REPORT

DRAFT
ENGINEERING EVALUATION/COST ESTIMATE
GASCO SEDIMENTS CLEANUP SITE

Prepared for

U.S. Environmental Protection Agency, Region 10

1200 Sixth Avenue

Seattle, Washington 98101

Prepared by

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Portland, Oregon 97224

On Behalf of

NW Natural

2200 NW Second Avenue

Portland, Oregon 97209

May 2012

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LIST OF ACRONYMS AND ABBREVIATIONS

Abbreviation	Definition
µg/kg	Micrograms per kilogram
µg/L	Micrograms per liter
mg/kg	Milligram per kilogram
AC	Activated carbon
AOC	Agreement and Order on Consent
AOPC	Area of Potential Concern
ARAR	Applicable and Relevant and Appropriate Requirements
BA	Biological Assessment
BaP	benzo(a)pyrene
BaPEq	benzo[a]pyrene equivalents
BERA	Baseline Ecological Risk Assessment
bgs	below ground surface
BHC	Beta- and Gamma- Benzene Hexachlorides
BHHRA	Baseline Human Health Risk Assessment
BNSF	Burlington Northern Santa Fe
BSAR	Biota-Sediment Accumulation Regressions
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAD	Confined aquatic disposal
CAMU	Corrective Action Management Unit
CBRA	Comprehensive Benthic Risk Areas
CDF	confined disposal facility
CDR	Construction Design Report
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
cis-DCE	cis-dichloroethylene
cm	centimeters
COC	Chemicals of Concern
COI	Chemicals of Interest
cPAH	Carcinogenic polycyclic aromatic hydrocarbon
CPD	City of Portland Datum
CRD	Columbia River Datum

CVOC	chlorinated volatile organic compounds
CWA	Clean Water Act
cy	cubic yards
DCE	Dichloroethylene
DDD	Dichlorodiphenyldichloroethanes
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
DEQ	Oregon Department of Environmental Quality
DNAPL	Dense Nonaqueous Phase Liquid
DNAPL	Dense Nonaqueous Phase Liquid
DOI	Depth of Impact
Draft Memorandum	Draft Benthic Toxicity Reanalysis Technical Memorandum
DRET	Dredging elutriate test
EE/CA	Engineering Evaluation/Cost Analysis
EMR	Environmental Monitoring Reports
EMNR	enhanced monitored natural recovery
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FAMM	Fuel and Marine Marketing
FEMA	Federal Emergency Management Agency
FFS	Focused Feasibility Study
Fill WBZ	Fill Water Bearing Zone
Final AirAIR	Final Project Area Identification Report and Data Gaps QAPP
FMD	future maintenance dredge
FPM	Floating Percentile Model
FS	Feasibility Study
FFS	Focused Feasibility Study
GHG	greenhouse gas
GPS	global positioning system
HC&C	hydraulic control and containment
HEC-RAS	Hydrologic Engineering Centers River Analysis System
HH-org	Human health, consumption of organism
HI	Hazard Index
HPAH	High Molecular Weight PAHs
HQ	Hazard Quotient

H:V	horizontal to vertical
IC	indicator chemical
ISCR	in situ chemical reduction
JSCS	Joint Source Control Strategy
KI	Koppers Industries
LC	Low concentration
LNG	Liquefied Natural Gas
LOE	Line of Evidence
Lower Alluvium WBZ	Lower Alluvium Water Bearing Zone
LPAH	Low Molecular Weight PAHs
LRM	Logistic Regression Model
LWG	Lower Willamette Group
MCL	Maximum Contaminant Levels
MFA	Maul Foster Alongi
MGP	Manufactured Gas Plant
MHW	Mean High Water
MNR	Monitored Natural Recovery
MOU	Memorandum of Understanding
MQ	Mean Quotient
MSL	Mean Sea Level
NAVD88	North American Vertican Datum 1988
NCP	National Contingency Plan
NCSW	near channel outside sheetpile wall
NGVD 29/47	National Geodetic Vertical Datum of 1929 through the Pacific Northwest Supplemental Adjustment of 1947 Sea level out of 1929
NMFS	National Marine Fisheries Services
NPL	National Priorities List
NRWQC	National Recommended Water Quality Criteria
NSLC	navigation channel sheetpile wall low chemical concentration
OAR	Oregon Hazardous Substance Remedial Action Rules
ODOT	Oregon Department of Transportation
OLW	Ordinary Low Water
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polycyclic aromatic hydrocarbon
PCDF	Polychlorinated Dibenzofuran

PGE	Portland General Electric
pMax	maximum probability of toxicity
Portland Harbor Site	Portland Harbor Superfund Site
ppb	Parts per billion
PRD	Portland River Datum
PRG	Preliminary Remediation Goal
PTM	Principal Threat Material
PUR	Posing Unacceptable Risk
RAL	Remedial Action Level
RAOs	Remedial Action Objectives
RB	Riverbank designation
RBCs	Risk-based concentration
RCRA	Resource Conservation and Recovery Act
REA	Reference Envelope Approach
REV	Reference Envelope Values
RG	Remediation Goal
Rhone-Poulenc	Rhone-Poulenc AG Company
RI/FS	Remedial Investigation/Feasibility Study
RME	Reasonable Maximum Exposure
RNA	Regulated Navigation Areas
ROD	Record of Decision
SBLT	Sequential Batch Leachate Test
SCRA	Site Characterization and Risk Assessment
Siltronic	Siltronic Corporation
SLL	Star Link Logistics
SLV	Screening Level Values
SMA	Sediment Management Areas
SOW	Statement of Work
SQV	Sediment Quality Value
SRE	Streamlined Risk Assessment
S/S	Stablization/Solidification
SSL	soil screening level
SWAC	Surface-area Weighted Average Concentration
TBC	To Be Considered
TCE	Trichloroethylene

TCLP	Toxic Characteristic Leaching Potential
TEQ	Toxic Equivalency Quotient
trans-DCE	Trans-1,2 dichloroethylene
TRV	toxicity reference values
tsf	tons per square foot
TZW	Transition zone water
UPL	Upper Prediction Limit
USACE	U.S. Army Corps of Engineers
UST	Underground storage tank
Upper Alluvium WBZ	Upper Alluvium Water Bearing Zone
WZ	Wave Zone
VOC	Volatile Organic Compound
WQS	Water Quality Standards
ZVI	Zero-Valent Iron

1 INTRODUCTION

This *Draft Engineering Evaluation/Cost Analysis* (EE/CA) has been prepared by Anchor QEA, LLC on behalf of NW Natural in coordination with Siltronic Corporation (Siltronic) for the Gasco Sediments Site, located on the Willamette River adjacent to the NW Natural "Gasco" and Siltronic properties in Portland, Oregon (Figure 1.0-1). This EE/CA has been prepared under the Administrative Settlement Agreement and Order on Consent (AOC; Docket No. CERCLA 10-2009-0255) and attached Statement of Work (SOW). The AOC contemplates that a proposed final Gasco Sediments Site remedial alternative will be prepared so that it can be described in the U.S. Environmental Protection Agency (EPA's) Proposed Plan for the Portland Harbor Superfund Site (Portland Harbor Site). After public comment, EPA's remedy decision for the Gasco Sediments Site will be documented in the Portland Harbor Record of Decision (ROD). EPA, NW Natural, and Siltronic anticipate that the remedial action will be implemented under a consent decree following issuance of the Portland Harbor ROD.

This EE/CA relies on the Portland Harbor draft final Remedial Investigation (Integral et al. 2011), including the draft final Baseline Human Health Risk Assessment (Kennedy/Jenks Consultants 2011) and draft final Baseline Ecological Risk Assessment (Windward 2011b). The EE/CA was prepared based on and consistent with the Portland Harbor Site draft Feasibility Study (Portland Harbor draft FS) submitted to EPA by the Lower Willamette Group (LWG) on March 30, 2012 (Anchor QEA 2012a). In the Portland Harbor draft FS (Anchor QEA 2012a), the Gasco Sediments Site was initially referred to as Area of Potential Concern (AOPC) 9U and then further refined to Sediment Management Area (SMA) 9U based on the various lines of evidence (LOEs) defined in the FS. The objective of this EE/CA is to provide a more refined evaluation of the alternatives developed for SMA 9U to support EPA's selection of an alternative and subsequent development of preliminary, interim, and final design reports.

This EE/CA has been developed in accordance with the EPA's *Guidance for Conducting Non-Time Critical Removal Actions Under CERCLA* (EPA 1993) and incorporates the additional requirements for the EE/CA listed in Sections 3.5 and 3.6 of the SOW. In accordance with the SOW, NW Natural and Siltronic presented a technical briefing (Anchor QEA 2011a) regarding the proposed contents of the EE/CA. EPA provided comments on the technical briefing in a letter dated November 28, 2011 (EPA 2011). This EE/CA was prepared in accordance with the comment letter and fulfills the requirements of Sections 3.5 and 3.6 of the SOW.

The following subsections present report objectives, background information, and the organization of this EE/CA.

1.1 Report Objectives

Although this report is an EE/CA, the alternatives discussed in this document are consistent with the Portland Harbor draft FS (Anchor QEA 2012a) submitted to EPA by the LWG for Portland Harbor, and are intended to provide a long-term and permanent sediment remedy for the Gasco Sediments Site. Per Section 3.6 of the SOW:

> *The EE/CA shall include a development and evaluation of alternatives as well as a thorough evaluation of all criteria considered under an FS. This is consistent with the goal of including the preferred alternative design in the Portland Harbor Proposed Plan.*

Therefore, this EE/CA provides more thorough analysis than is found in a typical EE/CA, while at the same time fulfilling EE/CA requirements per EPA guidance. In accordance with EPA's *Guidance for Conducting Non-Time Critical Removal Actions Under CERCLA* (1993), the objectives of this EE/CA are to:

- Summarize the remedial action area and adjacent Gasco Sediments Site characteristics
- Identify the remedial action goals and alternatives
- Evaluate and compare the remedial action alternatives
- Identify a recommended remedial action alternative

This EE/CA also has the following project-specific objectives, which are detailed in Sections 3.5 and 3.6 of the SOW:

- Report the results of the data gaps investigation scoped in the *Final Project Area Identification Report and Data Gaps QAPP* (Project AIR; Anchor QEA 2010a) (SOW Section 3.5).
- Develop and evaluate alternatives thoroughly relative to all applicable National Contingency Plan (NCP) Feasibility Study (FS) criteria (SOW Section 3.6.1).
- Define an interim Project Area for the Gasco Sediments Site that is based on a risk framework consistent with the Portland Harbor Site Remedial Investigation/Feasibility Study (RI/FS) process (SOW Section 3.6.1).

1.2 Background

The following subsections provide the background for this EE/CA.

1.2.1 Regulatory Context

In 2000, EPA added the Portland Harbor Site to the National Priorities List (NPL) pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, 42 U.S.C. § 9601, et seq. The Portland Harbor Site Study Area currently encompasses approximately 10 miles (river mile [RM] 1.9 to 11.8) of the Willamette River in Portland, Oregon, and includes the offshore areas adjacent to the NW Natural "Gasco" and Siltronic properties (Figure 1.0-1). In fall 2001, EPA and ten parties, including NW Natural, entered into an AOC (CERCLA-10-2001-0240; EPA 2001) for the Portland Harbor Site. The draft RI/FS characterized the nature and extent of contamination, assessed the ecological and human health risks at the Portland Harbor Site, and evaluated feasibility alternatives for cleanup. These documents are currently under review by EPA. As described in this section, the Gasco Sediments Site is referred to as SMA 9U in the Portland Harbor draft FS (Anchor QEA 2012a) and this EE/CA provides a more refined evaluation of the alternatives developed for this SMA to support EPA's selection of an alternative and the preparation of subsequent design reports.

1.2.2 Order of Work

The SOW attached to the AOC lays out an order of work for the final remedy design. The project steps include the development of a Project Work Plan, a Project AIR, and an EE/CA, followed by development of the preliminary, interim, and final designs for the Gasco Sediments Site. The Project Work Plan and Project AIR are complete. This EE/CA represents the first part of the EE/CA phase of the project. The EE/CA phase will be completed upon EPA approval of a Final EE/CA and documentation in an Action Memorandum.

1.2.3 Project Area Identification

As described in the SOW, the Project Area for the Gasco Sediments Site will be determined in a series of iterative evaluation steps intended to make the remedial design for the Project Area consistent with EPA's proposed remedy for the Portland Harbor Site. A preliminary Project Area for the Gasco Sediments Site (referred to as the "Area of Interest" on Figure 1.2.3-1) was identified in the *Final Work Plan: Gasco Sediments Cleanup Action* (Work Plan; Anchor QEA 2010b). The Project AIR (Anchor QEA 2010a) refines the "Area of Interest" into an initial Project Area (shown on Figure 1.2.3-1) representing the preliminary lateral and vertical extent of the

remedial action area, based on information available at the time of report development. This initial Project Area was generally equivalent to the area of the Portland Harbor Site previously referred to as AOPC 9U. The Portland Harbor draft FS defines and evaluates several candidate alternatives for active remediation within AOPC 9U; in each alternative, the active remedy is identified as SMA 9U. This EE/CA presents an interim Project Area (described in Section 4), representing a further refinement of the lateral and vertical extent of the SMA 9U remedial action areas, incorporating additional data from:

- Draft Data Gaps Investigation Report (Appendix A).
- February 4, 2011, update to the Portland Harbor Site Characterization and Risk Assessment (SCRA) database (Appendix H to the draft Final Portland Harbor RI/FS Remedial Investigation Report [Draft Final Portland Harbor RI; Integral et al. 2011]).
- Lines of evidence used in the Portland Harbor draft FS (Anchor QEA 2012a).

The interim Project Area is used in this EE/CA to evaluate remedial alternatives.
This EE/CA provides a basis for EPA to identify a final Project Area in the Proposed Plan. That final Project Area will also be presented in the Gasco Sediments Site preliminary design report. Assuming current terminology holds, this final Project Area would be identified as SMA 9U in the Portland Harbor Site Proposed Plan and ROD.

1.2.4 Programmatic Sequencing

The appropriate sequencing of remedial measures for the in-water and upland portions of the Gasco and Siltronic sites is critical to maximize the effectiveness of the remedial measures and minimize the potential for recontamination of the final sediment remedy. To this end, four distinct phases of work under Oregon Department of Environmental Quality (DEQ) and EPA direction are anticipated to occur in the following optimum sequence sequence:

1. Construct upland groundwater/dense nonaqueous phase liquid (DNAPL) source control (DEQ lead)
2. Construct upland remedial action (DEQ lead)
3. Gasco Sediments Site final sediment remedy (EPA lead), design of which is the subject of this EE/CA.
4. Portland Harbor Site sediment remedy (EPA lead).

Stormwater source controls will be implemented as part of the uplands remedy. Integration of these source controls with the sediment remedy to prevent any possible recontamination of

sediments is discussed more in Section 2.3.1.2. Figure 1.2.4-1 shows the sequencing for phase 1, 3, and 4 above.

1.2.4.1 *Groundwater/DNAPL Source Control*

NW Natural and Siltronic currently continue to work under DEQ oversight on upland groundwater/DNAPL source control actions related to the Gasco and Siltronic properties. The goal is for upland source control to be installed and operational before Gasco Sediment Site sediment remedy implementation. This sequencing is necessary to prevent sediment recontamination and to achieve and maintain the sediment Remedial Action Objectives (RAOs). Source control activities on both properties are briefly discussed below. A detailed summary of the Gasco and Siltronic upland groundwater/DNAPL source control activities is provided in Section 2.3.

NW Natural has submitted a *Revised Groundwater Source Control Construction Design Report* (CDR; Anchor QEA 2012b) and begun installation of groundwater source control measures on the Gasco property. The RAOs for groundwater source control on the Gasco property are in place to minimize migration of contaminated groundwater from the uplands to the Willamette River along the Gasco shoreline. Source control measures have been designed to minimize DNAPL mobilization along the portion of the Gasco property with the highest concentrations of groundwater contamination (Anchor QEA 2012b).

Siltronic has submitted an RI report to DEQ (which included confirmation of ongoing natural attenuation via reductive dechlorination) and installed source control measures (i.e., in situ chemical reduction [ISCR] enhanced bioremediation) in the trichloroethylene (TCE) source area. These source control measures have been demonstrated to be successful at chlorinated volatile organic compound (CVOC) reductions to meet or nearly meet final RAO levels. Upon installation of the riverbank hydraulic containment source control measures in coordination with NW Natural, Siltronic anticipates demonstrating that Siltronic's obligations for the RI and source control described in the *Order Requiring Remedial Investigation and Source Control Measures*, DEQ No. VC-NWR-03-16, issued to Siltronic on February 9, 2004 (i.e., the TCE Order; DEQ 2004), have been fulfilled.

1.2.4.2 *Upland Remedial Actions*

NW Natural and Siltronic currently continue to work under DEQ oversight on upland remedial actions related to the Gasco and Siltronic properties. The final Gasco and Siltronic upland

remedial actions are necessary prior to sediment remedy to prevent sediment recontamination following implementation of the final cleanup at the Gasco Sediments Site.

Upon approval of the risk assessment for the Gasco property, NW Natural will commence the Gasco upland FS. The Gasco upland FS will include evaluations of technologies and remedial alternatives to address upland soils, DNAPL, groundwater, and stormwater. Design and construction will follow DEQ selection of a remedial alternative.

NW Natural is also currently conducting an upland RI to determine the nature and extent of manufactured gas plant- (MGP-) related contaminants at the Siltronic property. RI activities are being completed by NW Natural in accordance with NW Natural's Voluntary Agreement with DEQ (No. WMCVC-NWR-94-13) dated August 8, 1994 as amended by Addendum No. 1 dated July 19, 2006. Most of the RI investigation has been completed and a Remedial Investigation Data Summary Report has been provided to DEQ (HAI 2011). An RI data gap investigation is being conducted. The findings of the RI will be used to prepare an upland risk assessment.

Upon installation of the riverbank hydraulic containment source control measures in coordination with NW Natural, Siltronic anticipates developing an FS to identify and evaluate the final remedy for TCE.

1.2.4.3 *Regulatory Oversight of Riverbank Remedy*

In the past, for the purpose of defining DEQ- versus EPA-led work, the water line equivalent to 13.3 feet NAVD88 (North American Vertican Datum 1988; Mean High Water [MHW]) was used as the regulatory boundary for the Portland Harbor Site. Thus, remedial work in riverbank soils above this line was evaluated in coordination with DEQ. For Gasco Sediments Site project-specific reasons, riverbank soils remediation and source control construction will take place simultaneously with the Gasco Sediments Site construction under the EPA AOC so that these two efforts can be efficiently integrated. EPA will oversee both the sediment and riverbank remediation and source control work from the top of bank riverward. EPA, DEQ, and NW Natural have agreed, as reflected in Section 3.6.2.10 of the SOW, that the identification of riverbank areas to be remediated and the evaluation of alternatives for those areas shall be conducted in this EE/CA, and EPA's selected remedial alternative for the riverbank shall be included in the Portland Harbor Proposed Plan. EPA oversight of sediment remediation and riverbank remediation and source control work will:

1. Extend from the river sediments up to the top of the bank slope ending where the generally level portions of the upland property begins (ranges from 30 feet to 36 feet NAVD88 across Gasco and Siltronic properties),
2. Result in a continuous fully integrated slope from the top of the riverbank to permanently submerged sediments, and
3. Be constructed at one time with one set of river water quality protection measures consistent with both riverbank and sediment designs.

The combined riverbank and sediment cleanup work will include one comprehensive Endangered Species Act (ESA) evaluation in consultation with National Marine Fisheries Services (NMFS); i.e., one Biological Assessment (BA) that will cover both the sediments and riverbank remediation work up to the top of the bank. A preliminary draft BA for the work is contained in Appendix C. Consistent with this approach, the alternatives evaluated in this EE/CA include remediation and source controls for soils on the sloping portion of the riverbank.

1.2.4.4 *Portland Harbor Site Process Integration*

The conceptual design alternatives for the Gasco Sediments remedy discussed in this EE/CA rely on the current versions of the Portland Harbor Site draft final risk assessments (Kennedy/Jenks 2011; Windward 2011b) and draft FS (Anchor QEA 2012a). The EE/CA is consistent with and fully incorporates the Portland Harbor Site process. This EE/CA uses this information, including RAOs, remediation goals (RGs), specific analyses, and overall decision framework in the Portland Harbor draft FS to develop and evaluate proposed remedial alternatives for the Gasco Sediments Site that are consistent with the wider Portland Harbor Site process. As shown in Figure 1.2.4-1, the Gasco Sediments Site EE/CA will be approved in an Action Memorandum by EPA and the EPA-selected remedial alternative will be included in the Portland Harbor Site Proposed Plan. The Proposed Plan will describe the recommended Portland Harbor Site remedy and is subject to public comment and review. After public comment, the remedy decision for the entire Portland Harbor Site, including the Gasco Sediments project, will be documented by EPA in the ROD for the Portland Harbor Site. This will enable EPA-to determine the appropriate sequencing for construction of the approved Gasco Sediment Site remedial action.

1.2.5 Risk Management Framework

The Gasco Sediments remedy will be consistent with the Portland Harbor Site ROD, designed to be protective of human health and the environment, and meet all federal- and state-applicable and relevant and appropriate requirements (ARARs). Following EE/CA guidance (EPA 1993), the rememdy will be evaluated against the two primary threshold criteria (overall protection of human health and the environment and compliance with ARARs) and five balancing criteria (long-term effectiveness and permanence; reduction of toxicity, mobility or volume through treatment; short-term effectiveness; implementability; and, cost). The risk lines of evidence used in the Portland Harbor Site process were used to develop Remedial Action Levels (RALs) and RGs for the Portland Harbor Site and for this EE/CA. The alternatives evaluation in this EE/CA also use a risk management framework that is consistent with EPA guidance (EPA 1988; 2005) for developing sediment remedies and specifically recognizes the risk management goals for the Gasco Sediments Site throughout the evaluation and design process. Consistent with the SOW, the risk management-related approaches that are specifically important to this EE/CA and eventual design that are consistent with guidance include:

- The Project Area boundary will be consistent with SMA 9U as defined in the Portland Harbor Site draft FS , futher refined as discussed in Section 4.
- Remedial alternatives will be evaluated with regard to total net risk reduction within the overall framework of the NCP remedy selection criteria.
- The Portland Harbor Site risk assessment protocols, procedures, data, and outcomes will be used whenever possible to refine Project Area boundaries and evaluate risk reduction.
- Remedial alternatives will be evaluated for long-term effectiveness for a range of technologies including dredging, capping, in situ treatment, and Monitored Natural Recovery (MNR).
- Remedial alternatives will include combinations of technologies that are tailored to physical, chemical, and other conditions in the Project Area, such as current and future site uses and the presence of in-water and upland structures.
- The short-term risks (e.g., sediment resuspension, waterborne releases, and dredge residuals) posed by dredge methods and removal of various containment systems (i.e., sheetpile wall) will be evaluated.
- Migration pathways, bioavailability, and future exposure (e.g., sediment stability under various river current and vessel propeller scour conditions) will be evaluated when predicting risk reduction.

- Future exposures and risks posed by the potential presence of mobile product in sediment will be evaluated.
- Removal of sediments containing "substantial" amounts of product ("substantial" is defined in SOW Section 3.6.2.1; product meeting this definition is referred to as "substantial product" in this EE/CA) from the Project Area for off-site disposal, where consistent with the other risk management framework approaches, will be preferred.

1.3 Document Organization

The remainder of this document is organized into the following sections:

- Section 2 – Project Area Characterization
- Section 3 – Remedial Action Objectives and ARARs
- Section 4 – Interim Area Identification
- Section 5 – Screening of Technologies
- Section 6 – Identification of Remedial Action Alternatives
- Section 7 – Detailed Analysis of Alternatives
- Section 8 – Comparative Analysis of Alternative
- Section 9 – Conclusions
- Section 10 – References

The following appendixes are attached to this document:

- Appendix A – Draft Data Gaps Investigation Report
- Appendix B – Draft Cultural Resources Analysis
- Appendix C – Draft Preliminary Biological Assessment
- Appendix D – Draft Preliminary Clean Water Act Section 404(b)(1) Evaluation
- Appendix E – Draft Fate and Transport Modeling
- Appendix F – Draft Potential Riverbank Hot Spot Data Screen
- Appendix G – Project AIR Data Re-screen
- Appendix H – Draft Riverbank Soil Screen
- Appendix I – Draft Evaluation of Isolation Cap Effectiveness
- Appendix J – Draft Remedial Alternatives Probable Cost Summary

2 PROJECT AREA CHARACTERIZATION

This section presents an overview of the physical characteristics, history, nature and extent of contamination, and risk analysis information for the Gasco Sediments Site. For the purposes of this discussion, this overview focuses on the initial Project Area as defined in Section 1.2.3. Using this information, the Project Area is further refined in Section 4 to define the interim Project Area, which is used throughout the remainder of this EE/CA. Numerous investigations have been conducted in the initial Project Area, on the adjacent properties, and within the greater Portland Harbor Site to evaluate the nature and extent of contamination and to assess the ecological and human health risks in these areas. This section summarizes the initial Project Area characterization information provided previously in the Work Plan (Anchor QEA 2010b). Refer to the Work Plan for additional detail. This section also includes a streamlined risk evaluation (SRE) that has not been previously submitted in project deliverables. The SRE is entirely consistent with the Portland Harbor risk assessments and was developed per EE/CA guidance and is presented in Section 2.7 of this EE/CA.

Note that elevation data in this EE/CA is presented relative to the NAVD88 consistent with the Portland Harbor Site documents. Several other vertical datums are used in the Willamette River area, including the City of Portland Datum (CPD), National Geodetic Vertical Datum of 1929 through the Pacific Northwest Supplemental Adjustment of 1947 (NGVD29/47) (also referred to as the Sea Level Datum of 1929 or mean sea level [MSL]), the Columbia River Datum (CRD), and the Portland River Datum (PRD). Elevations previously reported in these other datums have been converted to NAVD88 for use in this EE/CA.

2.1 Initial Project Area General Description

The Gasco Sediments Site is located along the western bank of the Willamette River within the Portland Harbor, a heavily industrialized reach downstream and north of downtown Portland, Oregon (Figures 1.0-1 and 1.2.3-1). Over many decades, public and private improvements have occurred within this area, including infrastructure, such as marine, rail, and highway facilities, as well as development of commercial and industrial facilities.

The initial Project Area is adjacent to the Gasco and Siltronic properties located between Willamette RM 6.3 and RM 6.7, which are, in turn, bordered downstream by the U.S. Army Corps of Engineers (USACE) U.S. Mooring facility and upstream by the Burlington Northern Santa Fe (BNSF), Arkema, and Aventis Cropscience USA properties (Figure 1.0-1). Figure 1.2.3-

1 depicts the initial Project Area, extending from the river sediments up to the top of the bank slope and ends where the generally level portions of the upland properties begin, in conformance with the SOW. Nearly three-quarters of the initial Project Area is within the USACE-maintained Willamette River navigational channel (which is described in further detail below).

2.2 Initial Project Area Uses and Activities

This section briefly describes the initial Project Area uses and activities including adjacent upland properties.

2.2.1 Adjacent Upland Properties

Adjacent Gasco Property – Upland property features, shown on Figure 2.2.1-1, include buildings, storage tanks, and equipment used in current site activities. The riverbank drops steeply from the upland areas of the Gasco property, with some riverbank areas armored with riprap and other areas not armored. A shallow shelf extends from the toe of the shoreline slope to the navigational channel in most areas. The property was formerly used as an oil MGP. Byproducts of the MGP included lampblack and lampblack briquettes, petroleum coke, tar, and light oil products. Spent oxide, a blend of iron sulfides, sulfur, iron oxides, and wood substrate, that sometimes containing hydrocarbons and cyanides, was also generated. The MGP ceased baseload manufacture of gas in 1956. The current uses of the Gasco property include liquefied natural gas (LNG) storage, coal tar and pencil pitch distribution, and marine fuel storage and distribution operations shown on Figure 2.2.1-1.

The upland RI was completed in 2007. Anchor QEA completed and submitted to DEQ the third revision to the Gasco risk assessment, Baseline Level III Ecological and Human Health Risk Assessment, in 2004 (Anchor 2004). DEQ provided NW Natural with comments on these documents in March 2010 (DEQ 2010). Since March 2010, NW Natural and DEQ have been working to resolve these comments and finalize the risk assessment. Upon approval of the risk assessment, the upland FS will commence and is expected to be completed according to the agreed timeline. The Gasco upland FS will include evaluations of technologies and remedial alternatives to address upland soils, DNAPL, groundwater, and stormwater.

Adjacent Siltronic Property: Site features associated with Siltronic industrial operations, shown on Figure 2.2.1-2, include two fabrication buildings (FAB1 and FAB2) and the associated

wastewater treatment plant, an administration building, equipment used in industrial processes currently ongoing at the property (silicon wafer fabrication), additional storage buildings, a Portland General Electric (PGE) substation, and paved parking areas. Similar to the Gasco shoreline, a shallow shelf extends from the toe of the shoreline slope to the navigational channel.

Siltronic commenced investigation of TCE and its degradation products in 2002, and initiated an RI of TCE and its degradation products in 2004 (in response to the 2003 TCE Order). The investigation included characterization of the nature and extent of TCE and its degradation products in soil, groundwater, in-river sediment, transition zone water, and groundwater below the Willamette River. The results were described in the 2007 Siltronic RI Report (MFA 2007a), which included a beneficial water use evaluation, risk evaluation, and hot spot evaluation consistent with DEQ guidance.

In 2006, Siltronic commenced pilot tests of ISCR-enhanced bioremediation in the source area and at the riverbank. The results of these tests were encouraging and were the basis for the Siltronic Focused Feasibility study (FFS; MFA 2007b), which recommended ISCR-enhanced bioremediation in the TCE source area and at the riverbank. In 2008, DEQ disapproved the riverbank portion of the proposed implementation of ISCR-enhanced bioremediation, citing several reasons including inadequate time in advance of necessary implementation of a potentially incompatible hydraulic control and containment system proposed by NW Natural as a riverbank source control measure for MGP constituents in groundwater. DEQ approved implementation of ISCR-enhanced bioremediation in the TCE source area, which was completed in mid-2009. The source area removal action was successful and the RAO was achieved within approximately 1 year.

A supplemental TCE source area upgradient of the primary source area was identified during a subsequent round of sampling, and additional ISCR-enhanced bioremediation was implemented in that area in stages during 2011. To date, results have been promising, with documented performance consistent with the primary source area installation.

Other Upland Nearby Properties: The following properties (shown on Figure 1.0-1) are located immediately beyond the BNSF railroad right-of-way: Star Link Logistics (SLL; formerly known as Aventis Crop Science and Rhone-Poulenc AG Company [Rhone-Poulenc]), ESCO Corporation, Gould-NL Industries, and Arkema (formerly known as Atofina and Pennwalt).

The U.S. Moorings property (also shown on Figure 1.0-1) is located immediately downstream of the Gasco property. Each of these properties is currently undergoing an environmental investigation and/or cleanup, except for Gould-NL Industries, where clean-up activities are complete.

2.2.2 Shoreline Conditions and Structures

A shoreline reconnaissance survey was conducted on August 8, 2009, to document the shoreline conditions and structures present. The results of the survey are shown on Figures 2.2.2-1 through 2.2.2-3. As shown in these figures, the majority of the Project Area shoreline is vegetated or covered with riprap. However, some locations of minimally vegetated soils exist along isolated portions of the Gasco property shoreline that could be eroded and transported to the river, if erosion occurs.

Major structures along the Gasco and Siltronic property shoreline are shown on Figures 2.2.1-1 and 2.2.1-2 and include the Gasco dock, fuel and coal tar pitch pipelines, an emergency slide for deploying spill containment booms, stormwater/industrial wastewater outfall WR-107, two stormwater outfalls, an abandoned loading dock, two catwalk structures, Fuel and Marine Marketing (FAMM) tanks, and the Siltronic Fab 1 building. A brief summary of these structures is provided below.

The NW Natural Gasco dock has existed in the central shoreline area since 1936. The dock is actively used by Koppers Industries (KI) and FAMM for import and export of products related to their operations. KI operates an aboveground pipeline running from the dock to a storage tank in its lease area to pump liquid coal tar pitch received via barge. Pipelines for fuel transport run between the dock and several tanks on the FAMM lease area. Outfall WR-107 is located in the southeastern portion of the Gasco property shoreline and is the major stormwater discharge point for the Gasco property. Two other small stormwater outfalls are located in shoreline areas; permits are not required for discharges associated with these outfalls (HAI 2007a).

Three outfalls, shown on Figure 2.2.1-2, are located along the Siltronic shoreline: a submerged stormwater/NPDES permitted outfall near the Gasco-Siltronic property line and two stormwater outfalls. The NPDES permitted outfall discharges DEQ-permitted effluent from Siltronic operations and stormwater directly to the river. It is a fully submerged outfall that is supported in place by pilings. Stormwater is also discharged from the Administration Building

parking lot to the river via a connection to the City of Portland's outfall OF-22C (shown on Figure 2.2.1-2), located just upstream of the Siltronic property.

The U.S. Moorings Dock is present just downstream of the Gasco property (Figure 2.2.1-1). It is a piling-supported overwater structure that is used for periodic docking of U.S. government vessels of various types.

Directly adjacent to the Siltronic top of bank is the Fab 1 building and associated access road. Fab 1 operations include continuous silicon wafer manufacturing and quality assurance support for the Fab 2 operations. These operations are extremely sensitive to vibrations, which create faulty products and lead to lost revenue and/or facility shutdowns if significant vibration-creating construction occurs. The Fab 1 access road along the top of bank provides access for manufacturing and emergency equipment, and requires unlimited access. Operation-critical utilities, including a 15 kilovolt electrical supply line, fire suppression support, and stormwater drainage are located under and adjacent to the Fab 1 access road.

2.2.3 Vessel Traffic Patterns

Federal Navigation Channel: Nearly three-quarters of the Project Area is within the USACE-maintained Willamette River navigational channel. This channel is navigated by a variety of small and large vessels moving in and out of Portland Harbor. Work on the -40-foot CRD (-33.8 feet NAVD88) channel in Portland Harbor was completed in 1976. In 1999, Congress authorized the Willamette River (and Columbia River) deepening to -43 feet CRD (-36.8 feet NAVD88), but to date, the USACE has not conducted any additional maintenance dredging to achieve this depth in the Willamette River channel. Historically until 1998, the USACE dredged between 500,000 to 750,000 cubic yards (cy) of sediment from the channel every 3 ro 5 years (Port of Portland 2011), but none of these operations occurred within the initial Project Area (Anchor QEA 2012a).

Gasco Dock: This dock is used for pencil pitch transfer via large ocean going vessels and petroleum product transfers via barges. Barge use is more frequent than oceangoing vessel use. Two mooring dolphins exist upstream and downstream of the dock along the shoreline, which are used to secure ocean going vessels when docked (Figures 2.2.2-2 and 2.2.2-3). There is also a small floating dock just downstream of the primary dock that is used to moor smaller boats supporting product transfer and other operations (Figure 1.2.3-1). Navigation areas between the federal channel and the dock is maintained to depths of -33.8 feet NAVD88 (-40 feet CRD).

U.S. Moorings Dock: As discussed later in this EE/CA, sediment remediation is not expected to affect navigation to the U.S. Moorings Dock just downstream of the Gasco Sediments Site. Access to this dock is generally maintained to -23.8 feet NAVD88 (-30 feet CRD).

2.2.4 2005 Removal Action

NW Natural has conducted a number of actions associated with the removal of a deposit of tar-like material from the Project Area under an AOC entered with the EPA on April 28, 2004 (Docket No. CERCLA 10-2004-0068). The tar deposit was removed from an area of riverbank and nearshore sediment adjacent to the Gasco property during the summer and fall of 2005. A pilot cap was placed over the primary removal area and the surrounding area was covered with a "fringe" cap consisting of approximately 6 inches of sand (Figure 1.2.3-1). After construction, NW Natural implemented the EPA-approved Monitoring and Reporting Plan that was completed in 2010 (Anchor 2006a; Anchor 2008; EPA 2010).

2.3 Source Control Activities and Status

Source control activities are being implemented on both the Gasco and Siltronic properties, which are briefly described as follows. A detailed review of the source control activities on both properties can be found in the documents referenced in these subsections.

2.3.1 Gasco Source Control Activities and Status

Source control work is being completed consistent with the requirements of: 1) the Joint Order (DEQ Order No. ECVC-NWR-00-27 to NW Natural and Siltronic, dated October 4, 2000); and 2) the Voluntary Agreement (DEQ No. WMCVM-NWR-94-13, dated August 8, 1994, as amended July 19, 2006). A brief summary of the groundwater and stormwater source control activities and status is provided in the following subsections.

2.3.1.1 *Groundwater Source Controls*

As directed by DEQ, NW Natural has completed the CDR. This is a 100-percent design for a complete hydraulic containment system that can be constructed and tested upon approval by DEQ. The groundwater remedial action objective for the hydraulic containment system is to prevent discharge of upland groundwater to the Willamette River, as measured by analyzing groundwater hydrology data from Gasco and Siltronic property wells and the river. Figure 5-1 in the CDR (Anchor QEA 2012b) shows that the construction and initial operation of

groundwater source control is scheduled in 2012, with final operational performance achieved by January 2014.

As described in the CDR (Anchor QEA 2012b), a groundwater model is being used to design the source control groundwater extraction system. Using currently available data collected both in the uplands and the Willamette River, the model has been used to determine the offshore extent of seepage control that will be achieved by the extraction system following implementation. The modeled extent of offshore groundwater capture and seepage rates is shown in Figure 2.3.1.1-1. The information on offshore seepage control has been developed for use in this EE/CA. A light green cross-hatch pattern shown on this figure depicts the model-predicted offshore area where the groundwater gradient in the alluvial sediments is reversed, thereby preventing seepage of groundwater into the Willamette River. Within this offshore area, river water will migrate into the sediments and, over time, the concentrations of COIs in sediment will decline.

2.3.1.2 *Stormwater Source Controls*

Pursuant to the Work Plan (Anchor 2007a), stormwater and catch basin sediment sampling was conducted during five sampling events between December 2007 and April 2010 to complete the characterization of stormwater at the Gasco property as a potential source of chemicals to the Willamette River. The catch basin and stormwater discharge screening evaluation identified several constituents that exceed the Joint Source Control Strategy (JSCS) screening values for stormwater and upland sediments, the most significant exceedances being stormwater polycyclic aromatic hydrocarbons (PAHs). However, the Portland Harbor draft FS (Anchor 2012a) evaluated stormwater discharges from multiple locations where contaminant concentrations exceeded the JSCS screening values and determined that widespread sediment recontamination from stormwater in Portland Harbor is unlikely. The Portland Harbor draft FS also concludes that although widespread recontamination is not expected, there could be localized impacts to sediments at smaller spatial scales (i.e., immediately in front of some outfalls at a scale that is much smaller than the model grid cells used in the Portland Harbor draft FS evaluation). Consequently, it is possible that some localized impacts to remediate sediment could occur immediately in front of outfall WR-107.

The upland remedy for the Gasco property will address any potential for stormwater to affect localized sediment quality from the Gasco property. Stormwater currently discharging from WR-107 will be evaluated as part of the Gasco upland FS, and be a part of any comprehensive

alternatives considered in the Gasco upland FS. Stormwater controls may include isolation of contaminated soils through capping or collection of stormwater runoff. Passive treatment (i.e., stormwater detention ponds, grassed swales, or wetland basins) of collected clean stormwater may also be implemented to remove residual chemical concentrations prior to discharge to the Willamette River.

NW Natural hopes to implement the overall upland remedy by 2014, prior to the implementation of the sediment remedy. The potential impacts from current stormwater loading (as well as future potential loading under upland alternatives) will be better understood prior to actual sediment remedy implementation through the ongoing progress of the upland FS. Additional stormwater loading analysis will include specific loading assessments to determine the potential sediment recontamination near the outfalls or future outfalls considered in the Gasco upland FS. The upland FS will consider whether the sediment remedy can proceed if the potential for sediment recontamination from stormwater is insignificant or if expedited source control measures are warranted because the stormwater recontamination potential is significant (which may be very localized).

Potential interim measures prior to completion of the upland remediation to mitigate the potential for stormwater recontamination may include, singly or in combination, actions such as:

- Isolating the most affected portions of the stormwater runoff and handling/treating those on a temporary basis until the upland remedy can be completed.
- Adding a temporary diffuser pipe system to the existing outfall to dissipate the load of stormwater in the channel to avoid localized sediment recontamination.
- Conducting focused monitoring of caps or post dredge covers near the outfall discharge point in the interim while the stormwater controls are being designed and implemented and if necessary, placing additional cap layers to re-isolate any interim recontamination from stormwater after source controls are complete.

2.3.2 Siltronic Source Control Activities and Status

Source control activities are ongoing on the Siltronic property. The 2003 TCE Order required Siltronic to complete an RI of TCE and its degradation products and implement source control measures as needed. The RI report, which was submitted to DEQ in 2007, concluded that source control to prevent discharge of TCE and its degradation products to the Willamette River

was a medium priority as defined in the JSCS, and recommended evaluation of source control alternatives for the groundwater pathway. Based on the results of bench testing and subsequent field pilot studies, Siltronic recommended ISCR-enhanced bioremediation at the riverbank, followed by implementation in the source area.

DEQ disapproved Siltronic's proposed approach on February 14, 2008. Source control for TCE and its degradation products were redesigned to a single step source removal (i.e., ISCR-enhanced bioremediation in the source area), and reliance upon the NW Natural groundwater extraction system at the riverbank.

Source control activities are ongoing on the Siltronic property consistent with the 2003 TCE Order. Installation of ISCR-enhanced bioremediation has been completed in the source area. To date, RAO 1, which was established for the source area (concentrations of TCE below injection threshold of 1 percent of solubility limit, or 11,000 micrograms per liter [µg/l]), has been met in all 28 of the performance monitoring wells located in the source area (MFA 2011). RAO 2 (concentrations of TCE and its degradation products below JSCS screening level values [SLVs]) has been met in four of the 11 Group 3 performance monitoring wells located under or downgradient of the Fab 1 building (MFA 2011). Concentrations of TCE and its degradation products in upland groundwater near the riverbank are likely to change following implementation of the riverbank source control and will be evaluated in the context of RAO 2 or other objectives.

Concentrations of TCE and its degradation products are below the JSCS SLVs in five of the six quarterly monitoring wells, which are located at the riverbank, downgradient of the Group 3 wells. As described elsewhere, these data and transition zone water (TZW) data confirm that naturally occurring reductive dechlorination continues to significantly reduce the downgradient plume mass. Until the TCE groundwater plume is completely degraded, reductive dechlorination and other attenuation processes will be supplemented by operation of the NW Natural groundwater extraction system, which will prevent migration of the CVOC-impacted groundwater to the Willamette River.

The Gasco Sediments Site remedial action will be integrated with the source control actions mentioned previously, and discussed in the following sections, into an overall permanent remedy addressing all matrices and pathways posing risk at the Gasco and Siltronic

properties. To the extent practicable, the goal is to implement the upland work prior to completion of the sediment remedy.

2.4 Physical Setting

This section summarizes available information pertaining to the physical setting of the Gasco Sediments Site Area of Interest, including descriptions of hydrogeology, hydrology, Willamette River characteristics, shoreline conditions, and climate data.

2.4.1 Hydrogeology

A description of the geologic and hydrogeologic setting for the Gasco Sediments Site Area of Interest is summarized in the following subsections.

2.4.1.1 *Geologic Setting*

The subsurface geology on the Gasco property can be subdivided into three main units: Surficial Fill (fill), alluvium, and Columbia River Basalt Group bedrock. The alluvium can be further subdivided into four units: the upper silt unit, the upper alluvium, the lower alluvium, and the lower aquitard (Figure 2.4.1.1-1). The surficial fill consists of a heterogeneous mixture of silt, sand, gravel, and anthropogenic material such as concrete, brick, and metal debris and is approximately 15- to 30-feet thick across the Gasco Sediments Site except where it is truncated toward the Willamette River channel.

The uppermost section of the upper alluvium is the upper silt unit, the top of which represents the original ground surface before emplacement of the surficial fill. The upper silt unit varies from approximately 1 to 10 feet in thickness and is generally continuous along the shoreline subsurface. However, there are occasional small gaps along the shoreline subsurface where the upper silt unit does not exist. For example, the original ground surface was not present along much of the current riverbank on the Siltronic property. The upper silt unit extends out into the shallow sediments underneath the river until it is truncated by the river channel.

The upper alluvium below the upper silt unit consists of fine-grained sands and silty sands interbedded and intermixed with numerous discontinuous silt layers and lenses. The upper alluvium is approximately 35 to 40 feet in thickness along the northward (downstream) section of the shoreline and generally thickens to approximately 60 to 70 feet in thickness in the

southward (upstream) direction. The upper alluvium extends into the river channel and comprises the surface sediments of the river channel.

The lower alluvium consists of primarily medium-grained sand with fewer silt layers than the upper alluvium, a generally continuous lower aquitard silt unit, and a basal gravel layer present in some areas at the contact of the lower alluvium with the basalt bedrock. In general, the thickness of the lower alluvium along the shoreline increases from approximately 20 feet in the north to approximately 135 feet in the south along the shoreline as the depth to bedrock increases.

A silt layer called the lower aquitard is present within the lower alluvium between approximately -100 and -120 feet elevation. The aquitard is generally a single silt unit along the north shoreline, and in some areas on the southern shoreline it consists of multiple silt layers. The thickness of the aquitard ranges from a few feet in the south to more than 15 feet in the north.

The upper surface of the basalt bedrock is the lower contact for the lower alluvium. The top of the basalt is defined by an erosional paleochannel oriented in the north-south direction. The top of the basalt is encountered at an elevation of approximately -50 feet NAVD88 in the north section of the shoreline and descends to approximately -190 feet NAVD88 at the southern end.

2.4.1.2 *Hydrogeologic Setting*

There are three general hydrogeologic units in the subsurface shoreline at the Gasco Sediment Site, the Fill Water Bearing Zone (Fill WBZ), the Upper Alluvium Water Bearing Zone (Upper Alluvium WBZ), and the Lower Alluvium Water Bearing Zone (Lower Alluvium WBZ) (see Figure 2.4.1.1-1 for geological units). Groundwater in the Fill and Alluvium WBZs is recharged from groundwater flow originating in the hills west of the Gasco property and from precipitation infiltration on the site and is discharged into the Willamette River.

Analysis of groundwater elevation maps prepared for the Fill and Upper and Lower Alluvium WBZs indicates that groundwater generally flows in an east-northeastward direction toward the Willamette River (see Figures 2-9a and 2-9b in the CDR [Anchor QEA 2012b]).
The Fill WBZ is perched on top of the lower permeability upper silt unit, except in areas where the upper silt unit does not exist. Groundwater in the Fill WBZ is recharged primarily from infiltration of precipitation because much of the Gasco property is unpaved and secondarily

from lateral inflow from off-site areas. Groundwater in the Fill WBZ both recharges the underlying Upper Alluvium WBZ and travels laterally to discharge into the Willamette River. Because of the heterogeneous nature of the soils in the Fill WBZ, the horizontal hydraulic conductivity is variable, but on average is very low. The Fill WBZ is not hydraulically connected to the Willamette River except during seasonal high river stages, and thus groundwater levels in the Fill WBZ are only affected by tidal influences from the Willamette River during such periods.

The Upper and Lower Alluvium WBZs are recharged from both their respective overlying WBZs and from groundwater flow originating in the hills west of the site. Groundwater flows toward and discharges into the Willamette River. Both the Upper and Lower WBZs are hydraulically connected to the Willamette River and groundwater levels in these WBZs are continually changing in response to river level changes. Because of the smaller grain size of the sand and a higher concentration of silt in the upper alluvium, the hydraulic conductivity of the Upper Alluvium WBZ is generally much lower than that of the Lower Alluvium WBZ.

Analysis of the groundwater elevation maps for each of the water-bearing zones (see Work Plan, Anchor QEA 2010b) indicates that groundwater generally flows in an east-northeastward direction towards the Willamette River.

2.4.2 Hydrology

The hydrology of the Willamette River is extensively presented in the Portland Harbor Site RI (Integral et al. 2011) and further summarized in the Gasco Sediments Site Work Plan (Anchor QEA 2010b). Hydraulic conditions in the Willamette and Columbia Rivers influence river stage and velocities in the Project Area, which are further affected by the operations of federal and non-federal dams along these two rivers, as well as the tidal stage of the Pacific Ocean. The lowest water surface elevations in the Willamette River typically occur between September and early November prior to the seasonal rains, and the highest elevations tend to occur in the winter or spring.

Tidal action also has a strong effect on hydraulic conditions in the Project Area, most strongly when the Willamette River is at a low stage. There are two high tides and two low tides daily. Tidal action can influence water levels by up to 3 feet in the Portland Harbor. The combination of large flood tides and low river stage can result in a reversal of river flow, typically in late summer and fall (Integral et al. 2011).

Both collection of empirical information (flow measurements) and hydrodynamic/sediment transport modeling are being used for the Portland Harbor draft FS to support the understanding of the river hydrodynamics in the Willamette River. The empirical data and preliminary modeling show that river velocities near the initial Project Area are higher in the deeper, channel areas and decrease towards the shoreline. Empirical data and preliminary modeling show higher river currents during most high flow conditions (under both mid-ebb and mid-flood tides), and reverse flow during low flow/mid-flood tide conditions (Anchor QEA 2012a).

2.4.3 Riverbed Characteristics/Dynamics and Sediment Transport

The characteristics of the Willamette River were studied by the LWG during the Portland Harbor Site RI/FS process (Integral et al. 2011; Anchor QEA 2012a). The most recent bathymetry for the Gasco Sediment Site Area of Interest is shown in Figure 1.2.3-1. Sediment texture in the initial Project Area is shown in Figures 2.4.3-1. Much of the nearshore portions of the initial Project Area contain 60 to 80 percent or higher fines, while areas in the navigational channel are dominated by sands. Finer grained material is generally associated with low-energy areas (such as nearshore areas) and coarser grained material in high-energy or dredged areas. This pattern is consistent with the hydrodynamic patterns previously discussed.

2.4.3.1 *Sediment Stability*

Sediment stability and erosion were evaluated as part of the Portland Harbor draft FS (Anchor QEA 2012a) using empirical Sedflume data and time-series bathymetry. These data were used to develop a comprehensive sediment transport model for Portland Harbor. This information, along with the fine-grained nature of the sediments noted, suggests that the shoreline sediments are in a relatively stable or net depositional environment under typical flow conditions. This is also consistent with observations during the 2005 Removal Action post-construction monitoring (Anchor 2007a, 2008a; Anchor QEA 2009a, 2010c), which indicated a several centimeters (cm) layer of fines that was deposited on top of the sand caps placed over a portion of the Project Area and was present 2 years later. Further into the navigation channel exists a relatively high-energy sediment transport zone, as evidenced by time-series bathymetry and sand grain size in this area. In addition, local prop wash scour in front of and near the main dock at the initial Project Area would be expected due to barge and ship docking. The empirical and modeling

evaluations related to sediment stability are presented and mapped for the initial Project Area in more detail in Section 5.1.

2.5 Nature and Extent of Contamination

This section presents a summary of the known nature and extent of contamination in the initial Project Area. The Work Plan (Anchor QEA 2010b) summarizes the nature and extent of contamination in the initial Project Area based on sampling results available at the time of Work Plan development. This section summarizes an updated nature and extent of contamination. The primary sources of new information are:

- Gasco Data Gaps sampling investigation performed in September and October 2010 and April 2011
- The U.S. Moorings remedial investigation results performed in March, April, and August 2008
- Long-term monitoring performed following the 2005 Removal Action (2006 to 2009)
- Recent groundwater monitoring events on the Gasco and Siltronic Properties

Appendix G summarizes a review of available data collected from within the Gasco Sediments Site Area of Interest conducted to address the screening requirement in SOW Section 3.4.1.2 and update the nature and extent of contamination. Refer to this Appendix for additional detail (including tables and figures) on the findings summarized in the following sections.

These results do not fundamentally change the understanding of the nature and extent of contamination within the initial Project Area. Rather, the additional data allows further refinement of the spatial delineation of impacted areas in the initial Project Area. The refined areas are carried through to the interim Project Area identification process summarized in Section 4.

2.5.1 Chemistry Results

A brief summary of the chemistry results for the chemicals of interest (COIs) is provided in the following subsections.

2.5.1.1 *Chemicals of Interest*

The current COI list for the Gasco Sediments Site is based on the COI lists for upland Gasco and Siltronic property source controls as well as the list of chemicals currently identified as COIs for

this region of the Portland Harbor Site (i.e., chemicals that are not Gasco- or Siltronic-specific COIs). The SOW refers to chemicals listed there as Chemicals of Concern (COCs). However, many of the chemicals listed have been found in the Portland Harbor Site process to either be contaminants potentially posing unacceptable risk (PUR) or presenting minimal risks in the Harbor (see Section 3 of the Portland Harbor draft FS [Anchor QEA 2012a]). Given this information is now available, this section further distinguishes between these chemical lists that may have formerly all been identified as COCs. The COIs for the initial Project Area are listed in Section 3.3 of the SOW and are as follows:

- Benzene, toluene, ethylbenzene, xylenes (BTEX)
- PAHs (naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzofluoranthenes, benzo(a)pyrene (BaP), indeno(1,2,3-c,d)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene), extended to include 2-methylnaphthalene
- Dibenzofuran and carbazole
- Cyanide (including total cyanide in sediment and total, available, and free forms in water samples)
- Zinc
- TCE
- cis-dichloroethylene (cis-DCE)
- Trans-1,2 dichloroethylene (trans-DCE)
- 1,1 DCE
- Vinyl chloride
- Polychlorinated biphenyls (PCBs)
- Dichlorodiphenyltrichloroethane (DDT)
- Dichlorodiphenyldichloroethane (DDD)
- Dichlorodiphenyldichloroethylene (DDEs)
- Diesel range hydrocarbons
- Residual range hydrocarbons
- Alpha-, beta- and gamma-benzene hexachlorides (BHCs)
- Endrin Ketone

2.5.1.2 *Indicator Chemicals (ICs)*

Because of the number of chemicals on the COI list, the presentation of the nature and extent of contamination in the Work Plan (Anchor QEA 2010b) and summarized in this EE/CA focuses on the following subset of PURs or COCs or groups of such chemicals:

- PAHs – Gasco Site COCs per the findings of the Portland Harbor Site risk assessments
- BTEX – Gasco Site COIs, some of which are PURs, in the Portland Harbor Site risk assessments
- Cyanide (in water matrices) and total cyanide – Gasco Site COI and Portland Harbor Site PUR
- TCE and daughter products – Siltronic COIs (COCs in TZW), some of which are Portland Harbor Site PURs
- PCBs – Portland Harbor COC not associated with the Gasco or Siltronic properties
- DDx – Portland Harbor COC not associated with the Gasco or Siltronic sites

As noted, these ICs were chosen because of their occurrence as COCs or PURs within the initial Project Area either due to Portland Harbor-wide or localized potential sources. Also, some of these ICs (e.g., PAHs) are present across large portions of the Project Area, encompassing the areas impacted by the documented historical releases from the adjacent upland properties. In the remainder of the EE/CA, some subsets of these chemical groups are used in select evaluations to allow efficient analyses that would not be possible using every indicator chemical (IC). The reasoning for using select ICs is presented in other EE/CA sections, as needed, as part of each evaluation where such a selection is made. Generally, for upland data evaluations, PCBs and DDx are not reviewed because the Gasco and Siltronic properties have not been identified as sources of these chemicals.

Also, both free cyanide and total cyanide were selected as indicator chemicals. Total cyanide is used to evaluate sediment contamination because free cyanide cannot be analyzed in sediments. Free cyanide is used primarily to evaluate potential impacts from groundwater to the Willamette River because it is the form of cyanide that is bioavailable and toxic in water matrices. Consequently, the nature and extent of cyanide in water focuses on free cyanide concentrations. Under certain geochemical conditions, total cyanide may be converted to free cyanide. Extensive analysis shows that total cyanide is not being converted to measurable levels of free cyanide in any water matrix sampled in the Project Area (see Section 2 and 3 of Offshore Investigation Report, Anchor 2008b). Nonetheless, total cyanide is included as an

indicator chemical to provide general information on the nature and extent of potential sources of free cyanide to the Willamette River.

2.5.2 Sediment Quality

This section describes the current understanding of sediment quality at the Gasco Sediments Site Area of Interest based on available sediment data. Note that sediment is defined to consist of material collected within the Willamette River from locations with a mudline elevation at or below 13 feet NAVD88, consistent with the LWG sediment database and the definition of the Study Area used for the Portland Harbor RI/FS.

The Work Plan (Anchor QEA 2010b) contains a detailed description of the distribution of ICs in surface sediment, subsurface sediment, and sediment trap samples and summarizes the understanding of sediment quality based on data available at that time. Additional surface and subsurface sediment data was collected in late 2010 and early 2011 within the initial Project Area as part of the Project AIR (Anchor QEA 2010a) and has been incorporated into the data screen presented in Appendix G. No new sediment trap data is available. A brief summary of the existing sediment quality data, updated per the data gaps results, is summarized as follows. Refer to Appendix G for GIS layers showing the maximum IC concentration detected in surface sediment, subsurface sediment, and sediment trap samples at each sample station.

- The highest surficial sediment concentrations of BTEX in the initial Project Area occur in and immediately adjacent to the 2005 Removal Action area. Much lower surficial sediment concentrations are found west (downstream) of this area and extend out into the navigation channel.
- Elevated subsurface concentrations of BTEX exist within much of the initial Project Area with the highest concentrations being between the navigation channel line and the shoreline.
- The highest surficial and subsurface sediment concentrations of PAHs in the initial Project Area occur between the Gasco property shoreline and the navigation channel line and much lower concentrations are generally found outside this area.
- The highest surficial sediment concentrations of cyanide in the initial Project Area occur adjacent to the 2005 Removal Action area, with slightly lower concentrations within the 2005 Removal Action area. Lower concentrations are generally found outside this area, except that subsurface concentrations of cyanide on the northern end of the shoreline are relatively high in some intervals.

- All surficial and subsurface sediment samples with detected concentrations of TCE and degradation products (DCE, 1,1-DCE, and vinyl chloride) are in the general vicinity of the VOC plume and outfall discharge (WR-66) from the Siltronic property near the Gasco and Siltronic property line (see Figure 2.2.1-2).
- The maximum PCB concentrations (310 micrograms per kilogram [µg/kg] and 640 µg/kg) for surface and subsurface sediments, respectively) in the initial Project Area are somewhat elevated as compared to other areas within the Portland Harbor Site. PCB concentrations over 1,000 µg/kg were detected in sediment samples collected across the Portland Harbor Site, with a maximum detected concentration 35,400 µg/kg. The Portland Harbor draft FS estimates the range of background PCB concentrations throughout the Portland Harbor Site as 5 to 37 µg/kg.
- Somewhat elevated concentrations of DDT and its metabolites occur between the Gasco and Siltronic shorelines and the navigation channel, with maximum DDx surface and subsurface concentrations of 1,700 µg/kg and 2,400 µg/kg, respectively (Integral et al. 2011). However, these concentrations are generally much lower than those found immediately upstream of the initial Project Area. DDx concentrations above 10,000 µg/kg were detected in sediments collected near the western shore of RM 7.5, with a maximum detected concentration of 84,900 µg/kg (Integral et al. 2011).

In-river sediment trap sampling was performed by the LWG during the Portland Harbor RI Round 3A investigation (Integral et al. 2011) and NW Natural as part of the 2005 Removal Action (Anchor 2004b). The LWG information is generally indicative of the concentrations in sediments depositing in the sediment bed over time. The LWG sediment trap sampling station at RM 6 is located offshore of the U.S. Moorings property directly downstream from the Gasco property. As presented in Appendix Ha of the Portland Harbor draft FS (Anchor QEA 2012a) the sediment trap concentrations at this location ranged between approximately 300 and 1000 µg/kg for BaP, which is substantially less than current bedded sediment concentrations over much of the initial Project Area, particularly outside the navigation channel. Further, these concentrations are below the most conservative benzo[a]pyrene equivalents (BaPEq) RAL developed for the Portland Harbor draft FS (1,500 ug/kg). Refer to Section 4.1.3 for additional detail on Portland Harbor draft FS RALs. Concentrations at an upstream sediment trap (RM 7.5 on the west side) not influenced by any potential resuspension from the Gasco Sediments Site ranged between approximately 20 and 50 µg/kg of BaP. This information indicates that sediments settling in the initial Project Area will have substantially lower PAH concentrations and will reduce bedded sediment concentrations where sedimentation takes place.

The 2005 Removal Action sediment trap data included baseline sampling when no removal action activities were taking place, which was reviewed in the Work Plan (Anchor QEA 2010b). These data similarly indicate that the baseline upstream BaP settling sediment concentration was 270 μg/kg, which is generally much lower than the initial Project Area bedded sediment concentrations.

2.5.3 Substantial Product Observations Summary

RAO 1 in Section 3.2 of the SOW uses the presence of "substantial product" in sediments to differentiate a preference for sediment removal. This RAO is specific to the Gasco Sediments Site and was not used in the Portland Harbor Site RI/FS documents. RAO 1 for the Gasco Sediments Site requires the removal of sediments containing substantial amounts of product that may serve as potential future source of risk material, unless it can be shown that the costs of such removal are clearly disproportionate to the degree of risk reduction to be attained through physical removal as compared to other remedial options for the same material. Substantial product is identified through the application of a specific, detailed visual observations definition provided in Section 3.6.2.1 of the SOW. This section also defines methods for how the perimeter of substantial product will be defined between core observations and how substantial product will be defined and identified in riverbank areas. The definition of substantial product does not include every incidence of product observation at the Project Area.

In addition, all observations of pencil pitch and lampblack (identified as such in the upland boring logs) were also identified to help support riverbank remedial evaluations. This was only done for supporting context and not to actually define substantial product in these borings because the SOW definition of substantial product only applies to sediments below 13 feet NAVD88. None of the modifying factors in the SOW regarding depth of product below the surface were applied in identificaton of the presence of pencil pitch and lampblack. That is because the riverbank slope soils may need to be regraded to achieve stable slopes for integration with the sediments dredge prism (this may include riverbank areas that do not contain contiguous substantial product or otherwise require source control measures in order to maintain stable riverbank slopes). Rather, observations of substantial product, pencil pitch, and lampblack were identified regardless of elevation throughout the full length of the boring.

The extent of substantial product was identified through the review of all visual observations recorded on available core logs for cores collected in the initial Project Area and the top of riverbank borings occurring within approximately 30 feet of the top of the bank. This distance was judged appropriate to provide visual observation data in areas with limited borings within the actual initial Project Area.

To further support evaluations of the remedial alternatives described in Section 6.2.1, visual observations from core and boring logs were placed in three categories 1) substantial product that was solid (e.g., tar) and considered non-mobile; 2) substantial product that was in liquid form (e.g., liquid oil, saturated media, DNAPL layers) and considered potentially mobile; and 3) pencil pitch/lampblack that was considered non-mobile. The first two categories are consistent with the two primary definition criteria in Section 3.6.2.1 of the SOW. The third category (non-mobile pencil pitch/lampblack) applies only to upland boring observations and does not meet the definition of substantial product in the SOW. No observations fitting the third category were identified in core logs. Figure 2.5.3-1 presents a map showing the core and boring locations containing the two categories of substantial product and third category related to pencil pitch/lampblack in the uplands. For locations where substantial product was identified, the deepest 4-foot depth interval where such product was identified is indicated.

2.5.4 Biological Testing

Extensive biological sampling was performed by LWG throughout the Portland Harbor Site and is used in the BERA (Windward 2011b). The sampling included benthic community surveys, benthic tissue evaluations (field-collected data and laboratory-exposed organism data), and toxicity bioassays. Results of these evaluations are discussed in the Work Plan (Anchor QEA 2010b) and are used in Section 4.4.2 to determine the benthic risk areas for the Gasco Sediments Site.

Additional bioassay testing was conducted as part of the Project AIR (Anchor 2010a), as described in Appendix A and is discussed in the next subsection.

2.5.4.1 *Data Gaps Bioassay Testing*

Freshwater bioassays were performed on 20 sediment samples and four reference samples as part of the Project AIR (Anchor QEA 2010a) data gaps investigation. These bioassays were

performed to provide a line of evidence to corroborate the assessment of benthic risk in the initial Project Area. Test and reference sediment sample locations are shown on Figure 2.5.4.1-1.

Bioassay testing was conducted in two phases because the initial results for the midge bioassays were determined to be unsuitable for regulatory decision-making based on high variability within replicate test treatments and because the performance standards established for reference sediments were not met. These issues are described in Anchor QEA's March 21, 2011, memorandum to EPA and were discussed at the April 8, 2011, meeting between NW Natural and EPA (Anchor QEA 2011b). During the April 8, 2011, meeting, EPA agreed with Anchor QEA's conclusions that the midge bioassay should be rerun based on the high variability observed in the midge survival bioassay test results. EPA also agreed that the initial amphipod bioassay results were of sufficient quality for regulatory decision making and that the amphipod bioassay did not require retesting. In accordance with the April 8, 2011, agreements, additional sediment was collected from the same sample locations as during the initial phase of bioassay testing and the midge bioassay tests were rerun. Based on EPA direction, one of the reference locations was revised for the retest in order to be consistent with LWG historical reference sediment locations.

The initial and retest bioassay results are presented in Tables 2.5.4.1-1 and 2.5.4.1-2, respectively, and are detailed in Attachment 8 of Appendix A of this EE/CA. The initial amphipod bioassay results and the retest midge bioassay results meet required criteria and the results are appropriate for their intended uses. The data quality review of the initial and retest sediment bioassay tests is provided in Attachment 8 of Appendix A of this EE/CA.

Consistent with the methodology used to evaluate the Portland Harbor Site RI/FS bioassay results, sediment sample bioassay results were interpreted using the 2009 EPA Reference Envelope Approach (REA) presented in the draft Memorandum, and the draft Final BERA (Windward 2009; Windward 2011b). Employing the REA, the bioassay data were statistically compared to negative control results and numerically compared to the four effects thresholds to define the potential for toxicity. Statistically significant results within 90 percent of the REVs were classified as having non-adverse effects (Level 1); results between 80 percent and 90 percent of the REV were considered uncertain (Level 2); and responses that were less than 80 percent of the REV were considered to have adverse effects (Level 3). Toxicity test results that were not significantly different from controls were identified as Level 0.

To support the identification of the benthic risk areas (see Section 4.4.2), test sediment locations with bioassay results indicating significant toxicity were identified. As described in the Portland Harbor draft FS (Anchor QEA 2012a), significant toxicity was considered to be one Level 3 toxicity endpoint (midge survival or growth or amphipod survival or growth), or two Level 2 endpoints. For the purposes of this EE/CA, significant toxicity is designated as a "hit." The data gap sampling hit results and the level classification assigned to each of the bioassay endpoints are shown in Tables 2.5.4.1-1 and 2.5.4.1-2, and on Figure 2.5.4.1-1.

Of the 20 bioassay locations in the data gap sampling dataset, 13 are identified as toxic or as a "hit" based on exhibiting a Level 3 response or having two or more Level 2 responses (Figure 2.5.4.1-1; Tables 2.5.4.1-1 and 2.5.4.1-2). Seven stations were classified as non-toxic or "no-hit" based on exhibiting a Level 1 or Level 0 response across all endpoints, or a single Level 2 response (Figure 2.5.4.1-1; Tables 2.5.4.1-1 and 2.5.4.1-2).

During the evaluation of the retest bioassay data, several concerns associated with the midge bioassay results were identified. Variability in the replicate results for the midge survival endpoint was reduced in the retest compared to the initial results, but was still high compared to the variability observed in the amphipod test. In addition, the test sediment "hit" results were all defined based on the Level 2 and Level 3 classification of the midge bioassay results. All of the amphipod bioassay results were classified as Level 0 or Level 1 and did not contribute to the designation of a test sediment as toxic. The high variability observed in the replicate results for the midge bioassay and the lack of agreement between the midge and amphipod bioassay results, indicates that there is uncertainty in interpreting and using the the midge bioassay data. Therefore, for the determination of benthic risk areas and the evaluation of different remedial alternatives in this EE/CA, greater weight was given to the amphipod bioassay testing results.

2.5.5 Groundwater Quality

This section describes the current understanding of groundwater quality at the Gasco property based on available data. The extent of groundwater impacts is primarily discussed in terms of three representative ICs for the Gasco property: benzene, naphthalene, and cyanide (both free and total forms). Note that free cyanide is the available toxic form of cyanide in water, and therefore is the best indication of potential impacts in the Willamette River. Groundwater at the Siltronic property contains these Gasco ICs as well as CVOCs. TZW and groundwater quality impacts associated with the Siltronic property are discussed together in this section for ease of

presentation. TZW quality impacts associated with the Gasco Sediments Site Area of Interest are discussed in Section 2.5.6.

The Work Plan (Anchor QEA 2010b) contains a detailed description of the distribution of ICs in groundwater samples and summarizes the understanding of groundwater quality based on data available at that time. Siltronic collected additional groundwater data for CVOCs during the Project AIR (Anchor QEA 2010a) data gaps investigation (see Appendix A). In addition, groundwater monitoring data has been collected from wells located on the Gasco and Siltronic properties. The nature and extent of MGP impacts to groundwater (as indicated by the distribution of the ICs benzene, naphthalene, and cyanide) has not changed based on the new groundwater data. Therefore, data from the Work Plan (Anchor QEA 2010b) groundwater quality description relating to MGP impacts are summarized below. The description of CVOC impacts offshore of the Siltronic property has been updated per the additional data gaps results. Refer to Appendix G for GIS layers showing the maximum IC concentration detected in groundwater samples at each sample station.

MGP DNAPL and tar are present in several areas underlying the Gasco and Siltronic properties. The DNAPL present on both sites is a potential ongoing source of dissolved contamination in the fill and alluvial WBZs, including PAHs, BETX free cyanide, and total cyanide. The physical and chemical properties of the DNAPL are described in detail in the Gasco RI Report (HAI 2007a). The Work Plan (Anchor QEA 2010b) describes benzene, naphthalene, and cyanide groundwater quality impacts as follows:

- Isoconcentration contours depicted on Work Plan (Anchor QEA 2010b) Figures 2.9.6-4 through 2.9.6-11 show detectable concentrations of benzene, naphthalene, and cyanide present in groundwater underlying the Gasco property, with the highest concentrations detected in the southwestern portion of the property.
- Isoconcentration contours on Work Plan (Anchor QEA 2010b) Figures 2.9.6-13 to 2.9.6-18 show detectable concentration of benzene, naphthalene, and cyanide present in groundwater underlying the Siltronic property, with the highest concentrations detected in the northeastern portion of the property.
- Three-dimensional fence diagrams shown on Work Plan (Anchor QEA 2010b) Figures 2.9.6-20 through 2.9.6-22 show detectable concentrations of benzene, naphthalene, and cyanide present in offshore groundwater, with concentrations highest in samples collected closest to the shoreline and generally significant decreases in concentration with depth and distance from the shoreline.

- Dissolved phase contamination and/or DNAPL have not migrated to the basalt, as evidenced by a lack of chemical impacts such as benzene and naphthalene detected within the basal portions of the Lower Alluvial WBZ. WBZs within the basalt have not been a target of RI activities, and any such zones do not undergo routine monitoring.

The Work Plan (Anchor QEA 2010b) discusses in more detail how the distributions of these chemicals offshore of the Gasco property relate to historical impacts to surface sediments (generally indicated by shallower more elevated chemical concentrations) versus historical and likely ongoing groundwater sources (generally indicated by deeper and lower detections of the same chemicals). Refer to the Work Plan (Anchor QEA 2010b) for additional detail.

The nature and extent of CVOC impacts to groundwater and TZW quality in the Work Plan (Anchor QEA 2010b) has been updated with new data collected during the data gaps investigation. Refer to Appendix A for additional detail. A summary of key points is as follows:

- During the recent sampling, TCE was detected in five samples, cis-1,2-DCE was detected in 13 samples, and vinyl chloride was detected in 12 samples. Ten of the vinyl chloride concentrations exceeded the National Recommended Water Quality Criteria (NRWQC) for human health, consumption of organism (HH-org) (2.4 micrograms per liter [µg/L]). No other human health risk screening values or ecological risk screening values were exceeded in the TZW or in-river groundwater samples.
- While there were several vinyl chloride exceedances of the NRWQC HH-org criteria, concentrations of vinyl chloride have decreased in all but one location (GP65-W-3) since the 2004/2005 sampling event.
- Natural attenuation of TCE and its degradation products by reductive dechlorination has been confirmed as an ongoing process. Confirmation of natural attenuation is summarized in Appendix A Section 4.2.2.1.
- Based upon isoconcentration contours for cis-1,2-DCE and vinyl chloride, the lateral extent of Area 1 (shown on Figure 1.2.3-1) has been reduced respectively by 70 percent (from 0.62 acres to 0.19 acres) and 35 per cent (from 2.2 acres to 1.4 acres) since 2004/2005, respectively. TCE is not present above the NRWQC HH-org screening level value. As described in Appendix A, TCE was not detected at concentrations greater than 3 µg/L in samples collected during the Project AIR data gaps sampling, so no isoconcentration boundary was developed for TCE. The reduction in area (i.e., from 0.08 acres to 0 acres) between the two events is therefore 100 percent. (Note that the second

CVOC impacted area [Area 2, shown on Figure 1.2.3-1] is believed by Siltronic to have originated in the Siltronic stormwater sewer system as a single discharge into the Willamette River and is not groundwater source-related.)

The Rhone-Poulenc property source control evaluation, as documented in the *Draft Source Control Evaluation Report* (AMEC 2008a) describes the nature and extent of groundwater contamination in the upland portion of the Rhone-Poulenc property. The groundwater quality tables in the *Draft Source Control Evaluation Repor*t shows that groundwater samples from many of the monitoring wells on the Siltronic property have had detections in one or more wells of numerous chemicals that are sourced from the former Rhone-Poulenc property, including 2,4-D, dioxin/furans, 1,2,-dichlorobenzene, and chlorobenzene. The Work Plan (Anchor QEA 2010b) provides additional information and figures related to these groundwater impacts.

2.5.6 Transition Zone Water Quality

This section describes the current understanding of TZW quality at the Gasco Sediments Site Area of Interest based on available TZW data. Consistent with the Portland Harbor Site RI (Integral et al. 2011), TZW is defined as extending from 0 to 38 cm in the sediment bed. The extent of TZW impacts is primarily discussed in terms of three representative ICs for Gasco: benzene, naphthalene, and cyanide (both free and total forms). Note that CVOC impacts to TZW were described previously in Section 2.5.5. Per the survey conducted for and presented in the Portland Harbor Site RI, no seeps were identified at the Gasco or Siltronic properties.

The Work Plan (Anchor QEA 2010b) contains a detailed description of the distribution of ICs in TZW samples collected in the Gasco Sediments Site Area of Interest and summarizes the understanding of TZW quality, based on data available at that time. This section summarizes select points from the Work Plan (Anchor QEA 2010b) TZW quality description and provides updates to reflect the additional data gaps results. Refer to Appendix G for GIS layers showing the maximum IC concentration detected in TZW samples at each sample station, based on currently available data.

- A total of 80 individual analytes and calculated sums (total xylenes, total DDE, total DDD, total DDT, and dioxin TEQ) were identified as exceeding one or more screening criteria for results obtained on behalf of LWG and Siltronic.
- As shown on a number of Work Plan (Anchor QEA 2010b) figures, benzene, naphthalene, and cyanide are present at detectable concentrations.

- As shown on Work Plan (Anchor QEA 2010b) Figures 2.9.7-11 through 2.9.7-13, the highest concentrations of BTEX were detected offshore of the Gasco/Siltronic property line.

2.5.7 Riverbank Soils Quality

This section describes the current understanding of riverbank soil quality along the Gasco and Siltronic properties based on available soil data. Note that riverbank is defined to consist of material collected above 13 feet NAVD88 to the top of bank, based on available survey information. Due to the highly armored nature of the Gasco and Siltronic riverbanks, data density within this zone is limited. For this reason, samples collected in very close proximity of the top of bank elevation (i.e., within approximately 5 feet) were also included in the dataset to provide additional data density. However, areas landward of the top of bank will be addressed in the upland feasibility study remedy evaluation. In addition, samples collected below the 13 feet NAVD88 contour were included in the riverbank soil data set to be consistent with DEQ direction in the *Draft Meeting Summary and Next Steps* document transmitted by Dana Bayuk of DEQ to Ben Hung of Anchor QEA in an e-mail dated May 12, 2011 (DEQ 2011). However, these samples are located within the in-water portion of the Gasco Sediments Site. Sediment impacts in this area will be addressed consistent with the in-water remedy.

The results of two analyses are summarized below, the *Gasco Source Control Data Gaps Evaluation* (Anchor 2006b) and the recent riverbank soil data screen presented in Appendix H.

The majority of the Gasco and Siltronic property riverbanks are vegetated or covered with riprap. However, some locations of minimally vegetated soils and unarmored steeper banks exist along the Gasco property shoreline that could be eroded and transported to the Willamette River. The *Gasco Source Control Data Gaps Evaluation* (Anchor 2006b) evaluated bank soil quality from previous investigations to determine the chemical concentrations in bank soils. This study is reviewed in more detail in the Work Plan (Anchor QEA 2010b). Generally, the study found that PAHs and cyanide exceeded the JSCS criteria in 11 of 14 and seven of 11 samples, respectively, across the length of the shoreline evaluated. Bank soils on the Siltronic property were evaluated in the *Segment 3 Source Control Evaluation Report* (Anchor QEA 2009b) based on information from earlier studies and is summarized in the Work Plan (Anchor QEA 2010b). This report indicates that the only ICs exceeding screening levels used in that evaluation in bank soils was naphthalene.

Additional riverbank soil data was collected in 2010 during the data gaps investigation reported in Appendix A. NW Natural and DEQ recently agreed (DEQ 2012) on screening levels for 0- to 3.5-foot soils, based on ecological and human health end points and for 0- to 12-foot soils based on human health end points. These screening levels are intended to be applied to exposure point concentrations calculated based on exposure areas for risk characterization purposes. Appendix H presents a screen of riverbank soil data against these screening levels on a point-by-point basis. This screening supersedes the JSCS screening described above. The application of these levels on a point-by-point basis is a very conservative approach and was used to provide a general understanding of the range of soil quality impacts in riverbank areas. The screen results for ICs are summarized as follows:

- ICs were detected at concentrations above associated ecological and human health screening levels in all riverbank areas, except for the northwest portion of the riverbank.
- PAHs were detected the most frequently at concentrations above associated ecological and human health screening levels.
- Cyanide was detected in three samples at concentrations above the ecological screening level and in one sample at a concentration above the 0- to 12-foot soil human health screening level, but not above the 0-to 3.5-foot soil human health screening level.
- DDx was detected in one sample at a concentration above the ecological screening level. This sample was collected at the top of bank along the Siltronic shoreline.

2.6 Engineering Design Testing

This section presents a summary of the existing engineering design testing data performed on sediments and riverbank soil at the Gasco Sediments Site. A description of the testing methods and results from previous efforts are provided in the Project AIR (Anchor QEA 2010a). Additional engineering design testing procedures were conducted as part of the Project AIR (Anchor QEA 2010a) data gaps sampling, as summarized in Appendix A. Results of the previous and most recent testing are used to inform design of the sediment remedial alternatives described in Section 6.2 and are summarized as follows.

2.6.1 Toxicity Characteristic Leaching Procedure Testing

The toxic characteristic leaching potential (TCLP) is a standardized simple leaching procedure that is promulgated by federal regulation (40 Code of Federal Regulations [CFR] §261.24) and is designed to approximately simulate contaminant mobility in landfill conditions. To support waste disposal suitability evaluations for sediments in the Gasco Sediment Site Area of Interest,

TCLP testing has been conducted by the LWG as part of the Portland Harbor Site RI (Integral et al. 2011) as well as by NW Natural in 2004 during the 2005 Removal Action design characterization (Anchor 2004b), in 2009 as part of a focused TCLP investigation (Anchor QEA 2010b), and in 2010 during the Project AIR (Anchor QEA 2010a) data gaps sampling. The LWG and NW Natural 2005 and 2009 data were reviewed in the Project AIR (Anchor QEA 2010a) and are briefly summarized here. The NW Natural 2010 data are subsequently presented.

For the LWG and NW Natural 2005 and 2009 sampling, three samples out of 15 contained benzene leachate results that exceeded TCLP criteria (as defined in 40 CFR §261.24). Two of these samples were from the 2005 evaluations in materials that consisted primarily of tar. Both of these locations were removed during the 2005 Removal Action so these materials are no longer present in the Gasco Sediment Site Area of Interest.

In 2010, NW Natural submitted both riverbank soil and sediment samples for TCLP testing. Subsurface sediment samples collected from seven locations and riverbank soil samples collected from three locations were submitted for the TCLP test. The tested sediment core and soil boring intervals were selected in the field targeting material with visual observations of substantial product (i.e., conservatively targeting cores with significant visual contamination). Each sample submitted for the TCLP test was also submitted for analysis of the hazardous waste characteristics of reactivity, ignitability, and corrosivity. Tables 2-11 and 3-4 of Appendix A present the waste characterization results for subsurface sediment and riverbank soil samples, respectively. As shown in Table 2-11 of Appendix A, benzene was detected in two sediment samples at concentrations above TCLP criteria. Refer to Figure 2-3 of Appendix A for the location of these samples. As shown in Table 3-4 of Appendix A, benzene was detected in one riverbank soil sample at concentrations above the associated TCLP criteria. Refer to Figure 3-1 of Appendix A for the location of this sample. These samples were subsequently submitted for bench scale testing of stabilization additions to determine whether such treatment might reduce benzene leaching. The results of this testing is described in Section 2.6.4. None of the samples tested exhibited the other hazardous waste characteristics of reactivity, ignitability, or corrosivity.

2.6.2 Dredge Elutriate Testing

The USACE dredging elutriate test (DRET; DiGiano et al. 1995) is intended as bench scale simulation of conditions that might be present in the water column very close to the dredge

(within a few feet). This information was used to evaluate potential water quality impacts associated with dredging. DRET testing was conducted by NW Natural in 2004 as part of the 2005 Removal Action design characterization and in 2010 as part of the Project AIR (Anchor QEA 2010a) data gaps investigation. The 2004 data were reviewed in the Project AIR (Anchor QEA 2010a), and are included in additional screening described below along with screening of the NW Natural 2010 data.

DRET results from both test events were directly compared to acute ecological water quality screening values, when available, for Gasco Sediments Site ICs. Tables 2.6.2-1 and 2.6.2-2 present the results of this screening. This is a very conservative evaluation, since elutriate concentrations would be much higher within a few feet of the dredge (simulated to the DRET method) than they would be at the typical compliance monitoring distance of 100 meters from the point of construction (note that this distance was defined by EPA for use in the Portland Harbor draft FS and therefore is generally applicable to this EE/CA and maintains consistency with the Portland Harbor draft FS). Given the conservative nature of this screening, results are compared to acute water quality criteria. This comparison is used in conjunction with the results of the fate and transport modeling contained in Appendix E to evaluate the need for further analysis of potential releases during dredging dredging activities.

In 2004, NW Natural submitted samples collected from four locations for DRET testing (Anchor 2006a). As shown on Table 2.6.2-1, two PAHs (BaP and naphthalene) were detected at concentrations above the acute screening levels in the tar body samples. No COIs were detected in the visually contaminated zone samples (no tar present) at concentrations about the acute screening levels. (Note that the locations of the 2005 samples were removed during the 2005 Removal Action and these materials are no longer present in the Gasco Sediments Site Area of Interest.)

In 2010, samples were collected from seven subsurface sediment locations within the initial Project Area and submitted for DRET testing. The tested core intervals were selected in the field targeting sediment with visual observations of substantial product (i.e., conservatively targeting cores with significant visual contamination). As shown on Table 2.6.2-2, three analytes (dissolved zinc, BaP, and napthalene) were detected at concentrations above the acute screening levels.

2.6.3 Sequential Batch Leachate Test Testing

The USACE's sequential batch leachate test (SBLT; as described in Appendix D of the Upland Testing Manual [USACE 2003]) is a tool used to estimate groundwater leachate concentrations and characteristics from confined disposal facilities (CDFs). The SBLT relies less closely on disposal site-specific conditions and can establish a general desorption isotherm that is potentially applicable in a wide range of situations, including a variety of confined disposal options, as well as in-situ capping of sediments. SBLT results can thus be used to derive leaching rates and concentrations for sediment that could be disposed of in a CDF for input into CDF contaminant transport models. SBLT testing of sediment samples from the Gasco Sediments Site Area of Interest was conducted by LWG as part of the Portland Harbor Site RI (Integral et al. 2011) and by NW Natural during the Project AIR (Anchor QEA 2010a) data gaps sampling. The LWG data were reviewed in the Project AIR (Anchor QEA 2010a) and are briefly summarized here. The NW Natural 2010 data are subsequently presented.

The LWG conducted SBLT testing on sediment collected from four locations and the results are summarized in Table 4-4 of the Project AIR (Anchor QEA 2010a). Four additional SBLT tests of site sediment were performed in 2010 as part of the Data Gaps Investigation. The results are presented on Table 4-4 of the Data Gaps Investigation Report (Appendix A).

Although long-term water-quality modeling was not conducted on Gasco Sediments Site Area of Interest samples as part of the Portland Harbor draft FS (Anchor QEA 2012a), this modeling was conducted on samples collected in other areas of the Portland Harbor Site to estimate long term releases if the material was placed in a CDF.

2.6.4 Disposal Treatment Bench Scale Testing

Most of the area containing material with TCLP exceedences was removed during the 2005 Removal Action. Two sediment samples collected from the initial Project Area for the AIR contained TCLP exceedences for benzene only. Bench scale treatment testing has been conducted on samples collected from the initial Project Area to estimate the amount of reagent that would need to be mixed into the material to pass paint filter test and a bearing capacity of 1 ton per square foot (tsf) (two typical requirements for landfill disposal), and to pass the TCLP criteria. NW Natural conducted bench scale testing in 2004 as part of the 2005 Removal Action design characterization and in 2010 as part of the Project AIR (Anchor QEA 2010a) data gaps

sampling. The 2004 data were reviewed in the Project AIR (Anchor QEA 2010a) and are briefly summarized here. The 2010 data are subsequently presented and detailed in Appendix A.

During the 2005 Removal Action design characterization, it was found that approximately 5 percent (by weight) Portland cement met the 1 tsf requirement in 1 day of curing time. Note that during construction of the 2005 Removal Action remedy, 5 percent Portland cement was not sufficient to remove all free liquid. Consequently, removed material was amended with 10 percent Portland cement during construction. It should be noted that the Portland cement was added at the Gasco Sediments Site and free water was found to be liberated during barge transport to the offloading facility. This liberation would not occur if the Portland cement was added directly at the offloading facility.

Bench scale treatment testing was conducted on soil and sediment samples from one riverbank and two in-water locations as part of the Project AIR data gaps sampling (Anchor QEA 2010a) (Appendix A). The testing was conducted on sediment from locations where benzene was detected above the maximum concentration of contaminant for the TCLP criteria (described in Section 2.6.1). The soil and sediment samples were treated with three amendments: 10 percent Portland cement, 10 percent quicklime, and 5 percent quicklime. The amended samples were submitted for TCLP tests, the results of which indicate that all amended samples contained benzene at levels below TCLP criteria. Sediment and soil bench scale treatment testing results are provided in Tables 2-11 and 3-4 of Appendix A.

2.6.5 CU-Triaxial and Consolidation Testing

CU-triaxial and consolidation tests estimate the strength, pre-consolidation stress, compression ratio, recompression ratio, and coefficient of consolidation of undisturbed samples. Testing results were used in this EE/CA to support assumptions of slope stability and subgrade consolidation under the weight of a cap. Shelby tubes were collected at nine riverbank boring locations as part of the Project AIR (Anchor QEA 2010a) data gaps sampling as described in Section 3.1.1 of Appendix A. Four of the Shelby tubes were characterized by consolidated undrained triaxial test (CU-Triaxial) and two Shelby tubes were characterized by one-dimensional consolidation analysis. Table 3-5 of Appendix A presents the strength results of both methods. Table 3-6 of Appendix A presents the estimated pre-consolidation stress, compression ratio, recompression ratio, and coefficient of consolidation for both samples analyzed. The full laboratory report, including graphs, can be found in data package RT85, which is contained in Attachment 6 of Appendix A.

2.7 Streamlined Risk Evaluation

The EE/CA guidance (EPA 1993) requires a streamlined risk evaluation that is "…intermediate in scope between the limited risk evaluation undertaken for emergency removal actions and the conventional baseline risk assessment normally conducted for remedial actions." Detailed Portland Harbor-wide baseline risk assessments that include the Gasco Sediments Site have already been completed and are currently in EPA review for both human health and ecological receptors. Therefore, this streamlined risk evaluation builds off of the results of the draft Portland Harbor draft final baseline risk assessments (Windward 2011) and presents an evaluation consistent with the baseline risk assessments and the Portland Harbor draft FS (Anchor QEA 2012a). This approach adheres to the Gasco Sediments Site SOW, which states that this EE/CA should be consistent with both the Portland Harbor Site risk assessment procedures and draft FS in identifying significant exposure pathways, COCs and Preliminary Remediation Goals (PRGs). This streamlined risk evaluation uses the available information from the Portland Harbor Site risk assessments and draft FS to focus on contaminants; to compare Gasco Sediments Site data to site-specific PRGs in order to provide a human health and ecological screening; and to further evaluate potential ecological exposure using additional benthic data in a manner consistent with the Portland Harbor draft FS comprehensive benthic risk approach (Anchor QEA 2012a). This approach eliminates the need to present a less-detailed preliminary screening type of evaluation for the Gasco Sediment Site cleanup. Each evaluation consistent with the Portland Harbor Site process is summarized as follows.

For a typical site that does not have expansive baseline risk assessment information available, a streamlined risk evaluation approach would consist of a more general type of screening of site data using existing non site-specific screening levels, similar to that conducted for the EE/CA associated with the 2005 Removal Action (Anchor 2005). A more general, less site-specific screening of Gasco Sediment Site data such as this has been conducted in the Project AIR (Anchor QEA 2010a). However, the primary source of information for the streamlined risk evaluation is the site-specific and comprehensive Portland Harbor draft final risk assessments and draft FS. This is consistent with the requirements set forth by EPA (1993) for streamlined risk evaluations, which state that they should be consistent with any future remedial actions to be taken to achieve risk goals as discussed in Section 1.2.5.

2.7.1 Identification of ICs Evaluated in Streamlined Risk Evaluation

As summarized in Section 2.5, ICs for the Gasco Sediments Site include chemicals identified in the Gasco Sediments Site SOW and for upland Gasco and Siltronic property source controls, as well as the list of chemicals currently identified as COCs for the Gasco Sediments Site portion of the Portland Harbor Site. Subsets of these ICs were selected and used in the human health and ecological screening for sediments and riverbank soils following methods discussed in the following subsections.

2.7.2 Screening of Gasco Site Data with Portland Harbor Site-Specific PRGs

The Portland Harbor Site draft final Baseline Human Health Risk Assessment (BHHRA) and BERA identified chemicals in sediments, surface water, biota, and TZW, and the pathways by which humans, fish, wildlife, and certain other ecological receptors could be exposed to those contaminants at levels exceeding acceptable limits. The draft final BHHRA and BERA provided quantitative estimates of risk and the related uncertainties and also identified those exposure scenarios and chemicals that were the primary contributors to overall risks, consistent with EPA guidance. Chemicals identified as posing potentially unacceptable risks in the draft final BHHRA and BERA have been carried forward into the Portland Harbor draft FS (Anchor QEA 2012a). The sediment screening evaluations presented below are conducted for those chemicals posing potentially unacceptable risk that have Portland Harbor Site PRGs.

It should also be noted that risk management recommendations for all the contaminants posing potentially unacceptable risks for the Portland Harbor Site are presented in the *Portland Harbor RI/FS Risk Management Recommendations* report (Kennedy/Jenks and Windward Environmental 2011). A subset of the contaminants posing potentially unacceptable risks was identified in the risk management recommendations as COCs, which were then used for purposes of developing and evaluating remedial alternatives in the Portland Harbor draft FS. Consequently, the screening conducted below includes many chemicals that were not recommended as COCs for the Portland Harbor Site, but are used in the screening for completeness and consistency with the PRGs presented in the Portland Harbor draft FS.

Section 5.9 of the Portland Harbor draft FS evaluates the spatial distribution of all Portland Harbor draft FS PRGs. This evaluation included the Gasco Sediments Site AOPC and provides a detailed screening of data in the Gasco Sediments Site Area of Interest. This evaluation used the Portland Harbor draft FS database, which does not include all available data in the Gasco

Sediments Site Area of Interest (e.g., it excludes long-term pilot cap monitoring data and data recently collected as part of the Project AIR [Anchor QEA 2010a]). However, the evaluation conducted for the Portland Harbor draft FS is more than sufficient for the purposes of this EE/CA to present a streamlined evaluation of potential risk for the initial Project Area (and maintains consistency with the Portland Harbor draft FS per the SOW).

Many PRGs presented in the Portland Harbor draft FS (Appendix Da of the Portland Harbor draft FS) are below background or less than zero[1] and are therefore unachievable. Conversely, some PRGs are higher than current conditions, and thus are already achieved at the Portland Harbor Site. Per EPA agreement, PRGs less than zero, below background, and/or inconsistent with the findings of the draft final risk assessments (i.e., above current concentrations) were not evaluated in the Portland Harbor draft FS or the evaluation presented here.

Figures 2.7.2.2-1 and 2.7.2.2-2 present a focused view of the Gasco Sediments Site Area of Interest similar to Figure 5.9-1 of the Portland Harbor draft FS and show where the PRGs above background and consistent with the risk assessments (for COCs where a PRG could be developed) tend to map due to sediment concentrations currently exceeding these values. The brighter colors on these figures indicate the locations where more of the PRG exceedance areas overlap. These figures are slightly modified from the Portland Harbor draft FS version to exclude one data point in the navigation channel that was resampled for the EE/CA data collection and showed very low levels of PAHs (as compared to the Portland Harbor dataset, which shows very high levels of PAHs at this location based on low quality data collected in 1997). Also, Figures 2.7.2.2-1 shows all of the PRG exceedances in Figure 5.9-1 of the Portland Harbor draft FS, while Figure 2.7.2.2-2 shows just those PRGs exceedances associated with Gasco Sediments Site-related COIs (i.e., this figure includes all of the ICs listed in Section 2.5.1.2, excluding PCBs, DDx, BHCs, and Endrin Ketone).

Also, recommended comprehensive benthic risk areas were identified through the comprehensive benthic approach in the Portland Harbor draft FS. Per Section 4.4.2 below, the comprehensive benthic risk approach indicates that risks to benthic receptors do exist in the initial Project Area.

[1] A PRG of "less than zero" is obtained when risk thresholds are exceeded when the contaminant concentration in sediment is set to zero, thus making a PRG essentially incalcuable. This occured for some COCs in human health tissue consumption-based PRGs that use sediment-tissue relationship models to derive the PRG.

Based on these results, there are PRG exceedances and benthic toxicity areas present within the initial Project Area indicating potentially unacceptable risk. Further, as shown in Figure 2.7.2.2-2, for those chemicals that are related to Gasco and Siltronic operations, there is a close concordance between the number of PRGs exceeded and the initial Project Area developed in the Final Project AIR (Anchor QEA 2010a) and refined in this EE/CA. To maintain consistency with the Portland Harbor draft FS, the interim Project Area, and SMAs, this EE/CA uses a smaller list of "bounding ICs" to delineate the interim Project Area and develop SMAs.

2.7.3 Screening of Gasco Site Data for Potential Riverbank Exposures

Riverbank exposures were not evaluated as part of the Portland Harbor draft FS (Anchor QEA 2012a). Areas of contamination residing above an elevation of 13 feet NAVD88 are evaluated on a site-specific basis in coordination with DEQ as part of upland risk assessment and source control efforts consistent with the Portland Harbor Memorandum of Understanding (MOU). Consequently, sediment PRG screening or similar methods cannot be used to evaluate potential riverbank exposures for the Gasco Sediments Site, which per Section 4.2, includes the riverbank up to the flat portions of the Gasco and Siltronic properties.

For this EE/CA, in accordance with the SOW, riverbank data for all ICs in Section 2.5.1.2 were screened against relevant upland (soil-based) screening levels to assess potential risks from exposures to bank soils by humans and upland ecological receptors as summarized in Appendix H. Relevant screening levels were obtained from the Gasco upland risk assessment process as of the date of this EE/CAand are presented in Table 2-1 of Appendix H. The lowest of these criteria for each IC were compared to two riverbank datasets (0- to 3-feet below ground surface [bgs] for occupational exposures and ecological exposures and 3- to 12-feet bgs for excavation worker exposures) that are consistent with the human health and ecological exposure scenarios evaluated in the upland risk assessment.

The revised Gasco property upland risk assessment will evaluate riverbank soils data integrated with upland soil data so that exposure point concentrations will be calculated using the combined riverbank and upland soils data sets. Riverbank data used in this EE/CA screening is generally consistent with the upland risk assessment data set from the top of bank down to 13 feet NAVD88. Refer to Section 2.5.7 and Appendix H for additional detail on the dataset screened. Figures 3-1 through 3-3 in Appendix H present the data locations and results of the screening at each location. Tables 3-1 through 3-3 in Appendix H provide the screening results. In general, the human health and ecological riverbank screening results in Appendix H indicate

that upland soil-based screening levels are exceeded for 2-methylnapthalene, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, BaP, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h,)anthracene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, low-molecular-weight PAHs (LPAHs), high-molecular-weight PAHs (HPAHs), naphthalene, phenanthrene, pyrene, endrin ketone, DDD, DDx, zinc, and cyanide with the highest exceedances and greatest number of exceedances occurring along the Gasco portion of the shoreline and generally lower exceedances occurring along the Siltronic portion of the shoreline.

These riverbank results are intended for screening purposes only and are not to be interpreted as results of a more detailed risk assessment that would be more accurately indicative of potential risk. This screening is conservative because data are screened on a point basis that may not represent exposure concentrations that should be calculated on a large spatial scale (e.g., the Gasco upland risk assessment screening is being conducted using exposure concentrations calculated over larger upland areas related to likely human health and ecological exposure scenarios, not each individual soil sample location). This screening is intended to support the overall EE/CA recommendations concerning remedial action for portions of the riverbank soils, and provides a general indication of riverbank areas that are more likely or less likely to pose potentially unacceptable risks for certain ICs.

3 REMEDIAL ACTION OBJECTIVES AND ARARS

This section presents RAOs and ARARs for the Gasco Sediments Site. Per EPA guidance (1988, 2005) RAOs are typically developed early in a project and then refined as the project progresses. Consistent with guidance, the following subsections review the existing RAOs for the Gasco Sediments Site as presented in the SOW and then propose refinements of those RAOs based on the most current information from the Portland Harbor draft FS (Anchor QEA 2012a) process to maintain consistency with the harbor process per the SOW. The performance goals and methods for measuring attainment of the refined RAOs are then discussed. Finally, ARARs for the project are briefly reviewed.

3.1 SOW Remedial Action Objectives

The SOW contains the following RAOs:

1. **Substantial Product:** Removal of sediments containing substantial amounts of product (e.g., solid "tar" and non-aqueous phase liquid [NAPL]) that may serve as potential future source of risk material, unless it can be shown that the costs of such removal are clearly disproportionate to the degree of risk reduction to be attained through physical removal as compared to other remedial options for the same material. "Substantial" is defined in Section 3.6.2.1 of the SOW.
2. **Human Health Sediments:** Reduce human health risks to acceptable levels from direct contact with and incidental ingestion of COCs in Project Area sediments.
3. **Human Health Biota Ingestion:** Reduce COC concentrations in Portland Harbor Site sediments to levels that would result in acceptable risks to humans that eat fish and shellfish from Portland Harbor in the absence of other sources of chemicals in the Willamette River.
4. **Human Health Surface Water:** Reduce COC fluxes from Portland Harbor Site sediments such that human health risks would be at acceptable levels for direct contact with and incidental ingestion of Site surface water in the absence of other sources of chemicals in the Willamette River.
5. **Ecological Sediments and Biota Ingestion:** Reduce ecological risks to acceptable levels from contact with and ingestion of COCs in Portland Harbor Site sediments or prey from the Portland Harbor Site in the absence of other sources in the Willamette River.
6. **Ecological Surface Water:** Reduce COC fluxes from Portland Harbor Site sediments such that ecological risks would be at acceptable levels for direct contact with and

ingestion of site surface water in the absence of other sources of chemicals in the Willamette River.

7. **Contaminant Migration:** Reduce the migration of contaminants at unacceptable levels from the Portland Harbor Site to the Willamette River.
8. **Recontamination:** Reduce COC fluxes through Portland Harbor Site sediments so that recontamination of Portland Harbor Site sediments to unacceptable levels does not occur.

3.2 Portland Harbor Draft FS RAOs

Per the SOW, as RAOs in the Portland Harbor Site RI/FS process are refined, the RAOs for the Gasco Sediments Site will be updated to maintain consistency with the Portland Harbor process. The goal of these updates is to follow the intent of the SOW RAOs identified in Section 3.1 and, at the same time, make them as consistent as possible with the Portland Harbor Site RAOs.

EPA has identified eight RAOs for the Portland Harbor draft FS, as identified in its RAOs letter to the LWG dated September 30, 2009. These RAOs were used to evaluate remedial action alternatives in the Portland Harbor draft FS, and thus represent the most recent and up-to-date Portland Harbor Site RAOs for consideration in Gasco Sediment Site RAO refinements. These RAOs are presented below in bold, with additional considerations relevant to the Gasco Sediments Site.

RAO 1 – Human Health Sediment Exposure: Reduce to acceptable levels human health risks from exposure to contaminated sediments resulting from incidental ingestion of and dermal contact with sediments, and comply with identified ARARs.

This RAO applies to direct human health sediment exposure scenarios found to have an unacceptable risk. The goal for this RAO is to reduce risks to human health from contaminant concentrations in contaminated sediments through sediment remedies at the Site, comply with chemical-specific ARARs identified for the Site, and protect beneficial uses of the Willamette River at the Portland Harbor Site. No chemical-specific sediment ARARs have been identified for the Portland Harbor Site.

Reasonable Maximum Exposure (RME) cancer risks from direct contact with and incidental ingestion of in-water sediment exceed 1×10^{-5} for Tribal fishers. Per the BHHRA

(Kennedy/Jenks 2011), this finding applies to shoreline sediments outside of the navigation channel, which represents the likely exposure area for this scenario. Dioxins/furans and carcinogenic PAHs (cPAHs) are the primary contributors to risk under this exposure scenario and are recommended COCs. Non-cancer hazard quotients (HQs) are greater than one for the Tribal fisher due to dioxins/furans and for breastfeeding infants of Tribal fishers, non-Tribal fishers, in-water workers, and wet-suited divers due to PCBs and dioxins/furans. Sediment RGs developed for dioxins/furans (in RM 7 West) and benzo(a)pyrene equivalents (BaPEq; in RM 6 West) are used in the Portland Harbor draft FS (Anchor QEA 2012a) to develop and evaluate remedial alternatives. RGs based on breastfeeding infants were not developed in accordance with agreements with EPA (verbal agreement in October 15, 2010, EPA-LWG meeting).

RAO 2 – Human Health Fish and Shellfish Consumption: Reduce to acceptable levels human health risks from indirect exposures to COCs through ingestion of fish and shellfish that occur via bioaccumulation pathways from sediment and/or surface water and comply with identified ARARs.

This RAO applies to fish and shellfish consumption scenarios found to have an unacceptable risk. The goal is to reduce risks to human health through sediment remedies that protect humans from indirect exposures to contaminants through eating fish and shellfish exposed to contaminants via bioaccumulation and bioconcentration, comply with chemical-specific ARARs identified for the Portland Harbor Site (as discussed more below), and protect the beneficial uses of the Willamette River at the Portland Harbor Site. This RAO is expected to contribute to the reduction of Portland Harbor PCB fish consumption advisories. Upstream background concentrations of PCBs in surface water and suspended sediment entering the Site are likely to cause fish consumption risks exceeding 1×10^{-6} according to site-specific bioaccumulation modeling (Windward 2009).

PCBs contribute the majority of the total potential cancer risk for the fish tissue consumption pathway (both whole body and fillet tissue) on a Site-wide exposure area basis, and are the primary contributor to risk under this exposure scenario. Dioxins and furans are the secondary contributor to risk that occurs on a Portland Harbor Site-wide basis. Total DDx had a greater contribution to the cumulative risk on a localized basis only for RM 7. For the fish tissue consumption exposure pathway, PCBs, dioxin/furans, and total DDx are recommended COCs. However, the extent to which shellfish consumption occurs or will reasonably occur in the future within the Site is unknown. Significant uncertainties related to risk estimates for

shellfish consumption include assumptions about the shellfish species consumed, exposure duration, ingestion rates, spatial scale of exposure areas, and use of undepurated tissue in risk estimates. Therefore, the Portland Harbor draft FS concluded that there is insufficient evidence of risk from the consumption pathway associated with illegally harvested invasive clams to contribute to determination of SMAs. Nonetheless, the Portland Harbor draft FS (Anchor QEA 2012a) does evaluate the extent to which each alternative attains contaminant concentrations in sediments that can be compared to clam consumption related sediment PRGs, which are provided below and in Appendix Da of the Portland Harbor draft FS.

Because of upstream loads of several contaminants, Portland Harbor Site sediment remedies by themselves will not result in the achievement of surface water concentrations at the Portland Harbor Site below all potential surface water ARARs related to fish consumption. Other contaminant reduction efforts conducted under other regulations and programs within the Willamette River watershed would be necessary to achieve these surface water criteria.

RAO 3 – Human Health Surface Water Exposure: Reduce risks from COCs in surface water at the Site to acceptable exposure levels that are protective of human health risks from ingestion of, inhalation of, and dermal contact with surface water; protect the drinking water beneficial use of the Willamette River at the Site; and comply with identified ARARs.

This RAO applies to direct human health surface water exposure scenarios found to have a potentially unacceptable risk and the protection of the drinking water beneficial use of the Willamette River. The goal is to reduce risks from contaminant concentrations in surface water, to the extent practicable, through sediment remedies that protect humans from the ingestion of and dermal contact with surface water, comply with chemical-specific ARARs identified for the Portland Harbor Site, and protect the beneficial uses (domestic/private water supply) of the Willamette River at the Portland Harbor Site. Although the BHHRA (Kennedy/Jenks 2011) identified potential localized cancer risks exceeding 1×10^{-4}, based on the weight of evidence, potentially unacceptable risk from existing and likely future surface water exposures at the Site were not identified in the LWG's risk management recommendations. Similarly, as noted below, none of the surface water samples exceed drinking water standards. Therefore, remedial alternatives do not need to be evaluated relative to this RAO, because the RAO is already being achieved. Nonetheless, the LWG has agreed to evaluate remedial alternatives relative to some specific water criteria that EPA has directed as noted below.

EPA has identified maximum contaminant levels (MCLs) as potential chemical-specific ARARs for surface water at the Portland Harbor Site[2]. EPA has also specified that depth-integrated water column samples should be used when evaluating compliance of surface water with drinking water ARARs (EPA 2010). None of the contaminant concentrations in depth-integrated water column samples from the Study Area exceed MCLs. Additionally, domestic water supply has not been identified as a current or reasonably likely future use of surface water in the Willamette River within Portland Harbor.

RAO 4 – Human Health Groundwater Exposure: Reduce to acceptable levels human health risks resulting from direct exposure to contaminated groundwater and indirect exposure to contaminated groundwater through fish and shellfish consumption, and comply with identified ARARs.

This RAO applies to human health risks via exposure to contaminated groundwater plumes. These risks include indirect exposure to contaminants in groundwater plumes discharging to the Willamette River that were found to have an unacceptable risk in the BERA (Windward 2011b), based on fish and shellfish consumption. Groundwater plumes will be controlled to achieve ARARs and risk-based RGs through upland source control actions such as the hydraulic control and containment (HC&C) system currently under construction at the Gasco and Siltronic sites. The goal for this RAO is to reduce potentially unacceptable risks to human health from contaminant concentrations in contaminated groundwater through sediment remedies at the Site to the extent feasible, comply with chemical-specific ARARs identified for the Portland Harbor Site, and protect beneficial uses of groundwater and the Willamette River at the Portland Harbor Site. However, it is understood that sediment remedies cannot have any direct impact on upland sources, which remain the primary mechanism for reducing potentially unacceptable risks from groundwater plumes to in-water receptors. Therefore, this RAO only applies to groundwater plumes downgradient of the upland source control measure.

Indirect exposure to contaminants in groundwater plumes discharging to the Willamette River was not explicitly evaluated in the BHHRA (Kennedy/Jenks 2011). As described under RAO 2, the recommended COCs for the fish tissue and shellfish consumption human exposure

[2] The LWG disagrees that MCLs are ARARs against which the surface water itself should be measured, because, under OAR 340-041-0340 Table 340A, the beneficial use designation of the Willamette River for domestic water supply assumes adequate pre-treatment will be applied. Therefore, the LWG believes that direct application of MCLs to individual, untreated surface water samples at the Site is inappropriate. This analysis was, nonetheless, carried through in the Portland Harbor draft FS as directed by EPA.

pathways are PCBs, dioxin/furans, cPAHs, and total DDx. However, as discussed in the Portland Harbor Site draft final RI, it is difficult to differentiate between impacts to TZW from groundwater plume discharges and those associated with sediment partitioning processes, so no conclusions have been made regarding indirect exposures to fish and shellfish consumers from contaminants in groundwater plumes.

Risks from direct exposures to groundwater seeps were evaluated in the BHHRA for exposure by a transient. Note that groundwater seeps have not been identified at the Gasco Sediments Site by the Portland Harbor RI or other investigations.

EPA has identified Oregon Water Quality Standards (WQS) for fish consumption and NRWQC for human health consumption of aquatic organisms as potential chemical-specific ARARs for TZW at the Portland Harbor Site. EPA has also identified MCLs as potential chemical-specific ARARs for groundwater (including TZW) at the Portland Harbor Site. The LWG disagrees that these ARARs are applicable to TZW, but was directed to evaluate remedial alternatives in the Portland Harbor draft FS (Anchor QEA 2012a) relative to these criteria.

RAO 5 – Ecological Sediment Exposure: Reduce to acceptable levels the risks to ecological receptors resulting from the ingestion of and direct contact with contaminated sediments and comply with identified ARARs.

This RAO applies to all ecological receptors found to have an unacceptable risk via direct sediment exposure. The goal is to reduce potentially unacceptable risks to ecological receptors from contaminant concentrations in contaminated sediments through sediment remedies at the Portland Harbor Site; prevent unacceptable effects on the survival, growth, and reproduction of ecological receptors at the Site, and comply with chemical-specific ARARs identified for the Portland Harbor Site. No chemical-specific sediment ARARs have been identified for the Site.

No unacceptable risks to fish, wildlife, amphibians, or aquatic plants resulting from the ingestion of and direct contact with contaminated sediments were identified in the BERA (Windward 2011b). The BERA found potentially unacceptable risks to the benthic community in some areas, which were identified as comprehensive benthic risk areas. Recommended sediment COCs for the benthic community include PAHs, PCBs, and total DDx.

RAO 6 – Ecological Prey Ingestion: Reduce to acceptable levels risks to ecological receptors from indirect exposures through ingestion of prey to COCs in sediments via bioaccumulation pathways from sediment and/or surface water and comply with identified ARARs.

This RAO applies to all ecological receptors found to have an unacceptable risk in the BERA through ingestion of prey. The goal is to reduce risks from contaminants through sediment remedies that protect ecological receptors from exposures to contaminants through consumption of fish and shellfish, benthic organisms, and other prey items exposed to contaminants via bioaccumulation and bioconcentration, comply with chemical-specific ARARs identified for the Portland Harbor Site, and protect the beneficial uses of the Willamette River at the Portland Harbor Site. This RAO is expected to contribute to reduction of prey ingestion related ecological risks through reduction in sediment chemical contributions to fish tissue. It is recognized that reduction of and elimination of these risks can only be achieved when conducted in conjunction with other Portland Harbor Site source control efforts conducted under other regulations and programs within the Willamette River watershed, as described below for Management Goal 1 (source control).

No Gasco Sediment Site-related contaminants were identified in the BERA as potentially posing unacceptable risk to ecological receptors through ingestion of prey. The risk management recommendations in the BERA identified PCBs and total Toxic Equivalent Quotient (TEQ) as COCs likely posing unacceptable risk to birds and mammals via indirect exposure through ingestion of prey.

RAO 7 – Ecological Surface Water Exposure: Reduce risks from COCs in surface water at the site to acceptable exposure levels that are protective of ecological receptors based on the ingestion of and direct contact with surface water and comply with identified ARARs.

This RAO applies to all ecological receptors found to have an unacceptable risk through exposure to surface water. The goal is to reduce potentially unacceptable risk from contaminant concentrations in surface water to the extent practicable as discussed above, through sediment remedies that prevent unacceptable effects on survival, growth, and reproduction of ecological receptors; comply with identified chemical-specific ARARs; and protect the beneficial uses of the Willamette River.

No unacceptable risks to fish, wildlife, amphibians, or aquatic plants resulting from the ingestion of and direct contact with surface water were identified in the BERA (Windward 2011b). Surface water was used as a supporting LOE in the comprehensive benthic evaluation; however, no surface water COCs for the benthic invertebrates were identified in the BERA risk management recommendations. Therefore, remedial alternatives do not need to be evaluated relative to this RAO, because the RAO is already being achieved. Nonetheless, the Portland Harbor Site draft FS evaluates remedial alternatives relative to some specific water criteria that EPA has directed, and a similar approach is used in this EE/CA.

RAO 8 – Ecological Groundwater Exposure: Reduce to acceptable levels the risks to ecological receptors resulting from the ingestion of and direct contact with contaminated groundwater and indirect exposures through ingestion of prey via bioaccumulation pathways from groundwater, and comply with identified ARARs.

This RAO applies to all ecological receptors found to have an unacceptable risk via exposure to contaminated groundwater plumes discharging to the Willamette River and through ingestion of prey with the understanding that groundwater plumes will be controlled to achieve ARARs and risk-based remediation goals through upland source control actions. The goal is to reduce potentially unacceptable risks to ecological receptors from contaminant concentrations in contaminated groundwater through sediment remedies at the Portland Harbor Site to the extent feasible; prevent unacceptable effects on the survival, growth, and reproduction of ecological receptors at the Portland Harbor Site; and comply with chemical-specific ARARs identified for the Portland Harbor Site. However, it is understood that sediment remedies cannot have any direct impact on upland known sources, which remain the primary mechanism for reducing risks from groundwater plumes to in-water receptors. Therefore, this RAO would only apply to groundwater plumes downgradient of the upland source control measure.

The BERA screened point concentrations of contaminants detected in TZW against EPA-specified water quality criteria and conservatively assumed that exceedance of a screening value represented potentially unacceptable risk. No further risk assessment for TZW beyond this screening level assessment was conducted by the LWG. For aquatic receptors exposed via TZW, 4,4'-DDT, total DDx, chlorobenzene, benzo(a)anthracene, BaP, naphthalene, carbon disulfide, cyanide, cis-1,2-dichloroethene, and TCE are the recommended TZW COCs at

particular AOPCs within the Portland Harbor Site[3]. There is considerable uncertainty as to whether some of the contaminants in TZW are truly associated with upland groundwater plumes; in particular, 4,4'-DDT, total DDx, and some of the PAHs[4] in some areas, are likely to be associated with sediment particulates rather than migrating groundwater plumes. Those TZW COCs associated with upland groundwater at the Gasco or Siltronic properties are not bioaccumulative, and so the portion of RAO 8 related to indirect exposure through ingestion of prey is already met at the Gasco Sediments Site.

EPA has identified Oregon freshwater chronic aquatic life WQS and NRWQC freshwater chronic aquatic life values as potential chemical-specific ARARs for TZW at the Portland Harbor Site. The LWG disagrees that these ARARs are applicable to TZW. However, remedial alternatives are evaluated in the Portland Harbor draft FS (Anchor QEA 2012a) against these criteria as EPA directed.

3.2.1 Portland Harbor Management Goals

EPA also identified three management goals for the Portland Harbor Site, as identified in EPA's RAOs letter to LWG, dated September 30, 2009. EPA defined the management goals as those that must be evaluated in the Portland Harbor draft FS (Anchor QEA 2012a) to ensure a successful remedy and that will require integration with other regulatory mechanisms to implement. These management goals are reviewed in the Portland Harbor draft FS and include goals relevant to 1) compatibility of sediment remedies with source control efforts; 2) minimization of long-term transport of COCs downstream of the Portland Harbor Site; and 3) cleanup remedies that promote habitat and support a healthy aquatic ecosystem. EPA anticipates that these regulatory mechanisms will include but are not limited to State of Oregon Water Quality and Environmental Cleanup programs. EPA does not expect specific, numeric PRGs and remediation goals to be developed for these management goals by the LWG for their part in developing the Portland Harbor draft FS for the in-water portion of the Portland Harbor Site. EPA expects that upland source control measures will be the primary actions for protecting beneficial uses of groundwater, including potential water supply use, and that such controls will be conducted to achieve RAOs established for the in-river portion of the Portland Harbor Site.

[3] Of these, benzo(a)anthracene, BaP, naphthalene, cyanide, cis-1,2-dichloroethene, and TCE are TZW COCs for the Gasco Sediments Site, specifically.

[4] Specifically, for the Gasco Sediments Site, it is unclear whether PAHs are likely to be associated with sediment particulates or migrating groundwater plumes.

3.3 Refined Remedial Action Objectives

As discussed in the previous sections, based on SOW RAOs and the most recent Portland Harbor Site RAOs, the SOW RAOs are refined here to follow the intent of the SOW RAOs while maintaining consistency with the Portland Harbor Site RAOs. A comparative summary of these RAOs is provided in Table 3.3-1. On this basis, the proposed refined RAOs for the Gasco Sediments Site are presented below. The primary refinement is to reflect concerns about groundwater fluxes to the river (expressed in the original SOW RAOs) to be consistent with the terminology of the groundwater RAOs developed for Portland Harbor.

1. **Substantial Product**: Removal of sediments containing substantial amounts of product (e.g., solid "tar" and/or DNAPL) that may serve as potential future source of risk material, unless it can be shown that the costs of such removal are clearly disproportionate to the degree of risk reduction to be attained through physical removal as compared to other remedial options for the same material. "Substantial" is defined in Section 3.6.2.1 of the SOW.
2. **Human Health Sediments**: Reduce to acceptable levels human health risks resulting from incidental ingestion of and dermal contact with COCs in contaminated sediments.
3. **Human Health Biota Ingestion**: Reduce to acceptable levels human health risks from indirect exposures to COCs through ingestion of fish and shellfish that occur via bioaccumulation pathways from sediment and/or surface water in the absence of other sources of chemicals in the Willamette River.
4. **Human Health Surface Water**: Reduce COC fluxes from Portland Harbor Site sediments to reduce risks from COCs in surface water at the Portland Harbor Site to acceptable exposure levels that are protective of human health risks from ingestion of, inhalation of, and dermal contact with surface water in the absence of other sources of chemicals in the Willamette River.
5. **Human Health Groundwater**: Reduce to acceptable levels human health risks resulting from direct exposure to COCs in contaminated groundwater and indirect exposure to COCs in contaminated groundwater through fish and shellfish consumption.
6. **Ecological Sediments**: Reduce to acceptable levels the risks to ecological receptors resulting from the ingestion of and direct contact with COCs in contaminated sediments.
7. **Ecological Biota (Prey) Ingestion**: Reduce to acceptable levels risks to ecological receptors from indirect exposures to COCs through ingestion of prey that occur via

bioaccumulation pathways from sediment and/or surface water in the absence of other sources in the Willamette River.

8. **Ecological Surface Water**: Reduce COC fluxes from Project Area sediments to reduce risks from COCs in surface water in the Project Area to acceptable exposure levels that are protective of ecological receptors based on the ingestion of and direct contact with surface water in the absence of other sources in the Willamette River.
9. **Ecological Groundwater**: Reduce to acceptable levels the risks to ecological receptors resulting from direct contact with COCs in contaminated groundwater and indirect exposures to COCs in contaminated groundwater through ingestion of prey.

Note that the SOW RAOs included separate RAOs that relate to preventing migration from and recontamination of the Gasco Sediments Site from upland or other sources. The above RAOs have been modified to be consistent with the Portland Harbor Site RAOs, where recontamination and migration potential and is evaluated as one component of the overall long-term effectiveness of each alternative as assessed through attainment of the above RAOs, and in concert with upland and upstream source controls. Thus, in Sections 7 and 8 of this EE/CA, both recontamination potential and the potential for downstream migration of contaminants are specifically addressed in the subsections presenting the long-term effectiveness evaluation of each alternative. In addition, it should be recognized that recontamination from all potential sources, both nearby upland as well as harbor-wide sources, are evaluated in this EE/CA.

Per the SOW, definitions of terms such as "reduce risks" and "acceptable levels" are intended to be consistent with the Work Plan (Anchor QEA 2010b) or as modified by the Portland Harbor Site RI/FS process. COCs are defined as those chemicals related to historical and present Gasco Sediments Site sources that are found to pose risk in the Project Area following methods consistent with the Portland Harbor Site risk assessment process. The final Portland Harbor Site Record of Decision (ROD) will select performance standards and cleanup levels based on protectiveness and compliance with ARARs. The Portland Harbor draft FS (Anchor QEA 2012a) also considers "background" following EPA guidance (EPA 2002a) on the use of background in RI/FS evaluations and other relevant EPA Superfund guidance, and this information is carried into this EE/CA relative to evaluation of the attainment of RAOs.

Section 3.2 of the SOW recognizes that "removal of all product in sediments is not necessary to meet this objective [RAO 1] and may not be technically feasible given practical limitations of sediment removal." Feasibility of product removal is evaluated in Section 5.6

3.4 RAO Performance Goals and Measurements

RAO performance goals and measurements are reviewed below for each of the refined RAOs.

RAO 1 –Substantial Product: Removal of sediments containing substantial amounts of product (e.g., solid "tar" and/or DNAPL) that may serve as potential future source of risk material, unless it can be shown that the costs of such removal are clearly disproportionate to the degree of risk reduction to be attained through physical removal as compared to other remedial options for the same material. "Substantial" is defined in Section 3.6.2.1 of the SOW.

The performance goals and measurement methods for substantial product are defined in the SOW. The general performance goal for assessing alternatives is that after implementation, instances of substantial product that may serve as a potential future source of risk would no longer be present at the Project Area, except where there is a disproportionate cost for such removal per the SOW. In cases where cost was found to be disproportionate, effective containment of the substantial product such that the other RAOs goals and measures (discussed below) are attained would determine attainment of RAO 1. The measurement method is also well defined and uses visual observations of cores, which are compared against the substantial product definition. The SOW also specifies that the perimeter of substantial product extents will be defined by the outer perimeter of cores that do not contain substantial product.

RAO 2 – Human Health Sediments: Reduce to acceptable levels human health risks from resulting from incidental ingestion of and dermal contact with COCs in contaminated sediments.

Performance relative to this RAO is determined by comparing chemical concentrations in surface sediments expected for various remedial alternatives to RGs from the Portland Harbor draft FS (Anchor QEA 2012a) that represent acceptable levels of human health risk from direct contact with and incidental ingestion of sediments.

The measurement methods include the specific RG cancer risk levels, percentile estimates of RGs specified in the Portland Harbor draft FS. Specifically, benzo[a]pyrene equivalents (BaPEq) RGs for human health direct contact with sediment using exposure assumptions in the BHHRA

(Kennedy/Jenks 2011) for a cancer risk level of approximately 10^{-6} will be used to determine attainment of this RAO. These RGs are compared to estimated sediment concentrations in EE/CA alternatives in the 0- to 30-cm depth layer using surface-area weighted average concentrations (SWACs) calculated over shoreline half RMs, which represent those areas where direct contact exposure to sediments was found to be a known and significant pathway in the BHHRA (i.e., excluding areas in the Willamette River navigation channel).

RAO 3 – Human Health Biota Ingestion: Reduce to acceptable levels human health risks from indirect exposures to COCs through ingestion of fish and shellfish that occur via bioaccumulation pathways from sediment and/or surface water in the absence of other sources of chemicals in the river.

Performance relative to this RAO in the EE/CA would be most directly determined by comparing EE/CA alternative estimated chemical concentrations in surface sediments to Portland Harbor Site sediment RGs that represent acceptable levels of human health risk via bioaccumulation pathways. The relevant PRG from the Portland Harbor draft FS for such a determination would be the BaP human health clam consumption PRG assuming a high consumption rate of 18 grams of shellfish/day and a 10-5 cancer risk level applied in areas above OLW (5.1 feet NAVD88).

As stated in Section 3.5.2.1 of the Portland Harbor draft FS, although this PRG is retained for use in the FS, there are a number of substantial uncertainties associated with this PRG beyond those typically associated with the other PRGs. The draft FS concluded that the clam consumption exposure scenario was too uncertain to be used either as a Focused PRG or an RG. These uncertainties include the following:

At the current clam population densities, it is very difficult to harvest quantities of clams equivalent to the BHHRA (Kennedy/Jenks 2011) exposure assumptions.

- It is highly uncertain that, after sediment remediation, future clam populations will be sufficient to support harvest quantities equivalent to the exposure assumptions.
- The clams in question are an exotic species and are illegal to harvest.
- The rate, extent, and areas over which people in and around the harbor actually harvest and consume clams is unknown, although anecdotal information exists that harvest may occasionally occur.

- Risk was calculated using undepurated clam tissue, and it is unclear to what extent clam tissue may be eaten in this manner.
- The relationship between BaP in sediment and clam tissue is weak (Windward 2009).

The Portland Harbor draft FS evaluated how remedial alternatives developed to attain the RGs addressed the BaP clam consumption PRG. In this EE/CA, the BaPEq sediment direct contact RG discussed previously is generally used to determine attainment of RAOs 1 and 2 together. The EE/CA will demonstrate that alternatives that are developed to meet the BaPEq RG will also eliminate potential exposure through shellfish consumption. For example, any sediment remedy in the shoreline areas of the Gasco Sediments Site will include institutional controls that would prevent people from digging for shellfish in the remediation area. For in-place remedial technologies, digging in and disrupting caps or similar technologies would not be an acceptable future Gasco Sediments Site use. For removal technologies, as discussed further in Section 6, all removal options are expected to require post removal sand covers in order to manage unavoidable dredge residuals, and again in this case, digging for shellfish in these sand covers would not be an acceptable post-remediation site use.

Fish bioaccumulation-based human health RGs from the Portland Harbor draft FS (Anchor QEA 2012a) for other Portland Harbor Site COCs from other sources (e.g., PCBs, DDx, and Polychlorinated Dibenzofuran [PCDF]) are also considered in the performance of the alternatives in this EE/CA, although because these are not Gasco Sediment Site-related contaminants, the focus of EE/CA alternative quantitative evaluations is not on these Portland Harbor Site COCs. Such an approach is consistent with the RAO, which states that the goal is to reduce risks to acceptable risk levels "in the absence of other sources of chemicals in the river." Regardless, where PAHs and related MGP or Siltronic COCs are successfully remediated, it is already shown in the Portland Harbor draft FS that COCs from other sources in the initial Project Area will also be successfully remediated (i.e., meet bioaccumulation-based RGs and PRGs for these other contaminants) by a wide range of potential integrated or removal focused alternatives.

RAO 4 – Human Health Surface Water: Reduce COC fluxes from Site sediments to reduce risks from COCs in surface water at the Site to acceptable exposure levels that are protective of human health risks from ingestion of, inhalation of, and dermal contact with surface water in the absence of other sources of chemicals in the river.

Performance relative to this RAO in the EE/CA is determined by comparing EE/CA alternative estimate chemical concentrations in surface water to surface water standards and criteria that represent acceptable levels of human health risk via incidental ingestion and dermal contact with surface water. This approach is entirely consistent with the Portland Harbor draft FS.

The measurement methods for the EE/CA use the Oregon WQS and NRWQC specified in Appendix C of the the Portland Harbor draft FS (Anchor QEA 2012a). Also consistent with the Portland Harbor draft FS, in cases where WQS/NRWQC are below background, upstream background concentrations are used for comparisons. Although the LWG does not agree that consumption of untreated drinking water is a beneficial use of the Willamette River, EPA has directed the LWG to compare untreated surface water to Safe Drinking Water Act Standards (i.e., MCLs) in the Portland Harbor draft FS. Therefore, in this EE/CA, the estimated water column concentrations for each alternative are compared to the MCLs. Comparisons of surface water concentrations estimated for EE/CA alternatives to WQS/NRWQC are made on a spatial scale appropriate to exposures in the Portland Harbor Site BHHRA (Kennedy/Jenks 2011). For fish consumption, water quality, and drinking water-based criteria, this is assumed to be depth integrated concentrations within RM 6 to 7 (i.e., the RM containing the Gasco Sediments Site).

RAO 5 – Human Health Groundwater: Reduce to acceptable levels human health risks resulting from direct exposure to COCs in contaminated groundwater and indirect exposure to COCs in contaminated groundwater through fish and shellfish consumption.

Consistent with the Portland Harbor draft FS, each EE/CA alternative is evaluated relative to the potential unacceptable risks to human health resulting from exposures to contaminated groundwater. The BHHRA did not identify potentially unacceptable risks to people who may contact or ingest water from nearshore groundwater seeps, and no seeps were found on the Gasco Sediments Site during Portland Harbor Site RI investigations. Thus, EE/CA evaluations relevant to this RAO are focused on groundwater plumes under the riverbed.

The groundwater RAO evaluations use Portland Harbor Site fate and transport model projections, which incorporated identified groundwater plumes (Appendix Ha of the Portland Harbor draft FS [Anchor QEA 2012a]), to assess long-term surface water and sediment quality changes in groundwater discharge areas. Additionally, cap modeling was performed for select COCs to evaluate the effectiveness of capping technologies within the groundwater plume area. Surface water quality projections for both Portland Harbor Site fate and transport and cap

modeling are compared to WQS/NRWQC criteria in Appendix C of the Portland Harbor draft FS as well as relevant sediment RGs.

Upland groundwater plumes at the Gasco Sediments Site will be primarily controlled through upland source control actions administered under DEQ's oversight. Implementation of upland groundwater source controls will prevent upland groundwater from discharging through river sediments into the Willamette River. The upland groundwater extraction system will result in a reversed groundwater gradient in the alluvial sediments that will cause river water to infiltrate into the river sediments. Over time, the infiltration of river water into the sediments will decrease the concentrations of COIs in shallow river sediments. Downgradient detached plumes would be expected to remain after upland source controls are in place but dissipate or naturally attenuate over time once the source has been controlled. The effects of upland source controls on groundwater plumes are included in the fate and transport and cap modeling evaluations conducted for this EE/CA. The effects of upland groundwater source controls and resulting natural attenuation of detached groundwater plumes are discussed more in Sections 2.3.1 and 2.3.2.

Groundwater sources and their control are factored into the EE/CA fate and transport and cap modeling. The performance of the sediment alternatives relative to this RAO is determined by attainment of the other RAOs measures as described throughout this section. That is, if groundwater is successively remediated by upland and in-river remedies, it would not contribute to unacceptable levels in sediments and surface water as evaluated by the other RAOs.

RAO 6 – Ecological Sediments: Reduce to acceptable levels the risks to ecological receptors resulting from the ingestion of and direct contact with COCs in contaminated sediments.

Performance relative to this RAO in the EE/CA is determined by comparing EE/CA alternative chemical concentrations in surface sediments to sediment PRGs from the Portland Harbor draft FS (Anchor QEA 2012a) that represent acceptable levels of ecological risk from ingestion of and direct contact with sediments. These PRGs are applied in the assumed biologically active zone of surface sediment consistent with the Portland Harbor draft FS (e.g., top 30 cm of sediment bed). As discussed under the Portland Harbor Site RAOs, the only direct sediment toxicity issue identified in the BERA (Windward 2011b) is for benthic risk. Consequently, the Mean Quotient (MQ) measure, derived from multiple Portland Harbor-specific sediment Sediment

Quality Values (SQVs) as described in Section 3 of the Portland Harbor draft FS, is used for comparison purposes in alternatives evaluations. Specifically, per the FS, an MQ of 0.7 represents an acceptable level of benthic risk. Note that because calculation of the MQ involves many contaminants, modeling or similar quantitative estimates of future MQs for comparison to an MQ threshold of 0.7 under each alternative cannot be readily made. However, existing MQ data as compared to threshold MQ of 0.7 is used to determine the lateral and vertical extents of sediment remediation alternatives, and thus, the alternative development incorporates attainment of MQs and this RAO into the alternatives. Modeling estimates of specific COCs are used as surrogates for overall MQ to assess whether it is likely that remediated sediments would be recontaminated or otherwise fail to reach levels of acceptable benthic risk in the future.

In addition, it is possible that benthic risks exist due to TZW concentrations for some Gasco Sediments Site COIs. TZW concentrations are one line of evidence used in the Portland Harbor draft FS (Anchor QEA 2012a) comprehensive benthic risk approach. Consequently, remedy alternatives are also evaluated relative to potential future concentrations of TZW COCs, where those can be estimated using cap and upland groundwater modeling information. These estimated concentrations are compared to appropriate chronic WQS/NRWQC presented in the Appendix C of the Portland Harbor draft FS.

RAO 7 – Ecological Biota (Prey) Ingestion: Reduce to acceptable levels risks to ecological receptors from indirect exposures to COCs through ingestion of prey that occur via bioaccumulation pathways from sediment and/or surface water in the absence of other sources in the Willamette River.

Performance relative to this RAO in the EE/CA would be determined by comparing post-remediation residual chemical concentrations in surface sediments to sediment PRGs from the Portland Harbor draft FS (Anchor QEA 2012a) that represent acceptable levels of ecological risk from ingestion of prey that may have accumulated contaminants. However, as discussed in the Portland Harbor Site RAOs, the risk management recommendations in the BERA (Windward 2011b) did not identify PAHs (or other MGP or Siltronic-related COCs) as posing unacceptable risk via this pathway (i.e., PCBs and total TEQ were identified as COCs likely posing unacceptable risk to birds and mammals ingestion of prey). Consequently, Gasco Sediment Site-sourced COCs were not evaluated against this RAO (i.e., the Gasco Sediments Site already achieves this RAO for these COCs).

Similar to the previous discussion regarding human health, prey ingestion-based ecological RGs from the Portland Harbor draft FS (Anchor QEA 2012a) exist for other Portland Harbor COCs (specifically, the Portland Harbor draft FS discusses that the PCB mink prey ingestion RG is representative of the highest and most widespread ecological risks via this pathway in Portland Harbor). Because PCBs are not a Gasco Sediment Site-related contaminant, the EE/CA alternative quantitative evaluations do not directly address PCBs. Such an approach is consistent with the RAO, which states the goal is to reduce risks to acceptable risk levels "in the absence of other sources of chemicals in the river." Regardless, where PAHs and related MGP or Siltronic COCs are successfully remediated, it is already shown in the Portland Harbor draft FS that PCBs in the initial Project Area will also be successfully remediated (i.e., meet bioaccumulation based RGs) by a wide range of potential integrated or removal focused alternatives.

RAO 8 – Ecological Surface Water: Reduce COC fluxes from Site sediments to reduce risks from COCs in surface water at the Site to acceptable exposure levels that are protective of ecological receptors based on the ingestion of and direct contact with surface water in the absence of other sources in the river.

Performance relative to this RAO in this EE/CA is determined by comparing EE/CA alternative estimate chemical concentrations in surface water to WQS/NRWQC for ecological exposures. This approach is entirely consistent with the Portland Harbor draft FS.

The EE/CA evaluation uses the WQS/NRWQC specified in the Portland Harbor draft FS Appendix C. Also consistent with the FS, in cases where WQS/NRWQC are below background, upstream background concentrations are used for comparisons. For some COCs relevant to the Gasco Sediments Site (e.g., BaP and naphthalene) WQS/NRWQC do not exist. For BaP and naphthalene there are alternate ecological chronic values of 0.014 μg/L and 12 μg/L, respectively, presented in Appendix C of Portland Harbor draft FS. These values are used for some specific evaluations in this EE/CA, or in the case of BaP, the human health consumption value of 0.018 μg/L, which is very close to the chronic value of 0.014 μg/L, is used as a surrogate for both human health and ecological RAOs. Comparisons of surface water concentrations estimated for EE/CA alternatives to water quality threshold values are made on a spatial scale appropriate to exposures in the Portland Harbor Site BERA (Windward 2011b). For chronic

exposures, this is assumed to be depth integrated concentrations within RM 6 to 7 (i.e., the RM containing the Gasco Sediments Site).

RAO 9 – Ecological Groundwater: **Reduce to acceptable levels the risks to ecological receptors resulting from direct contact with COCs contaminated groundwater and indirect exposures to COCs in contaminated groundwater through ingestion of prey**.

Consistent with the Portland Harbor draft FS, each EE/CA alternative is evaluated relative to the potential for ecological potentially unacceptable risks resulting from exposures to contaminated groundwater. Relative to potentially unacceptable ecological risks, a number of COCs in TZW were identified in the BERA (Windward 2011b) in the Gasco Sediments Site area that are potentially or partially attributable to up gradient groundwater plumes.

Attainment of the ecological groundwater RAO is evaluated exactly analogous to the human health groundwater RAO discussed above. In summary, the groundwater RAO evaluations use Portland Harbor Site fate and transport model projections, which incorporated identified groundwater plumes and cap modeling to assess long-term surface water and sediment quality changes in groundwater discharge areas. Results of this modeling are compared to WQS/NRWQC criteria in Appendix C of the Portland Harbor draft FS as well as relevant sediment RGs. These evaluations include the effects of upland source controls on groundwater plumes and sediment remediation alternatives. The performance of the sediment alternatives relative to this RAO is determined by attainment of the other RAOs measures as described throughout this section.

3.4.1 Other Considerations Relevant to RAOs

As noted above, potential downstream migration of contaminants is also evaluated as part of the overall effectiveness of each alternative and is potentially most directly relevant to both sediment and surface water RAOs (i.e., RAOs 2, 4, 6, and 8). The potential for downstream migration is evaluated in the EE/CA by estimating the potential for erosion, resuspension, and downstream transport of contaminated sediments for each alternative. The load of select COCs passing beyond RM 5 downstream of the Gasco Sediments Site during and after construction of each alternative was estimated.

Also as noted above, the potential for sediment recontamination from Gasco Sediment Site or upstream sources is also evaluated in this EE/CA and in the Portland Harbor draft FS as part of

the overall long term effectiveness evaluations. Estimates of the long-term sediment chemical concentration are made using the Portland Harbor Site fate and transport model. The results of the models are compared to the same sediment RGs as described for other RAOs (in Section 9).

3.5 Applicable or Relevant and Appropriate Requirements and To Be Considered Initiatives

This section discusses potential ARARs for the Gasco Sediments Site. The ARARs discussed in this section are evaluated for the various remedial alternatives developed in this EE/CA. Final ARARs determinations will be made by EPA during the preparation of the ROD.

Section 121(d) of CERCLA requires remedial actions to generally comply with all applicable or relevant and appropriate federal environmental or promulgated state environmental or facility siting laws, unless such standards are waived. "For the purposes of identification and notification of promulgated state standards, the term promulgated means that the standards are of general applicability and are legally enforceable" (NCP, 40 CFR 300.400[g][4]). If the most suitable remedial alternative does not meet an ARAR, EPA may waive the ARAR.
"Applicable requirements" as defined in 40 CFR 300.5 are:

> *"those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstances found at a CERCLA site. Only those state standards that are identified by a state in a timely manner and that are more stringent than federal requirements may be applicable."*

"Relevant and appropriate requirements," also defined in 40 CFR 300.5 are:

> *"those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws, that, while not 'applicable' to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site. Only those state standards that are identified in a timely manner and are more stringent than federal requirements may be relevant and appropriate."*

In addition to ARARs, advisories, criteria, or guidance may be identified as To Be Considered (TBC) for a particular release. As defined in 40 CFR 300AOO(g)(3), the TBC category "consists

of advisories, criteria, or guidance developed by the U.S. Environmental Protection Agency, other federal agencies, or states that may be useful in developing CERCLA remedies." TBCs are non-promulgated advisories or guidance that are not legally binding and do not have the status of potential ARARs.

Under CERCLA 121 (e), federal, state, or local permits need not be obtained for remedial actions which are conducted entirely on-site. "On-site" is defined as the "areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action" (40 CFR 300.5). Although a permit would not have to be obtained, the substantive (non-administrative) requirements of the permit must be met. Remedial activities performed off-site (such as a material sent off site for further management) would require applicable permits.

Potential ARARs and TBCs for the Gasco Sediments Site, consistent with those presented in the Portland Harbor draft FS (Anchor QEA 2012a) are presented in Table 3.5-1. Tables 1 through 5 of the Portland Harbor draft FS Appendix C presents proposed numeric levels and methods of application for the ARARs consistent with the Portland Harbor draft FS and the discussion of attainment of RAOs.

Potential ARARs are divided into the following categories:

- **Chemical-specific Requirements:** These are health- or risk-based concentration limits or ranges for contaminants in different media.
- **Location-specific Requirements**: These are restrictions on activities based on the characteristics of a site or its immediate environment.
- **Action-specific Requirements:** These are controls or restrictions on particular types of activities such as the Clean Water Act (CWA) regulating discharges of dredged and fill material into waters of the United States.

3.5.1 Chemical-specific Requirements

The RAOs above identify sediment, surface water, and groundwater as media of concern. Although there are no promulgated federal or Oregon ARARs providing numerical standards for contaminants in sediment, both federal and Oregon standards and criteria are available for surface water and groundwater.

In addition to Oregon WQS (OAR 340-041-0340), EPA has identified federal NRWQC developed to protect ecological receptors and human consumers of fish and shellfish as potential relevant and appropriate requirements. With respect to application of NRWQC, EPA directed the LWG to compare the NRWQC to the Oregon WQS. If there is no Oregon WQS and there is a NRWQC, comparisons should be made to the NRWQC. If the Oregon WQS have not been updated to reflect the most recent NRWQC, then comparisons should be made to the NRWQC. However, if the Oregon WQS is adopted after the most recent NRWQC, but is less stringent due to waterbody-specific reasons, EPA may determine that the NRWQC is not relevant and appropriate as long as the remedy will be protective using the Oregon promulgated standard (EPA 2010). Specific Oregon WQS and federal NRWQC and other chemical-specific ARAR numeric values are provided in Tables 1 through 5 of Appendix C of the Portland Harbor draft FS (Anchor QEA 2012a).

Oregon Hazardous Substance Remedial Action Rules (Oregon Rules; OAR 340-122-0040[2][a] and [c], 0115 [3],[32] and [51]) set standards for the degree of cleanup required and establish acceptable risk levels for humans and protection of ecological receptors at the individual level for threatened or endangered species and the population level for all others. OAR 340-122-0040 requires that hazardous substance remedial actions achieve one of three standards: 1) acceptable residual risk levels as defined in OAR 340-122-0115 and as demonstrated by a residual risk assessment; 2) generic soil numeric cleanup levels; or 3) background levels. Oregon Rules (OAR 340-122-0115) define the following acceptable risk levels[5]:

- 1 in 1,000,000 (1×10^{-6}) lifetime excess cancer risk for individual carcinogens (e.g., BaP)
- 1 in 100,000 (1×10^{-5}) cumulative lifetime excess cancer risk for multiple carcinogens (e.g., total PCBs)
- A HI[6] of 1.0 for noncarcinogens
- For populations of ecological receptors, a 10 percent or less chance that more than 20 percent of the total local population will be exposed to an exposure point value greater than the ecological benchmark value for each contaminant of concern and no other observed significant adverse effects on the health or viability of the local population
- For individuals of species listed as threatened or endangered, a toxicity index less than or equal to one

[5] OAR 340-122-0115 also provides separate "acceptable risk levels" for probabilistic risk assessments for human health and for individual ecological receptors listed as threatened or endangered, which are not addressed in these bullets.

[6] A Hazard Index (HI) represents the sum of individual contaminant HQs.

EPA's target range for managing cancer risk is 1×10^{-4} to 1×10^{-6}, and the level for noncancer risk is an HQ of 1. While the target risk levels in the Oregon Rules for noncarcinogens and for the protection of ecological receptors are similar to those of the NCP, the Oregon Rules for individual and multiple carcinogens are somewhat different than those under the NCP, which are nevertheless protective.

3.5.2 Location-specific Requirements

Location-specific ARARs are restrictions placed on the concentration of hazardous substances or the conduct of activities solely because they are in specific locations. Some examples of specific locations include floodplains, wetlands, historical places, and sensitive ecosystems or habitats.

3.5.3 Action-specific Requirements

Action-specific ARARs are usually technology- or activity-based requirements or limitations on actions taken with respect to hazardous wastes. These requirements are triggered by the particular remedial activities that are selected to accomplish a remedy. Because there are usually several alternative actions for any site remediation, a variety of requirements may apply. These action-specific requirements do not in themselves determine the remedial alternative; they instead indicate how a selected alternative must be achieved. Several select action-specific ARARs that are highlighted in later EE/CA evaluations as particularly relevant to EE/CA ARAR determinations are briefly described below.

Under the State of Oregon's Environmental Cleanup Law, Oregon hot spots are defined as hazardous substances that are present in high concentrations, are highly mobile or cannot be reliably contained, and that would present a risk to human health or the environment exceeding the acceptable risk level if exposure to these materials were to occur (ORS 465.315[2][b]; see also OAR 340-122-115[32]).

Section 404 of the CWA regulates the discharge of dredged or fill material into navigable waters, with the exception of incidental fallback associated with dredged materials. This ARAR is applicable to cleanup actions in the Willamette River. Appendix D provides a summary of the Section 404(b)(1) evaluation of the proposed alternatives and their consistency with the determinations provided for the Portland Harbor Site-wide remedial alternatives evaluated in

the Portland Harbor draft FS (see Appendix M to the Portland Harbor draft FS; Anchor QEA 2012a). The final determination of mitigation requirements will be made during remedial design; however, for the purposes of this EE/CA evaluation, the mitigation estimate developed for the Gasco SMA in the Portland Harbor draft FS is incorporated into the EE/CA CWA evaluation of the alternatives. This level of mitigation was considered to be a component of the proposed action, as it was then evaluated for ESA compliance in the Gasco Sediment Site draft BA.

Section 7 of the ESA requires that federal agencies consult with NMFS and the USFWS to ensure that action, "authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of any threatened or endangered species" or result in adverse modification of species' critical habitat (16 U.S.C. § 1536[a][2]). Five species of ESA-listed salmonids are known to use the Willamette River as a rearing and migration corridor. Moreover, eight listed salmonid species, three additional listed fish species, and one listed mammal species are known to occur in the Lower Columbia River near the confluence with the Willamette River. Due to the presence of these ESA-listed species at and near the Gasco Sediments Site, the Gasco Sediments Site draft BA is included in Appendix C. This draft BA is based upon the information and findings presented in the Portland Harbor draft BA, which includes consideration of impact avoidance and minimization measures and voluntary conservation measures.

The Federal Emergency Management Act (FEMA) floodplain ARAR requires that any action that encroaches on the floodways of United States waters (such as sediment cleanup) cannot cause an increase in the water surface elevation of the river during a 100-year flood event.

4 INTERIM AREA IDENTIFICATION

As described in Section 3.4.1.2 of the SOW, the Project Area will be identified in an iterative fashion through the course of data gathering, alternatives evaluation, and design. Gasco Sediment Site Area of Interest (shown on Figure 1.2.3-1) was the first such iteration identified in the Work Plan based on data available and analyses conducted at that time. The Gasco Sediments Site Area of Interest is generally defined as those in-water sediments and riverbank on or adjacent to the Gasco and Siltronic properties where MGP wastes and CVOCs are present in the Willamette River, based on existing data. The Project AIR (Anchor QEA 2010a) refined the "Area of Interest" into the initial Project Area based on the lines of evidence from the Portland Harbor Site RI/FS available when the report was written. The Project AIR was used to identify data gaps necessary to further refine the Project Area for evaluation of remedial alternatives. This EE/CA report presents the refined interim Project Area. Upon EPA approval of the final EE/CA and documentation in an Action Memorandum, the final Project Area boundary will be presented and used as the basis of remedial design in the Gasco Sediments Site preliminary design report and included in the Portland Harbor Proposed Plan. Assuming current terminology holds, this final Project Area would be identified as SMA 9U in the Proposed Plan.

This section describes the process used to define the interim Project Area used in the EE/CA evaluation. The interim Project Area is a refinement of the initial Project Area, incorporating new information from the 2010 and 2011 Project AIR (Anchor QEA 2010a) data gaps sampling events (presented in Appendix A). The interim Project Area is based on the following:

1. In-water Lines of Evidence (LOEs) from the Portland Harbor draft FS (Anchor QEA 2012a), including the substantial presence of product LOE described in Section 3.6.2.1 of the SOW.
2. Riverbank LOEs defined in Section 3.6.2.10 of the SOW.

Sections 4.1 and 4.2 described each of these two sets of LOEs and the methods for using these LOEs to define the interim Project Area. The remaining subsections contain the following information:

- Section 4.3 describes the methods to define regulatory designated contaminated materials (including potential Oregon hot spots, Principle Threat Material, and Hazardous Wastes).
- Section 4.4 presents the results of the above evaluations and defines the interim Project

Area.

- Section 4.5 describes the development of the initial Project Area into sub-SMAs based on other factors relevant to sediment cleanup (i.e., site uses, physical features, concentration gradients, and slope stability).
- Section 4.6 describes additions to the sub-SMAs due to buried contamination in areas not covered by the Section 4.5 sub-SMAs that could be exposed in the future due to known potential removal activities.
- Section 4.7 presents the methods and results of estimating the volumes associated within the sub-SMAs.

4.1 Interim Project Area Definition Methods - In-water Lines of Evidence (LOE)

Currently, the Portland Harbor Site risk assessments (BERA [Windward 2011b] and BHRRA [Kennedy/Jenks 2011]) and the FS have not been finalized. The SOW requires that the interim Project Area identification include two basic steps:

- A screening of all data against all screening levels derived from the draft Portland Harbor risk assessments (Appendix G)
- An identification of the interim Project Area using the same key LOEs as used in the Portland Harbor draft FS (Anchor QEA 2012a) process

With regard to the first step, it is important to recognize that a wide range of screening levels are available from the Portland Harbor Site process, including values that are (literally) zero or well below background levels. A broad screening against this wide range of values provides little indication of the actual areas that will be the focus of cleanup in the Portland Harbor Site. Although a screening of the wide range of values is provided in this EE/CA (Appendix G) to fulfill the requirements of this step per the SOW and to provide as transparent a screening process as possible, the actual work of identifying the interim Project Area is conducted through the application of the key LOEs developed and utilized in the Portland Harbor draft FS (Anchor QEA 2012a). Additional detail regarding the comprehensive screening completed as part of the first step is provided in Appendix G and not discussed further in this EE/CA. The remainder of the EE/CA describes the evaluations and results of the second step to maintain consistency with the Portland Harbor draft FS.

For the second step of the interim Project Area identification process, and consistent with Section 3.4.1.2 of the SOW, the following key LOEs are used to develop the preliminary lateral and vertical extents of interim Project Area presented in this EE/CA:

- "The lateral and vertical extent of substantial product (as defined in Section 3.6.2.1 of the SOW) in sediment"
- "The use of currently available key lines of evidence to evaluate where unacceptable risk exposure may be identified in the Portland Harbor Site ROD, but where substantial product is not present
- "The use of currently available lines of evidence for Portland Harbor Site background conditions."

4.1.1 Substantial Presence of Product

As described in the SOW and Section 2.5.3 of this EE/CA, substantial presence of product in sediments is a key LOE for evaluations of the Gasco Sediments Site remedy. Sediment core observations for all core locations identified in Figure 2.5.3-1 were examined for substantial product using the definition presented in Section 3.6.2.1 of the SOW. Also for this LOE, general knowledge about product extents was considered in the interim Project Area identification. For example, during construction of the 2005 Removal Action, observations of exposed tar were identified during very low Willamette River water surface elevations directly downstream from the 2005 Removal Action area beneath the oil pipeline and adjacent to the middle pipeline support. This area of remaining exposed tar is bounded on the downstream channel ward and upstream side by core locations (i.e., RAA-15, RAA-16, and GS-06, respectively) showing no substantial product indicating this tar is of limited extent. In addition, some tar remains in place at the upper end of the 2005 Removal Action dredge cut, where an organoclay mat was placed as part of the post removal capping.

The SOW indicates that the perimeter of the in-water area with substantial product will be defined by cores that do not contain substantial product.

4.1.2 Benthic Toxicity

The Portland Harbor draft FS (Anchor QEA 2012a) uses multiple LOEs related to potential benthic toxicity to determine so called Comprehensive Benthic Risk Areas (CBRA). The EE/CA uses the same LOEs and additional data collected by NW Natural to develop updated CBRAs

for the Gasco Sediments Site using methods consistent with the Portland Harbor draft FS. Each of these LOEs is described more below.

4.1.2.1 *Empirical Benthic Toxicity*

In both the Portland Harbor Site BERA (Windward 2011b) and the Portland Harbor draft FS (Anchor QEA 2012a), the primary LOE for identifying benthic community risks was sediment toxicity represented by survival and growth of the amphipod *Hyalella azteca* and chironomid midge *Chironomus dilutus* in a laboratory setting. The empirical bioassay results were assigned effect levels based on the REA as detailed in the *Benthic Toxicity Reanalysis Technical Memorandum* prepared as part of the Portland Harbor Site RI/FS (Windward 2009). Empirical bioassay results indicating significant toxicity, as defined by the effect levels, formed the core of the CBRA delineation procedure as described in the Portland Harbor Site BERA and FS.

Details of the empirical bioassay program for the Portland Harbor Site BERA (Windward 2011b) and the use of the REA for bioassay data interpretation is presented in the *Benthic Toxicity Reanalysis Technical Memorandum* (Windward 2009). Significant toxicity was considered to be one toxicity endpoint (*Chironomu*s biomass or growth or *Hyalella* biomass or growth) exceeding a Level 3 threshold, or two endpoints exceeding a Level 2 threshold based on the REA (Windward 2009).

As part of the data gaps investigation completed at the Gasco Sediments Site, freshwater bioassays were conducted on 20 sediment samples and four reference samples. This toxicity testing was conducted to develop the empirical toxicity LOE to support refinement of the extent of potential benthic risks in the initial Project Area. Details of the data gap investigation bioassay testing program, the toxicity test data interpretation, and tables with bioassay results and corresponding reference envelop effect levels and figure showing the sample locations and test result interpretation are presented in Section 2.5.4 of this EE/CA and detailed in Appendix A.

4.1.2.2 *Predicted Toxicity Based on Model-Derived SQVs*

In both the Portland Harbor Site BERA (Windward 2011b) and the draft FS, in areas where no empirical bioassay data were available, predicted benthic toxicity was used as a LOE to identify CBRAs.

Potential benthic toxicity was predicted based on Site-specific SQVs derived from multi-variable statistical models (the Floating Percentile Model [FPM] [Avocet 2002 and the Logistic Regression Model [LRM; Field et al. 1999]). Both models estimate the probability of toxicity above a suite of threshold chemical concentrations (i.e., SQVs) derived for the mixture of chemicals found at the Portland Harbor Site. Because the predictive models are statistical, results are correlative and do not conclusively identify contaminants causing toxicity. Both modeling approaches were used to identify contaminants whose sediment concentrations, when considered in aggregate, appear to help explain the observed toxicity and threshold concentrations for each contaminant above which toxicity was likely to occur.

The available sediment chemistry used to predict toxicity was represented as an aggregate value based on an average exceedance factor (i.e., MQ) across the entire FPM SQV set. This method of quantifying the concentrations of multiple chemicals that may be contributing to the potentially unacceptable risk to the benthic community has been used widely at other sites throughout the United States and was required by EPA in the problem formulation in the Portland Harbor Site BERA (Windward 2011b). Predictions of toxicity based on the LRM were represented as the maximum probability of toxicity (pMax) across all chemicals with some potential contribution to the observed toxicity seen in the empirical bioassays. Decision thresholds selected by EPA for use in the BERA were retained for the CBRA (i.e., an MQ greater than or equal to 0.7 and a pMax value greater than or equal to 0.59) for the Portland Harbor draft FS (Anchor QEA 2012a) and this EE/CA.

For the analytical data collected from the data gaps investigation completed at the Gasco Sediments Site, the analytical results were used to identify locations where significant sediment toxicity was predicted based on sediment chemistry exceeding an MQ of 0.7 based on the FPM model or a pMax of 0.59 based on the LRM model.

- Sampling locations where both the MQ and pMax thresholds were exceeded were considered toxic by the predictive toxicity LOE.
- Sampling locations where neither the MQ nor pMax threshold was exceeded were considered non-toxic by the predictive toxicity LOE.
- Sampling locations where the models disagreed (i.e., either the MQ or the pMax threshold was exceeded, but not both) were considered uncertain by the predictive toxicity LOE.

4.1.2.3 *Empirical Bioaccumulation*

In both the Portland Harbor Site BERA (Windward 2011b) and FS (Anchor QEA 2012a), significant bioaccumulation in either field-collected or laboratory-exposed organisms provided an independent LOE to either corroborate the identification of a CBRA or provide unique evidence that a CBRA was present. A detailed discussion of the empirical bioaccumulation LOE is provided in the Portland Harbor draft FS (Anchor QEA 2012a).

Locations where empirical tissue residues exceeded their toxicity reference values (TRVs) were identified and used as a LOE for delineating the CBRAs in the Portland Harbor BERA (Windward 2011b) and FS. For the Gasco Sediments Site, the empirical bioaccumulation LOE was not an LOE used to delineate CBRAs because there were only two locations that exhibited an HQ greater than 1, and these areas were for metals. As reported in the BERA, the evidence of risk provided by measured exceedance of metals TRVs was considered a weak LOE because of species-specific differences in metals sequestration or other bioregulation; such evidence was not used to identify CBRAs.

4.1.2.4 *Predicted Bioaccumulation Based on BSARs*

In both the Portland Harbor Site BERA (Windward 2011b) and FS, predicted significant tissue bioaccumulation provided an independent LOE to either corroborate the identification of a CBRA or provide unique evidence that a CBRA was present. A detailed discussion of the predicted bioaccumulation based on Biota-Sediment Accumulation Regressions (BSARs) LOE is provided in the Portland Harbor draft FS (Anchor QEA 2012a).

Locations where predicted tissue residues exceeded their TRVs were identified and used as a LOE for delineating the CBRAs in the Portland Harbor Site BERA and FS. For the Gasco Sediment Site, the predictive bioaccumulation LOE was not a significant LOE used to delineate the CBRA because there was only one location that exhibited an HQ greater than 1 for Total DDX, based on the mechanistic model. This location is already well within the CBRA developed using the other LOEs.

4.1.2.5 *Transitional Zone Water Quality*

The TZW water quality assessment is an additional LOE that was used to estimate risks to benthic invertebrate populations and communities in the Portland Harbor Site BERA (Windward 2011b) and FS. The Portland Harbor Site process used an operational definition of the porewater associated with the sediment matrix within the top 38 cm of the sediment bed.

Therefore, TZW is assumed to be composed of some percentage of both groundwater and surface water.

In the Portland Harbor Site BERA (Windward 2011b), TZW HQs were calculated by comparing contaminant concentrations in individual TZW samples to chronic water TRVs developed based on a hierarchy of water quality criteria and literature-based TRVs in accordance with the EPA's Problem Formulation (Attachment 2 of the Portland Harbor Site BERA) for surface water.

For the Portland Harbor draft FS (Anchor QEA 2012a), TZW exceedance areas with HQs greater than 100 were used as a LOE for delineating the CBRA. This same procedure was used to delineate the CBRA at the Gasco Sediments Site to maintain consistency with the Portland Harbor draft FS. As shown in the CBRA boundary depicted in Figure 4.4.2-1, all TZW exceedance areas with HQs greater than 100 are bounded by areas with REA Level 2 and REA Level 3 bioassay results and/or hits predicted by toxicity based on model-derived SQVs. Therefore, TZW exceedances areas with HQs greater than 100 are not, on their own, driving the remedial footprints discussed in Section 6.

EPA commented on the the Gasco Sediments Site EE/CA Technical Briefing (Anchor QEA 2011a) that the use of a TZW HQs greater than 100 in this procedure did not have consensus of the agencies and trustees (EPA 2011). Although EPA authorized NW Natural and Siltronic to develop an alternative methodology, it did not provide a proposed approach. EPA did not provide any comments on this methodology to the LWG on the draft BERA, the *Portland Harbor RI/FS Risk Management Recommendations* (Kenney/Jenks and Windward 2011), and has not not provided any formal comments to LWG on this methodology as presented in the draft final BERA (Windward 2011b). Consequently, NW Natural and Siltronic have no basis for proposing an alternate methodology.

4.1.3 Portland Harbor Draft FS Remedial Goals and Remedial Action Levels

The Portland Harbor Site RGs and RALs LOEs are described below.

4.1.3.1 *Remedial Goals*

Section 3 of the Portland Harbor draft FS (Anchor QEA 2012a) describes RGs selected for Portland Harbor, which are the numeric values used to evaluate achievement of RAOs for the bounding COCs based on the findings of the Portland Harbor Site BHHRA (Kennedy/Jenks

2011) and BERA (Windward 2011b). Section 3 of the Portland Harbor draft FS reviews all the COCs based on the results of the risk assessments and the *Portland Harbor RI/FS Risk Management Recommendations* document (Kennedy/Jenks and Windward Environmental 2011). From these, a set of RGs were selected for use throughout the Portland Harbor Site. The primary RGs for the Portland Harbor Site are total PCBs, BaPEq, DDE (as a representative of DDx), PCDF (as a representative of dioxin/furans), and benthic toxicity mean quotient (MQ; explained more in Section 4.1.2.2). These sediment RGs were selected because they are consistent with EPA directives and past Portland Harbor Site project agreements on the various risk pathways and are generally representative of the wide range of goals potentially available for the Portland Harbor Site. Of these RGs, BaPEq and benthic toxicity MQ are the most relevant to the COCs present at this Gasco Sediments Site, specifically:

- BaPEq (i.e., cPAHs) – 423 µg/kg based on human health Tribal fisher direct contact with sediments at the 10^{-6} cancer risk level
- BaPEq (i.e., cPAHs) – 162 µg/kg based on human health Tribal fisher direct contact with sediments at shoreline beaches at the 10^{-6} cancer risk level
- MQ – 0.7, which is a measure of toxicity to the benthic community

Of these three RGs, the shoreline beach BaPEq RG would not apply here because the Gasco Sediments Site does not contain any of the beaches where this RG is applied in the Portland Harbor RI/FS. In addition, a PRG was also developed for BaP (not BaPEq) clam consumption by EPA. For reasons discussed in Section 3.4, no RG was developed for this exposure pathway in the Portland Harbor draft FS; therefore, this PRG is not used to develop remedial alternatives in this EE/CA.

Consistent with EPA guidance (2005), the Portland Harbor draft FS also presents a range of RG estimates for BaPEq sediment direct contact based on a detailed uncertainty/sensitivity analysis (contained in Appendix E of the Portland Harbor draft FS). Although a wide range of RGs are determined based on this analysis considering various cancer risk levels and exposure assumptions, the Portland Harbor draft FS focuses on the following ranges for BaPEq sediment direct contact as generally representative of the overall sensitivity/uncertainty associated with this RG for the 10^{-6} cancer risk level as described above :

- 423 µg/kg EPA-provided point estimate (>99th percentile)
- 1,437 µg/kg 99th percentile RG
- 2,750 µg/kg 95th percentile RG

- 3,702 μg/kg 90th percentile RG

Also, for the benthic MQ, the Portland Harbor draft FS (Anchor QEA 2012a) presents individual SQVs (see Table 3.5-3 of the Portland Harbor draft FS) calculated using project-specific models (see the Portland Harbor Site BERA; Windward 2011b) that make up the overall MQ calculation. Given the role of PAHs at the Gasco Sediments Site, the following PAH SQVs are relevant for some evaluations in this EE/CA:

- Total HPAHs from 610,000 to 1,300,000 μg/kg
- Total LPAHs 2,000 to 650,000 μg/kg

4.1.3.2 *Remedial Action Levels*

The Portland Harbor draft FS (Anchor QEA 2012a) developed RALs that are used to define areas of sediment that are to be actively remediated (SMAs). The SMAs are, in turn, used to develop remedial alternatives. By definition, RALs are point concentrations that exceed RGs and require active remediation. Whereas RGs are set to achieve protection over long time spans and over large spatial areas for some receptors, RALs are set to achieve point-by-point concentrations immediately after active remedy construction is completed. The overall concept is that RGs can be met over longer periods of time and over larger relevant exposure areas through a combination of immediate or near-term active remedies in limited areas above the RALs and MNR processes throughout the site. Thus, the active remedy defined by the RAL helps achieve the RG over larger areas and longer time spans. RALs are developed with the understanding that remediation focusing on the select bounding COIs (and potentially unacceptable risks in the case of benthos) will also address the remaining contaminants potentially posing unacceptable risk as described in detail in the Portland Harbor draft FS. Section 4 of the Portland Harbor draft FS describes the methods and results of developing RALs in more detail.

RALs were developed in the Portland Harbor draft FS (Anchor QEA 2012a) for many of the RGs discussed above. Unlike many sediment cleanup sites in the United States (e.g., Little Mississinewa River in Indiana, EPA Region 5), that have different RALs for surface and subsurface sediment to reflect the reduced risk associated with buried contamination, the RALs developed as part of the the Portland Harbor draft FS were conservatively developed to be identical for surface and subsurface sediments. Similar to the RG discussion above, of these RALs, the BaP RALs are most relevant to the Gasco Sediments Site and this EE/CA. Per Section

4.4 of the Portland Harbor draft FS, RALs were defined across a range of values that are expected to cause more or less reduction of shoreline half-RM SWACs in RMs containing elevated BaP concentrations. Based on that approach, the range of RALs for BaP are:

- RAL high in the zone of maximum incremental SWAC reduction - 20,000 µg/kg
- RALs within the zone of maximum incremental SWAC reduction
  - First increment: 15,000 µg/kg
  - Second increment: 8,000 µg/kg
  - Third increment: 4,000 µg/kg
- RAL within the zone of minimal SWAC change 1,500 µg/kg

The estimated SWAC reductions expected over various time increments (Year 0, Year 10, and Year 30) for these RALs are graphed for RM 6.5 to 6.0 West and compared to the sensitivity range of sediment direct contact BaPEq RGs in Figure 4.1.3.2-1 (reproduced from the Portland Harbor draft FS [Anchor QEA 2012a]). These RALs are used later in Section 4.5 in the development of sub-SMAs that are in turn, used in alternatives development in Section 6.

4.2 Interim Project Area Definition Methods - Riverbank LOEs

Riverbank soils are included in the interim Project Area to the extent that these soils require remediation consistent with an upland remedial and source control approach as defined by the upland and source control processes at the time of the EE/CA development and consistent with the SOW. As described in Section 3.4.1.3 of the SOW, the riverbank is included in the Project Area to facilitate consistencies between riverbank remediation, source control work, and the in-water sediment cleanup. Per the SOW, the need for riverbank work will be determined by:

- "The need for soils remediation consistent with the upland risk assessment and upland FS
- "The need to control sources of contaminants from the riverbank to the river including:
  - Processes of soil erosion
  - Leaching of chemicals due to shallow groundwater movement through the riverbank
  - Stormwater infiltration and discharge through riverbank soils"

The in-water lines of evidence discussed in Section 4.1 for use in interim Project Area identification are not relevant to identifying riverbank areas to be included in the interim

Project Area. Rather, the SOW requires that the preliminary determination of riverbank areas included in the EE/CA be based on a review of existing data for COIs identified in Section 3.3 of the SOW extending landward up to (but not beyond) the top of riverbank. This area is also included in the data evaluation presented in this EE/CA.

The SOW further states that any data or known determinations consistent with soil remediation and source control actions that extend landward of the top of riverbank should be excluded from the EE/CA and that such data and activities will be included in the DEQ determinations for uplands source controls and remediation. As discussed in Appendix A, due to sampling logistic difficulties (e.g., boring through riprap and shoreline debris), the existing data density along the riverbank slope limits the evaluation of the nature and extent of substantial product and chemical screening level exceedances here. Therefore, top of riverbank data are used in this EE/CA to provide supporting information regarding riverbank LOEs. It is important to recognize that any and all information presented in this EE/CA that is landward of the top of the riverbank is specifically excluded from inclusion in riverbank soils cleanup or source controls under the SOW. Information and descriptions of product from this area are provided in this EE/CA solely for the purpose of contextual information to help guide efforts that are within the adjacent SOW defined interim Project Area (i.e., shoreward of the top of riverbank).

Similar to the in-water interim Project Area identification process, screening of soils data against readily available soils screening levels is a component of the riverbank interim Project Area identification process. Because DEQ has not approved a process for identification of preliminary areas of concern for the upland Gasco FS, a soil screening process was conducted for the riverbank in this EE/CA using screening levels currently approved by DEQ. As contemplated in the SOW, the screening results presented in this EE/CA may need to be revised following completion of the upland risk assessment and FS.

Additional detail on the methods for initial Project Area identification for the riverbank data set is presented in Section 4.2. The evaluation of riverbank soils for potential inclusion in the initial Project Area used both available soils screening levels as well as the presence of substantial product. (Unlike the sediments evaluation, there are no key lines of evidence yet developed for the upland FS process to further refine this area identification process.)

4.2.1 Presence of Substantial Product

Similar to the in-water sediments interim Project Area identification (Section 4.1), a key line of evidence for identification of the riverbank initial Project Area is the presence of substantial product. Section 3.6.2.10 of the SOW states that the following criterion associated with substantial product located within the riverbank shall be used to determine the need for, areas of, and design of, riverbank remedy and source controls:

> *"1. If substantial product is identified in riverbank cores and is contiguous with sediment substantial product (as indicated by sediment cores), the volume of riverbank soils that shall be removed if feasible will extend landward into the riverbank until contiguous product has been removed or a vertical line drawn from the top of the bank (as defined in Section 2.2* [of the SOW]*) is reached. Some product may not be removed because the vertical line at the top of bank is reached, the product extends too deep to be integrated into the sediments dredge prism, or for other feasibility reasons. In these cases, the remaining product shall be capped using an engineered system that reduces potential contaminant flux and product seepage to acceptable levels consistent with the design approach typically used for a sediment cap."*

To support evaluation of the above riverbank substantial product criteria, boring logs collected along the top of the riverbank (due to lack of borings collected on the riverbank) were evaluated for the presence of product using the definition in Section 3.6.2.1 of the SOW. Per the SOW, the definition of substantial product does not apply landward of the top of the riverbank. The information from top of riverbank borings were screened against the SOW substantial product definition solely to support evaluation of substantial product in the riverbank where this definition does apply. Because the riverbank slope soils may need to be regraded to achieve stable slopes that can be integrated into the sediments dredge prism (this may include riverbank areas that do not contain contiguous substantial product or otherwise require source control measures in order to maintain stable riverbank slopes), observations of substantial product were identified regardless of elevation throughout the full length of the boring.

In addition, observations of pencil pitch and lampblack materials were identified in some upload soil borings. Although these materials are not considered substantial product per the definition in Section 3.6.2.1 of the SOW, the presence of these materials was considered during the riverbank LOE evaluations.

The elevations of substantial product or pencil pitch/lampblack in the riverbank were then compared against the nearshore riverbank toe of slope elevations of substantial product to

determine if the elevations provided evidence for continuity between the uplands and Willamette River. Except in the location of the 2005 Removal Action (Figure 1.2.3-1), the GS-01 through GS-12 borings generally provided the most comprehensive data set for the presence/absence of substantial product along the toe of the riverbank. Additional toe of riverbank locations were collected in the vicinity of the former tar body during the 2005 Removal Action design characterization (Anchor 2004a).

4.2.2 Riverbank Soils Human Health and Ecological SLVs

Riverbank soil data were screened against riverbank screening levels for the Gasco Sediments Site COIs (Section 2.5.1.1). The screening levels were derived from and generally follow the DEQ January 5, 2012, screening matrix provided to NW Natural as part of the upland risk assessment discussions (DEQ 2012). Because exposure areas relevant specifically to the riverbank have not been defined, the screening was conducted on a point-by-point basis. However, this is a conservative approach for applying these human health screening levels and some of the ecological soil screening levels, given that exposure concentrations are typically defined over larger exposure areas where people or ecological receptors might normally range (as is being done for the upland risk assessments). The screening levels themselves are also highly conservative, and therefore, results should only be taken as a general indication of the potential for unacceptable risks and do not constitute a determination of risks in the riverbank soils. As agreed upon by DEQ for use in the Gasco uplands risk assessment, the screening was conducted by grouping the data set into two categories by depth interval: 0- to 3.5-foot soils, which are generally applicable to ecological and occupational human health screening levels and 0- to 12-foot soils, which are generally applicable to excavation worker exposures.

4.3 Identification of Potential Oregon Hot Spots, Principal Threat Material, and Hazardous Waste

The following subsections describe methods used to identify potential Oregon hot spots, principal threat material, and hazardous waste within the interim Project Area.

4.3.1 In-water Potential Oregon Hot Spots

Oregon law and regulations require application of a higher threshold for evaluating the reasonableness of costs to treat or excavate sediment contamination where hazardous substances are present in high concentrations, are highly mobile or cannot be reliably

contained, and present a risk to human health or the environment exceeding the acceptable risk level if exposure occurs.

The Portland Harbor draft FS concluded that there are no identifiable areas within the Portland Harbor Site that meet the Oregon hot spot definition, including the area covered by the Gasco Sediments Area of Interest. As discussed above, no human health risks were identified in sediment at high concentration levels for any individual contaminant for which an RG was developed, and no high concentration levels of ecological risk were found. Additional data collected by NW Natural is generally focused on lower concentration areas out in the navigation channel, so these data do not change this Portland Harbor draft FS determination. Per the SOW, to maintain consistency with the Portland Harbor draft FS, no potential Oregon hot spots in sediments were identified for this EE/CA.

Oregon's hot spot guidance notes that "It generally can be assumed that NAPLs [non-aqueous phase liquids] will produce 'highly concentrated,' 'highly mobile' and 'not reliably containable' hot spots." While the Portland Harbor draft FS did not identify potential hot spots based upon "highly mobile" or "not reliably containable" hazardous substances, the Gasco Sediments Site SOW and the remedial alternatives discussed developed in Section 6 do directly address the presence of DNAPL through the substantial product LOE discussed in Section 4.1.1 and evaluate the removal or treatment of such material with a higher threshold of cost reasonableness in a manner generally consistent with Oregon hot spot guidance.

As discussed further in Section 6, all alternatives include treatment and/or removal of high concentration or substantial product areas and the costs of that removal or treatment is estimated. Thus, as in the Portland Harbor draft FS, the intent of the Oregon hot spot rule is addressed through this approach because each alternative identifies the relatively highest concentration areas and volumes, evaluates the cost-effectiveness of dredging or treating those areas and volumes, and recommends removal or treatment of a significant percentage of such areas and volumes in all but the "no action" alternative.

4.3.2 Potential Oregon Riverbank Hot Spots

Appendix F presents the details of the potential Oregon hot spot evaluation of riverbank soils. The general approach is the same as that described in Section 4.2.2 for soil screening. Similar conservatism exists in this analysis with regards to both the use of a point-by-point screening approach and the very low levels of the screening levels themselves.

For ecological receptors, potential hot spot screening levels were derived by multiplying the ecological screening levels discussed in Section 4.2.2 by a factor of fifty consistent with the DEQ hot spot guidance. The following hierarchy was applied for selecting a single potential ecological hot spot screening level for each COI: if a DEQ Level II SLV was available, that value was used for potential hot spot screening. For chemicals without a DEQ Level II SLV, the lowest of the additional ecological soil screening levels that DEQ has directed to be used in the upland risk assessment was used for the potential hot spot screening. Soils from the 0- to 3.5-foot interval were screened against the resulting list of potential ecological hot spot screening levels.

For human health, potential hot spot screening levels were derived by multiplying screening levels based on a carcinogenic endpoint by 100 and multiplying screening levels based on a non-carcinogenic endpoint by ten, consistent with DEQ hot spot guidance. A single screening level for each COI was selected according to the following hierarchy: for 0- to 3.5-foot interval soils, the soil ingestion, dermal contact, and inhalation RBCs from DEQ for occupational workers was applied. For 0- to 12-foot interval soils, the lowest of the soil ingestion, dermal contact, and inhalation RBCs for construction and excavation workers from DEQ was applied. For all soils, the EPA RSL was applied for chemicals without an associated RBC.

Also, consistent with the sediment potential hot spot evaluation, observations of liquid substantial product in the riverbank are evaluated in this EE/CA with a higher threshold for the reasonableness of costs to remove or treat hazardous substances.

4.3.3 Principal Threat Material (PTM) Areas

The NCP states that EPA expects to use "treatment to address the principal threats posed by a site, wherever practicable." This section evaluates "source material" within the Portland Harbor Site consistent with EPA guidance on PTM (EPA 1991). Source material is defined as "material that includes or contains hazardous substances, pollutants or contaminants that act as a reservoir for migration of contamination to groundwater, to surface water, to air, or acts as a source for direct exposure…" The guidance states:

> *"Principal threat wastes are those source materials considered highly toxic or highly mobile that generally cannot be reliably contained or would present significant risk to human health or the environment should exposure occur. They include liquids and other highly mobile materials (e.g. solvents) or materials having high concentrations of toxic compounds. No "threshold level" of*

toxicity/risk have been established to equate to a "principal threat." However, where toxicity and mobility combine to pose a potential risk of 10^{-3} or greater, generally treatment alternatives should be evaluated."

Given that the guidance identifies PTM as "…highly toxic or highly mobile that cannot be reliably contained…," the determination is that one criteria only does not constitute PTM. As detailed in Section 5, capping is a viable technology across the entire Gasco Sediments Site in terms of effective contaminant isolation. Because all sediments can be reliably contained, no PTM areas were identified in the FS.

Further, the Portland Harbor draft FS included a review of the Portland Harbor Site risk assessments to determine whether any risks exceeding a 10^{-3} cancer risk level were present for contaminants and human health scenarios for which RGs were developed. Table 5.5-4 of the Portland Harbor draft FS summarizes this review. No such risks were found within the Portland Harbor Site, including the Gasco Sediments Site.

Finally, EPA guidance on PTM (EPA 1991) further states that, "…non-aqueous phase liquids (NAPLs) may be viewed as source materials." Thus, similar to the Oregon hot spot discussion above, the SOW preference for removal and disposal of liquid substantial product is generally consistent with the EPA guidance on PTM.

4.3.4 Hazardous Waste

Based on the definitions provided in the SOW, some sediment moved from the Gasco Sediments Site may be subject to Resource Conservation and Recovery Act (RCRA) hazardous waste regulations (40 CFR Parts 260 to 268). Sediment will be characterized prior to construction, and confirmatory samples will be collected after dredging (using the tiered approach identified in Section 3.6.3.1 of the SOW) the sediment and riverbank soils and consolidating it on barges. Composite samples of barge loads of sediment will be collected as described in Section 3.6.3.1 of the SOW. Sediment will be characterized as hazardous waste if it meets any of the following criteria:

- Contains TCE and certain related compounds at concentrations exceeding DEQ RBCs
- Simulated leachate from the sediment contains TCE, 1,1-dichloroethene, or vinyl chloride at concentrations exceeding TCLP regulatory levels
- Exhibits any of the other characteristics of hazardous waste, including failing the TCLP

for any other constituents other than MGP-related constituents (see Section 4.3.5 for a discussion of Special Waste)

These criteria can be applied before or after treatment (such as cement stabilization) and determinations made after treatment, where applicable, would supercede pre-treatment results.

On behalf of Siltronic, MFA submitted a memorandum dated January 13, 2011, to DEQ and EPA to propose RBCs to be used for screening sediments containing TCE and certain daughter products at the Gasco Sediments Site. MFA proposed the use of excavation worker RBCs for the purpose of waste characterization and identifying appropriate disposal facilities (i.e., either Subtitle C versus Subtitle D). MFA calculated the following excavation worker RBCs using a DEQ-provided Excel file titled "Risk-based Concentrations for Individual Chemicals" that was last updated on November 15, 2011: CE at 3,400 milligrams per kilogram (mg/kg), cis 1,2-DCE at 17,000 mg/kg, and vinyl chloride at 830 mg/kg. This exposure scenario assumes a 1-year exposure duration. DEQ and EPA provided comments to this proposal in a letter dated August 29, 2011, and stated that Siltronic should use the following occupational worker RBCs calculated using this same spreadsheet: TCE at 47 mg/kg, cis 1,2-DCE at 2,000 mg/kg, and vinyl chloride at 3.9 mg/kg. This exposure scenario assumes a 25-year exposure duration. MFA is in the process of developing a response to the DEQ and EPA comments that provides additional information why the excavation worker exposure RBCs are more appropriate for data screening at the Gasco Sediments Site.

DEQ and EPA have not approved RBCs to be used for waste suitability and disposal facility screening so this EE/CA screened the Gasco Sediments Site sediments and soil dataset against both the excavation worker and occupational worker RBCs summarized above. The results of this screening are provided in Section 4.4.5.

4.3.5 Special Waste

The SOW defines Special Waste as sediment that is <u>not</u> characterized as hazardous waste, per the definition in Section 4.3.4, but that fails TCLP for MGP-related constituents. The MGP-related constituents for this purpose are considered to be benzene, phenolic compounds, chromium, and lead. Figure 4.3.5-1 provides a decision tree for characterization of sediment, including regulatory levels for the pertinent MGP-related constituents.

MGP wastes are, by definition, not hazardous wastes per 40 CFR 261.24(a), which states the following:

> *"A solid waste (except manufactured gas plant waste) exhibits the characteristic of toxicity, if using the Toxicity Characteristic Leaching Procedures...contains any of the contaminants listed in Table 1 at the concentration equal to or greater than the respective valued given in that table."*

Oregon has adopted this rule, including the exception for MGP waste (OAR 340-100-002[1]). The Special Waste classification in Section 3.6.3.1 of the SOW addresses the exception for sediments containing significant quantities of MGP-related constituents by creating a category of nonhazardous waste that will be managed separately from sediment that does not contain significant quantities of MGP-related constituents.

4.4 Results - Interim Project Area Identification

The following subsections present the results of the various in-water and riverbank LOE evaluations discussed in Sections 4.1 through 4.3.

4.4.1 Substantial Product

A summary of in-water core and top of riverbank boring substantial product screening results is provided in Table 4.4.1-1 and 4.4.1-2, and depicted on Figure 2.5.3-1. Also, as described in Section 4.1.1, general knowledge about recently observed product extents was considered in the substantial product boundary delineation. Per the SOW requirements, the substantial product boundary was defined by the perimeter of the in-water area cores that do not contain substantial product. The top of riverbank substantial product screening results were used to evaluate the potential connection of substantial product from the sediments into the uplands and assist with the selection of technology applications (i.e., capping or removal) and potential associated removal depths along the riverbank for the remedial alternatives development presented in Section 6.2.

4.4.2 Comprehensive Benthic Risk Area Mapping

To delineate the CBRA, all individual sample results representing each benthic LOE discussed in Section 4.1.2 were overlaid on a map, as shown on Figure 4.4.2-1. The CBRAs are identified where two or more adjacent sampling locations indicated potentially unacceptable risk to the benthic community based on any of the following benthic LOEs: empirical or predicted toxicity,

empirical or predicted bioaccumulation, empirical TZW chemistry (i.e., HQ greater than 100), or a combination of bioassay and chemistry LOEs.

Because empirical toxicity is the primary LOE, potential benthic toxicity predicted by chemistry exceedances of model predicted SQVs in aggregate (i.e., MQs or pMax) are overridden by empirical bioassay data where these LOEs co-occur. Other methods for use of the benthic LOEs are described in Section 4.1.2. Also, boundaries of the CBRAs split the distance between sampling locations exceeding criteria and the surrounding clean sampling locations, except where other physical features were present (e.g., pier, channel edge, property boundary), in which case, the CBRA boundaries were drawn at the physical features. In instances where the nearest sampling location exceeding criteria was at a distance greater than 200 feet from a clean sampling location, the boundary was drawn at a subjective distance less than halfway to the nearest non-toxic sampling location.

The CBRA delineated for the Gasco Sediment Site is shown on Figure 4.4.2-1. As shown on Figure 4.4.2-1, the procedures identified for delineating CBRA in the Portland Harbor draft FS (Anchor QEA 2012a) were followed but used the boundaries of the surface Thiessen polygons developed for the interim Project Area to delineate the boundaries of the CBRA (versus the use of midpoint between samples used in the Portland Harbor draft FS). The two primary benthic LOEs that delineate the resulting CBRA at the Gasco Sediment Site are Empirical Toxicity and Predicted Toxicity Based on Model-Derived SQVs. As described in Section 4.1.2 and shown in Figure 4.4.2-1, there were a few areas that exhibited TZW sampling locations with an HQ greater than 100. All of these TZW exceedance areas are bounded by areas with REA Level 2 and REA Level 3 bioassay results and/or hits predicted by toxicity based on model-derived SQVs. Therefore, although TZW may contribute to risk, areas with TZW HQs greater than 100 are not driving the CBRA boundary and therefore remedial footprints discussed in Section 6.

There were no data available within the interim Project Area to support evaluation of the Empirical Bioaccumulation (Section 4.1.2.3) and Predicted Bioaccumulation Based on BSARs (Section 4.1.2.4) LOEs, so these LOEs were not used to delineate the boundaries of the CBRA.

There are three areas for which the CBRA boundary shown on Figure 4.4.2-1 does not coincide with the existing surface Thiessen polygon boundaries. The rationale for this deviation is described as follows. Working from the downstream to upstream boundary of the CBRA, the first area where the CBRA boundary deviates from the surface Thiessen polygon boundaries

occurs at the furthest downstream boundary of the CBRA, where it intersects the shoreline between the NW Natural Gasco and US Mooring property boundary. At this location, the CBRA boundary was drawn along the edge of the existing dock structure, which is consistent with the Portland Harbor draft FS (Anchor QEA 2012a) procedures for delineating CBRAs.

The second area where the CBRA boundary deviates from the existing surface Thiessen polygon boundary occurs along this same downstream area where the CBRA makes a sharp upstream turn by sample locations DGS-03SC and offshore from locations G259 and C525. The boundary was drawn at this location to exclude the two non-toxic empirical toxicity sample locations (DGS-02 and DGS-06; Figure 4.4.2-1) located further off-shore of the CBRA boundary. The location of this boundary is consistent with the Portland Harbor draft FS (Anchor QEA 2012a) procedure for weighting the benthic toxicity LOEs such that the empirical toxicity LOE results overrides or takes precedent over the predicted toxicity LOE.

The third and final area where the CBRA boundary does not follow the existing surface Thiessen polygon boundary occurs at the furthest upstream boundary of the CBRA where the boundary is drawn perpendicular to the shoreline. This boundary was drawn to encompass the area between the sample locations considered toxic or uncertain based on the predictive toxicity LOE that are located downstream and within the CBRA boundary and the non-toxic sample locations based on the predictive toxicity LOE that are located upstream of the CBRA boundary (Figure 4.2.2-1). This boundary is generally consistent with the downstream AOPC 9U boundary draft FS (see Figure 1.2.3-1).

4.4.3 Portland Harbor Draft FS Remedial Action Levels

Figures 4.4.3-1 through 4.4.3-6 depict the range of RAL contours that map out within the Gasco Sediments Site Area of Interest when using the Portland Harbor draft FS-identified range of Alternative B through F RALs for BaPEq, total PCBs, sum of DDTs, sum of DDEs, sum of DDDs, and 2,3,4,7,8-PCDF. If these COCs did not result in risk at the identified RAL for a given draft FS alternative, no contour is shown on the figures.

As detailed in the Gasco property RI (HAI 2007a) and RI Workplan (HAI 2007b), and Siltronic property RI (MFA 2007a), neither property has been identified as a historical or current source of PCBs, pesticide compounds (i.e., DDD, DDE, and DDT), and 2,3,4 ,7,8 PCDF. Therefore, the RAL contours for these compounds were plotted as shown in Figures 4.4.3-2 through 4.4.3-5 to maintain consistency with the Portland Harbor draft FS, but were not used in the determination

of the interim Project Area boundary. 2,3,4,7,8 PCDF did not result in risk for the Portland Harbor draft FS-identified range of Alternative B through F RALs; therefore, no contour is shown. It is important to note that none of the PCB and pesticide compound RAL contours extend beyond the identified interim Project Area boundary depicted on Figure 4.4.6-1 except for the total PCB Portlnd Harbor draft FS Alternative E (200 μg/kg) and Alternative F (75 ug/kg) RAL contours. These contours extend beyond the interim Project Area boundary due to a single core location (C300-2) in the upstream mid-channel area. If necessary, any active cleanup required for these non-Gasco Sediments Site related chemicals outside of the interim Project Area will be completed by other parties under other orders or consent decrees.

As a result, only the BaPEq RAL contours were used for development of the interim Project Area boundary.

4.4.4 Riverbank Soils Screening Levels

Screening results are depicted on Figures 4.4.4-1 through 4.4.4-3 (and as well as on Figures 3-1 through 3-3 of Appendix H). Multiple chemicals were identified above the screening levels with more exceedances and a greater magnitude of exceedances occurring in portions of the shoreline between the northern extents of the Gasco dock to the Gasco and Siltronic property line.

4.4.5 Potential Oregon Hot Spots, Principal Threat Material and Hazardous Waste

A summary of the evaluation results for potential Oregon hot spots, principle threat material and hazardous waste within the in-water and riverbank portions of the initial Project Area is described below.

As described in Section 4.3.1, no potential Oregon hot spots were identified within Gasco Sediments Site in-water sediments. Similarly, per Section 4.3.3, no PTM areas were identified within the Gasco Sediments Site in water sediments. In the riverbank, exceedances of both ecological and human health potential hot spot screening levels were identified (Figures 4.4.5-1 through 4.4.5-3 and on Figures 3-1 through 3-3 of Appendix F). One screening level exceedance is located within the riverbank (shown on Figure 4.4.5-2). The remaining exceedances are associated with samples collected landward of top of bank, primarily within the central portion of the Gasco property shoreline, except for a single exceedance associated with a sample

collected below 13 feet NAVD88 (shown on Figure 4.4.5-2). Potential Oregon hot spots in areas landward of the top of bank will be addressed as part of the upland FS remedy evaluation. Impacts associated with sediments collected below the 13 feet NAVD88 line will be addressed as part of the sediment remedy. This is relevant to alternative development and evaluation as discussed more in Sections 6 and 7.

For Hazardous Waste, the TCE, cis-1,2-DCE, and vinyl chloride concentration database (described in Appendix G) was screened against the RBCs identified in Section 4.3.4 to identify areas containing hazardous waste (prior to treatment as discussed in Section 4.3.4). Only a single location (C299 in the Siltronic Area 2 impact area shown on Figure 1.2.3-1) contained sediment concentrations (1,900,000 µg/kg) above the Siltronic-proposed TCE excavation worker RBC (1,200,000 µg/kg) in the 0- to 4-feet below mudline depth interval. This same location contained sediment concentrations above the DEQ-proposed occupational worker RBC (3,900 µg/kg) in the 0- to 4–feet (1,900,000 µg/kg) and 4-to 8-feet intervals (300,000 µg/kg). No top of riverbank soils concentrations available from 0- to 12-feet bgs contained exceedances of either the excavation worker or occupational worker RBCs.

For Special Waste, the existing data suggest that the quantity of sediment and soil that will be characterized as Special Waste will be a small portion of the total volume of sediment. TCLP data collected for the Portland Harbor RI/FS and Gasco-specific evaluations indicate that concentrations of contaminants in TCLP leachates are generally non-detect or well below RCRA regulatory levels (see Section 2.6.1). Benzene exceeded the regulatory limit in samples collected from three sediment cores and one riverbank soil boing location. Note that the results of subsequent bench scale testing on two of the sediments samples and the soil sample indicated that an addition of approximately 5 percent (by weight) of Portland cement to these samples reduced benzene leaching to levels below the regulatory limit (see Section 2.6.4).

4.4.6 Combined LOE Interim Project Area Identification

The boundaries developed by application of the individual LOEs summarized in Sections 4.1 through 4.3 were overlaid as shown in Figure 4.4.6-1. In accordance with the SOW, the interim Project Area boundary was identified as the largest perimeter of these LOEs. The interim Project Area was used as the outer boundary for evaluation of the remedial alternatives discussed in Section 62. It is important to note that this boundary was developed using surface LOEs. Section 4.6 describes the process for evaluating buried contamination for potential inclusion in the interim Project area and sub-SMAs (discussed in Section 4.5).

For the purposes of this EE/CA because the upland risk assessment results are not yet available, the entire portion of riverbank shown in Figure 4.4.6-1 adjacent to the Gasco and Siltronic properties was included within the interim Project Area boundary. This boundary may need to be revised based on future negotiations and agreements between DEQ and NW Natural and Siltronic.

4.5 Sub-sediment Management Area Development

Sub-SMAs are developed in this EE/CA to identify areas within the interim Project Area where site use or physical factors may influence the implementability or application of various remedial technologies (Section 5) that will be used in remedial alternative development (Section 6). Site use data and physical features (see Section 2) were used to determine sub-SMA types and are based on currently available information. The sub-SMAs also support simplification of the volume and cost estimates for the purposes of feasibility study level of analysis. These areas may be refined as part of remedial design.

The sub-SMA types shown on Figure 4.5-1 were developed based on the range of factors expected to most likely affect the implementability of various remedial technologies. sub-SMA types are consistent with the Portland Harbor draft FS (Anchor QEA 2012a) when applicable, with some additional sub-SMA types added for Gasco Sediment Site specific factors. These same sub-SMA types are then used for the identification and screening of technologies in Section 5. Each sub-SMA is given a two or four character code that describes the most relevant physical features and Site uses that are present in any given area. Other considerations as detailed in Section 4.5.3 were used to assign an additional code suffix to sub-SMA types as needed for particular areas within the Gasco Sediments Site.

4.5.1 Site Uses Sub-SMA Designation

Site uses, primarily vessel traffic, docking requirements, and upland structural stability, affect the way that remedial technologies may be applied because they may limit where certain technologies are effective or implementable. Vessel traffic information is summarized in Section 2.2.3. Consistent with the Portland Harbor draft FS (Anchor QEA 2012a), the following sub-SMA designations are used in this EE/CA to account for vessel traffic uses in the federal navigation channel (NC) and the potential future maintenance dredge (FMD) areas. The NC designation was applied to the area identified as the federally authorized navigation channel, as

detailed in Section 2.2.3. Maintenance dredging to maintain the channel and vessel traffic can impact the implementability of some remedial alternatives (e.g., capping). Potential FMD areas were identified as areas where current or likely future Gasco Sediment Site uses may result in dredging to accommodate vessel access to area docks and related shoreline areas. The NW Natural and U.S. Moorings FMD areas within the initial Project Area are shown on Figure 4.5-1.

4.5.2 Physical Feature Sub-SMA Designation

Physical features were determined from a variety of sources including field observations, bathymetric data, and aerial images. Consistent with the Portland Harbor draft FS (Anchor QEA 2012a), sub-SMA designations were used in this EE/CA for under heavy structures (SS), limited access because of structures (SL) and open water (OW). The presence of structures (SS) can impact the implementability of remedial technologies in many ways, creating access issues, additional time or expense, and the need for more specialized equipment from that used in open areas. This sub-SMA type applies to areas under the Gasco dock where dredging could undermine structural stability. This sub-SMA designation was applied to the area under the NW Natural Dock and in the adjacent structural offset area (5 feet around the structure as an EE/CA-level assumption). This sub-SMA type addresses the potential limiting effects of structures on construction operations. This includes the potential impact on implementability and costs of potential removal of these structures. Limited access (SL) can be caused by structures which limit but do not entirely prevent construction equipment to access areas. The SL sub-SMA type exists behind the Gasco dock, where specialized equipment and procedures would be needed to access this area. Open water areas are those in-water areas not impacted by structures (SS and SL) or within NC or potential FMD areas. By definition, they are free of structures, site usage, and maintenance dredging requirements.

4.5.3 Other Considerations for Sub-SMAs

The following subsections describe other considerations used in development of the Gasco Sediments Site sub-SMAs.

4.5.3.1 *Wave Zone Sub-SMA Designation*

In addition to the sub-SMAs identified above, areas of the interim Project Area located in the wave zone (WZ) area also potentially affects the effectiveness and implementability of technologies. Waves cause physical disturbance of the sediment bed that may cause implementability issues for some remedial technologies.

Because these considerations could occur in combination with the conditions discussed in Section 4.5.1 and 4.5.2, a -WZ suffix was added to the above codes in areas where both conditions occur. The WZ area is defined by the wind wave/vessel wake analysis (Appendix Hc of the Portland Harbor draft FS [Anchor QEA 2012a]) as any area above an elevation of 0 feet NAVD88 extending to the top elevation boundary of the Portland Harbor Site (13 feet NAVD88).

4.5.3.2 *Low Chemical Concentration Areas*

As shown in Figure 4.4.3-1, the surface sediment BaPEq concentration RAL contours are lower in the nearshore upstream portion of the initial Project Area. To help support the evaluation of potential application of different remedial technologies in these lower BaPEq concentration areas, this area was designated as a low chemical concentration area (LC).

4.5.3.3 *Considerations for Potential Location of Sheetpile Wall*

Rigid containment (i.e., sheetpile wall) is a technology considered in Section 5 for water quality containment purposes. To help support the evaluation of potential application of different remedial technologies inside and outside a sheetpile wall, the areas inside and outside the greatest depth a sheetpile wall could be feasibly constructed were designated. As detailed in Section 5.6.3.2.2, the sheetpile depth is based on the structural capacity of the sheetpile wall, which is affected by the water depths, depths of removal adjacent to the sheetpile wall, and the sheetpile properties (e.g., type of steel, length). The maximum feasible depth is shallower than the navigational channel depth. Thus, areas between the maximum feasible sheetpile wall depth and the federal navigation channel were designated as a separate sub-SMA: near channel outside sheetpile wall (NCSW). Thus, areas shoreward of this designated sub-SMA can be feasibly contained with a sheetpile wall, which can be considered for some alternatives as applicable per other feasibility issues discussed in Section 5. Where the LC area, as described in Section 4.5.3.2., overlaps with the NCSW area, this is designated as navigation channel sheetpile wall low chemical concentration (NSLC).

4.5.3.4 *Riverbank (RB) Sub-SMA Designation*

Areas upland of the Portland Harbor Site (13 feet NAVD 88) and below the top of the bank as defined in the SOW are given a separate riverbank designation (RB). The remedial technologies applied in these areas are discussed separately throughout the EE/CA.

4.6 Buried Contamination Analysis

The purpose of the buried contamination evaluation is to determine whether the interim Project Area should be modified due to the potential for buried contamination to be exposed from maintenance or navigation dredging. As discussed in the Portland Harbor draft FS (Anchor QEA 2012a), other factors such as river currents, propwash, and wave action on shoreline areas were not found likely to cause exposures of buried contamination.

For river currents, based on Portland Harbor draft FS (Anchor QEA 2012a) modeling, expected changes in surface sediment concentrations throughout the Portland Harbor Site (including the Gasco Sediments Site) due to river current erosion are relatively small and short in duration and do not substantially alter the course of natural recovery as generally observed at the Gasco Sediments Site. Consequently, there does not appear to be a need to identify any new areas of currently buried contamination that would have substantial impact on surface sediment concentrations due to current erosion. The extent to which any such erosion is expected to occur is fully integrated into and accounted for in the long-term surface sediment modeling results discussed in Sections 7 and 8. Therefore, this process can be fully assessed in terms of remedy success via evaluation of the model results.

For propwash and shoreline wave action, the Portland Harbor draft FS (Anchor QEA 2012a) indicates that any areas that would have elevated contaminant concentrations due to this overall process are very likely already identified by the use of the surface sediment datasets at an FS-appropriate level of spatial detail.

The Portland Harbor draft FS (Anchor QEA 2012a) also evaluated the possible mechanism of dissolved phase transport of contaminants from deeper sediments to shallower sediments using the Portland Harbor fate and transport model. Through this analysis, no specific areas were identified that would require addition to Portland Harbor Site sub-SMAs. This modeling was not conducted for the Gasco Sediments Site because an underlying assumption for all EE/CA alternatives, including the no action alternative, is that source controls will be in full operation at the time of construction. Under this condition, the primary driver for such dissolved phase transport, groundwater flux, will be zero or negative (i.e., downwelling) over the majority of the Gasco Sediments Site as discussed in Section 2.3.1.1 and shown on Figure 2.3.1.1-1.

For maintenance and navigation issues, EE/CA evaluation methods generally followed those used in the Portland Harbor draft FS (Anchor QEA 2012a), as summarized below. The results of the buried contamination analysis for each alternative are are integrated into the remedial footprints identified in Section 6.1.

4.6.1 Potential Future Maintenance Dredge Areas Outside of Navigation Channel

Two potential FMD areas outside the navigation channel, the Gasco dock and the U.S. Moorings dock (as discussed in Section 2) and shown on Figure 4.5-1. The Portland Harbor draft FS (Anchor QEA 2012a) identified potential FMD depths of -30 CRD and -40 CRD (-24.75 feet and -34.75 feet NAVD88, respectively) for the NW Natural dock and the U.S. Moorings dock, respectively. While these potential FMD areas may never be dredged in the future, they are a reasonable estimate of the potential for maintenance dredging to reveal potential buried contamination.

Consistent with the Portland Harbor draft FS (Anchor QEA 2012a) methods, to evaluate the potential for buried contamination to be revealed due to maintenance dredging within potential FMD areas, the interval of elevation in the 2 feet directly below the expected maintained navigation depth was evaluated. This is a reasonable estimate of concentrations that could be uncovered during a maintenance dredging event, given typical overdredge allowances for contracting purposes and safety factors. For potential FMD areas with navigation depths equal to the current authorized navigation channel depth of -40 feet CRD, a larger interval of 10 feet below the required FMD navigation depth was evaluated to account for potential future FMD deepening that might occur after the proposed deepening of the navigation channel occurs.

Levels of concern were defined in relationship to the RALs ranges associated with interim Project Area identification as follows:

- The average contaminant concentrations in each potential FMD area outside the sub-SMA boundaries (in the sediment horizons noted above) were compared to RALs. Any potential FMD areas with an exceedance of more than two times the RAL in those horizons was added to its nearest surface sub-SMA.
- The maximum point concentration in any core within potential FMD areas outside sub-SMAs with samples within the target horizons was compared to the RAL. Any point sample in these areas with an exceedance of more than five times the RAL in those

horizons was added to its nearest surface sub-SMA.

- Substantial product observation in any core within potential FMD areas outside sub-SMAs with samples within the target horizons was added to its nearest surface sub-SMA.

Additionally, the average concentration of sediments removed by maintenance dredge activities within potential FMD areas was estimated in order to understand how contaminant levels might impact future maintenance dredging operations or material disposal decisions. If the concentrations in maintenance dredge material were sufficiently high, it might be more appropriate to include such areas in sub-SMAs rather than to leave contamination to be handled during maintenance dredging operations. The average concentration of potential maintenance dredged sediments was calculated by averaging the subsurface concentrations of sediments in each potential FMD area outside of sub-SMAs located in the interval between the surface and 3 feet below the required navigation depth. These concentrations were compared to the RALs for each sub-SMA. As with the above analysis, a RAL exceedance factor (analytical result divided by the associated RAL) of two times the RAL for these average concentrations was used to identify areas that may need to be added to sub-SMAs for the same uncertainty reasons discussed above. Consistent with the Portland Harbor draft FS (Anchor QEA 2012a), a maximum point comparison was not made, given that maintenance dredging tends to combine sediments over broader areas such that single point concentrations are not representative.

4.6.2 Maintenance Dredging in the Navigation Channel

A similar analysis to the one performed for potential FMD areas as discussed in Section 4.6.1 was also performed for buried contamination in the navigation channel. The interval of elevation in the 5 feet directly below the required navigation depth, plus an additional 5 feet to account for potential future deepening, was analyzed across the Gasco Sediment Site Area of Interest. These sediment horizons were evaluated to determine whether they would represent contaminant levels of concern should they be uncovered by maintenance dredging. Levels of concern were defined in relationship to the RALs associated with each set of sub-SMAs exactly analogous to the steps described above for potential FMD areas. Consistent with the Portland Harbor draft FS (Anchor QEA 2012a), the navigation channel analysis was not conducted for BaPEq because RGs underlying these RALs are based primarily on human health sediment direct contact exposures, which per the BHHRA (Kennedy/Jenks 2011) are assumed to not occur in the navigation channel. However, PAHs are included in the benthic toxicity values used in calculation of the MQ. For the average value comparison, the average MQ concentration over

the portion of the navigation channel within the Gasco Sediments Site Area of Interest was assessed.

Additionally, like the FMD analysis, the average MQ and BaP concentration in sediments removed by maintenance dredge activities within navigation channel was estimated in order to understand how contaminant levels might impact future maintenance dredging operations or material disposal decisions. The average concentration of removed sediments was calculated by averaging the subsurface concentrations of sediments in the navigation channel river in the interval between the surface and 8 feet below the required navigation depth.

4.7 Determination of Sub-SMA Volumes

This section outlines how the removal volumes were estimated for the sub-SMAs. The removal volume determinations were consistent with the methods developed for the Portland Harbor draft FS (Anchor QEA 2012a). The LWG developed a method for calculating dredge volumes based on design and construction experience—this method is referred to as the LWG Method. EPA directed the LWG to use a simplified method for estimating dredge volumes—this method is referred to as the EPA-Directed Method.

The basis for dredge volume development is the Depth of Impact (DOI) determined for each core. The DOI is determined by comparing substantial product observations to subsurface chemistry RALs and MQs. As discussed in Section 4.1.3.2, unlike at other sediment cleanup sites in the United States that use a lower RAL at depth to reflect the lower risk of a complete exposure pathway at depth, the subsurface chemistry RALs were set equal to the surface chemistry RALs consistent with the Portland Harbor draft FS. The neatline removal volume ("boxcut" removal volume that does not account for constructability issues such as stable side slopes) is determined by multiplying the sub-SMA area by the depth of the DOI. Equation 5.10-3 below from the Portland Harbor draft FS (Anchor QEA 2012a) was used to calculate the neatline volume.

$$NV = (A_{s-t})[ft^2] * (DOI)\ [ft] * \left[\frac{1\ cy}{27\ ft^3}\right]$$

Where:
NV = Neatline volume in cy
$A_{s\text{-}t}$ = sub-SMA area in square feet (ft^2)
DOI = Depth of impact in feet (ft)

If the bottom of a core associated with a particular sub-SMA was impacted (that is, non-impacted sediment did not bound the bottom of the core (e.g., core location C299 and GS-C2), an additional 1.0 to 3.0 feet was added to the DOI to account for uncertainty in the full extents of impacted sediments.

The final volume used for the cost estimates is developed from the neatline volume but is adjusted upwards to account for engineering and construction factors that occur during construction. The following subsections present a brief overview of the methods used to estimate final removal volume consistent with the Portland Harbor draft FS (Anchor QEA 2012a).

4.7.1 Methods of Calculating Sub-SMA Volumes

Section 5.10 and Appendix G of the Portland Harbor draft FS (Anchor QEA 2012a) details the LWG Method and the EPA-Directed Method for determining dredge volumes. Figure 4.7.1-1 graphically presents the two methods. As depicted in Figure 5.11-5 of the Portland Harbor draft FS, the calculated volume difference between the two methods is a function of the DOI. The EPA-Directed Method produces smaller volumes than the LWG Method for smaller DOIs and larger volumes for larger DOIs. When the DOI is between approximately 7 and 10 feet the two methods produce similar dredge volumes. Figure 4.7.1-2 presents the total dredge volumes calculated using both methods for each of the remedial alternatives developed in Section 6. Because application of both methods results in virtually identical volumes for each of the alternatives (varying by no more than 2.5 percent for each alternative) and the LWG Method accounts for real world engineering and construction factors, the LWG Method was used for the volume determinations presented in this EE/CA.

Section 5.10.2 and Appendix G of the Portland Harbor draft FS (Anchor QEA 2012a) detail the different elements used in the LWG Method volume determination. Equation 5.10-1 from the Portland Harbor draft FS (Anchor QEA 2012a) was used to calculate volumes:

$$V_{LWG}[cy] = (NV + AOV) * (1 + EF) + \text{RV}$$

Where:

V_{LWG} = Volume in cy as calculated using the LWG method.

NV = Neatline volume in cy (see Section 4.7)

RV = Residuals volume in cy (see Section 5.10.2.5 of the Portland Harbor draft FS for more details)

AOV = Allowable overdredge volume in cy (see Section 5.10.2.3 of the Portland Harbor draft FS for more details)

EF = Engineering factors (30 percent to 50 percent) (see Section 5.10.2.4 of the Portland Harbor draft FS for more details)

See Figure 4.7.1-1 for further definition of each variable.

4.7.2 Additional Riverbank Removal Volumes

Significant DOIs exist in the vicinity of riverbank slopes for some sub-SMAs. The dredge cuts associated with these areas may impact the riverbank slopes generating additional removal volumes that are not captured in the methods described above. For this EE/CA a stable slope grade of 3 horizontal to 1 vertical (3H:1V) is assumed. The use of the conceptual 3H:1V dredge cut is based on existing stable slopes across the Gasco Sediments Site, which vary from 2H:1V to 3H:1V, the 2.5H:1V dredge cut used for the Time Critical Removal Action, and subsurface geotechnical information (see Section 2.6.5 and Appendix A). As part of the final remedial design, a detailed analysis will be completed to determine the stable slope grades along the riverbank based on site-specific data—it is anticipated that the slope will likely be steeper than 3H:1V, but not flatter, which will likely reduce the removal volumes summarized in this EE/CA.

Section 6.3.4 describes typical cross sections through the Gasco and Siltronic upland and in-water areas following removal to the DOI identified in each of the remedial alternatives. The additional dredge volume associated with the 3H:1V was calculated using the end area method for cross-sections stationed approximately every 200 feet along the riverbank. These volumes are referred to as "bank materials." The volumes associated with in-water sediments spatially separated from the bank cuts are referred to as "non-bank materials".

4.7.3 Estimated Total Removal Volume

Table 4.7.3-1 presents the total estimated low and high removal volumes for each alternative. The alternatives are described in more detail in later sections. The table breaks out the bank and non-bank removal quantities. Total dredge volumes range from 176,000 cy for the low estimate for Alternative 2b (Alternative 2a does not include removal) to 641,000 cy for the high estimate

for Alternative 5. The range of estimated total low and high removal volume is also presented by alternative in Figure 4.7.1-2.

5 SCREENING OF TECHNOLOGIES

This section identifies and evalutes various known and innovative technologies that have or can be used to remediate contaminated sediments. Information from the previous sections on the physical, chemical, and biological characteristics of the Gasco Sediments Site is used to evaluate and screen these technologies using EPA guidance methods and identify the subset of technologies that are most appropriate for use in sediment remediation at the Gasco Sediments Site. The evaluations identify that most of the commonly applied (EPA 2005) technologies of MNR, enhanced monitored natural recovery (EMNR), capping, environmental dredging, and disposal are widely appropriate for the Gasco Sediments Site as well as some more innovative technologies such as in situ treatment using carbon amendments, which is described in detail this section. In many cases, there is a wide array of "process options" for each major technology, so certain representative options were selected to facilitate later EE/CA evaluations. Both the technology screening and process option selections are for the purposes of this EE/CA, and technologies or options screened out may still be appropriate for consideration in remedial design. The screened-through technologies and process options identified in this section are used in Section 6 as the components to assemble the Gasco Sediments Site remedial alternatives.

Figure 5.0-1 provides a conceptual depiction of the various screened technologies in this EE/CA.

5.1 Monitored Natural Recovery

MNR is a remedy for contaminated sediment that typically uses ongoing naturally occurring processes to contain, destroy, or reduce the bioavailability or toxicity of contaminants in sediment (EPA 2005; Magar et al. 2009). There are multiple physical, biological, and chemical processes that can act together to contribute to natural recovery. Figure 5.0-1 shows an overall summary of typical MNR processes. As described in Section 2.5.5 and Appendix A, MNR of TCE and its degradation products in TZW by reductive dechlorination has been confirmed as an ongoing process.

As a remedial technology, important parts of MNR include: 1) a monitoring plan to assess whether natural recovery is occurring as expected (i.e., the rate and level of risk reduction estimated is occurring); and 2) a contingency plan to implement additional study or technologies should natural recovery not progress as expected. As discussed in EPA (2005) and Magar et al. (2009), MNR at sediment sites is most often included as one component of an overall remedy that includes active remediation (e.g., dredging and/or capping) of areas of

higher contamination in combination with MNR in areas of lower contamination, although MNR can sometimes be selected as a sole remedy.

5.1.1 Effectiveness

As outlined in EPA's Contaminated Sediment Remediation Guidance (EPA 2005) and technical support documents (e.g., Magar et al. 2009), the effectiveness of MNR should be evaluated using site-specific data, including multiple LOEs, as well as through the use of a predictive tool such as a model to estimate future effects of the physical, biological, and chemical processes contributing to natural recovery. Consistent with this guidance, the effectiveness of MNR was assessed for the entire Portland Harbor Site (including the Gasco Sediments Site Area of Interest) using a combination of empirical data and predictive modeling, as described in Section 6.2.2 of the Portland Harbor draft FS (Anchor QEA 2012a). Together, that information was used to develop an overall weight-of-evidence assessment of the effectiveness of MNR across the entire Portland Harbor Site, including the Gasco Sediments Site. A brief summary of the methodology used for that assessment is provided in Section 5.1.1.1; additional details on the methodology and the results of the Portland Harbor Site-wide assessment are provided in Section 6.2.2 of the Portland Harbor draft FS. That same analysis framework was used to further evaluate the effectiveness of MNR specifically within the Gasco Sediments Site Area of Interest, with certain evaluation refinements based on data and conditions specific to the Gasco Sediments Site as described in Section 5.1.1.2.

5.1.1.1 *Summary of Portland Harbor MNR Evaluation Framework*

In the Portland Harbor draft FS (Anchor QEA 2012a), numerous empirical data sets were reviewed to evaluate the occurrence of natural recovery at the Portland Harbor Site; a summary of these data sets is provided in Table 5.1.1.1-1. Results of that review indicated that MNR is effective on a site-wide basis for Portland Harbor, although the rates of natural recovery will vary depending on the specific location within Portland Harbor.

In addition to evaluating independent empirical LOEs, EPA (2005) guidance states that a predictive tool such as a model is useful to evaluate future reductions in surface sediment concentrations as a result of physical, biological, and chemical processes that contribute to MNR effectiveness. A well-developed and supported predictive model can also more specifically address the spatial variability of key MNR processes (e.g., deposition versus dynamic equilibrium sediment environments) and can estimate the timeframes for risk reduction

resulting from MNR. Such models are also useful in evaluating the potential impacts of extreme hydrologic events (e.g., floods, hurricanes, etc.) on future sediment concentrations and rates of natural recovery. As summarized in the Portland Harbor draft FS (Anchor QEA 2012a), all of the empirical datasets summarized in Table 5.1.1.1-1, as well as other more focused fate and transport datasets, were used in the development and calibration of quantitative hydrodynamic, sediment transport, and contaminant fate and transport models of Portland Harbor. For this EE/CA, the Portland Harbor Site models were refined to include additional Gasco Sediments Site-specific data and a smaller spatial scale of model cells in the Gasco Sediments Site Area of Interest, and were then used to predict long-term deposition/erosion rates and future changes in sediment concentrations in this area (see Appendix E). Together, these modeling tools provide another LOE to assess the effectiveness of MNR, and were also used in this EE/CA as part of comparative evaluations of the effectiveness of a range of remedial alternatives (see Sections 7 and 8).

The Portland Harbor draft FS (Anchor QEA 2012a) described an overall weight-of-evidence assessment of MNR effectiveness that was conducted for Portland Harbor (see Section 6.2.2.1.3 of the Portland Harbor draft FS). That evaluation combined five of the empirical data sets used to evaluate MNR effectiveness along with results from a sediment transport model simulation that provided predictions of long-term recovery rates throughout the Portland Harbor Site. Each of these six individual LOEs included in that evaluation were combined in a weight-of-evidence approach to assess the degree of certainty (or uncertainty) regarding the effectiveness of MNR within different areas of the Portland Harbor Site.

The approach used for the weight-of-evidence evaluation was based on categorizing the entire Portland Harbor Site Study Area (including the Gasco Sediments Site Area of Interest) into one of three "recovery categories" for each of six key MNR LOEs, which included:

- **Net Sedimentation Rate**: Areas experiencing relatively higher rates of net sedimentation would have the greatest potential for natural recovery.
- **Surface Sediment Grain Size**: Fine-grained sediments such as silts and clays tend to dominate in relatively low-energy (depositional) environments; as such, the rate of natural recovery is likely greater in sediment deposits comprised of finer-grained sediments.
- **Sediment Contaminant Surface to Subsurface Concentration Ratio***s*: In a system that is largely depositional and in which sources have been controlled, new sediments with lower concentrations deposit on top of the historical sediment deposits. This natural

recovery process is reflected by sediment cores that exhibit lower concentrations in the surface intervals and relatively higher concentrations at depth.

- **Maintenance Dredging/Propwash Activity**: Maintenance dredging and vessel propeller wash could remove recent sediment accumulations and likely retard recovery rates.
- **Shoreline Wave Action**: Wave/wake disturbance could potentially cause a regular reworking of the shoreline sediments that would impede recovery via sedimentation and long-term burial.
- **Model-Predicted Long-Term Recovery Rates**: A sediment transport model simulation was conducted as a "bed tracer" simulation, in which a unit concentration (of 100) was specified throughout the sediment bed (i.e., laterally and vertically uniform) at the beginning of the simulation, and incoming particles from upstream were assigned a concentration of zero. As incoming particles deposited on the bed in this model simulation, predicted concentrations within the surface (0 to-30 cm) of the bed were tracked over time to evaluate rates of decline.

The three categories used for each LOE listed were as follows:

1. Category 3 was assigned to areas where a given LOE indicated MNR would be effective
2. Category 2 was assigned to areas where a given LOE suggested that natural recovery will likely occur, but the degree of effectiveness is less certain
3. Category 1 was assigned to areas where a given LOE suggested that effective natural recovery is uncertain

Table 5.1.1.1-2 describes how these three recovery categories were assigned for each LOE. Recovery category assignments were made throughout the Portland Harbor Site on the scale of 100-foot grid cells for each of the six individual LOEs listed. Specifically, determination of the overall weight of evidence for the effectiveness of natural recovery was conducted by combining the recovery scores for each LOE at a given location within the Portland Harbor Site into an average. This combination was accomplished by overlaying the individual recovery category assignments for each of the six LOEs in GIS on a 100-foot square grid (so that all LOEs were evaluated on the same spatial scale), and calculating an average recovery category within each grid cell, resulting in a mapping of average recovery scores. Based on that mapping, MNR effectiveness was evaluated in the Portland Harbor draft FS (Anchor QEA 2012a) for each RM of Portland Harbor, although the discussion included evaluations at smaller scales in cases where

the empirical evidence indicated MNR would be more or less likely to be effective within certain portions of a given river mile.

5.1.1.2 *Application of the Portland Harbor MNR Evaluation Framework to the Gasco Sediments Site Area of Interest*

The same evaluation of MNR effectiveness described was used to evaluate the Gasco Sediments Site Area of Interest. One difference between the evaluation presented here for this EE/CA and the Portland Harbor draft FS (Anchor QEA 2012a) analysis is the sediment contaminant surface to subsurface concentration ratios. In the Portland Harbor draft FS, these ratios were calculated using total PCB data since PCBs tended to drive the remedial footprints over most of the Portland Harbor Site. However, for the assessment presented in this EE/CA, surface to subsurface concentration ratios were recalculated using BaP data, as this is a primary COC in the Gasco Sediments Site Area of Interest. The mapping of these BaP concentration ratios in the Area of Interest was based on additional site-specific sediment data collected during 2010 and 2011 as part of the Project AIR (Anchor QEA 2010a) data gaps sampling that were not included in the Portland Harbor draft FS, and the mapping was performed over the finer scale model grid (approximately 50-foot by 80-foot grid cells) developed to evaluate the Gasco Sediments Site.

The results of the MNR effectiveness categorization for the six LOEs within the Gasco Sediment Site Area of Interest are shown on Figure 5.1.1.2-1 (see Panels 1 through 6). As with the analysis presented in the Portland Harbor draft FS (Anchor QEA 2012a), the average recovery score was calculated spatially and mapped over a 100-foot grid, as shown on Panel 7 of Figure 5.1.1.2-1. This overall recovery score quantified the weight of evidence from the six LOEs with regard to MNR effectiveness.

This figure shows that multiple LOEs indicate that MNR is occurring in a large portion of the Gasco Sediment Site Area of Interest, particularly within areas of higher PAHs and CVOC concentrations (e.g., core location C299 in Area 2). Specifically, areas along either side of the navigation channel boundary in the interim Project Area are assigned Category 3 (shown in green). However, over some portions of the wider Gasco Sediments Site Area of Interest, the effectiveness of natural recovery is less certain (either Category 1 or 2, shown in red and yellow, respectively). Particularly in the navigation channel, there are areas that show a lower potential for natural recovery that are largely based on some combination of: 1) the presence of relatively coarser sediments; 2) areas that are net erosional or experience relatively low deposition; 3)

predictions of relatively long bed half-lives from the long-term sediment transport model simulation; and 4) sediment BaP concentration ratios indicating surface concentrations are higher than those of the subsurface. However, all of the Category 1 (red) areas in the navigation channel within the Gasco Sediments Site Area of Interest are in areas that are already well below relevant BapEq RALs and/or have MQs well below 0.7 (see Section 4.4), and thus do not represent an impediment to sediment contaminant recovery.

The weight of evidence suggests that natural recovery processes are occurring to some extent in the Gasco Sediments Site Area of Interest as a whole (i.e., a large portion of this area is characterized as Category 2 and Category 3); however, the rate at which it is occurring is uncertain in some areas. Also, in the areas with the highest sediment contaminant concentrations, including CVOCs in Area 1 and Area 2, much of this area is estimated to be likely undergoing natural recovery (i.e., is characterized as Category 3), including natural biodegradation.

5.1.2 Implementability

The previous effectiveness discussion addresses all of the natural and anthropogenic processes that are relevant to the determination of whether MNR is likely to be implementable. Monitoring and contingency planning is generally highly implementable.

5.1.3 MNR Conclusions

The weight of evidence suggests that natural recovery processes are occurring to some extent in the Gasco Sediments Site Area of Interest as a whole (i.e., a large portion of this area is characterized as Category 2 and Category 3); however, the rate at which it is occurring is uncertain in some areas. Also, in the areas with the highest sediment contaminant concentrations, much of this area is estimated to be likely undergoing undergoing natural recovery (i.e., is characterized as Category 3). MNR is considered implementable throughout the interim Project Area.

5.2 Enhanced Monitored Natural Recovery

EMNR involves active measures, such as the placement of a thin layer of suitable sand or sediment, to accelerate the natural recovery process (Figure 5.0-1). At the Gasco Sediments Site, this placement would accelerate the recovery of COIs by providing additional material to supplement naturally occurring sedimentation, which will act in combination with other

natural recovery processes. EMNR is often applied in areas where natural recovery may appear to be an appropriate remedy, yet the rate of sedimentation or other natural processes is insufficient to reduce potentially unacceptable risks within an acceptable timeframe (EPA 2005). The acceleration of natural recovery most often occurs due to burial and/or incorporation and mixing of the clean material into the contaminated surface sediments through bioturbation and physical mixing processes, which at the Gasco Sediment Site would supplement the ongoing degradation of PAHs. Other recovery processes can also be enhanced through the binding of contaminants to organic carbon in the clean material, via naturally occurring organic carbon or additions of amendments containing organic carbon. Placement of such EMNR materials is typically different than capping (discussed in Sections 5.4 and 5.5), because it is not designed to provide long-term isolation of contaminants. Clean materials can be placed in a relatively uniform thin layer over a contaminated area or it can be placed in berms or windrows, allowing natural sediment transport processes to distribute the clean material over wider areas. As with MNR, EMNR includes both monitoring and contingency plan components to verify that recovery is occurring as expected, and to respond accordingly.

5.2.1 Effectiveness

The Portland Harbor draft FS (Anchor QEA 2012a) showed that EMNR was determined to be potentially effective for the entire Portland Harbor Site, including the Gasco Sediments Site Area of Interest. As shown in Figure 5.1.1.2-1, there are portions of the interim Project Area that are designated Category 2 or 3 in the various MNR LOE evaluations. Based on the LOEs supporting these evaluations, these areas tend currently contain silty deposits, show net deposition over time, and have core ratios indicating higher levels of contamination are being buried over time. Thus, augmentation of sedimentation rates via EMNR would likely be effective in these areas. The operation of the upland source control hydraulic and containment system will also lead to groundwater capture throughout most of the initial Project Area (see Figure 2.3.1.1-1), leading to increased effectiveness of EMNR due to groundwater downwelling.

5.2.2 Implementability

The primary implementability challenge with EMNR is that a reasonable level of stability is needed for the EMNR material to stay in place and either bury or be incorporated into surface sediments over time. Gasco Sediment Site conditions where the stability of EMNR material is uncertain are similar to uncertain areas identified for MNR and include:

- EMNR material placed in areas subject to maintenance dredging (i.e., navigation

channel and potential FMD areas) could be removed over time, thus removing the benefit of the clean material. (It is important to note that this issue differs from maintenance dredging that might reveal new contaminated subsurface sediments, an issue which is addressed in sub-SMA development as described in Section 4.6.)

- EMNR material in these potential future maintenance dredge areas and navigation channel areas could be subject to propwash forces that may redistribute the materials elsewhere.
- EMNR material placed in WZ areas would be subject to wave forces that could move or erode the materials downslope and/or downstream.

For maintenance dredging issues in potential future maintenance dredge areas, EMNR may not be implementable if it would adversely affect Gasco Sediment Site uses, including navigation. EMNR may be implementable within the potential future maintenance dredge areas if appropriate institutional controls can be implemented to remove the potential for maintenance dredging of placed EMNR material.

EMNR in the navigation channel areas was judged to be generally incompatible with existing navigation maintenance programs and thus may be infeasible in these areas for the purposes of this EE/CA. Similarly, given the expected continued wave action higher on the shoreline, EMNR in the WZ is also considered generally infeasible for the purposes of this EE/CA. Additional evaluations during design would be required to further determine whether EMNR is potentially feasible in these areas.

5.2.3 EMNR Conclusions

Augmentation of sedimentation rates via EMNR would likely be effective in areas found to be effective for MNR. EMNR in navigation channel, maintenance dredge areas, and the WZ are generally considered difficult to implement for purposes of this EE/CA.

5.3 In Situ Treatment

This section provides a discussion and screening of the direct application or placement of amendments to reduce the bioavailability of certain contaminants as an in situ treatment technology, including an evaluation of representative process options to determine which amendments and distribution methods are likely to be most applicable to Gasco Sediments Site. One form of this technology involves the placement of an adsorbent or other reagent to reduce

the mobility of certain organic or metal contaminants. These materials have been successfully applied at other similar sites using one of five process options at the field pilot scale, including the following:

- Mechanical mixing of amendments into shallow sediment using injection tines or rotary tilling equipment
- Slurry placement of the amendments onto the sediment surface (e.g., in a clay mixture), potentially including injection or mixing into near-surface sediments
- Mixing amendments with sand and placing the blended materials using methods similar to the EMNR technology discussed previously (see Section 5.2)
- Sequentially placing amendments under a thin sand cover
- Broadcast application of amendments in a pelletized form to improve settling characteristics (e.g., SediMite™; the pellet matrix subsequently degrades, allowing the activated carbon (AC) to slowly mix into surface sediments through bioturbation)

Representative amendments and process options are discussed in more detail in the following subsections. An additional form of situ treatment, active capping, is discussed in Section 5.5.

5.3.1 Effectiveness Evaluation

In situ treatment techniques are less disruptive to the environment, typically less energy-intensive and less expensive than conventional remedial technologies, and can reduce ecosystem exposure by binding contaminants to organic or inorganic sediment matrices. The contaminant sorption capacity of natural sediments may be modified and enhanced by adding amendments such as AC for adsorption of non-polar organics and certain metals (various AC products are available as powder, granules, or pellets, each with different sediment application characteristics); natural minerals such as apatite, zeolites, or bauxite and refined minerals such as alumina/activated alumina for sequestration of metals/metalloids; ion exchange resins (organoclays) for replacement of metals/inorganic contaminants with amines or other functional groups (Ghosh 2008; O'Day and Vlassopoulos 2010). Multifunctional amendment blends may also be used to address complex contaminant mixtures in sediments and subsequently may enhance overall sorption capacity.

The two most common material classes for amendment are AC and organoclays. Organoclays have received attention largely in the context of addressing localized deposits of NAPLs

(Bullock 2007; Lampert and Reible 2009). AC application to sediment has been demonstrated at numerous sites as effective at reducing the mobility of a wide range of contaminants. It has a very high sorption capacity, particularly for nonpolar organic compounds, including PAHs and other principal constituents of MGP waste. The high sorption capacity of AC comes largely from the very high surface area to mass ratio achieved through the activation process. One limitation to AC in certain applications is that NAPL can coat the particles of AC, blocking the entrances to micropores that give AC its high surface areas that are critical to its sorptive capacity. Organoclay does not rely on micropores to effectively immobilize organic contaminants. Therefore, in applications where NAPL is present, organoclay can be more effective in immobilizing the organic phase. AC is most effective in applications with lower concentrations of contaminants for reducing the mobility of contaminants to extremely low levels.

AC or organoclay treatment has the effect of adsorbing hydrophobic contaminants, reducing porewater contaminant concentrations, and reducing their bioavailability for uptake by benthic organisms. The direct placement of AC or organoclay into sediment has now been demonstrated in a wide range of bench-scale and pilot studies and has been successfully deployed in large field efforts with promising documented monitoring results. AC and organoclay have proven effective in reducing the bioavailability of a range of sediment contaminants, including the primary sediment COIs that contribute to Gasco Sediments Site risk (i.e., including benzene, PAHs, phenolic compounds, TCE, and related compounds) for a variety of pathways and receptors, including the benthic community.

Section 6.2.4.1 of the Portland Harbor draft FS (Anchor QEA 2012a) provides a summary of case study results pertinent to this Gasco Sediments Site. The field demonstration sites are summarized in Table 6.2-7 of the Portland Harbor draft FS.

5.3.2 Implementability Evaluation

Similar to the EMNR, in situ treatment requires a stable sediment deposit for the treatment reagent (e.g., organoclay) to remain within the sediment treatment zone. The evaluation of river currents and sediment transport described in Section 2.4.3 indicates that sediment areas of the Gasco Sediments Site are primarily depositional (net bedload gain) and the MNR evaluation indicates that much of the more contaminated areas within the interim Project Area are stable and depositional. In these depositional areas outside both the navigation channel and potential

future maintenance dredge areas, in situ treatment with adsorptive materials is a practical remedial technology.

Within the navigation channel and future maintenance dredge area, the depth of contamination was evaluated relative to the necessary removal depth to support navigation channel elevations and potential future Gasco dock berthing elevations. As discussed further in Section 5.4.2, this evaluation showed that in the vast majority of cases, all buried contamination would be removed by the time these elevations would be reached. Therefore, for the purposes of this EE/CA, in situ treatment is not considered implementable in the navigation channel and potential future maintenance dredge areas. As with EMNR, placement of in situ treatment materials in the WZ may also present some implementability issues given the materials may move downslope over time. Thus, in situ treatment in the WZ is generally not considered for EE/CA purposes but may be considered further during remedial design.

5.3.3 In Situ Treatment Conclusions

As discussed in the Portland Harbor draft FS (Anchor QEA 2012a), past and ongoing studies are producing data demonstrating effective and implementable methods for distributing and mixing immobilization amendments into sediment in the biologically active zone. While the field studies have generally focused on the use of AC, these delivery methods can be used to distribute a wide range of amendments that could address the various organic and inorganic Site COIs. In situ treatment is generally considered implementable in areas outside the navigation channel, maintenance dredge areas, and the WZ for purposes of this EE/CA and may be further evaluated during remedial design.

5.4 Engineered Capping

Engineered capping (or capping) is a remedial technology for isolating contaminants in sediments and preventing or reducing the exposure and mobility of those contaminants from the sediment. It involves the placement of a subaqueous covering or cap of suitable material over contaminated sediment that remains in place and is one of the most commonly evaluated and implemented remedial technologies for contaminated sediments (EPA 2005; Palermo et al. 1998). Its effectiveness as a remedial option has been demonstrated by numerous successful projects. The results of a detailed evaluation of capping as a remedial technology for the Portland Harbor Site are presented in Appendix Hc of the Portland Harbor draft FS (Anchor QEA 2012a).

Depending on the contaminants and sediment environment, a cap is designed to reduce risk through the following primary functions (EPA 2005):

- Physical isolation of the contaminated sediment sufficient to reduce exposure due to direct contact and to reduce the ability of burrowing organisms to move contaminants to the surface
- Stabilization of the contaminated sediment and erosion protection of the sediment and cap, sufficient to reduce resuspension and transport to other sites
- Isolation of the contaminated sediment sufficient to reduce exposure from dissolved and colloidally bound contaminants transported into the water column

Typically, isolation caps are mostly composed of sand or suitable sediment and can range from approximately 1 foot to several feet thick, depending on the nature and extent of chemical concentrations. This primary isolation layer may be augmented by layers of other materials for various purposes, such as providing habitat and erosion controls on the cap surface (e.g., spawning gravels, cobble, riprap). The sources of capping materials can vary depending on the project-specific characteristics and are usually determined in remedial design. Likely sources of various cap materials include upland quarries for sand, gravel, and riprap and suitable maintenance dredge material for contaminant isolation layers (e.g., from Columbia River maintenance dredging). Figure 5.4-1 shows typical examples of a two-layer and three-layer capping system, with a sand isolation layer overlain with a coarser erosion protection layer.

5.4.1 Effectiveness Evaluation

The primary effectiveness issue for capping is whether the chemical and physical characteristics of the Gasco Sediments Site allow caps to sufficiently minimize dissolved flux of contaminants to surface sediments and surface water (the bioactive zones where exposure could occur). If the contaminant isolation is effective, capping is effective overall. Given that sufficiently robust erosion protection can be designed and maintained for almost any circumstance in a riverine system, the potential physical erosion of the cap and physical resuspension/transport of the underlying contaminated sediment is handled as an implementability issue in the next subsection.

As part of the Portland Harbor draft FS (Anchor QEA 2012a), a one-dimensional (i.e., vertical) contaminant transport model was used to evaluate if an engineered sediment cap would be

effective in reducing contaminant flux to the overlying water column. Specifically, the steady-state model of Lampert and Reible (2009) was used in the screening-level analysis. Lampert and Reible's steady-state model estimates the contaminant concentrations in the surficial (bioturbation) sediment layers of a cap once steady-state conditions are achieved in the cap. This same model was used for this EE/CA using the most up-to-date sediment and groundwater data. As the dissolved contaminants move upward through the cap, they are predicted to undergo biodegradation (for organic compounds such as PAHs and VOCs), while at the same time partitioning onto the cap material. Bioturbation mixes the surface layer, further reducing surface concentrations. The model calculates the contaminant concentrations in the bioturbation layer as a balance between the flux from the underlying contaminant isolation layer, the flux leaving the bioturbation layer, and the benthic boundary layer in the overlying water column.

Additional modeling conducted for this EE/CA included the additional sediment data available (per Appendix G) as well as more detailed information on the expected future groundwater velocities in the sediment bed due to the ongoing implementation of the upland groundwater source controls. This modeling is described in detail in Appendix I. Figure 2.3.1.1-1 shows the expected groundwater velocities in the Gasco Sediments Site Area of Interest based on modeling (using MODFLOW) estimates of the effect of the upland groundwater control system. The upland modeling is calibrated to both upland gradient data as well as offshore piezometer data collected to help further inform these predictions. Consequently, the model provides an accurate and reliable projection of future groundwater velocities. The condition shown in Figure 2.3.1.1-1 is modeled using conservative input parameters, and thus, is expected to represent a conservative estimate of these future velocities. Conservative in this case means that modeled downwelling velocity (water moving from the river into the sediment bed) projections are likely slower than expected and modeled upwelling velocity (water moving from the sediment bed into the river) projections are likely faster than expected. Such an approach promotes EE/CA level design of sediment caps that are at least as robust, if not more robust, than is likely needed.

Per Appendix I, the cap modeling indicates that the vast majority of the interim Project Area can be capped with at least 1 foot of sand (base cap and filter layer as shown on Figure 5.4-1 and stabilized in place using armor where necessary). This design is effective in all the areas of projected groundwater downwelling. The areas noted as "Center," "Area 1," and "Area 2" in Figure 5.4.1-1 fall into this category. Under these conditions, groundwater is transporting

capped sediment contaminants away from the biologically active zone in the cap, and diffusive flux of contaminants (and any other process) is insufficient to counteract the downwelling. At the upstream and downstream ends of the Gasco interim Project Area the upland groundwater controls are expected to reduce but not eliminate upwelling of groundwater. In these areas, model projections indicate that standard capping is likely to be less effective or there is uncertainty regarding their effectiveness. More robust designs such as thicker cap sections or active capping amendments would be needed to provide fully effective caps in these areas. Active capping in these areas is discussed in Section 5.5.

As part of the Portland Harbor draft FS (Anchor QEA 2012a), a screening-level analysis was performed to determine the stable particle size for a cap armor layer to protect the cap from erosional forces, such as wind- and vessel-generated wave action, river currents during extreme events, and propwash. The analysis was performed using the procedures and methods described in USACE (2006) and Maynord (1998). Appendix Hc of the Portland Harbor draft FS (Anchor QEA 2012a) presents the details of the cap armor analysis. The analysis found that caps could be designed to be stable for all the physical conditions present throughout Portland Harbor, including the Gasco Sediments Site. The stable particles sizes across Portland Harbor range from sand-sized particles to riprap materials. Based on this analysis, the sediment caps can be designed to withstand erosional forces at the Gasco Sediments Site.

5.4.2 Implementability Evaluation

As discussed in Section 5.4.1, a screening-level analysis was performed to determine the stable particle size for a cap armor layer to protect the cap from erosional forces, such as wind- and vessel-generated wave action, river currents during extreme events, and propwash. The analysis found that caps could be designed to be stable and withstand erosional forces at the Gasco Sediments Site.

Cap placement would be limited in some areas by some Gasco Sediments Site-use constraints. The placement of sediment caps above current or likely future navigation and maintenance dredge depths clearly would be incompatible with Gasco Sediment Site uses (e.g., barge and ship access to primary Gasco dock) if current waterfront operations are continued. Placement of caps in areas below the likely maintenance depths is implementable as long as sufficient depth safety factors were included to prevent possible cap damage from maintenance dredging activities. The federal navigation channel (NC) and maintenance dredge (FMD) sub-SMAs at the Gasco Sediments Site are shown on Figure 4.5-1. A detailed discussion of the constraints

associated with capping in a federal navigation channel or potential maintenance dredge areas is provided in Section 6.2.5.2 of the Portland Harbor draft FS (Anchor QEA 2012a). Based on that discussion, it was assumed for this analysis that capping in these sub-SMAs could only take place such that the surface of the cap armor was at a depth of -40 to -53 CRD (-34.75 to -47.75 NAVD88) and -30 to -33 CRD (-24.75 to -27.75 NAVD88) or deeper for FMD areas. These site uses were compared to the depth of contamination in these areas, and it was found that in the vast majority of cases all buried contamination would be removed by the time these depths would be reached. Consequently, dredging and capping back navigation channel and future maintenance areas was assumed to not be implementable for the purposes of this EE/CA.

One other potential constraint to capping is working in and around structures, such as the docks and piers that exist in the interim Project Area. Capping can typically be achieved in these situations by casting material from nearby areas under the dock or structure in question. A typical approach for this is mechanical placement with a "telebelt," which can be used to project material a considerable distance. This method uses gravitational settling of cap materials in the water column. The cap materials may also be placed by hydraulic methods. That is, the cap materials can also be entrained in a water slurry and carried to the capping area wet, where they can be discharged by pipe into the water column at the water surface or at depth. Both of these methods would allow the cap to be placed in and around structures along the shoreline. As a result, capping in and around structures is considered implementable for the EE/CA.

Finally, when placing caps there may be a need for an additional horizontal allowance to reliably cover the target contaminated sediment area. Such allowances are usually determined in remedial design, based on data density available at that time. For the purposes of this EE/CA, no additional horizontal tolerances were included in cost estimates.

5.4.3 Capping Conclusions

Based on the screening-level analysis, the engineered sediment cap technology was retained for detailed evaluation, except that engineered sediment caps were screened out for the navigation channel and future maintenance dredge areas of the interim Project Area due to future site use implementability considerations. In the remaining interim Project Area sub-SMAs, caps can be designed to be both effective in terms of contaminant flux and implementable in terms of stability against potential erosive forces and placement under and around structures.

5.5 Active Capping

A standard isolation cap, as described in Section 5.4, is designed to reduce the flux of contaminants from underlying sediments to the water column, primarily through adsorption of contaminants onto the cap material. Reactive materials can be placed within the contaminant isolation layer of the cap (an "active" cap) to supplement this adsorption process or to provide some other physical/contaminant processes that reduce the mobility of the contaminants. Active capping, given the use of reactive materials, is a form of in situ treatment. It is discussed in this section instead of Section 5.3, because this form of treatment is integrated into the functions of a cap. As discussed in Section 5.3, there are conditions where in situ treatment would be effective except that physical forces discussed previously (e.g., maintenance dredging or wave action) would jeopardize the stability of the amendments or amended sediment. In these cases, it may be feasible to provide in situ treatment if the amendment is integrated into a cap that provides stability of the materials.

The use of reactive materials may also be warranted where evaluations of standard capping indicate that a sufficiently thick cap cannot be created to adequately reduce the flux of contaminants over time. This condition may be due to a variety of reasons singly or in combination, such as the presence of highly mobile contaminants, high rates of groundwater advection, or the need to maintain certain water depths for navigation or habitat purposes. As described in EPA (2005), examples of materials used in active caps include engineered clay aggregate materials (e.g., AquaBlok™) and reactive/adsorptive materials such as AC, apatite, coke, organoclay, zero-valent iron, and zeolite. Composite geotextile mats containing one or more of these materials (i.e., reactive core mats) are available commercially. A description of how these materials act on reducing the contaminant flux through groundwater is provided in Section 6.2.6 of the Portland Harbor draft FS (Anchor QEA 2012a).

As with standard engineered caps, an active cap may provide an acceptable surface sediment concentration at future steady-state conditions; in which case, the chemical isolation design life for the cap is theoretically infinite. In other cases, contaminant concentrations in standard engineered or active caps may be expected to exceed an acceptable surface sediment concentration after many years and may require maintenance or augmentation at that time. Caps with active layers tend to be used in areas with higher underlying sediment concentrations of highly mobile contaminants, and thus, are more likely to have finite design lives. For this screening evaluation, capping design lives in excess of 100 years were generally

considered acceptable, which is consistent with design lives for many types of in-water engineered structures in general.

A subset of active caps has been developed and implemented on sites for capping NAPL in sediment. (Note that the following discussions are limited to the capping of DNAPL because other forms of NAPL have not been identified at the Gasco Sediments Site.) Active caps of this type typically function by including in the cap materials with high adsorbent capacity for DNAPL. Typical high-adsorbent capacity oleophilic materials include organoclay and activated carbon. These materials also function to effectively contain PAHs and CVOCs. The adsorbent materials may be applied in bulk, mixed with soil and then applied, or enclosed within geosynthetic materials. A cap of this type is also referred to as a sorbent cap.

5.5.1 Effectiveness

Active caps would be effective in all areas where the engineered caps discussed in Section 5.4 are effective, because the active layer would simply augment the effectiveness of the standard cap. As discussed in Section 5.4, there were two small areas upstream and downstream of the interim Project Area where standard engineered capping would potentially be less effective or its effectiveness would be less certain due to modeled positive groundwater seepage flux in these areas. As discussed in Section 4.4.1, portions of the interim Project Area contain sediments with substantial product, some of which contain DNAPL at variable depths below the sediment surface. One remedial technology that is available in those areas is the addition of an active cap layer.

5.5.1.1 *Chemical Dissolved Phase Migration*

Active capping is a potential technology to make standard capping more effective in reducing migration of dissolved contaminants, including PAHs and CVOCs. As part of the Portland Harbor draft FS (Anchor QEA 2012a) a screening-level active cap modeling was performed for two contaminants at the Gasco Sediments Site (e.g., benzene and vinyl chloride) associated with groundwater plumes. The modeling assumed the use of organoclay mats to augment cap performances. The screening-level results, presented in Appendix Hc of the Portland Harbor draft FS, indicate that use of organoclay mats integrated into a sand cap would meet the relevant screening values for each contaminant at the bottom of the cap bioturbation layer for 100 years. However, this modeling used general assumptions about groundwater velocities due to upland source controls and indicated in some cases that a large amount (or large thickness) of

organoclay could be needed to achieve an effective cap. These assumptions included net groundwater discharge from the Gasco Sediments Site, which will not occur following implementation of the groundwater source control hydraulic containment system (see Section 2.3.1.1).

Therefore, more detailed active cap modeling was conducted for this EE/CA in the areas that were found to have less certain effectiveness using standard capping approaches per Section 5.4. The modeling approach and results are provided in Appendix I. These specific areas modeled are showing in Figure 5.4.1-1 as "Upstream" and "Downstream." In this case, a transient cap model (Go et al. 2009) was used to perform iterative model runs that increase the effective organic carbon fraction (f_{oc}) of the 1-foot-thick chemical isolation material until relevant performance criteria were met throughout a 100-year model simulation period. These modeling results suggest that f_{oc} needed to amend a 1 foot-thick sand cap is approximately 20 to 25 percent in the upstream area, and twice that (40 percent) in the downstream modeling area. Based on studies that measured partitioning of PAHs to organoclay (Reible et al. 2011), the equivalent amounts of organoclay that would produce the same effective sorptive capacity as these f_{oc} values were calculated to be 10 percent by weight (approximately 6 pounds per square foot [lb/sf]) for the upstream area and 15 percent by weight (approximately 10 lb/sf) for the downstream area.

Although these cap designs continue to represent likely a relatively expensive means to control contaminant flux in the upstream and downstream areas, the modeling shows that such active caps can be effectively designed. Further, organoclay represents only one possible active material and more targeted active cap materials that may be more cost effective could be identified, modeled or tested during remedial design.

5.5.1.2 *DNAPL Migration*

Active caps that focus on the adsorption of DNAPL may also have useful application at the Gasco Sediments Site. Appendix I provides a detailed summary of the observations of DNAPL in the interim Project Area, areas where DNAPL exists within modeled positive groundwater discharge areas following implementation of the upland groundwater source control system, sites with DNAPL where active caps have been placed, the successful placement and performance of an active cap as part of the 2005 Removal Action, and design considerations for potential consolidation and/or gas ebullition-induced DNAPL migration pathways. A brief summary of the Appendix I findings related to DNAPL migration are provided below.

- DNAPL has been identified at variable depths below mudline in the interim Project Area.
- Only two adjacent cores within the interim Project Area contain DNAPL in an area where the groundwater modeling shows low-level net seepage following implementation of the upland groundwater source control system.
- Consolidation-induced seepage is a potential DNAPL migration pathway. Construction techniques can reduce the potential for this potential seepage pathway. Active caps have been successfully placed avoiding significant consolidation-induced DNAPL migration at numerous sites, indicating such caps can likely be designed at the Gasco Sediments Site.
- Gas ebullition is a potential DNAPL migration pathway but has not been observed to extensively exist at the Gasco Sediments Site during the various long-term visual monitoring events and construction activities that have been completed. Active caps have been successfully placed avoiding significant gas ebullition-induced DNAPL migration at numerous sites, indicating such caps can likely be designed at the Gasco Sediments Site.
- Active caps were successfully installed at the Gasco Sediments Site during the 2005 Removal Action and at other sites in Portland Harbor to control the potential for DNAPL migration.

5.5.2 *Implementability*

Similar to the engineered cap, active capping was not retained for navigation channel or potential future maintenance dredge areas, and is expected to be constructible and implementable in and around Gasco Sediment Site structures. Thus, active caps are expected to be implementable over most of the interim Project Area similar to the findings discussed above for engineered caps.

Beyond these typical cap implementability considerations, implementability and design of active caps intended to minimize DNAPL migration should also consider potential consolidation or gas ebullition-induced DNAPL migration. Per the matrix in Table 5.5.1.2-1, these are the primary two forces expected to cause a potential for upward migration of DNAPL through a cap. Given that DNAPL is heavier than water, by definition, upward movement due to density issues is not possible. The only other potential force for DNAPL migration would be upward groundwater movement through a cap, but as noted in Section 5.5.1.2, there are only

two adjacent sediment core that are located in an area where the modeled upland groundwater source control system will provide net seepage of groundwater.

A detailed evaluation of the potential for consolidation- and gas ebullition-induced DNAPL migration pathways and implementability is provided in Appendix I. In summary, active caps have been successfully placed avoiding significant consolidation- and/or gas ebullition-induced DNAPL migration at numerous sites, indicating such caps can likely be designed at the Gasco Sediments Site.

5.5.3 Active Capping Conclusions

The overall conclusion is that active capping (e.g., AC, organoclay, or other reagents) would be effective in the interim Project Area for the Gasco Sediment Site COCs (e.g., PAHs) and may be a necessary form of capping in areas where groundwater upwelling is expected to continue following implementation of upland groundwater source controls. Further, organoclay type sorbent capping may be a useful effective technology for areas where DNAPL in surface sediments are present and are expected to be contained in place under some alternatives. In addition, organoclay would likely function to further decrease the Siltronic CVOC COIs beyond the documented (Appendix A) natural attenuation already occurring in TZW as well as concentration decreases due to downwelling following implementation of the groundwater source control hydraulic containment system.

Therefore, active capping is retained for further consideration. For EE/CA purposes, the process option of an organoclay reactive core mat was selected to be representative of the active capping technology to be used in areas containing potential mobile liquid product and direct placement of bulk organoclay amendments onto the sediment bed in areas of positive groundwater flux. These technologies are carried into the remedial alternatives developed in Section 6. Other active capping process options should be retained for further evaluation and use in remedial design of specific sub-SMAs at the Gasco Sediments Site.

5.6 Removal

Removal is a technology commonly employed on contaminated sediment remediation projects. For sediment sites, removal can be accomplished from the water via dredging and from the land via excavation. There is a large array of process options available to accomplish removal.

There are several steps necessary to accomplish a complete removal scenario, and each step has several process options. Generally speaking, the steps are as follows:

- Excavating – physically removing target material from the current location
- Conveying – moving material to an offloading facility
- Offloading – transporting the material from the water to the land
- Processing – preparing the material for transportation and disposal (e.g., dewatering, amendment, and treatment)
- Transporting and Disposing – moving the material to its final disposal location.

For some process options, these steps may be combined. For other process options, these steps may occur in an alternate sequence. This section considers the first three steps listed above for removal screening. The remaining two steps are considered in 5.8 (treatment) and 5.9 (disposal).

There are a variety of technologies applicable to each step of the removal process. Table 5.6-1 summarizes commonly available technologies used in the removal process for sediment cleanup projects (EPA 2005).

In addition to the specific steps necessary to accomplish removal, there are a variety of best management practices (BMPs) to limit the release and loss of contaminants that are typically employed during removal. The types of BMPs that are appropriate can vary for different process options. BMPs can minimize potential environmental impacts during removal in some situations, and some BMPs may have site-specific limitations on their applicability. BMPs are summarized in this section and described in detail in the Portland Harbor draft FS (Anchor QEA 2012a).

Based on a general understanding of locally available equipment and typical local practice for removal on sediment cleanup projects, mechanical excavation with barge conveyance and mechanical offloading were assumed to be the representative process options for the screening evaluation. For example, the last two environmental dredging projects conducted in Portland Harbor (Terminal 4 Phase 1 and Gasco Early Action) were accomplished via mechanical dredging and barge conveyance. Because alternate technology/process options could be either less or more expensive than the EE/CA selected option, the use of a consistent process option for all alternatives does not consistently bias cost estimates either higher or lower.

5.6.1 Effectiveness

Dredging is a potentially effective technology in most cases, as discussed in the EPA guidance (2005). However, there is a large body of literature and project experience summarized in Patmont and Palermo (2007), USACE (2008a), and Bridges et al. (2010) that indicates dredge residuals can limit removal effectiveness, particularly when trying to significantly reduce concentrations of COCs.

The USACE has compiled a number of research documents in summary reports that describe specific issues related to residuals (USACE 2008b) and provide tools for estimating the potential for generating residuals during removal (USACE 2008a). Residuals are categorized as either undisturbed residuals or generated residuals (USACE 2008b). Undisturbed residuals occur where deeper sediments that are uncovered by removal of shallow sediments cannot be physically removed for any of a number of reasons, such as the following:

- Sediment overlying bedrock or hardpan
- Sediment covering highly uneven surfaces
- Sediment located near piers, piling, or utilities that are left in place
- Presence of debris or boulders
- Incomplete understanding of the horizontal and vertical extents of target material
- Inappropriate selection of target removal elevation
- Inaccuracy in meeting design elevations
- Design constraints that intentionally do not target complete removal

Generated residuals are those materials dislodged during removal and subsequently redeposited on the bottom of the waterbody. There are a number of causes of generated residuals (USACE 2008b), which can result in material redepositing within or adjacent to the removal footprint, such as the following:

- Sediments dislodged by the dredge head but left behind due to dredge operation and/or equipment limitations
- Sediments dislodged during debris removal operations
- Attempting removal in difficult conditions (e.g., debris fields or hard bottom)
- Sediment that sloughs into the dredge cut from adjacent undredged areas or otherwise moves due to slope failure

Generally speaking, understanding whether residuals are undisturbed or generated is important because each category of residuals could pose different risks, and prediction methods are different. Undisturbed residuals might be removed by a cleanup pass. Generated residuals may or may not trigger a need to actively manage these materials, depending on risk. Past practices of "chasing" generated residuals through multiple cleanup passes have often failed to meet project-specific action levels (USACE 2008b).

Because of the limitations residuals place on removal effectiveness, the representative set of removal process options used in screening and alternative development incorporates specific actions to manage residuals. The effectiveness of potential residuals management strategies was evaluated according to the methods described in Appendix Ib of the Portland Harbor draft FS (Anchor QEA 2012a) using assumptions about the likely range of process options that would be used to implement removal within the Portland Harbor. Based on this conceptual evaluation, the single cleanup pass and clean cover was considered an appropriate strategy to carry forward for residuals management in this EE/CA. The selected strategy is consistent with recently accepted strategies used at other sediment cleanup sites (e.g., Lower Fox River) and recognizes the limitations associated with attempting to manage residuals through multiple cleanup passes. It is important to note that this residuals-management strategy is only an EE/CA-level assumption. If EPA decides to require other residuals-management strategies, such as multiple dredge passes, the volumes and costs of dredging will likely substantially increase in remedial design beyond the estimates made for this EE/CA.

Thus, the representative removal process options for this EE/CA include active residuals management using a single cleanup pass after removal to the neatline followed by placement of a clean cover layer (e.g., sand). Note that post-dredge clean cover is similar to EMNR in concept, as described above, and is not the same as capping. Unlike capping, cover is not intended to completely isolate the underlying sediments or residuals.

5.6.2 Implementability

Removal is implementable where access to sediments can be reasonably achieved. Implementability may be limited in and around robust structures and/or to areas where stable slope laybacks for stability purposes would intersect with existing upland structures (e.g., Fab 1 building on Siltronic property and FAMM tanks on Gasco property) . Each of these issues is discussed in the following sections.

5.6.2.1 *Structure/Access Issues*

Heavy docks such as the Gasco primary dock that support large loads typically present implementability challenges for sediment removal due to limited access and the fact that many structures are designed assuming that the existing soils will provide lateral support to the foundation system. The general issues related to structure and access at the Gasco Sediments Site is reviewed in Section 4.5 and depicted on Figure 4.5-1, and includes designation of structure-related sub-SMAs:

- **Designated "SS"**: Areas located beneath heavy structures including a 5-foot offset from the structure face. For the purposes of this EE/CA, this offset is assumed to minimize environmental dredging-related impacts to structures. Additional structure stability evaluations during remedial design may define a different offset distance.
- **Designated "SL**": These areas are partially surrounded by in-water structures, such that in-water access is restricted.

There are two general process options that are typically considered for removal under such structures: 1) small dredge systems such as diver assisted suction dredges; and 2) removal of the structure followed by sediment removal and possible replacement of the structure.

The first option does not directly address the issue of structural stability. Based on as-built drawings of the Gasco dock, there is considerable concern that removing potentially 10 to 20 feet of sediment underneath and around the dock could substantially compromise the integrity of the dock. Further, such small scale environmental dredging operations have very low production rates and may still encounter difficulties in effectively removing all material from under such a complex dock structure with numerous pilings and other structural elements. Thus, the duration of such operations is very long and the costs tend to be very high per unit of material removed.

The second option addresses the issues of both structural stability and access. Once the structure is removed, more conventional removal process options can be used and would likely be nearly as effective as open water environmental dredging. However, the structure removal and possible replacement process adds significant logistics and duration, as well as cost, to the removal operation. Typical overwater structure demolition, dredging, and reconstruction costs, not including design work, are provided in the Portland Harbor draft FS (Anchor QEA 2012a). For the purposes of this EE/CA, an opinion of probable costs for structural removal and replacement of the Gasco dock and associated catwalk structures was estimated by Sevenson

Environmental Services. The probable cost estimate for just the removal of the Gasco dock and catwalk structures is approximately $10.8 million (see Appendix J Table 1-3). Despite this additional significant cost and logistical issues and due to EPA direction on this issue (EPA 2011), dock demolition and replacement is retained as potential technology for alternative development in Section 6.

While large and access-limiting structures impose constraints on removal, "light" structures (e.g., floating docks) are assumed to be movable, and certain small structures (e.g., catwalks and isolated small dolphins) are assumed to be replaceable to accommodate removal in this EE/CA. In these cases, removal was retained as implementable for the EE/CA as shown in Figure 4.5-1.

Also, another type of access issue can be created if the depth of impacted sediments to be removed is very deep. In some in-water areas the DOI is 30 feet or even greater. It may be technically infeasible in many cases to remove material to these depths, particularly along the shoreline (e.g., due to structure instability created and slope stability issues, which is discussed further in the following section). For the purposes of this EE/CA, 20 feet of removal is considered the feasible maximum for such work, which will cause potential issues to in-water/ upland structures and temporary slope instability, both of which will need to be carefully managed.

In summary, for the EE/CA the following applies:

- Removal under light structures such as catwalks and floating docks, is implementable
- Removal in sub-areas type SL behind the Gasco dock structure is implementable using either smaller water-based equipment or land-based equipment
- Removal in sub-areas type SS under robust structures is not implementable unless the structure is demolished and reconstructed as part of the removal operations.

5.6.2.2 *Slope Stability Issues*

Removal operations conducted at the toe of slopes or on slopes themselves has the potential to destabilize the slope or damage adjacent structures if the removal is not properly engineered to consider slope stability. Slope stability is a function of the depth of the removal, the design side slope, the geotechnical strength characteristics of the slope material, and any loads (current or future) at the top of the slope. The selection of a stable slope angle during design should consider all of these factors, which can vary widely across a given site. Given the complexity of

slope stability issues, it is not practical to consider detailed slope geometry and to design area-specific side slopes for every alternative for purposes of the EE/CA. As discussed in Section 4.7.2, this EE/CA assumes a 3H:1V side slope for volume estimates, although it is expected that this side slope will be refined during remedial design.

As shown in Figures 6.1-1 through 6.1-5, an assumed 3H:1V stable slope extending from the target removal depths identified for Alternatives 4 and 5 would remove significant portions of upland, including elements of necessary industrial infrastructure, undermine structures that are vital parts of existing business operations and would result in business interruption and other unacceptable economic impacts. Therefore, slope stability affects the implementability of these alternatives.

5.6.3 Removal Best Management Practices

As previously described, short-term water quality impacts and residuals generation is associated with contaminated sediment removal construction activities. These construction impacts can be mitigated to some degree using operational and barrier control BMPs. This subsection provides a summary review of a wide array of water quality and dredge residual BMPs and discusses the screening of these removal process options for EE/CA purposes.

5.6.3.1 *Operational Controls*

Operational controls impose limitations on the operation of the equipment being used for removal activities. For environmental mechanical dredging, the representative process option assumed for this EE/CA, typical operational control BMPs that usually reduce resuspension and loss of contaminated sediments include the following:

- Requiring a debris sweep prior to dredging in known debris areas (debris caught in dredging equipment can cause additional resuspension and release of contaminated sediments)
- Properly selecting the dredge bucket for site conditions (i.e., soft sediment versus debris or hard digging)
- Minimizing the potential for slope failures by maintaining stable side slopes during dredging (e.g., shallow top-to-bottom cuts)
- Slowing the rate of dredge bucket descent and retrieval (increasing dredge cycle time)
- Limiting operations during relatively high water velocity conditions (turbulence in the vicinity of the dredge bucket during high flow conditions can cause additional

resuspension and release of contaminated sediments)
- Preventing "sweeping" or leveling by pushing bottom sediments around with dredge equipment to achieve required elevations
- Preventing interim stockpiling of dredge material on the river bottom
- Preventing the overfilling of conventional clamshell (i.e., "open") buckets
- Requiring the slow release of excess bucket water at the water surface
- Preventing over-filling of barges to minimize spillage from barges
- Separating sediment solids from barge return water through filtration

While the effectiveness of operational controls in improving water quality can be difficult to assess (USACE 2008a, 2008b), several projects have demonstrated the effectiveness of specific operational controls (e.g., barge effluent filtration [Port of Seattle 2005]; minimizing the potential for slope failures by maintaining stable side slopes [Foth and Van Dyke et al. 2001]; general operational controls, Terminal 4 Phase 1 Removal Action [Port of Portland 2009], Table 6.2-10 of the Portland Harbor draft FS [Anchor QEA 2012a]). In particular, the Phase 1 Removal Action at Terminal 4 used a series of operational controls that were modified in response to water quality monitoring results, effectively controlling turbidity without the use of engineered barrier controls. However, operational controls reduce production rates and increase the overall project duration. Thus, the advantages of applying operational controls need to be considered in light of this reduction in efficiency and appropriately balanced (USACE 2008a).

5.6.3.2 *Barrier Controls*

Engineered barrier controls at environmental dredging and capping sites typically include the following two different technologies (USACE 2008a):

- Silt curtains and silt screens to retain suspended sediment plumes in low-energy environments and isolating the work zone and diverting some of the river flow around the work zone
- Rigid containment (e.g., sheetpile walls or cofferdams) to retain suspended sediment plumes in high-energy environments

A detailed discussion of the implementability, effectiveness and project experience of engineered barrier controls is provided in the Portland Harbor draft FS (Anchor QEA 2012a), is tabulated in Table 5.6.3.2-1, and is briefly summarized below.

5.6.3.2.1 Silt Curtains

Silt curtains and screens have proven effective in reducing surface water turbidity in relatively quiescent environments and are a common BMP used to retain suspended sediment plumes at environmental dredging sites located in low-energy environments (Francingues and Palermo 2005). They can also be effective at isolating the work zone and diverting some of the river flow around the work zone. However, their application in moderate- to high-energy areas (i.e., the Gasco Sediments Site) can be complicated, often requiring frequent repair and maintenance (see references in Table 5.6.3.2-1). In addition, water passes below or around fabric curtains because they are not typically sealed with the bottom, and water also discharges around the curtains when they are opened to allow the necessary passage of work equipment. As discussed in Bridges et al. (2010), based on a review of the available data, there is considerable uncertainty as to whether silt curtains are effective in retaining contaminants within the curtain footprint, and there are also concerns that contaminants can migrate through the bottom of the curtain anchor system while the curtain is in place and/or upon curtain removal. This has been confirmed by some other recent studies (e.g., Connolly et al. 2007). Releases of this type have been observed at specific sites noted in Table 5.6.3.2-1.

Silt curtain implementability concerns have also been documented on several projects, including the Lower Grasse River (Connolly et al. 2007), the San Jacinto River (Anchor QEA 2011b), and other environmental dredging projects that deployed silt curtains (EPA 2005; also see references in Table 5.6.3.2-1). These include damaged or lost silt curtains, difficulty anchoring curtains in deeper water, need for frequent moving and reanchoring, blockage of work access caused by "sailing" curtains, and reduced overall dredge production rates, which increases the duration and overall impacts from the dredging operation.

5.6.3.2.2 Rigid Containment Barriers

Rigid containment barriers, as discussed in Bridges et al. (2010) (e.g., sheetpile walls or cofferdams) are occasionally used to contain resuspension during environmental dredging operations, particularly in high-energy environments, although with different technological limitations. While several case studies have demonstrated reductions of dredging-related releases outside of the sheetpile-enclosed area (relative to releases that would have occurred without containment), release of contaminants beyond the barrier still occurs, as in practice it has not been possible to place a water-tight barrier. For example, during the Hudson River Phase 1 environmental dredging project, roughly 1 percent of the mass of PCBs dredged within sheetpile enclosure areas was released through the barrier, largely due to leakage through ports

at the interlocks (Anchor QEA and Arcadis 2010). The variable texture and debris conditions that occur at the Gasco Sediments Site, along with dynamic river forces, pose particular technological challenges that could lead to separation of the barrier interlocks, which would contribute to releases through the barrier. Necessary barrier design features such as pressure equalization ports also allow transport of dredging-related releases beyond the barrier.

In high-energy environments, the use of rigid containment barriers can also have unintended and undesirable environmental consequences. For example, a sheetpile enclosure placed in a mid- to high-energy reach of the Tittabawassee River led to local scour of sediments outside of the sheetpile wall, in some cases to depths of over 12 feet (Konechne et al. 2010). In addition to potential water and sediment quality impacts related to such scour, the loss of lateral support at the toe of the sheetpile will increase the unbalanced load on the wall and could cause it to fail. These types of unintended and undesirable consequences can be difficult to predict and can occur at any time after installation of the containment structure because they result from localized flow conditions that are transient in nature. In the case of the Tittabawassee River, the scour was not noted until after the removal was completed and post-construction bathymetry was evaluated. On the Hudson River Phase 1 project, one of the unintended and undesirable consequences of sheetpile containment was the concentration of dissolved-phase PCBs in the water column behind the sheetpile wall and exceedance of air quality criteria in the work area (Anchor QEA and Arcadis 2010).

Removal of rigid barriers can also have unintended and undesirable consequences. Adhered sediment can be resuspended into the water column during pile pulling, resulting in resuspension of deeply buried contaminants. Recontamination of adjacent sediment cap areas occurred during removal of a wall at Colman Dock in Seattle, due to mobilization and release of deeply buried PAHs in the area (Ecology 1995).

Specific to this project, technical evaluations completed as part of the 2005 Removal Action identified that sheetpiles: 1) would lead to penetration of contamination along the wall configuration to much deeper depths and leave stranded contamination following removal of the sheetpiles; 2) would greatly increase the construction durations and the duration of construction impacts; 3) would not lead to the complete containment of DNAPL and dissolved contaminant releases from the containment area (see Section 5.6.3.3 for further discussion); 4) would temporarily impound a large volume of water in which construction activities could create substantially concentrated contaminant loads, which could cause adverse impacts upon

release when containment is removed; and 5) would potentially create significant health and safety risks for construction workers (Anchor 2005a).

Finally, there are technical limitations related to the implementation of a standard sheetpile wall as rigid containment. Based on a contractor review of potential sheetpile use at the Gasco Sediments Site, a maximum practical depth of water for sheetpiles at the Site is approximately 35 to 40 feet based on the variable river flows that occur throughout the year (e.g., river discharge is approximately ten times higher during the winter than during the summer), the physical properties of the subsurface sediments, and the potential range of removal depths within the sheetpile wall (see Section 6). Beyond that depth, the sheets cannot be embedded sufficiently to account for these various factors. In areas with water depths greater than 35 to 40 feet, a cellular cofferdam would need to be constructed for rigid containment. Cellular cofferdams have considerable implementability issues including the time required for construction and the hazard to navigation they would create once in place. Because of the construction duration, it is not practical to construct and remove a cellular cofferdam structure to accommodate seasonal work windows.

EPA has indicated that it might allow extension of construction windows and allow removal to occur year-round once the barriers are in place. As shown in Table 5.6.3.3-1, the release rates observed across the numerous case studies are generally in the range of 2 to 4 percent, with most of the release being in the bioavailable dissolved form. As demonstrated by these case studies, there are no documented differences in these release rates between projects that use barrier controls and those that do not. Although all of the studies involved silt curtains or similar technologies, it is not expected that the predominantly dissolved phase release can be effectively contained by any technology, including sheetpile walls, because neither technology can provide a watertight barrier . Due to these factors, as well as other potential construction impacts, it is likely that releases would occur if construction was required outside the construction window. If removal was allowed out the construction window, it is assumed that the installation and removal of barriers, at least, would still have to take place during allowed construction windows. Any potential advantage of using rigid containment needs to be considered in light of the increased project duration as well as increased potential for impacts related to floodplains, scour, and other unintended consequences previously discussed.

5.6.3.3 *Review Environmental Dredging Releases and Water Quality Impacts*

Table 5.6.3.3-1 provides a summary of case studies regarding documented releases related to contaminated sediment dredging projects, mostly focused on PCBs. The most information is available for PCBs, but these results are expected to be generally representative of issues that would be observed for any hydrophobic organic contaminants (i.e., PAHs at the Gasco Sediments Site). The release rates observed across these studies are generally in the range of 2 to 4 percent, with most of the releases being in the bioavailable dissolved form. As demonstrated by these case studies, there are no documented differences in these release rates between projects that use barrier controls and those that do not. Although all of the studies involving barrier controls used silt curtains or similar barriers, it is not expected that this predominantly dissolved phase release can be effectively contained by any technology, even sheetpile walls, which like silt curtains, do not provide a watertight barrier (as discussed above). Because of the dissolved nature of these releases, it would appear unlikely that resource agencies would allow removal outside normal construction windows with rigid barriers such as sheetpile walls in place as hypothesized above.

All of the above indicates that there is likely little water quality benefit from deploying barrier controls, relative to their disproportionate impacts on implementability, schedule, and cost. However, per EPA direction (EPA 2011) rigid containment was retained for use in alternative development to allow further evaluation of this technology.

5.6.4 Removal Conclusions

Removal and many of its associated BMPs discussed in this section have been well demonstrated to be effective and implementable for the range of Gasco Sediment Site conditions. For the purpose of developing remedial alternatives in the EE/CA, the following representative process options are used in Section 6:

- Removal
  - Mechanical excavation with barge conveyance and mechanical offloading (either at a transload facility or an in-water CDF, see Section 5.8) is the assumed removal process option for the EE/CA.
  - Removal under robust structures is generally less implementable and cost effective, but demolition and reconstruction of docks is retained per EPA direction for the development of alternatives in the EE/CA.

  - Deep removal at the toe of the riverbank slope that would lead to removal of significant portions of upland, including elements of necessary industrial infrastructure, undermine structures that are vital parts of existing business operations, would result in business interruption and other unacceptable economic impacts, and is generally less implementable and less cost effective.

- Residuals Management
  - A single cleanup pass and post-dredge cover placement are considered an appropriate representative strategy to address residuals generated from the removal.
- BMPs
  - Operational BMPs apply to all removal options and they are included in all EE/CA alternatives involving removal.
  - Although likely cost ineffective, rigid containment (e.g., sheetpile walls installed in maximum water depth of 35 to 40 feet) are retained for alternative development per EPA direction as a representative process option for barrier controls.

Also, dewatering is one form of treatment of removed sediments. Process options for removed sediment dewatering are screened and discussed in the next subsection under treatment.

5.7 Ex Situ Treatment

Ex situ treatment refers to additional steps to reduce the toxicity, mobility, or volume of sediments after removal has taken place. Ex situ treatment can only occur in concert with removal (discussed in Section 5.6). At the Portland Harbor Site, a multi-year process was conducted to evaluate and screen ex situ treatment of sediments including multiple document submittals to and reviews by EPA (see Portland Harbor draft FS Section 6.2.8). The Portland Harbor draft FS (Anchor QEA 2012a) also provides further evaluation of seven ex situ treatment technology process options, including:

- Land Treatment/Composting (Biological)
- Stablization/Solidification (S/S) (Physical)
- Particle Separation (Physical)
- Sediment Washing (Physical/Chemical)
- Low- and High-Temperature Thermal Desorption (Thermal)
- Incineration (Thermal)
- Vitrification (Thermal)

The results of that screening indicated that three technologies were found to be potentially effective for treatment of sediments:

- S/S (Physical) – Was found to be potentially effective for metals leaching reduction in some local sub-SMAs, contaminant leaching reduction in sub-SMAs that may be found to have hazardous wastes during remedial design, and as treatment method to reduce sediment water content, potentially in all sub-SMAs.
- Incineration (Thermal) – Was found to be potentially effective on a limited basis for sub-SMAs that may be found to have RCRA hazardous waste during remedial design.
- Vitrification (Thermal) – Was found to be potentially effective on a limited basis for sub-SMAs that may be found to have RCRA hazardous waste during remedial design.

Of the three potentially effective ex situ treatment technologies, S/S was found to be implementable, and incineration and vitrification were generally found to not be implementable as compared to disposal without treatment at nearby landfills.

Therefore, S/S is retained for use in this EE/CA as a potential method to reduce leaching of contaminants and allow disposal of some sediments in a wider range of disposal facilities. Specifically, as noted in Section 2.6.4 addition of Portland cement was found to reduce the leaching of benzene from Gasco Sediments Site samples such that those sediments would pass TCLP tests for that contaminant. Per the definitions in the SOW, upon stabilization such sediments would no longer be classified as special waste (assuming they were not classified as hazardous waste per Figure 4.3.5-1), but as clean up material and would be suitable for disposal in an upland Subtitle D landfill or CDF.

Also, sediment that is preliminarily classified as hazardous waste, as described in Section 4.3.4, may be resampled for characterization after stabilization treatment. Treatment may result in that material not being classified as a hazardous waste per the determination method in the SOW (Figure 4.3.5-1). Material that is classified as hazardous waste based on the final characterization analysis is subject to the Land Disposal Restrictions. Under RCRA, most soil/sediment contaminated with a listed hazardous waste must be treated to reduce concentrations of hazardous constituents by 90 percent, unless such constituents are present (before or after treatment) at concentrations at or below ten times the Universal Treatment Standards identified in 40 CFR 268.48. For TCE, 1,1-dichloroethene, and vinyl chloride, this limit is 60 mg/kg, and for trans-1-2-dichloroethene, the limit is 300 mg/kg. If necessary, low

temperature thermal desorption should successfully remove the organic contaminants if the water content of the sediment is sufficiently reduced first. Therefore, this treatment technology is also retained for this specific situation, should it arise.

Also, as noted above, one other type of ex situ treatment, dewatering, is generally used for removed sediments before disposal. This is a form of ex situ treatment because reducing free water content reduces the mobility of contaminants contained in that water. This technology is discussed more below.

5.7.1 Dewatering Treatment

For upland disposal, excess water will be removed from the sediment before it is transported to the landfill. There are several reasons for removing as much water as feasible prior to final transport to the landfill, including the following:

- Disposal costs are based on weight, so the total cost for disposal is reduced if excess water is removed.
- Most landfills, including North Wasco County and Hillsboro, can only accept wastes that contain no free liquids.
- Free liquids need to be reduced as much as possible prior to loading sediment into trucks to reduce the potential release of contaminated material. This is less of a factor for gondola rail cars.
- Dewatering by amendment of the sediment may be required for transportation by rail or truck. Prior removal of free water will reduce the volume of dewatering amendment required.

As sediment is dredged and loaded onto barges, water that drains from the sediment may be collected in a sump. As the sediment is transported by barge, additional settlement and separation will occur and water will be collected for separate disposal. Gravity separation of water from the sediment, passive dewatering, is the first stage of dewatering. Mechanical dewatering may be used to further remove water from the sediment. As sediment is transferred from the barge to rail or truck, a dewatering agent may be added as the final stage of dewatering. Dewatering by amendment does not remove additional water from the sediment, but it can further improve handling characteristics and reduce the potential for releasing contaminants by absorbing water into the solid matrix. Passive, mechanical, and amendment dewatering are described in greater detail in the following subsections.

5.7.2 Passive Dewatering

Passive dewatering (also referred to as gravity dewatering) is facilitated through natural evaporation, consolidation, and drainage of sediment porewater to reduce the dredged sediment water content. Normal passive dewatering typically requires little or no treatability testing, although characteristics of the sediment such as grain size, plasticity, settling characteristics and NAPL content are typically considered to determine specific dewatering methods, to size the dewatering area, and to estimate the timeframe required for implementation.

Passive dewatering is generally effective and capable of handling variable process flow rates. Passive dewatering is fairly simple, but this method can require significant amounts of space (depending on the volume of material processed and the settling characteristics of the sediment) and time for significant water content reduction. Passive dewatering is a widely implemented dewatering technology for mechanically dredged sediments. It is also amenable to hydraulic dredging with placement into a settling basin or with the use of geotextile tubes[7] to confine slurry and sediment during passive dewatering. Hydraulic dredge sediment dewatering with geotextile tubes has been implemented at several sites but typically requires project-specific bench scale evaluations during remedial design to confirm its compatibility with Gasco Site-specific sediments and to properly select and size the geotextile tubes.

Depending on the desired moisture content of the sediment, the subsequent processing or handling steps, the volume of material to be dewatered, available space, and the ability to effectively manage the dewatering effluent, passive dewatering can be a highly implementable dewatering technology option. Passive barge dewatering was retained as a representative passive dewatering process option for inclusion in the development of alternatives. Other passive dewatering options should be retained for consideration in remedial design.

[7] A geotextile tube is a fabric enclosure that can be used to contain hydraulic dredge slurry and facilitate dewatering. The fabric is typically a woven geotextile that is selected, so the filtering characteristics of the textile allow discharge of relatively non-turbid effluent from the tube during dewatering. Containment by the tube imposes lateral stress on the dredge slurry, which facilitates more rapid dewatering of the dredge solids than would otherwise occur under passive (gravity) settling conditions.

5.7.3 Mechanical Dewatering

Mechanical dewatering involves the use of equipment such as centrifuges, hydrocyclones, belt presses, or plate-and-frame filter presses to separate coarse materials, or squeeze, press, or otherwise draw out water from sediment pore spaces. Mechanical dewatering is typically used in combination with hydraulic dredging to reduce the water content of the dredge slurry prior to beneficial reuse (e.g., sands retained from particle separation methods), ex situ treatment (e.g., thermal), and disposal of the dewatered sediment. Mechanical dewatering may also be used in combination with mechanical dredging if the dredge material is hydraulically re-slurried from the barge. Sufficient onshore space is needed to accommodate the selected dewatering equipment, but this space is usually less than required for passive dewatering. A mechanical dewatering treatment train usually includes treating the decanted water prior to discharge.

The mechanical dewatering treatment train typically includes screening to remove materials such as debris, rocks, and coarse gravel. If appropriate, polymers may be added for thickening prior to dewatering. These steps result in a dewatered cake that achieves project-specific volume and weight reduction goals of the dredged sediment. The mechanical dewatering process can be scaled to handle large volumes of sediment but requires operator attention, consistent flow rates, and consistent sediment feed quality.

Mechanical dewatering is generally an effective technology for both hydraulic and mechanical dredging and has been widely implemented for a range of sediment types and sediment end uses (e.g., beneficial reuse and upland disposal) and is likely the most effective method of achieving moisture content reduction over shorter timeframes than passive dewatering. Bench-scale tests are often performed during remedial design to develop the specific process design, select equipment, and to select polymer additives if appropriate.

5.7.4 Reagent Additive Dewatering

Reagent additive dewatering binds the water within the sediment matrix, increasing the mass of sediment relative to other dewatering technologies through both the added weight of the reagent and the added weight of the bound water. This added mass results in higher costs for landfill disposal compared to dewatering technologies that remove water. Various reagents may be used for dewatering, including quicklime, Portland cement, fly ash, diatomaceous earth, and sawdust or other cellulosic materials. Certain reagents—including Portland cement, quick

lime, and fly ash—can offer additional benefits such as increasing the strength and reducing the permeability of the sediment as well as reducing the mobility of contaminants in the sediment (as discussed above) and enhancing the removal of volatile contaminants through the release of energy (heat of hydration) and exposure of the sediment during mixing. Reagent mixtures can be optimized to provide enhanced strength or leachate retardation to meet specific project requirements.

Dewatering by the addition of reagents is effective and has similar or smaller space and operational requirements than mechanical dewatering. In some cases, reagent addition and mixing can be conducted as part of the dredge material transport and rehandling process, either on the barge or as dredge material is loaded into trucks or rail cars. Bench-scale testing is often necessary to determine the optimum reagent mixture prior to construction. However, for the Gasco Sediments Site bench scale tests using Portland cement, quicklime, and other materials have been conducted both for the 2005 Removal Action as well as the Project AIR data gaps sampling (see Section 2.6.4). Further diatomaceous earth was used in the 2005 Removal Action to provide dewatering polishing at the transload facility and was found to be cost effective. Thus, information is sufficient to determine the general effectiveness and implementability of this technology for this EE/CA.

5.7.5 Ex Situ Treatment Conclusions

S/S is retained as both a potential ex situ treatment as well as dewatering technology. Use of diatomaceous earth is also retained for dewatering steps. These are both EE/CA-level process options at this time, and other reagents for stabilization or dewatering may be identified in remedial design. Use of low-temperature thermal desorption is also retained for specific cases where such treatment might allow the disposal of hazardous waste containing CVOCs.

Several other potential dewatering process options are also generally retained for use. The degree of dewatering required will depend on the requirements of the disposal facility and the selected transportation method. In-water disposal would not require dewatering, although some sediment may require stabilization treatment for CDF disposal in which case, dewatering would be an ancillary effect of such stabilization.

For upland disposal, the alternatives evaluated in this EE/CA will be developed assuming that dewatering will consist of gravity separation to remove as much water as practical and an amendment such as Portland cement to absorb sufficient water and allow for transportation of

the sediment without releasing potentially contaminated water. Thorough mixing of the sediment and the dewatering agent are also assumed to effectively reduce or eliminate free liquid and decrease the leachability of the sediment porewater concentrations

Free water removed from the sediment may require treatment before it is discharged. Water treatment could be performed at the point of generation or at a commercial treatment facility. Removal of suspended solids may be sufficient to meet discharge limits, or removal of dissolved constituents may be necessary as a polishing step. For cost development, water treatment was assumed to consist of steps to remove solids (filtration) and dissolved constituents (adsorption with AC).

5.8 Dredge Material Transport and Disposal

As discussed in the SOW, dredged sediment will be characterized as Cleanup Materials, Special Waste, or Hazardous Waste based on the concentrations of MGP constituents or CVOC in the sediment or in simulated leachate. This means that a variety of potential disposal locations exist or may be required for alternatives evaluated in the EE/CA. The Portland Harbor draft FS (Anchor QEA 2012a) evaluated and screened numerous potential disposal sites in a multi-year process and reduced the potential likely disposal options for the Portland Harbor Site (including Gasco Sediments Site) to a few upland disposal locations and a few in-water CDF/ Confined Aquatic Disposal (CAD) facilities. The range of potential disposal materials for the Gasco Sediments Site are discussed below and are matched to appropriate representative disposal locations for the purposes of EE/CA alternative evaluations.

The bulk of Gasco Sediment Site materials are expected to be characterized as Cleanup Materials (i.e., not Special Waste or Hazardous Waste). A small volume of sediment may be characterized as Special Waste (containing significant quantities[8] of MGP constituents), and a very limited quantity of sediment may be characterized as Hazardous Waste (containing significant quantities of spent chlorinated solvent from releases from the Siltronic plant) if removal occurs in Area 2, where elevated CVOC sediment concentrations have been observed at core location C299. The characterization of sediment as Hazardous Waste or Special Waste is discussed in Sections 4.3.4 and 4.3.5, respectively. These sections discuss how ex situ treatment with amendment could effectively decrease the volume of materials that are characterized as

[8] "Significant quantities" is used generally here. See Figure 4.3.5-1 for details of how Special Waste and Hazardous Waste determinations are made per the SOW.

Hazardous Waste (converting the material to Special Waste), as described in the SOW. Dredged sediment that is not characterized as Hazardous Waste or Special Waste will be characterized as Cleanup Materials, per the SOW. Figure 4.3.5-1 provides a decision tree for characterization of dredged sediment. Disposal methods, assuming appropriate representative examples for EE/CA purposes, will be determined based on the characterization of the sediment.

5.8.1 Cleanup Materials

Cleanup Materials may be disposed of in a CDF or a CAD facility in Portland Harbor or in a Subtitle D (nonhazardous waste) landfill that is permitted to accept nonhazardous waste from cleanup actions. Additional information on the methods of transportation and disposal will be determined during design, but the final selection of a disposal facility, transportation method, and transfer station location will be made during planning stages of the implementation phase. As part of the the Portland Harbor draft FS (Anchor QEA 2012a), disposal options for sediment were evaluated, including potential CDFs at Terminal 4 and Swan Island Lagoon, and a CAD at Swan Island Lagoon (Anchor QEA 2012a). Any of these in-water disposal options would be appropriate for Cleanup Materials if the facilities are available for use in time for the implementation of the Gasco Sediments Cleanup Action. Similarly, other CDF/CAD options might be developed either by additional parties that could accept Cleanup Materials. The Portland Harbor draft FS (Anchor QEA 2012a) found that these types of facilities were likely equally effective at receiving and containing contaminated sediments over the short and long term. Therefore, a generic Portland Harbor CDF/CAD is used for EE/CA evaluation and costing purposes. One advantage of using a local disposal option is that the transportation distance would be negligible compared to transportation to one of the landfills. Another advantage is that the sediment would not need to be dewatered and may not need to be amended prior to placing it in one of the in-water disposal sites. The specific cost structure and other details would need to be negotiated with the developer of the CDF or CAD site in remedial design. For this EE/CA, general unit costs for CDFs/CADs based on information from CDF/CADs nationally as well as from the Portland Harbor draft FS are used.

In Oregon, landfills must develop and implement a "special waste management plan" in accordance with OAR 340-093-0170(3)(d) for managing Cleanup Materials. Several landfills in northwestern Oregon and southern Washington are qualified to manage Cleanup Materials, including the Columbia Ridge Landfill near Arlington, Oregon; the North Wasco County Regional Landfill near The Dalles, Oregon; the Hillsboro Landfill in Hillsboro, Oregon; and the Roosevelt Regional Landfill near Roosevelt, Washington. The transportation method from the

Gasco Sediments Site to the disposal site will depend on the landfill selected and the volume of sediment requiring disposal. The Columbia Ridge and Roosevelt landfills both have facilities for managing waste by rail as well as truck. Transport by truck is the only option available for the North Wasco County and Hillsboro landfills.

Mechanical dredging is the assumed removal method for the purpose of this evaluation. Dredged sediment will be loaded directly onto barges. Transportation to any of the landfills will require a combination of barge and truck or rail; therefore, a transfer station will be required to transload sediment from barges to truck or rail. If the transfer station is not within the Portland Harbor Site, the transfer station would need to obtain a solid waste permit. All of the disposal options described in the preceding paragraph are feasible for Cleanup Materials. The final selection should be made by the construction contractor based on cost.

Rail transport offers advantages, compared to truck transport, if the volume of sediment to be transported justifies the establishment of a barge-to-rail transload facility. The primary advantages of rail are that it would have less impact on traffic and reduced probability of traffic accidents. Rail freight transportation incurs approximately 12 percent of the fatalities, and 6 percent of the injuries as compared to trucking per trillion ton-miles, and the transportation employee injury rate for rail is approximately half of that for trucking (Moorman 2009). Transportation by rail also uses less fuel[9] and generates fewer exhaust emissions. The capacity of a single rail car is approximately two to three times the capacity of a truck-and-pup combination (approximately 75 to 100 tons for gondola rail car versus approximately 30 to 35 tons for a truck-and-pup combination). Therefore, a single train of 50 or more cars may transport as much material as 150 truck trips of the same distance. On the other hand, transload facilities for barge-to-truck transportation require less space than loading to rail and would be less expensive to develop. Truck transportation also offers greater flexibility in the choice of disposal facility because additional landfills are able to accept delivery by truck.

With any of the transportation and disposal options, excess water will be removed from the sediment before it is transported to the landfill. Treatment of dredged sediment is discussed in Section 5.7.

[9] Rail transportation in a gondola car, the type of equipment that would be used for transportation of bulk material to the landfill, is 2.3 to 4.0 times more efficient (tons of cargo times miles traveled per gallon of fuel) than truck transportation (Federal Railroad Administration 2009).

Again, the Portland Harbor draft FS (Anchor QEA 2012a) concluded that all the off-site upland Subtitle D facilities evaluated (including those noted) are likely to be equally effective and have similar costs. Consequently, consistent with the draft FS, Columbia Ridge was selected as a generally representative example, and EE/CA evaluations and costs are developed using this assumed disposal location.

5.8.2 Special Waste

As described in Section 4.3.5, the Special Waste classification is defined as those sediments that are not comingled with hazardous wastes but from which MGP constituents (benzene, phenols, chromium, and lead) leach at concentrations exceeding TCLP regulatory levels. Special Wastes will be disposed of as nonhazardous waste at a RCRA Subtitle C landfill. The transportation options and dewatering processes for Special Waste are the same as those discussed for Cleanup Materials in the previous section. The closest such disposal site was selected as generally representative of this option for EE/CA purposes, which is the Chemical Waste Management of the Northwest landfill near Arlington, Oregon.

5.8.3 Hazardous Waste

As described in Section 4.3.4, the hazardous waste classification will be applied to sediment that meets any of the following criteria:

- Contains TCE and certain related compounds at concentrations exceeding DEQ RBCs (to be determined by DEQ/EPA)
- Simulated leachate from the sediment contains TCE, 1,1-dichloroethene, or vinyl chloride at concentrations exceeding TCLP regulatory levels
- Exhibits any of the other characteristics of hazardous waste, including exceeding regulatory levels for non-MGP-constituents in TCLP simulated leachate

Preconstruction characterization of the sediment will be performed as part of the data gaps sampling, and confirmation sampling will be performed during construction, as described in the SOW. The processes of consolidating and dewatering/stabilizing sediment on the barge during construction may reduce concentrations of constituents in the sediment and simulated leachate. The results of the final confirmation sampling will be used to characterize the sediment for disposal.

Hazardous waste will be disposed of in a Subtitle C landfill. As discussed in Section 5.8.2, the closest hazardous waste landfill to the Gasco Sediments Site is the Chemical Waste Management of the Northwest landfill near Arlington, Oregon, which is generally used as the example of this option for this EE/CA. Dewatering and transportation options are the same as for Special Wastes. Management of material classified as Hazardous Waste introduces two significant distinctions: One is the requirement to use hazardous waste manifests, and another is a potential requirement for treating the material prior to land disposal. As discussed in Section 4.3.4 and 4.3.5, on-site treatment can be used to reduce the leachability of the waste material and decrease the volume of hazardous waste.

Storage of hazardous waste would require a permit. Storage of sediment is not anticipated as part of the action. Water decanted from the sediment or riverbank soils may be stored or accumulated prior to shipment to a treatment facility, but the water is not expected to contain concentrations of hazardous constituents that would make it hazardous waste. If necessary, a contained-out demonstration would be prepared to document that the water is not subject to hazardous waste regulation.

5.8.4 Disposal Conclusions

A variety of disposal options are available for Cleanup Materials, including in-water disposal and disposal in a commercial Subtitle D landfill. In-water disposal would be protective for certain Gasco Sediment Site materials. Compared to upland disposal, in-water disposal would have lower impact on river and roadway traffic, create less potential for traffic incidents and releases of contaminated material, would be less expensive, use less fuel, and create less emissions of exhaust gases. Upland disposal offers virtually unlimited capacity, and disposal facilities are already permitted and operating. For Special Wastes and Hazardous Wastes, the only disposal option allowed under the SOW is disposal at a Subtitle C facility. Thus, all three general disposal options are retained for alternative development in Section 6.

5.9 Institutional Controls

Non-engineering measures may be incorporated into a remedial action to affect human activities in such a way as to prevent or reduce exposure to CERCLA materials. These measures are considered "institutional controls," and generally entail limiting land or resource use (EPA 2005). Per the NCP, institutional controls generally supplement active remediation and MNR to manage short- and long-term potentially unacceptable risks, even if they may not be acceptable

as a stand-alone remedy. During active remedy implementation, institutional controls may be used to minimize the potential for human exposures during construction. In the long term, after active remedy implementation, institutional controls are implemented to minimize potential exposures while the system recovers over time to acceptable levels and may also be used to help ensure the effectiveness of active remedies, in the form of government or proprietary controls designed to limit the potential for disturbance to cap areas. Of the four broad categories of institutional controls EPA identifies in their 2005 RI/FS guidance (EPA 2005), four process options have been identified for this EE/CA as follows, consistent with the institutional technologies identified in the Portland Harbor draft FS (Anchor QEA 2012a):

- Government Controls
  - Commercial Fishing Bans
  - Waterway Use Restrictions or Regulated Navigation Areas (RNA)
- Proprietary Controls
  - Land use and access restrictions (such as deed restrictions, easements, and covenants, placed in property related documents or physical barriers, such as fences)
  - Structure Maintenance Agreements
- Enforcement and Permit Tools
  - Permit Processes or Provisions of Administrative Orders or Consent Decrees
- Informational Devices
  - Fish Consumption Advisories

All of these institutional controls can be effective and implementable and generally apply to the entire Gasco Sediments Site, and therefore all the institutional control technology categories listed are considered for the EE/CA. Generally, it is common that these institutional control technology categories overlap, and multiple institutional controls may perform amplifying functions. For example, informational devices may provide details related to the variety of other institutional controls and methods for informing the public on their applicability and restrictions. Similarly, in cap areas, RNAs may be applied in combination with deed restrictions and structure maintenance agreements, all of which may be subject to enforcement tools under permits, orders, or decrees.

The development of site-specific institutional controls that are effectively integrated into the overall remedy may be a relatively complex process. For example, Portland Harbor Site-wide institutional control efforts may include governmental controls and informational devices developed as comprehensive plans spanning the range of site conditions, requiring close coordination among EPA, other federal agencies, and the State (e.g., the U.S. Coast Guard for RNAs and Oregon Department of Health for fish advisories). In addition, specific efforts may need to be tailored to the Gasco Sediments Site and integrated with the specific combinations of other remedial technologies selected by EPA, and in some cases these will be highly dependent on the uses and ownership at the Gasco Sediments Site both now and in the future (e.g., for land use and access restrictions). For all these reasons, it is not necessary or prudent to develop a detailed institutional control plan at the EE/CA stage of analysis; this type of detailed plan will be developed during remedial design. For the EE/CA, each type of institutional control was included in the comprehensive alternatives in recognition of their general function and necessity within the overall remedy.

6 IDENTIFICATION OF REMEDIAL ACTION ALTERNATIVES

This section describes how remedial alternatives were developed for this EE/CA based on the interim Project Area identified in Section 4.4.6, the sub-SMAs identified in Section 4.5, and the remedial technologies screened in Section 5. A summary description of the proposed remedial alternatives was provided to EPA in a Technical Briefing on October 19, 2011, prepared by NW Natural and Siltronic Corporation (Anchor QEA 2011a). The remedial alternatives proposed in this section are consistent with the SOW requirements and incorporate EPA and DEQ comments on the Technical Briefing dated November 28, 2011.

Table 6.0-1 provides a detailed summary the proposed elements of remedial Alternatives 2a through 5 and Table 6.0-2 compares these alternatives against the Portland Harbor draft FS alternatives. Each of these alternatives apply a representative range of technology combinations to the sub-SMAs and directly account for the Gasco Sediments Site-specific RAO 1 (Section 3.3) for the preference for removal of substantial product. The EE/CA includes alternatives that have a combination of in-place and removal technologies (Alternatives 2a, 2b, and 3) as well as alternatives that have a greater emphasis on dredging/removal (Alternatives 4 and 5).

Each of the remedial alternatives developed in the Portland Harbor draft FS (Anchor QEA 2012a) included an "integrated" and "removal focused" option for BaPEq RALs ranging from 20,000 μg/kg for Alternative B to 1,500 μg/kg for Alternative F. The integrated option for each alternative placed a greater emphasis on construction of in-place technologies and treatment (e.g., EMNR, in situ treatment, engineered capping, active capping) in specific sub-SMAs, whereas the removal focused option placed a greater emphasis on removal in those same sub-SMAs. Based on the Gasco Sediments Site data, site uses and physical constraints (e.g., dock structures), and the results of the various LOEs used to develop the interim Project Area boundary (see Section 4.4.6), development of the EE/CA remedial alternatives using the draft FS "integrated" and "removal focused" framework across a range of intermediate BaPEq RALs is considered unnecessary. At the Gasco Sediments Site, RAL contours do not govern the perimeter lateral extent of the active remediation boundary except in one small area channelward of the 2005 Removal Action area (see Figure 4.4.6-1). In addition, comparison of all of the subsurface sediment concentration data within the active remediation boundary against the 1,500 and 20,000 μg/kg BaPEq RALs showed only a very limited number of locations where the vertical extent of RAL exceedances increases when the BaPEq RALs decreases across this range. Therefore, the remedial alternatives in this EE/CA were developed using the endpoint BaPEq RALs in the draft FS (Alternatives 2a, 2b, and 3 use the draft FS Alternative B

20,000 µg/kg BaPEq RAL and Alternatives 4 and 5 use the draft FS Alternative F 1,500 µg/kg BaPEq RAL) as well as a tiered preference for removal of liquid substantial product (Alternative 3), substantial product (liquid and non-liquid; Alternative 4), and substantial product (liquid and non-liquid) and 1,500 µg/kg BaPEq RAL exceedances (Alternative 5).

The in-place and dredging/removal technologies are applied across all alternatives in consideration with certain site uses and physical characteristics at the Gasco Sediments Site that limit or prevent the implementation of either removal or in-place technologies in some instances (as described in Section 5). For example, removal under and behind the Gasco dock can be difficult or impossible (unless the dock is removed and replaced, as assumed for Alternative 5), and capping in navigation areas may not be compatible with expected vessel traffic and docking needs. Similarly, deep removal at the toe of the riverbank slope (Alternatives 4 and 5) that would lead to removal of significant portions of upland, including elements of necessary industrial infrastructure, undermine structures that are vital parts of existing business operations and would result in business interruption and other unacceptable economic impacts, may not be implementable and cost effective. The no action alternative (Alternative 1) is also included consistent with EE/CA guidance (EPA 1993).

The remainder of this section summarizes the proposed remedial Alternatives 2 through 5 and provides a summary of the technology application assumptions for each alternative.

6.1 Development of Remedial Alternative Footprints

Alternatives 2 through 5 use the interim Project Area boundary as a baseline for development of the active remedial boundary. Any areas outside of this boundary potentially requiring remediation due to non-Gasco Sediments Site-related COCs will be addressed separately in the Portland Harbor Proposed Plan and ROD. Table 6.0-1 provides a summary of the following LOEs that were used to refine the interim Project Area boundary into the active remediation boundary: BaPEq RAL, benthic toxicity, predicted toxicity based on model derived mean quotient results (Section 4.1.2.2), results of buried contamination analysis (Section 4.6), and the preference for the removal of substantial product. A summary of the assumptions for each of these LOEs for each alternative is provided below. In addition, as discussed in Section 4.1.2.5, TZW exceedance areas of HQ greater than 100 were accounted for in development of the remediation boundaries but all exceedance areas were included within the active remediation boundaries developed based on the other LOEs so TZW impacts do not affect the remediation footprints.

As discussed in Section 4.4.6, the entire portion of riverbank shown in Figure 4.4.6-1 (extending up to the level portion at the top of bank as defined in the SOW) adjacent to the Gasco and Siltronic properties was included within the interim Project Area boundary. Inclusion of the entire riverbank within the interim Project Area boundary is an assumption for assessment purposes only, against the various LOEs identified in Table 6.0-1, and is not intended to imply that remediation is required along the entire riverbank. It should also be noted that Alternatives 4 and 5 require substantial shoreline reconfiguration beyond the top of riverbank and therefore Gasco Sediments Site boundary.

Alternative 2a

The Alternative 2a active remediation boundary was developed based on a modification of the interim Project Area boundary shown on Figure 4.4.6-1 using the methods developed for Alternative B in the Portland Harbor draft FS (Anchor QEA 2012a) and assuming no removal in the navigation channel or future maintenance dredge area. Specifically, as shown on Table 6.0-1, the boundary was developed using the following assumptions:

- The boundary excludes areas outside of the surface sediment BaPEq RAL 20,000 μg/kg contour (equivalent to Portland Harbor draft FS Alternative B RAL as shown in Table 6.0-2).
- The boundary excludes areas (defined by their surface sediment Thiessen polygons) outside generally contiguous surface sediments containing surface sediment MQ results (Section 4.1.2.2) less than 0.7. This is consistent with the Portland Harbor draft FS delination procedures for Alternative B.
- The boundary was decreased as necessary to exclude areas within the navigation channel and potential future maintenance dredge areas due to the Section 5.1 results, which show that MNR is occurring in these areas and will result in the necessary SWAC reductions to achieve the BaPEq RGs.
- The boundary was not specifically expanded for the presence of substantial product.

Application of these assumptions led to the Alternative 2a active remediation boundary identified in Figure 6.1-1.

Alternative 2b

The Alternative 2b active remediation boundary was developed based on a modification of the interim Project Area boundary shown on Figure 4.4.6-1 using the methods developed for

Alternative B in the Portland Harbor draft FS (Anchor QEA 2012a). Specifically, as shown on Table 6.0-1, the boundary was developed using the following assumptions:

- The boundary excludes areas outside of the surface sediment BaPEq RAL 20,000 μg/kg contour (equivalent to Portland Harbor draft FS Alternative B RAL as shown in Table 6.0-2).
- The boundary excludes areas (defined by their surface sediment Thiessen polygons) outside generally contiguous surface sediments containing surface sediment MQ results (Section 4.1.2.2) less than 0.7. This is consistent with the Portland Harbor draft FS delination procedures for Alternative B.
- The boundary was expanded as necessary to include areas within the navigation channel and potential future maintenance dredge areas that showed the potential for buried contamination (Section 4.6) to be exposed and thus potential for adverse impacts to surface sediment quality following potential future maintenance or navigation dredging. The expansion incorporated subsurface station Thiessen polygons for the buried contamination exceedance locations.
- The boundary was not specifically expanded for the presence of substantial product.

Application of these assumptions led to the Alternative 2b active remediation boundary identified in Figure 6.1-2.

Alternative 3

The Alternative 3 active remediation boundary was developed based on refinement of the Alternative 2a/2b active remediation boundary. Within that boundary, areas containing potential liquid substantial product in the top 3 feet of sediments were identified for targeted removal. The concept behind targeting these materials is that liquid product close to the sediment surface would have a higher theoretical potential for mobility to surface sediments and surface water under some circumstances. For the purposes of this EE/CA, liquid substantial product was defined as surface or near-surface sediment sampling locations containing visual observations of liquid DNAPL, oily media, and/or saturated media with strong sheen and hydrocarbon odor. This definition meets the definition of substantial product identified in Section 3.6.2.1 of the SOW, and it was applied consistent with the modifying factors identified in the SOW (i.e., every instance of liquid substantial product was also identified as substantial product). Alternative 3 excludes observations of liquid substantial product that do not initiate within 0- to 3-feet below mudline because deeper depth intervals were assumed to have limited potential for migration to the overlying surface sediments, as

detailed in the active capping technology screening in Section 5.5. However, adjustments to the design removal elevations were made, as necessary, to remove materials with liquid substantial product encountered following layback of a stable side slope from a designed removal elevation.

Thirty one subsurface sediment sampling locations contained liquid substantial product in the interim Project Area and the Alternative 3 active remediation boundary encompassed the surface sediment Thiessen polygons defined by each of these locations. Figure 6.1-3 presents the Alternative 3 active remediation boundary.

Alternative 4

As shown in Table 6.0-1, the Alternative 4 active remediation boundary was developed based on refining the interim Project Area boundary shown in Figure 4.4.6-1 using the following assumptions:

- The boundary included areas within the BaPEq RAL 1,500 µg/kg contour (equivalent to Portland Harbor draft FS Alternative F RAL as shown in Table 6.0-2).
- Boundary refined to exclude areas within the interim Project Area boundary that were: 1) outside of the substantial product boundary; and 2) showed benthic toxicity "hits" governed solely by midge performance without any other surface LOE exceedances (see Figure 4.4.2-1; locations DGS-08, DGS-25, DGS-30, DGS-33, SL04FPG, C312, and G309) or exceedances of the buried contamination thresholds.

Application of these assumptions led to the Alternative 4 active remediation boundary identified in Figure 6.1-4.

Alternative 5

Figure 6.1-5 depicts the Alternative 5 active remediation boundary, which is coincident with the interim Project Area boundary shown in Figure 4.4.6-1. Consistent with Alternative 4, this boundary includes areas within the BaPEq RAL 1,500 µg/kg. However, the Alternative 5 boundary includes areas outside of the substantial product boundary as well areas showing benthic toxicity "hits" governed solely by midge performance without any other surface LOE exceedances.

6.2 Summary of Remedial Alternatives

Based on the Gasco Sediment Site sub-SMA designations presented in Section 4.5 and screening of technologies results presented in Section 5, five alternatives (Alternatives 2a through 5) were selected for further development and detailed evaluation (Section 7). The no action alternative (Alternative 1) has zero acres of active remediation and, therefore, zero volumes of removal and zero construction duration.

The following subsections provide a summary of the technologies applied within the remedial footprints identified for Alternatives 2a through 5 (Section 6.1) and the assumptions used for the probable cost estimates for each alternative.

6.2.1 Remedial Alternatives Technology Application

Based on the results of the technology screening identified in Section 5, the following remedial technologies were screened for use in the remedial alternatives: MNR, in-place technologies (which includes a suite of potential technologies with similar effectiveness in many circumstances such as EMNR, in situ treatment, and various types of engineered caps) , active capping, removal, ex situ treatment, and transport to offsite disposal (CDF/CAD and/or upland disposal). As appropriate, each of these technologies was applied to the various sub-SMAs shown in Figure 4.5-1 within the remedial footprints identified in Section 6.1. For the purposes of this EE/CA, in-place technology application is represented by a specific cap design cross section. However, this is an EE/CA-level assumption only to assist with specific EE/CA parameters, such as cost estimating. For remedial design, it is anticipated that the locations assumed to have standard caps in this EE/CA will be further evaluated to determine the specific in-place technology that would best fit design requirements consistent with future EPA decisions on the EE/CA.

As discussed in Section 4.5, the technology assignment in each sub-SMA accounted for the specific Gasco Sediment Site uses and physical characteristics that limit or prevent the implementation of either removal or in-place technologies in some instances. Due to these limitations, alternatives with more removal emphasis (Alternative 4 and 5) do not identify removal in all parts of every sub-SMA, and alternatives with combinations of technologies (Alternatives 2 and 3) does not mean that there is no removal.

For the purposes of this EE/CA, sub-SMAs where removal occurs are identified as "Removal and Capping" or "Removal and Cover". The "Removal and Capping" designation was used for areas where the design removal depth will not result in the full removal of the various at-depth LOEs applied to the applicable alternative. Removal followed by capping is expected to directly address (contain in place or remove) buried contamination in the interim Project Area above the RALs that has a reasonable potential to be exposed in the future for all active alternatives (Alternatives 2 through 5). An example of this designation would occur within an sub-SMA in Alternative 3 where the design depth to remove liquid substantial product is 5 feet below mudline but non-mobile substantial product was visually observed below that depth and/or BaPEq concentrations below that depth exceeds the 20,000 μg/kg RAL threshold.

Alternatively, the "Removal and Cover" designation was used for areas where the design removal depth will result in the full removal of the at-depth LOEs. The cover is a dredge residuals cover as defined in Section 5.6.1. It should be noted that these are EE/CA-level assumptions that do not attempt to estimate the extent to which either post removal capping or cover (or variations on those approaches) would be able to provide long term attainment of RGs as assessed over wider risk-appropriate spatial scales. It is anticipated that during remedial design, a specific calculation of concentrations achieved by dredge residuals including various potential cover types will be conducted for each core within any dredge/removal prisms and then assessed over risk-appropriate spatial scales (e.g., shoreline half RM). This information will be used to refine the EE/CA-level assumptions here and may result in specific areas being designated as receiving an alternate post removal technology based on these remedial design evaluation results.

This EE/CA also accounts for the volume that must be removed to support stable side slopes extending from a target removal depth within a Thiessen polygon. As discussed in Section 5.6.2.2, as an EE/CA-level assumption, a 3H:1V side slope extending from the designed removal elevations was assumed for volume estimates, although it is expected that this side slope will be refined during remedial design. In areas where these side slopes extend through an area where capping is proposed, the approximate extents of the side slope area is identified as "Side Slope Removal and Capping." In areas where the side slopes extend through and areas where removal and cover is proposed, the approximate extents of the side slope area are identified as "Side Slope Removal and Cover." In areas where these side slopes extend through the riverbank to support stable slopes from the in-water target removal elevation, the approximate

extents are identified as "Riverbank Cutback Associated with Removal" (Figures 6.1-4 and 6.1-5).

As discussed in Section 5.4.3, engineered sediment caps were screened out for application in the navigation channel and FMD areas of the interim Project Area due to the depth of contamination relative to the berthing depths for site use implementability considerations. Therefore, these areas are designated as "Removal and Cover" for each of the alternatives. Consistent with the Portland Harbor draft FS (Anchor QEA 2012a), the target removal depth in the FMD and navigation channel areas were based on exceedances of sediments with greater than the BaPEq RAL shown in Table 6.0-1 or MQ greater than 0.7, and MQ greater than 0.7, respectively.

A summary of the technology assignment for each alternative is provided in Table 6.0-1 and is briefly summarized below.

6.2.1.1 *Alternative 2a Technology Assignments*

As shown in Table 6.0-1 and Figure 6.1-1, the following technologies were assigned to the in-water and riverbank portions within the interim Project Area:

- In-water technology assignments
  - **MNR:** Outside the Alternative 2a active remediation boundary but within interim Project Area boundary.
  - **In Place**: Everywhere outside the navigation channel that is within the interim Project Area boundary except the FMD area.
  - **Removal:** None.
- Riverbank technology assignments
  - **MNR**: Areas with minimal screening level exceedances in soils, no "substantial" product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).
  - **In-Place**: Areas with substantial product and/or substantial screening level exceedances in soil that are not removed or are remaining following removal.
  - **Removal**: As necessary "grubbing" of surface along Gasco property to facilitate placement of geomembrane and overlying in place technology.

6.2.1.2 *Alternative 2b Technology Assignments*

As shown in Table 6.0-1 and Figure 6.1-2, the following technologies were assigned to the in-water and riverbank portions within the interim Project Area:

- In-water technology assignments
  - **MNR:** Outside the Alternative 2b active remediation boundary but within interim Project Area boundary.
  - **In Place**: Everywhere outside the navigation channel that is within the interim Project Area boundary except the FMD area.
  - **Removal:** Everywhere in the navigation channel and FMD area that is within the interim Project Area boundary.
- Riverbank technology assignments
  - **MNR**: Areas with minimal screening level exceedances in soils, no "substantial" product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).
  - **In Place**: Areas with substantial product and/or substantial screening level. exceedances in soil that are not removed or are remaining following removal.
  - **Removal**: As necessary "grubbing" of surface along Gasco property to facilitate placement of geomembrane and overlying in-place technology..

6.2.1.3 *Alternative 3 Technology Assignments*

As shown in Table 6.0-1 and Figure 6. 1-3, the following technologies were assigned to the in-water and riverbank portions of the interim Project Area:

- In-water technology assignments
  - **MNR**: Outside the Alternative 3 active remediation boundary but within interim Project Area boundary.
  - **In Place**: Everywhere outside the navigation channel except FMD areas and liquid substantial product areas.
  - **Removal**: Everywhere in the navigation channel, FMD area, under dock structures, and areas containing liquid substantial product that initiate within 3 feet of the mudline that is within the interim Project Area boundary.
- Riverbank technology assignments

- **MNR**: Areas with minimal screening level exceedances in soils, no "substantial" product, and have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).
- **In Place**: Areas with substantial product and/or substantial screening level exceedances in soils (and as needed where these conditions persist following removal).
- **Removal**: As necessary to support stable slopes following in-water removal (in only an isolated area as shown in Figures 6.3.4-1 through 6.3.4-4) and in areas with potentially mobile substantial product.

6.2.1.4 *Alternative 4 Technology Assignments*

As shown on Table 6.0-1 and Figure 6. 1-4, the following technologies were assigned to the in-water and riverbank portions of the interim Project Area:

- In-water technology assignments
  - **MNR**: Areas on the periphery of the Alternative 4 active remediation boundary that only show surface sediment toxicity based on one LOE.
  - **In Place**: Everywhere outside the navigation channel except FMD areas and substantial product areas.
  - **Removal**: Everywhere in the navigation channel, FMD area, under dock structures, and areas containing substantial product that is within the interim Project Area boundary.
- Riverbank technology assignments
  - **MNR**: Areas with minimal screening level exceedances in soils, no "substantial" product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).
  - **In Place**: Areas with substantial product and/or substantial screening level exceedances in soil that are not removed or are remaining following removal.
  - **Removal**: As necessary to support stable slopes following in-water removal (in a number of areas as shown in Figures 6.3.4-1 through 6.3.4-4) and in areas with substantial product.

6.2.1.5 *Alternative 5 Technology Assignments*

As shown in Table 6.0-1 and Figure 6. 1-5, the following technologies were assigned to the in-water and riverbank portions of the interim Project Area:

- In-water technology assignments
  - **MNR**: None.
  - **In Place**: Where removal is assumed to be infeasible (i.e., areas where the LOE depth of contamination extends below 20 feet below mudline) in both nearshore and navigation channel areas.
  - **Removal**: Everywhere in nearshore and navigation channel areas within the interim Project Area boundary, including under docks (not included in Alternatives 2 through 4). The under dock removal is assumed to compromise the structural integrity of the dock so this alternative includes dock removal and replacement.
- Riverbank technology assignments
  - **MNR**: Areas with minimal screening level exceedances in soils, no "substantial" product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., the south end of Siltronic shoreline).
  - **In Place**: Areas with substantial product and/or substantial screening level exceedances in soil that are not removed or are remaining following removal.
  - **Removal**: As necessary to support stable slopes following in-water removal (along the entire riverbank as shown in Figures 6.3.4-1 through 6.3.4-4), in areas with substantial product, and in areas with substantial screening level exceedances in soils.

6.3 Summary of Technology Application Assumptions

The following subsections provide a summary of the technology application assumptions that were assumed for use in Alternatives 2 through 5 in this EE/CA. The full range of options for MNR, EMNR, and in place technologies will be further evaluated during remedial design to determine which of these technologies would best fit design requirements consistent with future EPA decisions on the EE/CA and in the Portland Harbor Site Proposed Plan.

6.3.1 MNR

Based on the evaluations included in Section 5.1, sedimentation and resulting MNR is likely to occur in areas of highest COC concentrations within the Gasco Sediments Site. Thus, the MNR

technology is assigned to locations outside the sub-SMA boundaries defined above but inside the interim Project Area. This specifically includes for Alternatives 2 and 3 the application of MNR in areas that are currently below an MQ of 0.7 consisten with the Portland Harbor draft FS (Anchor QEA 2012a) Alternative B development methods. MNR is assumed to include the monitoring and contingency requiements described in the Portland Harbor draft FS Appendix T.

6.3.2 Engineered Capping

The engineered capping locations for Alternative 2a through 5 are shown in Figures 6.1-1 through 6.1-5, respectively. For the purposes of this EE/CA, Alternatives 2 through 5 assume caps placed within the WZ area (Figure 4.5-1; above elevation 0 feet NAVD88 consistent with the Portland Harbor draft FS) will consist of the "Armored Cap Class 200" cap section depicted in 5.4-1, which includes a sand isolation layer overlain, overlain by a filter layer, overlain by Oregon Department of Transportation (ODOT) Class 200 Armor erosion protection layer. Outside the WZ (including the under dock areas), Alternatives 2 through 5 assume that the cap will consist of the "Armored Cap B" cap section, with the base cap overlain by a smaller diameter Armor Material B erosion protection layer.

The engineered capping materials were assumed to be transported to the Gasco Sediments Site via barge sourced from a regional quarry and placed from the waterside using a derrick barge equipped with a mechanical bucket. Standard operational BMPs for capping activities would be followed during placement.

6.3.3 Active Capping

As described in the active capping technology screening (Section 5.5.3) and cap modeling provided in Appendix I, organoclay amendments were assumed to be applied as follows for each of the Alternatives 2 through 5:

- Caps proposed in the modeled positive groundwater flux regions in the downstream and upstream areas (see Figures 6.1-1 through 6.1-5 and Figure 2.3.1.1-1), both inside and outside the wave zone, were assumed to include a bulk organoclay mixture of 5 pounds and 10 pounds per square foot, respectively, mixed into the base cap layer.
- Caps proposed in the under dock area are assumed to have 1.6 pounds per square foot of organoclay mixed into the base cap layer.
- Caps proposed in liquid substantial product areas assumed the placement of an

organoclay mat first followed by the placement of the appropriate wave zone or non-wave zone cap section.

Bulk organoclay mixed with cap sand was assumed for EE/CA purpses. The bulk organoclay was assumed to be mixed with the base cap material by the sand supplier and the combined material would be brought to the interim Project Area by barge and placed using a mechanical bucket. It is anticipated that the full range of options for active capping amendments will be further evaluated during remedial design to determine which technology would best fit design requirements consistent with future EPA decisions on the EE/CA.

6.3.4 Removal

Alternatives 2 through 5 assume the use of the removal, BMP, and residuals management technologies identified in Section 5.6.4 and that the in-water removal would be completed from the waterside using a barge mounted derrick equipped with a mechanical bucket of variable sizes and the riverbank removal would be completed with excavators from the landside.

As shown in Table 6.0-1, consistent with the Portland Harbor draft FS (Anchor QEA 2012a), Alternatives 2 through 4 assume no removal under the dock structure and a 5 foot assumed offset from this dock structure to minimize potential impacts to the structure. Alternative 5 includes removal under the docks. The under dock removal is assumed to compromise the structural integrity of the dock so this alternative includes dock removal and replacement. Removal under robust structures is generally less implementable and cost effective, but demolition and reconstruction of docks is retained per EPA direction (2011) for the development of alternatives in this EE/CA.

The assumed stable 3H:1V slope resulting from the toe of riverbank target removal elevation leads to significant cutback of the riverbank for Alternative 4 (Figure 6.1-4) and Alternative 5 (Figure 6.1-5). As discussed in Section 5.6.2.2, this degree of cutback would affect elements of necessary upland industrial infrastructure, undermine structures that are vital parts of existing business operations, and would result in business interruption and other unacceptable economic impacts.

Cross-sections showing proposed removal grades for each of the proposed remedial alternatives are depicted in Figures 6.3.4-1 through 6.3.4-4.

6.3.5 Water Quality Controls

Consistent with the removal BMPs and technology screening results summarized in Section 5.6.3.1 and 5.6.3.2, Alternatives 2a through 5 assume that typical operational BMPs apply to all removal options as well as a partial-height silt curtain to help contain any floatables, surface turidity, and/or debris. Alternatives 2a through 4 do not assume the use of more robust silt curtain containment (i.e., full-length curtains) or that rigid containment will be used due to the effectiveness, implementability, and cost effectiveness issues presented in Section 5.6.3.2. However, rigid containment is included in Alternative 5 per EPA direction (2011) as a representative process option for barrier controls.

Discussions with marine contractors have identified that sheetpile wall depth is based on the structural capacity of the sheetpile wall, which is affected by the range of anticipated water depths throughout the year, depths of removal adjacent to the sheetpile wall, and the sheetpile properties (e.g., type of steel, length). Based on existing information, the structural capacity would limit the wall to installation in a maximum 35 to 40 feet water depth. The navigation channel is deeper than this maximum feasible depth. Based on this constructability information and the anticipated water depths during the in-water construction windows, the alignment of the sheetpile is located as shown in Figure 6.1-5. This configuration divides the interim Project Area boundary so that removal channel-ward of this alignment would not be conducted within any type of rigid containment. As discussed in Section 2.2.2, installation of sheetpile wall is known to create vibration-related impacts to Siltronic operations; therefore, these impacts would need to be accounted for if EPA selected an alternative with sheetpile wall containment.

6.3.6 Dredge Material Transport

For the purpose of evaluating remedial alternatives in this EE/CA, it was assumed that sediment dredged from the Gasco Sediments Site will be loaded into barges for transportation to an in-water disposal site (CDF or CAD) or to a transfer station where the sediment would be transloaded into rail cars for delivery to a landfill for disposal. The location of the transfer station is assumed to be in Portland, Oregon, and the mode of transportation from the transfer station to the landfill is assumed to be rail. For large volumes of material transported significant distances, rail transportation may be more cost-effective than trucking. Rail also uses less fuel and generates less air pollution to transport the same quantity of material the same distance. Rail also has less impact on traffic and has historically been associated with fewer accidents, injuries, and fatalities than trucking. It is anticipated that the full range of

transportation and offloading facility options will be further evaluated during remedial design to determine which technology would best fit design requirements consistent with future EPA decisions on the EE/CA.

6.3.7 Dredge Material Treatment

As described in Section 5.8, treatment of removed sediments may be desirable and required for upland disposal and may be required for in-water disposal of certain sediments. Treatment can be categorized in passive gravity dewatering, elimination of free liquids through the application of amendments, and application of amendments with the purpose of reducing the chemical leaching potential of the materials. Dewatering is assumed to be a two-stage process that primarily will involve physical separation of water from sediment (i.e., draining excess water) and secondarily may require the addition of an adsorptive amendment. Diatomaceous earth is a lightweight amendment that has the capacity to absorb significant quantities of water. Portland cement or similar pozzolanic materials are somewhat heavier materials that not only dewater the sediments but also reduce the leaching potential of metals and organic compounds in the sediment.

Minimal dewatering may be sufficient for disposal of Cleanup Materials at Subtitle D landfills that are permitted to accept materials with free liquids (Columbia Ridge and Roosevelt). For disposal at these landfills, excess water will be drained for separate disposal, and the drained sediment may be amended to improve handling using conventional earth-moving equipment and to allow reliable delivery of the material to the landfill without releasing sediment or water. For disposal at any of the other landfills, including disposal of Special Waste and Hazardous Waste, drained sediment would need to be amended sufficiently to eliminate free liquid. As discussed in Section 5.8, additional treatment may be required for sediment classified as Hazardous Waste to reduce concentrations of principal hazardous constituents (TCE, 1,1-dichloroethene, *trans*-1-2-dichloroethene, and vinyl chloride) prior to disposing of the sediment in a hazardous-waste landfill. For the purpose of the EE/CA cost development, the treatment for this limited volume of sediment was assumed to be enhanced volatilization through Portland cement amendment.

For remedial Alternative 2b, all of the removed sediment may be disposed of in a CDF or CAD site without treatment (i.e., stabilization treatment or more than incidental dewatering). All of the other remedial alternatives are assumed to require at least some upland disposal and, therefore, dewatering treatment using Portland cement amendment or similar. The costs of

water collection and treatment and the addition of dewatering amendments are included in cost estimates for all alternatives except for the Alternative 2b lowend cost estimate that assumes 100 percent disposal in a CDF. Thus, with this one exception, ex situ treatment is incorporated into the removal and disposal of all material in each alternative for the purposes of this EE/CA.

6.3.8 Disposal

For the comparative evaluations of alternatives, certain assumptions were made regarding the disposal of dredged material, as summarized in Table 6.3.8-1 . At this stage in the process, it is difficult to know exactly what combinations of disposal facilities will ultimately be used for the remedial action. In-water disposal, at a CDF or CAD site in Portland Harbor, would be a protective and cost-effective disposal method for much of the sediment classified as Cleanup Materials. For this EE/CA, the following assumptions were made regarding in-water disposal:

- A CDF or CAD facility will be developed and available to accept sediment for confinement in a timeframe suitable to receive material from the Gasco Sediments Site.
- All or at least some portion of the material from the Gasco Sediments Site will meet acceptance criteria that will be established for the inwater disposal site.
- Cleanup Materials from the Gasco Sediments Site will be appropriate for disposal in the in-water disposal site without treatment.

Cleanup Materials that are not managed in an in-water disposal facility will be managed in a nonhazardous-waste (Subtitle D) landfill. Disposal of Cleanup Materials in any appropriately permitted Subtitle D landfill will be equally protective. For the purpose of developing high-end remedial alternative costs for the EE/CA, information for the Columbia Ridge landfill was used. This is not intended to limit the future selection of a disposal site or express a preference for any particular landfill. Additional assumptions related to disposal of Cleanup Materials at a Subtitle D landfill include the following:

- Cleanup Materials will be transported by barge from the Gasco Sediments Site to a facility for transloading sediment from the barge to land transportation.
- Sediment will be managed on the barge to drain as much water as practical. Water drained from the sediment will be collected for treatment.
- The transload facility will be located in Portland, Oregon.
- Transportation from the transload facility to the landfill will be by rail.
- At the transload facility, sediment will be amended with diatomaceous earth ash, as necessary to improve handling characteristics, and loaded into rail cars for transport to

the landfill.

Special Waste and Hazardous Waste will be managed in a hazardous-waste (Subtitle C) landfill. For the purpose of developing remedial alternative costs for this EE/CA, information for the Chemical Waste Management of the Northwest landfill was used. This is not intended to limit the future selection of a disposal site or express a preference for any particular landfill. Additional assumptions related to disposal of Special Waste and Hazardous Waste at a Subtitle C landfill include the following:

- Special Waste and Hazardous Waste will be transported by barge from the Gasco Sediments Site to a facility for transloading sediment from the barge to land transportation.
- Sediment will be managed on the barge to drain as much water as practical. Water drained from the sediment will be collected for treatment.
- The transload facility will be located in Portland.
- Transportation from the transload facility to the landfill will be by rail.
- At the transload facility, sediment will be amended with Portland cement (as necessary to improve handling characteristics, eliminate free liquids, and reduce concentrations of or immobilize hazardous constituents) and loaded into rail cars for transport to the landfill.

The Gasco Sediments Site database TCE, cis-1,2-DCE, and vinyl chloride concentrations were screened against the RBCs identified in Section 4.3.4 to identify areas containing hazardous waste (prior to treatment as discussed in Section 4.3.4). None of the data exceed the Siltronic-proposed CVOC excavation worker RBCs. Only a single location (C299 in the Siltronic Area 2 impact area shown on Figure 1.2.3-1) contained sediment concentrations above the DEQ-proposed occupational worker RBC (47 μg/kg) in the 0- to 4-feet (1,900,000 μg/kg) and 4-to 8-feet intervals (300,000 μg/kg). For the purposes of this EE/CA, all removal conducted within the surface sediment Thiessen polygon for location C299 was conservatively assumed to be disposed as hazardous waste at the Chemical Waste Management of the Northwest landfill. Post-removal treatment of these materials could potentially decrease the VOC concentrations below the RBCs allowing disposal as a Special Waste in a Subtitle D facility.

No top-of-riverbank soils concentrations available from 0- to 12-feet bgs contained exceedances of either the excavation worker or occupational worker RBCs; therefore, all riverbank soils were assumed to be suitable for disposal in a Subtitle D facility.

6.3.9 Institutional Controls

Consistent with Section 6.2.1 of the Portland Harbor draft FS (Anchor QEA 2012a), a detailed institutional control plan for the proposed Gasco Sediments Site remedial alternatives cannot and should not be developed and presented at this EE/CA stage of analysis; institutional controls are more appropriately considered during remedial designs. Consequently, all the institutional controls retained in Section 5.9 are included in the remedial alternatives to recognize their general function and necessity within the remedy without attempting to craft a detailed institutional control plan for each alternative. A general description of likely contents of institutional controls is provided in Appendix T of the Portland Harbor draft FS. Costs of institutional controls are broadly estimated for use in this EE/CA based on the controls described in Appendix T of the Portland Harbor draft FS, the cost assumptions for institutional controls are provided in Appendix J.

6.4 Technical Issues Considered in the Alternatives Development

The following subsections described a number of technical issues that were considered during development of the remedial alternatives.

6.4.1 Minimization of the Riverbank Infiltration Pathway

Direct infiltration of precipitation through the riverbank is a potential migration pathway for groundwater seepage to the nearshore sediments. To significantly reduce this migration pathway, Alternatives 2 through 5 assume the placement of an impermeable geomembrane along the riverbank slope from the top of the riverbank extending down to the 13 feet NAVD88).

For areas along the riverbank in Alternatives 2 through 4 where no removal is required to achieve the riverbank LOEs or support stable slopes from target in-water removal, it was assumed that the existing bank would be adequately graded to facilitate placement of bedding materials followed by placement of the geomembrane. Ideally existing armoring on the slope will be removed and stockpiled for placement after the geomembrane is placed. The geomembrane would be anchored into place along the top of the riverbank. Armor materials of sufficient size to resist erosive forces would then be placed on top of the geomembrane. The geomembrane will have a bedding layer or cushioning geotextile above and below to protect it from construction-related damage.

For portions of the riverbank where removal would be required as part of Alternative 3 through 5, the above-mentioned geomembrane and overlying armor material will be placed following removal to the target grades.

6.4.2 Protection of In-water Structures

The remedial alternatives account for the protection of the following in-water structures:

- Gasco dock: As described in Section 5.6.2.1, given current knowledge about the Gasco dock based on as-built drawings, there is considerable concern that removing potentially 10 to 20 feet of sediment underneath and around the dock could substantially compromise the integrity of the docks; therefore, Alternatives 2 through 5 assume a 5-foot offset for removal adjacent to this structure with no removal beneath this structure. Per EPA (2011) direction, Alternative 5 allows for removal and replacement of the dock to account for removal under the dock.
- Floating dock: the downstream portion of the Gasco dock structure shown in Figures 6.1-1 through 6.1-5 is a floating dock that is assumed can be temporarily relocated, as necessary, during the remedial activities.
- Catwalks, riverbank "slide" and small dolphins (Figure 4.5-1): these structures are assumed to be replaceable if necessary to support removal that may impact these structures.
- Gasco and Siltronic outfall structures: these structures are assumed to be protected during completion of the remedial activities.

6.4.3 Protection of Upland Structures

Evaluation of the remedial alternatives needs to account for potential adverse impacts to upland structures that exist near the top of riverbank on both the Gasco and Siltronic properties. As shown on Figure 2.2.1-1, structures along the Gasco property include: fuel and coal tar pitch pipelines, an emergency slide for deploying spill containment booms, two dolphin and pedestrian piers, stormwater outfall WR-107, an abandoned loading dock, and FAMM tanks. As shown on Figure 2.2.1-2, structures along the Siltronic property include: electrical utilities, fire suppression water lines, stormwater/industrial wastewater outfall WR-107, and the Siltronic Fab 1 building,

As shown on Figures 6.1-4, 6.1-5, 6.3.4-1, 6.3.4-2, and 6.3.4-4, the assumed stable 3H:1V slope resulting from the toe of riverbank target removal elevation leads to significant cutback of the riverbank for Alternative 4 and Alternative 5, which, in turn, leads to known and potential impacts to these structures. To support this significant bank reconfiguration, it is likely that Siltronic would need to temporarily shut down the facility, which may result in permanent loss of business and the likely termination of operations at the facility. Further, the Fab 1 building is constructed as slab on grade, such that significant structural damage resulting from undermining due to layback excavation is reasonably anticipated. Structural damage to Fab 1 will also result in permanent lost revenue and likely termination of operations at the facility. Similarly, it is anticipated that the foundation for the FAMM tank may not support the extent of layback excavation proposed in Alternative 5.

These significant impacts are taken into consideration during the implementability scoring discussed in Section 9.

6.4.4 Protection of Upland Source Control HC&C Wells and Proposed Fill Trench

As described in Section 2.3.1.1 and detailed in the CDR (Anchor QEA 2012b), a fill WBZ interceptor trench and alluvial WBZ extraction well system are proposed along the top of riverbank area along the entire portion of the Gasco property and northern portion of the Siltronic property. The need for the Fill WBZ interceptor trench along the Siltronic property is to be determined following additional pump testing. The purpose of the trench is to intercept groundwater in the fill WBZ before it discharges to the Willamette River. The purpose of the extraction well system is to prevent seepage of contaminated upland groundwater discharge to the Willamette River sediments. The trench will be constructed near the top of the riverbank in Segments 1 and 2. The trench is designed to be located between the extraction well system and the top of the riverbank (see Figures 6.1-1 through 6.1-5). If the trench is constructed prior to the sediment remedy and EPA approves either Alternative 4 or 5, the entire length of the trench would need to be reconstructed and potentially redesigned and relocated due to layback of the riverbank to support nearshore sediment removal.

A horizontal collector pipe will be installed at the bottom of the trench, which will be backfilled with permeable gravel. Each segment of the trench collector pipe will drain by gravity to a sump. There will be a manhole at each sump, and each sump will be equipped with a pump that is hooked by pipeline to a treatment system. The depth of the collector pipe will be in the

upper portion of the alluvial silt layer underlying the fill. Placing the collector pipe just below the base of the fill is intended to allow the trench to capture all of the groundwater in the fill WBZ.

Construction of the trench on the Gasco and Siltronic properties is expect to be difficult in many shoreline areas because of the presence of shoreline structures. The FAMM tank farm, FAMM office building, Gasco outfall, Siltronic outfall, and docking and mooring structures will be very difficult to work around due to accessibility issues. In these areas, the trench will be constructed along the extreme top of the riverbank or partially on the riverbank slope, due to the presence of the shoreline structures (alignment shown on Figures 6.1-1 through 6.1-5).

Any necessary remediation of the riverbank will occur during completion of the Gasco Sediments Site remedial action, as described in the SOW. As shown on Figures 6.1-4 and 6.1-5, Alternatives 4 and 5 presented in this EE/CA would require significant reconfiguration of the riverbank face and top of riverbank areas to attain a stable riverbank slope configuration following the proposed in-water removal activities. Figures 6.1-4 and 6.1-5 show that this reconfiguration would require removal of sections of the interceptor trench in several areas on the Gasco and Siltronic properties for Alternative 4 and along the entire interim Project Area riverbank boundary for Alternative 5. Discussions with contractors have identified that if portions of the trench needed to be removed due to the riverbank reconfiguration, the entire length of the trench would need to be reconstructed. This reconfiguration would similarly affect the extraction well system in a number of areas on both properties for both alternatives.

Due to the potential impacts of the riverbank cleanup on the trench system, NW Natural has proposed to DEQ that the fill WBZ trench be constructed concurrent with implementation of the future approved EE/CA remedy to minimize the impacts to the currently designed upland source control system. If the trench is constructed prior to the sediment remedy and EPA approves either Alternative 4 or 5, the entire length of the trench would need to be reconstructed and potentially redesigned if the trench needed to be relocated to a location with sufficiently different lithology (possible due to heterogeneous filling activities performed in the past).

The cost presented in this EE/CA do not include any necessary repair or relocation of the trench if damages occurred during implementation of the sediment remedy.

6.4.5 Groundwater Extraction/Treatment System Shutdown

The groundwater extraction system is designed to operate continuously to achieve continuous hydraulic containment even during maintenance and repair. Individual wells would be temporarily shut down for maintenance or repair, but the rest of the extraction wells would continue to operate for those periods. Replacement well pumps will be kept in inventory on the property at all times. These readily available replacement pumps should allow replacement of a well pump within 24 hours of shutdown. When a well is shut down for maintenance, the system will automatically increase the pumping rate on the adjacent wells to maintain groundwater capture.

The 100-year FEMA flood elevation is 28 feet CPD (30.1 feet NAVD88). River flooding above this level rarely occurs and is generally temporary, lasting a few hours or days at most. Under such extreme flood conditions, there may be extenuating circumstances associated with property access, flooding, and personnel travel, as well as other issues that could dictate a temporary shutdown of the source control system. Under these rare flood conditions, the river elevations would be much higher than groundwater elevations, resulting in the net discharge of river water to groundwater and eliminating the need for an operational extraction system under those temporary conditions. The treatment plant and backup power system are designed to operate under flood conditions up to the elevation of the 100-year flood event, if necessary.

To ensure the continuous operation of the extraction wells and treatment system during a potential power outtage, a backup diesel generator is incorporated into the treatment system design. The northwest industrial area is a high PGE priority for restoration of power in the event of an outage. Based on records from PGE, the longest historical power outage that has occurred in the northwest industrial area is less than 12 hours. The generator would start up in the event of a PGE power failure.

The treatment system is designed with redundant treatment system components, such as pumps and filters. This redundancy should prevent shutdown of the plant during normal maintenance or replacement of these components. The system is also designed to allow cleaning of the pipeline from each well without shutting down the adjacent wells.

DEQ requested an evaluation of the period of time that system shutdown could occur before an unacceptable water quality impact in the river occurs. However, the final design of the extraction and treatment system includes a backup generator to provide power in the event of a

PGE power failure. As explained in the previous paragraphs, the extraction and treatment system's final design allows maintenance and repair of the components during continued operation of the overall system. The extraction and treatment system design also includes redundant components, a backup power system, and the ability to repair or maintain components while maintaining overall system operation. These design changes largely mitigate the system shutdown conditions under which DEQ requested that a water quality assessment be conducted. On page 3 of the September 22, 2011, letter attachment, DEQ acknowledged NW Natural's plans for responding to the HC&C system shutdowns caused by equipment and agreed that an assessment of water quality changes under selected shutdown scenarios is no longer warranted.

6.4.6 DNAPL and LNAPL Occurrences

Comprehensive upland groundwater assessments have been conducted at the Gasco property during the remedial investigation (HAI 2007a) and upland groundwater source control design process (Anchor QEA 2012b). An extensive network of upland groundwater monitoring wells is present on this property. These wells are screened throughout the vertical thickness of the alluvium WBZ and the fill WBZ. The monitoring well network was extensively sampled as part of the RI (Hahn 2007a) and the wells have continued to be sampled each year as part of the ongoing upland groundwater monitoring program. The findings of the groundwater monitoring program are currently documented twice per year in the Environmental Monitoring Reports (EMR) by Hahn Associates, Inc. The latest EMR report (HAI 2012) was for the third and fourth quarter 2010. The groundwater monitoring program includes the use of an interface probe to check the wells for the presence of non-aqueous phase liquid (NAPL). Measurable LNAPL has never been detected in any upland monitoring well on the Gasco Sediments Site. DNAPL has been measured in several upland monitoring wells. A comprehensive description of the nature and extent of DNAPL is presented in the upland RI report (HAI 2007a) and the CDR (Anchor QEA 2012b).

As part of source control investigations, a network of nearshore and offshore piezometers have been installed that are screened in river sediment. Neither LNAPL nor DNAPL have been detected in the offshore piezometers installed in the river sediments adjacent to the Gasco Sediments Site.

These findings provide evidence that LNAPL migration from the uplands is not a concern for migration to the Gasco Sediments Site and therefore not a concern for the active capping

evaluations discussed in Section 5.5 and Appendix I. The construction and operation of the hydraulic control and containment system will provide even further confidence that any potential LNAPL that has not potentially been identified in the uplands has no migration pathway from the uplands to the sediments.

6.5 Construction Sequencing and Durations

To enable the detailed evaluation of remedial alternatives, certain assumptions were made regarding production rates and sequencing of the remediation activities. Sequencing is important to understanding construction timeframes, as well as the durations of the alternatives (which can affect costs), and can have an impact on the time to achieve RAOs. Beyond these assumptions, there will also be a number of factors that affect the actual construction sequencing (e.g., coordination with source control activities, coordination with remedial activites at other Portland Harbor Site sub-SMAs, disposal availability, contractor and equipment availability, implementation of additional BMPs due to monitoring contingencies, weather and river conditions, or duration of the in-water work window).

To maintain consistency between alternatives, the following guidelines were used to develop sequencing and project durations:

- The construction window for the Willamette River is between July 1 and October 31 each year as established by the National Marine Fisheries Service (NMFS) for the protection of ESA-listed fish species that occur in the Portland Harbor Site at other times of year. Currently, there are 88 to 105 construction days per season assuming 5 to 6 construction days per week, respectively.
- Alternatives 2b through 4 assumes daily removal rates of 600 cy per day during open water dredging and 400 cy per day for confined dredging. This assumes that no containment structure is installed, which would reduce the effective work window and reduce the overall production capacity per season. Using the assumptions bulleted above, the seasonal remediation dredge volumes range is assumed to be 63,000 cy.
- The sheetpile containment wall proposed in Alternative 5 would be constructed within one construction season (July 1 to October 31), subsequent removal within and outside of the the containment barrier would be conducted within 4 and 6 construction seasons, respectively, and removal of the barrier would occur for approximately 60 days.
- For Alternative 5, dock removal is assumed to take 5 weeks following installation of the sheetpile wall and dock replacement is assumed to take 17 weeks following completion

of the remedial activities.

- In place remediation activities (e.g., capping) would occur after dredging activities.
- Remediation work will generally be sequenced from upstream to downstream, taking into consideration ongoing operations by tenants, structure constraints, and installation of containment barriers (only applicable for Alternative 5).

The above assumptions are considered to represent reasonable estimates but could result in being optimistic due to the following considerations:

- Many environmental projects have experienced lower production rates, particularly in cases where extensive BMPs are required by regulatory agencies.
- The durations assume there will be no changes in construction windows in the future, whereas historically, these windows have been shrinking over time.
- Volumes may increase during remedial design, which often occurs when additional data are collected and dredge prisms are refined.
- The durations do not include multiple residual passes, which would lengthen the time required for remedy implementation.
- Depending on the size and characteristics of the transload facilities the through-put capacity and availability of rail or truck transportation could vary from the assumptions used here.

Also, it should be noted that Gasco Sediments Site construction will need to proceed within a wider Portland Harbor Site sequence of sub-SMA-specific remedial actions. This issue is discussed extensively in the Portland Harbor draft FS (Anchor QEA 2012a). Important points from the Portland Harbor draft FS for the Gasco Sediments Site perspective include that EPA approvals and equipment availability must be managed in the context of multiple other sites that may potentially be in planning or implementation stages, the Portland Harbor draft FS assumes that the Gasco Sediments Site will proceed early in the Portland Harbor sequence of sub-SMAs, and that some specific sequences of nearby sub-SMA construction should be fully evaluated to ensure recontamination of recently remediated areas does not occur. This latter issue is discussed further in Section 8 of the EE/CA.

6.6 Remedial Alternative Cost Estimates

Appendix J presents the approaches that were used to develop opinions of probable sediment remediation cost estimates for the draft EE/CA alternatives. The appendix discusses the following:

- Construction tasks used as the basis for developing costs
- Methods used for developing quantities for the different construction tasks
- Cost approach used for each construction task

EPA guidance (EPA 2000) was followed to develop the cost estimates. In addition, professional judgment was used where appropriate in estimating daily costs and production rates. Professional judgment drew on recently completed Portland area projects, including the Gasco 2005 Removal Action, Terminal 4 Phase I Removal Action, and the Alcoa Sediment Remediation in Vancouver, Washington. In providing opinions of probable construction costs, there is no control over the cost or availability of labor, equipment, or materials, or over market condition or Contractor method of pricing, and the opinions of probable construction costs are made on the basis of professional judgment and experience.

The resulting range of costs for each alternative is shown in Table 6.6-1. Beyond removal and replacement of the Gasco dock associated with Alternative 5, the opinion of probable costs do not include the costs associated with the following adverse impacts resulting from the significant Gasco and Siltronic bank reconfiguration proposed for Alternatives 4 and 5:

- Upland fuel and coal tar pitch pipelines
- FAMM tanks
- Siltronic Fab 1 building
- Upland electrical utilities and fire suppression water lines
- Tenant disruption and loss of business

7 DETAILED ANALYSIS OF ALTERNATIVES

This section presents the individual detailed analysis of the EE/CA alternatives developed in Section 6. The overall alternative evaluation approach, consistent with NCP evaluation criteria, is summarized in Section 7.1, and the primary methods used to perform the evaluations relative to these criteria are described in Section 7.2. To avoid repetition, Section 7.2 also presents an analysis of common elements of remedial technologies and process options (e.g., dredging, in-place technologies, MNR) with respect to the NCP evaluation criteria. Evaluation of the common elements is then incorporated by reference in the subsequent detailed analyses for each alternative (Sections 7.3 through 7.8) as well as in the comparative analysis in Section 8. The results of this detailed analysis are used in Section 8 to perform the comparative analysis of the alternatives.

Consistent with the Portland Harbor Site draft FS (Anchor QEA 2012a; as required by the SOW), the detailed analysis of alternatives relative to NCP evaluation criteria relies on the significant body of site-specific data and analyses, site-specific modeling, and information on past site-specific remedial activities (i.e., the 2005 Removal Action). Following EPA (2005) guidance, these evaluations were supplemented with a well-developed, data-supported, and peer-reviewed predictive model; the same model that was used for the Portland Harbor draft FS. This model was used to specifically address the spatial variability of Gasco Sediments Site conditions and estimate the timeframes for short-term construction impacts and long-term risk reductions resulting from implementation of each alternative (Appendix E). Ultimately, the model provides an effective tool for evaluating the relative performance of the alternatives. Model projected changes for each alternative in surface sediment (top 1 foot) and water column concentrations of BaP and naphthalene (the two most relevant contaminants for the Gasco Sediments Site available in the model) were used in this detailed evaluation. The site-specific modeling tool provides an objective quantitative framework to support the detailed evaluation of the alternatives.

Representative technology process options are identified in the alternatives as described in Section 6. Process options are often appropriately modified during remedial design due to engineering considerations or new information. In many cases, details of the evaluations are more easily presented and understood in the context of the comparative analysis in Section 8. Therefore, within Section 7, the overall individual alternative results are highly summarized and the reader is referred to Section 8 for additional details and supporting information.

7.1 Overview of Remedial Alternative Evaluation Methods per EPA Guidance

The alternative evaluation methods are consistent with the methods presented in the Portland Harbor draft FS (Anchor QEA 2012a). That is, remedial alternatives are evaluated with regard to risk reduction within the overall framework of the NCP remedy selection criteria. These methods include nine evaluation criteria (two threshold, five balancing, and two modifying criteria) to address the overall requirements of CERCLA and the NCP. Seven of the nine evaluation criteria serve as the basis for conducting the alternatives evaluation and the two Modifying Criteria will be evaluated by EPA at a later stage in the CERCLA process.

Per the SOW, one goal of the Gasco Sediments Site project is that the sediment and riverbank remedial design will be conducted concurrently and using the same decision framework as the Portland Harbor draft FS (Anchor QEA 2012a), such that the Gasco Sediments Site design can be approved concurrently with the Portland Harbor Site ROD. As a consequence, both sediment and riverbank components of the alternatives are evaluated simultaneously below using an overall framework that is consistent with Portland Harbor draft FS approach.

The NCP evaluation criteria used in the remainder of Sections 7 and 8 are:

Threshold Criteria:

1. **Overall Protection of Human Health and the Environment**: Addresses the overall ability of an alternative to eliminate, reduce, or control potential exposures to hazardous substances in both the short- and long-term and evaluates whether an alternative provides adequate overall protection to human health and the environment. This criterion is evaluated in the EE/CA using the following RAOs, as detailed in Section 3.3:
    1. Substantial Product
    2. Human Health Sediments
    3. Human Health Biota Ingestion
    4. Human Health Surface Water
    5. Human Health Groundwater
    6. Ecological Sediments
    7. Ecological Biota (Prey) Ingestion
    8. Ecological Surface Water
    9. Ecological Groundwater

With regards to riverbank work, these same RAOs generally apply except the specific ecological receptors and human health scenarios vary according to upland exposures. Also, as discussed in Section 4.2, the goals of the riverbank work are to:

- Conduct soils remediation that may be needed consistent with the upland risk assessment and upland FS
- Control sources of contaminants from the riverbank to the river including:
  - Processes of soil erosion
  - Leaching of chemicals due to Fill WBZ groundwater movement through the riverbank
  - Stormwater infiltration and discharge through riverbank soils

2. **Compliance with ARARs**: Assesses whether the alternative attains the identified chemical-specific, action-specific, and location-specific ARARs (see Section 3.5). CERCLA requires that remedial actions comply with the substantive provisions of federal and state promulgated ARARs, unless such standards are waived. Although compliance with all ARARs described in Section 3.5 was considered in the detailed evaluations of alternatives, the evaluations focused on five primary ARARs: Oregon State WQS and federal NRWQC, Oregon Environmental Cleanup Law, ESA, Section 404(b)(1) of the CWA, and FEMA Flood Rise Requirements.

Balancing Criteria:

1. **Long-Term Effectiveness and Permanence**: Evaluates the alternative for the long-term effectiveness and permanence it provides. Factors considered under this criterion include:

   - Magnitude of residual risk remaining after implementation.
   - Adequacy and reliability of control measures (e.g., containment systems and institutional controls)

1. **Reduction of Toxicity, Mobility, or Volume through Treatment:** Addresses the degree to which an alternative reduces the toxicity, mobility, or volume of chemical constituents through treatment. CERCLA has a statutory preference for selecting remedial actions that use treatment technologies to the maximum extent practicable. The evaluation focuses on the considerations defined in the NCP:

   - The treatment or recycling processes the alternatives employ and materials they will

treat.

- The amount of hazardous substances, pollutants, or contaminants that will be destroyed, treated, or recycled.
- The degree of expected reduction in toxicity, mobility, or volume of the waste due to treatment or recycling and the specification of the reductions that are occurring.
- The degree to which the treatment is irreversible.
- The type and quantity of residuals that will remain following treatment, considering the persistence, toxicity, mobility, and propensity for bioaccumulation of residual hazardous substances and their constituents.
- The degree to which treatment reduces the inherent hazards posed by any principal threats at the site.

2. **Short-Term Effectiveness**: Assesses effects and potentially unacceptable risks to human health and the environment related to construction and implementation of each alternative. Per the NCP, the following factors are addressed:

   - Potential environmental impacts of the remedial action and the effectiveness and reliability of mitigation measures during implementation.
   - Time until protection is achieved.
   - Short-term potentially unacceptable risks that might be posed to the community during implementation of an alternative.
   - Potential impacts on workers during remedial action and the effectiveness and reliability of protective measures.

3. **Implementability**: Evaluates the ease or difficulty of implementing the alternative by considering technical feasibility, administrative feasibility, and availability of services and materials required for implementation. Per the NCP, this includes the evaluation of the following factors:

   - Technical feasibility
     - Technical difficulties and unknowns associated with the construction and operation of a technology (e.g., effects to navigation areas and in-water and upland structures on technology implementation)
     - The reliability of the technology
     - Ease of undertaking additional remedial actions

  - The ability to monitor the effectiveness of the remedy

- Administrative feasibility
  - Activities needed to coordinate with other offices and agencies
  - The ability and time required to obtain any necessary approvals and permits from other agencies (for off-site actions)
- Availability of off-site treatment, storage, and disposal services and capacity
  - Availability of adequate off-site treatment, storage capacity, and disposal capacity and services
  - Availability of necessary equipment and specialists, and provisions to ensure any necessary additional resources
  - Availability of services and materials
  - Availability of prospective technologies.

4. **Cost:** Evaluates present worth (present value) direct and indirect capital, operating, and maintenance costs of implementing an alternative. The evaluation of this criterion was completed according to EPA (2000) guidance. Costs include capital costs (both direct and indirect), long-term monitoring and maintenance, and contingency in net present value dollars. Costs that are not included are summarized in Section 6.6.

Modifying Criteria

1. **State (Support Agency) Acceptance**: Assesses the technical and administration issues raised by the supporting agencies about the alternatives.
2. **Community Acceptance**: Assesses issues and concerns raised by interested persons in the community about the potential remedial alternative.

Note that the modifying criteria (State [Support Agency] Acceptance and Community Acceptance) will be evaluated by EPA after compilation of public comments and input received on the Proposed Plan for the Portland Harbor Site.

7.2 Methodologies to Evaluate NCP Criteria and Common Elements of the Evaluation

This section discusses the primary methods that were used in the detailed evaluation of the EE/CA alternatives, relative to the two threshold and five balancing NCP evaluation criteria

summarized above. Also, for all of the criteria, elements common to the evaluation of all of the alternatives (including MNR, in-place technologies, and dredging/removal components) are described to avoid repetition in the individual analysis of each alternative, as well as in the comparative analysis in Section 8. This common elements evaluation focuses on those findings that are common to all the alternatives and component technologies, so that the differences between the alternatives can be more clearly highlighted in the later individual and comparative evaluations (in Sections 7 and 8, respectively). The common elements discussion relies on Gasco Sediment Site-specific data that is presented in more detail later in Sections 7 and 8 as well as the screening of remedial technology effectiveness and implementability presented in Section 5.

7.2.1 Evaluation General Approach

Based on information presented in prior sections, this section describes the general approach and context for many of the more detailed threshold and balancing critieria evaluations discussed later in Section 7 and in Section 8. As discussed in Section 3, RAOs provide a general description of what the overall remedial action is expected to accomplish and help focus alternative development and evaluation (EPA 2005). RGs are numeric expressions of the RAOs that achieve a range of protective levels. RGs have applicable exposure areas, which were set to be consistent with risk assessment methods used for the Portland Harbor and Gasco Sediment Sites.

RALs for BaP and MQ, in combination with the CBRAs and areas where potential liquid (e.g., DNAPL, oil, saturated sediments) or non-mobile (e.g., tar) substantial product are present, define areas that are actively remediated (i.e., sub-SMAs). (Also, the overall riverbank area is designated a sub-SMA [Figure 4.5-1], although per the evaluations conducted in Section 4.4.4, not all areas of the riverbank exceed relevant soils screening levels [SSLs].) With active remediation of the defined sub-SMAs, each RG is expected to be met in time (i.e., following remedial action and natural recovery) over its applicable exposure area(s). Consistent with the Portland Harbor draft FS (Anchor QEA 2012a), ranges of RGs are used to evaluate compliance with RAOs. Per the Portland Harbor draft FS, these RGs come directly from the Focused PRGs that EPA directed the LWG to use. The LWG then explored the sensitivities associated with the EPA-directed PRGs and developed ranges of RG values for selected Focused PRGs to provide context to Portland Harbor draft FS evaluations. The same EPA-directed PRG values and LWG RG ranges are used in this EE/CA. Using RG ranges (rather than single values) is consistent

with guidance (EPA 2005), and assists EPA in identifying an appropriate cleanup level for the sediment remedy in the Proposed Plan and ROD.

As discussed in Section 4.1.3, the RGs used for alternatives evaluation for BaPEq are based on the EPA-directed Focused PRG for BaPEq for human health sediment direct contact, including percentile estimates of this RG developed by the LWG, as shown in Table 7.2-1. For benthic toxicity, a MQ of less than or equal to 0.7 (also directed by EPA) is used as a measure of toxicity for identifying benthic areas. For the benthic toxicity, the Portland Harbor draft FS (Anchor QEA 2012a) also presents individual SQVs (see Table 3.5-3 of the Portland Harbor draft FS) calculated using project-specific models and EPA approved approaches (see the BERA, Windward 2011b) that make up the overall MQ calculation. Given the role of PAHs at the Gasco Sediments Site, the following PAH SQVs ranges are relevant for some portions of the alternatives evaluations per Table 7.2-1:

- Total HPAHs – 610,000 to 1,300,000 μg/kg
- Total LPAHs – 2,000 to 650,000 μg/kg

Therefore, model projections of BaP and naphthalene concentrations can be compared to the Level 3 SQV for Total HPAHs and the Level 3 SQV for Total LPAHs, respectively. Exceedances of these summed SQVs by the individual contaminants (BaP and naphthalene) would be a likely indication of future toxicity and such comparisons are a useful tool for alternatives evaluations.

The alternatives evaluation also considered a range of timeframes over which different BaPEq RGs within the above ranges are expected to be achieved, considering anticipated construction durations and natural recovery processes. Thus, the comprehensive alternatives were modeled over a sufficiently long time period (45 years) to project when various points in the range of RGs would likely be achieved under each alternative.

As discussed, fate and transport modeling was conducted for BaP and naphthalene. In addition, for cap long-term performance estimates, the larger list of contaminants relevant to cap effectiveness were modeled including: BaP, naphthalene, benzene, TCE, DCE, and vinyl chloride (Appendix J). The documented natural attenuation of CVOCs summarized in Appendix A is also incorporated into the remedial alternatives evaluations.

Fate and transport model projected changes in surface sediment contaminant concentrations under the different alternatives are presented on several spatial scales relevant to various scenario/receptor exposure scales, as described in Portland Harbor draft FS (Anchor QEA 2012a). Specifically, model projections for BaP are presented on a shoreline half-RM scale, which is consistent with the human health direct sediment contact risk scenario in the Portland Harbor BHHRA. BaP and naphthalene are also both representative of potential benthic toxicity (which can occur across the surface of the sediment bed). Therefore, projections are presented for subareas of the Gasco Sediments Site Area of Interest including half-RM areas of the navigation channel and shoreline areas (outside the navigation channel). This is consistent with the overall Portland Harbor draft FS approach to develop CBRAs, where generally, clusters of LOEs showing toxicity are needed (not isolated single station exceedances) to define a CBRA representing potentially unacceptable benthic risk. Note that the use of the half-RM scale for benthic SQV comparisons is coincidentally the same as the human health half-RM scale however the lateral scales are different. For benthic toxicity, the lateral spatial scale includes the navigation channel. For human health, the lateral spatial scale does not include the navigation channel because that is not a human health exposure pathway. Appendix E also contains maps of a model grid cell scale that shows sediment concentrations at 10-, 30-, and 45-year intervals in the model projections.

The evaluations conducted using BaP and naphthalene projections are intended to be representative of the outcomes for the full list of COCs present at the Gasco Sediments Site. As discussed in Section 5.1, the primary mechanism of projected sediment recovery at the Gasco Sediments Site following sediment remediation is due to subsequent deposition, burial, and biodegradation. This indicates that focusing evaluations on a few select COCs that are representatives of the primary COCs for this site (i.e., PAHs) because they are all subject to these same processes.

With regard to benthic toxicity, given that surface sediment concentrations of a large set of contaminants would all decline over time due to natural sedimentation, the resultant calculation of the combined MQ would also decrease similarly over time. The informal comparison of naphthalene to the Level 3 SQG for LPAH and BaP to the Level 3 SQG for HPAH as previously described also confirms chemical concentration reductions over time. It is understood that representing many contaminants with projections for select COCs involves some level of uncertainty, but this uncertainty is nevertheless acceptable for an EE/CA-level evaluation. To further assist EPA in making risk-management decisions, sediment

concentrations achieved at time zero (i.e., not using modeling projections) for each comprehensive alternative were calculated for Gasco Sediment Site COIs and compared to any available Portland Harbor PRGs that are above background and consistent with the Portland Harbor risk assessments. These more simple time zero estimates (calculated based on expected SWACs immediately after construction is complete[10]) provide EPA with the information needed to understand how each alternative will address the broadest possible list of contaminants posing potentially unacceptable risk. However, because the sediments are expected to recover during and after construction, as discussed above and in Section 5.1, time zero estimates immediately after construction are the most conservative possible estimate and the least likely to be representative of long-term effectiveness of the alternatives, which are presented for BaP and naphthalene based on 45-year modeling projections. Thus, time zero estimates should be used as a comparative tool only and in the context of the long-term estimates evaluated in detail in Sections 7 and 8.

The following sections describe the more specific methods used to assess the comprehensive alternatives relative to the two threshold and five balancing NCP evaluation criteria. Also, within each section, the common elements of the detailed evaluation for the alternatives and their component technologies of MNR, in-place technologies, dredging/removal, and riverbank remediation are discussed for each criterion. As noted, the common elements discussion helps avoid repetition of the similarities between the alternatives throughout the remainder of Section 7 and 8 evaluations.

7.2.2 Overall Protection of Human Health and the Environment

This criterion addresses the overall ability to eliminate, reduce, or control potential exposures to hazardous substances in both the short and long term. As discussed in EPA (2005), the NCP evaluation of overall protectiveness is highly location-specific.

7.2.2.1 *Methods*

As noted, the ability of an alternative to provide overall protection to human health and the environment is determined based on the extent to which it achieves RAOs. The primary information used to make this determination are projected changes in surface sediment and

[10] Note "time zero" estimates are SWAC estimates immediately after construction with no evaluation of MNR included in the calculation either during or after construction. This is distinct from the term "Year 0" used in later discussions, which represents the starting point of construction in the 0 to 45 year simulations. These long term modeling projections include estimates of SWAC changes due to MNR both during and after construction.

water column COC concentrations derived from model simulations of each comprehensive alternative both during and after construction, and comparison of these projections with the range of sediment RGs and water quality criteria, respectively, as well as the timeframes to achieve such levels. The range of sediment RGs and SQVs used in these evaluations are summarized in Table 7.2.-1.

Determination of RAO attainment was performed by comparing projected short- and long-term changes in COC concentrations in surface sediment and surface water resulting from implementation of the alternatives with the range of sediment RGs and water quality standards/criteria respectively, as well as the time to achieve such levels. Consistent with current Portland Harbor RAOs and the Gasco Sediments Site SOW, the evaluation of alternatives focused on the following RAOs:

- Short- and long-term changes in surface sediment contaminant concentrations, which are directly relevant to RAO 2 (human health sediment direct contact), RAO 3 (human health biota ingestion), RAO 6 (ecological sediment direct contact and ingestion), and RAO 7 (ecological biota ingestion).
- Short- and long-term changes in surface water concentrations, which are directly relevant to RAO 4 (human health surface water contact) and RAO 8 (ecological surface water contact).
- Protectiveness for under river groundwater plumes after known plume sources are controlled through upland source controls, which is directly relevant to RAO 5 (human health groundwater direct contact and fish consumption) and RAO 9 (ecological groundwater direct contact and prey consumption).

RAO 1 regarding preference for removal of sediments containing substantial amounts of product was also evaluated through comparison of alternatives that target removal of substantial product to those that contain or treat some substantial product in place. This comparison allows a determination of whether costs of removal are clearly disproportionate to contain or treat in place or not. Therefore, RAO 1 is primarily addressed in the comparative evaluation in Section 8.

The comparison of changes over time in sediment concentrations for each alternative to points in the RG ranges shown on Table 7.2-1 is used to help determine whether risk reduction has been achieved in a way that is meaningful to the RAOs. As discussed in both Section 3.6 and

Appendix E of the Portland Harbor draft FS (Anchor QEA 2012a), due to the uncertainty and sensitivity around these RGs, differences between points in these representative RG ranges does not necessarily mean there is substantial difference in risk reduction achieved at these various points.

In addition, compliance with surface water RAOs 4 and 8 is evaluated and discussed for each alternative throughout Sections 7 and 8. However, as noted in Section 3.2 of the Portland Harbor draft FS (Anchor QEA 2012a), based on the findings of the risk assessments, there are no potentially unacceptable risks in surface water at the Gasco Sediments Site relevant to RAOs 4 and 8, and the Portland Harbor Site and the Gasco Sediments Site already achieve these surface water RAOs. Therefore, evaluations against surface water RAOs are only conducted to assess whether any of the alternatives might cause short-term or long-term changes in surface water concentrations that would increase from current conditions and potentially not meet the surface water RAOs. As discussed more throughout Sections 7 and 8, all the alternatives were found to create long-term surface water concentrations that are not substantially different from existing surface water concentrations at the Gasco Sediments Site, and there is no substantial difference between the alternatives in this regard.

Projected changes in surface sediment concentrations of BaP and naphthalene averaged across RM 6 to 6.5 and 6.5 to 7 inside and outside of the navigation channel during and following implementation of each comprehensive alternative are presented in Figures 7.2.2.1-1a, 7.2.2.1-1b, 7.2.2.1-2a, and 7.2.2.1-2b, respectively. It should be noted that the Portland Harbor draft FS included Portland Habor-wide model projections using the same BaPEq RALs used in the EE/CA alternatives (i.e., 20,000 µg/kg and 1,500 µg/kg). Those Portland Harbor draft FS modeling simulations projected changes over time across all shoreline half-RMs in the entire Portland Harbor Study Area that are similar to those shown in Figures 7.2.2.1-1a and 7.2.2.1-2a. Specifically, levels below the most conservative point estimate BaPEq RG of 423 µg/kg were achieved by both RALs in every shoreline half-RM in the Portland Harbor Study Area. Consequently, these RALs are expected to be effective long-term not only at the Gasco Sediments Site, but across the entire Portland Harbor.

Projected changes in surface water (water column average) concentrations BaP and naphthalene during and following implementation of each comprehensive alternative are presented for RM 6.3 in Figures 7.2.2.1-3 and 7.2.2.1-4, respectively.

For riverbank soils, each alternative is evaluated on its ability to meet each of the riverbank goals described in Section 7.1. Specifically, for each alternative it is determined whether the technologies applied in the riverbank sub-SMA result in either removal of concentrations above SSLs or effectively isolates those soils from exposure to ecological receptors and people. Similarly, it is evaluated whether those technologies minimizes the potential for erosion and leaching of chemicals via Fill WBZ groundwater or stormwater infiltration movement through the riverbank soils. In the case of Fill WBZ groundwater movement, the alternatives are evaluated as they would perform in combination with the ongoing upland design for control of Fill WBZ groundwater (i.e., the proposed Fill WBZ groundwater collection trench and treatment of groundwater).

7.2.2.2 *Common Elements – Overall Protection Evaluation*

For all alternatives, overall protection of human health and the environment is achieved by reducing contaminant concentrations and or reducing exposures to surface sediment, water column, and riverbank soils. To accomplish reductions in surface water, the comprehensive alternatives reduce concentrations of or exposure to contaminants in surface sediments and riverbanks soils, which reduces the flux of contaminants into these other media. Based on evaluations presented in the Portland Harbor draft FS (Anchor QEA 2012a), ongoing upstream contaminant levels and other known sources likely contribute to potentially unacceptable risks in sediment and water at the Portland Harbor Site. The most prominent of these contaminants, PCBs, are not Gasco or Siltronic upland site COCs. Coordinated upland source control efforts being directed by DEQ within Portland Harbor (including at Gasco and Siltronic, as detailed in Section 2.3), are anticipated to assist in the sediment remediation achieving long-term reductions in Gasco Sediment Site potentially unacceptable risks, and to prevent recontamination from the adjacent uplands.

Reduced contaminant concentrations/exposures in the various media are achieved over time under all comprehensive alternatives through a combination of in-place technologies (with or without armoring, as necessary), dredging/removal with post-dredge residual covers or capping, and ongoing natural recovery. In addition, implementation of upland groundwater source controls will prevent upland groundwater from discharging through river sediments into the river. The upland groundwater extraction system will result in a reversed groundwater gradient in the alluvial sediments that will cause COCs in river sediments to move toward upland extraction system where groundwater is captured and treated over time. All of the alternatives integrate to varying degrees ongoing site-wide natural recovery processes with

more active technologies. As discussed in Section 5.1, site-specific data have demonstrated that these processes are effective and are likely supported by reduction of discharges to the Willamette River through previous land-based source control efforts and ongoing natural sedimentation of relatively low concentration materials from upstream of the Gasco Sediments Site. The natural recovery processes have and will continue to reduce surface sediment and water column concentrations of all of the COIs at the Site. Per Section 6.2.1, capping or removal followed by capping or cover is expected to directly address (contain in place or remove) buried contamination in the interim Project Area above the RALs that has a reasonable potential to be exposed in the future for all active alternatives (Alternatives 2 through 5).

The Portland Harbor draft FS (Anchor QEA 2012a) evaluates the uncertainty associated with the conservative case or lower bound estimate for the modeling projections of the FS alternatives. This uncertainty analysis shows that the model projections do not change conclusions regarding the overall effectiveness of the Portland Harbor draft FS alternatives given that the action alternatives are all still projected to reach relatively similar protective sediment concentrations in the long term. For BaP particularly, these concentration results are very similar in comparison to the range of RGs in Table 7.2-1. Using the results of the Portland Harbor draft FS modeling uncertainty analysis, the uncertainty for the Gasco Sediments Site model projections is expected to be equally small in comparison to the RGs ranges, and therefore, is not expected to change the conclusions of this EE/CA.

All of the alternatives evaluated in this EE/CA are projected to reduce COC levels in surface sediment and the water column over time. The combination of more active technologies and MNR is expected to minimize the potential remobilization of buried COCs, which could potentially be subject to erosion or disturbance in the future. Projections for all alternatives indicate that large scale erosion events, such as the one simulated in Year 17 of the projections, would result in some temporary increase in sediment concentrations that would return to the pre-event trajectory within a few years (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b).

The common elements of the alternatives evaluation associated with MNR, in-place, dredging/removal, and riverbank remediation are discussed below.

7.2.2.3 *Monitored Natural Recovery*

MNR generally relies upon natural processes to achieve long-term protectiveness. As described in Section 5.1, bathymetry and grain size patterns indicate sedimentation over substantial

portions of the Gasco Sediment Site Area of Interest, particularly where COC concentrations are higher. These LOEs indicate substantial recovery in many areas where higher COC sediment concentrations are present. The modeling projections for the alternatives confirm that MNR will effectively reduce potentially unacceptable risks from contaminants in sediments within modeled timeframes in and around the interim Project Area (7.2.2.1-1a-b and 7.2.2.1-2a-b). The model results, which are discussed further throughout Section 7 and 8, provide a particularly useful tool for evaluating the protectiveness of MNR on both large and relatively small spatial scales and over modeled timeframes.

As described in Appendix A, MNR is also occurring for CVOC in TZW. TZW sampling over time has clearly documented the following multiple lines of evidence confirming natural attenuation by reductive dechlorination: decreasing concentrations, changes in relative contaminant distribution caused by reductive dechlorination, and geochemical conditions favoring reductive dechlorination. This natural attenuation has been shown for TCE, cis-1,2-DCE, and vinyl chloride. This natural recovery, in combination with downwelling of groundwater due to operation of the groundwater hydraulic containment system, significantly reduces potential risk associated with the TZW pathway.

7.2.2.3.1 In-Place Technologies

In place technologies such as EMNR, in situ treatment, and capping would provide for protection of human health and the environment by reducing COC concentrations on the sediment surface and reducing flux to the water column, which, in turn, would reduce levels in water. In-place technologies also provide a clean surface and remove direct contact exposure pathways. As discussed in Section 5, in-place technologies all provide a similar level of protectiveness when applied in and under appropriate areas and conditions as detailed in Section 5. For the purposes of EE/CA development, capping is used as the representative process option for in place technologies.

Caps included in the remedial alternatives for this EE/CA would be designed in accordance with EPA and USACE guidance (Palermo et al. 1998; USACE 1998) to provide long-term chemical isolation and ensure the stability, integrity, and protectiveness of the caps under the range of potential erosional forces. The preliminary cap designs at the Gasco Sediments Site were determined through an evaluation of Gasco Sediment Site-specific information so that the cap would meet the following objectives:

- Physical isolation of COCs in the sediment from the benthic environment
- Erosion protection (i.e., to mitigate resuspension and transport of sediments to downstream areas) to maintain cap stability against forces resulting from open water river flows, propeller, and other forces
- Chemical isolation (i.e., reduce the flux of COCs to the water column).

In accordance with EPA (Palermo et al. 1998) and USACE (1998) design guidance, the total thickness of a protective cap was specified as the sum of the thicknesses required to achieve each of the design objectives summarized above. To achieve chemical isolation, active cap layers (assumed to be organoclay for EE/CA purposes) were added to cap designs in some subareas of the interim Project Area, where necessary to achieve long-term minimization of contaminant flux and potential DNAPL movement.

7.2.2.3.2 Dredging/Removal

While alternatives including removal would reduce the volume of contaminated sediments in the river and can achieve overall protection of human health and the environment, short-term water quality impacts and elevated post-dredging residuals reduce the protectiveness of this remedial technology, particularly when trying to achieve low concentrations relative to target material concentrations. In addition, dredging/removal has a more limited effectiveness for liquid and dissolved phase constituents (e.g., liquid substantial product). Although dredging/removal reduces the volume of contaminated sediments, EPA guidance (2005) indicates that first and foremost, the focus of remediation should be on risk reduction, not simply on contaminant mass removal (EPA 2005 – p. 7-1, 7-16). This principle is based on the consideration that contaminated sediment that is not bioavailable or bioaccessible and reasonably stable, meaning that the contaminants are unlikely to be released from the sediment in concentrations that would pose an unacceptable risk to human health and the environment, does not necessarily contribute to site risks (EPA 2005 – p. 7-3). Mass removal, therefore, does not equal risk reduction. This principle was expanded upon by the NRC, "Remedies should be designed to meet long term risk reduction goals (as opposed to metrics not strictly related to risk, such as mass removal targets)" (NRC 2007).

The expectation of short-term water quality impacts and post-dredging residuals with dredging/removal are based on detailed evaluations of dredging effectiveness, including the recent evaluation by the NRC (2007), which noted that,

> *"Dredging effectiveness is limited by resuspension and release of contaminants during dredging and the generation and exposure of residual contamination by dredging"* (NRC 2007 – p. 163) and *"Dredging alone is unlikely to be effective in meeting short-term and long-term goals if a site has one or more unfavorable conditions"* (NRC 2007 – p. 5).

EPA's (2005) guidance likewise notes that,

> *"the level of uncertainty associated with estimating residual contamination [after dredging] can be high at some sites,"* and that *"[a]nother limitation [of dredging] may include the potential for contaminant losses during dredging through resuspension"* (EPA 2005a – p. iv-v).

More recent publications have continued to document similar dredging-related residuals and corresponding increases in fish tissue concentrations at sediment cleanup sites (EPA 2005; NRC 2007; Patmont and Palermo 2007; USACE 2008a; Bridges et al. 2010). Dredging may have particularly limited effectiveness as a means to provide overall protection of human health and the environment when applied to the following situations, which occur at the Gasco Sediments Site:

- In areas where rocks/cobbles or other debris are present on the river bottom, because they increase resuspension and residuals generation.
- In areas where the highest sediment concentrations are located at the base of the dredge prism. In these cases, post-dredge cover may be essential (or the most appropriate approach might be partial removal followed by capping or even capping only).
- In areas where substantially contaminated sediments immediately overlie hard bottom, resulting in relatively high post-dredge residual concentrations due to the inability of the dredge equipment to remove all sediment above the hard bottom surface.

Because residuals limit the protectiveness that can be attained by dredging, the representative set of removal process options used in the EE/CA incorporated specific actions to manage residuals. Specifically, a single cleanup pass and suitable sand cover (similar to EMNR) was considered an appropriate strategy to carry forward for residuals management for the EE/CA alternatives. This assumption is consistent with recent strategies used successfully at other sediment cleanup sites (e.g., 2005 Gasco Removal Action ; Fox River, Wisconsin; and Hudson River, New York), and in recognition of the limitations associated with attempting to manage residuals through multiple cleanup passes. The calculations conducted in the Appendix Ib of the Portland Harbor draft FS (Anchor QEA 2012a) indicate that the RALs defined by the

alternatives can be achieved by removal, but with progressively more implementability issues for the lower RALs (i.e., RALs used in Alternative 5). Also, for the lower RALs, the post-dredge cover plays a greater role in achieving the RALs as compared to dredging itself. This indicates that process options that have a higher RAL as the target for dredging and lower RALs achieved by post-dredge covers, as necessary, may be a more reasonable approach for remedial design at this site.

It is important to note that the EE/CA residuals management strategy is an assumption for EE/CA purposes only. However, given experience at other sites, this EE/CA assumption appears to be one reasonable approach to pursue in remedial design, as do options that use cover after dredging to achieve lower RALs as necessary. Remedial implementation strategies that rely solely upon additional dredge passes to achieve RALs will create sediment volumes far in excess of those estimated for this EE/CA, and therefore will increase the durations, short-term water quality and sediment impacts, and costs of such dredging.

Alternatives 3 through 5 also include some areas of dredging possibly followed by post-dredging capping to minimize exposures to sediment concentrations that are potentially above RALs. In terms of overall protectiveness, this technology would have short-term impacts consistent with dredging releases and long-term effectiveness similar to capping as previously discussed.

7.2.2.3.3 Riverbank Remediation

Remedial technologies applied in the riverbank sub-SMA include no active remedy (i.e., MNR where substantial SSL exceedances do not exist and riverbank soils are already well armored to protect against soil erosion), placement of impermeable membrane followed by armoring for infiltration and erosion source control (this technology is essentially a form of capping), and removal and capping after removal. In each case, these technologies are expected to minimize exposure from (or remove) soils exceeding screening levels, minimize infiltration of stormwater through riverbank material where substantial SSL exceedances exist, minimize erosion of any soils including soils with screening level exceedanes, and minimize Fill WBZ groundwater moving through the all riverbank soils due to the upland Fill WBZ trench groundwater collection system. As a consequence, all of the alternatives are expected to be protective over the long term as required by the goals for the riverbank work described in Section 7.1.

7.2.3 Compliance with ARARs

This criterion assesses whether the alternative attains the identified chemical-specific, action-specific, and location-specific ARARs (see Section 3.5). As noted above, five select ARARs were the focus of the draft EE/CA evaluation, although compliance with all ARARs was considered in the detailed evaluations of alternatives.

7.2.3.1 *Methods*

The methods used to evaluate compliance with the five primary ARARs are summarized below.

State and Federal Surface Water Quality Standards/Criteria (WQS/NRWQC): Short- and long-term surface water quality projections for each alternative were compared with Oregon WQS and NRWQC for BaP consistent with criteria and procedures in the Portland Harbor draft FS (Anchor QEA 2012a). (Note that no WQS/NRWQC exist for naphthalene.) For BaP, the ARAR value for comparison is 0.018 μg/L, which is the Human Fish Consumption Water Quality Standard. There are no ecological WQS/NRWQC.

It should be noted that instances of exceedances of specific values are noted in Section 7 discussions, but in many cases, such exceedances may occur over very small areas and durations of time. In this section, exceedances are summarized as a percentage to time and area over which those exceedances occur as compared to the entire Gasco Sediments Site Area of Interest for the entire simulation period. More information on these exceedances is provided in Section 8.2.1.

Also, consistent with the Portland Harbor draft FS (Anchor QEA 2012a), comparisons are made to drinking water MCLs. The LWG disagrees that MCLs are ARARs against which the surface water itself should be measured because under Table 340A of OAR 340-041-0340, the beneficial use designation of the Willamette River for domestic water supply assumes adequate pre-treatment will be applied, and the LWG believes that direct application of MCLs to individual, untreated surface water samples at the Portland Harbor Site is therefore inappropriate. However, this analysis was, nonetheless, also conducted for this EE/CA. The BaP MCL is 0.2 μg/L. No MCL exists for naphthalene.

- **Oregon Environmental Cleanup Law:** Long-term sediment concentration projections for each alternative were compared to potential cleanup value requirements included in this ARAR. Also, as described in Section 4.4.5, no potential Oregon hot spots were identified;

however, this EE/CA evaluates treatment and removal of areas of higher concentrations consistent with the intent of the Oregon Environmental Cleanup Law.

Section 404(b)(1) of the CWA: The 404(b)(1) analysis presented in Appendix D provides an assessment of how each alternative would comply with this ARAR.

FEMA Flood Rise Requirements: For all communities participating in the National Flood Insurance Program, any action that encroaches on the floodway cannot cause a significant increase in water surface elevation in the river during a 100-year flood event. An increase is defined as more than 0.00 feet (FEMA 2011). As discussed in the Portland Harbor draft FS (Anchor QEA 2012a), the City of Portland is the implementing community in this case and, in coordination with FEMA, interprets the threshold as "less than 0.005 feet," based on the assumption that hydraulic model results less than 0.005 feet would be rounded to 0.00 feet and therefore meet the criterion. The Portland Harbor draft FS conducted modeling of the Willamette River and Multnomah Channel for a variety of Portland Harbor-wide alternatives to evaluate compliance of sediment remediation with this ARAR (Appendix Lb of the draft FS). This information is used in the EE/CA to inform evaluations of the compliance of the EE/CA alternatives with this ARAR.

ESA: The Preliminary Draft BA for the Gasco Sediments Site presented in Appendix C, provides an assessment of the range of potential effects to ESA-listed species that may result due the implementation of each alternative. The Preliminary Draft BA for the Gasco Sediments Site is intended to inform and assist EPA in developing its own BA to initiate formal consultation with the Services. The Portland Harbor Site BA explains the ESA consultation process in more detail.

For riverbank remediation, the degree to which exposure to contaminated soils is reduced (or removed) for each alternative is used as a general measure of compliance with water quality ARARs and the Oregon Cleanup Law. The extent to which riverbank soil potential hot spots are removed or treated and the potential for flood impacts due to riverbank changes are evaluated in a manner analogous to sediments. Although potential hot spots in sediments were not identified, but were identified in riverbank soils, the primary evaluation of potential soils hot spots is the evaluation of treatment and removal of areas of higher concentrations consistent with the intent of the Oregon Environmental Cleanup Law. For 404(b)(1) and ESA, Appendices D and C, respectively, address the entire alternatives including the riverbank work.

7.2.3.2 *Common Elements – Compliance with ARARs*

All of the alternatives are expected to comply with the five primary ARARs evaluated in detail, with the possible exceptions of certain WQS/NRWQC and FEMA flood regulations.

WQS/NRWQC: It should be noted that the Portland Harbor Site RI indicated that the 95th percentile Upper Prediction Limit (UPL) of upstream background surface water concentrations of total PAHs exceeded the federal or state Human Fish Consumption Water Quality Standards for these contaminants. Thus, some of the potential future exceedances of the BaP fish consumption values observed in the model projections (mostly during construction periods) may be due to or not substantially different from background water concentrations of PAHs in general entering the Gasco Sediments Site Area of Interest. Based on the Portland Harbor Site RI data, concentrations of BaP do not currently exceed the applicable Human Fish Consumption Water Quality Standards in the Portland Harbor Site. Similarly, Figure 7.2.2.1-3 generally shows exceedances of the BaP human consumption criteria are not expected for any alternative over the long term. However, short-term (during construction) increases in water column concentrations exceeding this BaP criterion are anticipated during some dredging operations, as detailed below.

FEMA Flood Rise Requirements: The Portland Harbor draft FS (Anchor QEA 2012a) evaluated the effect of each of the comprehensive alternatives on water surface elevations. All of the alternatives in the Portland Harbor draft FS except Alternative A (No Action) had maximum projected increases in water surface elevation (during an estimated 100-year flood event) of more than 0.005 feet. However, the Hydrologic Engineering Centers River Analysis System (HEC-RAS) model's precision is estimated to be no less than 0.25 feet. Thus, these predicted increases are considered to be negligible and not significantly different between Portland Harbor draft FS alternatives based on the model precision; therefore, the Portland Harbor Site FS could not confirm compliance of the Portland Harbor draft FS alternatives with this ARAR. The Portland Harbor draft FS concluded that to demonstrate compliance with the ARAR in remedial design, one or more of the following actions would need to be taken for any alternative selected by EPA: 1) additional modeling with a higher precision; 2) revisions to effective Flood Insurance Studies, Flood Insurance Rate Maps, or Flood Boundary Floodway Maps following FEMA regulations (FEMA 2011); or 3) mitigation for any unacceptable flood rise that can be confirmed in remedial design. Based on this analysis, although the EE/CA alternatives are considerably smaller than the Portland Harbor draft FS alternatives, this EE/CA

assumes that there is a potential for any of the EE/CA action alternatives to cause a flood rise in excess of the discussed criteria. Therefore, all alternatives are expected to take one or more of the following actions noted above in remedial design, should they be selected for design and implementation.

7.2.4 Long-term Effectiveness and Permanence

This criterion assesses the alternatives for magnitude of residual risk remaining after implementation and the adequacy and reliability of control measures (e.g., containment systems and institutional controls).

7.2.4.1 *Methods*

The long-term effectiveness and permanence of the comprehensive alternatives was evaluated for each of the NCP factors of magnitude of residual risk and adequacy and reliability of controls. Several methods were used to evaluate the potential magnitude of residual risk, each of which relates to determining attainment of specific RAOs. Attainment of the RAOs indicates that the magnitude of residual risk is within the RAO definition. The methods used for these evaluations are described below.

7.2.4.1.1 Magnitude of Residual Risk – Long-Term Sediment and Surface Water COC Concentration Projections

The fate and transport model was used to project long-term sediment and surface water contaminant concentrations resulting from implementation of each alternative. These metrics are most relevant to RAOs 2, 4, 6, and 8. Sediment projections were compared to a range of RGs and SQVs shown in Table 7.2-1. Surface water projections were compared against the ARAR-based WQS/NRWQC noted previously, as well as more informal comparisons to additional water quality guidelines noted in Appendix C of the the Portland Harbor draft FS (Anchor QEA 2012a). Specifically, for chronic ecological exposures, comparisons to the BaP 0.018 µg/L human fish consumption value were generally deemed representative of the alternate ecological chronic value in Appendix C of the Portland Harbor draft FS of 0.014 µg/L given how close the two values are. For naphthalene, the Portland Harbor draft FS alternate ecological chronic value of 12 µg/L was used. For acute ecological exposures, the Portland Harbor draft FS alternate values of 4 and 2300 µg/L were used for BaP and naphthalene, respectively.

7.2.4.1.2 Magnitude of Residual Risk – Potential for Recontamination

Each alternative was also evaluated using the fate and transport model to assess the potential for long-term sediment recontamination, which is relevant to RAOs 2, 3, 6, and 7. This evaluation is also relevant to the original SOW RAO regarding recontamination potential. This evaluation included examination of recontamination potential at smaller spatial scales and assessed recontamination potential from ongoing known sources (e.g., stormwater, permitted industrial discharges, groundwater, and upstream inputs), along with localized recontamination due to dredging-related resuspension in adjacent areas (i.e., other Portland Harbor SMAs). This was primarily accomplished by reviewing projected sediment concentrations after remediation using Portland Harbor draft FS (Anchor QEA 2012a) modeling scenarios that were updated to include additional Gasco Sediment Site data discussed in Appendix G. Given that this evaluation is relevant to recontamination from any upstream or off-site sources, evaluations were conducted for BaP, PCBs, and DDE as relevant examples of potential upstream sources including dredging releases from upstream sediment remediation.

7.2.4.1.3 Magnitude of Residual Risk – Minimization of Potential for Groundwater Impacts

Each alternative was also evaluated relative to the potential for human health and ecological potentially unacceptable risks resulting from exposures to contaminated groundwater, which is relevant to RAOs 5 and 9. These evaluations included fate and transport model projections for naphthalene as a representative mobile contaminant present in Gasco Sediments Site groundwater plumes to assess long-term surface water and sediment quality changes in groundwater discharge areas. The effect of groundwater source controls in progress (Section 2.3) was incorporated into the model.

Additionally, cap modeling was performed for BaP, naphthalene, benzene, TCE, DCE, and vinyl chloride to evaluate the effectiveness of capping technologies in groundwater discharge areas. Surface water quality projections for both fate and transport and cap modeling were compared to WQS/NRWQC and alternate guidelines previously discussed in Section 7.2.4.1.1. For cap modeling, comparisons to water criteria and alternate guidelines were used to predict TZW concentrations in the bioactive zone of the caps and in surface water above the caps.

As discussed in the Portland Harbor draft FS (Anchor QEA 2012a), per EPA direction, groundwater RAOs only apply to that portion of each groundwater plume that is downgradient of its respective upland groundwater source control boundary (i.e., riverward of the riverbank and out under the riverbed). These downgradient detached plumes would be expected to

remain immediately after upland source controls are in place. However, as noted above, the downwelling created by the groundwater extraction systems will result in the plume migrating back toward the uplands and eventually into the treatment system. Both the fate and transport model and the cap model incorporate the effects of upland groundwater source controls and provide estimates of this process at the Gasco Sediment Site. In addition, as documented in Appendix A, natural attenuation of CVOCs via reductive dechlorination has been documented through the completion of TZW sampling in the vicinity of Area 1. The coupled downwelling and natural attenuation processes significantly decrease potentially unacceptable risks resulting from exposures to contaminated groundwater.

It is important to note that from a human health perspective, the Portland Harbor draft final BHHRA (Kennedy/Jenks 2011) did not identify potentially unacceptable risks to people who may contact or ingest water from nearshore groundwater seeps, and no such shoreline seeps were identified during RI surveys of the Gasco Sediments Site shoreline. Relative to potentially unacceptable ecological risks, the BERA identified a number of COCs that are potentially or partially attributable to upgradient groundwater plumes including the chemicals used in the fate and transport models.

7.2.4.1.4 Magnitude of Residual Risk – Minimization of Downstream Transport

This evaluation is relevant to RAOs 2, 4, 6, and 8. It is also relevant to the original SOW RAO regarding minimization of downstream transport. This metric was evaluated using long-term fate and transport model projections, which quantified the mass of contaminants leaving the downstream boundaries of the Gasco Sediment Site under each alternative for BaP and naphthalene.

7.2.4.1.5 Adequacy of Controls

The ability of institutional controls and containments (e.g., in-place technologies) to reliably control residual risks was evaluated assuming a general institutional control program for each alternative as well as evaluations of capping chemical isolation and stability discussed in Sections 5.4 and 5.5.

7.2.4.1.6 Riverbank Remediation

Long-term effectiveness of riverbank remediation is evaluated consisted with the methods described above for overall protection.

7.2.4.2 *Common Elements – Long Term Effectiveness and Permanence*

Similar to the discussion for overall protectiveness, all the alternatives are effective at reducing COC concentrations to RGs representing the lowest acceptable risk estimates or reducing exposures to surface sediment and the water column over the long term.

7.2.4.2.1 Monitored Natural Recovery

Natural recovery is a critical element of every alternative in the Portland Harbor draft FS for achieving long-term effectiveness and is an equally important process at the Gasco Sediments Site. MNR provides a low to high level of risk reduction depending on processes being relied upon and site-specific characteristics that might enhance the long-term isolation or destruction of chemicals. MNR is a potentially acceptable method for independently achieving long term effectiveness, or as a component of an integrated set of active clean up methods, depending on the processes being relied upon, spatial scale of the risk exposure assumption, and site-specific conditions.

Natural recovery processes are expected to continue to cause long-term reductions in sediment and water column contaminant levels at the Gasco Sediments Site, and reductions in potentially unacceptable risks related to these contaminants. Empirical data from the Portland Harbor Site RI (as summarized in Section 2.5) pertaining to the long-term effectiveness and permanence of source control and natural recovery processes are reviewed in Section 5.1.1 and have been incorporated into detailed site-specific fate and transport modeling. These natural recovery processes are expected to continue over the long term. In addition, as documented in Appendix A, natural attenuation of CVOCs via reductive dechlorination has been documented through the completion of TZW sampling in the vicinity of Area 1.

Because sediment exceeding RGs would remain in the Willamette River under all alternatives for a period of time until RG ranges are met, the potential for sediment erosion during the recovery period(s) is relevant in the evaluation of long-term effectiveness and permanence as it relates to adequacy and reliability of controls. Detailed fate and transport modeling revealed that extreme flood events, such as the 100-year event modeled in Year 17 projections, would result in a transient increase in surface sediment concentrations over most spatial scales and areas assessed. During such an extreme flood event, some sediment bed erosion is projected to occur. However, in this situation, such transient erosion events are followed by continued or increased deposition as flows return to normal conditions, which cause the sediments to recover

to pre-flood equilibrium conditions usually within a few years (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b).

Also, MNR is relevant to attenuation of groundwater plumes after source controls are in place. Given that the upland groundwater source controls cause downwelling of groundwater over most the interim Project Area, any contaminants observed in sediments and surface water in long-term projections cannot come primarily from groundwater; groundwater will be moving away from these in-river media. In addition, as discussed in Section 2.3.2, the ISCR-enhanced bioremediation system installed on the Siltronic property has successfully decreased upland groundwater concentrations in the CVOC source area. Thus, the groundwater upland source controls and naturally occurring dechlorination of CVOCs are highly effective at minimizing any potential for ongoing impacts to the Willamette River sediment or surface water due to groundwater plumes currently residing under the Willamette River.

7.2.4.2.2 In-Place Technologies

With respect to the magnitude of residual risk, in-place technologies, as represented by capping in the EE/CA alternatives, may provide moderate to high level of risk reduction and low to moderate residual risk, depending on cap design, placement, construction, and maintenance to address Gasco Sediment Site characteristics that might otherwise prevent long-term isolation of contaminants. With respect to the adequacy and reliability of controls for residual risk, capping may provide moderate to high control, depending on cap stability and contaminant migration through the cap.

Caps included in the remedial alternatives for the EE/CA were based on preliminary designs following EPA and USACE guidance. Caps designed and constructed in accordance with this guidance provide long-term chemical isolation and stability (EPA 2005). Different cap designs have been developed to address the range of potential erosional forces (e.g., currents/ propwash), contaminant conditions, and groundwater conditions anticipated within different areas of the Gasco Sediments Site (see Section 5.4 and 5.5). The results of these analyses support that erosional or contaminant transport mechanisms would not impact the long-term stability or chemical isolation effectiveness of the caps. Placement of boat anchors on the caps is also expected to have minimal impact, primarily due to the relatively small surface area potentially affected by this activity (Palermo et al. 1998; USACE 1998). As described in Section 5.4, large ships are not expected to anchor in the areas that are capped under any alternatives because

caps are not placed in the navigation channel and future maintenance dredge areas associated with large ship traffic in any alternative.

Areas with lower erosional forces from any of the above processes would likely be suitable for other in place technologies such as EMNR or in situ treatment, but, as noted previously, capping is assumed for the EE/CA alternatives.

It is also assumed for this EE/CA that habitat features will be incorporated into many of the in-place technologies eventually designed at the Gasco Sediments Site. Although specific habitat designs are not developed for this EE/CA, the mitigation analysis in Appendix D defines the level of habitat impact associated with each cap in each alternative and discusses the level of mitigation necessary to achieve no long-term net impact to the habitats at the Gasco Sediments Site. Also, in many cases, the substrate and elevation changes assumed for effective cap or other in-place designs would be expected to already create habitat improvements without any additional habitat features being added.

Long-term monitoring and maintenance of the caps is included as an element of all alternatives that include capping to further ensure their long-term effectiveness and permanence, consistent with EPA and USACE guidance. Proper design and installation would reduce future maintenance requirements. In the event that damage to the caps or other in place technologies occurs, affected areas would be identified during post-construction monitoring and subsequently addressed (which is included in EE/CA cost estimates for caps).

7.2.4.2.3 Dredging/Removal

Although environmental dredging/removal may provide moderate to high level of risk reduction, it also often results in a moderate to high level of residual risk. That risk is the result of dredge residuals. Contaminated material suspended in the water column during dredging settles back on the river bottom after operations have ceased. These residuals can occur directly over the footprint of the dredge area and can extend 500 to 1,000 feet downstream of the dredge area. Residuals occur both in the direct vicinity of the dredge operations and downstream even when containment structures (i.e. sheetpile walls) are used. It is possible to reduce the residual risk from dredging to a low to moderate level with the use of backfill or capping material.

While environmental dredging/removal would reduce the volume of contaminated sediments in the Willamette River and contribute to long-term effectiveness and permanence, as discussed

above mass removal is not a goal supported by the sediments guidance. Further, post-dredge surface concentrations are anticipated to be elevated above RGs due to unavoidable residuals and releases of dissolved phase chemicals (e.g., from dredging in areas with liquid substantial product). Dredging residuals have routinely been observed during environmental dredging projects (including the 2005 Removal Action at the Gasco Sediments Site), particularly when rocks/cobbles or other debris are present on the river bottom as occurs in the interim Project Area, which increases resuspension and residuals generation (Patmont and Palermo 2007). These considerations are built into the remedial alternatives included in this EE/CA, wherein, all dredging alternatives include a post-dredge cover. The long-term effectiveness and permanence of alternatives that include dredging is driven primarily by the post-dredge cover component, particularly for lower RALs, due to the ability of the covers to provide reduced surface sediment concentrations. In Alternatives 3 through 5 in some instances dredging is followed by capping instead of cover. As noted in Section 6.2.1, this is an EE/CA-level process option assumption that does not attempt to estimate the extent to which either post removal capping or cover (or variations on those approaches) would be able to provide long-term attainment of RGs as assessed over wider risk-appropriate spatial scales. Such an evaluation will be conducted in remedial design to further refine areas requiring post removal covers, caps, and other options for this technology.

Sediments removed as part of each alternative would be disposed of at protective CADs, CDFs, and/or off-site landfills. These disposal facilities would provide effective long-term management of the dredged materials, controlling potential future exposure to human and environmental receptors to within acceptable levels.

7.2.4.3 *Riverbank Remediation*

Riverbank remediation technologies are expected to minimize exposure from (or remove) soils exceeding screening levels, minimize infiltration of stormwater through riverbank material where substantial soil screening level exceedances exist, minimize erosion of any soils including soils with screening level exceedanes, and minimize Fill WBZ groundwater moving through the all riverbank soils due to the upland Fill WBZ trench groundwater collection system. As a consequence, all of the alternatives are expected to be effective over the long term, as required by the goals for the riverbank work summarized in Section 7.1.

7.2.5 Reduction of Toxicity, Mobility, or Volume through Treatment

This criterion assesses the degree to which an alternative reduces the toxicity, mobility, or volume of COCs through treatment.

7.2.5.1 *Methods*

This criterion was assessed by calculating the volume of sediment removed and treated via dewatering or stabilization with Portland cement for each alternative. The acreage of contaminated sediments addressed by treatment via active capping for each alternative was also evaluated. In addition, groundwater flow reversal caused by the upland hydraulic containment system will recover and treat chemicals in the groundwater plumes beneath the Gasco Sediments Site. Similarly, the ISCR-enhanced bioremediation system on the Siltronic property is treating CVOCs in upland groundwater prior to discharge to sediments. Thus, this is another important aspect of the treatment of contaminants in the Willamette River that is achieved by the integrated Gasco source control and Sediments Site remedy for all of the EE/CA alternatives.

7.2.5.2 *Common Elements - Reduction of Toxicity, Mobility, or Volume through Treatment*

Reduction of toxicity, mobility, or volume through treatment is accomplished in different ways depending on the remedial technology.

7.2.5.2.1 In-Place Technologies

As noted previously, in-place technologies include a suite of potential technologies, including in situ treatment. For EE/CA alternative purposes, capping is used as representative of this suite of in-place technologies. Using this representative example, capping would be expected to provide no treatment of sediment contaminants. However, in remedial design, it may be determined that in situ treatment may be applied more effectively than capping in some specific areas of the Gasco Sediments Site, and in that case, would represent a form of sediment treatment in those areas.

7.2.5.2.2 Dredging/Removal

Dewatering using diatomaceous earth (the assumed process option for sediment disposed of in an upland landfill for the purposes of this EE/CA) and addition of other materials that may be used for dewatering or to reduce contaminant leaching (e.g., Portland cement) are forms of ex

situ treatment that reduce the mobility of contaminants in sediment and dewater. This evaluation includes volumes removed in riverbank areas to the extent included in each alternative.

7.2.5.2.3 Active Capping

Active capping is included in this EE/CA in certain areas, and this is one form of in situ treatment. Active capping is a retained technology providing treatment that could be added to standard capping as judged necessary in sub-SMA-specific remedial designs. This evaluation includes active capping in riverbank areas to the extent included in each alternative.

7.2.6 Short-term Effectiveness

This criterion assesses impacts related to construction and implementation of each alternative.

7.2.6.1 *Methods*

Short-term impacts were evaluated following the NCP short-term factors of environmental impacts, time until protection, community risks, and potential impacts on workers. These methods are applicable to the combined construction of the sediments and riverbank portions of the work except for water quality impacts, which are evaluated for riverbank areas as described above under overall protection.

Potential Environmental Impacts: Water quality impacts to ecological and human health receptors, sediment recontamination, and air pollutant and greenhouse gas (GHG) emissions were evaluated for the construction phase of each alternative. Water quality and recontamination during construction were evaluated using fate and transport model projections for each EE/CA alternative. Model-projected water column concentrations were compared to criteria and guidelines noted above, while sediment quality projections were compared to RGs and SQVs. For the evaluation of potential sediment recontamination from short-term construction activities, increases in average surface sediment BaP and napthalene concentrations for shoreline half river mile and half mile SWAC areas, respectively, immediately downstream of the Gasco Sediments Site were projected.

The relative potential impacts of GHG and air pollutant emissions during construction of each alternative were estimated based on the detailed air inventory analysis described in Appendic Ic of the Portland Harbor draft FS (Anchor QEA 2012a). That analysis determined that the

degree of air emissions of sediment remedial alternatives in the Portland Harbor Site is highly correlated with the construction durations of the remedial alternatives. This fact is used in thia EE/CA to compare durations of the EE/CA alternatives as quantitative surrogate for the amount of air impacts associated with each alternative.

Time Until Protection is Achieved: The approximate timeframes required to achieve RAOs were evaluated by comparing model projected changes over time in sediment concentrations to the ranges of RGs in Table 7.2-1.

Potentially Unacceptable Community Risks and Quality of Life: The primary community risk during construction would occur through the short-term water quality, downstream transport, recontamination, and air pollutant impacts discussed above. Impacts to business operations and loss of jobs due to tenant disruption and/or business closure is also a community risk. In addition, quality of life considerations during the short-term construction phase of the alternatives were evaluated in the Portland Harbor draft FS (Anchor QEA 2012a) through a qualitative assessment of the human use environment and the potential for alternatives to affect issues of aesthetics, odor and dust, traffic, noise, commercial navigation, and recreation. Similar to the findings for air impacts, the Portland Harbor draft FS found that quality of life issues were generally proportional to the duration of construction. The longer the duration of construction, the more significant the impacts were to quality of life criteria. Thus, duration is used as a surrogate metric for the level of impact to community quality of life.

Potential Impacts to Workers. Protection of workers during construction of each alternative was assessed in the Portland Harbor Site draft FS (Anchor QEA 2012a) using calculated estimates of non-fatal and fatal injuries using incident occurrence rate data in conjunction with the anticipated construction durations associated with each alternative. Like other short-term impact measures, the Portland Harbor Site draft FS methods use the number of worker hours estimated directly from alternative durations to calculate likely incident rates. Therefore, the duration also provides a direct quantitative estimate of the amount of non-fatal and fatal incidents expected for each EE/CA alternative.

7.2.6.2 *Common Elements – Short Term Effectiveness*

Short-term impacts common to all of the alternatives include temporary water quality impacts, localized recontamination of nearby downstream sediments, some downstream transport of contaminants, air pollutant and GHG emissions, community quality of life impacts, and worker

incidents. Short-term impacts can actually extend across a long period of time if the construction duration is lengthy. In the Portland Harbor draft FS, some of the Alternatives have short-term impacts that last decades, and Alternative 5 in this EE/CA is estimated to last 10 years. Many factors must be balanced to determine the time until the target sediment concentrations are reached. It is therefore necessary to evaluate the time needed to reach clean up targets for each individual alternative.

An evaluation of the Gasco Sediments Site-specific application of MNR, in-place technologies, and dredging/removal in consideration of this criterion follows.

7.2.6.2.1 Monitored Natural Recovery

Generally, this technology is associated with reducing risks over longer periods of time than active remedy. MNR is expected to have varying degrees of short-term effectiveness depending on specific conditions in individual sub-SMAs within the Gasco Sediments Site. With MNR, there are no additional impacts to the environment, public/worker protection, or existing habitats from the remedy itself.

7.2.6.2.2 In-Place Technologies

Short-term impacts associated with construction of in-place technologies, as represented by capping in EE/CA alternatives, would include possible minor effects on water quality (primarily turbidity and surface foam from the capping materials themselves, which will be chemically suitable for this use). Consequently, silt curtains and similar barriers are not commonly used for capping operations. For example, EPA (2005) notes operational controls that are typically applied to limit water quality impacts during capping operations. Further, monitoring data collected at other capping sites similar to the conditions of the Willamette River indicates that silt curtains are likely ineffective in controlling downstream water quality and in such situations, their use is not recommended (EPA 2005). If determined to be necessary during remedial design or construction, turbidity and surface foam impacts potentially associated with placement of suitable capping materials could be controlled through operational BMPs.

Placement of cap material would, in some cases, provide desirable habitat substrates (e.g., gravel) and in many other cases, the larger cap armor types are expected to fill in with deposition of sand and silt-sized materials similar to those currently present at these same locations across the Gasco Sediments Site. These new surfaces are expected to provide suitable substrate for the benthic invertebrate community (i.e., the mixtures that often mimic existing

Site sediments). Studies completed in the Columbia River estuary indicate that recolonization after sediment disturbance (e.g., initial placement of the cap) through construction usually occurs within several months when suitable substrate is present (McCabe et al. 1998).

7.2.6.2.3 Dredging/Removal

With dredging/removal, the time to achieve protection varies depending on the size (volume and duration) and complexity of the project and is generally more uncertain than for in-place technologies due to dredging-induced resuspension, release, and residuals. In addition, if post-dredging cover or capping is required, there would be additional short-term impacts during the extended construction period. Table 5.6.3.3-1 provides a summary of case studies regarding documented releases related to contaminated sediment dredging projects, mostly focused on PCBs, but which is applicable to most hydrophobic contaminants such as PAHs. The release rates observed across these studies are generally in the range of 2 to 4 percent, with most of the release being in the bioavailable dissolved form. As demonstrated by these case studies, there are no documented differences in these release rates between projects that use barrier controls and those that do not. Although all of the studies involved silt curtains or similar technologies, it is not expected that the predominantly dissolved phase release can be effectively contained by any technology, including sheetpile walls, because neither technology can provide a watertight barrier. Thus, as discussed in Section 5.6.3, it is unlikely that sheetpile wall barriers would allow work to be conducted outside currently accepted construction work windows, because releases of this type would still be occurring.

Unavoidable resuspension and release of COCs during sediment removal would result in significant short-term increases in water concentrations (Bridges et al. 2010), as presented in more detail in Section 8.5.1.

As noted in Section 5.6.3, based on the documented issues with effectiveness and implementability of barrier containment controls, and the limited documented benefit associated with such controls, consideration of these controls as a removal BMP is generally not warranted for remedial design. However, as directed by EPA, a sheetpile wall was included in Alternative 5.

In areas of the Willamette River where dredging occurs, the fish habitat and benthic community would be significantly altered and/or eliminated in the short term. However, where acceptable

concentrations can be achieved in dredge areas (e.g., through placement of post-dredge covers), recolonization would be expected within several months (McCabe et al. 1998).

7.2.6.2.4 Riverbank Remediation

The same general issues are expected to occur in riverbank remediation as described above for MNR, in-place technologies, and removal, where soils are left in place with existing armoring, capped and armored, or removed and capped, respectively. Alternatives that remove substantial amounts of shoreline soils are expected to greatly increase the potential for dredge/removal-related releases, given that new continuous slopes below or directly above the waterline must be regraded and prepared for capping and armoring in these riverbank areas. As discussed in Section 6.4.3, significant riverbank removal and layback will also lead to potential and known impacts to upland structures and business operations.

7.2.7 Implementability

This criterion assesses the ease or difficulty of implementing the remedial technology/ process option by considering technical feasibility, administrative feasibility, and availability of services and materials required for implementation as well as the additional factors for each of these noted in Section 7.1.

7.2.7.1 *Methods*

The technical feasibility evaluation included reviews of the implementability issues described for each component technology in Section 5 as well as the combined implementability issues associated with each alternative. As discussed in the Portland Harbor draft FS (Anchor QEA 2012a), most of the implementability issues associated with alternatives are directly related to the duration of the alternatives, and these durations are a good overall metric for levels of implementability issues. However, the draft FS did not contemplate riverbank reconfiguration and the associated impacts to adjacent upland structures and operating businesses. Consistent with the draft FS, this EE/CA evaluates implementability of the remedy based on duration as well as on impacts resulting from construction (including upland/in-water structures and business operations).

7.2.7.2 *Common Elements – Implementability*

All of the alternatives have some implementability issues, with greater implementability challenges occurring for the alternatives that actively remediate larger areas and volumes of

sediment and riverbank soils. Larger areas and volumes are directly correlated to longer construction durations and more significant layback of the riverbank and thus impacts to upland structures and business operations.

7.2.7.2.1 Monitored Natural Recovery

There are no implementability issues associated with MNR because it does not require any Gasco Sediments Site construction activities and monitoring is relatively easy to implement.

7.2.7.2.2 In-Place Technologies

Construction of in-place technologies, as represented by capping for the EE/CA alternatives at the Gasco Sediments Site is both administratively and technically implementable over much of the Site, including the riverbank soils, except for navigation channel and future maintenance dredge areas described in Section 5. In addition, a range of regional capping projects have confirmed the implementability of operations such as onshore preparation of the cap materials and transportation of the cap materials from the staging area to the placement area. Necessary personnel for the various tasks (i.e., crane and loader operators, global positioning system [GPS] engineer, and monitoring crew) are typically readily available. Capping projects throughout the northwest United States have also demonstrated that an armored cap can be successfully placed across the chemical, physical, and hydrodynamic conditions at the Gasco Sediments Site (e.g., McCormick and Baxter, 2005 Gasco Removal Action, and Terminal 4 Removal Action Phase 1); specific cap placement methods to achieve target cap thickness would be determined during the design phase. Based on recent capping project experiences and a preliminary review of local borrow pits, it is likely that suitable materials for all of the different cap specifications can be obtained from local sources.

As discussed in Section 5.5, caps have been successfully placed over sediments containing DNAPL at numerous sites (including the McCormick and Baxter site across the Willamette River), indicating that such caps can likely be designed and implemented at the Gasco Sediments Site.

7.2.7.2.3 Dredging/Removal

Environmental dredging/removal at the Gasco Sediments Site is both administratively and technically implementable, although there are some limitations. Dredging/removal of sediments and soils could be accomplished using construction equipment available from a

number of marine contractors. Although not without limits, necessary equipment, personnel, and services are expected to be available in sufficient supply to implement the dredging/removal components of the remedial alternatives as demonstrated through recent environmental dredging operations in the Portland Harbor region. However, as discussed in Section 5.6, Gasco Sediments Site-specific conditions such as the presence of structures, steep slopes, and deep impacted sediment depth would affect the implementability of dredging/removal, and, for reasons stated in Section 5.6, dredging/removal in these areas is generally limited for the purposes of this EE/CA and requires capping after removal.

Further, as the duration of the alternatives increases, there will be increased competition for limited regional construction equipment, given that other SMAs will be awaiting implementation throughout Portland Harbor. (Note that given the limited local construction window, mobilizing equipment from other regions is unlikely to be economically viable because the equipment would be idle for most of the year.) An alternative that takes 10 years will remove that equipment from potential use in the rest of Portland Harbor and would likely slow down Portland Harbor-wide remediation progress in other areas.

Also, there are a number of implementability issues specific to the Gasco Sediments Site that are discussed more in Section 6.4.3. In summary, some alternatives (particularly Alternatives 4 and 5) include additional issues related to dock removal and replacement and resulting impacts on facility uses; the placement and removal of sheetpile walls in deep water and around docks; riverbank removal, regrading, and working around or impacting shoreline features, facilities, and buildings; and removal of sediments to depths at the limits of equipment capability.

7.2.8 Cost

Cost ranges were estimated and presented for each alternative consistent with EPA (2000) guidance in Appendix J to this EE/CA. Costs were estimated for the different alternatives following methods described in Appendix J. Per the NCP, capital costs, including both direct and indirect costs, annual operation and maintenance costs, and net present value of capital and operations/maintenance costs are included in the estimates. As discussed in Section 6.6, the estimated costs do not include impacts to upland structures, upland groundwater source control elements, or disruption and/or closure to businesses affected by construction of the remedy. The EE/CA costs are therefore conservative (low) and these additional costs would need to be factored into the evaluation if EPA considers carrying forward alternatives that lead to these impacts.

7.3 Alternative 1: No Action Detailed Analysis

7.3.1 Overall Protection of Human Health and the Environment

As discussed above, overall protection is evaluated for each alternative by the extent to which it achieves RAOs. This determination was performed by comparing projected short- and long-term changes in COC concentrations in surface sediment and surface water resulting from implementation of the alternatives with the range of sediment RGs and SQVs (compared to projected SWACs over various spatial scales), and WQS/NRWQC as well as the time to achieve such levels.

Sediment: Alternative 1 is projected to achieve surface sediment concentrations (SWACs over various spatial scales) that are below EPA's conservative point estimate RG for BaP, and also below the lowest LPAH and HPAH SQVs (compared to naphthalene and BaP projections, respectively), and thus, this alternative is expected to meet sediment RAOs 2, 3, 6, and 7 (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b). This alternative has no short-term impacts to sediment due to construction. Empirical data on sedimentation rates, upstream sediment loads, bathymetry, and sediment core profiles reviewed in Section 5.1 indicate deposition of low contaminant concentration sediments, particularly in areas with elevated COC concentrations over the long term. This supports the conclusion that the no action alternative would result in reduced long-term sediment concentrations as indicated by the modeling.

Surface Water: Alternative 1 is projected to achieve long-term surface water concentrations post-remedy that are the same as all the other alternatives (Figures 7.2.2.1-3 and 7.2.2.1-4). Further, these long-term concentrations are below WQS/NRWQC and alternate guideline values. Thus, this alternative is projected to meet surface water RAOs 4 and 8.

Groundwater: Upland source control actions by themselves will likely address groundwater RAOs 5 and 9 over most of the interim Project Area, given that the control actions will create downwelling of groundwater contaminants away from river sediment and surface water except in the extreme upstream and downstream portions of the interim Project Area (Figure 5.4.1-1) and the Siltronic ISCR-bioremediation system will continue to decrease CVOC concentrations in groundwater discharges (Section 2.3.2). Thus, Alternative 1 is expected to meet the groundwater RAOs as long as the upland source controls are completed and continue to operate over most of the interim Project Area. For the upstream and downstream areas,

Alternative 1 contains no provision for additional in-water remedies (e.g., capping or removal) to assist in attainment of the groundwater RAOs in the river. Thus, Alternative 1 is least likely to meet the groundwater RAOs in the upstream and downstream areas.

Riverbank: Alternative 1 provides no reduction in exposure or removal of riverbank soils exceeding screening levels and no control of erosion or stormwater infiltration source pathways. (The Fill WBZ groundwater transport source pathway is minimized by the Fill WBZ trench groundwater collection system provided by the upland groundwater source controls, even under no action.) Thus, Alternative 1 does not meet the riverbank goals summarized in Section 7.1.

7.3.2 Compliance with ARARs

Chemical-Specific ARARs: As discussed in Section 3, there are no chemical-specific ARARs for sediment quality in Oregon. Detailed evaluations relative to Alternative 1 are summarized below to provide comparisons to each chemical-specific water quality criteria (Section 8.2.1 contains additional details):

- MCLs – None of the depth-integrated water column samples collected for the Portland Harbor RI/FS exceeded drinking water MCLs. However, the fate and transport modeling for BaP in Alternative 1 indicated that concentrations could nevertheless exceed drinking water MCLs in very small areas and periods (i.e., approximately 0.0001 percent of the simulation [one ten-thousandth of a percent]).
- Fish consumption WQS/NRWQC – The fate and transport model projected very few exceedances of the BaP fish consumption WQS/NRWQC for Alternative 1 (i.e., approximately 0.004 percent of the simulation).

Location-Specific ARARs: Alternative 1 is expected to meet several applicable location-specific ARARs as summarized below (Section 8.2.2 contains additional details):

- Oregon Environmental Cleanup Law – OARs establish acceptable risk levels for human health at $1x10^{-6}$ for individual carcinogens and $1x10^{-5}$ for multiple carcinogens. (Other aspects of this rule [i.e., human health noncancer endpoints and ecological risk levels] are similar to CERCLA criteria and are discussed under long-term effectiveness.) This alternative is projected to achieve the long-term sediment BaP concentrations below the 10^{-6} cancer risk range (Figures 7.2.2.1-1a-b), thus meeting the acceptable risk levels. Alternative 1 is not expected to achieve the soil goals in Section 7.1 along the riverbank

due to the lack of active remediation. Alternative 1 does not treat or remove any potential Oregon hot spots in sediments or soils at the Gasco Sediments Site.[11]

- ESA – Alternative 1 would comply with ESA because it causes no construction impacts or other changes to the baseline condition that might affect listed species.
- CWA Section 404(b)(1) and FEMA Flood Rise Requirements – Similarly, no actions triggering the CWA Section 404(b)(1) or FEMA ARARs would occur under Alternative 1.

7.3.3 Long-Term Effectiveness and Permanence

Evaluation of the long-term effectiveness and permanence criterion is summarized below. Section 8.3 contains additional details.

Magnitude of Residual Risk - Surface Sediment COC Projections: Alternative 1 is projected to achieve long-term (approximately 20 to 40 years) surface sediment concentrations that are below EPA's conservative point estimate RG for BaP and the lowest HPAH and LPAH Level 3 SQVs for BaP and naphthalene (Table 7.2-1), respectively. These RGs/SQVs are projected to be achieved in the Gasco Sediments Site Area of Interest and within each half RM exposure area (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b).

Other Projections and Assessments: The long-term effectiveness of all alternatives was also evaluated for projected surface water concentrations, minimization of the potential for long-term sediment recontamination, minimization of potential groundwater impacts, minimization of downstream transport, and minimization of riverbank risks and sources. Alternative 1 generally has no effect on any of these measures beyond or substantially different from existing conditions within the Gasco Sediments Site.

7.3.4 Reduction of Toxicity, Mobility, and Volume Through Treatment

Because Alternative 1 includes no active technologies, there is no reduction of toxicity, mobility, and volume through treatment provided by this alternative.

[11] Per Section 4.4.5, no Oregon hot spots were identified at the Gasco Sediments Site.

7.3.5 Short-Term Effectiveness

A number of short-term effectiveness measures were evaluated for all alternatives as introduced in Section 7.2.6. There are no short-term construction-related impacts associated with Alternative 1. Section 8.5.3 contains additional details about time until protection is acheived, which is summarized below.

Time Until Protection is Achieved - Projected Timeframes to Achieve RAOs: As discussed in Section 4.1.3, this EE/CA uses a range of RGs that may eventually be judged by EPA to meet the RAOs within the acceptable risk ranges noted in the guidance (Table 7.2-1). Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b generally summarize the projected sediment concentration reductions over time. This information was further examined, as detailed in Section 8.5.3. In summary, under Alternative 1, the the range of BaP RGs will be met in 24 to 40 years in RM 6 to 6.5 and in 0 to 19 in RM 6.5 to 7. For these same half river miles, naphthalene concentrations are already below the highest LPAH Level 3 SQV and will take 30 years to be below the lowest LPAH SQV.

7.3.6 Implementability

There are no direct implementability issues associated with Alternative 1 because it does not require any Site construction, impacts to structures or businesses, or monitoring activities.

7.3.7 Cost

There are no costs associated with the baseline Alternative 1.

7.4 Alternative 2a Detailed Analysis

7.4.1 Overall Protection of Human Health and the Environment

Sediment: Alternative 2a is projected to achieve surface sediment concentrations (SWACs over various spatial scales) that are below EPA's lowest point estimate RG for BaP, and also below the lowest LPAH and HPAH SQVs (compared to naphthalene and BaP projections, respectively), and thus, this alternative is expected to meet sediment RAOs 2, 3, 6, and 7 (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b). Empirical data on sedimentation rates, upstream sediment loads, bathymetry, and sediment core profiles reviewed in Section 5.1 indicate deposition of low contaminant concentration sediments (i.e., in background ranges for PAHs). This sedimentation is particularly evident in areas with elevated COC concentrations. This supports the conclusion that a combination of active remedies and MNR would result in substantially reduced long-term sediment concentrations as indicated by the modeling. This

alternative is expected to have no short-term sediment impacts in the form of dredge residuals, given it does not include dredging/removal (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b).

Surface Water: Alternative 2a is projected to achieve long-term surface water concentrations post-remedy that are the same as all the other alternatives (Figures 7.2.2.1-3 and 7.2.2.1-4). Further, these long-term concentrations are below WQS/NRWQC and alternate guideline values. No short-term elevations of surface water concentrations are expected with Alternative 2a given that no dredging is included in this alternative (Figures 7.2.2.1-3 and 7.2.2.1-4). Thus, this alternative is projected to meet surface water RAOs 4 and 8.

Groundwater: Upland source control actions and natural attenuation will likely address groundwater RAOs 5 and 9 over most of the interim Project Area given that the source control actions will create downwelling of groundwater contaminants (Figure 5.4.1-1) and natural reductive dechlorination of CVOCs has been documented throughout the Siltronic Area 1 groundwater plume. As described in the Siltronic RI Report (MFA 2007), surface water in this reach of the Willamette River often discharges to groundwater, but the Portland Harbor RI/FS assumed only groundwater discharge to surface water. The combination of upland source control and natural attenuation of groundwater, with surface water recharge to groundwater, is likely to shorten the time frame for attaining RAOs 5 and 9. In upstream and downstream areas where some upwelling remains, Alternative 2a includes active caps that are expected to maintain sediment, surface water, and TZW concentrations below relevant RGs, SQVs, WQS/NRWQC, and alternate guidelines for at least 100 years (Appendix J). Documented reductive dechlorination of CVOCs in TZW (Appendix A) will also continue to occur. Thus, Alternative 2a is expected to meet the groundwater RAOs.

Riverbank: Alternative 2a provides reduction in exposure of riverbank soils exceeding screening levels and control of erosion or stormwater infiltration source pathways. This is achieved by MNR where substantial SSL exceedances do not exist and riverbank soils are already well armored to protect against soil erosion (along the Siltronic riverbank) and placement of impermeable membrane followed by armoring for infiltration and erosion source control (along the remainder of the Gasco Sediments Site riverbank). The Fill WBZ groundwater transport source pathway is minimized by the Fill WBZ trench groundwater collection system provided by the upland groundwater source controls. Thus, Alternative 2a is expected to meet the riverbank goals summarized in Section 7.1.

7.4.2 Compliance with ARARs

Chemical-Specific ARARs: Detailed evaluations relative to Alternative 2a are summarized below for each chemical-specific water quality criteria (Section 8.2.1 contains additional details):

- MCLs –The fate and transport modeling for BaP in Alternative 2a indicated that surface water concentrations could exceed drinking water MCLs in very small areas and periods (i.e., less than approximately 0.0001 percent of the simulation [one ten-thousandth of a percent]).
- Fish consumption WQS/NRWQC – The fate and transport model projected very few exceedances of the fish consumption WQS/NRWQC for Alternative 2a (i.e., approximately 0.003 percent of the simulation).

A combination of MNR and capping of riverbank soils in Alternative 2a would be expected minimize the potential for surface water quality exceedances from potential bank sources.

Location-Specific ARARs: Alternative 2a is generally expected to meet the location-specific ARARs as summarized below (Section 8.2.2 contains additional details):

- Oregon Environmental Cleanup Law – Oregon Hazardous Substance Remedial Action Rules establish acceptable risk levels for human health at $1x10^{-6}$ for individual carcinogens and $1x10^{-5}$ for multiple carcinogens. (Other aspects of this rule are similar to CERCLA criteria and are discussed under long-term effectiveness.) This alternative is projected to achieve the long-term sediment BaP concentrations below the 10^{-6} cancer risk range (Figures 7.2.2.1-1a-b), thus meeting acceptable risk levels. Alternative 2a is expected to achieve the soil goals in Section 7.1 along the riverbank due to MNR and capping of the soils. Alternative 2a identifies relatively high concentration areas (above the RAL for this alternative) in sediments and targets some of those areas for active capping. See Section 8.2.2 for additional information. In addition, the upland source controls create downwelling in the under-river groundwater plume causing groundwater and TZW contaminants to be captured and treated by the upland control system.
- ESA – Alternative 2a would comply with ESA with the implementation of potential impact avoidance and minimization measures and conservation measures included in the alternatives (Appendix C).
- CWA Section 404(b)(1) – Alternative 2a meets the substantive requirements of this ARAR (Appendix D).

- FEMA Flood Rise Requirements – The Portland Harbor draft FS (Anchor QEA 2012a) predicted increases in water surface elevations for all of the active Portland Harbor Site alternatives during an estimated 100-year flood, but these increases were considered to be negligible and not significantly different between alternatives based on the model precision. Therefore, compliance with this ARAR cannot be confirmed (see Section 7.2.3.2 for further discussion).

7.4.3 Long-term Effectiveness and Permanence

Evaluation of the long-term effectiveness and permanence criterion is summarized below. Section 8.3 contains additional details.

Magnitude of Residual Risk - Surface Sediment COC Projections: Alternative 2a is projected to achieve long-term surface sediment concentrations that are below EPA's conservative point estimate RG for BaP and the lowest HPAH and LPAH Level 3 SQVs for BaP and naphthalene (Table 7.2-1), respectively. These RGs/SQVs are projected to be achieved in the Area of Interest and within each half-RM exposure area (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b). Residual risk in riverbanks soils is expected to be minimal as described for overall protectiveness above.

Minimization of Potential Long - Term Sediment Recontamination: As discussed above, long-term surface sediment BaP and naphthalene concentrations under Alternative 2a are projected to be at or below the lowest RGs/SQVs for both the Gasco Sediments Site Area of Interest and half river mile exposure areas. Thus, across the Gasco Sediments Site long-term sediment recontamination of PAHs (or other Gasco Sediment Site COCs) is not projected. Per Section 7.2.4.1.2, an additional evaluation of the potential for long-term recontamination from upstream sources of PCBs, DDE, and BaP at smaller spatial scales was conducted. This evaluation indicated that, following initial reductions in Gasco Sediment Site surface sediment COC concentrations due to active remediation, concentrations of PCBs, DDE, and BaP are projected to increase in response to continuing contaminant inputs from upstream. However, these projected increases are lower than current contaminant concentrations in the Gasco Sediments Site, and no areas are projected to exceed the EPA point estimate RGs established in the Portland Harbor draft FS (Anchor QEA 2012a) for PCBs, DDE, and BaP (see Section 8.3.3 for additional information on this evaluation).

Magnitude of Residual Risk - Minimization of Potential Groundwater Impacts: As discussed in Section 7.4.1, the combination of upland source control actions and active capping in

Alternative 2a is expected to maintain sediment, surface water, and TZW concentrations below relevant RGs, SQVs, WQS/NRWQC and alternate guidelines for at least 100 years (Appendix J). Documented reductive dechlorination of CVOCs in TZW (Appendix A) will also continue to occur. Thus, Alternative 2a is expected to be effective in minimizing potential long-term groundwater impacts.

Magnitude of Residual Risk - Minimization of Potential Long-Term Downstream Contaminant Transport: Figures 7.2.2.1-3 and 7.2.2.1-4 show surface water concentrations projected through 45 years. The projected transport of these contaminant concentrations off site (i.e., out of the Gasco Sediments Site Area of Interest) throughout the simulation period was examined as discussed more in Section 8.3.5. Alternative 2a is projected to result in no additional downstream transport of COCs, as represented by BaP simulations, beyond the no action condition.

Adequacy of Controls. Alternative 2a results in some residual chemical concentrations at the Gasco Sediments Site. Caps, long-term monitoring, operations and maintenance, and institutional controls included in the alternatives are expected to adequately control these residual concentrations and maintain them at the sediment and water concentrations below the RGs and SQVs discussed above. There is some potential for subsurface contamination above the RALs outside the areas of active remediation (i.e., in the river channel where MNR is applied) that could be subject to potential future exposure from erosion. However, as noted above, modeling simulations indicate that exposure during extreme flood events would last a few years and return to the pre flood event equilibrium after that time. See Section 8.3.6 for additional discussion.

7.4.4 Reduction of Toxicity, Mobility, or Volume through Treatment

Alternative 2a includes 3.6 acres of active capping with organoclay included as part of the engineered capping section.

7.4.5 Short-term Effectiveness

Evaluation of the short-term effectiveness criterion is summarized below. Section 8.5 contains additional details.

Environmental Impacts - Construction Water Quality Impacts: Very limited projected surface water exceedances of WQS/NRWQC under Alternative 2a are discussed above in Section 7.4.2. Figures 7.2.2.1-3 and 7.2.2.1-4 show there are no elevations of BaP and naphthalene concentrations during the construction phase (one year) due to the absence of dredging/removal under this alternative.

Environmental Impacts - Potential Sediment Recontamination During Construction: Under Alternative 2a, modeling projections indicate there is no potential sediment recontamination of adjacent areas because no dredging/removal is included in this alternative.

Time Until Protection is Achieved - Projected Timeframes to Achieve RAOs: As discussed in Section 4.1.3, this EE/CA uses a range of RGs that may eventually be judged by EPA to meet the RAOs within the acceptable risk ranges noted in the guidance (Table 7.2-1). Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b generally summarize the projected sediment concentration reductions over time. This information was further examined and is detailed in Section 8.5.3. In summary, under Alternative 2a, the BaP RG ranges will be met in approximately 1 to 30 years (depending on the specific RG percentile in question) in RM 6 to 6.5 and in approximately 0 to 5 years in RM 6.5 to 7. For these same half RMs, naphthalene concentrations are already below the highest LPAH SQV and will take approximately 19 years to be below the lowest LPAH SQV.

Other Short-term Impacts: As discussed in Section 7.2.6.1, duration of construction is a good surrogate measure for air emissions, quality of life, and worker impacts. In general, all of these impacts are proportionally larger as construction durations become longer. The duration of Alternative 2a construction is estimated to be one construction season and thus would cause relatively low air emission, quality of life, and worker impacts compared to the other alternatives.

7.4.6 Implementability

As discussed in Section 7.2.7, duration and secondary impacts (e.g., undermining the FAMM tank and Fab 1 building and significantly impacting ongoing business operations) resulting from construction of the remedy are good general measures of the level of implementability issues associated with the alternatives. Section 8.6 contains more detailed discussions of the various implementability factors for all the alternatives. Alternative 2a, with a construction duration of one construction season, is readily implementable. Given that this alternative relies on MNR in the navigation channel, there may be some implementation issues related to any

potential future navigation channel dredging. However, many portions of the navigation channel in Portland Harbor are not currently maintained to their full depth, because the existing water depths support all ongoing uses in those areas. The channel in front of the Gasco dock is one such area, and there is no need to deepen this area to support ongoing or future anticipated uses.

7.4.7 Cost

Alternative 2a has an estimated net present value cost range from $34 million to $40 million. Alternative 2a would not lead to impact to upland or in-water structures and upland source control elements, and would have minimal to no impact to business operations. Therefore, unlike Alternatives 4 and 5, the cost range is not sensitive to implementability factors.

7.5 Alternative 2b Detailed Analysis

7.5.1 Overall Protection of Human Health and the Environment

Sediment: Alternative 2b is projected to achieve surface sediment concentrations (SWACs over various spatial scales) that are below EPA's conservative point estimate RG for BaP, and also below the lowest LPAH and HPAH SQVs (compared to naphthalene and BaP projections, respectively), and thus, this alternative is expected to meet sediment RAOs 2, 3, 6, and 7 (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b). Empirical data on sedimentation rates, upstream sediment loads, bathymetry, and sediment core profiles reviewed in Section 5.1 indicate deposition of low contaminant concentration sediments (i.e., in background ranges for PAHs), particularly in areas with elevated COC concentrations. This supports the conclusion that a combination of active remedies and MNR would result in substantially reduced long-term sediment concentrations as indicated by the modeling. This alternative is expected to have some short-term sediment impacts in the form of dredge residuals, but these are not projected to cause substantial increases in short-term sediment concentrations (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b) because post-dredge cover would be applied.

Surface Water: Alternative 2b is projected to achieve long-term surface water concentrations post-remedy that are the same as all the other alternatives (Figures 7.2.2.1-3 and 7.2.2.1-4). Further, these long-term concentrations are below WQS/NRWQC and alternate guideline values. Short term elevations of surface water concentrations are expected for approximately 3 years due to dredge releases, but the levels are generally not expected to be frequently or

consistently above WQS/NRWQC and alternate guideline values (Figures 7.2.2.1-3 and 7.2.2.1-4). Thus, this alternative is projected to meet surface water RAOs 4 and 8.

Groundwater: Upland source control actions by themselves will likely address groundwater RAOs 5 and 9 over most of the interim Project Area given that the source control actions will create downwelling of groundwater contaminants (Figure 5.4.1-1). In upstream and downstream areas where some upwelling remains, Alternative 2b includes active caps that are expected to maintain sediment, surface water, and TZW concentrations below relevant RGs, SQVs, WQS/NRWQC and alternate guidelines for at least 100 years (Appendix J). Documented reductive dechlorination of CVOCs in TZW (Appendix A) will also continue to occur. Thus, Alternative 2b is expected to meet the groundwater RAOs.

Riverbank: Alternative 2b provides reduction in exposure of riverbank soils exceeding screening levels and control of erosion or stormwater infiltration source pathways. This is achieved by MNR where substantial soils screening level exceedances do not exist and riverbank soils are already well armored to protect against soil erosion (along the Siltronic riverbank) and placement of impermeable membrane followed by armoring for infiltration and erosion source control (along the remainder of the Gasco Sediments Site riverbank). (The Fill WBZ groundwater transport source pathway is minimized by the Fill WBZ trench groundwater collection system provided by the upland groundwater source controls.) Thus, Alternative 2b is expected to meet the riverbank goals summarized in Section 7.1.

7.5.2 Compliance with ARARs

Chemical-Specific ARARs: Detailed evaluations relative to Alternative 2b are summarized below for each chemical-specific water quality criteria (Section 8.2.1 contains additional details):

- MCLs –The fate and transport modeling for BaP in Alternative 2b indicated that surface water concentrations could exceed drinking water MCLs in very small areas and periods (i.e., approximately 0.001 percent of the simulation [one one-thousandth of a percent]).
- Fish consumption WQS/NRWQC – The fate and transport model projected very few exceedances of the fish consumption WQS/NRWQC for Alternative 2b (i.e., approximately 0.02 percent of the simulation).

A combination of MNR and capping of riverbank soils in Alternative 2b would be expected minimize the potential for surface water quality exceedances from potential bank sources.

Location-Specific ARARs: Alternative 2b is generally expected to meet the location-specific ARARs as summarized below (Section 8.2.2 contains additional details):

- Oregon Environmental Cleanup Law – Oregon Hazardous Substance Remedial Action Rules establish acceptable risk levels for human health at $1x10^{-6}$ for individual carcinogens and $1x10^{-5}$ for multiple carcinogens. (Other aspects of this rule are similar to CERCLA criteria and are discussed under long-term effectiveness.) This alternative is projected to achieve the long-term sediment BaP concentrations below the 10^{-6} cancer risk range (Figures 7.2.2.1-3 and 7.2.2.1-4), thus meeting acceptable risk levels. Alternative 2b is expected to achieve the soil goals in Section 7.1 along the riverbank due to MNR and capping of the soils. Alternative 2b identifies relatively high concentration areas (above the RALs for these alternatives) in sediments and targets some of those areas for active capping or removal and off-site disposal consistent with the intent of Oregon hot spot requirements. See Section 8.2.2 for additional information. In addition, the upland source controls create downwelling in the under-river groundwater plume causing groundwater and TZW contaminants to be captured and treated by the upland control system.
- ESA – Alternative 2b would comply with ESA with the implementation of potential impact avoidance and minimization measures and conservation measures included in the alternatives (Appendix C).
- CWA Section 404(b)(1) – Alternative 2b meets the substantive requirements of this ARAR (Appendix D).
- FEMA Flood Rise Requirements – The Portland Harbor draft FS (Anchor QEA 2012a) predicted increases in water surface elevations for all the active Portland Harbor Site alternatives during an estimated 100-year flood, but these increases were considered to be negligible and not significantly different between alternatives based on the model precision. Therefore, compliance with this ARAR cannot be confirmed (see Section 7.2.3.2 for further discussion).

7.5.3 Long-term Effectiveness and Permanence

Evaluation of the long-term effectiveness and permanence criterion is summarized below. Section 8.3 contains additional details.

Magnitude of Residual Risk - Surface Sediment COC Projections: Alternative 2b is projected to achieve long term surface sediment concentrations that are below EPA's conservative point estimate RG for BaP and the lowest HPAH and LPAH Level 3 SQVs for BaP and naphthalene (Table 7.2-1), respectively. These RGs/SQVs are projected to be achieved in the Area of Interest and within each half river mile exposure area (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b). Residual risk in riverbanks soils is expected to be minimal as described for overall protectiveness above.

Minimization of Potential Long - Term Sediment Recontamination: As discussed above, long-term surface sediment BaP and naphthalene concentrations under Alternative 2b are projected to be at or below the lowest RGs/SQVs for both the Gasco Sediments Site Area of Interest and half-RM exposure areas. Thus, across the Gasco Sediments Site long-term sediment recontamination of PAHs (or other Gasco Sediment Site COCs) is not projected. Per Section 7.2.4.1.2, an additional evaluation of the potential for long-term recontamination from upstream sources of PCBs, DDE, and BaP at smaller spatial scales was conducted. This evaluation indicated that, following initial reductions in Gasco Sediment Site surface sediment COC concentrations due to active remediation, concentrations of PCBs, DDE, and BaP are projected to increase in response to continuing contaminant inputs from upstream. However, these projected increases are lower than current contaminant concentrations in the Gasco Sediments Site, and no areas are projected to exceed the EPA point estimate RGs established in the Portland Harbor draft FS (Anchor QEA 2012a) for PCBs, DDE, and BaP (see Section 8.3.3 for additional information on this evaluation).

Magnitude of Residual Risk - Minimization of Potential Groundwater Impacts: As discussed in Section 7.5.1, the combination of upland source control actions and active capping in Alternative 2b is expected to maintain sediment, surface water, and TZW concentrations below relevant RGs, SQVs, WQS/NRWQC and alternate guidelines for at least 100 years (Appendix J). Documented reductive dechlorination of CVOCs in TZW (Appendix A) will also continue to occur. Thus, Alternative 2b is expected to be effective in minimizing potential long-term groundwater impacts.

Magnitude of Residual Risk - Minimization of Potential Long-Term Downstream Contaminant Transport: Figures 7.2.2.1-3 and 7.2.2.1-4 show surface water concentrations projected through 45 years. The projected transport of these contaminant concentrations off site (i.e., out of the Gasco Sediments Site Area of Interest) throughout the simulation period was examined as discussed more in Section 8.3.5. Alternative 2b is projected to result in no

additional downstream transport of COCs, as represented by BaP simulations, beyond the no action condition. Although Alternative 2b includes dredging, these construction phase releases are balanced by reduced flux in capped areas during the remainder of the 45-year period simulated.

Adequacy of Controls. Alternative 2b results in some residual chemical concentrations at the Gasco Sediments Site. Dredge residual covers, caps, long-term monitoring, operations and maintenance, and institutional controls included in the alternatives are expected to adequately control these residual concentrations and maintain them at the sediment and water concentrations below the RGs and SQVs discussed above. As noted in Section 4.6, very little subsurface contamination above the RALs is left in place outside areas of active remediation that could be subject to potential future exposure from erosion. See Section 8.3.6 for additional discussion.

7.5.4 Reduction of Toxicity, Mobility, or Volume through Treatment

Under Alternative 2b, depending on the range of disposal assumptions discussed in Section 6.3.8, stabilization using Portland cement would be used to treat up to 85,000 cy of sediment to reduce contaminant leaching before disposal to a Portland Harbor CDF/CAD. Additionally, between 6,000 and 233,000 cy of sediment would be dewatered using diatomaceous earth, which is the assumed process option for sediment disposed of in an upland landfill for the purposes of this EE/CA.

Alternative 2b also includes 3.6 acres of active capping with organoclay included as part of the active capping section.

7.5.5 Short-term Effectiveness

Evaluation of the short-term effectiveness criterion is summarized below. Section 8.5 contains additional details.

Environmental Impacts - Construction Water Quality Impacts: Projected surface water exceedances of WQS/NRWQC that occur primarily during in-water construction operations under Alternative 2b are discussed above in Section 7.5.2. Figures 7.2.2.1-3 and 7.2.2.1-4 show elevations of BaP and naphthalene concentrations during the construction phase of the model simulations (approximately the first 3 years) that are on average below relevant WQS/NRWQC

and alternate guidelines. These elevations for Alternative 2b are due to unavoidable dredging-related resuspension and releases to the water column.

Environmental Impacts - Potential Sediment Recontamination During Construction: Under Alternative 2b, modeling projections and comparisons with case study results from other environmental dredging sites (Bridges et al. 2010) suggest that potential sediment recontamination of adjacent areas resulting from dredging resuspension and residuals would generally be limited to within approximately 500 to 1,000 feet of the dredging activity. Modeling projects very small increases in bedded sediment concentrations of BaP (1.3 µg/kg) and napthalene (7.6 µg/kg), relative to the BaPEq RGs (423 µg/kg using EPA point estimate for Tribal fisher direct contact 10-6 cancer risk level) and BaP and napthalene SQVs (BaP at 610,000 µg/kg and napthalene high/low at 2,000/650,000 µg/kg), downstream of the Gasco Sediment Site due to Alternative 2b dredging.

Time Until Protection is Achieved - Projected Timeframes to Achieve RAOs: As discussed in Section 4.1.3, this EE/CA uses a range of RGs that may eventually be judged by EPA to meet the RAOs within the acceptable risk ranges noted in the guidance (Table 7.2-1). Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b generally summarize the projected sediment concentration reductions over time. This information was further examined and is detailed in Section 8.5.3. In summary, under Alternative 2b, the range BaP RGs will be met in 3 to 28 years (depending on the RG percentile in question) in RM 6 to 6.5 and in 0 to 5 years in RM 6.5 to 7. For these same half RMs, naphthalene concentrations are already below the highest LPAH SQV and will take 18 years to be below the lowest LPAH SQV.

Other Short-term Impacts: As discussed in Section 7.2.6.1, duration of construction is a good surrogate measure for air emissions, quality of life, and worker impacts. In general, all of these impacts are proportionally larger as construction durations become longer. The duration of Alternative 2b construction is estimated to be three construction seasons and thus would cause relatively low air emission, quality of life, and worker impacts compared to Alternatives 3, 4, and 5.

7.5.6 Implementability

As discussed in Section 7.2.7, duration and secondary impacts (e.g., undermining the FAMM tank and Fab 1 building and significantly impacting ongoing business operations) resulting from construction of the remedy are good general measures of the level of implementability

issues associated with the alternatives. Section 8.6 contains more detailed discussions of the various implementability factors for all the alternatives.

7.5.7 Cost

Alternative 2b has an estimated net present value cost range from $73 million to $123 million. Similar to Alternative 2a, Alternative 2b would not lead to impacts on upland or in-water structures and upland source control elements, and would have minimal to no impact on business operations. Therefore, unlike Alternatives 4 and 5, the cost range is not sensitive to implementability factors.

7.6 Alternative 3 Detailed Analysis

7.6.1 Overall Protection of Human Health and the Environment

Sediment: Alternative 3 is projected to achieve surface sediment concentrations (SWACs over various spatial scales) that are below EPA's conservative point estimate RG for BaP, and also below the lowest LPAH and HPAH SQVs (compared to naphthalene and BaP projections, respectively), and thus, this alternative is expected to meet sediment RAOs 2, 3, 6 and 7 (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b). Empirical data on sedimentation rates, upstream sediment loads, bathymetry, and sediment core profiles reviewed in Section 5.1 indicate deposition of low contaminant concentration sediments (i.e., in background ranges for PAHs), particularly in areas with elevated COC concentrations over the long term. This supports the concept that a combination of active remedies and MNR would result in substantially reduced long-term sediment concentrations as indicated by the modeling. This alternative is expected to have some short-term sediment impacts in the form of dredge residuals, but these are not projected to cause substantial increases in short-term sediment concentrations (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b) because post-dredge cover would be applied.

Surface Water: Alternative 3 is projected to achieve long-term surface water concentrations post-remedy that are the same as all the other alternatives (Figures 7.2.2.1-3 and 7.2.2.1-4). Further, these long term concentrations are below WQS/NRWQC and alternate guideline values. Short term elevations of surface water concentrations are expected for approximately 4 years due to dredge releases, but the levels are generally not expected to be frequently or consistently above WQS/NRWQC and alternate guideline values (Figures 7.2.2.1-3 and 7.2.2.1-4). Thus, this alternative is projected to meet surface water RAOs 4 and 8.

Groundwater. Upland source control actions by themselves will likely address groundwater RAOs 5 and 9 over most of the interim Project Area given that the source control actions will create downwelling of groundwater contaminants (Figure 5.4.1-1) and natural reductive dechlorination of CVOCs has been documented throughout the Siltronic Area 1 groundwater plume. As described in the Siltronic RI Report (MFA 2007), surface water in this reach of the Willamette River often discharges to groundwater, but the Portland Harbor RI/FS assumed only groundwater discharge to surface water. The combination of upland source control and natural attenuation of groundwater, with surface water recharge to groundwater, is likely to shorten the time frame for attaining RAOs 5 and 9. In upstream and downstream areas where some upwelling remains, Alternative 3 includes active caps that are expected to maintain sediment, surface water, and TZW concentrations below relevant RGs, SQVs, WQS/NRWQC and alternate guidelines for at least 100 years (Appendix J). Documented reductive dechlorination of CVOCs in TZW (Appendix A) will also continue to occur. Thus, Alternative 3 is expected to meet the groundwater RAOs.

Riverbank: Alternative 3 provides reduction in exposure of riverbank soils exceeding screening levels and control of erosion or stormwater infiltration source pathways. This is achieved by:

- MNR where substantial soils screening level exceedances do not exist and riverbank soils are already well armored to protect against soil erosion (along most of the Siltronic riverbank).
- Removal followed by impermeable membrane and armor placement for infiltration and erosion source control (along the downstream most portion of the Siltronic riverbank).
- Placement of impermeable membrane followed by armoring for infiltration and erosion source control (along the remainder of the Gasco Sediments Site riverbank).

(The Fill WBZ groundwater transport source pathway is minimized by the Fill WBZ trench groundwater collection system provided by the upland groundwater source controls.) Thus, Alternative 3 is expected to meet the riverbank goals summarized in Section 7.1.

7.6.2 Compliance with ARARs

Chemical-Specific ARARs: Detailed evaluations relative to Alternative 3 are summarized below for each chemical-specific water quality criteria (Section 8.2.1 contains additional details):

- MCLs –The fate and transport modeling for BaP in Alternative 3 indicated that surface water concentrations could exceed drinking water MCLs in very small areas and periods

(i.e., approximately 0.001 percent of the simulation [one one-thousandth of a percent]). Note that the frequency of exceedance increases with increasing duration of construction. Thus, Alternative 3 has higher frequencies of exceedances than the previously discussed alternatives and lower exceedances than Alternatives 4 and 5.

- Fish consumption WQS/NRWQC – The fate and transport model projected very few exceedances of the fish consumption WQS/NRWQC for Alternative 3 (i.e., approximately 0.03 percent of the simulation).

A combination of MNR, capping, and removal of riverbank soils in Alternative 3 would be expected to minimize the potential for long term surface water quality exceedances from potential bank sources. Removal of soils may cause some short term water quality exeedances.

Location-Specific ARARs: Alternative 3 is generally expected to meet the location-specific ARARs as summarized below (Section 8.2.2 contains additional details):

- Oregon Environmental Cleanup Law – Oregon Hazardous Substance Remedial Action Rules establish acceptable risk levels for human health at $1x10^{-6}$ for individual carcinogens and $1x10^{-5}$ for multiple carcinogens. (Other aspects of this rule are similar to CERCLA criteria and are discussed under long-term effectiveness.) This alternative is projected to achieve the long-term sediment BaP concentrations below the 10^{-6} cancer risk range (Figures 7.2.2.1-1a-b), thus meeting the acceptable risk levels. Alternative 3 is expected to achieve the soils goals in Section 7.1 along the riverbank due to MNR, capping, and select removal of the soils. Alternative 3 identifies relatively high concentration areas (above the RALs for these alternatives) in sediments and soils and targets some of those areas for active capping or removal and off-site disposal consistent with the intent of Oregon hot spot requirements. See Section 8.2.2 for additional information. In addition, the upland source controls create downwelling in the under-river groundwater plume causing groundwater and TZW contaminants to be captured and treated by the upland control system.
- ESA – Alternative 3 would comply with ESA with the implementation of potential impact avoidance and minimization measures and conservation measures included in the alternatives (Appendix C).
- CWA Section 404(b)(1) – Alternative 3 meets the substantive requirements of this ARAR (Appendix D).
- FEMA Flood Rise Requirements – The Portland Harbor draft FS (Anchor QEA 2012a) predicted increases in water surface elevations for all the active Portland Harbor Site

alternatives during an estimated 100-year flood, but these increases were considered to be negligible and not significantly different between alternatives based on the model precision. Therefore, compliance with this ARAR cannot be confirmed (see Section 7.2.3.2 for further discussion).

7.6.3 Long-term Effectiveness and Permanence

Evaluation of the long-term effectiveness and permanence criterion is summarized below. Section 8.3 contains additional details.

Magnitude of Residual Risk - Surface Sediment COC Projections: Alternative 3 is projected to achieve long-term surface sediment concentrations that are below EPA's conservative point estimate RG for BaP and the lowest HPAH and LPAH Level 3 SQVs for BaP and naphthalene (Table 7.2-1), respectively. These RGs/SQVs are projected to be achieved in the Area of Interest and within each half river mile exposure area (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b). Residual risk in riverbanks soils is expected to be minimal as described for overall protectiveness above.

Minimization of Potential Long - Term Sediment Recontamination: As discussed above, long-term surface sediment BaP and naphthalene concentrations under Alternative 3 are projected to be at or below the lowest RGs/SQVs for both Gasco Sediment Site Area of Interest and half RM exposure areas. Thus, across the Gasco Sediments Site long-term sediment recontamination of PAHs (or other Gasco Sediment Site COCs) is not projected. Per Section 7.2.4.1.2, an additional evaluation of the potential for long-term recontamination from upstream sources of PCBs, DDE, and BaP at smaller spatial scales was conducted. This evaluation indicated that, following initial reductions in Gasco Sediment Site surface sediment COC concentrations due to remediation, concentrations of PCBs, DDE, and BaP are projected to increase in response to continuing contaminant inputs from upstream. However, these projected increases are lower than current contaminant concentrations in the Gasco Sediments Site, and no areas are projected to exceed the EPA point estimate RGs established in the Portland Harbor draft FS (Anchor QEA 2012a) for PCBs, DDE, and BaP (see Section 8.3.3 for additional information on this evaluation).

Magnitude of Residual Risk - Minimization of Potential Groundwater Impacts. As discussed in Section 7.6.1, the combination of upland source control actions and active capping in Alternative 3 is expected to maintain sediment, surface water, and TZW concentrations below relevant RGs, SQVs, WQS/NRWQC and alternate guidelines for at least 100 years (Appendix J).

Documented reductive dechlorination of CVOCs in TZW (Appendix A) will also continue to occur. Thus, Alternative 3 is expected to be effective in minimizing potential long term groundwater impacts.

Magnitude of Residual Risk - Minimization of Potential Long-Term Downstream Contaminant Transport: Figures 7.2.2.1-3 and 7.2.2.1-4 show surface water concentrations projected through 45 years. The projected transport of these contaminant concentrations off site (i.e., out of the Gasco Sediments Site Area of Interest) throughout the simulation period was examined as discussed more in Section 8.3.5). Alternative 3 is projected to result in a slight reduction in downstream transport of COCs, as represented by BaP simulations, as compared to the no action condition. Although Alternative 3 includes dredging, these construction phase releases are balanced by reduced flux in capped areas during the remainder of the 45-year period simulated.

Adequacy of Controls: Alternative 3 results in some residual concentrations of contaminants at the Gasco Sediments Site. Dredge residual covers, caps, long-term monitoring, operations and maintenance, and institutional controls included in the alternatives are expected to adequately control these residual concentrations and maintain them at the sediment and water concentrations below the RGs and SQVs discussed above. As noted in Section 8.3.6, very little subsurface contamination above the RALs is left in place outside areas of active remediation that could be subject to potential future release. See Section 8.3.6 for additional discussion.

7.6.4 Reduction of Toxicity, Mobility, or Volume through Treatment

Under Alternative 3, depending on the range of disposal assumptions discussed in Section 6.3.8, stabilization using Portland cement would be used to treat up to 61,000 cy of sediment to reduce contaminant leaching before disposal to a Portland Harbor CDF/CAD. Additionally, between 84,000 and 273,000 cy of sediment would be dewatered using diatomaceous earth, which is the assumed process option for EE/CA purposes for sediment disposed of in an upland landfill. Alternative 3 also includes 2.5 acres of active capping with organoclay included as part of the engineered capping section.

7.6.5 Short-term Effectiveness

Evaluation of the short-term effectiveness criterion is summarized below. Section 8.5 contains additional details.

Environmental Impacts - Construction Water Quality Impacts: Projected surface water exceedances of WQS/NRWQC that occur primarily during in-water construction operations under Alternative 3 are discussed above in Section 7.6.2. Figures 7.2.2.1-3 and 7.2.2.1-4 show elevations of BaP and naphthalene concentrations during the construction phase of the model simulations (approximately the first 4 years) that are on average below relevant WQS/NRWQC and alternate guidelines. These elevations for Alternative 3 are due to unavoidable dredging-related resuspension and releases to the water column. Releases will likely include those caused by removal of riverbank soils in select areas for this alternative.

Environmental Impacts - Potential Sediment Recontamination During Construction: Under Alternative 3, modeling projections and comparisons with case study results from other environmental dredging sites (Bridges et al. 2010) suggest that potential sediment recontamination of adjacent areas resulting from dredging resuspension and residuals would generally be limited to within approximately 500 to 1,000 feet of the dredging activity. Modeling projects very small increases in bedded sediment concentrations of BaP (6.9 µg/kg) and napthalene (6.3 µg/kg), relative to the BaPEq RGs (423 µg/kg using EPA point estimate for Tribal fisher direct contact 10-6 cancer risk level) and BaP and napthalene SQVs (BaP at 610,000 µg/kg and napthalene high/low at 2,000/650,000 µg/kg), downstream of the Gasco Sediment Site due to Alternative 3 dredging.

Time Until Protection is Achieved - Projected Timeframes to Achieve RAOs: As discussed in Section 4.1.3, this EE/CA uses a range of RGs that may eventually be judged by EPA to meet the RAOs within the acceptable risk ranges noted in the guidance (Table 7.2-1). Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b generally summarize the projected sediment concentration reductions over time. This information was further examined, as detailed in Section 8.5.3. In summary, under Alternative 3, the range of BaP RGs will be met in 4 to 24 years (depending on the RG percentile in question) in RM 6 to 6.5 and in 0 to 6 years in RM 6.5 to 7. For these same half river miles, naphthalene concentrations are already below the highest LPAH SQV and will take 8 years to be below the lowest LPAH SQV.

Other Short-term Impacts: As discussed in Section 7.2.6.1, duration of construction is a good surrogate measure for air emissions, quality of life, and worker impacts. In general, all of these impacts are proportionally larger as construction durations become longer. The duration of

Alternative 3 construction is estimated to be 4 construction seasons and thus would cause relatively low air emission, quality of life, and worker impacts compared to Alternatives 4 and 5, but higher levels of impact than Alternatives 2a and 2b.

7.6.6 Implementability

As discussed in Section 7.2.7, duration and secondary impacts (e.g., undermining the FAMM tank and Fab 1 building and significantly impacting ongoing business operations) resulting from construction of the remedy are good general measures of the level of implementability issues associated with the alternatives. Section 8.6 contains more detailed discussions of the various implementability factors for all the alternatives. Alternative 3, with a construction duration of four construction seasons, is readily implementable.

7.6.7 Cost

Alternative 3 has an estimated net present value cost range of $92 million to $152 million. Similar to Alternative 2a and 2b, Alternative 3 has minimum potential to lead to impact to upland or in-water structures and upland source control elements, and would have minimal to no impact to business operations. Therefore, unlike Alternatives 4 and 5, the cost range is not sensitive to implementability factors.

7.7 Alternative 4 Detailed Analysis

7.7.1 Overall Protection of Human Health and the Environment

Sediment: Alternative 4 is projected to achieve surface sediment concentrations (SWACs over various spatial scales) that are below EPA's conservative point estimate RG for BaP, and also below the lowest LPAH and HPAH SQVs (compared to naphthalene and BaP projections, respectively), and thus, this alternative is expected to meet sediment RAOs 2, 3, 6, and 7 (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b). Empirical data on sedimentation rates, upstream sediment loads, bathymetry, and sediment core profiles reviewed in Section 5.1 indicate deposition of low contaminant concentration sediments (i.e., in the range of background for PAHs), particularly in areas with elevated COC concentrations over the long term. This supports the conclusion that a combination of active remedies and MNR would result in substantially reduced long-term sediment concentrations as indicated by the modeling. This alternative is expected to have some short-term sediment impacts in the form of dredge residuals including substantial increases in short-term naphthalene sediment concentrations (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b).

Surface Water: Alternative 4 is projected to achieve long-term surface water concentrations post-remedy that are the same as all the other alternatives (Figures 7.2.2.1-3 and 7.2.2.1-4). Further, these long-term concentrations are below WQS/NRWQC and alternate guideline values. Short term elevations of surface water concentrations are expected for approximately 5 years due to dredge releases, but the levels are generally not expected to be frequently or consistently above WQS/NRWQC and alternate guideline values (Figures 7.2.2.1-3 and 7.2.2.1-4). Thus, this alternative is projected to meet surface water RAOs 4 and 8.

Groundwater: Upland source control actions by themselves will likely address groundwater RAOs 5 and 9 over most of the interim Project Area, given that the source control actions will create downwelling of groundwater contaminants (Figure 5.4.1-1) and natural reductive dechlorination of CVOCs has been documented throughout the Siltronic Area 1 groundwater plume. As described in the Siltronic RI Report (MFA 2007), surface water in this reach of the Willamette River often discharges to groundwater, but the Portland Harbor RI/FS assumed only groundwater discharge to surface water. The combination of upland source control and natural attenuation of groundwater, with surface water recharge to groundwater, is likely to shorten the time frame for attaining RAOs 5 and 9. In upstream and downstream areas where some upwelling remains, Alternative 4 includes active caps that are expected to maintain sediment, surface water, and TZW concentrations below relevant RGs, SQVs, WQS/NRWQC, and alternate guidelines for at least 100 years (Appendix J). Documented reductive dechlorination of CVOCs in TZW (Appendix A) will also continue to occur. Thus, Alternative 4 is expected to meet the groundwater RAOs.

Riverbank: Alternative 4 provides reduction in exposure of riverbank soils exceeding screening levels and control of erosion or stormwater infiltration source pathways. This is achieved by:

- MNR where substantial soils screening level exceedances do not exist and riverbank soils are already well armored to protect against soil erosion (along portions of the Siltronic riverbank).
- Removal followed by impermeable membrane and armor placement for infiltration and erosion source control (along select areas of the Siltronic and Gasco property riverbank).
- Placement of impermeable membrane followed by armoring for infiltration and erosion source control (along the remainder of the Gasco Sediments Site riverbank).

The Fill WBZ groundwater transport source pathway is minimized by the Fill WBZ trench groundwater collection system provided by the upland groundwater source controls. Thus, Alternative 4 is expected to meet the riverbank goals summarized in Section 7.1.

7.7.2 Compliance with ARARs

Chemical-Specific ARARs: Detailed evaluations relative to Alternative 4 are summarized below for each chemical-specific water quality criteria (Section 8.2.1 contains additional details):

- MCLs – The fate and transport modeling for BaP in Alternative 4 indicated that surface water concentrations could exceed drinking water MCLs in very small areas and periods (i.e., approximately 0.003 percent of the simulation [three one-thousandth of a percent]).
- Fish consumption WQS/NRWQC – The fate and transport model projected very few exceedances of the fish consumption WQS/NRWQC for Alternative 4 (i.e., approximately 0.03 percent of the simulation).

A combination of MNR, capping, and removal of riverbank soils in Alternative 4 would be expected minimize the potential for long-term surface water quality exceedances from potential bank sources. Removal of soils may cause some short term water quality exceedances.

Location-Specific ARARs: Alternative 4 is generally expected to meet the location-specific ARARs as summarized below (Section 8.2.2 contains additional details):

- Oregon Environmental Cleanup Law – Oregon Hazardous Substance Remedial Action Rules establish acceptable risk levels for human health at $1x10^{-6}$ for individual carcinogens and $1x10^{-5}$ for multiple carcinogens. (Other aspects of this rule are similar to CERCLA criteria and are discussed under long-term effectiveness.) This alternative is projected to achieve the long-term sediment BaP concentrations below the 10^{-6} cancer risk range (Figures 7.2.2.1-1a-b), thus meeting the acceptable risk levels. Alternative 4 is expected to achieve the soils goals in Section 7.1 along the riverbank due to MNR, capping, and removal of the soils. Alternative 4 identifies relatively high concentration areas (above the RALs for these alternatives) in sediments and soils and targets some of those areas for removal and off-site disposal or active capping consistent with the intent of Oregon hot spot requirements. See Section 8.2.2 for additional information. In addition, the upland source controls create downwelling in the under-river groundwater plume causing groundwater and TZW contaminants to be captured and treated by the upland control system.

- ESA – Alternative 4 would comply with ESA with the implementation of potential impact avoidance and minimization measures and conservation measures included in the alternatives (Appendix C).
- CWA Section 404(b)(1) – Alternative 4 meets the substantive requirements of this ARAR (Appendix D).
- FEMA Flood Rise Requirements – The Portland Harbor draft FS (Anchor QEA 2012a) predicted increases in water surface elevations for all the active Portland Harbor Site alternatives during an estimated 100-year flood, but these increases were considered to be negligible and not significantly different between alternatives based on the model precision. Therefore, compliance with this ARAR cannot be confirmed (see Section 7.2.3.2 for further discussion).

7.7.3 Long-term Effectiveness and Permanence

Evaluation of the long-term effectiveness and permanence criterion is summarized below. Section 8.3 contains additional details.

Magnitude of Residual Risk - Surface Sediment COC Projections: Alternative 4 is projected to achieve long-term surface sediment concentrations that are below EPA's conservative point estimate RG for BaP and the lowest HPAH and LPAH Level 3 SQVs for BaP and naphthalene (Table 7.2-1), respectively. These RGs/SQVs are projected to be achieved in the Gasco Sediments Site Area of Interest and within each half RM exposure area (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b). Residual risk in riverbanks soils is expected to be minimal as described for overall protectiveness above.

Minimization of Potential Long - Term Sediment Recontamination: As discussed above, long-term surface sediment BaP and naphthalene concentrations under Alternative 4 are projected to be at or below the lowest RGs/SQVs for both Gasco Sediments Site Area of Interest and half Rm exposure areas. Thus, across the Gasco Sediments Site long-term sediment recontamination of PAHs (or other Gasco Sediment Site COCs) is not projected. Per Section 7.2.4.1.2, an additional evaluation of the potential for long-term recontamination from upstream sources of PCBs, DDE, and BaP at smaller spatial scales was conducted. This evaluation indicated that, following initial reductions in Gasco Sediment Site surface sediment COC concentrations due to remediation, concentrations of PCBs, DDE, and BaP are projected to increase in response to continuing contaminant inputs from upstream. However, these projected increases are lower than current contaminant concentrations in the Gasco Sediments

Site, and no areas are projected to exceed the EPA point estimate RGs established in the Portland Harbor draft FS (Anchor QEA 2012a) for PCBs, DDE, and BaP (see Section 8.3.3 for additional information on this evaluation).

Magnitude of Residual Risk - Minimization of Potential Groundwater Impacts: As discussed in Section 7.7.1, the combination of upland source control actions and active capping in Alternative 4 is expected to maintain sediment, surface water, and TZW concentrations below relevant RGs, SQVs, WQS/NRWQC and alternate guidelines for at least 100 years (Appendix J). Documented reductive dechlorination of CVOCs in TZW (Appendix A) will also continue to occur. Thus, Alternative 4 is expected to be effective in minimizing potential long-term groundwater impacts.

Magnitude of Residual Risk - Minimization of Potential Long-Term Downstream Contaminant Transport: Figures 7.2.2.1-3 and 7.2.2.1-4 show surface water concentrations projected through 45 years. The projected transport of these contaminant concentrations off site (i.e., out of the Gasco Sediments Site Area of Interest) throughout the simulation period was examined as discussed more in Section 8.3.5). Alternative 4 is projected to result in no substantial difference in downstream transport of COCs, as represented by BaP simulations, as compared to the No Action condition. Although Alternative 4 includes substantial dredging, these construction phase releases are balanced by reduced flux in capped areas during the remainder of the 45-year period simulated.

Adequacy of Controls: Alternative 4 results in some residual concentrations of contaminants at the Gasco Sediments Site. Dredge residual covers, caps, long-term monitoring, operations and maintenance, and institutional controls included in the alternatives are expected to adequately control these residual concentrations and maintain them at the sediment and water concentrations below the RGs and SQVs discussed above. As noted in Section 8.3.6, very little subsurface contamination above the RALs is left in place outside areas of active remediation that could be subject to potential future release. See Section 8.3.6 for additional discussion.

7.7.4 Reduction of Toxicity, Mobility, or Volume through Treatment

Under Alternative 4, depending on the range of disposal assumptions discussed in Section 6.3.8, stabilization using Portland cement would be used to treat up to 46,000 cy of sediment to reduce contaminant leaching before disposal to a Portland Harbor CDF/CAD. Additionally, between 190,000 and 371,000 cy of sediment would be dewatered using diatomaceous earth, which is the

assumed process option for sediment disposed of in an upland landfill for the purposes of this EE/CA.

Alternative 4 also includes 2.9 acres of active capping with organoclay included as part of the engineered capping section.

7.7.5 Short-term Effectiveness

Evaluation of the short-term effectiveness criterion is summarized below. Section 8.5 contains additional details.

Environmental Impacts - Construction Water Quality Impacts: Projected surface water exceedances of WQS/NRWQC that occur primarily during in-water construction operations under Alternative 4 are discussed above in Section 7.7.2. Figures 7.2.2.1-3 and 7.2.2.1-4 show elevations of BaP and naphthalene concentrations during the construction phase of the model simulations (approximately the first 5 years) that are on average below relevant WQS/NRWQC and alternate guidelines. These elevations for Alternative 4 are due to unavoidable dredging-related resuspension and releases to the water column. Releases will likely include those caused by removal of riverbank soils in select areas for this alternative.

Environmental Impacts - Potential Sediment Recontamination During Construction: Under Alternative 4, modeling projections and comparisons with case study results from other environmental dredging sites (Bridges et al. 2010) suggest that potential sediment recontamination of adjacent areas resulting from dredging resuspension and residuals would generally be limited to within approximately 500 to 1,000 feet of the dredging activity. Modeling projects very small increases in bedded sediment concentrations of BaP (9.6 μg/kg) and napthalene (5.3 μg/kg), relative to the BaPEq RGs (423 μg/kg using EPA point estimate for Tribal fisher direct contact 10-6 cancer risk level) and BaP and napthalene SQVs (BaP at 610,000 μg/kg and napthalene high/low at 2,000/650,000 μg/kg), downstream of the Gasco Sediment Site due to Alternative 4 dredging.

Time Until Protection is Achieved - Projected Timeframes to Achieve RAOs: As discussed in Section 4.1.3, this EE/CA uses a range of RGs that may eventually be judged by EPA to meet the RAOs within the acceptable risk ranges noted in the guidance (Table 7.2-1). Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b generally summarize the projected sediment concentration reductions over time. This information was further examined, as detailed in Section 8.5.3. In summary, under

Alternative 4, the range of BaP RGs will be met in 5 to 32 years (depending on the RG percentile in question) in RM 6 to 6.5 and in 0 to 4 years in RM 6.5 to 7. For these same half RMs, naphthalene concentrations are already below the highest LPAH SQV and will take 30 years to be below the lowest LPAH SQV.

Other Short-term Impacts: As discussed in Section 7.2.6.1, duration of construction is a good surrogate measure for air emissions, quality of life, and worker impacts. In general, all of these impacts are proportionally larger as construction durations become longer. The duration of Alternative 4 construction is estimated to be five construction seasons and thus would cause higher air emission, quality of life, and worker impacts than Alternatives 2a, 2b, and 3.

7.7.6 Implementability

As discussed in Section 7.2.7, duration and secondary impacts (e.g., undermining the FAMM tank and Fab 1 building and significantly impacting ongoing business operations) resulting from construction of the remedy are good general measures of the level of implementability issues associated with the alternatives. Section 8.6 contains more detailed discussions of the various implementability factors for all alternatives. Alternative 4, with a construction duration of five construction seasons, has some implementablity issues.

7.7.7 Cost

Alternative 4 has an estimated net present value cost range of $134 million to $202 million. As discussed in Section 6.6, the Alternative 4 costs do not include the likely impacts to upland structures, upland groundwater source control elements, or disruption and/or closure to businesses affected by construction of the remedy. The EE/CA costs are therefore conservative (low) and these additional costs would need to be factored into the evaluation if EPA considers carrying forward alternatives that lead to these impacts.

7.8 Alternative 5 Detailed Analysis

7.8.1 Overall Protection of Human Health and the Environment

Sediment: Alternative 5 is projected to achieve surface sediment concentrations (SWACs over various spatial scales) that are below EPA's conservative point estimate RG for BaP, and also below the lowest LPAH and HPAH SQVs (compared to naphthalene and BaP projections, respectively), and thus, this alternative is expected to meet sediment RAOs 2, 3, 6 and 7 (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b). Empirical data on sedimentation rates, upstream sediment loads,

bathymetry, and sediment core profiles reviewed in Section 5.1 indicate deposition of low contaminant concentration sediments (i.e., in the range of background for PAHs), particularly in areas with elevated COC concentrations over the long term. This supports the concept that a combination of active remedies and MNR would result in substantially reduced long-term sediment concentrations as indicated by the modeling. This alternative is expected to have short-term sediment impacts in the form of dredge residuals including substantial increases in short-term naphthalene sediment concentrations (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b).

Surface Water: Alternative 5 is projected to achieve long-term surface water concentrations post-remedy that are the same as all the other alternatives (Figures 7.2.2.1-3 and 7.2.2.1-4). Further, these long-term concentrations are below WQS/NRWQC and alternate guideline values. Short-term elevations of surface water concentrations are expected for approximately 10 years due to dredge releases, but the levels are generally not expected to be frequently or consistently above WQS/NRWQC and alternate guideline values (Figures 7.2.2.1-3 and 7.2.2.1-4). At EPA's direction, sheetpile barriers are evaluated in this Alternative. Per Section 5.6.3, the use of sheetpile barriers during removal is not expected to appreciably decrease the surface water impacts due to releases that will occur during sheetpile placement and removal, losses through sheetpile interlocks and equalization ports, and loss of retained water once the sheetpile system is removed. However, this alternative is projected to meet surface water RAOs 4 and 8 also met by all of the other alternatives.

Groundwater: Upland source control actions by themselves will likely address groundwater RAOs 5 and 9 over most of the interim Project Area, given that the source control actions will create downwelling of groundwater contaminants (Figure 5.4.1-1) and natural reductive dechlorination of CVOCs has been documented throughout the Siltronic Area 1 groundwater plume. As described in the Siltronic RI Report (MFA 2007), surface water in this reach of the Willamette River often discharges to groundwater, but the Portland Harbor RI/FS assumed only groundwater discharge to surface water. The combination of upland source control and natural attenuation of groundwater, with surface water recharge to groundwater, is likely to shorten the time frame for attaining RAOs 5 and 9. In upstream and downstream areas where some upwelling remains, Alternative 5 includes some active caps that are expected to maintain sediment, surface water, and TZW concentrations below relevant RGs, SQVs, WQS/NRWQC and alternate guidelines for at least 100 years (Appendix J). Documented reductive dechlorination of CVOCs in TZW (Appendix A) will also continue to occur. In upstream and downstream areas that are not capped, the groundwater source control system would reduce

the flux of groundwater contaminants and full feasible removal of contaminated sediments would take place. Thus, based on fate and transport model projections the upstream and downstream areas would also be expected to recover to acceptable levels within 45 years (Appendix E). Thus, Alternative 5 is expected to meet the groundwater RAOs.

Riverbank: Alternative 5 provides reduction in exposure of riverbank soils exceeding screening levels and control of erosion or stormwater infiltration source pathways. This is achieved by removal followed by impermeable membrane and armor placement for infiltration and erosion source control along the entire riverbank. (The Fill WBZ groundwater transport source pathway is minimized by the Fill WBZ trench groundwater collection system provided by the upland groundwater source controls.) Thus, Alternative 5 is also expected to meet the riverbank goals summarized in Section 7.1.

7.8.2 Compliance with ARARs

Chemical-Specific ARARs: Detailed evaluations relative to Alternative 5 are summarized below for each chemical-specific water quality criteria (Section 8.2.1 contains additional details):

- MCLs – The fate and transport modeling for BaP in Alternative 5 indicated that surface water concentrations could exceed drinking water MCLs in very small areas and periods (i.e., approximately 0.005 percent of the simulation [five one-thousandth of a percent]).
- Fish consumption WQS/NRWQC – The fate and transport model projected very few exceedances of the fish consumption WQS/NRWQC for Alternative 5 (i.e., approximately 0.07 percent of the simulation).

Although the above exeedances are relatively infrequent, Alternative 5 is projected to fail to meet water quality criteria more often than any other alternative.

A removal and capping of riverbank soils in Alternative 5 would be expected minimize the potential for long-term surface water quality exceedances from potential bank sources. The large amount of soil removal in Alternative 5 will likely cause some water quality exeedances during construction.

Location-Specific ARARs: Alternative 5 is generally expected to meet the location-specific ARARs as summarized below (Section 8.2.2 contains additional details):

- Oregon Environmental Cleanup Law – Oregon Hazardous Substance Remedial Action

Rules establish acceptable risk levels for human health at $1x10^{-6}$ for individual carcinogens and $1x10^{-5}$ for multiple carcinogens. (Other aspects of this rule are similar to CERCLA criteria and are discussed under long-term effectiveness.) This alternative is projected to achieve the long-term sediment BaP concentrations below the 10^{-6} cancer risk range (Figures 7.2.2.1-1a-b), thus meeting the acceptable risk levels. Alternative 5 is expected to achieve the soils goals in Section 7.1 along the riverbank due to removal and capping of the soils. Alternative 5 identifies relatively high concentration areas (above the RALs for these alternatives) in sediments and soils and targets those areas for removal and off-site disposal consistent with the intent of Oregon hot spot requirements. See Section 8.2.2 for additional information. In addition, the upland source controls create downwelling in the under-river groundwater plume causing groundwater and TZW contaminants to be captured and treated by the upland control system. Similarly, the ISCR-bioremediation system on the Siltronic property treats the CVOCs in the upland groundwater.

- ESA – Alternative 5 would comply with ESA with the implementation of potential impact avoidance and minimization measures and conservation measures included in the alternatives (Appendix C).
- CWA Section 404(b)(1) – Alternative 5 meets the substantive requirements of this ARAR (Appendix D).
- FEMA Flood Rise Requirements – The Portland Harbor draft FS (Anchor QEA 2012a) predicted increases in water surface elevations for all the active Portland Harbor Site alternatives during an estimated 100-year flood, but these increases were considered to be negligible and not significantly different between alternatives based on the model precision. Therefore, compliance with this ARAR cannot be confirmed (see Section 7.2.3.2 for further discussion).

7.8.3 Long-term Effectiveness and Permanence

Evaluation of the long-term effectiveness and permanence criterion is summarized below. Section 8.3 contains additional details.

Magnitude of Residual Risk - Surface Sediment COC Projections: Alternative 5 is projected to achieve long-term surface sediment concentrations that are below EPA's conservative point estimate RG for BaP and the lowest HPAH and LPAH Level 3 SQVs for BaP and naphthalene (Table 7.2-1), respectively. These RGs/SQVs are projected to be achieved in the Area of Interest

and within each half river mile exposure area (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b). Residual risk in riverbanks soils is expected to be minimal as described for overall protectiveness above.

Minimization of Potential Long - Term Sediment Recontamination: As discussed above, long-term surface sediment BaP and naphthalene concentrations under Alternative 5 are projected to be at or below the lowest RGs/SQVs for both Gasco Sediments Site Area of Interest and half RM exposure areas. Thus, across the Gasco Sediments Site, long-term sediment recontamination of PAHs (or other Gasco Sediment Site COCs) is not projected. Per Section 7.2.4.1.2, an additional evaluation of the potential for long-term recontamination from upstream sources of PCBs, DDE, and BaP at smaller spatial scales was conducted. This evaluation indicated that, following initial reductions in Gasco Sediment Site surface sediment COC concentrations due to remediation, concentrations of PCBs, DDE, and BaP are projected to increase in response to continuing contaminant inputs from upstream. However, these projected increases are lower than current contaminant concentrations in the Gasco Sediments Site, and no areas are projected to exceed the EPA point estimate RGs established in the Portland Harbor draft FS (Anchor QEA 2012a) for PCBs, DDE, and BaP (see Section 8.3.3 for additional information on this evaluation).

Magnitude of Residual Risk - Minimization of Potential Groundwater Impacts: As discussed in Section 7.8.1, the combination of upland source control and full removal in Alternative 5 is expected to result in recovery of groundwater plumes and in river media over 45 years. Documented reductive dechlorination of CVOCs in TZW (Appendix A) will also continue to occur. Thus, Alternative 5 is expected to be effective in minimizing potential long-term groundwater impacts.

Magnitude of Residual Risk - Minimization of Potential Long-Term Downstream Contaminant Transport: Figures 7.2.2.1-3 and 7.2.2.1-4 show surface water concentrations projected through 45 years. The projected transport of these contaminant concentrations off site (i.e., out of the Gasco Sediments Site Area of Interest) throughout the simulation period was examined as discussed more in Section 8.3.5). Alternative 5 is projected to result in an increase in downstream transport of COCs, as represented by BaP simulations, as compared to the no action condition. This increase is due to the large amount of dredging and associated unavoidable releases that will occur. Per Section 5.6.3, the use of sheetpile walls is not expected to significantly reduce the downstream transport during construction due to releases that will still occur during sheetpile placement and removal, losses through sheetpile interlocks and

equalization ports, and loss of retained water with highly concentrated chemical releases once the sheetpile system is removed

Adequacy of Controls: Alternative 5 results in residual concentrations of contaminants at the Gasco Sediments Site. Dredge residual covers (and to a much lesser extent caps) and long-term monitoring included in the alternatives are expected to adequately control these residual concentrations and maintain them at the sediment and water concentrations below the RGs and SQVs discussed above. As noted in Section 8.3.6, very little subsurface contamination above the RALs is left in place outside areas of active remediation that could be subject to potential future release. See Section 8.3.6 for additional discussion.

7.8.4 Reduction of Toxicity, Mobility, or Volume through Treatment

Under Alternative 5, depending on the range of disposal assumptions discussed in Section 6.3.8, stabilization using Portland cement would be used to treat up to 130,000 cy of sediment to reduce contaminant leaching before disposal to a Portland Harbor CDF/CAD. Additionally, between 261,000 and 641,000 cy of sediment would be dewatered using diatomaceous earth, which is the assumed process option for EE/CA purposes for sediment disposed of in an upland landfill.

Alternative 5 also includes 1.3 acres of active capping with organoclay included as part of the engineered capping section.

7.8.5 Short-term Effectiveness

Evaluation of the short-term effectiveness criterion is summarized below. Section 8.5 contains additional details.

Environmental Impacts - Construction Water Quality Impacts: Projected surface water exceedances of WQS/NRWQC that occur primarily during in-water construction operations under Alternative 5 are discussed above in Section 7.8.2. Figures 7.2.2.1-3 and 7.2.2.1-4 show elevations of BaP and naphthalene concentrations during the construction phase of the model simulations (approximately the first 10 years) that are on average below relevant WQS/NRWQC and alternate guidelines. These elevations for Alternative 5 are due to unavoidable dredging-related resuspension and releases to the water column that are expected to occur even with the use of sheetpile containment system, for reasons discussed above. Releases will likely include

those caused by removal of riverbank soils across the entire Gasco Sediments Site for this alternative.

Environmental Impacts - Potential Sediment Recontamination During Construction: Under Alternative 5, modeling projections and comparisons with case study results from other environmental dredging sites (Bridges et al. 2010) suggest that potential sediment recontamination of adjacent areas resulting from dredging resuspension and residuals would generally be limited to within approximately 500 to 1,000 feet of the dredging activity. Modeling projects small increases in bedded sediment concentrations of BaP (17.5 µg/kg) and napthalene (2.4 µg/kg), relative to the BaPEq RGs (423 µg/kg using EPA point estimate for Tribal fisher direct contact 10-6 cancer risk level) and BaP and napthalene SQVs (BaP at 610,000 µg/kg and napthalene high/low at 2,000/650,000 µg/kg), downstream of the Gasco Sediment Site due to Alternative 2b dredging. Again, this recontamination is expected to occur even with the use of a sheetpile containment system.

Time Until Protection is Achieved - Projected Timeframes to Achieve RAOs: As discussed in Section 4.1.3, this EE/CA uses a range of RGs that may eventually be judged by EPA to meet the RAOs within the acceptable risk ranges noted in the guidance (Table 7.2-1). Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b generally summarize the projected sediment concentration reductions over time. This information was further examined, as detailed in Section 8.5.3. In summary, under Alternative 4, the range of BaP RGs will be met in 13 to 30 years (depending on the RG percentile in question) in RM 6 to 6.5 and in 0 to 10 years in RM 6.5 to 7. For these same half RMs, naphthalene concentrations are already below the highest LPAH SQV and will take 27 years to be below the lowest LPAH SQV.

Other Short-term Impacts: As discussed in Section 7.2.6.1, duration of construction is a good surrogate measure for air emissions, quality of life, and worker impacts. In general, all of these impacts are proportionally larger as construction durations become longer. The duration of Alternative 5 construction is estimated to be 10 construction seasons and thus would cause significantly higher air emission, quality of life, and worker impacts than any of the other alternatives.

7.8.6 Implementability

As discussed in Section 7.2.7, duration and secondary impacts (e.g., undermining the FAMM tank and Fab 1 building and significantly impacting ongoing business operations) resulting

from construction of the remedy are good general measures of the level of implementability issues associated with the alternatives. Section 8.6 contains more detailed discussions of the various implementability factors for all alternatives. Alternative 5, with a construction duration of 10 construction seasons, will have considerable implementability challenges.

7.8.7 Cost

Alternative 5 has an estimated net present value cost range of $245 million to $350 million. As discussed in Section 6.6, the Alternative 5 costs do not include the likely impacts to upland structures, upland groundwater source control elements, or disruption and/or closure to businesses affected by construction of the remedy. The EE/CA costs are therefore conservative (low) and these additional costs would need to be factored into the remedy evaluation if EPA considers carrying forward alternatives that lead to these impacts.

8 COMPARATIVE ANALYSIS OF ALTERNATIVES

Section 7 presented the detailed analysis of each individual EE/CA alternative against the NCP evaluation criteria. The results of those analyses are used in this section to compare the relative advantages and disadvantages of the alternatives, consistent with EPA (1988, 2005) guidance and the Portland Harbor draft FS (Anchor QEA 2012a).

8.1 Overall Protection of Human Health and the Environment

This criterion addresses the overall ability to eliminate, reduce, or control potential exposures to hazardous substances in both the short and long term. As discussed in EPA (2005), the NCP evaluation of overall protectiveness is highly location-specific; therefore, site-specific evaluations are a necessary step in the evaluation process..

As discussed in Section 7.2.2, reduced concentrations of and exposure to contaminants in surface sediment, water column, and riverbank soils are achieved over time under all of the five alternatives through a combination of MNR, in-place technologies, dredging/removal with post-dredge residual covers, and dredging followed by capping.

The primary difference between the alternatives is that they use different RALs (the bounding Portland Harbor draft FS Alternative B and F BaPEq RALs), different approaches for targeting liquid substantial product (higher potential mobility) or substantial product (both liquid and non-liquid), and include different combinations of MNR, in-place technologies, and dredging/removal technologies. These differences highlight the tradeoffs between potential alternative approaches. For example, the alternatives with more removal of sediment and riverbank soils results in unavoidable resuspension, release, and residuals that reduce the overall protection of human health and the environment provided by these alternatives, particularly in the short term (USACE 2008a; Bridges et al. 2010). Similarly, these same alternatives lead to greater impacts on in-water and upland structures and therefore business operations. As discussed in Section 5.6.3, and evaluated specifically for Alternative 5, the application of rigid barriers or silt curtains is not expected to appreciably improve the protection of alternatives with more removal, and may cause some additional unintended adverse consequences. In contrast, alternatives that use a blend of methods, including more in-place technologies such as capping, represent an effective means of rapidly reducing surface sediment contaminant concentrations.

Per the methods described in Section 7.2, the following subsections compare and contrast the alternatives relative to each of the RAOs that are used to define overall protectiveness of the alternatives.

8.1.1 Surface Sediment RAOs

Projected changes in surface sediment concentrations (SWACs) of BaP and naphthalene during and following implementation of each alternative for both half RM and Gasco Sediment Site Area of Interest spatial scales are presented in Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b. Based on these evaluations, all of the alternatives are projected to achieve surface sediment concentrations (SWACs over various spatial scales) that are below EPA's conservative point estimate RG for BaP, and also below the lowest LPAH and HPAH SQVs (compared to naphthalene and BaP projections, respectively). Thus, all of the alternatives are expected to meet sediment RAOs 2, 3, 6, and 7.

Alternatives that include more dredging/removal (Alternatives 4 and 5) are projected to result in higher overall surface sediment concentrations (particularly for naphthalene) over substantial periods of time due to the duration of construction and the effects of dredge residuals as compared to those alternatives with more emphasis on in-place technologies and MNR (Alternatives 2a, 2b, and 3 on Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b). Despite these interim sediment concentration increases associated with unavoidable dredging releases and residuals, all of the active remedy alternatives are projected to achieve the surface sediment RAOs in similar approximate timeframes. However, Alternatives 2a, 2b, and 3 achieve various points within the BaP RG ranges generally faster than Alternatives 4 and 5 (i.e., from 0 to 14 years faster, depending on the RG used in the comparison).

As discussed in Section 7, empirical data on sedimentation rates, upstream sediment loads, bathymetry, and sediment core profiles reviewed in Section 5.1 indicate deposition of low contaminant concentration sediments (i.e., in the range of background for PAHs) from upstream, particularly in areas with elevated COC concentrations over the long term. This supports the conclusion that a combination of active remedies and MNR would result in substantially reduced long-term sediment concentrations, as indicated by the modeling projections previously summarized.

As shown in Table 8.1.1-1, time zero SWACs for the Gasco Sediments Site created by each alternative for Gasco Sediment Site COIs without RALs were also calculated to understand how

these bounding RALs address and reduce concentrations of other contaminants across the Gasco Sediments Site. These estimated time zero SWACs are conservative in that they do not account for any natural recovery processes over time. As described in Appendix Ha of the Portland Harbor draft FS (Anchor QEA 2012a), every contaminant examined for the draft FS shows some degree of natural recovery. Although the degree of natural recovery varies spatially across the Portland Harbor Site and by contaminant and there is some uncertainty with the evaluations, the various LOEs clearly support that some natural recovery of the system is taking place. Consequently, it is expected that the estimated time zero site-wide SWACs presented here for the Gasco Sediment Site will also decrease over time, and the number of PRG exceedances and areas of those exceedances will further decrease over time. Additionally, Table 8.1.1-2 shows results of time zero SWAC estimates on exposure scales applicable to all of the Portland Harbor draft FS PRGs. These tables include all contaminants with PRGs evaluated in the draft FS.

Overall, the tables indicate that active remediation using the RALs associated with sub-SMAs for Alternatives 2a through 5 will substantially reduce SWACs for a wide range of contaminants across the Gasco Sediments Site. In many cases, these reduced SWACs achieve levels below all PRG levels for these contaminants. For many contaminants, the SWACs achieved are progressively lower and the number of PRG exceedances decreases across the range of sub-SMA sizes from Alternatives 2a through 5, although not always. However, consistent with the development of the Portland Harbor draft FS Site-wide AOPC concept in general, as discussed above, even Alternative 5 does not result in achievement of all PRGs for all contaminants at time zero.

8.1.2 Surface Water RAOs

Relevant to RAOs 4 and 8, projected changes in surface water concentrations of BaP and naphthalene during and following implementation of each alternative at RM 6.3 are presented in Figures 7.2.2.1-3 and 7.2.2.1-4, respectively. Projected differences in long-term surface water contaminant concentrations are indistinguishable among the alternatives. None of the alternatives is expected to achieve different long-term results with regards to the water column concentrations, and all are expected to achieve RAOs 4 and 8. Short-term increases in surface water contaminant concentrations during dredging operations are anticipated, particularly for those alternatives with the greatest dredging volumes and construction durations in the 5- to 10-year range (e.g., Alternatives 4 and 5).

8.1.3 Groundwater RAOs

As discussed in Section 7, upland groundwater source control actions, by themselves, will likely address groundwater RAOs 5 and 9 over most of the interim Project Area, given that the source control actions will create downwelling of groundwater contaminants (Figure 5.4.1-1) and increased natural degradation of CVOCs. In upstream and downstream areas where some upwelling is modeled to occur following implementation of the groundwater source controls, Alternatives 2a, 2b, 3, and 4 include active caps that are expected to maintain sediment, surface water, and TZW concentrations below relevant RGs, SQVs, WQS/NRWQC, and alternate guidelines for at least 100 years (Appendix J). Alternative 5 involves full sediment removal and minimal active capping (in limited areas where full removal is infeasible) in upwelling areas. Consequently, Alternative 5 (and to a greater extent Alternative 1) would be reliant on ongoing natural attenuation of the groundwater plume due to upland source controls and reductive dechlorination to achieve acceptable levels in Willamette River media. Therefore, all the alternatives are expected to meet the groundwater RAOs.

8.1.4 Substantial Product RAO

As discussed in Section 7.2.2.1, RAO 1 regarding preference for removal of sediments containing substantial amounts of product (as defined in Section 3.6.2.1 of the SOW) was evaluated through comparison of alternatives that target removal of substantial product to those that contain or treat substantial product in place. In accordance with the SOW requirements, this comparison allows a determination of whether costs of removal are clearly disproportionate to contain or treat in place alternatives. With regards to substantial product removal, the alternatives achieve the following:

- Alternative 1 removes no substantial product at a cost of $0.
- Alternative 2a removes no substantial product and effectively contains nearshore substantial product in place at a cost of $34 to 40 million.
- Alternative 2b removes substantial product in the navigation channel and effectively contains nearshore substantial product in place at a cost of $73 to $123 million.
- Alternative 3 removes substantial product in the navigation channel and a portion of nearshore substantial product (liquid substantial product that is potentially most mobile) at a cost of $92 to $152 million.
- Alternative 4 removes all in-water substantial product that can be feasibly (EE/CA assumes removal deeper then 20 feet is infeasible) removed at a cost of $134 to $202 million.

- Alternative 5 removes all substantial product including areas under docks and the entire riverbank at a cost of $245 to $350 million.

It is important to note that all of the alternatives (except Alternative 1) are equally protective. They all achieve the project RAOs and, except Alternative 2a, include removal of various quantities of substantial product. However, while Alternative 2a achieves the RAOs for the lowest cost, Alternative 4 is is nearly four to five times the cost, and Alternative 5 costs more than seven to eight times as much. In addition, Alternatives 4 and 5 have significant implementability limitations due to impacts to in-water and upland structures and associated business operations and the costs associated with these impacts is not included in the cost estimates. Therefore, these cost differences are conservative and likely much higher.

Further, one of the primary concerns that led to a preference for removal in the SOW was that substantial product could be a source of contamination that could be exposed or migrate downstream in the future. Specifically, the SOW RAO 1 states that substantial product "…may serve as a potential future source of risk material." However, Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b show that Alternatives 4 and 5 actually have higher long-term sediment concentrations than Alternatives 2a, 2b, and 3. As discussed in Section 7, Alternative 5 has somewhat greater amounts of downstream contaminant migration than the other alternatives. Also, even though the use of sheetpile walls is included in Alternative 5, increased downstream transport is still expected to occur for reasons discussed in Section 5.6.3. Thus, when evaluated using guidance and the approved risk management framework, the alternatives analysis demonstrates that a preference for substantial product removal can actually attain less overall protection at a much higher cost. Even though it was not the anticipated outcome when the RAO was originally crafted, it is the finding of the EE/CA that Alternatives 2a or 2b (and to a lesser extent Alternative 3) appear most likely to meet the intent of the RAO, while Alternatives 4 and 5 are least likely to meet the RAO.

8.1.5 *Riverbank Remediation*

All of the alternatives except Alternative 1 provide reductions in exposure of riverbank soils exceeding screening levels and control of erosion or stormwater infiltration source pathways. (The Fill WBZ groundwater transport source pathway is minimized in all alternatives by the Fill WBZ trench groundwater collection system provided by the upland groundwater source controls.) This is achieved by MNR where substantial SSL exceedances do not exist and riverbank soils are already well armored to protect against soil erosion (along the Siltronic

riverbank in some alternatives), placement of impermeable membrane is followed by armoring for infiltration and erosion source control, and removal is followed by impermeable membrane and armoring. Thus, all alternatives except Alternative 1 are expected to meet the riverbank goals summarized in Section 7.1 through various combinations and methods of exposure reduction, source pathway containment, or removal.

8.1.6 Summary of Comparative Evaluation Relative to RAOs

Because all of the active remedy alternatives (Alternatives 2 through 5) attain the RAOs to a similar degree and in similar timeframes, the primary differences in overall protectiveness achieved by the comprehensive alternatives are related to the extent and duration of shorter-term changes in risks that occur during remedy implementation. The comprehensive alternatives that include greater dredging/removal volumes and/or longer construction durations (especially Alternative 5 at 10 years' duration) provide less overall protection of human health and the environment than shorter duration alternatives that focus on in-place technologies. Also, Alternatives 4 and 5 appear the least likely to meet the intent of RAO 1 (preference for substantial product removal) due to lack of additional risk reduction obtained and significant additional cost.

8.2 Compliance with ARARs

Comparative evaluations of each potential ARAR are provided in the sections below.

8.2.1 Chemical-Specific ARARs

As discussed in Section 7, those alternatives that include the greatest dredging/removal volumes (e.g., Alternatives 4 and 5) are projected to require the longest time to achieve the WQS/NRWQC due to periodic and infrequent water quality exceedances. However, none of the alternatives are projected to have widespread water quality exceedances on average during construction (Figure 7.2.2.1-3 and 7.2.2.1-4).

To provide a comparison of projected exceedances of chemical-specific ARARs, a screening exercise was performed to assess the cumulative surface water volume (acre-feet) and duration (days) of exceedance of the WQS/NRWQC predicted by the fate and transport model over the 45-year simulation. Figures 8.2.1-1a and b compare the alternatives and depict the amount and duration (volume-days) exceeding the specified BaP criteria for each of the remedial alternatives both during the period of alternative construction as well as the entire 45-year

simulation period. This provides a measure of compliance with potential WQS/NRWQC as well as a measure of the long-term effectiveness of the alternatives.[12]

8.2.1.1 *Compliance with MCLs*

None of the depth-integrated water column samples collected for the Portland Harbor Site RI exceeded drinking water MCLs (0.2 μg/L for BaP)[13]. However, fate and transport modeling performed as part of the EE/CA (Appendix E) suggests that localized areas could infrequently exceed MCLs for BaP under current baseline conditions. Moreover, some increases in water column BaP concentrations are projected during dredging, resulting in the exceedances shown in Figure 8.2.1-1a. Alternative 1 (No Action) is projected to have the lowest combined extent/duration of MCL exceedances, while those alternatives that include the largest dredging volumes (e.g., Alternative 5) are projected to have the highest extent/duration of exceedances. As noted in Section 7, these exceedances represent very small areas and periods over the entire simulation.

8.2.1.2 *Compliance with Human Health Fish Consumption WQS/NRWQC*

None of the depth-integrated water column samples collected for the Portland Harbor Site RI exceeded the human health fish consumption value for BaP (0.018 μg/L). However, as with the MCL comparison, fate and transport modeling performed as part of the EE/CA (Appendix E) suggests that localized areas may infrequently exceed this criteria under current baseline conditions. The projected volume-day exceedances of the BaP human health fish consumption criterion under each alternative are summarized in Figure 8.2.1-1b. The lowest combined extent/duration of exceedances of the BaP criterion are projected for the No Action Alternative 1, while those alternatives that include the greatest dredging/removal volumes (i.e., Alternatives 4 and 5) are projected to have the highest extent/duration of exceedances. As discussed in Section 7, these exceedances are projected to occur over relatively small areas and periods.

8.2.2 Location-and Action-Specific ARARs

All of the alternatives are expected to comply with location- and action-specific ARARs, including the Oregon Environmental Cleanup Law, ESA, CWA Section 404(b)(1), and FEMA

[12] The data in these graphs are consistent with the percentages of total simulation time and areas discussed in Section 7 (e.g., Section 7.3.2).

[13] Per Section 7.2.3, the LWG states in the Portland Harbor draft FS that direct application of MCLs to individual, untreated surface water samples in Portland Harbor is inappropriate. This analysis was, nonetheless, carried through as directed by EPA and consistent with the Portland Harbor draft FS.

requirements. Comparative evaluations of the alternatives relative to each of these ARARs are provided in the following subsections.

8.2.2.1 *Oregon Environmental Cleanup Law*

Oregon Hazardous Substance Remedial Action Rules establish acceptable risk levels for human health at 10^{-6} for individual carcinogens and 10^{-5} for multiple carcinogens. (Other aspects of this rule [i.e., human health noncancer endpoints and ecological risk levels] are similar to CERCLA criteria and are discussed under long-term effectiveness.)

While No Action Alternative 1 is projected to result in higher long-term potentially unacceptable risks than the other alternatives evaluated in this EE/CA, all of the comprehensive alternatives are projected to achieve relatively similar surface sediment concentrations and associated potentially unacceptable risk reductions over the long term. All of the alternatives are projected to achieve similar long-term surface sediment BaP concentrations in the shoreline portions of all half RMs, below the full range of BaP 10^{-6} cancer risk level sediment direct contact RGs. Riverbank technologies applied in the active remedy alternatives are also expected to either reduce exposure to or remove soils such that 10^{-6} or lower cancer risks are achieved.

Section 4.4.5 discusses potential Oregon hot spots in sediments and riverbank soils at the Gasco Sediments Site, and does not identify any Oregon hot spots in sediments, consistent with the Portland Harbor draft FS (Anchor QEA 2012a). Section 4.4.5 identifies potential Oregon hot spots in riverbank soils using conservative screening levels. Regardless, for the formal delineation of potential Oregon hot spots, the EE/CA evaluates a preference for treatment or excavation and off-site disposal for all active remedy alternatives (i.e., Alternatives 2a through 5) by applying a higher threshold for evaluating the reasonableness of the cost of treating or excavating the areas with the highest concentrations of the COCs. Thus, the intent of the Oregon hot spot rule is addressed in this approach because each active remedy alternative (i.e., Alternatives 2 through 5) identifies the relatively highest concentration areas and volumes of sediments and riverbank soils and evaluates the cost-effectiveness of removal or treatment (i.e., stabilization of removed material or active capping in place) of those areas and volumes.

Alternatives 2 through 5 include physical removal or active capping of sediments exceeding the respective RALs. As shown in Table 6.6-1, the cost of Alternative 5 is up to 700 to 800 percent higher (more than seven to eight times the cost, and these costs are likely low because they do not account for the impacts discussed in Section 6.4.3) than Alternative 2a. Per Section 8.1, there

is no appreciable long-term incremental risk reduction from Alternative 2a to 5. This conclusion is true for both sediments, where potential Oregon hot spots were not identified and riverbank soils, where potential Oregon hot spots were identified using conservative screening values.

The above evaluation demonstrates that any approach to identifying potential Oregon hot spots would not result in proportionately greater risk reduction for the cost involved and is not feasible given the greater short-term risks associated with physical removal of such very large volumes of sediment and soils across much of the Gasco Sediments Site. Thus, the intent of the rule (i.e., evaluation of a preference for treatment or removal) is met through the analysis in this EE/CA.

8.2.2.2 *Endangered Species Act*

As part of ESA compliance, all of the active remedy alternatives include impact avoidance and minimization and conservation measures, including performing in-water work during an approved work window, corresponding to times of the year when salmonids are expected to be present only in very low numbers.

As detailed in the preliminary draft BA presented in Appendix C, with the implementation of potential impact avoidance, minimization, and conservation measures, very few individuals of any ESA listed fish species would experience negative impacts during each in-water work window for Alternatives 2a through 4. Potential impacts are not expected to affect ESA-listed species at the population level. Alternative 5, with a duration of 10 years, may have adverse impacts on the aquatic environment that may affect listed species due to the potential for continued short-term impacts over many more years. For Alternatives 2a through 4, those individual fish that are present within the Gasco Sediments Site during each in-water work window are not expected to spend time rearing within the Gasco Sediments Site as the rearing habitat in this reach of the river is limited. Each of the comprehensive alternatives are therefore anticipated to comply with the substantive provisions of the ESA, with Alternative 5 resulting in potential for short-term adverse impacts over several more years.

8.2.2.2.1 CWA Section 404(b)(1)

As discussed in more detail in the Preliminary Draft Section 404(b)(1) analysis[14] presented in Appendix D, all of the alternatives are anticipated to comply with the substantive provisions of

[14] This document will be reviewed and refined by the EPA, including the issuance of findings.

this ARAR. The 404(b)(1) analysis revealed that although short-term construction-related impacts may occur to potential jurisdictional waters, vegetated shallows, water quality, and human uses, projected longer-term reductions in contaminant concentrations resulting from construction could offset many or all of the short-term impacts under the CWA. Thus, if any of the alternatives evaluated in this EE/CA were to be selected by EPA consistent with detailed NCP criteria, they would also be identified as the "least environmentally damaging practicable alternative" when considering cost, logistics, technology, and including balancing criteria. The integration of BMPs and compensatory mitigation would also compensate for any potentially unavoidable significant adverse impacts associated with each comprehensive alternative.

8.2.2.2.2 FEMA Flood Rise Requirements

As discussed in Section 7.2.3, for all communities participating in the National Flood Insurance Program, FEMA requires that any action that encroaches on the floodway cannot cause an increase in water surface elevation in the Willamette River during a 100-year flood event. The Portland Harbor draft FS (Anchor QEA 2012a) predicted increases in water surface elevations for all the Portland Harbor Site active remedy alternatives during an estimated 100-year flood, but these increases were considered to be negligible and not significantly different between alternatives based on the model precision. Therefore, given that these results would most likely apply to the Gasco Sediments Site active remedy alternatives, compliance with this ARAR cannot be confirmed for Alternatives 2 through 5. To demonstrate compliance with the ARAR in remedial design for any alternative selected by EPA, one or more of the following actions would need to be taken: 1) additional modeling with a higher precision; 2) revisions to effective Flood Insurance Studies, Flood Insurance Rate Maps, or Flood Boundary Floodway Maps following FEMA regulations (FEMA 2011); or 3) mitigation for any unacceptable flood rise that can be confirmed in remedial design.

8.3 Long-term Effectiveness and Permanence

The long-term effectiveness and permanence of the alternatives was evaluated using several methods, each of which relates to determining attainment of specific RAOs. To quantitatively compare each alternative's ability to meet this NCP criterion, fate and transport modeling was performed to project long-term surface sediment and water column concentrations under each alternative. These results were evaluated against both the magnitude of residual risk and adequacy of controls as described in Section 7.2.4.

8.3.1 Magnitude of Residual Risk – Long-Term Surface Sediment COC Concentrations

Projected changes in surface sediment concentrations of BaP and napthalene during and following implementation of each alternative are presented on half RM and Gasco Sediments Site Area of Interest spatial scales in Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b. Relative to current conditions and No Action Alternative 1, substantial reductions in surface sediment COC concentrations are expected for all active remedy alternatives over the long term. Moreover, all of the alternatives are projected to achieve relatively similar surface sediment concentrations over the long term, given that the uncertainty of the various RGs is generally much greater than the differences in long-term COC concentrations achieved across alternatives.

All of the alternatives are projected to achieve long-term surface sediment concentrations that are below EPA's conservative point estimate RG for BaP and the lowest HPAH and LPAH Level 3 SQVs for BaP and naphthalene (Table 7.2-1), respectively. These RGs/SQVs are projected to be achieved in the Gasco Sediments Site Area of Interest and within each half RM exposure area (Figures 7.2.2.1-1a-b and 7.2.2.1-2a-b).

The fate and transport model was also used to assess long-term effectiveness of the alternatives during an extreme flood event (e.g., 100-year flood event similar to the 1996 flood) simulated in Year 17 of the model projection. Under all alternatives, the modeled flood event in Year 17 was projected to result in a relatively short-term increase in surface sediment concentrations over the spatial scales and areas assessed. Erosion is projected to temporarily expose higher concentration subsurface sediments previously buried as part of earlier natural recovery processes. This erosion does not occur in areas of capping. However, following the temporary concentration increases associated with the erosional event, deposition is projected to continue in natural recovery areas, which would allow local sediment concentrations to recover to pre-flood conditions within a few years. Thus, periodic peak flood events are not projected to adversely impact the long-term effectiveness of any of the alternatives.

Also, residual risk in riverbanks soils is expected to be minimal for Alternatives 2 through 5 as described for overall protection above (in Section 8.1.5).

8.3.2 Magnitude of Residual Risk – Long-Term Surface Water Contaminant Concentrations

All of the alternatives are predicted to result in similar long-term surface water contaminant concentrations. Projected changes in surface water concentrations of BaP and naphthalene during and following implementation of each alternative are presented in Figure 7.2.2.1-3 and 7.2.2.1-4, respectively. All of the alternatives achieve long-term concentrations that are below all of the WQS/NRWQC and alternate water guidelines discussed in Section 7.2.4.1.1.

8.3.3 Magnitude of Residual Risk – Minimization of Potential Long-Term Sediment Recontamination

As discussed in Section 7, long-term surface sediment BaP and naphthalene concentrations under all alternatives are projected to be at or below the lowest RGs/SQVs for both Gasco Sediments Site Area of Interest and half Rm exposure areas. Thus, across the Gasco Sediments Site, long-term sediment recontamination of PAHs (or other Gasco Sediments Site COCs) is generally not expected.

Per Section 7.2.4.1.2, an additional evaluation of the potential for long-term recontamination from upstream sources of PCBs, DDE, and BaP at smaller spatial scales was conducted. This evaluation focused on modeling evaluations of PCBs, BaP, and DDE conducted for the Portland Harbor draft FS (Anchor QEA 2012a) and example areas that are assumed to be capped under those alternatives within SMA 9U (the Gasco Sediments Site). This evaluation examines how the surface sediment concentrations are expected to change after the capping is complete and suspended sediments from upstream and other sources deposit on the cap surface.

Figures 8.3.3-1 through 8.8.3-3 show the evaluation results, which are excerpted from the Portland Harbor draft FS (Anchor QEA 2012a). The figures present time-series plots of model-projected surface sediment contaminant concentrations in the Gasco Sediments Site for the example cap areas. In these example cap areas, following initial reductions in surface sediment contaminant concentrations from placement of the cap, the post-cap sediment surface contaminant concentrations are projected to increase due to continuing contaminant inputs from upstream. However, these projected increases are lower than current contaminant concentrations in the Gasco Sediment Site and none of the example cap areas exceeded the EPA point estimate RGs for PCBs, BaP, or DDE described in the Portland Harbor draft FS.

Thus, the overall potential for recontamination of caps in any EE/CA alternative appears to be relatively low. The Portland Harbor draft FS (Anchor QEA 2012a) also evaluated the potential for recontamination of downstream areas from upstream remediation dredging, which is not evaluated above. Specifically, the Portland Harbor draft FS indicated that dredging remediation of SMA 14 (near the Arkema site) was projected to cause relatively small increases in DDx surface sediment concentrations at the Gasco Sediments Site under some of the Portland Harbor draft FS Alternatives. However, given the uncertainties of the evaluation and that some measurable recontamination by DDx was projected at the Gasco Sediments Site, the Portland Harbor draft FS recommended that remediation of SMA 14 after Gasco Sediments Site remediation should be carefully evaluated in remedial design before such a sequence is implemented. The potential issue of the Gasco Sediments Site remediation causing potential contamination downstream of the Gasco Sediments Site Area of Interest is discussed more under short-term impacts in Section 8.5.2.

8.3.4 Magnitude of Residual Risk – Minimization of Potential for Groundwater Impacts

As discussed in Section 8.1.3, the combination of upland source control actions, natural reductive dechlorination of CVOCs, active capping in Alternatives 2a through 4 is expected to maintain sediment, surface water, and TZW concentrations below relevant RGs, SQVs, WQS/NRWQC, and alternate guidelines for at least 100 years (Appendix I). Alternative 5 involves full sediment removal and minimal active capping (EE/CA assumes infeasible to remove deeper than 20 feet) in upwelling areas. Consequently, Alternative 5 (and to a greater extent Alternative 1) would be reliant on ongoing natural attenuation of the groundwater plume due to upland source controls to achieve acceptable levels in river media. Therefore, all the alternatives are expected to meet the groundwater RAOs, although Alternatives 1 and 5 rely more on natural attenuation of the groundwater plume due to the upland groundwater source controls.

8.3.5 Magnitude of Residual Risk – Minimization of Potential Downstream Transport

Long-term transport of COCs downstream from the Gasco Sediments Site was evaluated using BaP as a representative COC for each alternative using the fate and transport model. This is relevant to residual risk per the NCP criterion (as well as one of the original SOW RAOs). Figure 8.3.5-1 depicts the projected mass of total BaP exiting the Gasco Sediments Site (at RM 5)

over the 45-year model projection period for each alternative. This figure also shows how much BaP mass is entering the Gasco Sediments Site (at RM 7) for comparative purposes.

The projected mass of total BaP transported downstream is relatively similar across the alternatives including No Action Alternative 1. Alternative 5, which includes the greatest dredging/removal volumes, is projected to result in slightly higher BaP mass transported downstream compared with Alternative 1 due to unavoidable dredging releases. Conversely, Alternatives 2a, 2b, 3, and 4 are projected to result in very similar or small reductions of the estimated BaP mass exiting the Gasco Sediments Site relative to Alternative 1, due to reductions in BaP flux from areas of sediment that are capped under these alternatives. As noted in Sections 5.6.3 and 7.8, the projections for Alternative 5 include the use of sheet pile wall containment barriers, which still allow releases through sheet interlocks, equalization ports, during pile placement and removal, and due to retained water and chemicals being released once the sheet pile containment system is removed at the end of the project.

8.3.6 Adequacy of Controls

This factor assesses the adequacy and suitability of controls, that are used to manage residuals or wastes that remain at the Gasco Sediments Site. All of the alternatives result in some residual concentrations of contaminants at the Gasco Sediments Site, even attempts at full removal in Alternative 5. For all the alternatives, residual contamination will remain beneath dredge residual covers, in-place technologies, or buried beneath natural sedimentation as part of natural recovery. For all alternatives, the controls for these residual concentrations include the physical/chemical barriers provided as part of the technologies (covers, caps, shoreline armoring, and natural sedimentation) as well as institutional controls that ensure the ongoing effectiveness and maintenance of these barriers. Monitoring of dredge residual, in-place technology, and MNR areas is designed to identify any problems with expected controls before or soon after they occur. Monitoring and contingency plans consistent with those described in Appendix T of the Portland Harbor draft FS (Anchor QEA 2012a) are included in the costs of all the alternatives.

Similarly, the alternatives include additional operations and maintenance procedures for caps also consistent with Appendix T of the Portland Harbor draft FS. Capping evaluations indicate that cap armoring (see Appendix Hc of the Portland Harbor draft FS) and contaminant isolation components (see Appendix J of this EE/CA) can be readily designed to minimize movement of underlying contaminants consistently over very long periods. Cap areas would also have

specific institutional controls to prevent human impacts from routine site uses and capping is excluded in all alternatives from Gasco Sediments Site sub-SMAs where maintenance or navigation dredging would take place.

Finally, modeling projections indicate that for MNR, contaminant concentrations within biologically active sediments will decrease over time, and once the projected reduced concentrations are achieved, there is very little potential for buried contaminants to be substantially released by any known mechanism. Per discussions in Section 8.3.1 on flood events, extreme river currents are not expected to substantially alter the course of natural recovery. Extreme flood events are projected to cause minor and temporary (a few years) increases in sediment concentrations in natural recovery areas that quickly recovery to the previous ongoing equilibrium. Capping areas prevent similar temporary erosion and maintain physical isolation of contaminated sediments. Further, per Section 4.6, there is very little buried contamination above the RALs left in place outside the active remedy areas. Thus, maintenance dredging would also not be expected to reveal buried contamination that could alter the projected natural recovery.

8.4 Reduction of Toxicity, Mobility, or Volume through Treatment

Under this NCP criterion, the degree to which each comprehensive alternative reduces toxicity, mobility, or volume through treatment was evaluated. This includes evaluation of the factors described in Section 7.1.

As discussed in Section 5.7, ex situ treatment can include passive gravity dewatering, elimination of free liquids through the application of amendments, and application of amendments with the purpose of reducing the chemical leaching potential of the materials. Removal in Alternatives 2b through 5 include passive dewatering or elimination of free liquids through addition of amendments. The addition of diatomaceous earth amendment is a treatment that reduces the contaminants in free water, which reduces contaminant mobility. Similarly, the addition of treatment amendments such as Portland cement or other pozzolanic material would provide further treatment reducing both contaminants in free water and contaminant leaching in the resulting solid stabilized materials. The volume of sediment removed and treated via dewatering or addition of Portland cement amendment (used as an example pozzolanic material in this EE/CA) is summarized in Table 8.4-1. In general, the larger alternatives which include more removal also include more treatment. Alternatives 2b and 5 provide the most treatment with Portland cement amendment.

For all of the alternatives, toxicity and mobility of contaminants in sediments are reduced by active capping in areas of groundwater upwelling. For the purposes of this EE/CA, the example active capping technology assumed for alternative development was incorporation of organoclay into the cap isolation layer or placement of an organoclay mat. Table 8.4-1 summarizes the areas treated via active capping for each alternative. Alternatives 2a, 2b, and 4 have the greatest areas of active capping. Application of active caps over these acreages would provide a long term reduction of the flux of contaminants by actively adsorbing contaminants into the cap materials. Although the additional area of sediments treated through this technology is relatively minor in comparison to the volume of sediment treated before disposal, active capping is an important aspect of the treatment provided in remedial design in the groundwater upwelling areas of the Gasco Sediments Site.

8.5 Short-term Effectiveness

This criterion is used to evaluate the effects and potentially unacceptable risks associated with alternative implementation considering potential environmental impacts, time until protection is achieved, and protection of the community and workers. This criterion also considers the effectiveness of mitigation measures as noted in the NCP (i.e., measures such as BMPs that are intended to reduce the short-term impacts of the alternatives). Per the NCP, specific considerations in the assessment of short-term effectiveness that are evaluated here are described in Section 7.2.6. Comparative analyses of the alternatives relative to specific short-term impacts are presented below.

8.5.1 Environmental Impacts – Water Quality During Construction

Fate and transport modeling (Appendix E) projects exceedances of WQS/NRWQC during the construction periods, and, as discussed in Section 8.2.1, these exceedances occur infrequently and over small areas. Also, Figures 7.2.2.1-3 and 7.2.2.1-4 show average increases of BaP and naphthalene concentrations during the construction phase of the model simulations for Alternatives 2 through 5 that are generally below relevant WQS/NRWQC as well as alternate water quality guidelines. The duration of these water quality elevations is longer for those alternatives with longer construction durations (Alternatives 4 and 5), extending up to 10 years for Alternative 5. These increases are due to unavoidable dredging-related resuspension and releases to the water column that are expected to occur even with the use of sheetpile containment system in Alternative 5, for reasons discussed in Section 8.3.5. Releases will likely

include those caused by removal of riverbank soils that are included in Alternatives 3, 4, and particularly Alternative 5, which includes bank removal across the entire Gasco Sediments Site shoreline. As discussed in Sections 5.6.3 and 8.3.5, the application of rigid barriers or similar, which are included in Alternative 5, is not expected to appreciably improve the protection of alternatives with more removal and may cause some additional unintended consequences.

Also, Appendix Ia of the the Portland Harbor draft FS (Anchor QEA 2012a) used SMA 9U data (Gasco Sediments Site) to evaluate near-dredge water quality impacts using the USACE DREDGE model. DREDGE model results were compared to the alternate acute aquatic life guideline for BaP (4 µg/L). The Portland Harbor draft FS found there was some limited potential for slightly exceeding the BaP acute alternate guideline within 300 feet of the dredge when very high rates of dredge resuspension were assumed, which could likely be minimized using dredge operational controls (i.e., a slower dredge production rate). There would exist a greater potential for exceedances for alternatives that included greater dredging volumes and durations (i.e., Alternatives 4 and 5).

8.5.2 Environmental Impacts – Downstream Sediment Recontamination During Construction

Based on fate and transport modeling and comparisons with case study results from other environmental dredging sites (Bridges et al. 2010), dredging that is included as a component of all active remedy alternatives is projected to result in localized sediment recontamination of adjacent areas. Environmental dredging resuspension and residuals would generally be limited to within approximately 500 to 1,000 feet of the dredging activity (Bridges et al. 2010).

The Gasco Sediment Site fate and transport modeling projections (Appendix E) were further evaluated to understand the potential for the EE/CA alternatives to cause BaP and naphthalene sediment recontamination downstream of the Gasco Sediments Site. As shown in Table 8.5.2-1, this evaluation indicated downstream post-remediation surface sediment concentration increases of up to approximately 17 µg/kg for BaP and 28 µg/kg for naphthalene, except for Alternative 2a, which has no dredge releases and therefore no increases due to this mechanism. Of the remaining alternatives, Alternative 2b was estimated to have the lowest BaP concentration increases and Alternative 3 to have the highest naphthalene concentration increases, while Alternative 5 was the opposite. The other alternatives achieve concentrations that are mid-range between Alternative 2b, 3, and 5 for both COCs.

8.5.3 Time Until Protection Is Achieved – Time to Achieve RAOs

This section discusses the time until protection is achieved per the NCP, which is estimated as the time to achieve RAOs. Section 3.3 discusses the framework for determining attainment of RAOs by remedial alternatives for this EE/CA. The time to achieve RAOs was evaluated by comparing projected COC concentrations in sediment for each alternative to numeric sediment goals: sediment RGs and SQVs. Each numeric value used is assumed to represent attainment of "acceptable" risk levels as described in Section 3.3.

Consistent with the Portland Harbor draft FS (Anchor QEA 2012a), this EE/CA uses a range of RGs to evaluate acceptable risk ranges, in accordance with guidance, as well as other factors that help put into context any particular point within that acceptable risk range. As such, attainment of acceptable risk levels for each RAO cannot be simply defined as a single numeric value. As discussed in Section 8.3.1, the ranges of potentially acceptable RGs are generally larger than the differences between the projected outcomes of the alternatives. Thus, a relatively wide range of times to meet these RGs (indicating attainment of RAOs) can be estimated.

Table 8.5.3-1 summarizes the ranges of estimated times to achieve sediment RAOs for each alternative by shoreline half river miles for BaP and naphthalene. As discussed above, this spatial scale is the relevant exposure area for the BaP direct contact RGs and provides a reasonable spatial scale for the evaluation of benthic community level risks represented by SQVs. Based on this summary, Alternative 1 has the longest times to attain RAOs, with one exception (attainment of the naphthalene low SQV, where Alternative 4 has the longest time). Alternatives 2a, 2b, and 3 have generally lower times to attain the RAOs across the various RGs and SQVs, and Alternatives 4 and 5 usually have relatively higher times to attain the RAOs.

These time ranges also illustrate the range of outcomes based on EPA discretion with regards to selection of RGs and SQVs. The overall times to achieve RAOs, based on RG/SQV ranges that could represent attainment of acceptable risk levels, often range from 0 to 20 or 30 years for the same alternative, depending on the RG/SQV selected.

For riverbank work, the soils remediation and source control goals are expected to be met once riverbank remedies are constructed, given that exposures will be minimized at that time. For Alternatives 2a, 2b, and 3, much of the Siltronic riverbank area is left in place and is described generally as "MNR" above. Given that soil erosion will not take place in these areas due to the

heavily armored bank conditions, the only riverbank migration pathway in this area would potentially be stormwater infiltration and leaching. However, as discussed above, given that the soils concentrations are relatively low in these riverbank areas, the soils goals are expected to be attained at time zero.

8.5.4 Other Short Term Impacts

As discussed in Section 7.2.6.1, duration of construction is a good surrogate measure for air emissions, quality of life, and worker impacts. In general, all of these impacts are proportionally larger as construction durations become longer. The construction durations calculated in Section 6.5 are as follows:

- Alternative 1 – no construction
- Alternative 2a – 1 construction season
- Alternative 2b – 3 construction seasons
- Alternative 3 – 4 construction seasons
- Alternative 4 – 5 construction seasons
- Alternative 5 – 10 construction seasons

For air emissions, greater durations are associated with greater mass of greenhouse gas and air pollutants due to greater energy requirements associated with greater quantities of removed sediments and soils, volume of sediments and soils disposed of off site, and the quantities of capping and similar materials placed. Therefore, the more removal-based alternatives (Alternative 4, and particularly Alternative 5) are expected to create substantially more air pollutant emissions.

The primary potentially unacceptable community risk during construction would occur through the short-term water quality, downstream transport, recontamination, worker safety, and air pollutant impacts discussed above. In addition, quality of life during the short-term construction phase of the alternatives is also a consideration. Quality of life generally refers to the human use environment, and the potential for each alternative to impact aesthetics, odor and dust, traffic, noise, commercial navigation, and recreation. In general, alternatives with longer construction durations (Alternatives 4, and particularly 5) have substantially larger community quality of life impacts (e.g., longer periods of increased truck and train traffic, odor and dust, and noise).

The Portland Harbor draft FS (Anchor QEA 2012a) illustrated that shorter duration alternatives and/or alternatives with less removal volume are projected to experience less injury and fatality events. This is due to longer construction durations resulting in increased work hours for all construction workers. Work hours increase as greater volumes of material are removed, and to a lesser extent, as more area is remediated in place. Thus, Alternative 4, and particularly Alternative 5, have substantially more worker impacts.

As discussed in Section 7.2.6.1, impacts to business operations and loss of jobs due to tenant disruption and/or business closure is also a community risk. Section 6.4.3 describes that Alternative 4 and 5 lead to significant layback of the riverbank, which would lead to impacts to upland structures and ongoing FAMM and Siltronic business operations. The effects to business operations could lead to loss of jobs and or closure of the operations entirely, which would significantly impact community quality of life.

8.6 Implementability

Section 5 presents a detailed evaluation of the implementability of each of the remedial technologies considered for the EE/CA. Technologies identified as implementable and effective were carried forward and used as part of the remedial alternatives presented in Section 6. Per the NCP and FS guidance (EPA 1988, 2005) implementability includes:

- Technical feasibility
- Administrative feasibility
- Availability of services and materials

In general, the ease of implementation for all these factors decreases as the alternatives become larger and more complex, involving more area, increasing volumes and duration, and remedial components. Therefore, as discussed in Section 7.2.7, duration is a good overall surrogate for the implementability issues associated with any given alternative. Thus, overall Alternative 4, and particularly Alternative 5, is expected to have substantially greater implementability issues as compared to the other alternatives.

However, as discussed in Section 7.2.7.1, duration alone does not accurately capture all of the implementability issues. Alternatives 4 and 5 include significant volumes of the riverbank removal, which either directly or indirectly impacts upland structures and business operations, as described in more detail below.

The Portland Harbor draft FS (Anchor QEA 2012a) has extensive reviews of the various implementability issues raised with increasingly complex and longer duration alternatives, which are also applicable to the Gasco Sediments Site. Some particular implementability issues that are important to the Gasco Sediments Site EE/CA alternatives include:

- Alternative 5 includes the additional elements of dock removal, dredging in the dock footprint, and reconstruction of the docks. These efforts will add substantial complexity and types of equipment, personal, and disposal that will need to be utilized on this alternative. In addition, Gasco Sediments Site uses will need to be suspended or relocated during the duration of these operations, creating large-scale logistical considerations. Further, removal of docking structures would impact tenant business activities, including shipping and transportation, and have considerable associated economic and operational impacts, which are not evaluated in the EE/CA.
- Alternative 5 includes the use of sheetpile walls, which will add an additional large phase to the project, both before and after actual sediment remediation takes place. The sheetpiles will have to be precisely placed around existing dock structures to allow dock operations to continue, or dock operations would need to be discontinued causing additional logistical issues. Also, the sheetpile wall design will need to address problems typically associated with placing sheetpiles in deep water in an active river with removal directly adjacent to the piles. In addition, installation and removal of sheetpile would have to occur during in-water work windows, and would therefore decrease the already short window of time allowable for dredging. Depending upon the water depths and river flow characteristics, sheetpile deployment could be required annually with a decrease in available work time for actual sediment removal.
- Alternative 4, and particularly Alternative 5, include substantial bank removal and reworking (Figures 6.1-4 and 6.1-5), which will:
  - Add substantial new elements of shoreline work and equipment, some of which may have difficulty accessing the shoreline areas due to existing upland facilities.
  - Result in partial or complete reconstruction of the upland groundwater control wells, and if in place at that time, the Fill WBZ trench.
  - Impact the Siltronics Fab 1 building directly due to likely structural undermining of the building foundations and potential damage, requiring temporary or permanent shutdowns and permanent loss of business.

  - Impact the Siltronic Fab 1 and Fab 2 buildings indirectly due to vibration-related impacts that will require temporary shutdowns and permanent loss of business.
  - Impact to the FAMM tanks and buildings, which could cause a shutdown of operations, loss of jobs in both the short- and long-term, or additional work to ensure tank and building stability and safety with associated economic and operation impacts.
  - Impact the Gasco and Siltronic property stormwater outfalls that discharge through the riverbank.
  - Impacts to electrical utilities, fire water suppression lines, and access roads.

- Alternative 4, and particularly Alternative 5, include in-water removal of deep subsurface sediments. For the purposes of this EE/CA, 20 feet of removal is considered the feasible maximum for such work, which will cause potential issues of temporary slope instability that will need to be carefully managed. They also include removal of significant portions of the Gasco and Siltronic riverbank.
- Under Alternative 4, large scale removal around the U.S. Moorings and Gasco docks may cause dock instability, impacts to business operations, and may require additional measures to ensure the stability of the existing dock.
- Alternatives 2a through 4 will require capping under docks, which, compared to removal, is relatively easier to implement. The caps would be expected to remain in place for the life of the docks, which is well beyond the 30-year timeframe of the cost estimates of this EE/CA. If, at some point in the future, the docks were removed or modified, any under-dock cap affected would need to be reconstructed. Reconstruction of new caps around new docks is relatively easy to implement, similar to the original capping procedures.
- Given that Alternative 2a relies on MNR in the navigation channel and in front of the Gasco dock, there may be some implementation issues related to any potential future maintenance dredging in the navigation channel or in front of the Gasco dock. However, many portions of the navigation channel in Portland Harbor are not currently maintained to their full depth, because the existing water depths support all ongoing uses in those areas. The channel in front of the Gasco dock is one such area, and there is no need under the current operating conditions to deepen this area to support ongoing or future anticipated uses.

8.7 Cost

Costs were estimated for the different alternatives following methods described in Appendix J. Per the NCP, capital costs, including both direct and indirect costs, annual operation and maintenance costs, and net present value of capital and operations/maintenance costs are included in the estimates. Costs were also estimated for habitat mitigation and project development construction costs (i.e., owner construction management and oversight, agency oversight, contractor construction management, engineering support during construction, and special insurance/bonding). Low and high cost ranges are provided to account for some of the uncertainties in the EE/CA-level cost estimates. The elements factored into the cost uncertainties are discussed in Appendix J.

As discussed in Section 6.4.3 and Section 8.6, construction of Alternatives 4 and 5 would lead to a number of implementability issues that could affect the costs presented in this EE/CA. Specifically, the costs presented in this EE/CA do not account for:

- Protection, repair or replacement of upland Siltronic and Gasco structures (Fab 1 building, FAMM tanks and associated support structures and buildings, roadways, and electrical conduit).
- Potential repair or relocation of the upland groundwater control wells and Fill WBZ trench (if in place at that time).
- Implementation of additional measures to ensure the stability of the existing U.S. Moorings and Gasco docks during dredging performed as part of Alternative 4.
- FAMM and Siltronic operations disruptions and associated loss of revenue.

These additional cost elements were not estimated due to the findings presented in Sections 7, 8, and 9 of this EE/CA that show that Alternatives 4 and 5 do not provide additional long-term risk reduction and are cost disproportionate relative to Alternatives 2a, 2b, and 3 (see Figure 9.2.3-1 and Figures 9.2.8-1 through 9.2.8-3) and are therefore already not cost-effective. If EPA selects Alternative 4 or Alternative 5 for remedial design consideration, these additional factors would have to be more thoroughly evaluated for both feasibility and cost.

Table 6.6-1 presents the estimated cost ranges for each alternative and Figure 8.7-1 graphically presents the cost ranges. These costs are net present value costs using a discount factor of 2.3 percent, per EPA guidance (EPA 2000) and the Portland Harbor draft FS (Anchor QEA 2012a), using the estimated construction duration and long-term monitoring, maintenance, and

institutional control schedule (Appendix J). As can be seen in the table and figure, as the scope, size, and duration of the project increases, the costs also increase.

9 CONCLUSIONS

This EE/CA provides the necessary information and tools for EPA to evaluate the alternatives for sediment remedies at the Gasco Sediments Site based on the NCP criteria and select an alternative for design development. This section presents:

- A review of how the EE/CA addresses the SOW risk management framework, including the specific aspects of the framework related to consistency with national risk management principles and guidance for remedy selection at contaminated sediment sites.
- A summary of conclusions of the comparative evaluation of alternatives relative to the NCP criteria for remedial alternative selection, including comparing and contrasting the costs and benefits of the various alternatives as part of the risk management framework.

9.1 Risk Management Framework

As detailed in Section 1.2.5 and consistent with the SOW, the EE/CA alternatives evaluation uses a risk management framework that is consistent with EPA guidance (EPA 1988; 2002b; 2005) on developing sediment remedies and supported by the risk lines of evidence used in the Portland Harbor draft FS (Anchor QEA 2012a). The following subsections briefly review how the EE/CA is consistent with both recent guidance and SOW risk management framework approaches noted in Section 1.2.5.

9.1.1 EPA Guidance

EPA has recently developed two guidance documents specific to sediment remediation decision-making, including:

- EPA's 11 Risk Management Principles Memorandum, which was developed to provide guidance to site managers in, "making scientifically sound and nationally consistent risk management decisions at contaminated sediment sites" (2002b).
- EPA's (2005) Contaminated Sediment Remediation Guidance for Hazardous Waste Sites, which embodies national EPA policy on contaminated sediment, the focus of which is to reduce potentially unacceptable risks to human health and the environment posed by contaminated sediment sites. There are six key principles in this guidance document.

These 17 principles, in total across these two documents, are addressed by this EE/CA as follows:

1. **Control sources early** – The upland groundwater source control is in final design and starting the implementation stage. This system will provide hydraulic containment of contaminants in groundwater, removing them as a potential source to the river sediments well before the sediments remedy is implemented. In addition, the ISCR-enhanced bioremediation system installed in the Siltronic CVOC source area has effectively removed 99 percent of the CVOC source material. Potential riverbank sources such as erosion, Fill WBZ groundwater transport, or surface water infiltration and leaching will be controlled as an integrated part of any of the alternatives in this EE/CA that may be eventually selected. (It is important to reiterate that selection of Alternatives 4 and 5 will necessarily delay integration of riverbank source control measures.) Stormwater sources will be identified and controlled, as needed, as part of the upland FS and remedy, and temporary stormwater controls will be implemented if necessary to allow sediment remedy implementation to proceed on schedule.
2. **Involve the community early and often** – Public involvement activities conducted throughout the Portland Harbor RI/FS process have kept the community informed on the overall Portland Harbor Site remedy as well as activities in specific areas. As the Gasco Sediments Site remedy design is developed, it will be incorporated into the Portland Harbor Site-wide Proposed Plan and ROD, including already-planned public involvement activities during that process.
3. **Coordinate with States, Local Governments, Tribes, and Natural Resource Trustees** – This principle is administered by EPA and has been accomplished through ongoing EPA coordination with these "partner" entities on all project developments.
4. **Develop and refine a conceptual site model that considers sediment stability** – The Portland Harbor CSM (Section 2.6 of the Portland Harbor draft FS (Anchor QEA 2012aa) is based on numerous detailed Portland Harbor Site-specific RI/FS investigations that comprehensively describe sediment stability. This CSM was examined in this EE/CA in the Gasco Sediment Site Area of Interest and further refined in Section 4.4 using multiple datasets and independent LOEs. These LOEs consistently indicate that the Gasco Sediments Site has substantial depositional areas, particularly in areas of elevated contaminant levels on the margins of the navigation channel while areas further in the channel are most likely in dynamic equilibrium (alternating deposition and erosion) or erosional. This spatial variability in sediment stability and its potential impact on alternative effectiveness was addressed through detailed modeling of sediment transport processes and additional evaluations consistent with Portland Harbor draft FS approaches.

5. **Use an iterative approach in a risk-based framework** – The 2005 Removal Action was the first step of remediation at the Gasco Sediments Site. Lessons learned from that removal action and similar sites throughout the United States have provided valuable information to further inform risk-based evaluations. For example, remedial alternatives that rely primarily on dredging to achieve risk-based goals have demonstrated practical limitations as a result of the effects of sediment resuspension and residuals (Bridges et al. 2010), even when barrier controls are included. This was seen in the 2005 Removal Action where, despite an extensive silt curtain system, dredging releases were observed and post dredging necessitated the use of fringe cover to control the impacts of dredge residuals. These considerations have been accounted for in the development and evaluation of the alternatives.
6. **Carefully evaluate the assumptions and uncertainties associated with site characterization data and site models** – Extensive data collection and evaluation efforts have sufficiently reduced uncertainty of the Portland Harbor FS CSM as applied to the Gasco Sediments Site to evaluate remedial alternatives for this EE/CA. These data evaluations were supplemented with a comprehensive predictive model designed to address the spatial variability of Gasco Sediments Site conditions and estimate the short-term construction impacts and long-term risk reductions resulting from each EE/CA alternative. The Gasco Sediments Site characterization data and modeling results both reveal that the Gasco Sediments Site is recovering naturally in many areas, and that focused remedial actions can accelerate the rate of recovery. The Portland Harbor contaminant fate/transport model provides an objective quantitative framework to support detailed evaluations of EE/CA alternatives and is supported by and developed with extensive Gasco Sediment Site and Portland Harbor empirical data. The Portland Harbor draft FS (Anchor QEA 2012a) provides a quantitative assessment of this model's uncertainty, accuracy, and reliability, which indicates that these uncertainties are small enough to allow alternative evaluation and selection.
7. **Select site-specific, project-specific, and sediment-specific risk management approaches that will achieve risk-based goals** – EPA's policy is that there is no presumptive remedy, even for sites with substantial product. As a result, remedial alternatives that vary across a range of cleanup goals and technologies applied were evaluated to determine reduction in risks that may be achievable under each alternative. Based on the results of these evaluations, a combination of dredging, in place technologies, and MNR technologies is projected to be an effective approach for achieving the RAOs (with institutional controls needed to manage residual risks). All of

the comprehensive alternatives are projected to achieve the same long-term risk levels, with some differences in how quickly those levels would be achieved.

8. **Ensure that sediment cleanup levels are clearly tied to risk management goals** – RAOs that describe the desired results of the remedy—reduction of unacceptable risks to human health and ecological receptors—have been developed for the Gasco Sediments Site. Metrics specifically tied to each RAO were used to evaluate projected changes to surface sediment and water column contaminant concentrations resulting from implementation of each potential remedial alternative using detailed, Gasco Sediments Site-specific modeling supported by the extensive empirical data. Final cleanup levels will be determined by EPA based on risk management principles, the NCP, and the information presented in this EE/CA.
9. **Maximize the effectiveness of institutional controls and recognize their limitation**s – All of the alternatives evaluated include institutional controls, particularly for in place technology and riverbank remedy areas where restrictions will be placed on activities that could disturb these areas. Detailed institutional control plans will be developed for the selected alternative during remedial design. These types of institutional controls have been successfully implemented at a wide range of sediment cleanup sites, both regionally and nationally.
10. **Design remedies to minimize short-term risks while achieving long-term protection** – The alternatives evaluated in this EE/CA highlight the tradeoffs associated with unavoidable short-term risks associated with larger and more dredging-intensive alternatives and long-term protection provided by a range of remedial technologies. Alternatives have been developed that achieve similar long-term risk reduction. The alternatives differ significantly in short-term risks during construction, including increases to contaminant concentrations in sediment and water during dredging, air and GHG emissions, construction worker risks, quality of life impacts on local communities, business interruption, and habitat disruption. Both the magnitude and extent of these short-term risks are tied closely to the dredging volumes associated with each alternative and the durations over which those volumes are removed, regardless of dredge management and containment technology.
11. **Monitor during and after sediment remediation to assess and document remedy effectiveness** – Monitoring during and after sediment remediation to assess and document remedy effectiveness and identify contingency actions is assumed and included in cost estimates for all of the EE/CA alternatives. Short- and long-term monitoring data can be evaluated against performance metrics, and appropriate

contingency actions (such as dredging, capping, in situ treatment, or EMNR) may be implemented as identified in the final decision documents.

12. **The focus of remediation should be on risk reduction, not simply on contaminant mass removal** (EPA 2005 – p. 7-1, 7-16). This principle is based on the consideration that contaminated sediment that is not bioavailable or bioaccessible and reasonably stable, meaning that the contaminants are unlikely to be released from the sediment in concentrations that would pose an unacceptable risk to human health and the environment, does not necessarily contribute to site risks (EPA 2005 – p. 7-3). Mass removal, therefore, does not equal risk reduction. Consistent with this principle, the EE/CA alternatives include a range of alternatives from a mostly in-place technology remedy (with capping as a representative process option for the EE/CA) to various combinations of dredging and in-place containment to a full mass removal. It was found that additional mass removal does not equate to additional risk reduction as defined by the RAOs.
13. **An evaluation of the potential effectiveness of each remedial technology (dredging, capping, MNR, etc.) should be incorporated into the selection of remedies at a site** (EPA 2005 – p. 7-3). The extensive series of investigations, empirical data, and detailed modeling of a range of alternatives incorporating various combinations of remedial technologies was conducted for this EE/CA consistent with this principle.
14. **An appropriate evaluation of the comparative net risk reduction potential of the comprehensive alternatives, including a realistic evaluation of their respective advantages and site-specific limitations should be conducted, including the risks introduced by implementing the alternatives** (EPA 2005 – p. 7-13, 7-14). For example, the risks associated with implementing a dredging remedy include unavoidable contaminant resuspension and releases during sediment removal, continued exposure to contaminants during the construction and implementation phases, residual contamination, disruption of the benthic community, worker risk during sediment removal and handling, and community impacts including accidents, GHG emissions, business interruption, and quality of life considerations. Further, these risks all become greater as the size of the alternatives and volume of dredging increases. These considerations were identified and discussed in the comparative evaluation of short-term effectiveness and comparative net risk reduction is discussed under overall protection and long-term effectiveness.
15. **Consideration of the use of combinations of remedies may be appropriate** (EPA 2005 – p. 7-3). All of the EE/CA alternatives (except for Alternative 5) are consistent with the

combination remedy approach, and use different combinations of dredging, in place technologies, and MNR to highlight the tradeoffs associated with different technologies and remedial goals.

16. **Monitoring and contingency planning concepts, which involve a stepwise approach to remediation, should be applied where appropriate** (EPA 2005 – p. 2-22, 3-1, 7-16). As noted above, the 2005 Removal Action provided important information for the Gasco Sediments Site remedy design. Monitoring and contingency planning concepts have been incorporated into all of the EE/CA alternatives and can continue to be refined during remedy design and implementation.
17. **Comparing and contrasting the costs and benefits of the various remedies is part of the risk management decision-making framework**. "*Another important risk management function generally is to compare and contrast the cost and benefit of various remedies*" (EPA 2005 – p. 7-1). The comparative analysis of risk reduction benefits versus project costs and construction durations for the Gasco Sediments Site is discussed in more detail in Section 9.2.

9.1.2 SOW Risk Management Framework

Per Section 1.2.5, the SOW lists several risk management-related approaches that are specifically important to the EE/CA and eventual design. How each approach is addressed in the EE/CA is summarized below.

1. **The Project Area boundary will be consistent with the Portland Harbor Site risk assessments**. As detailed in Section 4, the interim Project Area is developed entirely consistent with the risk LOEs in the Portland Harbor draft FS (Anchor QEA 2012a). Differences in Portland Harbor draft FS SMA 9U (this area) and the Gasco Sediments Site interim Project Area are primarily due to additional data collection for this EE/CA and additional evaluations of those data in a manner that is consistent with Portland Harbor risk-based approaches.
2. **Remedial alternatives will be evaluated with regard to total net risk reduction within the overall framework of the NCP remedy selection criteria**. The EE/CA addresses this approach as discussed for Principle 12 in the previous subsection.
3. **The Portland Harbor Site risk assessment protocols, procedures, data, and outcomes will be used whenever possible to set Project Area boundaries and evaluate risk reduction**. As a result, the EE/CA interim Project Area is defined completely consistent with the Portland Harbor Site-wide process and EE/CA alternatives are evaluated using

the same metrics of risk reduction as presented in the Portland Harbor draft FS (Anchor QEA 2012a).

4. **Remedial alternatives will be evaluated for long-term effectiveness for a range of technologies including dredging, capping, and Monitored Natural Recovery (MNR)**. The EE/CA addresses this approach as discussed for Principle 13 in the previous subsection.
5. **Remedial alternatives will include combinations of technologies that are tailored to physical, chemical, and other conditions in the Project Area**. As discussed in Sections 4 and 5, the implementability and effectiveness issues of each potential remedial technology is compared to the Gasco Sediments Site-specific site use, physical, and chemical conditions (which are used to break the site into sub-SMAs) to determine where each technology can most appropriately be applied in an effective and implementable manner for each alternative.
6. **The short-term risks (e.g., sediment resuspension, waterborne releases, and dredge residuals) posed by dredge methods and removal of various containment systems (i.e., sheetpile wall) will be evaluated**. The EE/CA addresses this approach as discussed for Principle 14 in the previous subsection
7. **Because some of the risk is related to biota exposures, migration pathways, bioavailability, and future exposure (e.g., sediment stability under various river current and vessel propeller scour conditions) will be evaluated when predicting risk reduction.** Potential future exposures are evaluated via use of the empirical data supported fate and transport model, which includes a large flood event to determine whether any alternative would result in unacceptable exposure or loss of contaminants due to river currents. Sections 7 and 8 use these evaluations to determine the long-term sediment concentrations provided by each alternative. Further, per Sections 4 and 5, the potential for other forces (e.g., maintenance dredging, propwash, wave action) to expose contamination is also assessed and factored into sub-SMA development including addition of buried contamination that is likely to be exposed to active remedy areas and consideration of propwash and wave effects on technology implementability screening decisions.
8. **Future exposures and risks posed by the potential presence of mobile product in sediment will be evaluated**. The overall potential for contaminant exposure is addressed as described for approach 7. In addition, to recognize the specific potential issues associated with DNAPL in shallow sediments, DNAPL versus other types of substantial product are differentiated in site core observations and used to focus

alternative development (i.e., Alternative 3) and evaluate the potential impacts of DNAPL on containment technologies (i.e., active capping discussions in Section 5).

9. **Removal of "substantial product" (as defined in SOW Section 3.6.2.1) from the Project Area for off-site disposal, where consistent with the other risk management framework approaches, will be preferred (as that term is defined in the SOW)**. Consistent with the SOW, substantial product was identified and delineated for the interim Project Area and used to define areas and volumes of sediments meeting this definition. The EE/CA alternatives were developed to span a range remedial approaches for these substantial product areas and volumes such that the cost effectiveness (i.e., cost versus long term risk reduction and short term risks posed) of the preference for removal (as compared to not removing substantial product) could be comparatively evaluated, including whether costs of removal are disproportionate (per the SOW) to any increased effectiveness.

9.2 Summary of Comparative Analysis of Alternatives

Six alternatives were evaluated against the NCP criteria in Section 7 and compared to one another in Section 8. The types and relative application of the technologies in each alternative are summarized in Figure 9.2-1. All of the active remedy alternatives (Alternatives 2a through 5) except Alternative 2a include dredging/removal (sometimes followed by capping) in more than half the interim Project Area. Alternatives 2b and 3 are a relatively balanced combination of dredging/removal and in place technologies/MNR. Alternative 4 is predominantly dredging/removal, sometimes with capping after the removal component, and Alternative 5 is entirely dredging/removal with a little capping after removal.

All of the alternatives are projected to be protective of human health and the environment; differences in the overall protectiveness of the alternatives are largely in the context of short-term effectiveness, implementability, and in the timing of substantial risk reductions that lead to attaining a range of RGs/SQVs associated with the RAOs. The major differences among the comprehensive alternatives are due to: 1) smaller versus larger volumes actively remediated; and 2) more reliance on removal for the larger alternatives as compared to combinations of removal, in place technologies, and MNR for the smaller alternatives.

Table 9.2-1 summarizes the comparative analysis on a 10 point scoring scale for the balancing criteria. The scoring methods and metrics are consistent with the Portland Harbor draft FS (Anchor QEA 2012a; see Appendix U) with the exception that the short-term effectiveness and

implementability scoring took into consideration the impacts associated with the impacts identified in Section 8.6. In many cases, the comparative evaluation did not identify substantial differences in long-term effectiveness. In contrast, evaluations of short-term effectiveness, implementability, and cost distinguish differences among the alternatives.

The following sections summarize the key points of the comparative analyses and performance of the remedial alternatives related to CERCLA and NCP requirements. Note that NCP modifying criteria—state/Tribal and community acceptance—are not discussed below; they will be evaluated by EPA after the EE/CA is completed and will include consideration of formal public comments on the Portland Harbor Site Proposed Plan.

9.2.1 Overall Protection of Human Health and the Environment

Overall, protection is primarily determined by attainment of the RAOs using the metrics discussed in Sections 3.3, 7.2.2, and 8.1.

The alternatives that rely more on dredging/removal have higher impacts to human health and the environment in the short term and they would result in longer durations of elevated water column concentrations and downstream loss. Residual risks achieved by the alternatives are summarized below:

- Over the long term, all of the alternatives are projected to be similarly protective of human health and the environment. This is reflected in the projected long-term surface sediment concentrations and the ability of the riverbank technologies to either minimize exposure or remove contaminants posing potential risks or sources. Over the long-term, all of the comprehensive alternatives are projected to achieve similar levels of human health protection, with excess cancer risks below 1 in 1,000,000 (10^{-6} magnitude risk) and ecological HQs less than 1. Both cancer and non-cancer risk reductions achieved by all of the comprehensive alternatives are generally within the acceptable risk range for CERCLA and the Oregon Environmental Cleanup Law and are similar across all alternatives.
- As discussed in Section 7.2.1, the RGs and SQVs are expressed as individual point estimates mostly for convenience in the initial analysis of alternatives. However, the exposure scenarios on which the RGs are based are a combination of many parameters and represent a range of values with varying probabilities. Similarly, the SQVs range over considerable concentrations depending on the toxicity endpoint being used.

Consequently, the evaluation of protectiveness needs to recognize there may not be substantial differences in protectiveness even across large concentration ranges.

- Implementation timeframes are longer for dredging than for other remedial technologies applied over a similar area, and alternatives with larger dredge volumes and longer timeframes would result in greater short-term risks related to construction duration (e.g., water quality impacts, air emissions, worker safety, and quality of life).

Also, the time to attain the RAOs is relatively similar between the alternatives. However, Alternatives 2a, 2b, and 3 achieve RAOs consistently faster than Alternatives 4 and 5.

Evaluation of achievement of RAOs and long-term residual risks under each comprehensive alternative was based on modeling projections, supported by extensive site data, and comparisons with a range of risk metrics. Uncertainties associated with the modeling and the risk metrics are discussed more in the Portland Harbor draft FS (Anchor QEA 2012a). Overall, the uncertainties in the modeling are expected to be relatively small as compared to the uncertainties in the risk metrics.

In summary, all alternatives provide overall protection of human health and the environment in the long term with some differences in how quickly that protection is achieved.

9.2.2 Compliance with ARARs

ARAR compliance under the comprehensive alternatives is summarized below:

- All of the alternatives comply with ARARs.
- All the alternatives are expected to achieve similar surface water concentrations that are below WQS/NRWQC and not distinguishable from existing conditions. Some unavoidable but infrequent and localized exceedances of WQS/NRWQC are projected to occur under all the alternatives, with the frequency being slightly higher for the larger alternatives.
- All alternatives are expected to achieve residual risk levels that comply with Oregon Cleanup Law and all alternatives remove or treat high concentration areas consistent with the intent of the Oregon hot spot rules.
- All alternatives also likely comply with other important ARARs including ESA, 404[b][1], FEMA flood regulations (although compliance with FEMA regulations cannot be confirmed at this time).

9.2.3 Long-term Effectiveness and Permanence

Long-term effectiveness and permanence considers the magnitude of residual risks that would remain on site after the RAOs have been achieved and the adequacy and reliability of controls that can be used to manage these residual risks. The comparative analysis is summarized below:

- Residual risks remaining at the Gasco Sediments Site under all of the alternatives are similar based on model projections, and all of these alternatives are projected to achieve similar risk levels below the most stringent acceptable risk levels. As summarized in Figure 9.2.3-1, under all of the alternatives except Alternative 2a and 2b, natural recovery processes are projected to achieve the majority of progress toward BaP reductions and associated residual risks over the long term. The results for naphthalene are similar, and both COCs together are expected to be representative of outcome for Gasco Sediments COCs in general.
- For riverbank remediation, all of the active remedy alternatives are expected to achieve similar residual risks through either reduction in exposures to or removal of contaminants in riverbank soils.
- Uncertainty in the residual risk from surface sediment is largely associated with the sedimentation rate and stability of incoming sediment from upstream sources in the Lower Willamette River. Ultimately, surface sediment contaminant concentrations are expected to converge to levels similar to the quality of incoming sediment from upstream (which is well characterized) combined with other inputs (which are more uncertain), resulting in similar levels of potentially unacceptable risk over time for all the alternatives.
- All of the alternatives (except Alternative 1) would include a set of controls consisting of monitoring, maintenance, institutional controls, and periodic reviews (e.g., every 5 years) for both sediments and riverbank soils. Notification to waterway users, review of USACE construction permit applications, and where appropriate, the use of restrictive covenants or similar controls such as U.S. Coast Guard RNAs to avoid disturbance of subsurface contamination would be required to varying degrees for all of the active remedy alternatives.
- Although all of the alternatives ranked similarly with respect to the overall evaluation of long-term effectiveness and permanence, the Alternatives that use in-place technologies in addition to or instead of removal technologies (Alternatives 2a, 2b and 3) ranked

higher than the other alternatives because they provide a higher level of overall risk reduction. This is because Alternatives 2a, 2b and 3 produce fewer releases and residuals during construction as compared to alternatives with more removal, which cause ongoing elevations in sediment and water over a timespan that is relevant to long term effectiveness (i.e., up to 10 years).

9.2.4 Reductions in Mobility, Toxicity, or Volume through Treatment

This criterion considers the treatment processes used and materials treated; amount of hazardous materials destroyed or treated; degree of expected reductions in toxicity, mobility, and volume; degree to which treatment is irreversible; and type and quantity of residues remaining after treatment. The use of institutional and engineering controls is also acceptable for the lower level risks at a site (40 CFR Section 300.430[a][1][iii]). The comparative analysis is summarized below:

- Removal in all of the active remedy alternatives includes passive dewatering or treatment through addition of amendments, which reduce contaminants in free water and thereby reduce contaminant mobility. The addition of Portland cement or other pozzolanic material amendments would provide further treatment reducing both contaminants in free water and contaminant leaching in the resulting solid stabilized materials.
- For all of the alternatives, toxicity and mobility of contaminants in sediments are reduced by in-situ treatment of active capping in areas of groundwater upwelling.
- Per Table 9.2-1, Alternative 5 achieves a slightly higher level of treatment through the large amount of post removal dewatering and stabilization. Alternatives 2a through 4 achieve a slightly lower amount of treatment, however still incorporate significant amounts of treatment through a combination of dewatering/amendment addition, except for Alternative 2a, and a greater amount of active capping as compared to Alternative 5.

9.2.5 Short-term Effectiveness

Short-term effectiveness is a measure of the time required to achieve the RAOs and the risks and impacts that may occur during implementation of the alternative. Each comprehensive alternative was evaluated relative to protection of the community, workers, and the environment during implementation. The comparative analysis is summarized below:

- The alternatives with more dredging have higher and longer duration short-term risks associated with sediment and surface water releases.
- These releases are highest for Alternative 5. Although this alternative includes sheetpile controls, these are not expected to fully control the projected short term water quality impacts due to releases that will occur during sheetpile placement and removal, losses through sheetpile interlocks and equalization ports, and loss of retained water once the sheetpile system is removed.
- Those comprehensive alternatives with longer construction durations (in this case, as long as 10 years) and greater dredge volumes present proportionately larger risks to workers, the community, and the environment and therefore rank lower for short-term effectiveness factors. Longer construction durations significantly impact water and air quality and increase equipment/vehicle emissions, noise, and other resource use. Similarly, the significant riverbank removal in Alternatives 4 and 5 and associated impacts to upland structures and business operations are likely to require temporary or permanent shutdown to business operations, which would further increase short-term risk to workers and negatively impact quality of life.
- The time to attain RAOs is relatively similar across all the alternatives, but Alternatives 2a, 2b, and 3 have generally lower times to attain the RAOs and Alternatives 4 and 5 usually have relatively higher times to attain the RAOs.
- Alternative 2a ranked the highest for short-term effectiveness (Table 9.2-1) given its shorter duration and absence of water quality releases due to dredging. Differences in these rankings are based on the relative construction durations (shorter durations for dredging-related impacts). In comparison, implementation of Alternatives 4, and particularly 5, would result in greater environmental impacts (e.g., water quality, sediment recontamination, and greenhouse gas emissions during construction), longer construction durations, and greater community/worker impacts.

9.2.6 *Implementability*

This criterion considers reliability of the remedial technology, the technical and administrative ability to implement each alternative, and other related implementability factors. Each of the alternatives involves various combinations of technologies that on their own have been successfully implemented at numerous sites throughout the northwest and across the United States. The required equipment and appropriately skilled personnel are readily available and coordination of the activities among implementing parties and agencies can be achieved, particularly for the alternatives with higher RALs, and smaller areas of active remedy.

However, the larger and longer duration alternatives are more complex and less implementable. Based on the comparative analysis:

- Alternatives with shorter durations for construction would be easier to implement for most issues through the end of the construction period than those with longer construction periods. This reduces the overall level of difficulty both technically and administratively (e.g., coordination with agencies and other stakeholders) and the potential for technical problems leading to schedule delays.
- Alternatives 4, and particularly 5, include additional volumes of sediment/soil removal and additional construction elements that will significantly limit implementability, including:
  - Dock removal and reconstruction (Alternative 5), which would result in economic and operational impacts to water dependent business activities (these impacts are not incorporated into the EE/CA cost analysis)
  - The use of sheetpile walls (Alternative 5)
  - Substantial bank removal and reworking
  - Additional shoreline equipment access issues
  - Partial or complete reconstruction of the upland groundwater control wells, and if in place at that time, the Fill WBZ trench (these impacts are not incorporated into the EE/CA cost analysis)
  - Impacts to the Siltronics Fab 1 building, access road, electrical/sewer/water lines, stormwater/wastewater outfall both directly or through vibrations, causing facility shut downs, business interruption, and additional work to ensure building stability (these impacts are not incorporated into the EE/CA cost analysis)
  - Impacts to the FAMM tanks and fuel and coal tar pitch pipelines and associated business interruption, and additional work to ensure the tank stability
  - Potential issues of temporary slope instability
  - Large-scale removal around the docks that may cause Gasco and U.S. Mooring dock instability (Alternative 4 - this impact is not incorporated into the EE/CA cost analysis)
- Alternative 2b ranked highest under this criterion because it has the least implementability issues and Alternative 5 ranked lowest due to the large number of implementability issues created. Alternative 2a ranked slightly lower than Alternative 2b due to the potential logistical issues related to relying on MNR throughout the navigation channel. Alternative 1 was ranked in the middle in consideration of the

potential regulatory implementability issues resulting from not completing any remediation.

The implementability scoring summarized in Section 9.2.9 takes into consideration all of the above implementability factors, including the significant upland structure and business interruption impacts caused by Alternatives 4 and 5.

9.2.7 Cost

The comprehensive alternatives differ significantly in their projected costs:

- Alternative 5 has the highest cost range (approximately $245 to $350 million) and therefore ranks the lowest for this criterion (Table 9.2-1). The estimated costs for the other active remedy alternatives range from Alternative 2a (approximately $34 to $40 million) up to Alternative 4 (approximately $134 to $202 million).
- Alternative 2a has the lowest cost range of the active remedy alternatives and therefore ranked best for the cost criterion.

As detailed in Section 6.6 and 8.7, the cost ranges for Alternatives 4 and 5 are are considered conservative (low) as they do not capture the significant costs associated with impacts to upland structures and business interruptions and potential job loss. If EPA selected these alternatives than additional evaluations would need to be completed to determine these additional costs.

9.2.8 Cost-Effectiveness

As discussed above, a key objective under NCP is to develop an efficient, coordinated, and cost-effective remediation response for the Site. As discussed in various guidance and laws:

- Comparing and contrasting the costs and benefits of the various remedies is part of the risk management decision-making framework, "*Another important risk management function generally is to compare and contrast the cost and benefit of various remedies*" (EPA 2005 – p. 7-1)
- 40CFR300.430(f)(ii)(D) states that "*Each remedial action selected shall be cost-effective; cost-effectiveness is determined by evaluating long-term effectiveness and permanence, reduction of toxicity, mobility or volume through treatment, and short-term effectiveness to establish overall effectiveness. Overall effectiveness is then compared to cost to ensure that the remedy is cost-effective. A remedy shall be cost-effective if its costs are proportional to its overall effectiveness.*"

Evaluations of cost-effectiveness can provide a useful measure that compares several of the balancing criteria including long-term effectiveness, short-term effectiveness, and costs.

For this evaluation, several representative measures of short- and long-term effectiveness were developed based on projections of the time-averaged BaP sediment SWACs over the first 30 years after cleanup begins. This measure is useful because it provides a projection of the overall potential risk to the next generation of people that would be exposed to Gasco Sediments Site media during and/or immediately following remedy implementation, and is based on the Portland Harbor Site BHHRA 30-year exposure period for human health exposure scenarios.

These time-averaged measures of overall effectiveness were compared to both cost and construction duration of each alternative to provide an overall evaluation of cost-effectiveness. Figures 9.2.8-1 and 9.2.8-2 compare overall total BaP sediment projections to cost and duration for each alternative. The comparative evaluations represented in these figures reveal that the larger alternatives with greater dredge volumes would provide less overall effectiveness, primarily because they would generate more releases of contaminants over significantly longer construction durations and at greater cost. The greatest degree of overall effectiveness is achieved under Alternatives 2a, 2b, and 3, which correspond to total costs of approximately $34 to $152 million and construction durations of approximately 1 to 4 years.

In addition to the BaP comparisons summarized above, another useful method is to compare and contrast the overall benefits and costs of the various remedies consistent with the NCP and EPA (2005) guidance, combining four balancing "benefit" criteria including: 1) long-term effectiveness; 2) reduction of toxicity, mobility, and volume through treatment; 3) short-term effectiveness; and 4) implementability into a total benefit metric (scores shown in Table 9.2-1, and comparing this metric with the fifth balancing criteria of cost for each alternative. This analysis can be used to evaluate, among other elements, whether the incremental cost of an alternative is disproportionate to the overall degree of protectiveness it provides, as seen in Figure 9.2.8-3.

9.2.9 Conclusions of the Comparative Analysis of Alternatives

The NCP at 40 CFR §300.430(e)(9) establishes a framework of nine criteria for evaluating remedies. This EE/CA has comparatively evaluated the five potential remedial alternatives against seven of these criteria (protectiveness; compliance with ARARs; long-term effectiveness;

reduction of toxicity, mobility, and volume; short-term effectiveness; implementability; and cost). Two additional criteria (state and community acceptance) will be considered by EPA during development of the Portland Harbor Site Proposed Plan. The six remedial alternatives were evaluated both qualitatively and quantitatively by numerically scoring the performance of each alternative against each criterion. The scoring methods and metrics are consistent with the Portland Harbor draft FS (Anchor QEA 2012a; see Appendix U) with the exception that the implementability scoring took into consideration the impacts associated with the impacts identified in Section 8.6. The resulting scores of long-term effectiveness; reduction of toxicity, mobility, or volume through treatment; short-term effectiveness; and implementability were totaled into a total "Summary Score" for these balancing criteria are shown on Table 9.2-1.

Figure 9.2.8-3 presents the comparison of remedial alternatives. Alternatives 4 and 5 have the lowest scores. Alternative 1 scores slightly higher due to the criteria for long-term effectiveness, short-term effectiveness, and implementability. Alternatives 4 and 5 are therefore less protective than the other alterntives and have the highest cost.

Alternative 2b has the highest Summary Score and best meets both the RAOs and the seven NCP criteria. Alternative 2a has the next highest Summary Score and meets the RAOs and the seven NCP criteria at substantially less cost. Thus, Alternative 2a is protective for the least cost, and Alternative 2b scores the highest without consideration of cost.

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TABLES

Table 2.5.4.1-1
Initial Sediment Bioassay Results and Toxicity Classification

Hyalella azteca 28-Day Amphipod Sediment Toxicity Test									
	Survival				Growth				
Sediment Sample Identification	Percent Survival (Mean ± SD)	Negative-Control Adjusted Response (%)	Statistically Significantly Different?[a]	Effect Level[b]	Total Biomass (mg) (Mean ± SD)	Negative-Control Adjusted Response (%)	Significantly Different?[a]	Effect Level[b]	Midge and Amphipod Pooled Bioassay Results Hit (Yes/No)[c]
Negative Control	95.0 ± 7.6	--	--	--	1.94 ± 0.21	--	--	--	--
DGS-01SG-101014	88.8 ± 11.3	93.4	No	0	1.81 ± 0.29	93.4	No	0	No
DGS-02SG-101014	93.8 ± 7.4	98.7	No	0	1.37 ± 0.09	70.8	Yes	1	No
DGS-04SG-101013	91.3 ± 11.3	96.1	No	0	1.58 ± 0.69	81.8	Yes	0	Yes
DGS-05SG-101014	91.3 ± 8.3	96.1	No	0	1.87 ± 0.38	96.4	No	0	Yes
DGS-06SG-101014	92.5 ± 7.1	97.4	No	0	1.58 ± 0.14	81.8	Yes	0	No
DGS-08SG-101013	88.8 ± 9.9	93.4	No	0	1.72 ± 0.41	88.9	No	0	Yes
DGS-09SG-101013	90.0 ± 14.1	94.7	No	0	1.41 ± 0.18	73.0	Yes	1	Yes
DGS-12SG-101013	92.5 ± 10.4	97.4	No	0	1.32 ± 0.12	68.1	Yes	1	No
DGS-13SG-101013	97.5 ± 4.6	102.6	No	0	1.54 ± 0.18	79.5	Yes	0	Yes
DGS-16SG-101013	93.8 ± 7.4	98.7	No	0	1.37 ± 0.19	70.7	Yes	1	No
DGS-17SG-101013	95.0 ± 10.7	100.0	No	0	1.57 ± 0.14	81.3	Yes	0	No
DGS-20SG-101013	96.3 ± 5.2	101.3	No	0	1.61 ± 0.14	83.1	Yes	0	No
DGS-21SG-101013	96.3 ± 7.4	101.3	No	0	1.34 ± 0.16	69.2	Yes	1	Yes
DGS-25SG-101012	90.0 ± 17.7	94.7	No	0	1.34 ± 0.17	69.2	Yes	1	Yes
DGS-26SG-101013	97.5 ± 4.6	102.6	No	0	1.43 ± 0.08	73.9	Yes	0	Yes
DGS-30SG-101012	87.5 ± 11.6	92.1	No	0	1.33 ± 0.16	68.9	Yes	1	Yes
DGS-31SG-101012	95.0 ± 7.6	100.0	No	0	1.39 ± 0.35	71.8	Yes	1	Yes
DGS-33SG-101012	97.5 ± 4.6	102.6	No	0	1.39 ± 0.10	71.8	Yes	1	Yes
DGS-34SG-101012	88.8 ± 8.3	93.4	No	0	1.35 ± 0.15	69.8	Yes	1	Yes
DGS-35SG-101012	82.5 ± 14.9	86.8	Yes	1	1.49 ± 0.38	76.9	Yes	0	Yes
U2C2SG-110421[d]	87.5 ± 10.4	92.1	No	0	1.47 ± 0.22	76.0	Yes	0	--
U4Q1SG-110421[de]	92.5 ± 10.4	97.4	No	0	1.49 ± 0.19	77.1	Yes	0	--
U4Q2SG-110421[de]	93.8 ± 7.4	98.7	No	0	1.40 ± 0.18	72.5	Yes	1	--

Notes:

[a] Statistically different from the negative control response (one-tailed test, $p<0.05$)

[b] Effect Level assignment was based on statistically significant differences ($p \leq 0.05$) between test and negative control sample responses, and comparison of the negative-control adjusted responses to reference thresholds developed for the U.S. Environmental Protection Agency (EPA) for application in the Baseline Ecological Risk Assessment (Windward 2011).

[c] Test sediments were given a "Hit" designation if one toxicity endpoint (Chironomus survival or growth or Hyalella survival or growth) exceeded a Level 3 threshold, or two endpoints exceeded a Level 2 threshold (Anchor QEA 2012).

[d] Initial bioassay reference samples.

[e] Retest bioassay reference samples, locations U4Q1SG and U4Q2SG were retested.

Anchor QEA, LLC, 2012. Draft Feasibility Study. Prepared for the Lower Willamette Group. 2012.

Windward Environmental, LLC, 2011. Portland Harbor RI/FS. Appendix G: Baseline Ecological Risk Assessment. Draft Final. Prepared for the Lower Willamette Group. July 2011.

Table 2.5.4.1-2
Retest Sediment Bioassay Results and Toxicity Classification

Chironomus dilutus 10-Day Midge Sediment Toxicity Test									Midge and Amphipod Pooled Bioassay Results Hit (Yes/No)[c]
	Survival				Growth				
Sediment Sample Identification	Percent Survival (Mean ± SD)	Negative-Control Adjusted Response (%)	Statistically Significantly Different?[a]	Effect Level[b]	Total ash-free dry weight (mg) (Mean ± SD)	Negative-Control Adjusted Response (%)	Significantly Different?[a]	Effect Level[b]	
Negative Control	90.42 ± 5.47	--	--	--	7.10 ± 1.22	--	--	--	--
DGS-01SG-110420	77.50 ± 17.53	85.7	Yes	1	6.95 ± 1.38	97.9	No	0	No
DGS-02SG-110420	83.75 ± 19.23	92.6	No	0	6.26 ± 1.72	88.2	No	0	No
DGS-04SG-110420	20.00 ± 14.14	22.1	Yes	3	0.60 ± 0.69	8.4	Yes	3	Yes
DGS-05SG-110418	46.25 ± 32.04	51.2	Yes	3	3.76 ± 2.71	53.0	Yes	3	Yes
DGS-06SG-110420	81.25 ± 18.08	89.9	No	0	5.98 ± 1.09	84.2	Yes	1	No
DGS-08SG-110418	65.00 ± 29.76	71.9	Yes	3	4.72 ± 1.94	66.4	Yes	3	Yes
DGS-09SG-110418	76.25 ± 31.14	84.3	No	0	4.85 ± 2.20	68.2	Yes	3	Yes
DGS-12SG-110418	75.00 ± 22.68	82.9	Yes	2	5.78 ± 1.61	81.4	No	0	No
DGS-13SG-110418	42.50 ± 25.50	47.0	Yes	3	2.52 ± 1.85	35.5	Yes	3	Yes
DGS-16SG-110418	75.00 ± 26.19	82.9	No	0	5.67 ± 1.83	79.8	No	0	No
DGS-17SG-110418	73.75 ± 26.69	81.6	No	0	5.91 ± 1.87	83.2	No	0	No
DGS-20SG-110419	86.25 ± 19.96	95.4	No	0	6.53 ± 1.20	91.9	No	0	No
DGS-21SG-110419	58.75 ± 26.96	65.0	Yes	3	3.70 ± 1.88	52.1	Yes	3	Yes
DGS-25SG-110419	55.00 ± 26.73	60.8	Yes	3	4.45 ± 2.09	62.7	Yes	3	Yes
DGS-26SG-110419	42.50 ± 23.15	47.0	Yes	3	1.57 ± 0.87	22.1	Yes	3	Yes
DGS-30SG-110419	72.50 ± 18.32	80.2	Yes	2	5.21 ± 0.73	73.3	Yes	2	Yes
DGS-31SG-110419	56.25 ± 21.34	62.2	Yes	3	3.35 ± 1.01	47.2	Yes	3	Yes
DGS-33SG-110419	61.25 ± 19.59	67.7	Yes	3	4.88 ± 2.18	68.7	Yes	3	Yes
DGS-34SG-110419	26.25 ± 15.98	29.0	Yes	3	0.82 ± 0.91	11.5	Yes	3	Yes
DGS-35SG-110419	30.00 ± 23.90	33.2	Yes	3	0.66 ± 0.47	9.3	Yes	3	Yes
U3C2SG-110421[e]	80.00 ± 15.12	88.5	No	0	5.20 ± 1.21	73.17	Yes	2	--
U4Q1SG-110421[de]	80.00 ± 18.52	88.5	No	0	7.09 ± 1.55	99.82	No	0	--
U4Q2SG-110421[de]	78.75 ± 14.58	87.1	Yes	1	6.88 ± 0.65	96.81	No	0	--

Notes:

[a] Statistically different from the negative control response (one-tailed test, $p<0.05$)

[b] Effect Level assignment was based on statistically significant differences ($p \leq 0.05$) between test and negative control sample responses, and comparison of the negative-control adjusted responses to reference thresholds developed for U.S. Environmental Protection Agency (EPA) for application in the Baseline Ecological Risk Assessment (Windward 2011).

[c] Test sediments were given a "Hit" designation if one toxicity endpoint (Chironomus survival or growth or Hyalella survival or growth) exceeded a Level 3 threshold, or two endpoints exceeded a Level 2 threshold (Anchor QEA 2012).

[d] Initial bioassay reference samples.

[e] Retest bioassay reference samples, locations U4Q1SG and U4Q2SG were retested.

Anchor QEA, LLC, 2012. Draft Feasibility Study. Prepared for the Lower Willamette Group. 2012.

Windward Environmental, LLC, 2011. Portland Harbor RI/FS. Appendix G: Baseline Ecological Risk Assessment. Draft Final. Prepared for the Lower Willamette Group. July 2011.

Table 2.6.2-1
2005 Removal Action Sediment Sample DRET Results

Location ID			RAA-03	RAA-11	RAA-11	RAA-13
Sample ID			RAA-03SD-0513DRET	RAA-11SD-0204DRET	RAA-11SD-0413DRET	RAA-13SD-0911DRET
Sample Date			7/21/2004	7/22/2004	7/22/2004	7/20/2004
Depth Interval			5 to 13 feet	2 to 4 feet	4 to 13 feet	9 to 11 feet
Sediment Zone	Eco Acute WQC[7]	Alternate Eco Acute Values[8]	Visually Contaminated	Tar Body	Visually Contaminated	Tar Body
Sheen Visible in Elutriate Test Vessel?			No	Yes	No	Yes
Measurable Non-Aqueous Phase Layer?			No	No	No	No
Conventionals (mg/L)						
Cyanide	0.022 [3]		0.01 U	**0.01**	0.01 U	**0.01**
Metals (µg/L)						
Zinc (dissolved)	36.2 [1,2]		**2.7**	**1.2**	**1.5**	**2.7**
Zinc (total)			**16.5**	**3.7**	**4.1**	**7.3**
Total Petroleum Hydrocarbons (µg/L)						
TPH - Diesel Range			**430 Z**	**17000 Z**	**240 J**	**13000 Z**
TPH - Residual Range			**280 J**	**400 J**	**99 J**	**790 Z**
Semi-Volatile Organic Compounds (µg/L)						
2-Methylnaphthalene			**0.030 J**	**470**	**0.050 J**	**710**
Acenaphthene			**64**	**150**	**6.7**	**440**
Acenaphthylene			**1.7**	**390**	**0.48**	**140**
Anthracene			**0.12 J**	**41**	**1.2**	**58**
Benzo(a)anthracene			**0.78**	**4.8**	**0.76**	**19**
Benzo(a)pyrene		4.0 [4]	**0.55**	**4.6**	**1**	**24**
Benzo(g,h,i)perylene			**0.39**	**3.8 J**	**1**	**20**
Chrysene			**0.81**	**7.4**	**2.1**	**24**
Dibenzo(a,h)anthracene			**0.037 J**	3.9 U	**0.086 J**	**1.8 J**
Dibenzofuran			**0.044 J**	**23**	**0.072 J**	**28**
Fluoranthene			**19**	**56**	**6.3**	**110**
Fluorene			**0.078 J**	**130**	**0.32**	**150**
Hexachlorobenzene			0.20 U	3.9 U	0.20 U	3.9 U
Indeno(1,2,3-cd)pyrene			**0.36**	**3.2 J**	**0.83**	**17**
Naphthalene		2,300 [5]	**0.078 J**	**6900**	**0.27**	**11000**
Pentachlorophenol			**0.072 J**	20 U	**0.071 J**	**2.0 J**
Phenanthrene			**0.49**	**280**	**1**	**300**
Pyrene			**20**	**58**	**6**	**110**
Volatile Organic Compounds (µg/L)						
1,1-Dichloroethene			0.50 U	0.50 U	0.50 U	0.50 U
Benzene		5,300 [5]	0.50 U	**810**	**0.26 J**	**220**
cis-1,2-Dichloroethene			0.50 U	0.50 U	0.50 U	0.50 U
Dichloromethane			**0.66 J**	**0.67 J**	**0.53 J**	**0.90 J**
Ethylbenzene			0.50 U	**62**	0.50 U	**290**
m,p-Xylenes			0.50 U	**210**	0.50 U	**210**
o-Xylene			0.50 U	**100**	0.50 U	**120**
Tetrachloroethene			0.50 U	0.50 U	0.50 U	0.50 U
Toluene			0.50 U	**320**	0.50 U	**160**
trans-1,2-Dichloroethene			0.50 U	0.50 U	0.50 U	0.50 U

Table 2.6.2-1
2005 Removal Action Sediment Sample DRET Results

Location ID			RAA-03	RAA-11	RAA-11	RAA-13
Sample ID			RAA-03SD-0513DRET	RAA-11SD-0204DRET	RAA-11SD-0413DRET	RAA-13SD-0911DRET
Sample Date			7/21/2004	7/22/2004	7/22/2004	7/20/2004
Depth Interval			5 to 13 feet	2 to 4 feet	4 to 13 feet	9 to 11 feet
Sediment Zone	Eco Acute WQC[7]	Alternate Eco Acute Values[8]	Visually Contaminated	Tar Body	Visually Contaminated	Tar Body
Vinyl chloride		23,400 [6]	0.50 U	0.50 U	0.50 U	0.50 U

Notes:

Indicates value that exceeds acute criteria.

µg/L = micrograms per liter

m/L = milligrams per liter

Bold = Detected value

J = The result is an estimated concen

U = The compound was analyzed for, but was not detected at or above the MRL/MDL.

Z = The chromatographic fingerprint does not resemble a petroleum product.

[1] = Criteria based on a dissolved zinc concentration.

[2] = Screening level for zinc is based on a hardness of 25 mg/l.

[3] = The criteria is expressed as free cyanide

[4] = Value from EPA 2003 (Procedures for the derivation of equilibrium partitioning sediment benchmarks [ESBs] for the protection of benthic organisms: PAH mixtures [EPA-600-R-02-013]). No Oregon Table 33C freshwater acute guidance value exists for this chemical.

[5] = Oregon Table 33C freshwater acute guidance value exists and was used for this chemical.

[6] = Value shown is water screening level from Draft BERA (Windward Environmental 2009).

[7] = Acute ecological values from Oregon DEQ Table 33a. Refer to screening level source document for additional notes.

[8] = Alternate acute values are from Table 6 of Appendix C of the Portland Harbor Draft Feasibility Study (Anchor QEA 2012). Footnotes in Table 6 indicate the source of the value for each chemical. Refer to screening level source document for additional notes.

Table 2.6.2-2
Data Gaps Sediment Sample DRET Test Results

Location ID			DGS-11SC	DGS-11SC	DGS-18SC	DGS-18SC	DGS-22SC
Sample ID			DGS-11SC-1.58.2-101006-T	DGS-11SC-1.58.2-101006-D	DGS-18SC-004.5-101008-T	DGS-18SC-004.5-101008-D	DGS-22SC-1.92.9-101012-T
Sample Date			10/6/2010	10/6/2010	10/8/2010	10/8/2010	10/12/2010
Depth			1.5 - 8.2 feet	1.5 - 8.2 feet	0 - 4.5 feet	0 - 4.5 feet	1.9 - 2.9 feet
Sample Type			N	N	N	N	N
Fraction	Eco Acute WQC[18]	Alternate Eco Acute Values[19]	Total	Dissolved	Total	Dissolved	Total
Conventional Parameters (mg/l)							
Cyanide, total	--	--	**0.026**	**0.008**	0.005 U	0.005 U	**0.009**
Cyanide, available	--	--	**0.0026**	0.002 U	0.002 U	0.002 U	**0.0027**
Cyanide, free	0.022 [9]	--	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Metals (µg/l)		--					
Zinc	36.2 [10,11]	--	**80**	**20**	**40**	10 U	**190**
Volatile Organics (µg/l)							
1,1-Dichloroethene	--	--	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, cis-	--	--	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, trans-	--	--	1 U	1 U	1 U	1 U	1 U
Benzene	--	5300 [12]	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	--	--	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	--	--	2 U	2 U	2 U	2 U	2 U
o-Xylene	--	--	1 U	1 U	1 U	1 U	1 U
Toluene	--	--	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	--	--	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	--	23400 [17]	1 U	1 U	1 U	1 U	1 U
LWG RA Total BTEX[4] (Calculated U = 1/2)	--	--	2 UT	2 UT	2 UT	2 UT	2 UT
LWG RA Total Xylene[7] (Calculated U = 1/2)	--	--	2 UT	2 UT	2 UT	2 UT	2 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
1-Methylnaphthalene	--	--	**130**	**160**	**42**	**40**	**18**
2-Methylnaphthalene	--	--	**250**	**280**	**9.6**	**14**	**1.2**
Acenaphthene	--	--	**240**	**210**	**34**	**30**	**80**
Acenaphthylene	--	--	**37**	**32**	1 U	1 U	1 U
Anthracene	--	--	**47**	**20**	**16**	**10**	**35**
Benzo(a)anthracene	--	--	**30**	**5.1**	**4.8**	1 U	**15**
Benzo(b,j,k)fluoranthenes	--	--	**40**	**5.6**	**3.9**	1 U	**18**
Benzo(a)pyrene	--	4.0 [13]	**37**	**5.2**	**3.6**	1 U	**14**
Benzo(g,h,i)perylene	--	--	**24**	**3.3**	**2.2**	1 U	**9.9**
Chrysene	--	--	**36**	**4.9**	**6**	1 U	**47**
Dibenzo(a,h)anthracene	--	--	5 U	1 U	1 U	1 U	**2.3**
Fluoranthene	--	--	**130**	**41**	**18**	**6.9**	**59**
Fluorene	--	--	**98**	**84**	**25**	**21**	**39**
Indeno(1,2,3-c,d)pyrene	--	--	**17**	**2.1**	**1.5**	1 U	**7.2**
Naphthalene	--	2300 [14]	**3200**	**3800**	1 U	1 U	**13**
Perylene	--	--	**9.3**	**1.3**	1 U	1 U	**3.8**
Phenanthrene	--	--	**340**	**230**	**100**	**74**	**180**
Pyrene	--	--	**150**	**47**	**25**	**8.7**	**65**
LWG RA Total 7 of 17 LPAH[1] (Calculated U = 1/2)	--	--	**4200 T**	**4700 T**	**190 T**	**150 T**	**350 T**
LWG RA Total 10 of 17 HPAH[2] (Calculated U = 1/2)	--	--	**470 T**	**110 T**	**65 T**	**19 T**	**240 T**
LWG RA Total 17 PAH[6] (Calculated U = 1/2)	--	--	**4700 T**	**4800 T**	**250 T**	**170 T**	**590 T**
LWG RA Total cPAH TEQ[5] (EPA 1993) (Calculated U = 1/2)	--	--	**48 T**	**7 T**	**5.1 T**	1 UT	**20 T**
Semivolatile Organics (µg/l)							
Carbazole	--	--	**87**	**87**	**2.6**	**2.5**	**12**
Dibenzofuran	--	--	**17**	**14**	**4.1**	**3.6**	**4.9**

Table 2.6.2-2
Data Gaps Sediment Sample DRET Test Results

Location ID	Eco Acute WQC[18]	Alternate Eco Acute Values[19]	DGS-11SC	DGS-11SC	DGS-18SC	DGS-18SC	DGS-22SC
Sample ID			DGS-11SC-1.58.2-101006-T	DGS-11SC-1.58.2-101006-D	DGS-18SC-004.5-101008-T	DGS-18SC-004.5-101008-D	DGS-22SC-1.92.9-101012-T
Sample Date			10/6/2010	10/6/2010	10/8/2010	10/8/2010	10/12/2010
Depth			1.5 - 8.2 feet	1.5 - 8.2 feet	0 - 4.5 feet	0 - 4.5 feet	1.9 - 2.9 feet
Sample Type			N	N	N	N	N
Fraction			Total	Dissolved	Total	Dissolved	Total
PCB Aroclors (µg/l)	--	--					
Aroclor 1016	--	--	1 U	1 U	1 U	1 U	1 U
Aroclor 1221	--	--	1 U	1 U	1 UJ	1 UJ	1 U
Aroclor 1232	--	--	1 U	1 U	1 U	1 U	1 U
Aroclor 1242	--	--	1 U	1 U	1 U	1 U	1 U
Aroclor 1248	--	--	1 U	1 U	1 U	1 U	1 U
Aroclor 1254	--	--	1 U	1 U	1 U	1 U	1 U
Aroclor 1260	--	--	1 U	1 U	1 U	1 U	1 U
LWG RA Total PCB Aroclors[8] (Calculated U = 1/2)	2	--	1 UT	1 UT	1 UJT	1 UJT	1 UT
Pesticides (µg/l)							
2,4'-DDD (o,p'-DDD)	--	0.06 [16]	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDE (o,p'-DDE)	--	--	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDT (o,p'-DDT)	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 UJ
4,4'-DDD (p,p'-DDD)	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE (p,p'-DDE)	--	1050 [16]	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT (p,p'-DDT)	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
alpha-Hexachlorocyclohexane (BHC)	--	--	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U
beta-Hexachlorocyclohexane (BHC)	--	--	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U
delta-Hexachlorocyclohexane (BHC)	--	--	0.05 UJ	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ
Endrin ketone	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.95	--	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	--	--	0.1 UJT	0.1 UT	0.1 UT	0.1 UT	0.1 UJT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	--	--	0.1 UJT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDD (Calculated U = 1/2)	--	--	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	0.1 UJT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UJT
LWG RA Total DDx (Calculated U = 1/2)	1.1 [15]	--	0.1 UJT	0.1 UT	0.1 UT	0.1 UT	0.1 UJT
Total Petroleum Hydrocarbons (mg/l)		--					
Diesel Range Hydrocarbons	--	--	**2.3**	**1.8**	**1 J**	**0.63 J**	**0.72**
Motor Oil Range	--	--	**0.98**	**0.42**	**0.48**	0.2 U	0.2 U
LWG RA TPH[3] (Calculated U = 1/2)	--	--	**3.3 T**	**2.2 T**	**1.5 JT**	**0.73 JT**	**0.82 T**

Table 2.6.2-2
Data Gaps Sediment Sample DRET Test Results

Location ID	DGS-22SC	DGS-24SC	DGS-24SC	DGS-26SC	DGS-26SC	DGS-31SC
Sample ID	DGS-22SC-1.92.9-101012-D	DGS-24SC-6.710.7-101012-T	DGS-24SC-6.710.7-101012-D	DGS-26SC-015.4-101011-T	DGS-26SC-015.4-101011-D	DGS-31SC-011.9-101011-T
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/11/2010	10/11/2010	10/11/2010
Depth	1.9 - 2.9 feet	6.7 - 10.7 feet	6.7 - 10.7 feet	1 - 5.4 feet	1 - 5.4 feet	1 - 1.9 feet
Sample Type	N	N	N	N	N	N
Fraction	Dissolved	Total	Dissolved	Total	Dissolved	Total
Conventional Parameters (mg/l)						
Cyanide, total	0.005 U	**0.007**	0.005 U	0.005 U	0.005 U	**0.009**
Cyanide, available	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cyanide, free	0.005 U	**0.0021 J**	**0.002 J**	0.005 U	0.005 U	**0.0027 J**
Metals (µg/l)						
Zinc	**20**	**20**	10 U	10 U	10 U	**90**
Volatile Organics (µg/l)						
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, cis-	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, trans-	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	2 U	2 U	2 U	2 U	2 U	2 U
o-Xylene	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	1 U	1 U	1 U	1 U	1 U	1 U
LWG RA Total BTEX[4] (Calculated U = 1/2)	2 UT	2 UT	2 UT	2 UT	2 UT	2 UT
LWG RA Total Xylene[7] (Calculated U = 1/2)	2 UT	2 UT	2 UT	2 UT	2 UT	2 UT
Polycyclic Aromatic Hydrocarbons (µg/l)						
1-Methylnaphthalene	**15**	**290**	**260**	**38**	**38**	**23**
2-Methylnaphthalene	1 U	**510**	**450**	**25**	**26**	**2**
Acenaphthene	**65**	**320**	**280**	**74**	**68**	**44**
Acenaphthylene	1 U	**7**	**5.5**	1 U	1 U	1 U
Anthracene	**15**	**28**	**19**	**12**	**10**	**9**
Benzo(a)anthracene	**2.3**	**12**	**1.7**	**3.6**	**1.1**	1 U
Benzo(b,j,k)fluoranthenes	**2**	**18**	**1.9**	**5.2**	1 U	1 U
Benzo(a)pyrene	**1.4**	**15**	**1.5**	**4.2**	1 U	1 U
Benzo(g,h,i)perylene	1 U	**12**	**1.2**	**3.3**	1 U	1 U
Chrysene	**4.6**	**14**	**1.9**	**4.5**	**1.2**	1 U
Dibenzo(a,h)anthracene	1 U	1 U	1 U	1 U	1 U	1 U
Fluoranthene	**26**	**54**	**20**	**22**	**14**	**11**
Fluorene	**30**	**68**	**62**	**26**	**24**	**20**
Indeno(1,2,3-c,d)pyrene	1 U	**8.5**	1 U	**2.3**	1 U	1 U
Naphthalene	**9.9**	**6200**	**5600**	**120**	**120**	**2.7**
Perylene	1 U	**4**	1 U	**1.2**	1 U	1 U
Phenanthrene	**130**	**300**	**200**	**77**	**66**	**66**
Pyrene	**28**	**61**	**22**	**24**	**15**	**10**
LWG RA Total 7 of 17 LPAH[1] (Calculated U = 1/2)	**250 T**	**7400 T**	**6600 T**	**330 T**	**310 T**	**140 T**
LWG RA Total 10 of 17 HPAH[2] (Calculated U = 1/2)	**66 T**	**190 T**	**51 T**	**70 T**	**34 T**	**25 T**
LWG RA Total 17 PAH[6] (Calculated U = 1/2)	**320 T**	**7600 T**	**6700 T**	**400 T**	**350 T**	**170 T**
LWG RA Total cPAH TEQ[5] (EPA 1993) (Calculated U = 1/2)	**2.4 T**	**19 T**	**2.4 T**	**5.8 T**	**1.2 T**	1 UT
Semivolatile Organics (µg/l)						
Carbazole	**11**	**69**	**69**	**6**	**5.5**	**10**
Dibenzofuran	**3.9**	**16**	**15**	**4.6**	**4.3**	**3.7**

Table 2.6.2-2
Data Gaps Sediment Sample DRET Test Results

Location ID	DGS-22SC	DGS-24SC	DGS-24SC	DGS-26SC	DGS-26SC	DGS-31SC
Sample ID	DGS-22SC-1.92.9-101012-D	DGS-24SC-6.710.7-101012-T	DGS-24SC-6.710.7-101012-D	DGS-26SC-015.4-101011-T	DGS-26SC-015.4-101011-D	DGS-31SC-011.9-101011-T
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/11/2010	10/11/2010	10/11/2010
Depth	1.9 - 2.9 feet	6.7 - 10.7 feet	6.7 - 10.7 feet	1 - 5.4 feet	1 - 5.4 feet	1 - 1.9 feet
Sample Type	N	N	N	N	N	N
Fraction	Dissolved	Total	Dissolved	Total	Dissolved	Total
PCB Aroclors (µg/l)						
Aroclor 1016	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1221	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1232	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1242	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1248	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1254	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1260	1 U	1 U	1 U	1 U	1 U	1 U
LWG RA Total PCB Aroclors[8] (Calculated U = 1/2)	1 UT	1 UT	1 UT	1 UT	1 UT	1 UT
Pesticides (µg/l)						
2,4'-DDD (o,p'-DDD)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDE (o,p'-DDE)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDT (o,p'-DDT)	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDD (p,p'-DDD)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE (p,p'-DDE)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT (p,p'-DDT)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
alpha-Hexachlorocyclohexane (BHC)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
beta-Hexachlorocyclohexane (BHC)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
delta-Hexachlorocyclohexane (BHC)	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Endrin ketone	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	0.1 UJT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.1 UJT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Total DDx (Calculated U = 1/2)	0.1 UJT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	**0.67**	**3**	**2.4**	**0.81**	**0.67**	**0.55**
Motor Oil Range	0.2 U	**0.37**	0.2 U	0.2 U	0.2 U	0.2 U
LWG RA TPH[3] (Calculated U = 1/2)	**0.77 T**	**3.4 T**	**2.5 T**	**0.91 T**	**0.77 T**	**0.65 T**

Table 2.6.2-2
Data Gaps Sediment Sample DRET Test Results

Location ID	DGS-31SC	DGS-32SC	DGS-32SC	
Sample ID	DGS-31SC-011.9-101011-D	DGS-32SC-2.83.8-101011-T	DGS-32SC-2.83.8-101011-D	Sitewater
Sample Date	10/11/2010	10/11/2010	10/11/2010	10/28/2010
Depth	1 - 1.9 feet	2.8 - 3.8 feet	2.8 - 3.8 feet	
Sample Type	N	N	N	N
Fraction	Dissolved	Total	Dissolved	Total
Conventional Parameters (mg/l)				
Cyanide, total	**0.008**	**0.052**	**0.012**	0.005 U
Cyanide, available	0.002 U	**0.0069**	0.002 U	0.002 U
Cyanide, free	**0.0029 J**	0.005 U	0.005 U	--
Metals (µg/l)				
Zinc	10 U	**310**	**40**	**5**
Volatile Organics (µg/l)				
1,1-Dichloroethene	1 U	1 U	1 U	1 U
1,2-Dichloroethene, cis-	1 U	1 U	1 U	1 U
1,2-Dichloroethene, trans-	1 U	1 U	1 U	1 U
Benzene	1 U	1 U	1 U	1 U
Ethylbenzene	1 U	1 U	1 U	1 U
m,p-Xylene	2 U	2 U	2 U	2 U
o-Xylene	1 U	1 U	1 U	1 U
Toluene	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	1 U	1 U	1 U	1 U
Vinyl chloride	1 U	1 U	1 U	1 U
LWG RA Total BTEX[4] (Calculated U = 1/2)	2 UT	2 UT	2 UT	2 UT
LWG RA Total Xylene[7] (Calculated U = 1/2)	2 UT	2 UT	2 UT	2 UT
Polycyclic Aromatic Hydrocarbons (µg/l)				
1-Methylnaphthalene	**23**	**140**	**130**	1 U
2-Methylnaphthalene	**2.2**	**210**	**200**	1 U
Acenaphthene	**43**	**120**	**120**	1 U
Acenaphthylene	1 U	1 U	1 U	1 U
Anthracene	**8.7**	**28**	**20**	1 U
Benzo(a)anthracene	1 U	**8.9**	**3.1**	1 U
Benzo(b,j,k)fluoranthenes	1 U	**8.2**	**2.6**	1 U
Benzo(a)pyrene	1 U	**6.6**	**1.9**	1 U
Benzo(g,h,i)perylene	1 U	**4.1**	**1**	1 U
Chrysene	1 U	**11**	**3.7**	1 U
Dibenzo(a,h)anthracene	1 U	1 U	1 U	1 U
Fluoranthene	**9.3**	**39**	**20**	1 U
Fluorene	**20**	**50**	**46**	1 U
Indeno(1,2,3-c,d)pyrene	1 U	**2.9**	1 U	1 U
Naphthalene	**4.7**	**140**	**140**	1 U
Perylene	1 U	**1.7**	1 U	1 U
Phenanthrene	**63**	**180**	**140**	1 U
Pyrene	**7.9**	**47**	**24**	1 U
LWG RA Total 7 of 17 LPAH[1] (Calculated U = 1/2)	**140 T**	**730 T**	**670 T**	1 UT
LWG RA Total 10 of 17 HPAH[2] (Calculated U = 1/2)	**21 T**	**130 T**	**57 T**	1 UT
LWG RA Total 17 PAH[6] (Calculated U = 1/2)	**160 T**	**860 T**	**720 T**	1 UT
LWG RA Total cPAH TEQ[5] (EPA 1993) (Calculated U = 1/2)	1 UT	**9.1 T**	**3 T**	1 UT
Semivolatile Organics (µg/l)				
Carbazole	**10**	**53**	**55**	1 U
Dibenzofuran	**3.7**	**10**	**9.3**	1 U

Table 2.6.2-2
Data Gaps Sediment Sample DRET Test Results

Location ID	DGS-31SC	DGS-32SC	DGS-32SC	
Sample ID	DGS-31SC-011.9-101011-D	DGS-32SC-2.83.8-101011-T	DGS-32SC-2.83.8-101011-D	Sitewater
Sample Date	10/11/2010	10/11/2010	10/11/2010	10/28/2010
Depth	1 - 1.9 feet	2.8 - 3.8 feet	2.8 - 3.8 feet	
Sample Type	N	N	N	N
Fraction	Dissolved	Total	Dissolved	Total
PCB Aroclors (µg/l)				
Aroclor 1016	1 U	1 U	1 U	1 U
Aroclor 1221	1 U	1 U	1 U	1 U
Aroclor 1232	1 U	1 U	1 U	1 U
Aroclor 1242	1 U	1 U	1 U	1 U
Aroclor 1248	1 U	1 U	1 U	1 U
Aroclor 1254	1 U	1 U	1 U	1 U
Aroclor 1260	1 U	1 U	1 U	1 U
LWG RA Total PCB Aroclors[8] (Calculated U = 1/2)	1 UT	1 UT	1 UT	1 UT
Pesticides (µg/l)				
2,4'-DDD (o,p'-DDD)	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDE (o,p'-DDE)	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDT (o,p'-DDT)	0.1 U	0.1 UJ	0.1 UJ	0.1 U
4,4'-DDD (p,p'-DDD)	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE (p,p'-DDE)	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT (p,p'-DDT)	0.1 U	0.1 U	0.1 U	0.1 U
alpha-Hexachlorocyclohexane (BHC)	0.05 U	0.05 U	0.05 U	0.05 UJ
beta-Hexachlorocyclohexane (BHC)	0.05 U	0.05 U	0.05 U	0.05 U
delta-Hexachlorocyclohexane (BHC)	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Endrin ketone	0.1 U	0.1 U	0.1 U	0.1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.05 U	0.05 U	0.05 U	0.05 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	0.1 UT	0.1 UJT	0.1 UJT	0.1 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.1 UT	0.1 UJT	0.1 UJT	0.1 UT
LWG RA Total DDx (Calculated U = 1/2)	0.1 UT	0.1 UJT	0.1 UJT	0.1 UT
Total Petroleum Hydrocarbons (mg/l)				
Diesel Range Hydrocarbons	**0.45**	**2.2**	**2**	0.1 U
Motor Oil Range	0.2 U	**0.39**	**0.29**	0.2 U
LWG RA TPH[3] (Calculated U = 1/2)	**0.55 T**	**2.6 T**	**2.3 T**	0.2 UT

Table 2.6.2-2
Data Gaps Sediment Sample DRET Test Results

Notes:
Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = calculation or summation applied
N = Normal Field Sample
FD = Field Duplicate
-- Results not reported or not applicable
Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.
Significant figures applied to all calculated totals
Table contains validated data

Footnotes
[1] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[2] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene
[3] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured
[4] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene
[5] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

[6] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.
[7] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene
[8] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors
[9] = Criteria based on free cyanide concentration.
[10] = Criteria based on a dissolved zinc concentration.
[11] = Screening level for zinc is based on a hardness of 25 mg/l.
[12] = Oregon Table 33C freshwater acute guidance value exists and was used for this chemical.
[13] = Value from EPA 2003 (Procedures for the derivation of equilibrium partitioning sediment benchmarks [ESBs] for the protection of benthic organisms: PAH mixtures [EPA-600-R-02-013]). No Oregon Table 33C freshwater acute guidance value exists for this chemical.
[14] = Oregon Table 33C freshwater acute guidance value exists and was used for this chemical.
[15] = Criteria applies to DDT and it's metabolites
[16] = Oregon Table 33C freshwater acute guidance value exists and was used for this chemical.
[17] = Value shown is water screening level from Draft BERA. See Table 5-2 of Draft BERA Attachment 5. No acute or chronic WQC available.
[18] = Acute ecological values are from Oregon DEQ Table 33a. Refer to screening level source document for additional notes.
[19] = Alternate acute values are from Table 6 of Appendix C of the Portland Harbor Draft Feasibility Study (Anchor QEA 2012). Footnotes in Table 6 indicate the source of the value for each chemical. Refer to screening level source document for additional notes.

Acronyms
cPAH = carcinogenic PAH
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
EPH = extractable petroleum hydrocarbon
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
mg/kg = milligrams per kilograms
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons
µg/kg = micrograms per kilogram
VPH = volatile petroleum hydrocarbon

Table 3.3-1
RAO Summary Table

Gasco Sediments Site Statement of Work RAOs[1]	Portland Harbor Draft FS RAOs[2]	Gasco EE/CA RAOs
RAO 1 – Substantial Product: Removal of sediments containing substantial amounts of product (e.g., solid "tar" and/or NAPL) that may serve as potential future source of risk material, unless it can be shown that the costs of such removal are clearly disproportionate to the degree of risk reduction to be attained through physical removal as compared to other remedial options for the same material. "Substantial" is defined in Section 3.6.2.1 of this SOW.	--	**RAO 1 – Substantial Product:** Removal of sediments containing substantial amounts of product (e.g., solid "tar" and/or DNAPL) that may serve as potential future source of risk material, unless it can be shown that the costs of such removal are clearly disproportionate to the degree of risk reduction to be attained through physical removal as compared to other remedial options for the same material. "Substantial" is defined in Section 3.6.2.1 of the SOW.
RAO 2 – Human Health Sediments: Reduce human health risks to acceptable levels from direct contact with and incidental ingestion of COCs in Site sediments.	**RAO 1 – Human Health Sediments Exposure:** Reduce to acceptable levels human health risks from exposure to contaminated sediments resulting from incidental ingestion of and dermal contact with sediments, and comply with identified ARARs.	**RAO 2 – Human Health Sediments:** Reduce to acceptable levels human health risks resulting from incidental ingestion of and dermal contact with COCs in contaminated sediments.
RAO 3 – Human Health Biota Ingestion: Reduce COC concentrations in Site sediments to levels that would result in acceptable risks to humans that eat fish and shellfish from the harbor in the absence of other sources of chemicals in the river.	**RAO 2 – Human Health Fish and Shellfish Consumption:** Reduce to acceptable levels human health risks from indirect exposures to COCs through ingestion of fish and shellfish that occur via bioaccumulation pathways from sediment and/or surface water and comply with identified ARARs.	**RAO 3 – Human Health Biota Ingestion:** Reduce to acceptable levels human health risks from indirect exposures to COCs through ingestion of fish and shellfish that occur via bioaccumulation pathways from sediment and/or surface water in the absence of other sources of chemicals in the Willamette River.
RAO 4 – Human Health Surface Water: Reduce COC fluxes from Site sediments such that human health risks would be at acceptable levels for direct contact with and incidental ingestion of Site surface water in the absence of other sources of chemicals in the river.	**RAO 3 – Human Health Surface Water Exposure:** Reduce risks from COCs in surface water at the Site to acceptable exposure levels that are protective of human health risks from ingestion of, inhalation of, and dermal contact with surface water; protect the drinking water beneficial use of the Willamette River at the Site; and comply with identified ARARs.	**RAO 4 – Human Health Surface Water:** Reduce COC fluxes from Portland Harbor Site sediments to reduce risks from COCs in surface water at the Portland Harbor Site to acceptable exposure levels that are protective of human health risks from ingestion of, inhalation of, and dermal contact with surface water in the absence of other sources of chemicals in the Willamette River.
--	**RAO 4 – Human Health Groundwater Exposure:** Reduce to acceptable levels human health risks resulting from direct exposure to contaminated groundwater and indirect exposure to contaminated groundwater through fish and shellfish consumption, and comply with identified ARARs.	**RAO 5 – Human Health Groundwater**: Reduce to acceptable levels human health risks resulting from direct exposure to COCs in contaminated groundwater and indirect exposure to COCs in contaminated groundwater through fish and shellfish consumption.

Table 3.3-1
RAO Summary Table

Gasco Sediments Site Statement of Work RAOs[1]	Portland Harbor Draft FS RAOs[2]	Gasco EE/CA RAOs
RAO 5 – Ecological Sediments and Biota Ingestion: Reduce ecological risks to acceptable levels from contact with and ingestion of COCs in Site sediments or prey from the Site in the absence of other sources in the river.	**RAO 5 – Ecological Sediment Exposure:** Reduce to acceptable levels the risks to ecological receptors resulting from the ingestion of and direct contact with contaminated sediments and comply with identified ARARs.	**RAO 6 – Ecological Sediments:** Reduce to acceptable levels the risks to ecological receptors resulting from the ingestion of and direct contact with COCs in contaminated sediments.
	RAO 6 – Ecological Prey Ingestion: Reduce to acceptable levels risks to ecological receptors from indirect exposures through ingestion of prey to COCs in sediments via bioaccumulation pathways from sediment and/or surface water and comply with identified ARARs.	**RAO 7 – Ecological Biota (Prey) Ingestion**: Reduce to acceptable levels risks to ecological receptors from indirect exposures to COCs through ingestion of prey that occur via bioaccumulation pathways from sediment and/or surface water in the absence of other sources in the Willamette River.
RAO 6 – Ecological Surface Water: Reduce COC fluxes from Site sediments such that ecological risks would be at acceptable levels for direct contact with and ingestion of Site surface water in the absence of other sources of chemicals in the river.	**RAO 7 – Ecological Surface Water Exposure:** Reduce risks from COCs in surface water at the site to acceptable exposure levels that are protective of ecological receptors based on the ingestion of and direct contact with surface water and comply with identified ARARs.	**RAO 8 – Ecological Surface Water**: Reduce COC fluxes from Project Area sediments to reduce risks from COCs in surface water in the Project Area to acceptable exposure levels that are protective of ecological receptors based on the ingestion of and direct contact with surface water in the absence of other sources in the Willamette River.
--	**RAO 8 – Ecological Groundwater Exposure:** Reduce to acceptable levels the risks to ecological receptors resulting from the ingestion of and direct contact with contaminated groundwater and indirect exposures through ingestion of prey via bioaccumulation pathways from groundwater, and comply with identified ARARs.	--
RAO 7 – Contaminant Migration: Reduce the migration of contaminants at unacceptable levels from the Site to the Willamette River.	--	SOW contaminant migration RAO incorporated in Refined EE/CA RAOs 4, 5, and 8, above.
RAO 8 – Recontamination: Reduce COC fluxes through Site sediments so that recontamination of Site sediments to unacceptable levels does not occur.	--	SOW recontamination RAO incorporated in Refined EE/CA RAOs 4, 5, and 8, above.

Notes:

[1] = Gasco SOW reference

[2] = Portland Harbor draft FS reference

Acronyms:

-- = associated RAO not developed

Table 3.3-1
RAO Summary Table

ARAR = applicable and relevant and appropriate requirement
COC = contaminant of concern
DNAPL = dense nonaqueous phase liquid
EE/CA = Engineering Evaluation/Cost Analysis
FS = Feasibility Study
NAPL = nonaqueous phase liquid
RAO = remedial action objective
SOW = Statement of Work

Table 3.5-1
ARARs for Remedial Action at the Portland Harbor Superfund Site

Regulation	Citation	Criterion/Standard	Applicability/Appropriateness
Federal ARARs			
Clean Water Act, Section 404 and Section 404(b)(1) Guidelines	33 USC 1344, 40 CFR Part 230	Regulates discharge of dredged and fill material into navigable waters of the United States.	Action-specific. Applicable to dredging, covering, capping, and designation and construction of in-water disposal sites and in-water filling activities in the Willamette River.
Clean Water Act	33 USC 1313, 1314 Most recent 304(a) list, as updated up to issuance of the ROD	Under Section 304(a), minimum criteria are developed for water quality programs established by states. Two kinds of water quality criteria are developed: one for protection of human health, and one for protection of aquatic life.	Chemical-specific and Action-specific. Relevant and appropriate for cleanup standards for surface water and contaminated groundwater discharging to surface water if more stringent than promulgated state criteria. Relevant and Appropriate to short-term impacts to surface water from implementation of the remedial action that result in a discharge to navigable water, such as dredging and capping if more stringent than promulgated state criteria.
Clean Water Act, Section 401	33 USC 1341, 40 CFR Section, 121.2(a)(3), (4) and (5)	Any federally authorized activity which may result in any discharge into navigable waters requires reasonable assurance that the action will comply with applicable provisions of sections 1311, 1312, 1313, 1316, and 1317 of the Clean Water Act.	Action-specific. Relevant and Appropriate to implementation of the remedial action that results in a discharge to the river if more stringent than state implementation regulations.
Clean Water Act, Section 402	33 USC 1342	Regulates discharges of pollutants from point sources to waters of the U.S., and requires compliance with the standards, limitations and regulations promulgated per Sections 301, 304, 306, 307, 308 of the CWA.	Relevant and Appropriate to remedial activities that result in a discharge of pollutants from point sources to the river if more stringent than state promulgated point source requirements.
Safe Drinking Water Act	42 USC 300f, 40 CFR Part 141, Subpart O, App. A. 40 CFR Part 143	Establishes national drinking water standards to protect human health from contaminants in drinking water	Chemical-specific Relevant and Appropriate as a performance standard for groundwater and surface water which are potential drinking water sources.
Resource Conservation and Recovery Act	40 CFR 260, 261	Establishes identification standards and definitions for material is exempt from the definition of a hazardous waste.	Action-specific. Applicable to characterizing wastes generated from the action and designated for off-site or upland disposal; potentially relevant and appropriate for use in identifying acceptance criteria for confined in-water disposal.

Table 3.5-1
ARARs for Remedial Action at the Portland Harbor Superfund Site

Regulation	Citation	Criterion/Standard	Applicability/Appropriateness
RCRA – Solid Waste	40 CFR 257 Subpart A		RCRA Solid Waste requirements may be relevant and appropriate to remedial actions that result in upland or in-water disposal of dredged material. Requirements for the management of solid waste landfills may be relevant and appropriate to upland disposal.
Hazardous Materials Transportation Act	49 USC §5101 et seq. 40 CFR Parts 171-177		Hazardous Materials Transportation Act requirements are applicable to remedial actions that involve the transport of hazardous materials (i.e., dredged material)
Fish and Wildlife Coordination Act Requirements	16 USC 662, 663 50 CFR 6.302(g)	Requires federal agencies to consider effects on fish and wildlife from projects that may alter a body of water and mitigate or compensate for project-related losses, which includes discharges of pollutants to water bodies.	Action-specific. Potentially applicable to determining impacts and appropriate mitigation, if necessary, for effects on fish and wildlife from filling activities or discharges from point sources.
Magnuson-Stevens Fishery Conservation and Management Act	50 CFR Part.600.920	Evaluation of impacts to Essential Fish Habitat (EFH) is necessary for activities that may adversely affect EFH.	Location-specific. Potentially applicable if the removal action may adversely affect EFH.
Federal Emergency Management Act	44 CFR 60.3(d)(2) and (3)		FEMA flood rise requirements are considered relevant and appropriate requirements for remedial actions.
River and Harbors Act	33 USC 401 et seq. 33 CFR parts 320 to 323	Section 10 prohibits the unauthorized obstruction or alteration of any navigable water. Structures or work in, above, or under navigable waters are regulated under Section 10.	Action-specific. Applicable requirements for how remedial actions are taken or constructed in the navigation channel.
Clean Air Act	42 USC §7401 et seq.		Action-specific. Applicable to remedial activities that generate air emissions.
Toxic Substances Control Act	15 USC §2601 et seq.		Chemical-specific. TSCA requirements are applicable to contaminated material or surface water with PCB contamination
Marine Mammal Protection Act	16 USC §1361 et seq. 50 CFR 216		Action-specific. Applicable to remedial actions that have the potential to affect marine mammals.
Migratory Bird Treaty Act	16 USC §703 50 CFR §10.12	Makes it unlawful to take any migratory bird. “Take” is defined as pursuing, hunting, wounding, killing, capturing, trapping and collecting.	Action-specific. Applicable to remedial actions that have the potential to effect a taking of migratory birds.

Table 3.5-1
ARARs for Remedial Action at the Portland Harbor Superfund Site

Regulation	Citation	Criterion/Standard	Applicability/Appropriateness
National Historic Preservation Act	16 USC 470 et seq. 36 CFR Part 800	Requires the identification of historic properties potentially affected by the agency undertaking, and assessment of the effects on the historic property and seek ways to avoid, minimize or mitigate such effects. Historic property is any district, site, building, structure, or object included in or eligible for the National Register of Historic Places, including artifacts, records, and material remains related to such a property.	Action-specific. Potentially applicable if historic properties are potentially affected by remedial activities.
Archeological and Historic Preservation Act	16 USC 469a-1	Provides for the preservation of historical and archeological data that may be irreparably lost as a result of a federally-approved project and mandates only preservation of the data	Action-specific. Potentially applicable if historical and archeological data may be irreparably lost by implementation of the remedial activities.
Native American Graves Protection and Reparation Act	25 USC 3001-3013 43 CFR 10	Requires Federal agencies and museums which have possession of or control over Native American cultural items (including human remains, associated and unassociated funerary items, sacred objects and objects of cultural patrimony) to compile an inventory of such items. Prescribes when such Federal agencies and museums must return Native American cultural items. “Museums” are defined as any institution or State or local government agency that receives Federal funds and has possession of, or control over, Native American cultural items.	Location-specific; action-specific. If Native American cultural items are present on property belonging to the Oregon Division of State Lands (DSL) that is a part of the removal action area, this requirement is potentially applicable. If Native American cultural items are collected by an entity which is either a federal agency or museum, then the requirements of the law are potentially applicable.
Endangered Species Act	16 USC 1531 et seq. 50 CFR 17	Actions authorized, funded, or carried out by federal agencies may not jeopardize the continued existence of endangered or threatened species or adversely to avoid jeopardy or take appropriate mitigation modify or destroy their critical habitats. Agencies are to avoid jeopardy or take appropriate mitigation measures to avoid jeopardy.	Action-specific. Applicable to remedial actions, that may adversely impact endangered or threatened species or critical habitat that are present at the site.
Executive Order for Wetlands Protection	Executive Order 11990 (1977) 40 CFR 6.302 (a) 40 CFR Part 6, App. A	Requires measures to avoid adversely impacting wetlands whenever possible, minimize wetland destruction, and preserve the value of wetlands.	Location-specific. Relevant and appropriate in assessing impacts to wetlands, if any, from the response action and for developing appropriate compensatory mitigation for the project.

Table 3.5-1
ARARs for Remedial Action at the Portland Harbor Superfund Site

Regulation	Citation	Criterion/Standard	Applicability/Appropriateness
Executive Order for Floodplain Management	Exec. Order 11988 (1977) 40 CFR Part 6, App. A 40 CFR 6.302 (b)	Requirements for Flood Plain Management Regulations Areas Requires measures to reduce the risk of flood loss, minimize impact of floods, and restore and preserve the natural and beneficial values of floodplains.	Location-specific. Relevant and appropriate for assessing impacts, if any, to the floodplain and flood storage from the response action and developing compensatory mitigation that is beneficial to floodplain values.
National Flood Insurance Act and Flood Disaster Protection Act	42 USC 4001 et seq. 44 CFR National Flood Insurance Program Subpart A	Requirements for Flood Plain Management Regulations Areas Requires measures to reduce the risk of flood loss, minimize impact of floods, and restore and preserve the natural and beneficial values of floodplains.	Location-specific. Relevant and appropriate for assessing impacts, if any, to the floodplain and flood storage from the response action and developing compensatory mitigation that is beneficial to floodplain values.
State ARARs			
Oregon Environmental Cleanup Law ORS 465.315.	Oregon Hazardous Substance Remedial Action Rules OAR 340-122-0040(2)(a) and (c), 0115(3),(32) and (51).	Sets standards for degree of cleanup required, including for oil and other petroleum products/wastes. Establishes acceptable risk levels for human health at 1x10-6 for individual carcinogens, 1x10-5 for multiple carcinogens, and Hazard Index of 1 for noncarcinogens; and protection of ecological receptors at the individual level for threatened or endangered species and the population level for all others. OAR 340-122-0040 and 0115(3).	Chemical-specific: a risk-based numerical value that, when applied to site-specific conditions, will establish concentrations of hazardous substances that may remain or be managed on-site in a manner avoiding unacceptable risk.
	OAR 340-122-and (b), 340-122-0040(4) 0115(32)	For hot spots of contamination in water, requires treatment, if feasible, when treatment would be reasonably likely to restore or protect beneficial uses within a reasonable time. For hot spots contamination of sediments, requires treatment or excavation and off-site disposal of hazardous substances if treatment is reasonably likely to restore or protect such beneficial uses within a reasonable time.	Chemical-specific and action-specific: when contaminant concentrations fall within the definition of “hot spot” set forth in subpart 0115(32), treatment (including excavation and offsite disposal) of contaminated media to levels below such risk levels or beneficial-use impacts needs to be evaluated in the feasibility study.

Table 3.5-1
ARARs for Remedial Action at the Portland Harbor Superfund Site

Regulation	Citation	Criterion/Standard	Applicability/Appropriateness
Hazardous Waste and Hazardous Materials II	ORS 466.005(7) OAR 340-102-0011 - Hazardous Waste Determination	Defines "Hazardous Waste" and the rule contains the criteria by which anyone generating residue must determine if that residue is a hazardous waste.	Chemical- and Action-specific: specifies substantive requirements if remedial action will involve on-site treatment, disposal, or storage of RCRA-listed or characteristic hazardous waste. (Note: off-site treatment, storage, or disposal subject to all administrative and substantive state requirements.)
	Identification and Listing of Hazardous Waste OAR 340-101-0033	Identifies additional residuals that are subject to regulation as hazardous waste under state law.	Action-specific: specifies requirements if remedial action will involve on-site treatment, disposal, or storage of additional listed wastes.
Solid Waste: General Provisions	Specific regulatory references to be provided by DEQ when alternatives are identified for FS analysis	Substantive Requirements for the location, design, construction, operation, and closure of solid waste management facilities.	Action-specific: applicable if upland disposal facility contemplated on-site for solid, nonhazardous, waste disposal, handling, treatment, or transfer. (Note: off-site transfer, treatment, handling, or disposal subject to all administrative and substantive state requirements.)
	Solid Waste: Land Disposal Sites Other than Municipal Solid Waste Landfills, specific regulatory references to be supplied by DEQ	Requirements for the management of solid wastes at land disposal sites other than municipal solid waste landfills.	Action-specific: applicable to the on-site management and disposal of contaminated sediment, soil, and/or groundwater.
Water Pollution Control Act ORS 468B.048	Water Quality Standards OAR 340-041-0340, Table 20 and Table 33A	DEQ is authorized to administer and enforce CWA program in Oregon. DEQ rules designate beneficial uses for water bodies and narrative and numeric water quality criteria necessary to protect those uses. OAR 340-041-0340 designates and defines the beneficial uses that shall be protected in the Willamette Basin. For the purposes of state law, Table 20 are the applicable criteria, unless there is a corresponding criterion under Table 33A, in which case Table 33A is applicable. (Note: if Oregon promulgates new criteria prior to ROD, such new criteria will be ARAR).	Chemical- and action-specific: applicable to any discharges to surface water from point sources, groundwater, overland flow of stormwater, and activities that may result in discharges to waters of the state, such as, dredge and fill, de-watering sediments, and other remedial activities. Relevant and appropriate as performance standards for sites and where contaminants are left in place.

Table 3.5-1
ARARs for Remedial Action at the Portland Harbor Superfund Site

Regulation	Citation	Criterion/Standard	Applicability/Appropriateness
Water Pollution Control Act ORS 468B.048	Regulations Pertaining to NPDES Discharges Specific regulatory references to be supplied by DEQ	Effluent limitations and management practices for point-source discharges into waters of the state (otherwise subject to NPDES permit but for on-site permit exemption).	Chemical- and Action-specific: applies state water quality standards and effluent limitations to point-source discharges to the Willamette River.
	Certification of Compliance with Water Quality Requirements and Standards ORS 468b.035	Provides that federally-approved activities that may result in a discharge to waters of the State requires evaluation whether an activity may proceed and meet water quality standards with conditions, which if met, will ensure that water quality standards are met.	Action-specific: Applicable to implementation of the remedial action (e.g., dredging, capping, and construction of confined disposal facility) that may result in a discharge to waters of the State.
	Rules Governing the Issuance and Enforcement of Removal-Fill Authorizations within Waters of Oregon Including Wetlands OAR 141-085 0680, 141-085-0695, 141-085-0710, 141-085-0765	Substantive requirements for dredge and fill activities in waters of the state, including in designated Essential Indigenous Anadromous Salmonid Habitat.	Action-specific: Applicable to remedial action dredge and fill activities, capping, and riverbank remediation.
ODFW Fish Management Plans for the Willamette River	OAR 635, div 500	Provides basis for in-water work windows in the Willamette River.	Action-specific. Potentially applicable to timing of implementation of the remedial action due to presence of protected species at the site.
Oregon Air Pollution Control ORS 468A et. seq.	General Emissions Standards OAR 340-226	DEQ is authorized to administer and enforce Clean Air program in Oregon. Rules provide general emission standards for fugitive emissions of air contaminants and require highest and best practicable treatment or control of such emissions.	Action-specific: applicable to remedial actions taking place in on-site uplands. Could apply to earth-moving equipment, dust from vehicle traffic, and mobile-source exhaust, among other things.
Oregon Air Pollution Control ORS 468A et. seq.	Fugitive Emission Requirements OAR 340-208	Prohibits any handling, transporting, or storage of materials, or use of a road, or any equipment to be operated, without taking reasonable precautions to prevent particulate matter from becoming airborne. These rules for “special control areas” or other areas where fugitive emissions may cause nuisance and control measures are practicable.	Action-specific: applicable to remedial actions taking place in on-site uplands. Could apply to earth-moving equipment, dust from vehicle traffic, and mobile-source exhaust, among other things

Table 3.5-1
ARARs for Remedial Action at the Portland Harbor Superfund Site

Regulation	Citation	Criterion/Standard	Applicability/Appropriateness
Indian Graves and Protected Objects ORS 97.740-760		Prohibits willful removal of cairn, burial, human remains, funerary object, sacred object or object of cultural patrimony. Provides for reinterment of human remains or funerary objects under the supervision of the appropriate Indian tribe. Proposed excavation by a professional archeologist of a native Indian cairn or burial requires written notification to the State Historic Preservation Officer and prior written consent of the appropriate Indian tribe. Prohibits persons from excavating, injuring, destroying or damaging archeological sites or objects on public or private lands unless authorized.	
Archeological Objects and Sites ORS 358.905-955 ORS 390.235		Imposes conditions for excavation or removal of archeological or historical materials.	Location-specific; action-specific. Potentially relevant and appropriate if archeological material encountered.
	Survival Guidelines OAR 635-100-0135	Survival Guidelines are rules for state agency actions affecting species listed under Oregon's Threatened or Endangered Wildlife Species law.	Action-and location specific: Substantive requirements of Survival Guidelines relevant and appropriate to remedial activities affecting state-listed species.
Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment DEQ, 2007		Describes a process to evaluate chemicals found in sediment for their potential contribution to risk as a result of bioaccumulation. Provides alternative methods for developing sediment screening levels and bioaccumulation bioassay data.	To be Considered: in level of cleanup or standard of control that is protective.

Table 4.4.1-1
Substantial Product in In-water Cores

Location ID	Easting (NAD83 ORNH)	Northing (NAD83 ORNH)	Mudline Elevation (ft NAVD88)	Conclusive for Substantial Product (Y/N/I)	Substantial Product[1] Start Depth Below Mudline (ft)	Substantial Product[1] End Depth Below Mudline (ft)	Tar Substantial Product Start Depth Below Mudline (ft)	Tar Substantial Product End Depth Below Mudline (ft)	Lampblack/ Pencil Pitch Start Depth Below Mudline (ft)	Lampblack/ Pencil Pitch End Depth Below Mudline (ft)	Liquid Substantial Product[2] Start Depth Below Mudline (ft)	Liquid Substantial Product[2] End Depth Below Mudline (ft)
B-1	7623921	705499	32.4	Y	24.4	24.6	24.4	24.6	24.4	24.6	--	--
B-2	7624068	705402	32.9	Y	30.0	33.0	--	--	30.0	30.2	30.0	33.0
B-3	7624255	705335	27.4	N	--	--	--	--	--	--	--	--
B-4	7624418	705234	25.6	N	--	--	--	--	--	--	--	--
B-4B	7624413	705238	26.0	N	--	--	--	--	--	--	--	--
B-5	7623997	705450	33.1	Y	27.0	41.0	--	--	--	--	27.0	41.0
B-6	7624155	705354	33.2	Y	25.0	25.2	--	--	25.0	25.2	--	--
B-7	7624323	705297	26.4	I	--	--	--	--	--	--	--	--
B-8	7623673.14	705664.29	25.5	N	--	--	--	--	--	--	--	--
B-29	7623989.144	705472.7054	31.5	Y	18.3	19.0	18.3	19.0	--	--	--	--
B-29	7623989.144	705472.7054	31.5	Y	22.5	22.8	22.5	22.8	--	--	--	--
B-29	7623989.144	705472.7054	31.5	Y	25.0	25.3	25.0	25.3	--	--	--	--
B-29	7623989.144	705472.7054	31.5	Y	26.3	27.0	26.3	27.0	--	--	--	--
B-29	7623989.144	705472.7054	31.5	Y	27.5	29.0	--	--	--	--	27.5	29.0
B-29	7623989.144	705472.7054	31.5	Y	30.0	31.5	--	--	--	--	30.0	31.5
B-29	7623989.144	705472.7054	31.5	Y	32.5	34.0	--	--	--	--	32.5	34.0
B-29	7623989.144	705472.7054	31.5	Y	35.0	36.5	--	--	--	--	35.0	36.5
B-29	7623989.144	705472.7054	31.5	Y	36.5	40.0	--	--	--	--	36.5	40.0
B-53	7624036.326	705432.9303	31.3	I	--	--	--	--	--	--	--	--
B-54	7623921.424	705506.0387	32.0	Y	10.0	13.5	--	--	10.0	13.5	--	--
B-54	7623921.424	705506.0387	32.0	Y	15.0	20.0	--	--	15.0	20.0	--	--
B-56	7624273.82	705338.44	26.8	I	--	--	--	--	--	--	--	--
B-56	7624273.82	705338.44	26.8	Y	22.5	23.0	22.5	23.0	--	--	--	--
B-31	7624265.94	705336.29	27.2	Y	--	--	--	--	18.0	19.5	--	--
B-31	7624265.94	705336.29	27.2	Y	--	--	20.0	21.0	--	--	--	--
B-59	7623976.267	705459.9179	33.2	Y	1.0	2.5	1.0	2.5	--	--	--	--
B-59	7623976.267	705459.9179	33.2	Y	2.5	4.0	2.5	4.0	--	--	--	--
B-59	7623976.267	705459.9179	33.2	Y	5.0	8.0	5.0	8.0	--	--	5.0	8.0
B-59	7623976.267	705459.9179	33.2	I	--	--	--	--	--	--	--	--
B-59	7623976.267	705459.9179	33.2	Y	11.0	13.0	11.0	13.0	--	--	11.0	13.0
B-59	7623976.267	705459.9179	33.2	Y	15.0	17.5	15.0	17.5	--	--	15.0	17.5
B-59	7623976.267	705459.9179	33.2	Y	20.0	23.0	--	--	20.0	23.0	--	--
B-59	7623976.267	705459.9179	33.2	Y	25.0	27.0	--	--	25.0	27.0	--	--
B-59	7623976.267	705459.9179	33.2	Y	27.0	28.0	27.0	28.0	--	--	27.0	28.0
GP-04	7624558.77	705179.30	36.0	N	--	--	--	--	--	--	--	--
GP-07	7624748.87	705058.83	36.2	N	--	--	--	--	--	--	--	--
GP-33	7624993.00	704911.00	36.3	I	--	--	--	--	--	--	--	--
GP-33	7624993.00	704911.00	36.3	I	--	--	--	--	--	--	--	--
GP-33	7624993.00	704911.00	36.3	I	--	--	--	--	--	--	--	--
GP-33	7624993.00	704911.00	36.3	I	--	--	--	--	--	--	--	--
GP-36	7625091.00	704836.00	36.0	I	--	--	--	--	--	--	--	--
GP-36	7625091.00	704836.00	36.0	I	--	--	--	--	--	--	--	--
GSM-07	7624080.46	705443.1	15.9	Y	17.6	20.0	17.6	20.0	--	--	19.0	20.0
GSM-08	7624309.89	705352.03	15.6	Y	8.3	8.9	--	--	--	--	8.3	8.9
GSM-08	7624309.89	705352.03	15.6	Y	8.9	10.0	--	--	--	--	8.9	10.0
GSM-08	7624309.89	705352.03	15.6	Y	10.0	10.7	--	--	--	--	10.0	10.7
GST-01	7623033.55	705971.45	32.0	Y	5.3	5.9	--	--	5.3	5.9	--	--
GST-02	7623222.76	705942.49	32.0	Y	17.0	21.1	--	--	17.0	21.1	--	--

Table 4.4.1-1
Substantial Product in In-water Cores

Location ID	Easting (NAD83 ORNH)	Northing (NAD83 ORNH)	Mudline Elevation (ft NAVD88)	Conclusive for Substantial Product (Y/N/I)	Substantial Product[1] Start Depth Below Mudline (ft)	Substantial Product[1] End Depth Below Mudline (ft)	Tar Substantial Product Start Depth Below Mudline (ft)	Tar Substantial Product End Depth Below Mudline (ft)	Lampblack/ Pencil Pitch Start Depth Below Mudline (ft)	Lampblack/ Pencil Pitch End Depth Below Mudline (ft)	Liquid Substantial Product[2] Start Depth Below Mudline (ft)	Liquid Substantial Product[2] End Depth Below Mudline (ft)
GST-03	7623355.07	705854.3	33.9	Y	3.4	23.9	--	--	3.4	23.9	--	--
GST-04	7623516.95	705739.05	32.3	I	--	--	--	--	--	--	--	--
GST-05	7623706.19	705638.33	25.4	N	--	--	--	--	--	--	--	--
GST-06	7623903.67	705518.3	32.0	Y	15.5	16.5	--	--	15.5	16.5	--	--
GST-06	7623903.67	705518.3	32.0	Y	18.0	18.2	--	--	18.0	18.2	--	--
GST-06	7623903.67	705518.3	32.0	Y	25.8	26.7	--	--	--	--	25.8	26.7
GST-06	7623903.67	705518.3	32.0	Y	26.7	27.5	--	--	--	--	26.7	27.5
GST-06	7623903.67	705518.3	32.0	Y	27.5	27.9	27.5	27.9	--	--	--	--
GST-06	7623903.67	705518.3	32.0	Y	27.9	29.8	--	--	--	--	27.9	29.8
GST-09	7624425.3	705238.37	25.5	Y	16.6	18.0	--	--	--	--	16.6	18.0
GST-09	7624425.3	705238.37	25.5	Y	18.0	19.0	--	--	18.0	19.0	--	--
GST-11	7624804.25	705044.86	36.0	N	--	--	--	--	--	--	--	--
GST-13	7625079.46	704877.18	35.1	N	--	--	--	--	--	--	--	--
MW-4-57	7624107.356	705375.1728	33.6	Y	15.0	16.5	--	--	--	--	--	--
MW-4-101	7624095.39	705380.33	33.8	Y	2.0	3.0	--	--	2.0	3.0	--	--
B-59	7623976.267	705459.9179	33.2	Y	30.0	35.0	--	--	--	--	30.0	35.0
B-59	7623976.267	705459.9179	33.2	Y	35.0	38.0	--	--	--	--	35.0	38.0
GSM-07	7624080.46	705443.1	15.9	Y	15.0	17.6	15.0	17.6	--	--	--	--
MW-16-125	7623955.495	705475.1124	33.0	Y	12.5	15.0	--	--	12.5	15.0	--	--
MW-16-125	7623955.495	705475.1124	33.0	Y	23.5	44.0	24.0	24.5	--	--	23.5	44.0
MW-16-45	7623944.819	705482.9181	32.4	Y	30.5	32.5	--	--	--	--	30.5	32.5
MW-16-45	7623944.819	705482.9181	32.4	Y	32.5	35.0	--	--	--	--	32.5	35.0
MW-16-45	7623944.819	705482.9181	32.4	Y	35.0	36.0	--	--	--	--	35.0	36.0
MW-16-45	7623944.819	705482.9181	32.4	Y	36.0	41.0	--	--	--	--	36.0	41.0
MW-16-45	7623944.819	705482.9181	32.4	Y	42.0	46.0	--	--	--	--	42.0	46.0
MW-20-120	7624360	705233	27.0	Y	16.0	17.0	--	--	16.0	17.0	--	--
MW-20-120	7624360	705233	27.0	Y	70.0	73.0	--	--	--	--	71.0	72.7
MW-20-120	7624360	705233	27.0	Y	77.0	77.3	--	--	--	--	77.0	77.3
MW-22-80	7623312.674	705869.1974	35.0	Y	1.5	1.7	--	--	1.5	1.7	--	--
MW-22-80	7623312.674	705869.1974	35.0	Y	10.0	15.0	--	--	10.0	15.0	--	--
MW-22-80	7623312.674	705869.1974	35.0	Y	15.0	22.0	--	--	15.0	22.0	--	--
MW-23-123	7623490.45	705740.5805	34.8	Y	10.0	10.2	--	--	10.0	10.2	--	--
MW-24-130	7623868.133	705513.3071	33.0	Y	18.2	25.0	--	--	--	--	18.2	20.0
MW-24-130	7623868.133	705513.3071	33.0	Y	14.1	25.0	--	--	--	--	21.0	24.6
MW-24-130	7623868.133	705513.3071	33.0	Y	14.1	25.0	22.2	22.4	--	--	--	--
MW-24-130	7623868.133	705513.3071	33.0	Y	14.1	25.0	--	--	23.0	23.2	--	--
MW-24-130	7623868.133	705513.3071	33.0	Y	14.1	25.0	--	--	--	--	24.2	24.6
P-1	7624483.22	705182.82	35.6	Y	30.0	31.0	30.0	31.0	--	--	--	--
MW-24-130	7623868.133	705513.3071	33.0	Y	14.1	25.0	24.6	25.0	--	--	24.6	25.0
P-2	7624655.869	705124.685	36.3	N	--	--	--	--	--	--	--	--
P-3	7624847.273	704992.942	36.5	I	--	--	--	--	--	--	--	--
P-3	7624847.273	704992.942	36.5	I	--	--	--	--	--	--	--	--
P-3	7624847.273	704992.942	36.5	I	--	--	--	--	--	--	--	--
P-3	7624847.273	704992.942	36.5	I	--	--	--	--	--	--	--	--
P-3	7624847.273	704992.942	36.5	I	--	--	--	--	--	--	--	--
P-4	7624979.862	704917.862	36.3	I	--	--	--	--	--	--	--	--
P-4	7624979.862	704917.862	36.3	Y	20.0	24.0	--	--	--	--	20.0	24.0

Table 4.4.1-1
Substantial Product in In-water Cores

Location ID	Easting (NAD83 ORNH)	Northing (NAD83 ORNH)	Mudline Elevation (ft NAVD88)	Conclusive for Substantial Product (Y/N/I)	Substantial Product[1] Start Depth Below Mudline (ft)	Substantial Product[1] End Depth Below Mudline (ft)	Tar Substantial Product Start Depth Below Mudline (ft)	Tar Substantial Product End Depth Below Mudline (ft)	Lampblack/ Pencil Pitch Start Depth Below Mudline (ft)	Lampblack/ Pencil Pitch End Depth Below Mudline (ft)	Liquid Substantial Product[2] Start Depth Below Mudline (ft)	Liquid Substantial Product[2] End Depth Below Mudline (ft)
P-5	7625279.037	704727.81	36.0	Y	9.5	10.0	--	--	--	--	9.5	10.0
MW-24-130	7623868.133	705513.3071	33.0	Y	29.4	30.0	--	--	--	--	29.4	30.0
P-43	7624849.95	705001.01	36.2	I	--	--	--	--	--	--	--	--
P-43	7624849.952	705001.0051	36.2	I	--	--	--	--	--	--	--	--
P-43	7624849.952	705001.0051	36.2	I	--	--	--	--	--	--	--	--
OW-8-28	7623623.47	705691.25	25.9	Y	8.4	9.0	--	--	8.4	9.0	--	--
P-46	7625237.155	704761.8773	36.0	I	--	--	--	--	--	--	--	--
P-1A	7624481.51	705179.39	35.6	Y	28.0	30.5	28.0	30.5	--	--	--	--
P-42	7624541.347	705191.0119	36.0	Y	31.0	32.0	31.0	32.0	--	--	31.0	32.0
P-43	7624849.952	705001.0051	36.2	Y	37.0	38.0	37.0	38.0	--	--	37.0	38.0
P-44	7625005.802	704893.787	36.2	I	--	--	--	--	--	--	--	--
PW-7-93	7623758.099	705590.9579	25.5	I	--	--	--	--	--	--	--	--
PW-8-39	7623616.17	705698.81	25.4	N	--	--	--	--	--	--	--	--
P-44	7625005.802	704893.787	36.2	Y	16.0	18.0	16.0	18.0	--	--	--	--
P-44	7625005.802	704893.787	36.2	Y	10.0	13.0	10.0	13.0	--	--	--	--
RAA-19	7623898.25	705560.22	15.6	Y	3.2	4.4	3.2	4.4	--	--	--	--
RAA-19	7623898.25	705560.22	15.6	Y	5.7	10.0	5.7	10.0	--	--	5.7	10.0
RAA-20	7623941.59	705544.21	14.4	Y	2.7	4.1	2.7	4.1	--	--	2.7	4.1
RP-11-30	7625335.01	704680.59	36.7	N	--	--	--	--	--	--	--	--
RP-11-160	7625327.26	704686.24	36.6	N	--	--	--	--	--	--	--	--
RP-11-216	7625318.75	704691.98	36.5	N	--	--	--	--	--	--	--	--
SIL-01	7624876	704978	36.5	N	--	--	--	--	--	--	--	--
SIL-02	7625203	704773	35.3	N	--	--	--	--	--	--	--	--
P-46	7625237.155	704761.8773	36.0	Y	15.8	16.8	15.8	16.8	--	--	--	--
P-46	7625237.155	704761.8773	36.0	Y	32.5	33.0	32.5	33.0	--	--	--	--
PW-8-68	7623605.53	705682.8676	25.9	Y	15.0	15.8	--	--	--	--	15.0	15.8
PW-9-92	7623393.471	705809.388	35.0	Y	15.8	22.0	--	--	15.8	22.0	--	--
WS-14	7624485.687	705182.883	35.6	I	--	--	--	--	--	--	--	--
WS-11	7624628.253	705147.35	35.6	Y	31.5	31.7	--	--	--	--	--	--
WS-12	7624836.715	704998.62	36.5	Y	15.5	17.0	--	--	--	--	--	--
WS-14	7624485.687	705182.883	35.6	I	--	--	--	--	--	--	--	--
WS-12	7624836.715	704998.62	36.5	Y	18.0	20.0	--	--	--	--	--	--
WS-12	7624836.715	704998.62	36.5	Y	20.0	27.0	--	--	--	--	--	--
WS-12	7624836.715	704998.62	36.5	Y	13.0	13.5	--	--	--	--	--	--
WS-14	7624485.687	705182.883	35.6	Y	26.0	29.0	--	--	--	--	26.0	29.0
WS-14	7624485.687	705182.883	35.6	Y	29.0	33.0	29.0	33.0	--	--	29.0	33.0

Notes:

[1] = Per Section 3.6.2.1 in the Statement of Work, the definition of "Substantial Product" only extends up to the top of the riverbank. The above screening presents the results of the application of this definition to borings beyond the top of the bank due to limited data along the riverbank. This screening is only used to support the evaluation of the potential presence of substantial product within the riverbank.

[2] = Liquid substantial product - visual observations indicating higher potential for mobility (e.g., oily, nonaqueous phase liquid, saturated)

ft = feet

I = inconclusive

N = No

Y = Yes

NAD83 ORNH = North American Datum 1983 Oregon North Zone, HARN

NAVD88 = North American Vertical Datum 1988

Table 4.4.1-2
Substantial Product in Top of Riverbank Borings

Location ID	Easting (NAD83 ORNH)	Northing (NAD83 ORNH)	Mudline Elevation (ft NAVD88)	Conclusive for Substantial Product[a] (Y/N/I)	Substantial Product Start Depth Below Mudline (ft)	Substantial Product End Depth Below Mudline (ft)	Tar Substantial Product Start Depth Below Mudline (ft)	Tar Substantial Product End Depth Below Mudline (ft)	Liquid Substantial Product[b] Start Depth Below Mudline (ft)	Liquid Substantial Product[b] End Depth Below Mudline (ft)
AN-1-1	7624419	705409	2.5	Y	1.3	3.5	1.3	3.5	--	--
AN-1-1	7624419	705409	2.5	Y	4.0	6.3	4.0	6.3	4.0	6.3
AN-1-2	7624437	705424	-6.0	Y	1.5	4.0	3.0	4.0	1.5	3.0
AN-1-2	7624437	705424	-6.0	Y	6.5	9.5	6.5	7.5	6.5	9.5
AN-1-3	7624470	705429	-15.4	Y	1.5	4.0	--	--	1.5	4.0
AN-1-5	7624621	705763	-43.0	N	--	--	--	--	--	--
AN-2-5	7624253	705971	-41.0	N	--	--	--	--	--	--
DGS-03SC	7623188	706214	-24.6	N	--	--	--	--	--	--
DGS-06SC	7623484	706133	-40.3	N	--	--	--	--	--	--
DGS-07SC	7623500	705913	-0.8	Y	0.7	1.5	--	--	--	--
DGS-07SC	7623500	705913	-0.8	Y	2.2	2.7	--	--	--	--
DGS-07SC	7623500	705913	-0.8	Y	3.0	4.2	--	--	--	--
DGS-07SC	7623500	705913	-0.8	Y	4.7	5.2	--	--	--	--
DGS-07SC	7623500	705913	-0.8	Y	5.6	6.7	--	--	--	--
DGS-07SC	7623500	705913	-0.8	Y	7.0	7.3	--	--	--	--
DGS-07SC	7623500	705913	-0.8	Y	8.7	9.1	--	--	--	--
DGS-07SC	7623500	705913	-0.8	Y	9.7	10.0	--	--	--	--
DGS-07SC	7623500	705913	-0.8	Y	10.6	10.9	--	--	--	--
DGS-07SC	7623500	705913	-0.8	Y	11.6	11.8	--	--	--	--
DGS-07SC	7623500	705913	-0.8	Y	12.7	12.9	--	--	--	--
DGS-07SC	7623500	705913	-0.8	Y	13.0	13.2	--	--	--	--
DGS-07SC	7623500	705913	-0.8	Y	12.7	12.9	--	--	--	--
DGS-07SC	7623500	705913	-0.8	Y	13.0	13.2	--	--	--	--
DGS-08SC	7623746	706121	-39.1	Y	4.4	4.6	--	--	4.4	4.6
DGS-10SC	7623897	706007	-39.4	N	--	--	--	--	--	--
DGS-11SC	7623847	705911	-39.1	Y	1.5	2.2	--	--	1.5	2.2
DGS-11SC	7623847	705911	-39.1	Y	2.5	8.3	--	--	2.5	8.3
DGS-13SC	7623951	705843	-38.3	N	--	--	--	--	--	--
DGS-18SC	7624336	705715	-39.1	Y	--	4.5	--	--	--	4.5
DGS-19SC	7624277	705624	-34.6	Y	--	0.2	--	--	--	0.2
DGS-19SC	7624277	705624	-34.6	Y	3.3	4.1	--	--	3.3	4.1
DGS-19SC	7624277	705624	-34.6	Y	10.7	10.9	--	--	10.7	10.9
DGS-19SC	7624277	705624	-34.6	Y	4.4	5.1	--	--	4.4	5.1
DGS-19SC	7624277	705624	-34.6	Y	5.3	8.2	--	--	5.3	8.2
DGS-20SC	7624443	705726	-40.9	N	--	--	--	--	--	--
DGS-22SC	7624258	705483	1.3	Y	1.9	2.3	--	--	--	--
DGS-23SC	7624597	705619	-42.1	N	--	--	--	--	--	--
DGS-24SC	7624506	705336	0.0	N	--	--	--	--	--	--
DGS-24SC	7624506	705336	0.0	N	--	--	--	--	--	--
DGS-24SC	7624506	705336	0.0	N	--	--	--	--	--	--
DGS-25SC	7624758	705542	-41.7	N	--	--	--	--	--	--
DGS-26SC	7624695	705437	-37.7	Y	0.5	5.4	--	--	--	--
DGS-28SC	7624890	705446	-41.2	N	--	--	--	--	--	--
DGS-30SC	7625046	705375	-41.9	N	--	--	--	--	--	--
DGS-31SC	7624939	705255	-37.2	Y	1.3	1.9	--	--	1.3	1.9
DGS-32SC	7624907	705161	-20.7	Y	3.2	3.8	--	--	3.2	3.8
DGS-36SC	7623124	706102	4.7	N	--	--	--	--	--	--

Table 4.4.1-2
Substantial Product in Top of Riverbank Borings

Location ID	Easting (NAD83 ORNH)	Northing (NAD83 ORNH)	Mudline Elevation (ft NAVD88)	Conclusive for Substantial Product[a] (Y/N/I)	Substantial Product Start Depth Below Mudline (ft)	Substantial Product End Depth Below Mudline (ft)	Tar Substantial Product Start Depth Below Mudline (ft)	Tar Substantial Product End Depth Below Mudline (ft)	Liquid Substantial Product[b] Start Depth Below Mudline (ft)	Liquid Substantial Product[b] End Depth Below Mudline (ft)
DGS-37SC	7625358	704882	-6.5	N	--	--	--	--	--	--
DGS-44SC	7623783	706164	-39.4	N	--	--	--	--	--	--
DGS-45SC	7624977	705314	-40.8	N	--	--	--	--	--	--
GS-01	7623088	706052	7.5	N	--	--	--	--	--	--
GS-02	7623259	705998	8.4	N	--	--	--	--	--	--
GS-03	7623381	705918	7.1	N	--	--	--	--	--	--
GS-10	7624654	705235	4.6	Y	3.0	7.0	--	--	3.0	7.0
GS-10	7624654	705235	4.6	Y	9.0	11.0	9.0	9.1	9.0	11.0
GS-11	7624824	705118	8.2	N	--	--	--	--	--	--
GS-12	7624999	705008	7.3	N	--	--	--	--	--	--
GTC-01	7623215	706069	4.9	N	--	--	--	--	--	--
GTC-02	7623531	706004	-30.0	N	--	--	--	--	--	--
GTC-03	7623667	706065	-40.0	Y	2.8	3.4	--	--	2.8	3.4
GTC-04	7623784	705740	5.4	Y	0.5	1.2	0.7	1.2	0.5	0.7
GTC-04	7623784	705740	5.4	Y	5.0	11.3	5.0	11.3	--	--
GTC-05	7624239	705529	-4.0	Y	0.5	5.0	--	--	0.5	5.0
GTC-06	7624381	705418	6.1	Y	0.2	0.6	--	--	0.2	0.6
GTC-06	7624381	705418	6.1	Y	1.8	2.6	--	--	1.8	2.6
GTC-06	7624381	705418	6.1	Y	3.4	10.1	3.4	10.1	8.2	8.5
GTC-07	7624492	705586	-37.8	Y	--	4.4	--	--	--	4.4
GTC-08	7624876	705376	-39.6	Y	--	1.4	--	--	--	1.4
GTC-09	7624702	705228	2.5	Y	4.4	4.8	--	--	4.4	4.8
GTC-09	7624702	705228	2.5	Y	6.0	6.2	--	--	6.0	6.2
GTC-09	7624702	705228	2.5	Y	6.8	7.0	--	--	6.8	7.0
GTC-09	7624702	705228	2.5	Y	9.6	9.8	9.6	9.8	--	--
GTC-09	7624702	705228	2.5	Y	12.1	13.2	12.3	13.2	--	--
GTC-10	7625064	705108	-25.8	Y	4.9	6.7	4.9	6.7	4.9	6.7
C252	7623371	706489	-43.9	N	--	--	--	--	--	--
C255	7624338	706218	-45.0	N	--	--	--	--	--	--
C258	7623824	706210	-40.0	N	--	--	--	--	--	--
C263	7623183	706140	2.0	N	--	--	--	--	--	--
C263	7623183	706140	-1.0	N	--	--	--	--	--	--
C264	7623455	706049	-32.0	Y	--	1.0	--	1.0	--	--
C264	7623455	706049	-32.0	Y	1.9	2.3	1.9	2.3	--	--
C269	7623382	706011	-4.0	N	--	--	--	--	--	--
C270	7623675	705920	-33.0	Y	1.0	2.4	--	--	--	--
C270	7623675	705920	-33.0	I	--	--	--	--	--	--
C272	7624310	705901	-41.0	N	--	--	--	--	--	--
C273	7623605	705869	3.0	Y	--	2.7	--	--	--	2.7
C276	7623951	705779	-35.0	Y	5.0	8.1	--	--	--	--
C278	7623909	705763	-28.0	Y	5.7	6.1	--	--	5.7	6.1
C283	7623870	705739	-7.0	I	--	--	--	--	--	--
C283	7623870	705739	-7.0	Y	1.0	5.7	--	--	3.9	4.0
C284	7624194	705660	-32.0	Y	1.0	3.4	--	--	1.0	3.4
C288	7624127	705581	-4.0	N	--	--	--	--	--	--

Table 4.4.1-2
Substantial Product in Top of Riverbank Borings

Location ID	Easting (NAD83 ORNH)	Northing (NAD83 ORNH)	Mudline Elevation (ft NAVD88)	Conclusive for Substantial Product[a] (Y/N/I)	Substantial Product Start Depth Below Mudline (ft)	Substantial Product End Depth Below Mudline (ft)	Tar Substantial Product Start Depth Below Mudline (ft)	Tar Substantial Product End Depth Below Mudline (ft)	Liquid Substantial Product[b] Start Depth Below Mudline (ft)	Liquid Substantial Product[b] End Depth Below Mudline (ft)
C289	7624358	705561	-34.0	Y	5.1	5.9	--	--	5.1	5.9
C294	7624301	705487	-1.0	N	--	--	--	--	--	--
C299	7624685	705385	-35.0	Y	3.5	7.5	--	--	3.5	7.5
C300-2	7625529	705209	-41.0	N	--	--	--	--	--	--
C301	7624556	705333	-5.0	Y	--	7.5	--	--	1.5	7.2
C301	7624556	705333	-5.0	Y	12.4	12.8	--	--	12.4	12.8
C301	7624556	705333	-5.0	Y	13.5	13.6	--	--	13.5	13.6
C302	7624629	705301	-6.0	Y	3.3	11.4	--	--	3.3	6.5
C305-1	7624929	705219	-35.0	I	--	--	--	--	--	--
C305-2	7624924	705229	-35.0	I	--	--	--	--	--	--
C311	7625144	705020	-15.5	N	--	--	--	--	--	--
C312	7625128	705159	-38.0	N	--	--	--	--	--	--
C521	7624522	705462	-35.0	Y	--	6.8	--	--	3.0	6.0
C525	7623306	706147	-29.7	N	--	--	--	--	--	--
C527	7623022	706136	-4.2	N	--	--	--	--	--	--
C528	7622856	706193	-8.0	N	--	--	--	--	--	--
C658	7623760	706454	-44.0	N	--	--	--	--	--	--
C662	7624540	705353	-6.0	Y	--	1.0	--	--	--	1.0
C662	7624540	705353	-6.0	Y	2.3	9.8	4.3	4.5	2.3	9.8
C11-A	7623275	706091	-1.9	Y	2.9	3.2	2.9	3.2	--	--
C11-A	7623275	706091	-1.9	Y	4.7	5.1	4.7	5.1	--	--
C11-A	7623275	706091	-1.9	Y	5.8	6.0	5.8	6.0	--	--
C11-A	7623275	706091	-1.9	Y	7.6	7.8	7.6	7.8	--	--
C11-A	7623275	706091	-1.9	Y	8.4	8.8	8.4	8.8	--	--
C11-A	7623275	706091	-1.9	N	--	--	--	--	--	--
C11-A	7623275	706091	-1.9	Y	1.6	1.8	1.6	1.8	--	--
C11-B	7623589	706000	-34.7	I	--	--	--	--	--	--
C11-C	7624583	705336	-8.9	Y	--	3.0	--	--	--	1.0
C11-C	7624583	705336	-8.9	Y	3.0	4.5	--	--	3.0	4.5
C11-C	7624583	705336	-8.9	Y	6.6	10.0	--	--	6.6	10.0
C11-D	7625050	705043	-1.2	Y	5.5	9.3	--	--	5.5	9.3
C11-D	7625050	705043	-1.2	Y	11.9	12.0	--	--	11.9	12.0
LWMTCLP11A	7623675	705929	-34.0	Y	1.8	3.3	--	--	--	--
LWMTCLP11A	7623675	705929	-34.0	Y	4.7	9.2	--	--	--	--
LWMTCLP11B	7624579	705333	-8.0	Y	--	1.0	--	--	--	--
LWMTCLP11B	7624579	705333	-8.0	Y	2.8	12.0	--	--	2.8	11.0
LWMTCLP11C	7624693	705388	-35.0	Y	--	4.8	--	--	--	4.8
PCM-02Y1E2	7623943	705682	-19.5	Y	0.5	2.0	--	--	0.5	2.0
PCM-03Y1E2	7623938	705653	-10.7	Y	1.6	4.6	1.6	4.6	2.1	4.6
PCM-04Y1E2	7623935	705624	-2.4	N	--	--	--	--	--	--
PCM-05Y1E2	7623983	705679	-26.8	Y	1.0	3.7	1.0	3.7	1.0	3.7
PCM-06Y1E2	7623978	705650	-18.9	N	--	--	--	--	--	--
PCM-07Y0E1b	7623958	705591	4.0	N	--	--	--	--	--	--
PCM-08Y1E2	7624029	705635	-23.3	N	--	--	--	--	--	--
PCM-09Y1E2	7624013	705587	-5.1	Y	1.0	1.6	1.0	1.6	--	--

Table 4.4.1-2
Substantial Product in Top of Riverbank Borings

Location ID	Easting (NAD83 ORNH)	Northing (NAD83 ORNH)	Mudline Elevation (ft NAVD88)	Conclusive for Substantial Product[a] (Y/N/I)	Substantial Product Start Depth Below Mudline (ft)	Substantial Product End Depth Below Mudline (ft)	Tar Substantial Product Start Depth Below Mudline (ft)	Tar Substantial Product End Depth Below Mudline (ft)	Liquid Substantial Product[b] Start Depth Below Mudline (ft)	Liquid Substantial Product[b] End Depth Below Mudline (ft)
PCM-10Y1E2	7623989	705577	1.3	Y	0.6	2.2	0.8	1.8	0.6	2.2
PCM-11Y1E2	7624021	705686	-32.2	N	--	--	--	--	--	--
PCM-12Y1E2	7624055	705665	-31.9	N	--	--	--	--	--	--
PCM-18Y0E3	7623962	705603	0.3	Y	0.7	2.2	0.7	2.2	1.7	2.2
PCM-21Y1E2	7623979	705590	-0.6	N	--	--	--	--	--	--
PZ1-50	7623593	705764	12.3	N	--	--	--	--	--	--
PZ2-43	7623665	705810	5.9	N	--	--	--	--	--	--
PZ2-77	7623670	705813	5.2	Y	0.7	3.0	--	--	0.7	3.0
PZ3-33	7623613	705915	-13.4	Y	--	1.5	1.0	1.5	--	1.5
PZ3-33	7623613	705915	-13.4	Y	4.0	4.1	--	--	4.0	4.1
PZ4-41	7623817	705778	-6.2	Y	1.1	1.3	1.1	1.3	--	--
PZ5-85	7623651	705731	12.9	N	--	--	--	--	--	--
RAA-01	7624047	705549	3.3	Y	--	5.5	5.0	5.5	--	5.5
RAA-02	7624053	705569	-3.0	Y	11.0	12.5	--	--	11.0	12.5
RAA-03	7624051	705659	-31.0	N	--	--	--	--	--	--
RAA-04	7624018	705530	9.0	Y	5.0	6.0	5.0	6.0	--	--
RAA-05	7624011	705578	-0.5	N	--	--	--	--	--	--
RAA-08	7623918	705571	12.0	Y	2.5	7.5	2.5	7.5	2.5	7.5
RAA-09	7623967	705600	2.7	N	--	--	--	--	--	--
RAA-10	7623967	705650	-13.6	N	--	--	--	--	--	--
RAA-11	7623923	705649	0.7	Y	--	1.7	--	1.7	--	--
RAA-11	7623923	705649	0.7	I	--	--	--	--	--	--
RAA-12	7623910	705697	-8.2	Y	--	0.5	--	--	--	0.5
RAA-12	7623910	705697	-8.2	Y	13.3	13.4	13.3	13.4	13.3	13.4
RAA-13	7623944	705700	-15.0	N	--	--	--	--	--	--
RAA-13	7623944	705700	-15.0	Y	8.3	10.8	8.3	10.8	--	--
RAA-14	7623974	705715	-27.8	N	--	--	--	--	--	--
RAA-15	7623845	705624	12.9	N	--	--	--	--	--	--
RAA-16	7623876	705658	4.3	Y	5.3	5.4	--	--	5.3	5.4
RAA-17	7623851	705692	7.0	N	--	--	--	--	--	--
RAA-18	7624006	705518	13.0	N	--	--	--	--	--	--
SD-01	7623210	706172	-34.3	N	--	--	--	--	--	--
SD-15	7623307	706065	-10.1	N	--	--	--	--	--	--
SD-4	7623111	706081	4.8	N	--	--	--	--	--	--
SD-5	7623408	705901	6.3	N	--	--	--	--	--	--
SD-6	7623669	705756	8.8	N	--	--	--	--	--	--
SD-7	7623892	705592	10.4	Y	0.2	2.0	0.2	2.0	--	--
SD-8	7624177	705437	7.9	I	--	--	--	--	--	--
SD-9	7624419	705359	4.7	I	--	--	--	--	--	--
WR-VC-50	7624130	705696	-35.0	N	--	--	--	--	--	--
WR-VC-52	7624511	705495	-37.0	Y	--	3.3	--	--	--	3.3
WR-VC-54	7624882	705243	-34.0	N	--	--	--	--	--	--
WR-VC-56	7625301	704999	-33.0	N	--	--	--	--	--	--
GS-B2	7623412	706044	-22.0	N	--	--	--	--	--	--
GS-B5	7624164	705614	-24.0	N	--	--	--	--	--	--

Table 4.4.1-2
Substantial Product in Top of Riverbank Borings

Location ID	Easting (NAD83 ORNH)	Northing (NAD83 ORNH)	Mudline Elevation (ft NAVD88)	Conclusive for Substantial Product[a] (Y/N/I)	Substantial Product Start Depth Below Mudline (ft)	Substantial Product End Depth Below Mudline (ft)	Tar Substantial Product Start Depth Below Mudline (ft)	Tar Substantial Product End Depth Below Mudline (ft)	Liquid Substantial Product[b] Start Depth Below Mudline (ft)	Liquid Substantial Product[b] End Depth Below Mudline (ft)
GS-B7	7624534	705407	-27.0	Y	4.0	15.0	--	--	4.0	15.0
GS-C2	7623537	706197	-39.0	N	--	--	--	--	--	--
GS-C5	7624309	705778	-40.0	N	--	--	--	--	--	--
GS-C7	7624612	705532	-38.0	Y	--	5.0	--	--	--	5.0
GS-D2	7624393	705947	-43.0	N	--	--	--	--	--	--
GS-D4	7624712	705715	-45.0	N	--	--	--	--	--	--
GS-D5	7624899	705623	-43.0	N	--	--	--	--	--	--
GS-04	7623562	705802	6.7	N	--	--	--	--	--	--
GS-05	7623735	705692	9.2	N	--	--	--	--	--	--
GS-06	7623923	705595	9.0	N	--	--	--	--	--	--
GS-07	7624134	705479	6.0	I	--	--	--	--	--	--
GS-08	7624313	705373	12.0	N	--	--	--	--	--	--
GS-09	7624459	705286	7.2	N	--	--	--	--	--	--
SDDA17SB	7623194	706210	-25.6	N	--	--	--	--	--	--
SDDA18SB	7623005	706321	-18.7	N	--	--	--	--	--	--
SDDB20SB	7622895	706324	-9.3	N	--	--	--	--	--	--
SDDB22SB	7622883	706179	-9.1	N	--	--	--	--	--	--
SDDC23SB	7623055	706170	-2.8	N	--	--	--	--	--	--
SDDC24SB	7623023	706120	-4.4	N	--	--	--	--	--	--
SDDC25SB	7622978	706078	-3.2	N	--	--	--	--	--	--
SDUD1SB	7623110	706143	2.2	N	--	--	--	--	--	--
SDUD1SB	7623110	706143	2.2	N	--	--	--	--	--	--
SDUD26SB	7623062	706228	-13.1	N	--	--	--	--	--	--
SDUD27SB	7623145	706182	1.2	N	--	--	--	--	--	--
SDUD2SB	7623036	706065	3.7	N	--	--	--	--	--	--
SDUD2SB	7623036	706065	3.7	N	--	--	--	--	--	--
GP25	7624669	705245	0.8	N	--	--	--	--	--	--
GP26	7624615	705319	-8.5	Y	7.0	8.0	--	--	7.0	8.0
GP27	7624726	705330	-31.5	Y	10.0	13.5	--	--	10.0	13.5
GP28	7624791	705173	2.9	N	--	--	--	--	--	--
GP29	7624790	705389	-37.2	N	--	--	--	--	--	--
GP30	7624837	705251	-32.4	N	--	--	--	--	--	--
GP31	7624692	705456	-37.6	Y	6.0	7.0	--	--	6.0	7.0
GP32	7624970	705256	-37.8	Y	5.5	6.0	--	--	5.5	6.0
SD072	7625417	704825	0.4	N	--	--	--	--	--	--
GSM-14	7625309	704792	11.7	N	--	--	--	--	--	--

Notes:

[a] The definition of "Substantial Product" is provided in Section 3.6.2.1 of the Statement of Work

[b] Liquid substantial product - visual observations indicating higher potential for mobility (e.g., oily, dense nonaqueous phase liquid, saturated)

I = inconclusive

N = No

Y = Yes

NAD83 ORNH = North American Datum 1983 Oregon North Zone, HARN

NAVD88 = North American Vertical Datum 1988

Table 4.7.3-1
Estimated Removal Quantities

Alternative	Cost Range	Dredge Volume in cy[1]			Residuals Dredge Volume in cy[2]	Total Removal Volume in cy
		Riverbank Materials	In-water Materials	Total		
1 - No Action	Low	0	0	0	0	0
	High	0	0	0	0	0
2a	Low	0	0	0	0	0
	High	0	0	0	0	0
2b	Low	0	164,000	164,000	13,000	177,000
	High	0	220,000	220,000	13,000	233,000
3	Low	0	193,000	193,000	13,000	206,000
	High	0	259,000	259,000	13,000	272,000
4	Low	15,000	255,000	270,000	16,000	286,000
	High	15,000	350,000	365,000	16,000	381,000
5	Low	69,000	420,000	489,000	31,000	520,000
	High	69,000	542,000	611,000	31,000	642,000

Notes:

[1] = Using the Lower Willamette Group Preferred Method for determining dredge volumes

[2] = Residuals dredge volume assumes one, 12-inch dredge pass in dredge and cover areas only

cy = cubic yards

Table 5.1.1.1-1
Site-specific Empirical Information Used to Evaluate MNR Effectiveness

Site-specific Information Listed in EPA (2005) Sediment Guidance	Portland Harbor Site Dataset(s)
Identification and characterization of ongoing sources	· Portland Harbor Site draft FS Source Control Inventory Tables (Portland Harbor Site draft FS Section 2.5.1 and Appendix Q) · Stormwater Sampling Data · Upstream Transect Surface Water Data · Groundwater/TZW Sampling Data · NPDES Discharge Data
Evaluation of geomorphology, long-term accretion, and erosion	· Sediment Bathymetric Surveys · Sediment Trap Data · Radioisotope Data
Characterization of bed sediment types	· Sediment Grain Size Data · Sediment Profile Imaging Survey Data
Evaluation of historical trends in contaminant concentrations in biota, sediments, and/or surface water	· Sediment Contaminant Concentrations · Biota Contaminant Concentrations
Evaluation of sequestration mechanisms	· Contaminant and TOC Concentrations on Incoming (Upstream) Sediment Particles · Sediment Trap Data · Sediment Bathymetric Surveys
Determination of the depth of the surface mixed layer	· Radioisotope Data · Sediment Profile Imaging Survey Data
Measurement of suspended solids and contaminant transport during high-energy (e.g., storm) events	· Water Column Suspended Sediment Data · Water Column Contaminant Concentration Data · Sediment Trap Data
Measurement of sediment erosion properties	· Sedflume Core Data

Notes:

EPA = U.S. Environmental Protection Agency

FS = Feasibility Study

MNR = Monitored Natural Recovery

NPDES = National Pollutant Discharge Eliminations System

TZW = transition zone water

TOC = total organic carbon

Table 5.1.1.1-2
Criteria for Assigning Natural Recovery Categories

Line of Evidence		Recovery Categories		
		Category 1	**Category 2**	**Category 3**
		(Recovery Uncertain)	**(Recovery Less Certain)**	**(Predicted to Recover)**
Physical Conditions	Future Maintenance Dredge / Berthing (Propeller Wash) Areas	Likely deep FMD/ berthing areas	Shallow-use FMD/ berthing areas	Outside likely FMD areas
	Wave/Wake Areas	High elevation wave zone areas	Low elevation wave zone areas	Outside wave zone areas
		(6-13 feet NAVD88)	(0-6 feet NAVD88)	
Empirical Data	Net Sedimentation Rate	< -1 cm/yr net sedimentation	-1 to +1 cm/yr net sedimentation[2]	> 1 cm/yr net sedimentation
	(Multi-Beam Bathymetry Surveys)[1]	(i.e., net erosion)		(net deposition)
	Surface Sediment Grain Size (Percent Fines)	< 20% fines	20-40% fines	> 40% fines
	Sediment Surface to Subsurface Concentration Ratios[3]	Surface:subsurface ratio > 1.5	Surface and subsurface within a factor of 1.5	Subsurface:surface ratio > 1.5
Sediment Transport Model	Long-term bed "tracer" simulation to evaluate recovery rate and potential for disruption by extreme flow event	Half life > 20 years	Half life 10 to 20 years	Half life < 10 years
Overall Weight of Evidence	**Calculated average of all six lines of evidence listed above**	**Average Score < 2**	**Average Score 2 to 2.5**	**Average Score > 2.5**

Notes:

[1] = Evaluation of net sedimentation conducted using analysis of bathymetric change between 2003 and 2009 multi-beam bathymetric surveys.

[2] = Corresponds to bathymetric changes that are within +/- 7.5 cm between 2003 and 2009, which represent no discernible change in bathymetry based on the vertical resolution of the surveys.

[3] = Focus of this analysis is on BaP given that this is a primary contaminant of concern at the Gasco Sediments Site.

cm/yr = centimeters per year

FMD = Future maintenance dredge

NAVD88 = North American Vertical Datum 1988

Table 5.5.1.2-1
Gasco Sediment EE/CA Capping Effectiveness Matrix

NAPL Sites with Similar Characteristics to the Gasco Site—Summary of Capping Effectiveness and Lessons Learned											
Project (e.g., location, year completed)	**Nature of Site (e.g., lake, river, estuary)**	**Physical Properties of Sediments (e.g., sands, silts, clays)**	**Physical/Chemical Properties of MGP Contamination (e.g., PAHs, tars, oils, LNAPL, DNAPL)**	**Measured/ Estimated Groundwater Flux Through Cap**	**Consolidation Induced Seepage an Issue?**	**Ebullition an Issue?**	**Cap Thickness and Material Design**	**Performance Monitoring Results**	**Proposed Corrective Actions**	**Lessons Learned and Application to Gasco Sediment Site**	**References**
PSR, Seattle, WA	Estuary (tidal)	Silt to silty sand, wood waste	PAHs, tars, oils, LNAPL, DNAPL. Sheen and some globules in sediment.	Not available, but probably low due to upland barrier wall	Yes	Not sure	5-foot sand cap in intertidal area, 3-foot sand cap elsewhere	2009 5-year review. Cap meeting objectives except in one area where cap is thinner than design and one PCB exceedance occurred.	Additional capping of area that did not meet design thickness	EPA questions whether or not DNAPL is migrating to surface water by product migration or dissolved phase migration. No data exists showing either occur, but concern remains and additional studies are being considered to further investigate upland NAPL and nearshore sediment, groundwater, surface water, transistional zone water and porewater.	
McCormick & Baxter, Willamette River, Portland, OR	River (tidal)	Silt, silty sand, sand	PAHs, tars, oils, LNAPL, DNAPL, metals. Active NAPL seeps.	1 to 3 cm/d	Yes	Yes	1-foot sand cap over 1- to 2-foot organophilic clay or 2- to 5-foot sand cap without clay 6- to 24-inch rock armoring or articulated concrete block	5-year review 2011. Cap and institutional controls effective in achieving RAOs.	Porewater monitoring in area where sand cap is thinner than design and gravel cover on articulated concrete block to cover void spaces that are considered a physical hazard	No dredging required, capped sediments in place. DEQ considers upland barrier wall part of success of offshore cap particularly with respect to NAPL seeps. Organophilic clay considered effective in ebullition-induced sheen areas.	
Island End River Sediment Cap, Everett, MA (2008)	River (tidal)	Organic silt	Tar, sheens	Information not available	Yes	Yes	Triton® Marine Mattresses used in conjunction with 135,000 lbs of Organoclay® bulk capping material and 35,000 square feet of Reactive Core Mat®	Sheens substantially reduced but not eliminated.	None	Sheens were observed near nearshore CDF after dredging and disposal in CDF. Capping was not part of the original project but was required to manage post-dredge residual sheens.	1, 2
Former MGP Poughkeepsie, New York - Pilot Cap Study (May 2009) - EPRI	River with 60-foot water depths and strong currents at the pilot study site	Not specified	Coal-tar NAPL impacted sediments	Information not available		Yes	The caps were assembled using Tensar International's Triton® marine mattresses filled with three different types of material: -Type 1: mattresses filled with 6 inches of armor stone, underlain by an organoclay-filled CETCO RCM and geogrid - Type 2: mattresses filled with 3 inches of armor stone and 3 inches of sand (wrapped in geotextile) - Type 3: mattresses filled with 3 inches of armor stone and 3 inches of bulk organoclay/sand (wrapped in geotextile), underlain by an organoclay-filled RCM and geogrid	The Type 1 caps had the highest level of success. These mats had approximately twice the adsorption capacity of a 5:1 mixture of sand and bulk organoclay and approximately three times the adsorption capacity of sand. Organoclay filled RCMs retained significant adsorption capacity and permeability 18 months after initial placement—performance comparable to that of unused sorbents. The effective life of organoclay-filled RCMs depends on the mass of coal tar in the sediments and the	None (18 month pilot study concluded in November 2010)	Pilot testing of cap configurations may be required to get a representative characterization of NAPL loading, and to match cap sorptive capacity to NAPL loading. Organoclay reactive core mats performed better than bulk materials enclosed in geosynthetic materials.	3

Table 5.5.1.2-1
Gasco Sediment EE/CA Capping Effectiveness Matrix

NAPL Sites with Similar Characteristics to the Gasco Site—Summary of Capping Effectiveness and Lessons Learned											
Project (e.g., location, year completed)	**Nature of Site (e.g., lake, river, estuary)**	**Physical Properties of Sediments (e.g., sands, silts, clays)**	**Physical/Chemical Properties of MGP Contamination (e.g., PAHs, tars, oils, LNAPL, DNAPL)**	**Measured/ Estimated Groundwater Flux Through Cap**	**Consolidation Induced Seepage an Issue?**	**Ebullition an Issue?**	**Cap Thickness and Material Design**	**Performance Monitoring Results**	**Proposed Corrective Actions**	**Lessons Learned and Application to Gasco Sediment Site**	**References**
								mechanisms and rate of transport from the sediments to the overlying water.			
Messer Street Former MGP Sediment Cap in "Location 1", Winnipesauke River, Laconia NH (2007)	River – Location 1 occurs in about 12 feet of water in a depression in the river bed	Fines	Free phase coal tar	Information not available			Previous work has included removal of coal tar/DNAPL utilizing a vacuum truck initially and absorbent pads. DNAPL quantities have decreased over time. In 2007, an organoclay mat was placed in Location 1 in 2007 in lieu of the absorbent pads. The mat is a granular permeable high-capacity organic adsorptive material placed to provide subaqueous chemical isolation of NAPL seeps. The adsorptive capacity of the organoclay is a minimum of 0.5 pounds of oil per pound of clay.	In October 2010, the 2007 mat was replaced with a new organoclay mat. Limited staining was evident on the organoclay mats at that time. In October 2011, NAPL was not observed under the organoclay mat or in the general area of the organoclay mat. The organoclay mat appears to be functioning as intended.	The mat was replaced in October 2011 and is scheduled to be replaced on a biennial basis (every other year).	Cap can be maintainable/replaceable if NAPL loading is predicted to be high enough to exceed a practically achievable cap sorbent capacity	4
Glens Falls, NY (Hudson River) (February 2008)	Canal/River (freshwater)	Sand and gravel	Tar, DNAPL	Low	No	No	Site area was approximately 4,000 sq feet. AquaBlok Cap Design/Site Area: Multi-layer design comprised of a 1-inch base layer AquaBlok+ORGANOCLAY covered with a hydrated layer (about 6 inches in target thickness) of AquaBlok 3070FW. The cap was then armored with a 2-inch layer of AASHTO #2 stone.	No problems reported	None	Because groundwater flux was not identified as an issue, a low permeability cap was identified as appropriate for site conditions.	5
Stryker Bay (part of St. Louis River/Interlake/ Duluth Tar (SLRIDT) Superfund Site), Duluth, MN (2006)	Shallow flat-bottomed bay with an average water depth of 0.9 to 1.5 m (3 to 5 feet)	Fine-grained sediment – black clayey silt with tarry sheen. Native clay underlies contaminated silt.	NAPL and tarry sheens	CICEET (2009) Ground water seepage rate is a relatively high 5 cm/day (CICEET 2009)[19]	Yes	Yes	10 acre active carbon amended Cetco RCM. The cross section of the cap was 0.5 feet (15 cm) sand/activated carbon mat/2.5 feet (75 cm) sand. To maintain water depths of the shallow bay, the cap was surcharged with an additional 4 feet of sand. After consolidation, the surcharge material would be removed. (No documentation that this occurred; scheduled for 2009.) Additional bench tests were conducted to determine the effect of the surcharge load. Based upon the results of these tests, an additional layer of activated carbon mat was included within the cap to adsorb PAH contamination from the temporary flow of consolidation water. To prevent erosion of capped areas the entrance to the bay would be armored. Cetco Installation Report (2007).	No measurable PAHs were detected into the sand capping material. Gas collection indicated more than 99% reduction in gas bubble transported PAHs.	None	These studies found that gas is generated only in Stryker Bay, not in the slips. Capping prevents further gas generation by thermal insulation, reduced permeability of the gas generating layer, and increased sediment strength, and by interrupting any former gas-passing channels at the base of the sand cap. To control bubble transport of contaminated sediment, and DNAPL in the area of the most contaminated sediment, a cap must be 2.5 to 3 feet thick. Groundwater/surface water interaction studies using extensive site-specific measurements rather than assumptions, showed that with the consolidation of an in situ cap, upward flow would be very slow and dominated by diffusion. Dissolved PAHs delivered to the cap under steady-state conditions would degrade within the bottom 20 cm of a sand cap, and	6, 7, 18

Table 5.5.1.2-1
Gasco Sediment EE/CA Capping Effectiveness Matrix

NAPL Sites with Similar Characteristics to the Gasco Site—Summary of Capping Effectiveness and Lessons Learned											
Project (e.g., location, year completed)	**Nature of Site (e.g., lake, river, estuary)**	**Physical Properties of Sediments (e.g., sands, silts, clays)**	**Physical/Chemical Properties of MGP Contamination (e.g., PAHs, tars, oils, LNAPL, DNAPL)**	**Measured/ Estimated Groundwater Flux Through Cap**	**Consolidation Induced Seepage an Issue?**	**Ebullition an Issue?**	**Cap Thickness and Material Design**	**Performance Monitoring Results**	**Proposed Corrective Actions**	**Lessons Learned and Application to Gasco Sediment Site**	**References**
										dissolved contaminants in porewater would not migrate into the cap because of the excess carbon adsorption capacity of the uppermost 15 cm of cleaner post-industrial sediments that overly the contamination (Costello 2004)	
Pine Street Canal Burlington, VT	Historic Canal and turning basin	Organic silt – The sediments are very weak, relatively thick (up to 3 m) and highly organic in nature (TOC > 18%)	Tar, NAPL, sheens		Yes	Yes	RCM multiple layers (including geogrid) and sand	Following re-inundation there was some migration of NAPL from areas near crib structures on the sides of the canal where placement of cap material was not possible.	See lessons learned	Cap was designed and constructed originally as a sand cap. NAPL was observed to migrate through the sand cap, necessitating corrective actions, which included a forensic investigation of sand cap failure. The investigation concluded that gas ebullition was a primary cause of cap failure, and post-construction consolidation of sediment is suspected also as a failure mechanism. The corrective measures included placing multiple layers of RCM, anchored by overlying sand, in NAPL breakthrough areas.	8
Thea Foss Waterway Sediment Remediation, Tacoma, WA (November 2003)	Estuarine waterway	Fines	Active NAPL-seep area. COIs include metals, PAHs, and PCBs.			Yes.	SR-509 Seep Area – A 75-foot by 60-foot cap constructed of HDPE was placed over a localized area of underwater NAPL seeps and topped with an 18-inch layer of sand.	Since the cap was installed, no sheens have been observed in the SR-509 seep area. Naturally occurring gas bubbles continued to be observed on the water surface during low tides. No sheens associated with the gas bubbles have been recorded.	None	This sediment cap impedes groundwater flow through the capped area, potentially forcing flow to deviate from its natural path and contaminate adjacent areas.	9
East Eagle Harbor, Wycoff/Eagle Harbor (1994-2002)	Estuarine waterway	Soft sediments (sandy silt grading to silty sand) with substantial quantities of trapped free product.	NAPL and PAH		Yes. Bench Scale testing for 1-D consolidation. 60-cm sand cap was added in lab. After equilibrium, flocculant portion of cap consolidated considerably (18 to 30 cm). Coarse sand cap and native sand	Yes	90-cm sand cap (approximately 70% sand and 30% fines). Phase 1 (1994) – 3-foot cap of clean sediments over 54 acres Phase 2 (2001) – cap extended additional 15 acres Phase 3 (2002) Intertidal cap (3 to 20 feet thick)	As of 5-Year Review – significant NAPL seeps still evident in intertidal area. Despite the existence of NAPL seep s in the intertidal area, habitat function of the East Beach area appears to be good beyond the immediate vicinity of the seeps. PAH contaminants in surface sediment in localized area.	Cap is continually monitored. Actions being explored for further upland NAPL source control.	Cap design needs to take into account potential for NAPL releases during construction. Requires selecting a method for placement of cap materials that does not disturb sediment/NAPL. Stability of soft sediment (and associated NAPL) underlying cap and stability of capped slopes require analysis during design phase. Contaminant sources need to be identified and mitigated prior to cap placement to avoid recontaminating cap surface.	10,11

Table 5.5.1.2-1
Gasco Sediment EE/CA Capping Effectiveness Matrix

NAPL Sites with Similar Characteristics to the Gasco Site—Summary of Capping Effectiveness and Lessons Learned											
Project (e.g., location, year completed)	**Nature of Site (e.g., lake, river, estuary)**	**Physical Properties of Sediments (e.g., sands, silts, clays)**	**Physical/Chemical Properties of MGP Contamination (e.g., PAHs, tars, oils, LNAPL, DNAPL)**	**Measured/ Estimated Groundwater Flux Through Cap**	**Consolidation Induced Seepage an Issue?**	**Ebullition an Issue?**	**Cap Thickness and Material Design**	**Performance Monitoring Results**	**Proposed Corrective Actions**	**Lessons Learned and Application to Gasco Sediment Site**	**References**
					consolidated very little: 5.5 to 6.5 cm (sand) and 0.5 to 2.5 (native). NAPL pockets and sheen in native sediment. NAPL migration noted in bottom 1 to 2 cm of cap. Distinct boundary/little mixing between cap and native sand.						
Tennessee Products (Chattanooga Creek), Chattanooga, TN, EPA Region 4	Site area was a 2,000-foot segment of the creek, which included an oxbow for a total of over 175,000 sq. feet.		PAHs (creosote), NAPL, sheens		Yes	Yes	8 inch AquaBlok Cap installed in the dry and hydrated. A 6-inch layer of native soil was applied over the cap.	No evidence of NAPL penetration through Aquablok.	No report	A low permeability cap is potentially applicable to sites without significant groundwater advection and uplift pressure.	12
Salem MGP, Salem, MA	Coastal embayment/ beach	Sand, gravel, fill	Tar, oil, LNAPL, DNAPL	High flux	No	Yes	MAMs over one to three layers of RCMs 12 to14 inches thick	No sheens observed since winter 2006/2007 installation	None	Cap is maintainable, i.e., RCMs can be removed and replaced if NAPL loading is higher than predicted in design.	13
Bangor Landing, Bangor, ME	Tidal river	Silty sand, gravel	Tar, DNAPL	30 cm/s (Lab Study)	No	Yes	Pervious gravel gas vent zone under Aquablok gas control zone under bedding layer under armor layer – 2 to 3 feet thick	No report yet.	None	Gas ebullition was the most significant NAPL migration mechanism identified.	14,15
Pawtucket Canal, Lowell, MA	Canal	Sand, organic material	Oil, LNAPL	Variable, depending on water depth maintained in canal by controlling hydroelectric power plant	No	Yes	Multiple layers of RCM anchored with pre-formed concrete weights	Sheens observed 1 year after cap construction during canal drawdown that exceeded design condition for canal drawdown duration	Pump LNAPL from collection trenches installed below cap	Cap is maintainable, i.e., RCMs can be removed and replaced if NAPL loading is higher than predicted in design.	16
Tidewater MGP, Pawtucket, RI	Tidal river bank	Fill	Tar, NAPL	Not known	No	No	Armortec block mats over one to three layers of RCMs 12 to 14 inches thick	No sheens observed since winter 2009/2010 installation	None	Cap is maintainable, i.e., RCMs can be removed and replaced if NAPL loading is higher than predicted in design.	
Former Manufactured Gas Plant, Scajaquada Creek, Buffalo NY	Freshwater creek		NAPL, PAHs, BTEX				18-inch cap (GCL, sand, geotextile, armor) and habitat layer placed				17

Table 5.5.1.2-1
Gasco Sediment EE/CA Capping Effectiveness Matrix

NAPL Sites with Similar Characteristics to the Gasco Site—Summary of Capping Effectiveness and Lessons Learned											
Project (e.g., location, year completed)	**Nature of Site (e.g., lake, river, estuary)**	**Physical Properties of Sediments (e.g., sands, silts, clays)**	**Physical/Chemical Properties of MGP Contamination (e.g., PAHs, tars, oils, LNAPL, DNAPL)**	**Measured/ Estimated Groundwater Flux Through Cap**	**Consolidation Induced Seepage an Issue?**	**Ebullition an Issue?**	**Cap Thickness and Material Design**	**Performance Monitoring Results**	**Proposed Corrective Actions**	**Lessons Learned and Application to Gasco Sediment Site**	**References**
Housatonic River, Western, MA	Freshwater river		NAPL, PAHs, PCBs				Sand cap with armor installed				17

Notes:

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Acronyms:

AASHTO	American Association of State Highway and Transportation Officials
BTEX	benzene, toluene, ethylbenzene, and xylenes
CICEET	Cooperative Institute for Coastal and Estuarine Environmental Technology
CDF	confined disposal facility
cm/d	centimeters/day
COI	chemical of interest
DNAPL	dense non-aqueous phase liquid
EPA	U.S. Environmental Protection Agency
GCL	geosynthetic clay liner
HDPE	high-density polyethylene
LNAPL	light non-aqueous phase liquid
MAM	Marine armor mattress
MGP	manufactured gas plant
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyls
PSR	Puget Sound Resources
RAO	Remedial action objective
RCM	Reactive core material

Table 5.6-1
Common Environmental Dredging Process Options

Step	Process Technology Mechanical Removal		Process Technology Hydraulic Removal
Excavation	Wet		Cutterhead
		Conventional clamshell	Horizontal auger
		Enclosed bucket (wire)	Plain suction
		Articulated mechanical	Pneumatic
			Specialty
	Dry	Various mechanical methods (e.g. conventional clamshell, articulated closed bucket, open bucket, dragline bucket	Diver-assisted suction
Conveyance	Wet	Barge	Pipeline
	Dry	Barge	
		Truck	
		Rail	
Offloading	Various mechanical methods		
	Conveyor		
	Pipeline		

Table 5.6.3.2-1
Resuspension Control Options for Environmental Dredging Matrix of Advantages and Disadvantages and Project Examples

			Case Study Information		
			Project Example	**Report or Technical Document Reference**	**Project Specific Notes**
1. Engineering controls: sheetpile enclosures					
Advantages	1.A1	Reduced transport of resuspended sediments during dredging	Multiple projects	--	--
Disadvantages	1.D1	Difficult to install, maintain, and work around, slows remedy construction	Hudson River - New York	Anchor QEA 2010a	890 LF of sheetpile used to contain 1.56 acre area. Installation required 7 weeks and removal required 6 weeks. The 4-week dredge event required dedicating a dredge to the inside of the sheetpile area, where it could not be productive during sheetpile installation & removal and thus had very low overall productivity.
	1.D2	Reduced production	Published Guidance	EPA 2005	Dependent on site-specific scale and other conditions; conceptual design
	1.D3	Obstruction to navigation	Published Guidance	EPA 2005	Dependent on site-specific scale and other conditions; conceptual design; Require compliance with Coast Guard Regulations
	1.D4	Induced turbulent flow and scour outside of containment	Tittabawassee River Reach D - Michigan	Konechne, et.al. 2010	Scour depths of up to 12 feet below mudline along the sheetpile alignment were noted after sheetpile was removed
			Published Guidance	EPA 2005; USACE 2008	--
	1.D5	Dry excavation can lead to containment failure in adjacent upland areas	Velsicol Chemical Corp./Pine River - Michigan	EPA 2010	Adjacent upland containment wall damage discovered during dry excavation.
	1.D6	Increased chance of river flooding	Published Guidance	EPA 2005	Dependent on site-specific scale and other conditions; conceptual design
	1.D7	Installation may drive contaminants deeper; removal of piling can create a release	Gasco Tar Body Early Action - Oregon (2004)	Anchor Environmental 2005a	Potential for sloughed sediments being released to river during sheetpile removal is described in the EE/CA
			Colman Dock - Seattle	Ecology 1995	Piles pulled during wing wall and structure demolition caused recontamination of adjacent cap area when adhered sediments were resuspended during pulling.
			Published Guidance	EPA 2005	--
	1.D8	Allows transport of dissolved contaminants (not impermeable)	Hudson River - New York	Anchor QEA 2010a	Flow through equalization ports and gaps in the sheetpile connections caused downstream transport of PCBs
			Grasse River - New York	Connolly, et. al. 2007	Containment system extensively engineered and monitored for effectiveness. Dissolved phase and particle bound PCBs were found to have migrated beyond the containment
			GM Massena, St. Lawrence River Remediation Project - New York (1996)	EPA 2003	Turbidity exceedances reported at overflows at low steel sheets during storms and high waves
			Published Guidance	EPA 2005; USACE 2008	--
	1.D9	Release of dissolved and suspended contaminants concentrated inside containment	Hudson River - New York	Anchor QEA 2010a	Dissolved phase PCBs became concentrated in contained water column, resulting in exceedance of air emissions standards during dredging. Residuals released downstream after removal of sheetpile containment.
			Published Guidance	USACE 2008	--
	1.D10	Release of residuals inside containment	Published Guidance	USACE 2008	--
	1.D11	High cost of materials	Published Guidance	USACE 2008	Dependent on site-specific scale and other conditions; conceptual design

Table 5.6.3.2-1
Resuspension Control Options for Environmental Dredging Matrix of Advantages and Disadvantages and Project Examples

			Case Study Information		
			Project Example	**Report or Technical Document Reference**	**Project Specific Notes**
2. Engineering controls: Silt curtains/silt screens					
Advantages	2.A1	Reduced transport of resuspended sediments	Multiple projects	--	--
	2.A2	Lower cost materials conmpared to sheetpiles			
Disadvantages	2.D1	Only feasible in quiescent conditions	Gasco Tar Body Early Action - Oregon (2004)	Anchor Environmental 2005b	Silt curtains used in currents greater than 1fps require aggressive anchoring that is difficult to reposition during construction
			Fox River SMU 56/57 Phase I - Wisconsin (1999)	EPA 2003	Woven geotextile perimeter permeable curtain anchored to river and shore; Curtain performed well under velocity conditions of 2 to 3 fps, experienced damage when velocity neared 4.5 fps
			Kinnickinnic River - Michigan (2009)	EPA 2009	Silt curtains were used prior to implementation of a bubble curtain. Curtains were difficult to manage due to variable river flow and seiche conditions
			Multiple projects	Bridges et. al. 2010	--
	2.D2	Difficult to install and maintain	Gasco Tar Body Early Action - Oregon (2004)	Anchor Environmental 2006	Silt curtain was damaged and repaired on multiple occasions.
			Ford Outfall - Monroe, MI (1997)	Tams 2000	Silt curtain damaged due to unauthorized vessel traffic
			Outboard Marine - Waukegan, IL (1992)	EPA 2003	Silt curtain required multiple repair events due to high winds and currents
			United Heckathorn - San Francisco (1997)	EPA 2006	Silt curtain was damaged and repaired on multiple occasions. The use of a temporary, emergency curtain was required.
			GM Massena, St. Lawrence River Remediation Project - New York (1996)	EPA 2003	Use of silt curtain was abandoned because it could not be maintained in variable flow conditions
			San Jacinto River Waste Pits Time Critical Removal Action - Texas (2011)	Anchor QEA 2011a	Turbidity curtain was continually subject to movement during tide and wind shifts. Regular maintenance and anchor resetting was required; curtain impeded access to work area; hydrodynamic river forces damaged the curtain during construction
			Multiple projects	Bridges, et. al. 2010	--
	2.D3	Obstruction to navigation	Manistique River - Michigan	EPA 2003	Silt curtain could not be placed at mouth of river so as to not restrict river traffic
			East Waterway Phase 1 Removal Action - Seattle (2005)	Anchor Environmental 2003	Silt curtains not used in part because of obstruction to navigation at active Port
	2.D4	Allows transport of dissolved contaminants (not impermeable)	Gasco Tar Body Early Action - Oregon (2004)	Anchor Environmental 2006	Downstream transport of dissolved phase contaminants occurred despite use of silt curtain
			GM Massena, St. Lawrence River Remediation Project - New York (1996)	EPA 2003	Double silt curtain system abandoned after being determined to be ineffective due to variable current speed and direction
			Grasse River - New York	Connolly, et. al. 2007	Containment system extensively engineered and monitored for effectiveness. Dissolved phase and particle bound PCBs were found to have migrated beyond the containment
			Published Guidance	USACE 2008	--
	2.D5	Velocities under silt curtain cause scour			
			New Bedford Harbor - Massachusetts (1995)	EPA 2003	Silt curtain containment originally selected, but later abandoned due to their continuous disturbance of bottom surface

Table 5.6.3.2-1
Resuspension Control Options for Environmental Dredging Matrix of Advantages and Disadvantages and Project Examples

			Case Study Information		
			Project Example	**Report or Technical Document Reference**	**Project Specific Notes**
3. Engineering controls: Cofferdams/caissons/removable dams (e.g., geotubes)					
Advantages	3.A1	Allows removal "in the dry"	Multiple projects	--	--
Disadvantages	3.D1	Feasible under limited site conditions	Velsicol Chemical Corp./Pine River - Michigan	EPA 2010	ROD recognized the cofferdams might only be practicable in certain portions of the site
	3.D2	Difficult to install and maintain, slows remedy construction	Rock Bay - Victoria, B.C. (2009)	Hemmera and Anchor QEA 2010	Caisson dredging; caisson control was difficult, debris hindered placement of caisson; multiple caisson placements caused metal fatigue and damage to caisson during the course of work
			Grand Calumet River - Indiana	EPA 2003	Three cells contained within cofferdams BMPs required in the event of action limit exceedance included: decreasing dredge speed, additional resuspension controls, suspension of dredging operations
	3.D3	Reduced production	Rock Bay - Victoria, B.C. (2009)	Hemmera and Anchor QEA 2010	Caisson dredging production rates averaged 13.8 cubic meters per day
	3.D3	Obstruction to navigation	Similar to 1.D3	See 1.D3	--
	3.D4	Induced turbulent flow and scour outside of containment	Similar to 1.D4	See 1.D4	--
	3.D5	Increased chance of river flooding	Similar to 1.D5	See 1.D5	--
	3.D6	Installation may drive contaminants deeper	Similar to 1.D6	See 1.D6	--
	3.D7	High cost of materials	Similar to 1.D11	See 1.D11	--
4. Operational controls[1]					
Advantages	4.A1	Reduced resuspension	Black River - Ohio	EPA undated	Oil booms only; Sediment concentrations reduced from 8.8-52 mg/kg to 1.6-3.7 mg/kg two years after dredging; 1997 Sampling indicated that the river and its biota are healthier and do not contain elevated levels of PAHs
			Terminal 4 Phase 1 Removal Action	Anchor QEA 2009	Turbidity levels were effectively reduced using operational BMPs, including preventing bucket overfilling, pausing the dredge bucket near the mudline, slowing the rate of bucket closure and ascent, and complete emptying of the dredge bucket on the material barge
			East Waterway Phase 1 Removal Action - Seattle (2005)	Anchor Environmental and Windward Environmental 2005	Barge filtration was demonstrated to prevent WQ impacts; 1 failure of barge filter fabric was picked up by the WQ monitoring, and once repair was made exceedance stopped.
	4.A2	Increased production	Hylebos Waterway, Commencement Bay (2003)	DOF 2002	Lack of contained dredge area selected because of need for constant repositioning of the dredge
	4.A3	Faster remedy construction	Multiple projects	--	--
	4.A4	Lower cost removal remedy	Multiple projects	--	--
Disadvantages	4.D.1	May not be effective	Published Guidance	USACE 2008	Additional study recommended to understand limitations of operational controls
	4.D.2	Increased transport of resuspended sediments	Multiple projects	--	--

Table 5.6.3.2-1
Resuspension Control Options for Environmental Dredging Matrix of Advantages and Disadvantages and Project Examples

	Case Study Information		
	Project Example	**Report or Technical Document Reference**	**Project Specific Notes**

Notes:

[1] = Water quality monitoring using chemical testing of river water (e.g., field lab or offsite laboratory 24 hour turn around) at monitoring locations/depths is not recommended. Standard physical field monitoring parameters (e.g., turbidity) recommended.

Table 5.6.3.2-1
Resuspension Control Options for Environmental Dredging Matrix of Advantages and Disadvantages and Project Examples

Additional Sources:

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USACE 2008. *Technical Guidelines for Environmental Dredging of Contaminated Sediments* ERDC EL TR-08-29

Table 5.6.3.3-1
Release Case Studies

Project	Environmental Dredging Activity	BMPs	Source of Release Estimate	Contaminant Mass Released	Primary Reference
1995 Grasse River NTCRA Pilot Study	3,000 cy of sediment and debris removed using hydraulic dredge for sediments	Dredging operation BMPs and silt curtains	Caged fish monitoring	Adjacent fish tissue concentrations increased 50x; 0.9 km downstream fish tissue concentrations increased 5x	"Non-Time Critical Removal Action (NTCRA) Pilot Dredging in the Grasse River" presentation to the NAS Panel on Risk-management Strategy for PCB-Contaminated Sediments. November 8, 1999.
1999-2000 Fox River SMU 56/57 Dredging Pilot Study	82,000 cy removed using hydraulic cutterhead dredge	Dredging operation BMPs and silt curtains	Water quality monitoring data collected 100 to 200 ft downstream of the dredge, outside of silt curtains	Average **2.2%** of dredged PCB mass released into water column, with roughly 30% as dissolved phase PCBs	Steuer, J.J. 2000. A mass-balance approach for assessing PCB movement during remediation of a PCB-contaminated deposit on the Fox River, Wisconsin. USGS Water-Resources Investigations Report 00-4245.
2004 Duwamish/ Diagonal Early Action	70,000 cy removed using clamshell mechanical dredge	Dredging operation BMPs	Fate/transport and food web modeling to simulate measured fish tissue PCB increases during and after dredging	Fish tissue increases simulated assuming an average **3%** (range: 1 to 6%) of dredged PCB mass released and available for bioaccumulation	Stern. J. H. 2007. Temporal effects of dredge-related releases on fish tissue concentrations: Implications to achieving net risk reduction. SETAC North America 28th Annual Meeting, Nov. 2007, Milwaukee, WI.
2005 Grasse River Remedial Options Pilot Study	25,000 cy removed using hydraulic cutterhead dredge	Dredging operation BMPs and silt curtains	Water quality monitoring data collected more than 2,000 ft downstream of the dredge, outside of silt curtains	Average **3%** of dredged PCB mass released into water column, with more than 50% as dissolved phase PCBs	Connolly J.P., Quadrini J.D., and McShea L.J. 2007. Overview of the 2005 Grasse River Remedial Options Pilot Study. In: Proceedings, Remediation of Contaminated Sediments—2007. Savannah, GA. Columbus (OH): Battelle.
2005 Lower Passaic River Dredging Pilot Study	4,000 cy removed using clamshell mechanical dredge	Dredging operation BMPs and rinse tank	Water quality monitoring data collected 400 ft downstream of the dredge over the 5 day dredging event	Average **3 to 4%** (range: 1 to 6%) of dredged dioxin mass released into water column	Lower Passaic River Restoration Project Team. 2009. Revision and Updates to the Environmental Dredging Pilot Study. Project Delivery Team Meeting. March 2009.
2009 Hudson River Phase I Dredging	280,000 cy removed using clamshell mechanical dredge	Dredging operation BMPs and silt curtains	Water quality monitoring data collected more than 10,000 ft downstream of the dredge, outside of silt curtains	Average **3 to 4%** of dredged PCB mass released into water column, with 70 to 90% as dissolved phase PCBs	Anchor QEA and Arcadis. 2010. Phase 1 Evaluation Report: Hudson River PCBs Superfund Site. Report prepared for General Electric, Albany, New York. March 2010.

References:

Anchor QEA, 2012a. Draft Feasibility Study. Portland Harbor RI/FS, Feasibility Study. Prepared for The Lower Willamette Group. March 2012.

Notes:

BMP = best management practice

cy = cubic yards

ft = feet

NTCRA = Non-Time Critical Removal Action

PCB = polychlorinated biphenyl

USGS = U.S. Geological Survey

Table 6.0-1
Summary Description of Gasco Sediment Site Remedial Alternatives

No.	Description	BaPEq RAL (µg/kg)[1]	Benthic Toxicity	Active Remediation Areas Defined By	Active Remediation Area Additions for Subsurface Contamination in NC and FMD Areas Outside Active Cleanup Boundary	Preference for Removal of Substantial Product[2]	In-water Technology Options[4]	
							MNR	In Place[3]
1	No further action	None selected	No CBRA duration selected	No active remediation areas proposed	No active remediation area additions for subsurface contamination	No preference for removal	No MNR proposed	No in place technologies proposed
2a	IN PLACE Focused	20,000	CBRAs achieved at Year 10 (estimated)	- Nearshore: Areas where >RAL and/or MQ currently >0.7* - NC: no active remediation areas proposed	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7 - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7	In place technologies proposed over removal throughout active remediation boundary	- Outside Alternative 2 active remediation boundary but within interim Project Area Boundary	- Nearshore: Everywhere inside active remediation boundary except FMD area - NC: not proposed
2b	COMBINED In Place and Removal 1	20,000	CBRAs achieved at Year 10 (estimated)	- Nearshore: Areas where >RAL and/or MQ currently >0.7* - NC: Areas where MQ currently >0.7*	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7 - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7	In place technologies proposed over removal throughout active remediation boundary	- Outside Alternative 2 active remediation boundary but within interim Project Area Boundary	- Nearshore: Everywhere inside active remediation boundary except FMD area - NC: not proposed
3	COMBINED In Place and Removal 2	20,000	CBRAs achieved at Year 10 (estimated)	- Nearshore: Areas where >RAL and/or MQ currently >0.7* - NC: Areas where MQ currently >0.7* - Both: Where potentially mobile substantial product present in surface	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7. - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7 - Both: Where liquid product present in subsurface	Preference for removal for observances of liquid substantial product**	- Outside Alternative 3 active remediation boundary but within interim Project Area Boundary	- Nearshore: Everywhere inside active remediation boundary except FMD areas and liquid substantial product areas. Also, cap back followingliquid substantial product removal. Also, cap under docks and unstable slopes where liquid substantial product present and/or RAL exceedances identified. - NC: not proposed
4	COMBINED In Place and Removal 3	1,500	CBRAs achieved at Year 0 (estimated)	- Nearshore: Areas where >RAL and within CBRA - NC: Areas within CBRA - Both: where substantial product present in surface	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7 - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7 - Both: Where substantial product present in subsurface	Observances of substantial product (as defined in SOW)	- Areas on periphery of Alternative 4 active remediation boundary that only show surface sediment toxicity based on one LOE	- Nearshore: Everywhere inside active remediation boundary except FMD area and substantial product areas. Also, cap back after substantial product removal. Also, cap under docks and unstable slopes where substantial product present and/or RAL exceedances identified. - NC: not proposed
5	REMOVAL Focused	1,500	CBRAs achieved at Year 0 (estimated)	- Nearshore: Areas where >RAL and within CBRA - NC: Areas within CBRA - Both: where substantial product present in surface	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7 - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7 - Both: Where substantial product present in subsurface	Observances of substantial product (as defined in SOW)	No MNR proposed	Where removal infeasible (e.g., causes unstable slopes, impacts upland structures) in both nearshore and NC

Table 6.0-1
Summary Description of Gasco Sediment Site Remedial Alternatives

No.	Description	In-water Technology Options[4]			Riverbank Technology Options[4]			Disposal (Riverbank and Sediments)
		Removal	Dock Considerations	Rigid Containment[5]	MNR****	In Place (e.g., water infiltration barrier with erosion control on top)	Removal	
1	No further action	No removal proposed	No dock removal/ replacement	No rigid containment	No MNR proposed	No in place technologies proposed	No removal proposed	No disposal proposed
2a	IN PLACE Focused	No removal proposed	No dock removal/ replacement	No rigid containment	Areas with minimal screening level exceedances in soils, no "substantial"*** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soils.	None (assumes no need for removal to create stable slopes following in-water remediation)	No disposal proposed
2b	COMBINED In Place and Removal 1	- Nearshore: In FMD area inside active remediation boundary - NC: Everywhere inside Alternative 2 active remediation boundary	No dock removal/ replacement	No rigid containment	Areas with minimal screening level exceedances in soils, no "substantial"*** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soils.	None (assumes no need for removal to create stable slopes following in-water remediation)	100% CDF/CAD disposal (low cost) to 100% unspecified upland Subtitle D (high cost). 100% SubSMA C299 Subtitle C.
3	COMBINED In Place and Removal 2	- Nearshore: In FMD area inside active remediation boundary and liquid substantial product areas (except under docks and unstable slopes) - NC: Everywhere inside Alternative 3 active remediation boundary	No dock removal/ replacement	No rigid containment	Areas with minimal screening level exceedances in soils, no "substantial"*** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soils (and as needed where these conditions persist following removal--see removal).	As necessary to support stable slopes following in-water removal and in areas with liquid substantial product.	For materials without liquid substantial product in NC and FMD areas, use Alternative 2b assumptions. For materials with liquid substantial product, assume 100% unspecified upland Subtitle D (low cost range) or 50% Subtitle C (high cost range). 100% SubSMA C299 Subtitle C.
4	COMBINED In Place and Removal 3	- Nearshore: In FMD area inside active remediation boundary and substantial product areas (except under docks and unstable slopes) - NC: Everywhere inside Alternative 4 active remediation boundary	No dock removal/ replacement	No rigid containment	Areas with minimal screening level exceedances in soils, no "substantial"*** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soil that are not removed or are remaining following removal.	As necessary to support stable slopes following in-water removal and in areas with substantial product.	For non-substantial product materials, use Alternative 2b assumptions. For materials with substantial product, 10% Subtitle C (low cost range) to 35% Subtitle C (high cost range); remainder to unspecified Subtitle D. 100% SubSMA C299 Subtitle C.
5	REMOVAL Focused	Where removal feasible in both nearshore and NC	Remove/replace dock	Sheetpile wall proposed where feasible (e.g., water depths)	Areas with minimal screening level exceedances in soils, no "substantial"*** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soil that are remaining following removal.	As necessary to support stable slopes following in-water removal, in areas with substantial product, and in areas with substantial screening level exceedances in soils.	For non-substantial product materials, use Alternative 2b assumptions. For materials with substantial product, 20% Subtitle C (low cost range) to 40% Subtitle C (high cost range); remainder to unspecified upland Subtitle D. 100% SubSMA C299 Subtitle C.

Table 6.0-1
Summary Description of Gasco Sediment Site Remedial Alternatives

Notes:

[1] = Consistent with Portland Harbor draft Feasibility Study (FS; Anchor QEA 2012a), prospective RAL point of compliance is the maximum layer-weighted-average up to 30 centimeters below mudline applied outside the navigation channel.

[2] = The Statement of Work (SOW) includes the preference for removal of substantial product (as defined in the SOW) as a remedial action objective.

[3] = In Place remedial technologies include a range of process options with similar effectiveness, implementability, and cost, including armored caps, sand caps, enhanced monitored natural recovery (EMNR), or in-situ treatment (e.g., activated carbon placement), depending on sediment management area (SMA)-specific characteristics.

[4] = For all proposed alternatives, upland source controls are assumed to be in place and functioning to minimize (in most areas eliminate) groundwater flux to the riverbank and in-water areas.

[5] = The Portland Harbor draft FS determined that due to the documented issues with effectiveness and implementability of rigid containment, and the limited documented benefit associated with such controls, consideration of rigid containment (e.g., sheet pile walls) as a Removal Best Management Practice (BMP) is generally not warranted for remedial design.

Avg = Average

CAD = Confined aquatic disposal facility

CBRA = Comprehensive Benthic Risk Area (defined using the procedures established for use in the Portland Harbor FS)

EMNR = Enhanced Monitored Natural Recovery

FMD = Potential Future Maintenance Dredge Area

LOE = Line of Evidence

MNR = Monitored Natural Recovery

NC = Navigation Channel

RAL = Remedial Action Level

SMA = Sediment Management Area

SL = screening level

µg/kg = micrograms per kilogram

* Consistent with Portland Harbor draft FS Alternative B, mean quotient (MQ)<0.7 takes precedence over bioassay hits, but TZW and bioaccumulation benthic endpoints take precedence over MQ<0.7.

** Observations of substantial product noted in core and boring logs that indicate potential for increased mobility (e.g., liquid nonaqueous phase liquid [NAPL], oily product, saturated with NAPL product) originating within 0 to 3 feet below mudline.

*** Defined using the SOW sediments definition, but technically such product in riverbank is not defined as "substantial product" because it is outside the sediments project area boundary.

**** The assumption here is that if there are not substantial chemical screening level exceedances and no "substantial product", then the stormwater "percolation" pathway would not transport substantial contaminant load to the river by itself.

Table 6.0-2
Comparison of Gasco Sediment Site Alternatives to Portland Harbor Draft FS Alternatives

Gasco Sediments Site Alternatives[3]									Most Similar Portland Harbor draft FS Alternative								
No.	**Description**	**BaPEq RAL (µg/kg)**	**Benthic Toxicity**	**Preference for Removal of Substantial Product[1]**	**Technology Options[2]**	**Dock Removal**	**Rigid Containment[4]**	**Disposal Locations**	**No.**	**Description**	**BaPEq RAL (µg/kg)**	**Benthic Toxicity**	**Preference for Removal of Substantial Product**	**Technology Options**	**Dock Removal**	**Rigid Containment[4]**	**Disposal Locations**
1	No further action	NA	NA	NA	No technologies	None	No rigid containment	No disposal proposed	A	No further action	NA	NA	NA	No technologies	None	No rigid containment	No disposal proposed
2a	In-place and MNR Focused	20,000	CBRAs achieved at Year 10 (SMA-specific estimate)	No	- Nearshore: In-place technologies except removal in FMD - NC: MNR	None	No rigid containment	No disposal proposed	B-i	Integrated	20,000	CBRAs achieved at Year 10 (estimated)	No	- Nearshore: In place technologies except removal in FMD - NC: Removal	None	No rigid containment	Upland Subtitle D
2b	Combined In-place and Removal 1	20,000	CBRAs achieved at Year 10 (estimated)	No (but removal of some substantial product is included)	- Nearshore: In-place technologies except removal in FMD - NC: Removal	None	No rigid containment	CDF/CAD or Upland Subtitle D (C299 Subtitle C)	B-i	Integrated	20,000	CBRAs achieved at Year 10 (estimated)	No	- Nearshore: In-place technologies except removal in FMD - NC: Removal	None	No rigid containment	Upland Subtitle D
3	Combined In-Place and Removal 2	20,000	CBRAs achieved at Year 10 (estimated)	Yes, for liquid product	- Nearshore: In-place technologies except removal in FMD and in liquid product areas - NC: Removal	None	No rigid containment	CDF/CAD, Upland Subtitle D, or Upland Subtitle C	B-r	Removal Focused	20,000	CBRAs achieved at Year 10 (estimated)	No	- Nearshore: Removal except under docks - NC: Removal	None	No rigid containment	CAD and Upland Subtitle D
4	Removal Focused	1,500	CBRAs achieved at Year 0 (estimated)	Yes	- Nearshore: Removal of substantial product and in FMD; otherwise in-place technologies - NC: Removal	None	No rigid containment	CDF/CAD, Upland Subtitle D, or Upland Subtitle C	F-r	Removal Focused	1,500	CBRAs achieved at Year 0 (estimated)	No	- Nearshore: Removal except under docks - NC: Removal	None	No rigid containment	CAD and Upland Subtitle D
5	Full Removal	1,500	CBRAs achieved at Year 0 (estimated)	Yes	- Nearshore: Removal - NC: Removal	Remove/ replace dock	Sheetpile wall proposed where feasible	CDF/CAD, Upland Subtitle D, or Upland Subtitle C	F-r	Removal Focused	1,500	CBRAs achieved at Year 0 (estimated)	No	- Nearshore: Removal except under docks - NC: Removal	None	No rigid containment	CAD and Upland Subtitle D

Table 6.0-2
Comparison of Gasco Sediment Site Alternatives to Portland Harbor Draft FS Alternatives

Notes:

[1] = The Statement of Work (SOW) includes the preference for removal of substantial product (as defined in the SOW) as a remedial action objective.

[2] = In Place remedial technologies include a range of process options with similar effectiveness, implementability, and cost, including armored caps, sand caps, enhanced monitored natural recovery (EMNR), or in-situ treatment (e.g., activated carbon placement), depending on sediment management area (SMA)-specific characteristics.

[3] = For all proposed alternatives, upland source controls are assumed to be in place and functioning to minimize (in most areas eliminate) groundwater flux to the riverbank and in-water areas.

[4] = The Portland Harbor draft FS determined that due to the documented issues with effectiveness and implementability of rigid containment, and the limited documented benefit associated with such controls, consideration of rigid containment (e.g., sheet pile walls) as a Removal Best Management Practice (BMP) is generally not warranted for remedial design.

Avg = Average

CAD = Confined aquatic disposal facility

CBRA = Comprehensive Benthic Risk Area (defined using the procedures established for use in the Portland Harbor FS)

EMNR = Enhanced Monitored Natural Recovery

FMD = Potential Future Maintenance Dredge Area

LOE = Line of Evidence

MNR = Monitored Natural Recovery

NC = Navigation Channel

RAL = Remedial Action Level

SMA = Sediment Management Area

SL = screening level

µg/kg = micrograms per kilogram

Table 6.3.8-1
Remedial Alternative Disposal Facility Assumptions

Alternative	Cost	Subtitle C	Subtitle D	CDF and CAD Disposal
2b	Low	Core C299 Theissen Polygon 50% of liquid substantial product material	--	All areas except core C299 Thiessen polygon
	High	Core C299 Theissen Polygon 50% of liquid substantial product material	All areas except core C299 Thiessen polygon	--
3	Low	Core C299 Theissen Polygon 50% of liquid substantial product material	100% of liquid substantial product material	All non-liquid substantial product material
	High	Core C299 Theissen Polygon 50% of liquid substantial product material	50% of liquid substantial product material All non-liquid substantial product material	--
4	Low	Core C299 Theissen Polygon 10% of substantial product material	90% of substantial product material	All non-substantial product material
	High	Core C299 Theissen Polygon 35% of substantial product material	65% of substantial product material All non-substantial product material	--
5	Low	Core C299 Theissen Polygon 20% of substantial product material	80% of substantial product material	All non-substantial product material
	High	Core C299 Theissen Polygon 40% of substantial product material	60% of substantial product material All non-substantial product material	--

Notes:

CAD = confined aquatic disposal

CDF = confined disposal facility

Table 6.6-1
Summary of Estimated Costs for the
Gasco Sediments Site Remedial Alternatives

Alternative	Total Direct and Indirect Construction Costs, and Contingency		Institutional Controls ($M)	Long Term Monitoring and Maintenance ($M)	Total Net Present Value Costs[3]	
	Low ($M) [1]	High ($M) [2]			Low ($M)	High ($M)
1	0	0	0	0	0	0
2a	23	28	1	10	34	40
2b	62	111	1	10	73	123
3	80	140	1	10	92	152
4	121	190	1	12	134	202
5 [4]	239	343	1	6	245	350

Notes:

[1] = Assumes Habitat Mitigation Costs are $150,000.

[2] = Assumes Habitat Mitigation Costs are $4,000,000.

[3] = Net Present Value Costs are the sum of the Discounted Direct and Indirect Construction Costs , Contingency Costs (25 percent of direct contstruction costs), Long Term Monitoring and Maintenance, and Institutional Controls.

[4] = These costs include sheetpile wall construction, and demolition/replacement of the existing heavy pier structure.

Table 7.2-1
Summary of BaP and Naphthalene
Sediment RGs and SQVs Used in Alternatives Evaluations

BaPEq RG Basis	BaPEq Sediment RG (µg/kg)
EPA Point Estimate for Tribal fisher direct contact 10^{-6} cancer risk level	423
99th Percentile for Tribal fisher direct contact 10^{-6} cancer risk level	1,437
95th Percentile for Tribal fisher direct contact 10^{-6} cancer risk level	2,750
90th Percentile for Tribal fisher direct contact 10^{-6} cancer risk level	3,702

SQV Basis	BaP SQVs (µg/kg)[1]	Naphthalene SQVs (µg/kg)[2]
Chironomus Growth Level 3	610,000	650,000
Chironomus Survival Level 3	610,000	2,000
Hyalella Growth Level 3	1,300,000	650,000
Hyalella Survival Level 3	1,300,000	2,000

Notes:

[1] = The SQV value are for HPAHs

[2] = The SQV values are for LPAHs

µg/kg = micrograms per kilograms

BaP = benzo(a)pyrene

BaPEq = benzo(a)pyrene equivalents

EPA = U.S. Environmental Protection Agency

RG = Remediation Goals

SQV = Sediment Quality Values

Table 8.1.1-1
Estimated Concentrations Pre-Remediation and at Time Zero After Construction for Gasco Sediment Site COIs

Chemical Group	Chemical	River Mile	Background/ MRL	Units	Initial "No-Action" SWAC	Time 0 Alternative 2a	Time 0 Alternative 2b	Time 0 Alternative 3	Time 0 Alternative 4	Time 0 Alternative 5
Half West Shoreline Rivermile 6.5-7.0										
VOCs	1,1-Dichloroethene	6.5-7W	0.1	µg/kg	0.609	0.561	0.561	0.561	0.538	0.538
VOCs	1,2-Dichloroethene, cis-	6.5-7W	1	µg/kg	1.08	1.04	1.04	1.04	1	1
VOCs	1,2-Dichloroethene, trans-	6.5-7W	0.15	µg/kg	0.772	0.719	0.719	0.719	0.687	0.687
Dioxins	2,3,4,7,8-PCDF	6.5-7W	0.0005	µg/kg	0.0073	0.00722	0.00722	0.00722	0.00714	0.00714
PAHs	2-Methylnaphthalene	6.5-7W	20	µg/kg	266	213	213	213	44.4	44.4
Pesticides	Aldrin	6.5-7W	0.339	µg/kg	1.76	1.75	1.75	1.75	1.73	1.73
Metals	Arsenic	6.5-7W	3.973	mg/kg	7.03	6.99	6.99	6.99	6.98	6.98
PAHs	BapEq	6.5-7W	22.8	µg/kg	994	864	864	864	747	747
VOCs	Benzene	6.5-7W	0.11	µg/kg	8.89	2.79	2.79	2.79	1.08	1.08
PAHs	Benzo(a)anthracene	6.5-7W	15.7	µg/kg	588	483	483	483	410	410
PAHs	Benzo(a)anthracene (OC)	6.5-7W	1.93	mg/kg-OC	72.8	60.7	60.7	60.7	44.1	44.1
PAHs	Benzo(a)pyrene	6.5-7W	15.3	µg/kg	699	605	605	605	518	518
PAHs	Benzo(a)pyrene (OC)	6.5-7W	1.794	mg/kg-OC	93.4	82.2	82.2	82.2	65	65
PAHs	Benzo(b)fluoranthene	6.5-7W	20.2	µg/kg	580	533	533	533	484	484
PAHs	Benzo(k)fluoranthene (OC)	6.5-7W	1.93	mg/kg-OC	37.4	33.7	33.7	33.7	27.2	27.2
SVOCs	Carbazole	6.5-7W	2.2	µg/kg	77.6	56.1	56.1	56.1	49.7	49.7
Conventionals	Cyanide, total	6.5-7W	1	mg/kg	0.562	0.529	0.529	0.529	0.529	0.529
PAHs	Dibenz(a,h)anthracene	6.5-7W	3.2	µg/kg	111	102	102	102	93.3	93.3
SVOCs	Dibenzofuran	6.5-7W	6.7	µg/kg	332	272	272	272	226	226
Hydrocarbons	Diesel Range Hydrocarbons	6.5-7W	5000	µg/kg	105	105	105	105	105	105
Pesticides	Endrin ketone	6.5-7W	0.103	µg/kg	8.19	7.86	7.86	7.86	7.67	7.67
VOCs	Ethylbenzene	6.5-7W	0.11	µg/kg	8.93	2.83	2.83	2.83	1.11	1.11
SVOCs	Hexachlorobenzene (OC)	6.5-7W	0.1245	mg/kg-OC	0.446	0.41	0.41	0.41	0.377	0.377
VOCs	m,p-Xylene	6.5-7W	0.22	µg/kg	17.1	5.24	5.24	5.24	1.91	1.91
VOCs	o-Xylene	6.5-7W	0.11	µg/kg	0.794	0.721	0.721	0.721	0.666	0.666
Hydrocarbons	Residual Range Hydrocarbons	6.5-7W	10000	µg/kg	320	320	320	320	320	320
Pesticides	Sum DDD	6.5-7W	1.31	µg/kg	104	92.2	92.2	92.2	76.2	76.2
Pesticides	Sum DDE	6.5-7W	1.72	µg/kg	41.2	39.8	39.8	39.8	38.2	38.2
Pesticides	Sum DDT	6.5-7W	1.1	µg/kg	98	91.9	91.9	91.9	86.4	86.4
VOCs	Toluene	6.5-7W	0.11	µg/kg	9.04	2.94	2.94	2.94	1.22	1.22
Pesticides	Total DDx	6.5-7W	3.59	µg/kg	242	224	224	224	202	202
PAHs	Total PAH	6.5-7W	187	µg/kg	12700	9870	9870	9870	8300	8300
PCBs	Total PCBs	6.5-7W	17	µg/kg	84.9	80.2	80.2	80.2	75.7	75.7
VOCs	Trichloroethene (TCE)	6.5-7W	0.1	µg/kg	0.62	0.567	0.567	0.567	0.53	0.53
VOCs	Vinyl chloride	6.5-7W	0.1	µg/kg	0.633	0.579	0.579	0.579	0.541	0.541
Metals	Zinc	6.5-7W	110	mg/kg	146	145	145	145	144	144
Half West Shoreline Rivermile 6.0-6.5										
VOCs	1,1-Dichloroethene	6-6.5W	0.1	µg/kg	43	20.9	9.91	7.89	1.95	1.95
VOCs	1,2-Dichloroethene, cis-	6-6.5W	1	µg/kg	19.3	4.61	4.58	4.54	3.46	3.46
VOCs	1,2-Dichloroethene, trans-	6-6.5W	0.15	µg/kg	43.1	21	9.99	7.97	2.03	2.03
Dioxins	2,3,4,7,8-PCDF	6-6.5W	0.0005	µg/kg	0.00079	0.000587	0.000568	0.000549	0.000487	0.000487
PAHs	2-Methylnaphthalene	6-6.5W	20	µg/kg	4520	1460	1070	766	80.7	80.7
Pesticides	Aldrin	6-6.5W	0.339	µg/kg	1.32	0.631	0.585	0.561	0.494	0.494

Table 8.1.1-1
Estimated Concentrations Pre-Remediation and at Time Zero After Construction for Gasco Sediment Site COIs

Chemical Group	Chemical	River Mile	Background/ MRL	Units	Initial "No-Action" SWAC	Time 0 Alternative 2a	Time 0 Alternative 2b	Time 0 Alternative 3	Time 0 Alternative 4	Time 0 Alternative 5
Metals	Arsenic	6-6.5W	3.973	mg/kg	4.28	3.88	3.84	3.84	3.84	3.84
PAHs	BapEq	6-6.5W	22.8	µg/kg	21700	4280	2850	2500	1840	1840
VOCs	Benzene	6-6.5W	0.11	µg/kg	149	113	102	99.5	92.6	92.6
PAHs	Benzo(a)anthracene	6-6.5W	15.7	µg/kg	12900	2420	1570	1380	1010	1010
PAHs	Benzo(a)anthracene (OC)	6-6.5W	1.93	mg/kg-OC	533	165	142	113	52	52
PAHs	Benzo(a)pyrene	6-6.5W	15.3	µg/kg	16300	3290	2230	1920	1350	1350
PAHs	Benzo(a)pyrene (OC)	6-6.5W	1.794	mg/kg-OC	635	202	175	138	66.7	66.7
PAHs	Benzo(b)fluoranthene	6-6.5W	20.2	µg/kg	14100	3120	2310	1940	1270	1270
PAHs	Benzo(k)fluoranthene (OC)	6-6.5W	1.93	mg/kg-OC	244	76	66.9	51.3	23.5	23.5
SVOCs	Carbazole	6-6.5W	2.2	µg/kg	1490	251	183	159	111	111
Conventionals	Cyanide, total	6-6.5W	1	mg/kg	8.84	2.24	1.88	1.88	1.88	1.88
PAHs	Dibenz(a,h)anthracene	6-6.5W	3.2	µg/kg	1760	414	286	237	148	148
SVOCs	Dibenzofuran	6-6.5W	6.7	µg/kg	1230	500	412	316	50.8	50.8
Hydrocarbons	Diesel Range Hydrocarbons	6-6.5W	5000	µg/kg	1080	969	964	964	962	962
Pesticides	Endrin ketone	6-6.5W	0.103	µg/kg	4.23	1.8	1.37	1.14	0.727	0.727
VOCs	Ethylbenzene	6-6.5W	0.11	µg/kg	204	158	143	141	134	134
SVOCs	Hexachlorobenzene (OC)	6-6.5W	0.1245	mg/kg-OC	0.798	0.241	0.216	0.202	0.137	0.137
VOCs	m,p-Xylene	6-6.5W	0.22	µg/kg	252	202	190	188	180	180
VOCs	o-Xylene	6-6.5W	0.11	µg/kg	158	115	102	99.5	92.5	92.5
Hydrocarbons	Residual Range Hydrocarbons	6-6.5W	10000	µg/kg	1940	1920	1920	1920	1920	1920
Pesticides	Sum DDD	6-6.5W	1.31	µg/kg	59.1	20.5	15.9	14.5	11.1	11.1
Pesticides	Sum DDE	6-6.5W	1.72	µg/kg	11.7	5.25	4.18	3.94	3.2	3.2
Pesticides	Sum DDT	6-6.5W	1.1	µg/kg	24.3	13.7	12.4	11.3	8.11	8.11
VOCs	Toluene	6-6.5W	0.11	µg/kg	105	67	55.6	53.5	46.6	46.6
Pesticides	Total DDx	6-6.5W	3.59	µg/kg	96.4	38.5	32	29.3	21.9	21.9
PAHs	Total PAH	6-6.5W	187	µg/kg	225000	42300	25500	22000	15500	15500
PCBs	Total PCBs	6-6.5W	17	µg/kg	47.2	27.2	26.3	26	24.8	24.8
VOCs	Trichloroethene (TCE)	6-6.5W	0.1	µg/kg	56.4	21.8	10.8	8.79	1.88	1.88
VOCs	Vinyl chloride	6-6.5W	0.1	µg/kg	56.5	21.9	10.9	8.87	1.96	1.96
Metals	Zinc	6-6.5W	110	mg/kg	137	122	121	121	120	120
Full Rivermile 6.0 to 7.0										
VOCs	1,1-Dichloroethene	6-7	0.1	µg/kg	4.65	2.75	1.48	1.31	0.781	0.77
VOCs	1,2-Dichloroethene, cis-	6-7	1	µg/kg	4	2.73	1.55	1.54	1.14	1.13
VOCs	1,2-Dichloroethene, trans-	6-7	0.15	µg/kg	4.79	2.88	1.61	1.44	0.91	0.9
Dioxins	2,3,4,7,8-PCDF	6-7	0.0005	µg/kg	0.00276	0.00273	0.00268	0.00267	0.00264	0.00261
PAHs	2-Methylnaphthalene	6-7	20	µg/kg	704	436	211	180	87.6	82.3
Pesticides	Aldrin	6-7	0.339	µg/kg	0.678	0.618	0.584	0.58	0.567	0.56
Metals	Arsenic	6-7	3.973	mg/kg	4.26	4.22	4.15	4.15	4.14	4.1
PAHs	BapEq	6-7	22.8	µg/kg	2940	1430	922	875	767	757
VOCs	Benzene	6-7	0.11	µg/kg	47.9	44.3	37.6	37.4	35.8	35.4
PAHs	Benzo(a)anthracene	6-7	15.7	µg/kg	1780	867	522	491	425	417
PAHs	Benzo(a)anthracene (OC)	6-7	1.93	mg/kg-OC	89.1	56.5	43.7	40.6	32.8	32.3
PAHs	Benzo(a)pyrene	6-7	15.3	µg/kg	2140	1010	653	618	532	525
PAHs	Benzo(a)pyrene (OC)	6-7	1.794	mg/kg-OC	103	65.3	53	49.4	40.6	40.2

Table 8.1.1-1
Estimated Concentrations Pre-Remediation and at Time Zero After Construction for Gasco Sediment Site COIs

Chemical Group	Chemical	River Mile	Background/ MRL	Units	Initial "No-Action" SWAC	Time 0 Alternative 2a	Time 0 Alternative 2b	Time 0 Alternative 3	Time 0 Alternative 4	Time 0 Alternative 5
PAHs	Benzo(b)fluoranthene	6-7	20.2	µg/kg	2250	1300	839	778	666	655
PAHs	Benzo(k)fluoranthene (OC)	6-7	1.93	mg/kg-OC	45	30.3	25.9	24.4	20.9	20.6
SVOCs	Carbazole	6-7	2.2	µg/kg	235	126	79.6	76.4	66.7	64.9
Conventionals	Cyanide, total	6-7	1	mg/kg	3.27	1.34	1.08	1.07	1.06	1.06
PAHs	Dibenz(a,h)anthracene	6-7	3.2	µg/kg	256	139	85.4	78.6	65.5	64.5
SVOCs	Dibenzofuran	6-7	6.7	µg/kg	242	174	126	117	85.9	80.9
Hydrocarbons	Diesel Range Hydrocarbons	6-7	5000	µg/kg	222	213	212	212	212	212
Pesticides	Endrin ketone	6-7	0.103	µg/kg	2.29	2.05	1.66	1.63	1.52	1.48
VOCs	Ethylbenzene	6-7	0.11	µg/kg	91.5	87.1	75.4	75	73.4	72.9
SVOCs	Hexachlorobenzene (OC)	6-7	0.1245	mg/kg-OC	0.741	0.69	0.669	0.667	0.655	0.652
VOCs	m,p-Xylene	6-7	0.22	µg/kg	90.1	84.8	72.9	72.7	70.2	69.5
VOCs	o-Xylene	6-7	0.11	µg/kg	115	111	107	106	105	104
Hydrocarbons	Residual Range Hydrocarbons	6-7	10000	µg/kg	540	538	538	538	538	538
Pesticides	Sum DDD	6-7	1.31	µg/kg	18.1	13.9	12.6	12.4	10.6	10.5
Pesticides	Sum DDE	6-7	1.72	µg/kg	6.51	5.85	5.51	5.48	5.23	5.21
Pesticides	Sum DDT	6-7	1.1	µg/kg	16.4	15	14.3	14.2	13.1	12.6
VOCs	Toluene	6-7	0.11	µg/kg	66.3	62.6	56.4	56.2	54.9	54.7
Pesticides	Total DDx	6-7	3.59	µg/kg	39.9	33.5	31.7	31.4	28.4	27.8
PAHs	Total PAH	6-7	187	µg/kg	33700	17700	9740	9160	7820	7570
PCBs	Total PCBs	6-7	17	µg/kg	74.4	72.3	71.1	71	70.2	69.8
VOCs	Trichloroethene (TCE)	6-7	0.1	µg/kg	6.97	3.99	1.83	1.65	0.768	0.751
VOCs	Vinyl chloride	6-7	0.1	µg/kg	7.07	4.08	1.87	1.69	0.806	0.787
Metals	Zinc	6-7	110	mg/kg	105	104	103	103	103	103

Notes:

Cells are shaded when concentration less than background

BapEq = Benzo(a)pyrene equivalent
COI = chemical of interest
DDD= dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethylene
DDT = dichlorodiphenyltrichloroethane
mg/kg = milligrams per kilogram
MRL = Method Reporting Limit
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyl
OC = organic compound
SVOC = semivolatile organic compound
SWAC = Surface-area Weighted Average Concentration
TCE = Trichloroethene
VOC = volatile organic compound
µg/kg = micrograms per kilogram

References:

Background values are from Portland Harbor draft FS, Appendix A, Upriver Surface Sediment, with Primary Outliers Removed - 95 UPL - Portland Harbor Draft FS, Appendix A

Table 8.1.1-1
Estimated Concentrations Pre-Remediation and at Time Zero After Construction for Gasco Sediment Site COIs

Chemical Group	Chemical	River Mile	Background/ MRL	Units	Initial "No-Action" SWAC	Time 0 Alternative 2a	Time 0 Alternative 2b	Time 0 Alternative 3	Time 0 Alternative 4	Time 0 Alternative 5

If background values were not included in the Portland Harbor draft FS, MRL values are from Gasco Final Data Gaps QAPP, Table 1-1 (Anchor 2010)

Table 8.1.1-2
Estimated Concentrations Pre-Remediation and at Time Zero After Construction Compared to Portland Harbor draft FS PRGs

Chemical Group	Chemical	Units	Risk Group	Risk Pathway	PRG Mapping Extent	River Mile	PRG Value	Initial "No-Action" SWAC	Time 0 Alternative 2a	Time 0 Alternative 2b	Time 0 Alternative 3	Time 0 Alternative 4	Time 0 Alternative 5
Dioxins	2,3,4,7,8-PCDF	µg/kg	ECO	Eco, Mammal Diet, Mink, Mult Sp	FRMiNC	6-7	0.056	0.00276	0.00273	0.00268	0.00267	0.00264	0.00261
Dioxins	2,3,4,7,8-PCDF	µg/kg	HHx4	Adult SMB Consumption, High IR	FRMiNC	6-7	0.00141	0.00276	0.00273	0.00268	0.00267	0.00264	0.00261
Dioxins	2,3,4,7,8-PCDF	µg/kg	HHx4	Adult SMB Consumption, Low IR	FRMiNC	6-7	0.0205	0.00276	0.00273	0.00268	0.00267	0.00264	0.00261
Dioxins	2,3,4,7,8-PCDF	µg/kg	HHx4	Adult SMB Consumption, Low IR	FRMiNC	6-7	0.085	0.00276	0.00273	0.00268	0.00267	0.00264	0.00261
Dioxins	2,3,4,7,8-PCDF	µg/kg	HHx4	Child SMB Consumption, High IR	FRMiNC	6-7	0.00475	0.00276	0.00273	0.00268	0.00267	0.00264	0.00261
Dioxins	2,3,4,7,8-PCDF	µg/kg	HHx4	Child SMB Consumption, Low IR	FRMiNC	6-7	0.0698	0.00276	0.00273	0.00268	0.00267	0.00264	0.00261
Dioxins	2,3,4,7,8-PCDF	µg/kg	HHx5	Adult SMB Consumption, Low IR	FRMiNC	6-7	0.00106	0.00276	0.00273	0.00268	0.00267	0.00264	0.00261
Dioxins	2,3,4,7,8-PCDF	µg/kg	HHx5	Child SMB Consumption, Low IR	FRMiNC	6-7	0.0039	0.00276	0.00273	0.00268	0.00267	0.00264	0.00261
Dioxins	2,3,4,7,8-PCDF	µg/kg	HQ1	Adult SMB Consumption, High IR	FRMiNC	6-7	0.000619	0.00276	0.00273	0.00268	0.00267	0.00264	0.00261
Dioxins	2,3,4,7,8-PCDF	µg/kg	HQ1	Adult SMB Consumption, Low IR	FRMiNC	6-7	0.00986	0.00276	0.00273	0.00268	0.00267	0.00264	0.00261
Dioxins	2,3,4,7,8-PCDF	µg/kg	HQ1	Child SMB Consumption, Low IR	FRMiNC	6-7	0.00448	0.00276	0.00273	0.00268	0.00267	0.00264	0.00261
Metals	Arsenic	mg/kg	HHx6	In-Water Contact, High Frequency Fisher	HRMxNC	6.5-7W	15	7.03	6.99	6.99	6.99	6.98	6.98
Metals	Arsenic	mg/kg	HHx6	In-Water Contact, High Frequency Fisher	HRMxNC	6-6.5W	15	4.28	3.88	3.84	3.84	3.84	3.84
PAHs	BapEq	µg/kg	HHx4	In-Water Contact, Tribal Fisher	HRMxNC	6.5-7W	42300	994	864	864	864	747	747
PAHs	BapEq	µg/kg	HHx4	In-Water Contact, Tribal Fisher	HRMxNC	6-6.5W	42300	21700	4280	2850	2500	1840	1840
PAHs	BapEq	µg/kg	HHx5	In-Water Contact, Diver (Wet Suit)	HRMxNC	6.5-7W	25900	994	864	864	864	747	747
PAHs	BapEq	µg/kg	HHx5	In-Water Contact, Diver (Wet Suit)	HRMxNC	6-6.5W	25900	21700	4280	2850	2500	1840	1840
PAHs	BapEq	µg/kg	HHx5	In-Water Contact, High Frequency Fisher	HRMxNC	6.5-7W	16500	994	864	864	864	747	747
PAHs	BapEq	µg/kg	HHx5	In-Water Contact, High Frequency Fisher	HRMxNC	6-6.5W	16500	21700	4280	2850	2500	1840	1840
PAHs	BapEq	µg/kg	HHx5	In-Water Contact, Low Frequency Fisher	HRMxNC	6.5-7W	24700	994	864	864	864	747	747
PAHs	BapEq	µg/kg	HHx5	In-Water Contact, Low Frequency Fisher	HRMxNC	6-6.5W	24700	21700	4280	2850	2500	1840	1840
PAHs	BapEq	µg/kg	HHx5	In-Water Contact, Tribal Fisher	HRMxNC	6.5-7W	4230	994	864	864	864	747	747
PAHs	BapEq	µg/kg	HHx5	In-Water Contact, Tribal Fisher	HRMxNC	6-6.5W	4230	21700	4280	2850	2500	1840	1840
PAHs	BapEq	µg/kg	HHx6	In-Water Contact, Diver (Dry Suit)	HRMxNC	6.5-7W	13300	994	864	864	864	747	747
PAHs	BapEq	µg/kg	HHx6	In-Water Contact, Diver (Dry Suit)	HRMxNC	6-6.5W	13300	21700	4280	2850	2500	1840	1840
PAHs	BapEq	µg/kg	HHx6	In-Water Contact, Diver (Wet Suit)	HRMxNC	6.5-7W	2590	994	864	864	864	747	747
PAHs	BapEq	µg/kg	HHx6	In-Water Contact, Diver (Wet Suit)	HRMxNC	6-6.5W	2590	21700	4280	2850	2500	1840	1840
PAHs	BapEq	µg/kg	HHx6	In-Water Contact, High Frequency Fisher	HRMxNC	6.5-7W	1650	994	864	864	864	747	747
PAHs	BapEq	µg/kg	HHx6	In-Water Contact, High Frequency Fisher	HRMxNC	6-6.5W	1650	21700	4280	2850	2500	1840	1840
PAHs	BapEq	µg/kg	HHx6	In-Water Contact, Low Frequency Fisher	HRMxNC	6.5-7W	2470	994	864	864	864	747	747
PAHs	BapEq	µg/kg	HHx6	In-Water Contact, Low Frequency Fisher	HRMxNC	6-6.5W	2470	21700	4280	2850	2500	1840	1840
PAHs	BapEq	µg/kg	HHx6	In-Water Contact, Tribal Fisher	HRMxNC	6.5-7W	423	994	864	864	864	747	747
PAHs	BapEq	µg/kg	HHx6	In-Water Contact, Tribal Fisher	HRMxNC	6-6.5W	423	21700	4280	2850	2500	1840	1840
PAHs	BapEq	µg/kg	HHx6	In-Water Contact, Worker	HRMxNC	6.5-7W	8570	994	864	864	864	747	747
PAHs	BapEq	µg/kg	HHx6	In-Water Contact, Worker	HRMxNC	6-6.5W	8570	21700	4280	2850	2500	1840	1840
PAHs	Benzo(a)anthracene	µg/kg	HHx6	In-Water Contact, Diver (Wet Suit)	HRMxNC	6.5-7W	25900	588	483	483	483	410	410
PAHs	Benzo(a)anthracene	µg/kg	HHx6	In-Water Contact, Diver (Wet Suit)	HRMxNC	6-6.5W	25900	12900	2420	1570	1380	1010	1010
PAHs	Benzo(a)anthracene	µg/kg	HHx6	In-Water Contact, High Frequency Fisher	HRMxNC	6.5-7W	16500	588	483	483	483	410	410
PAHs	Benzo(a)anthracene	µg/kg	HHx6	In-Water Contact, High Frequency Fisher	HRMxNC	6-6.5W	16500	12900	2420	1570	1380	1010	1010
PAHs	Benzo(a)anthracene	µg/kg	HHx6	In-Water Contact, Low Frequency Fisher	HRMxNC	6.5-7W	24700	588	483	483	483	410	410
PAHs	Benzo(a)anthracene	µg/kg	HHx6	In-Water Contact, Low Frequency Fisher	HRMxNC	6-6.5W	24700	12900	2420	1570	1380	1010	1010
PAHs	Benzo(a)anthracene	µg/kg	HHx6	In-Water Contact, Tribal Fisher	HRMxNC	6.5-7W	4230	588	483	483	483	410	410
PAHs	Benzo(a)anthracene	µg/kg	HHx6	In-Water Contact, Tribal Fisher	HRMxNC	6-6.5W	4230	12900	2420	1570	1380	1010	1010
PAHs	Benzo(a)pyrene	µg/kg	HHx5	In-Water Contact, Diver (Wet Suit)	HRMxNC	6.5-7W	25900	699	605	605	605	518	518
PAHs	Benzo(a)pyrene	µg/kg	HHx5	In-Water Contact, Diver (Wet Suit)	HRMxNC	6-6.5W	25900	16300	3290	2230	1920	1350	1350
PAHs	Benzo(a)pyrene	µg/kg	HHx5	In-Water Contact, High Frequency Fisher	HRMxNC	6.5-7W	16500	699	605	605	605	518	518
PAHs	Benzo(a)pyrene	µg/kg	HHx5	In-Water Contact, High Frequency Fisher	HRMxNC	6-6.5W	16500	16300	3290	2230	1920	1350	1350

Table 8.1.1-2
Estimated Concentrations Pre-Remediation and at Time Zero After Construction Compared to Portland Harbor draft FS PRGs

Chemical Group	Chemical	Units	Risk Group	Risk Pathway	PRG Mapping Extent	River Mile	PRG Value	Initial "No-Action" SWAC	Time 0 Alternative 2a	Time 0 Alternative 2b	Time 0 Alternative 3	Time 0 Alternative 4	Time 0 Alternative 5
PAHs	Benzo(a)pyrene	µg/kg	HHx5	In-Water Contact, Low Frequency Fisher	HRMxNC	6.5-7W	24700	699	605	605	605	518	518
PAHs	Benzo(a)pyrene	µg/kg	HHx5	In-Water Contact, Low Frequency Fisher	HRMxNC	6-6.5W	24700	16300	3290	2230	1920	1350	1350
PAHs	Benzo(a)pyrene	µg/kg	HHx5	In-Water Contact, Tribal Fisher	HRMxNC	6.5-7W	4230	699	605	605	605	518	518
PAHs	Benzo(a)pyrene	µg/kg	HHx5	In-Water Contact, Tribal Fisher	HRMxNC	6-6.5W	4230	16300	3290	2230	1920	1350	1350
PAHs	Benzo(a)pyrene	µg/kg	HHx6	In-Water Contact, Diver (Dry Suit)	HRMxNC	6.5-7W	13300	699	605	605	605	518	518
PAHs	Benzo(a)pyrene	µg/kg	HHx6	In-Water Contact, Diver (Dry Suit)	HRMxNC	6-6.5W	13300	16300	3290	2230	1920	1350	1350
PAHs	Benzo(a)pyrene	µg/kg	HHx6	In-Water Contact, Diver (Wet Suit)	HRMxNC	6.5-7W	2590	699	605	605	605	518	518
PAHs	Benzo(a)pyrene	µg/kg	HHx6	In-Water Contact, Diver (Wet Suit)	HRMxNC	6-6.5W	2590	16300	3290	2230	1920	1350	1350
PAHs	Benzo(a)pyrene	µg/kg	HHx6	In-Water Contact, High Frequency Fisher	HRMxNC	6.5-7W	1650	699	605	605	605	518	518
PAHs	Benzo(a)pyrene	µg/kg	HHx6	In-Water Contact, High Frequency Fisher	HRMxNC	6-6.5W	1650	16300	3290	2230	1920	1350	1350
PAHs	Benzo(a)pyrene	µg/kg	HHx6	In-Water Contact, Low Frequency Fisher	HRMxNC	6.5-7W	2470	699	605	605	605	518	518
PAHs	Benzo(a)pyrene	µg/kg	HHx6	In-Water Contact, Low Frequency Fisher	HRMxNC	6-6.5W	2470	16300	3290	2230	1920	1350	1350
PAHs	Benzo(a)pyrene	µg/kg	HHx6	In-Water Contact, Tribal Fisher	HRMxNC	6.5-7W	423	699	605	605	605	518	518
PAHs	Benzo(a)pyrene	µg/kg	HHx6	In-Water Contact, Tribal Fisher	HRMxNC	6-6.5W	423	16300	3290	2230	1920	1350	1350
PAHs	Benzo(a)pyrene	µg/kg	HHx6	In-Water Contact, Worker	HRMxNC	6.5-7W	8570	699	605	605	605	518	518
PAHs	Benzo(a)pyrene	µg/kg	HHx6	In-Water Contact, Worker	HRMxNC	6-6.5W	8570	16300	3290	2230	1920	1350	1350
PAHs	Benzo(b)fluoranthene	µg/kg	HHx6	In-Water Contact, Diver (Wet Suit)	HRMxNC	6.5-7W	25900	580	533	533	533	484	484
PAHs	Benzo(b)fluoranthene	µg/kg	HHx6	In-Water Contact, Diver (Wet Suit)	HRMxNC	6-6.5W	25900	14100	3120	2310	1940	1270	1270
PAHs	Benzo(b)fluoranthene	µg/kg	HHx6	In-Water Contact, High Frequency Fisher	HRMxNC	6.5-7W	16500	580	533	533	533	484	484
PAHs	Benzo(b)fluoranthene	µg/kg	HHx6	In-Water Contact, High Frequency Fisher	HRMxNC	6-6.5W	16500	14100	3120	2310	1940	1270	1270
PAHs	Benzo(b)fluoranthene	µg/kg	HHx6	In-Water Contact, Low Frequency Fisher	HRMxNC	6.5-7W	24700	580	533	533	533	484	484
PAHs	Benzo(b)fluoranthene	µg/kg	HHx6	In-Water Contact, Low Frequency Fisher	HRMxNC	6-6.5W	24700	14100	3120	2310	1940	1270	1270
PAHs	Benzo(b)fluoranthene	µg/kg	HHx6	In-Water Contact, Tribal Fisher	HRMxNC	6.5-7W	4230	580	533	533	533	484	484
PAHs	Benzo(b)fluoranthene	µg/kg	HHx6	In-Water Contact, Tribal Fisher	HRMxNC	6-6.5W	4230	14100	3120	2310	1940	1270	1270
PAHs	Dibenz(a,h)anthracene	µg/kg	HHx6	In-Water Contact, Diver (Wet Suit)	HRMxNC	6.5-7W	2590	111	102	102	102	93.3	93.3
PAHs	Dibenz(a,h)anthracene	µg/kg	HHx6	In-Water Contact, Diver (Wet Suit)	HRMxNC	6-6.5W	2590	1760	414	286	237	148	148
PAHs	Dibenz(a,h)anthracene	µg/kg	HHx6	In-Water Contact, High Frequency Fisher	HRMxNC	6.5-7W	1650	111	102	102	102	93.3	93.3
PAHs	Dibenz(a,h)anthracene	µg/kg	HHx6	In-Water Contact, High Frequency Fisher	HRMxNC	6-6.5W	1650	1760	414	286	237	148	148
PAHs	Dibenz(a,h)anthracene	µg/kg	HHx6	In-Water Contact, Low Frequency Fisher	HRMxNC	6.5-7W	2470	111	102	102	102	93.3	93.3
PAHs	Dibenz(a,h)anthracene	µg/kg	HHx6	In-Water Contact, Low Frequency Fisher	HRMxNC	6-6.5W	2470	1760	414	286	237	148	148
PAHs	Dibenz(a,h)anthracene	µg/kg	HHx6	In-Water Contact, Tribal Fisher	HRMxNC	6.5-7W	423	111	102	102	102	93.3	93.3
PAHs	Dibenz(a,h)anthracene	µg/kg	HHx6	In-Water Contact, Tribal Fisher	HRMxNC	6-6.5W	423	1760	414	286	237	148	148
Pesticides	Sum DDD	µg/kg	HHx5	Adult SMB Consumption, High IR	FRMiNC	6-7	10.2	18.1	13.9	12.6	12.4	10.6	10.5
Pesticides	Sum DDD	µg/kg	HHx5	Child SMB Consumption, High IR	FRMiNC	6-7	27.3	18.1	13.9	12.6	12.4	10.6	10.5
Pesticides	Sum DDD	µg/kg	HHx6	Adult SMB Consumption, Low IR	FRMiNC	6-7	8.08	18.1	13.9	12.6	12.4	10.6	10.5
Pesticides	Sum DDD	µg/kg	HHx6	Child SMB Consumption, High IR	FRMiNC	6-7	1.86	18.1	13.9	12.6	12.4	10.6	10.5
Pesticides	Sum DDD	µg/kg	HHx6	Child SMB Consumption, Low IR	FRMiNC	6-7	23.2	18.1	13.9	12.6	12.4	10.6	10.5
Pesticides	Sum DDD	µg/kg	HQ1	Adult SMB Consumption, High IR	FRMiNC	6-7	56.3	18.1	13.9	12.6	12.4	10.6	10.5
Pesticides	Sum DDD	µg/kg	HQ1	Child SMB Consumption, High IR	FRMiNC	6-7	28.1	18.1	13.9	12.6	12.4	10.6	10.5
Pesticides	Sum DDE	µg/kg	HQ1	Child SMB Consumption, High IR	FRMiNC	6-7	3.08	6.51	5.85	5.51	5.48	5.23	5.21
Pesticides	Sum DDT	µg/kg	HHx5	Adult SMB Consumption, High IR	FRMiNC	6-7	13.6	16.4	15	14.3	14.2	13.1	12.6
Pesticides	Sum DDT	µg/kg	HHx5	Child SMB Consumption, High IR	FRMiNC	6-7	36.7	16.4	15	14.3	14.2	13.1	12.6
Pesticides	Sum DDT	µg/kg	HHx6	Adult SMB Consumption, Low IR	FRMiNC	6-7	10.8	16.4	15	14.3	14.2	13.1	12.6
Pesticides	Sum DDT	µg/kg	HHx6	Child SMB Consumption, High IR	FRMiNC	6-7	2.42	16.4	15	14.3	14.2	13.1	12.6
Pesticides	Sum DDT	µg/kg	HHx6	Child SMB Consumption, Low IR	FRMiNC	6-7	31.3	16.4	15	14.3	14.2	13.1	12.6
Pesticides	Sum DDT	µg/kg	HQ1	Child SMB Consumption, High IR	FRMiNC	6-7	54.1	16.4	15	14.3	14.2	13.1	12.6
PCBs	Total PCBs	µg/kg	ECO	Eco, Bird Diet, Bald Eagle, Mult Sp	FRMiNC	6-7	730	74.4	72.3	71.1	71	70.2	69.8

Table 8.1.1-2
Estimated Concentrations Pre-Remediation and at Time Zero After Construction Compared to Portland Harbor draft FS PRGs

Chemical Group	Chemical	Units	Risk Group	Risk Pathway	PRG Mapping Extent	River Mile	PRG Value	Initial "No-Action" SWAC	Time 0 Alternative 2a	Time 0 Alternative 2b	Time 0 Alternative 3	Time 0 Alternative 4	Time 0 Alternative 5
PCBs	Total PCBs	µg/kg	ECO	Eco, Bird Diet, Merganser, Mult Sp	FRMiNC	6-7	618	74.4	72.3	71.1	71	70.2	69.8
PCBs	Total PCBs	µg/kg	ECO	Eco, Bird Diet, Osprey, Mult Sp	FRMiNC	6-7	423	74.4	72.3	71.1	71	70.2	69.8
PCBs	Total PCBs	µg/kg	ECO	Eco, Mammal Diet, Mink, Mult Sp	FRMiNC	6-7	31	74.4	72.3	71.1	71	70.2	69.8
PCBs	Total PCBs	µg/kg	ECO	Eco, Tissue Residue, Pikeminnow	FRMiNC	6-7	85.5	74.4	72.3	71.1	71	70.2	69.8
PCBs	Total PCBs	µg/kg	ECO	Eco, Tissue Residue, SMB	FRMiNC	6-7	63.7	74.4	72.3	71.1	71	70.2	69.8
PCBs	Total PCBs	µg/kg	HHx4	Adult SMB Consumption, Low IR	FRMiNC	6-7	29.5	74.4	72.3	71.1	71	70.2	69.8
PCBs	Total PCBs	µg/kg	HHx4	Child SMB Consumption, Low IR	FRMiNC	6-7	87.2	74.4	72.3	71.1	71	70.2	69.8
PCBs	Total PCBs	µg/kg	HHx5	In-Water Contact, Tribal Fisher	HRMxNC	6.5-7W	14800	84.9	80.2	80.2	80.2	75.7	75.7
PCBs	Total PCBs	µg/kg	HHx5	In-Water Contact, Tribal Fisher	HRMxNC	6-6.5W	14800	47.2	27.2	26.3	26	24.8	24.8
PCBs	Total PCBs	µg/kg	HHx6	In-Water Contact, Diver (Wet Suit)	HRMxNC	6.5-7W	8810	84.9	80.2	80.2	80.2	75.7	75.7
PCBs	Total PCBs	µg/kg	HHx6	In-Water Contact, Diver (Wet Suit)	HRMxNC	6-6.5W	8810	47.2	27.2	26.3	26	24.8	24.8
PCBs	Total PCBs	µg/kg	HHx6	In-Water Contact, High Frequency Fisher	HRMxNC	6.5-7W	5740	84.9	80.2	80.2	80.2	75.7	75.7
PCBs	Total PCBs	µg/kg	HHx6	In-Water Contact, High Frequency Fisher	HRMxNC	6-6.5W	5740	47.2	27.2	26.3	26	24.8	24.8
PCBs	Total PCBs	µg/kg	HHx6	In-Water Contact, Low Frequency Fisher	HRMxNC	6.5-7W	8610	84.9	80.2	80.2	80.2	75.7	75.7
PCBs	Total PCBs	µg/kg	HHx6	In-Water Contact, Low Frequency Fisher	HRMxNC	6-6.5W	8610	47.2	27.2	26.3	26	24.8	24.8
PCBs	Total PCBs	µg/kg	HHx6	In-Water Contact, Tribal Fisher	HRMxNC	6.5-7W	1480	84.9	80.2	80.2	80.2	75.7	75.7
PCBs	Total PCBs	µg/kg	HHx6	In-Water Contact, Tribal Fisher	HRMxNC	6-6.5W	1480	47.2	27.2	26.3	26	24.8	24.8

Notes:

Shaded cells indicate concentration is less than PRG.

PRGs are from Portland Harbor draft FS, Appendix Da. All PRGs for Gasco Sediment Site COIs above background and consistent with the risk assessment are included.

BapEq = Benzo(a)pyrene equivalent
DDD = dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethylene
DDT = dichlorodiphenyltrichloroethane
FS = Portland Harbor draft Feasibility Study
IR = Ingestion Rate
mg/kg = milligrams per kilogram
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyl
PRG = Preliminary Remediation Goal
SMB = Smallmouth Bass
SWAC = Surface-area Weighted Average Concentration
µg/kg = micrograms per kilogram

Table 8.4-1
Treatment Included in Each Alternative

Alternative	Cost Range	Ex Situ Treatment (cy of Sediment)		Total Active Capping Area (Acres)
		Passive Dewatering with Carbon Treatment[1]	Passive Dewatering with Carbon Treatment and Portland Cement Amendment [2]	
2a	Low	0	0	3.6
	High	0	0	
2b	Low	171,000	6,000	3.6
	High	0	233,000	
3	Low	123,000	84,000	2.5
	High	0	272,000	
4	Low	97,000	190,000	2.9
	High	0	380,000	
5	Low	259,000	261,000	1.3
	High	0	641,000	

Notes:

cy = cubic yards

1. For the purposes of this EE/CA, it is assumed that 100 percent of the removed volume disposed in the CAD/CDF will undergo passive dewatering on the holding barge with treatment of the dewater fluids through a carbon filtration system.

2. For the purposes of this EE/CA, it is assumed that 100 percent of the removed volume disposed in a Subtitle C or D landfill will undergo passive dewatering and treatment/discharge as described for CDF/CAD disposal. In addition, it was assumed that Portland cement would be added to the removed materials to support further dewatering and/or decreases in the leachable chemical concentrations of the removed materials to support appropriate waste disposal.

Table 8.5.2-1
Maximum Average Sediment Concentration Increases Downstream of the Gasco Sediments Site Resulting from EE/CA Alternatives

Maximum Average 1/2-Mile BaP[1] Concentration Increase Downstream of Site (µg/kg)				
Alt 2a	Alt 2b	Alt 3	Alt 4	Alt 5
No Removal	1.3	6.9	9.6	17.5
Maximum Average 1-Mile Naphthalene[1] Concentration Increase Downstream of Site (µg/kg)				
Alternatives				
Alt 2a	Alt 2b	Alt 3	Alt 4	Alt 5
No Removal	7.6	6.3	5.3	2.4

Notes:

[1] - The maximum average downstream SWAC was calculated using the procedures identified in Section 4.2 of Appendix U, Portland Harbor draft FS (Anchor QEA 2012a)

µg/kg = micrograms per kilogram

BaP = benzo(a)pyrene

Table 8.5.3-1
Time to Attain Sediment
RGs and SQVs

	Time (years) to Attain Sediment Direct Contact BaPEq RGs and Lowest BaP SQV					Time (years) to Attain Sediment Naphthalene SQVs	
	>99th RG	99th RG	95th RG	90th RG	BaP SQV	Low SQV	High SQV
RM/Alternative	**423 µg/kg**	**1437 µg/kg**	**2750 µg/kg**	**3702 µg/kg**	**610,000 µg/kg**	**2,000 µg/kg**	**650,000 µg/kg**
Shoreline RM 6 to 6.5							
Alt 1	40	31	26	24	0	30	0
Alt 2a	30	21	1	1	0	19	0
Alt 2b	28	7	3	3	0	18	0
Alt 3	24	5	4	4	0	8	0
Alt 4	32	22	6	5	0	30	0
Alt 5	30	19	16	13	0	27	0
Shoreline RM 6.5 to 7							
Alt 1	19	0	0	0	0	0	0
Alt 2a	5	0	0	0	0	0	0
Alt 2b	5	0	0	0	0	0	0
Alt 3	6	0	0	0	0	0	0
Alt 4	4	0	0	0	0	0	0
Alt 5	10	0	0	0	0	8	0

Notes:

BaP = benzo(a)pyrene

BaPEq = benzo(a)pyrene equivalents

µg/kg = microgram per kilogram

RG = Remediation Goal

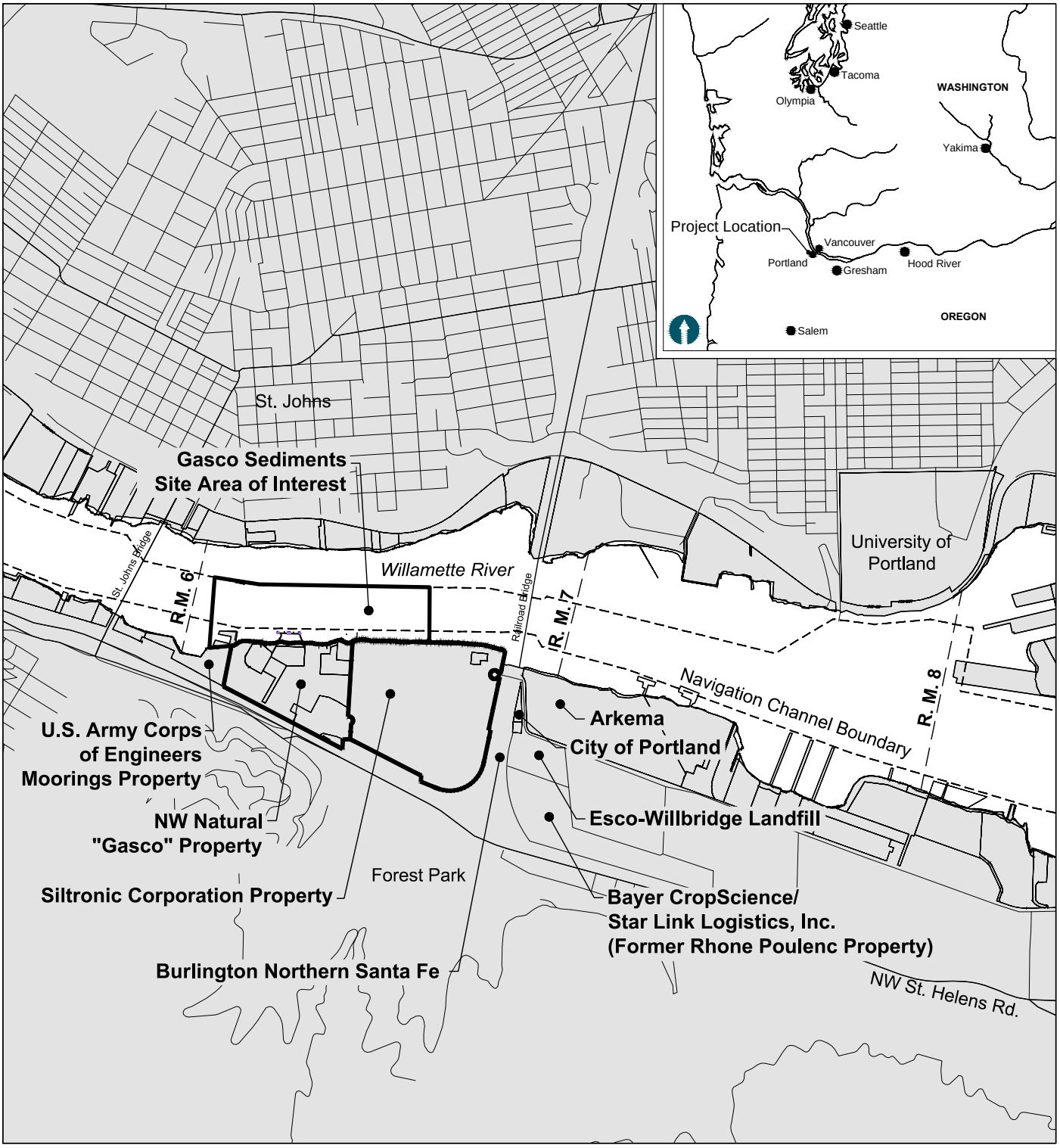
RM = River Mile

SQV = Sediment Quality Values

Table 9.2-1
Draft Numeric Summary of Comparative Analysis of Remedial Alternatives

	Threshold Criteria		Balancing Criteria						
			Effectiveness Criteria					Cost ($M)	
Alternative	Overall Protection	Meets ARARs	Long-term Effectiveness	Reduction of Toxicity through Treatment	Short-term Effectiveness	Implementability	Summary Score	Low	High
1 - No Action	Yes	Yes	7	1	8	5	21	0	0
2a	Yes	Yes	9	2	10	8	29	34	40
2b	Yes	Yes	10	3	9	9	31	73	123
3	Yes	Yes	10	2	8	7	27	92	152
4	Yes	Yes	8	3	5	3	19	134	202
5	Yes	Yes	7	4	1	1	13	245	350

FIGURES



K:\Projects\0029-NW Natural Gas Co\Gasco Sediments\EECA and Data Report\0029-RP-002 VMAPS.dwg FIG 1.0-1 EECA

May 07, 2012 12:46pm heriksen

Figure 1.0-1
Site Vicinity Map
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

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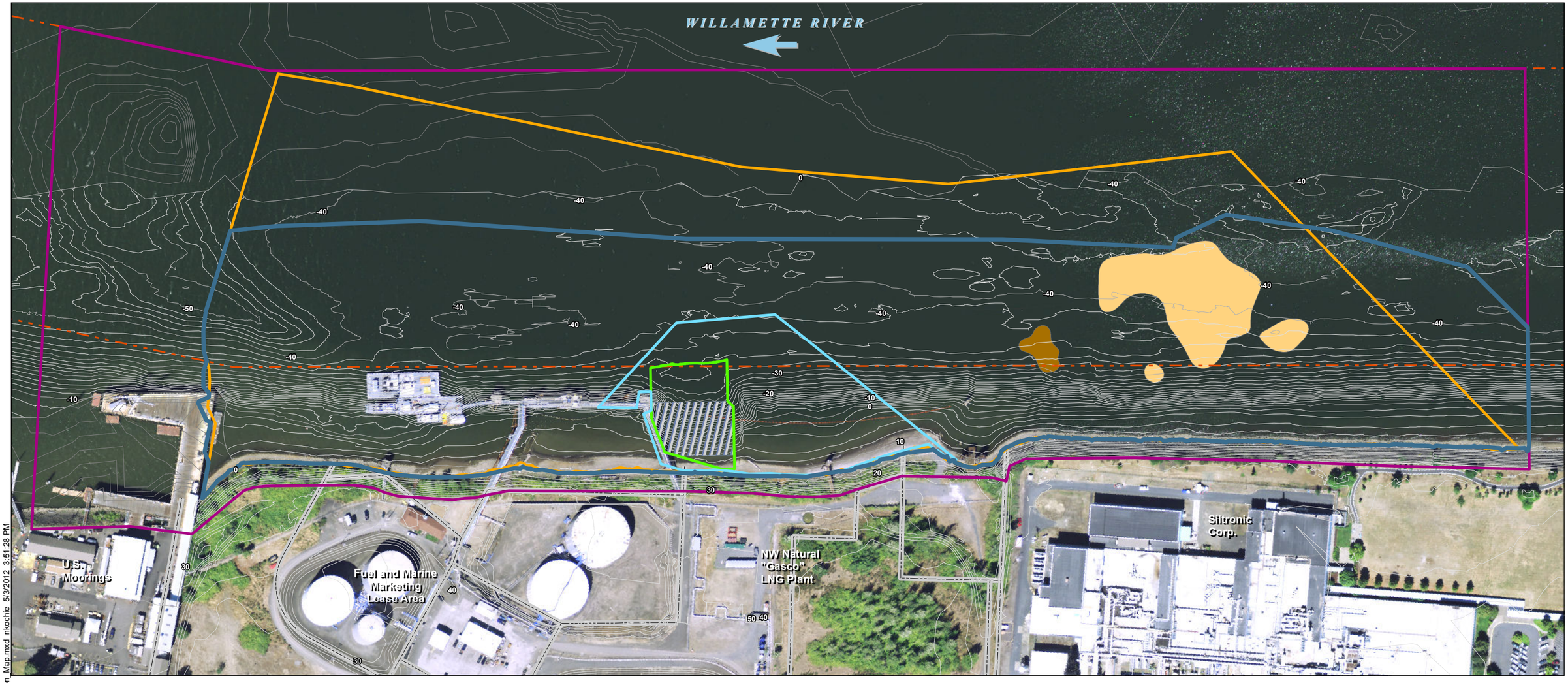

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
Initial Project Area
Portland Harbor draft FS AOPC 9U Boundary (Anchor QEA 2012a)
Tar Body Removal Action 6-inch Fringe Cover Placement
Tar Body Removal Action Area (RAPP [Anchor 2005])
Tar Body Removal Action Pilot Cap

Area 1 - Detected CVOC Concentrations in TZW
Area 2 - Detected CVOCs in TZW and 1 Subsurface Sediment Location
Navigation Channel
Composite of Surveys by Geomatrix NW, Bluewater Engineering, and Spencer B. Gross
Lower Willemette Group Bathymetry by David Evans and Associates

NOTES:
1. Area 1 zone of impact provided by MFA via e-mail on October 17, 2011.
2. Area 2 zone of impact is as shown in Figure 1 of the Statement of Work.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
5. Vertical datum is NAVD88.
6. Aerial imagery from July 2007.
7. Source of bathymetry: Blue Water Engineering, Inc. dated April 2011 and David Evan and Associates, Inc. dated 2009.
8. Source of upland topography: Geometrix NW, dated May 2011 and Spencer Gross, Inc. dated December 2006.

Feet
0 100 200 300 400

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Figure 1.2.3-1
Location Map
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

https://portal.anchorqea.com/sites/nwnatural/GascoSite/Gasco/Sediment/Documents/02 Draft EECA/Draft EECA Figures/source files/ Figure 1.2.4-1, Programmatic Sequencing Schedule, Gasco EECA

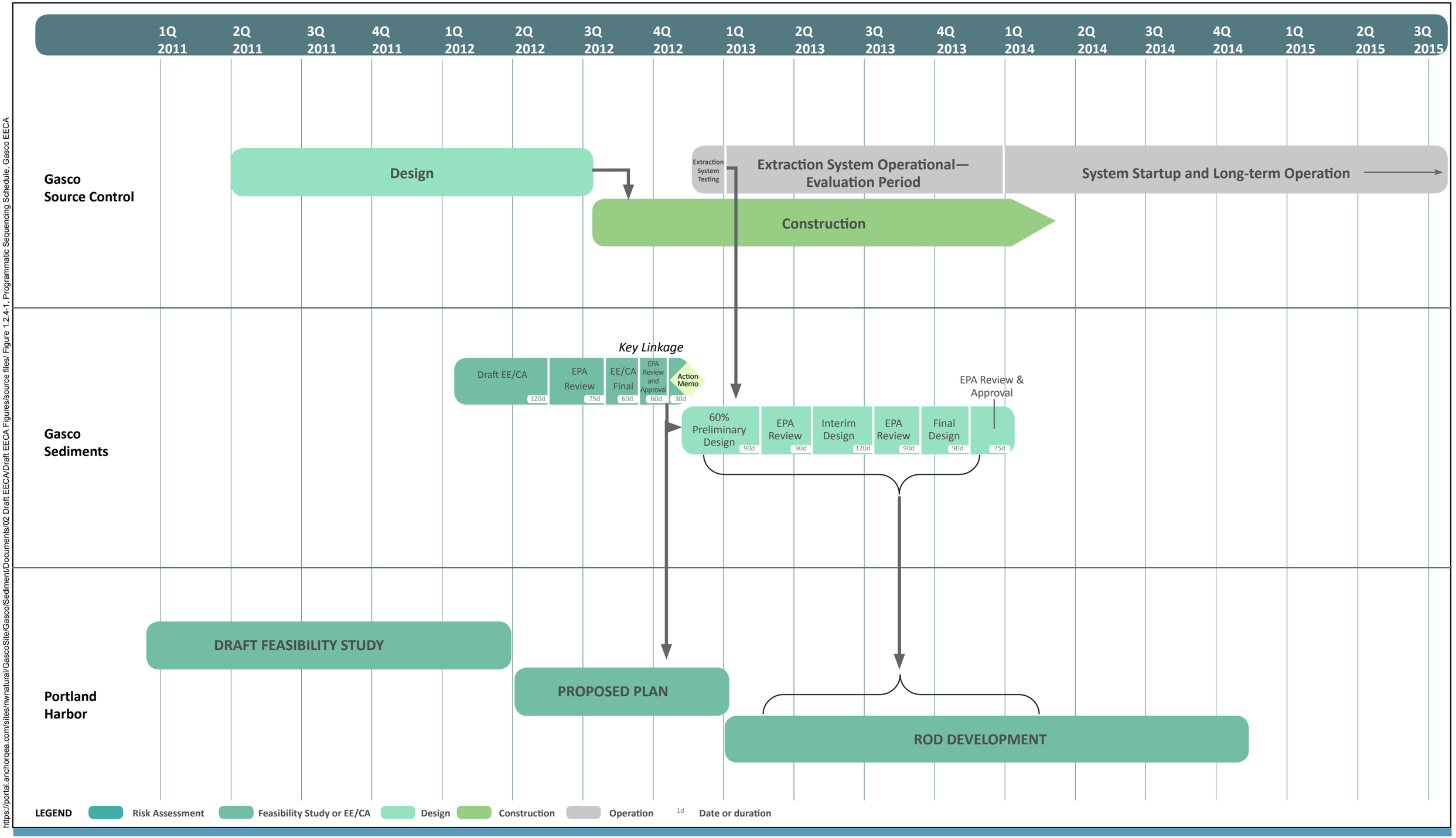

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Figure 1.2.4-1
Programmatic Sequencing Schedule
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

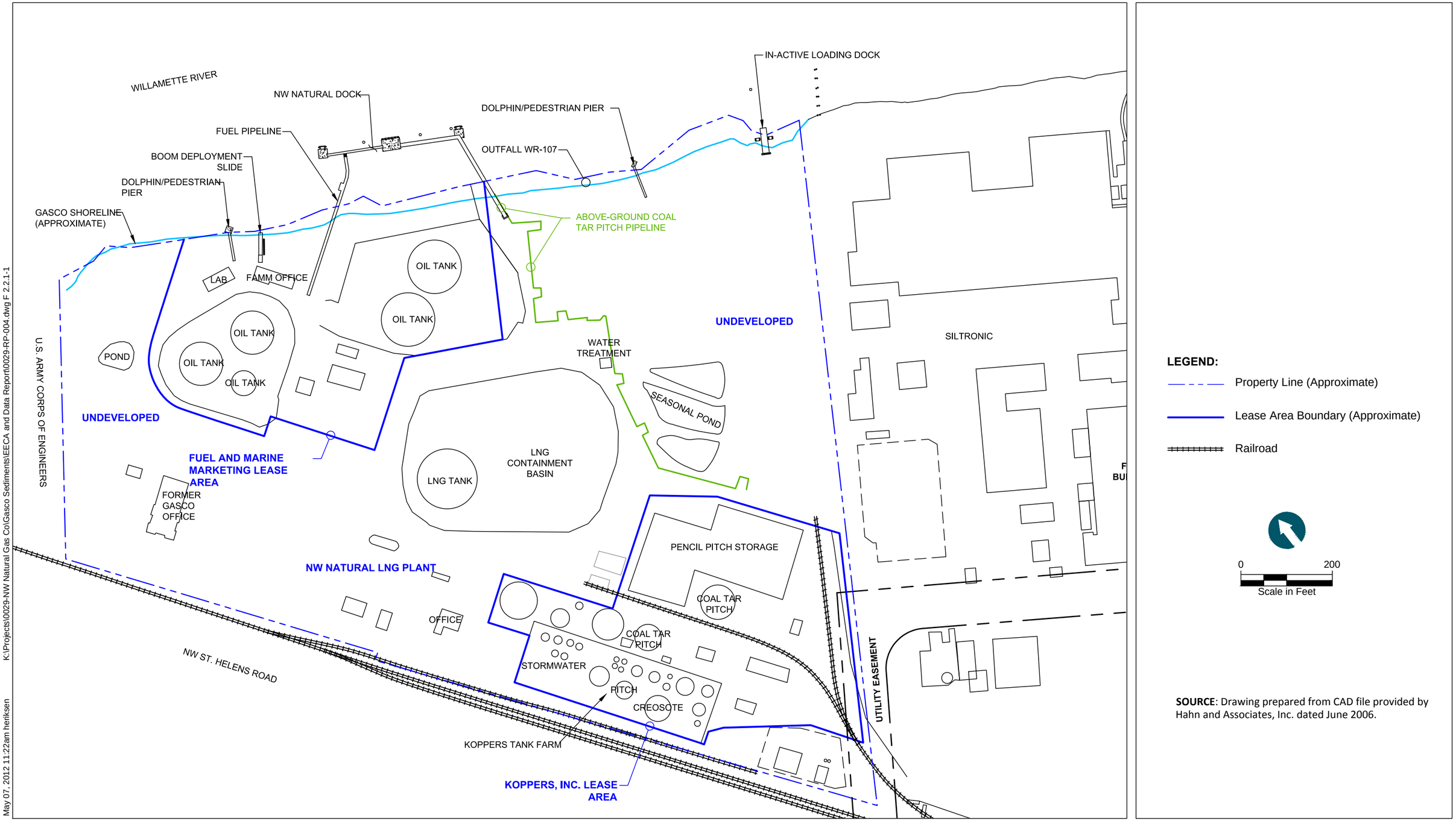

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Figure 2.2.1-1
Current Gasco Property Features
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

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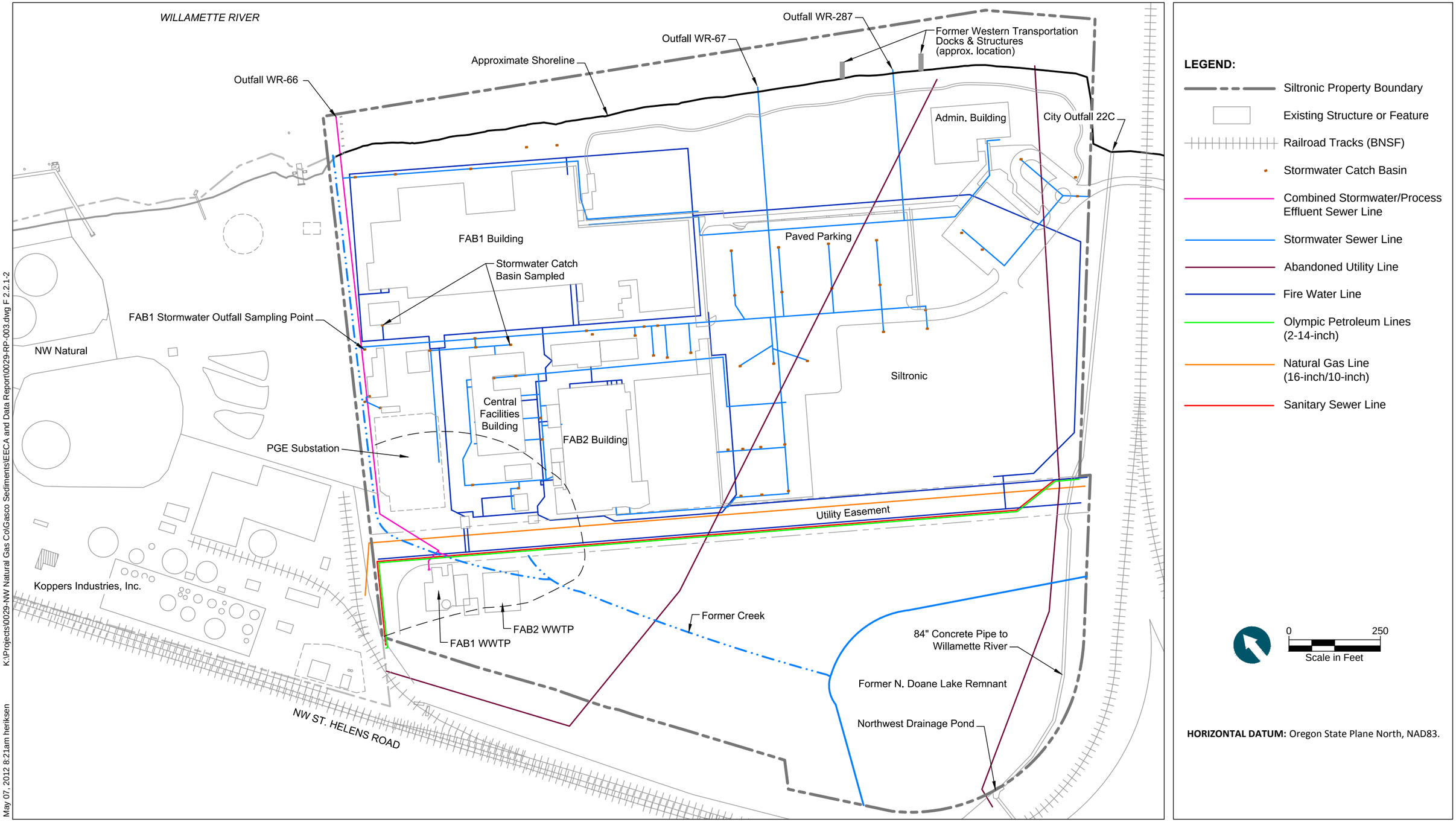

LEGEND:

- Siltronic Property Boundary
- Existing Structure or Feature
- Railroad Tracks (BNSF)
- Stormwater Catch Basin
- Combined Stormwater/Process Effluent Sewer Line
- Stormwater Sewer Line
- Abandoned Utility Line
- Fire Water Line
- Olympic Petroleum Lines (2-14-inch)
- Natural Gas Line (16-inch/10-inch)
- Sanitary Sewer Line

0 250
Scale in Feet

HORIZONTAL DATUM: Oregon State Plane North, NAD83.

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May 07, 2012 8:21am heriksen

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Figure 2.2.1-2
Siltronic Historical and Current Property Features
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

May 07, 2012 11:23am heriksen K:\Projects\0029-NW Natural Gas Co\Gasco Sediments\EECA and Data Report\0029-RP-005.dwg FIG 2.2.2-1

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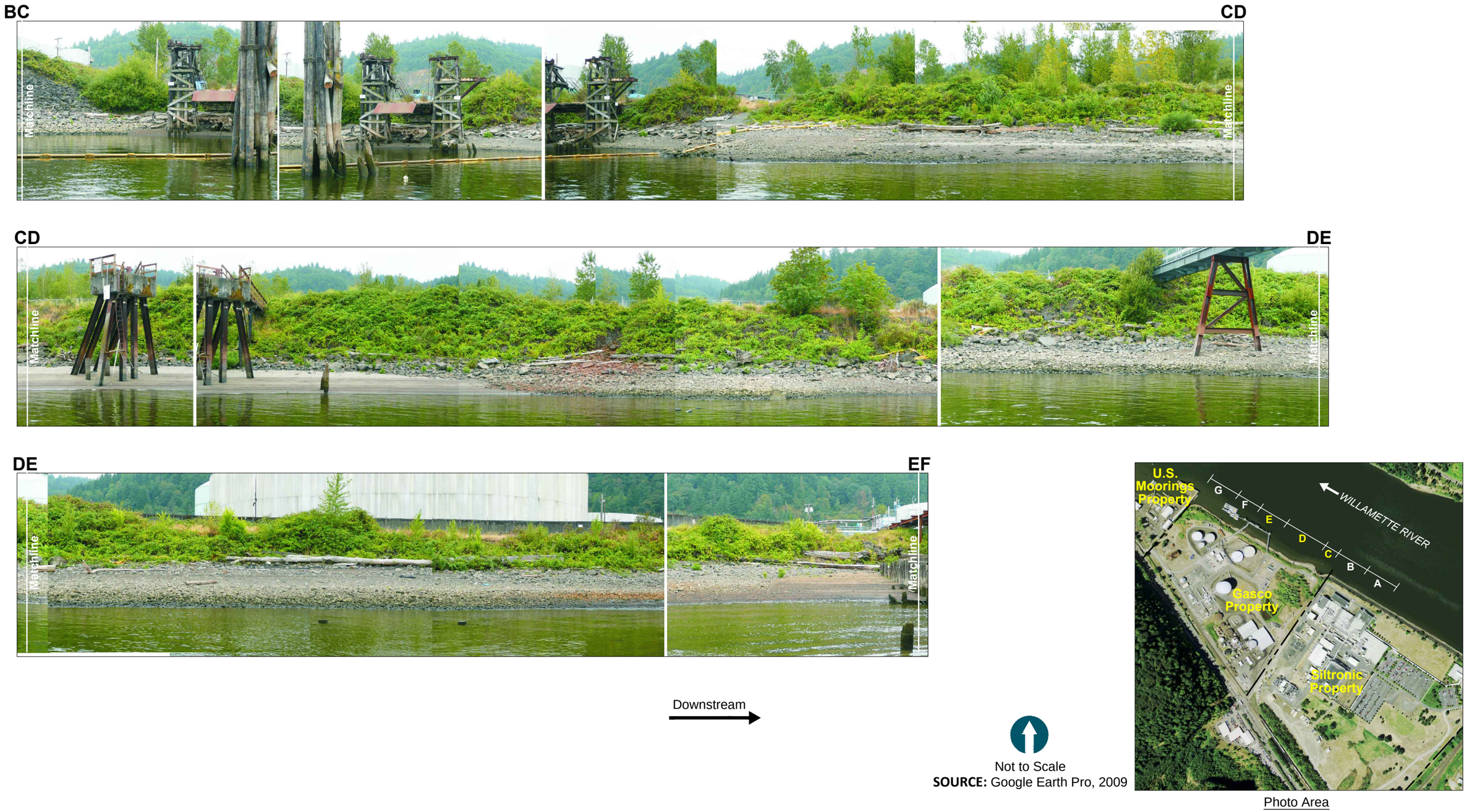
Figure 2.2.2-1
August 8, 2009 Shoreline Photo Reconnaissance Survey - Photo Area AB
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



SOURCE: Google Earth Pro, 2009

Photo Area

K:\Projects\0029-NW Natural Gas Co\Gasco Sediments\EECA and Data Report\0029-RP-005.dwg FIG 2.2.2-2

May 07, 2012 11:23am heriksen

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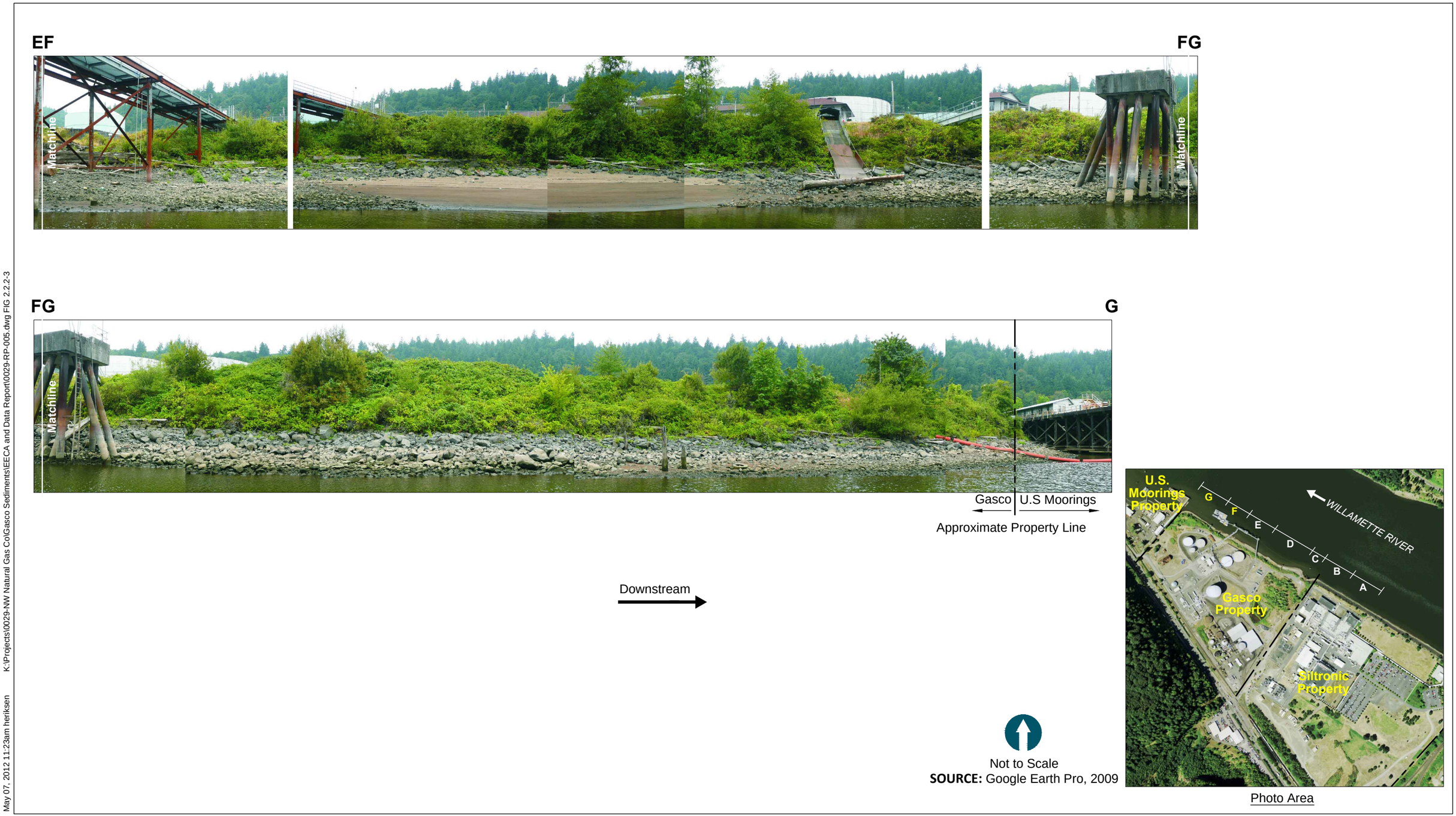
Figure 2.2.2-2

August 8, 2009 Shoreline Photo Reconnaissance Survey - Photo Area CDE

Draft Engineering Evaluation/Cost Analysis

Gasco Sediments Cleanup Action



SOURCE: Google Earth Pro, 2009

May 07, 2012 11:23am heriksen K:\Projects\0029-NW Natural Gas Co\Gasco Sediments\EECA and Data Report\0029-RP-005.dwg FIG 2.2.2-3

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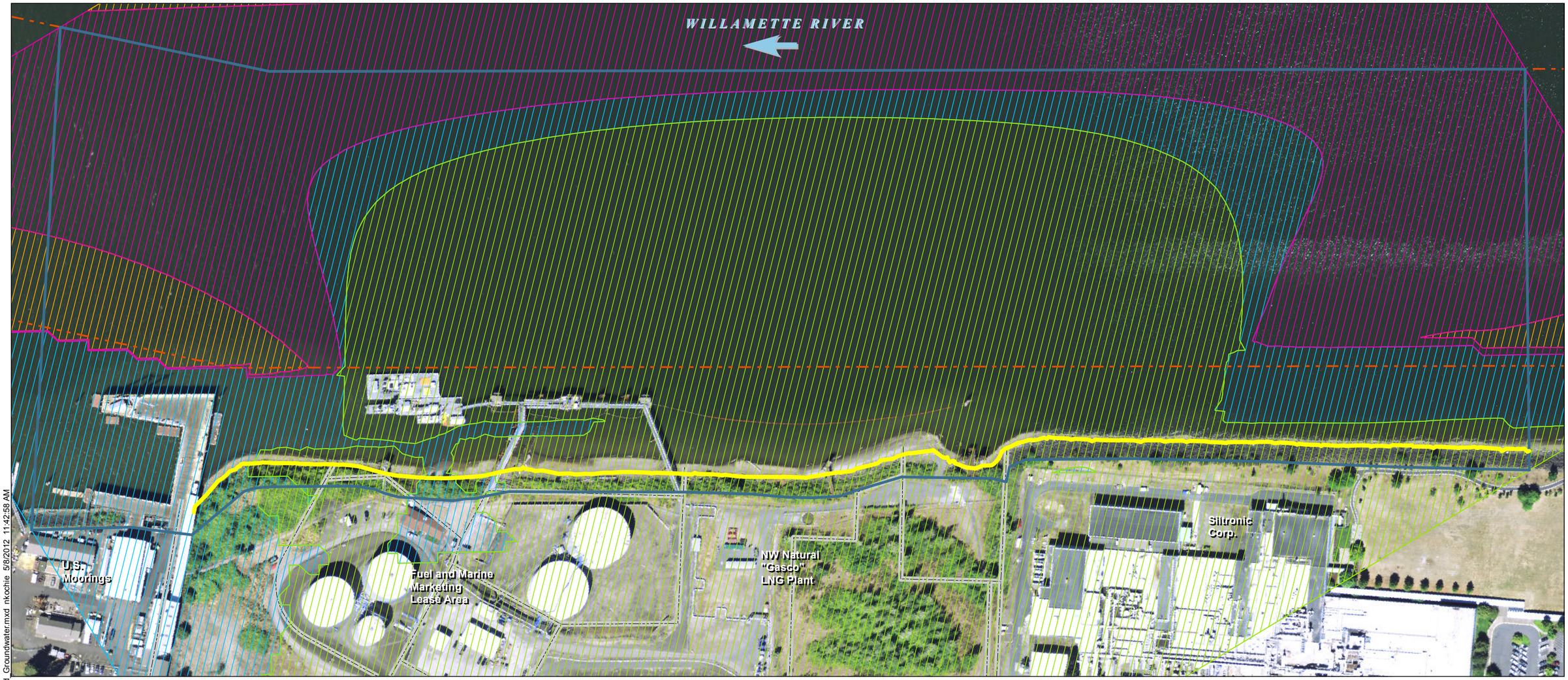
Figure 2.2.2-3
August 8, 2009 Shoreline Photo Reconnaissance Survey - Photo Area FG
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



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Groundwater Velocity

- Velocity from river
- Velocity to river <10^(-5) cm/s
- Velocity to river <10^(-6) cm/s
- Velocity to river >10^(-5) cm/s

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Federal Navigation Channel
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
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ANCHOR QEA

Figure 2.3.1.1-1
Modeled Extents of Offshore Groundwater Seepage Capture
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

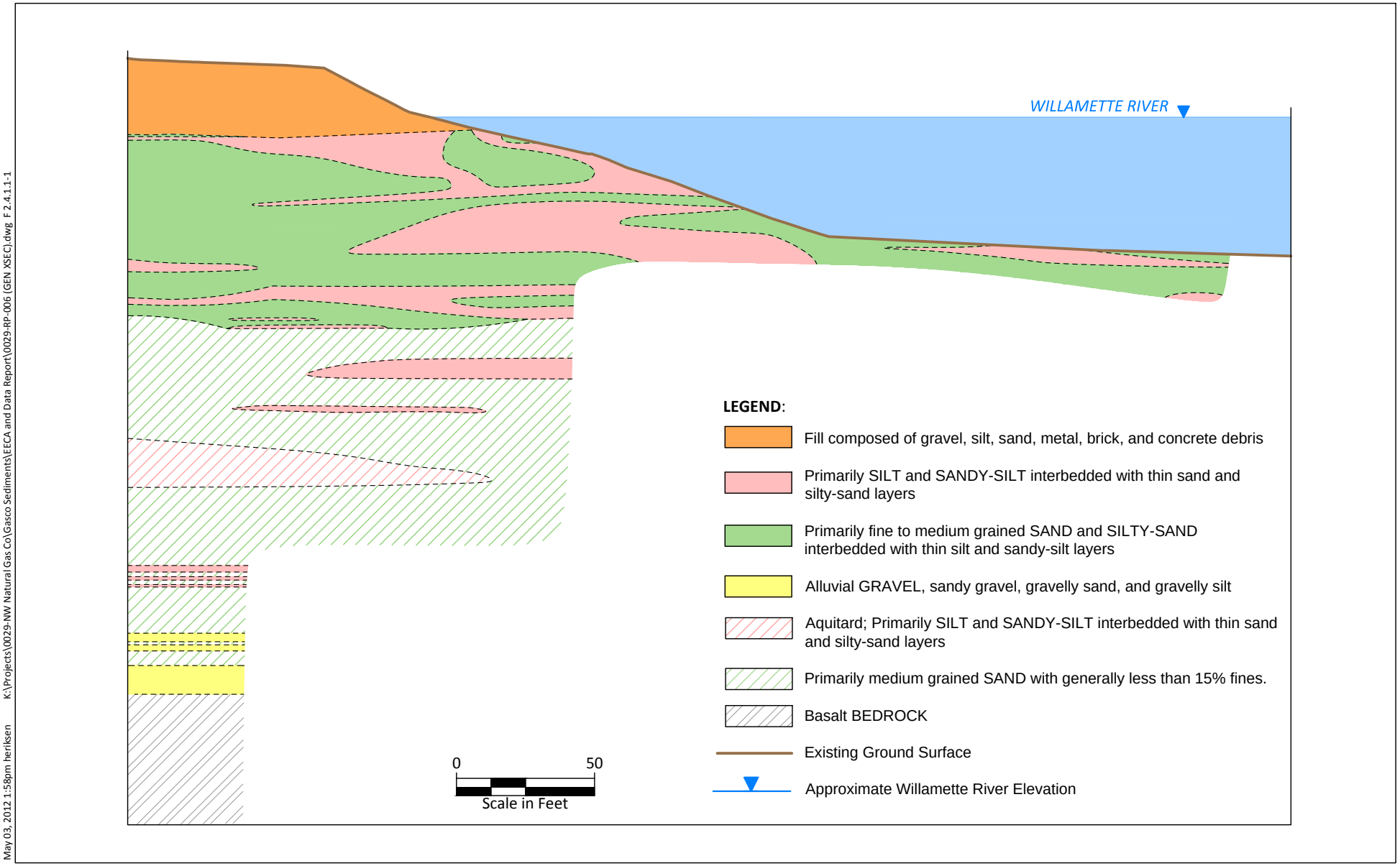

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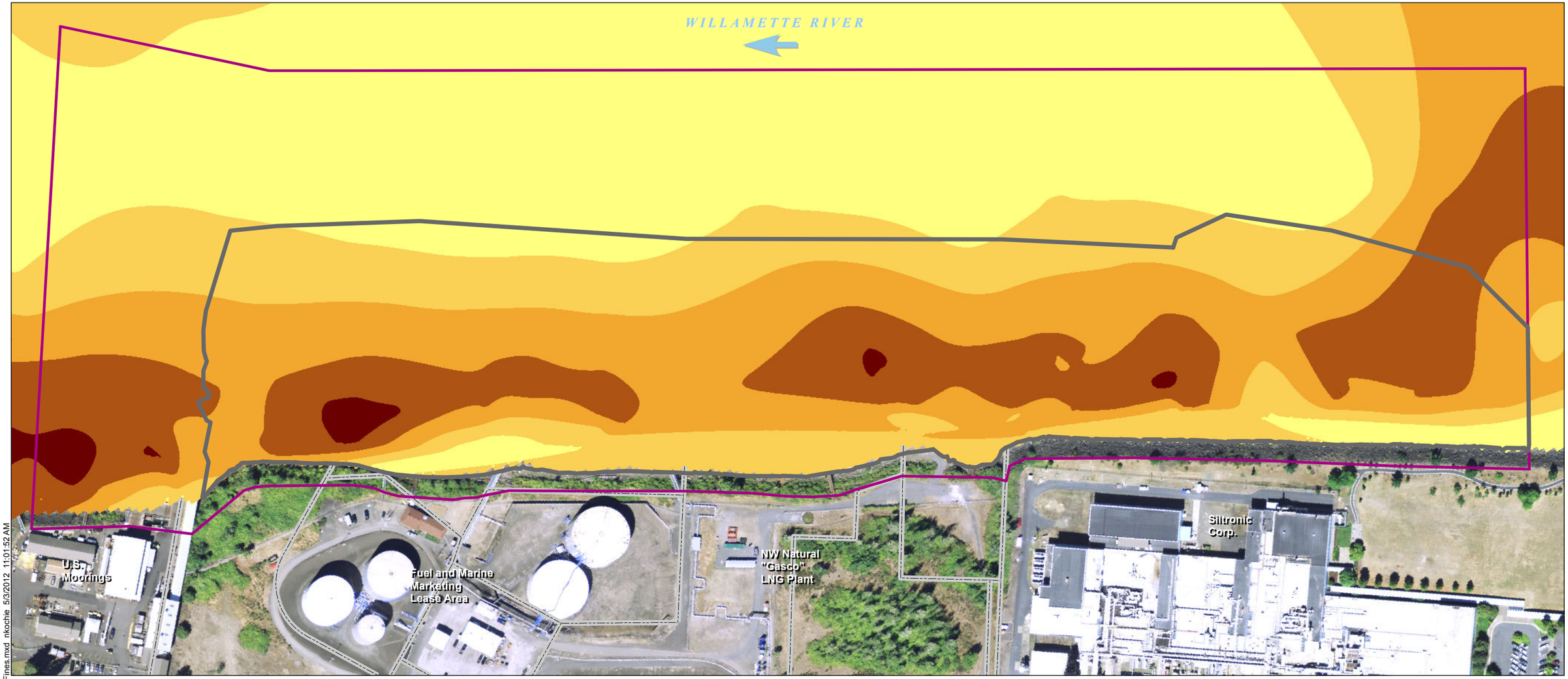
Figure 2.4.1.1-1
Generalized Geologic Cross Section
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



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Percent Fines

- 0 - 20%
- 20 - 40%
- 40 - 60%
- 60 - 80%
- 80 - 100%
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Initial Project Area

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
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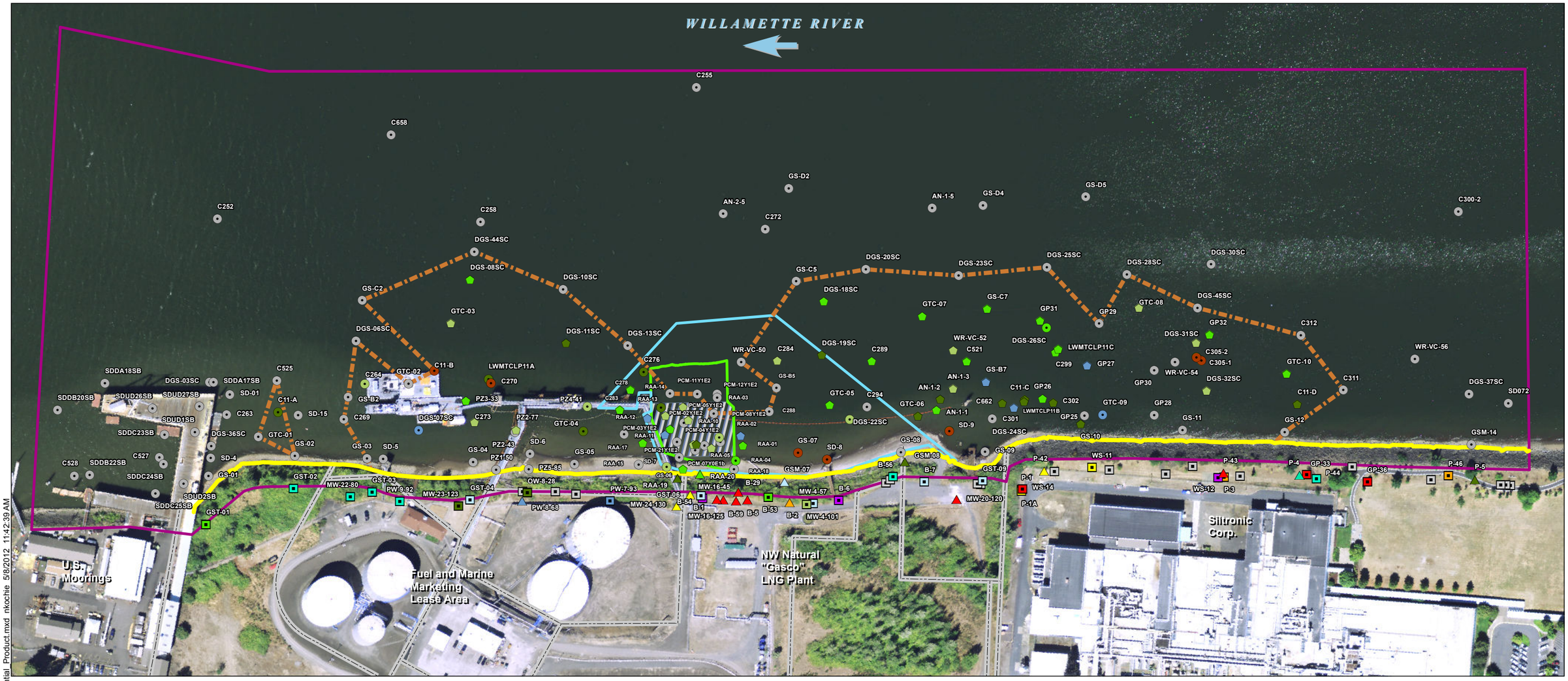
Figure 2.4.3-1
Contoured Surface Sediment Texture, Percent Fines
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



- Sediment Coring Location
- Core with Liquid Substantial Product
- Shoreline Soil Boring Location
- Boring with Potential Mobile Product
- Inconclusive Substantial Product
- No Substantial Product
- Substantial Product from 0-4 feet Below Mudline
- Substantial Product from 4-8 feet Below Mudline
- Substantial Product from 8-12 feet Below Mudline
- Substantial Product from 12-16 feet Below Mudline
- Substantial Product from 16-20 feet Below Mudline
- Substantial Product from 20-24 feet Below Mudline
- Substantial Product from 24-28 feet Below Mudline
- Substantial Product from 28-32 feet Below Mudline
- Substantial Product from 32-36 feet Below Mudline
- Substantial Product >36 feet Below Mudline

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Substantial Product Area
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action Pilot Cap
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.
5. Review of the core logs at the locations designated as Inconclusive Substantial Product provided insufficient information to confirm the presence of substantial product using the definition in the Statement of Work (e.g., stained sediments noted in an interval but no thickness provided).
6. The designated depths of substantial product are the deepest depth of substantial product observed in the core/boring log. Shallower depths may not contain substantial product.
7. Locations designated as containing liquid substantial product contain liquid substantial product in at least one depth interval. These locations may also contain non-liquid substantial product and the shown deepest depth interval designation may be driven by either liquid substantial or non-liquid substantial product.
8. Per the SOW, the definition of substantial product does not apply landward of the top of the riverbank. The shown top of riverbank borings were screened against the SOW substantial product definition solely to support evaluation of substantial product in the riverbank.

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ANCHOR QEA

Feet
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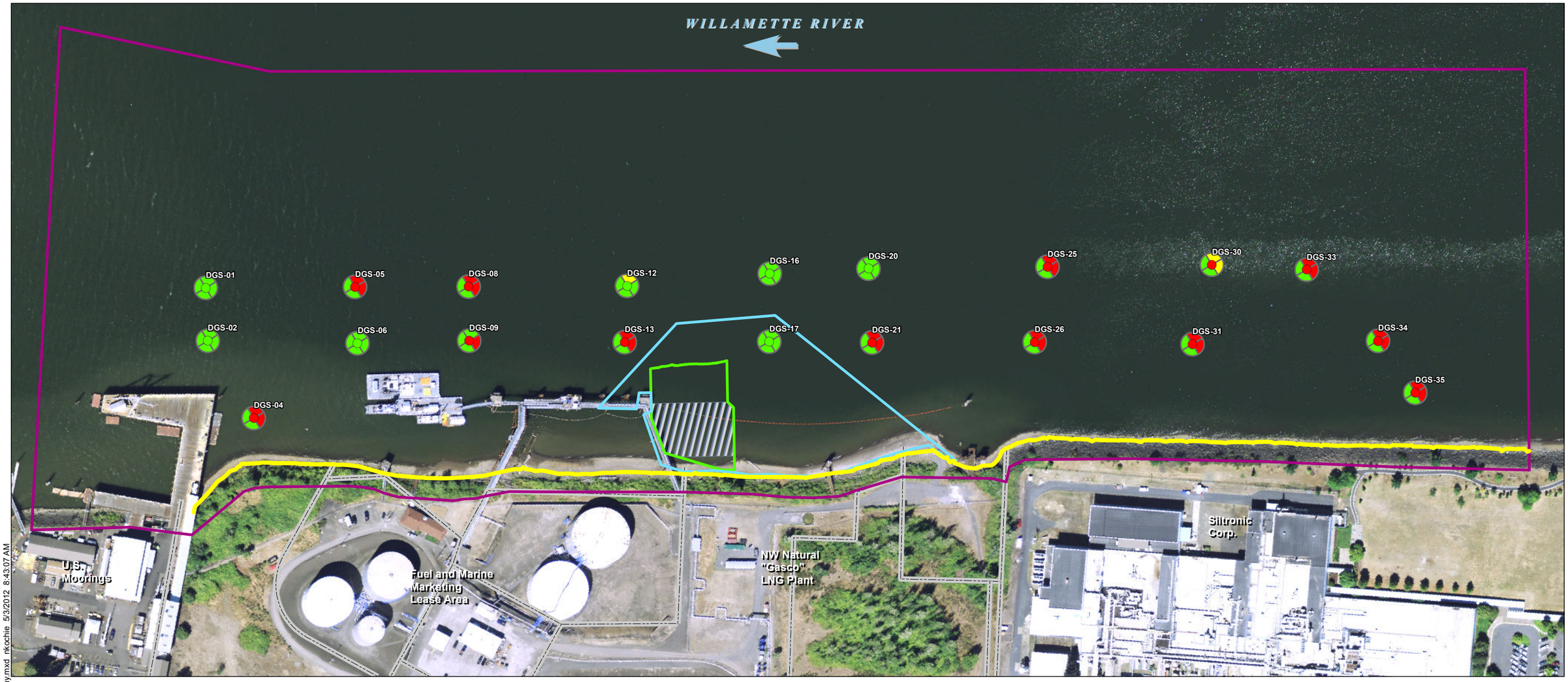
Figure 2.5.3-1
Summary of Presence of Substantial Product
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



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Pooled Bioassay Result

- Hit
- No Hit
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action Pilot Cap
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

Bioassay Test Interpretation

Amphipod Survival / Midge Survival / Amphipod Growth / Midge Growth

- REA Level 0
- REA Level 1
- REA Level 2
- REA Level 3

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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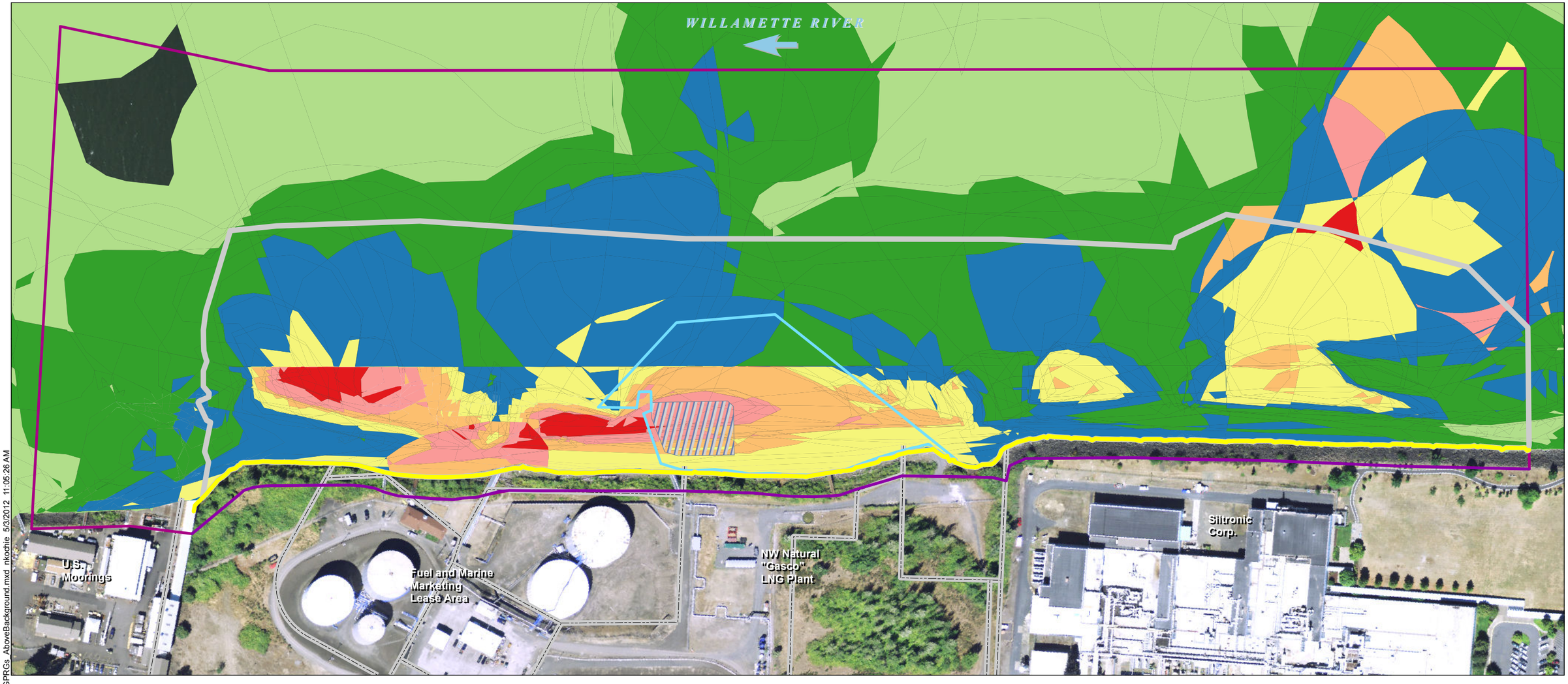
Figure 2.5.4.1-1
Gasco Data Gaps Sampling Benthic Toxicity Results – Amphipod and Midge Performance
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Q:\Jobs\000029-02_Gasco\Maps\EECA\EECA_AllLWGPRGs_AboveBackground.mxd nkochie 5/3/2012 11:05:26 AM

Number of PRGs Exceeded

- 1 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- 21 - 25
- 26 - 30
- 30 - 35

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Initial Project Area
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Pilot Cap
- Top of Bank
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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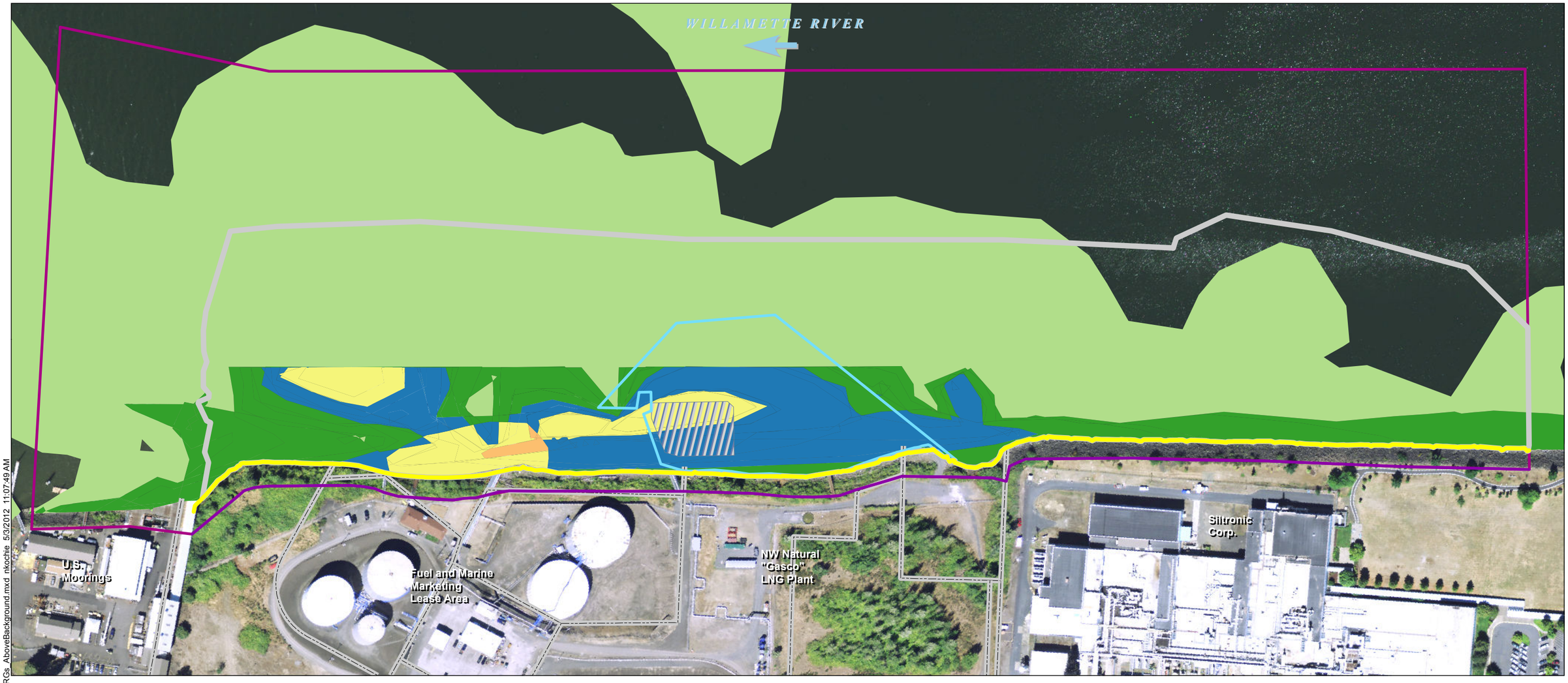
Figure 2.7.2.2-1
Mapping of All Portland Harbor Risk Assessment PRGs Above Background, Above Zero at Time Zero
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Number of PRGs Exceeded

- 1
- 2 - 5
- 6 - 10
- 11 - 15
- 16 - 18

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Initial Project Area
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Pilot Cap
- Top of Bank
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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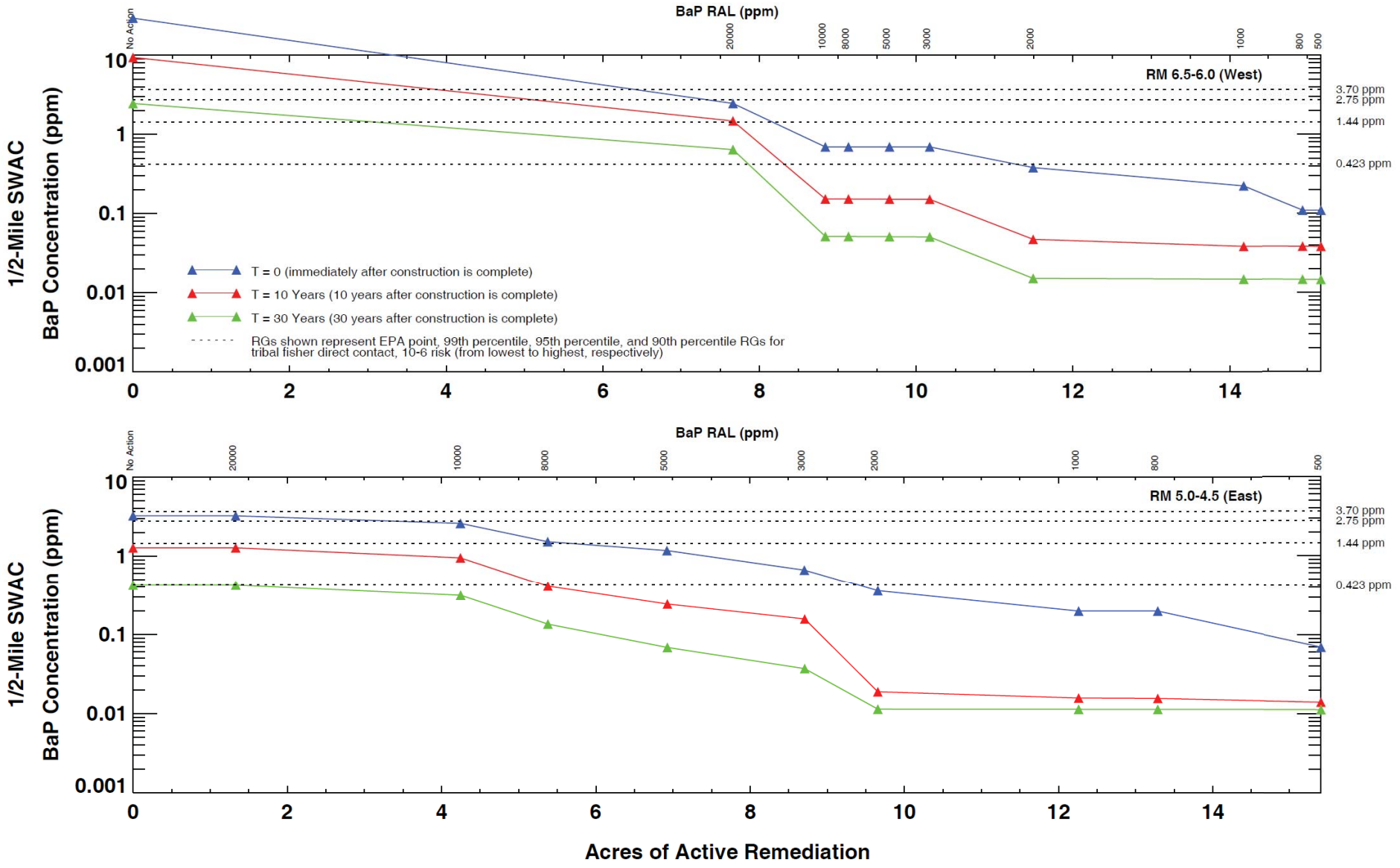
Figure 2.7.2.2-2
Mapping of Gasco Sediment Site COI PRGs Above Background, Above Zero at Time Zero
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Source: Anchor QEA, 2012. Draft Feasibility Study for the Portland Harbor Superfund Site. Prepared for the Lower Willamette Group. March 2012.

Figure 4.1.3.2-1
Comparison of BaP 1/2-Mile SWAC to Potential RALs/Acres Remediated
at Three Points in Time Following Construction Completion
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

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Sediment characterization may be performed before or after "treatment" and will be performed by the "bargeload."

This comparison pertains to concentrations in sediment (not in simulated leachate).

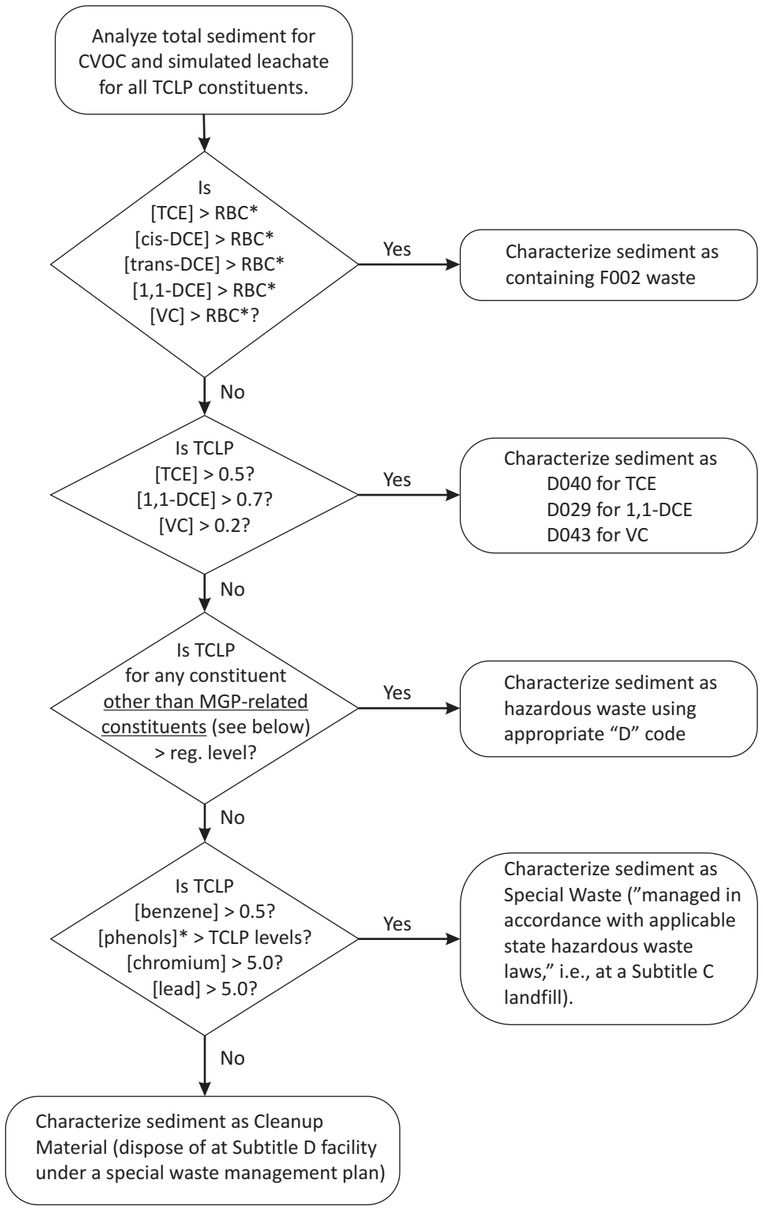
* RBC to be determined

This comparison pertains to concentrations in simulated leachate (TCLP).

Note: the appropriate hazardous waste number will be applied if the sediment meets the criteria of any other characteristic

This comparison pertains to concentrations in simulated leachate (TCLP).

* Phenols (regulatory levels)
  cresol (200 mg/L)
  pentachlorophenol (100 mg/L)
  2,4,5-trichlorophenol (400 mg/L)
  2,4,6-trichlorophenol (2.0 mg/L)



Notes

CVO - Chlorinated volatile organic compound

TCLP - Toxicity characteristic leaching procedure

MGP - Manufactured gas plant

TCE - Trichloroethene

DCE - dichloroethene

VC - Vinyl chloride

All TCLP levels in milligrams of constituent per liter of simulated leachate

3/6/12 ejs GASCO\Sediment EECA\Waste Characterization Decision Tree.cdr

Figure 4.3.5-1
Waste Characterization and Suitability Framework
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

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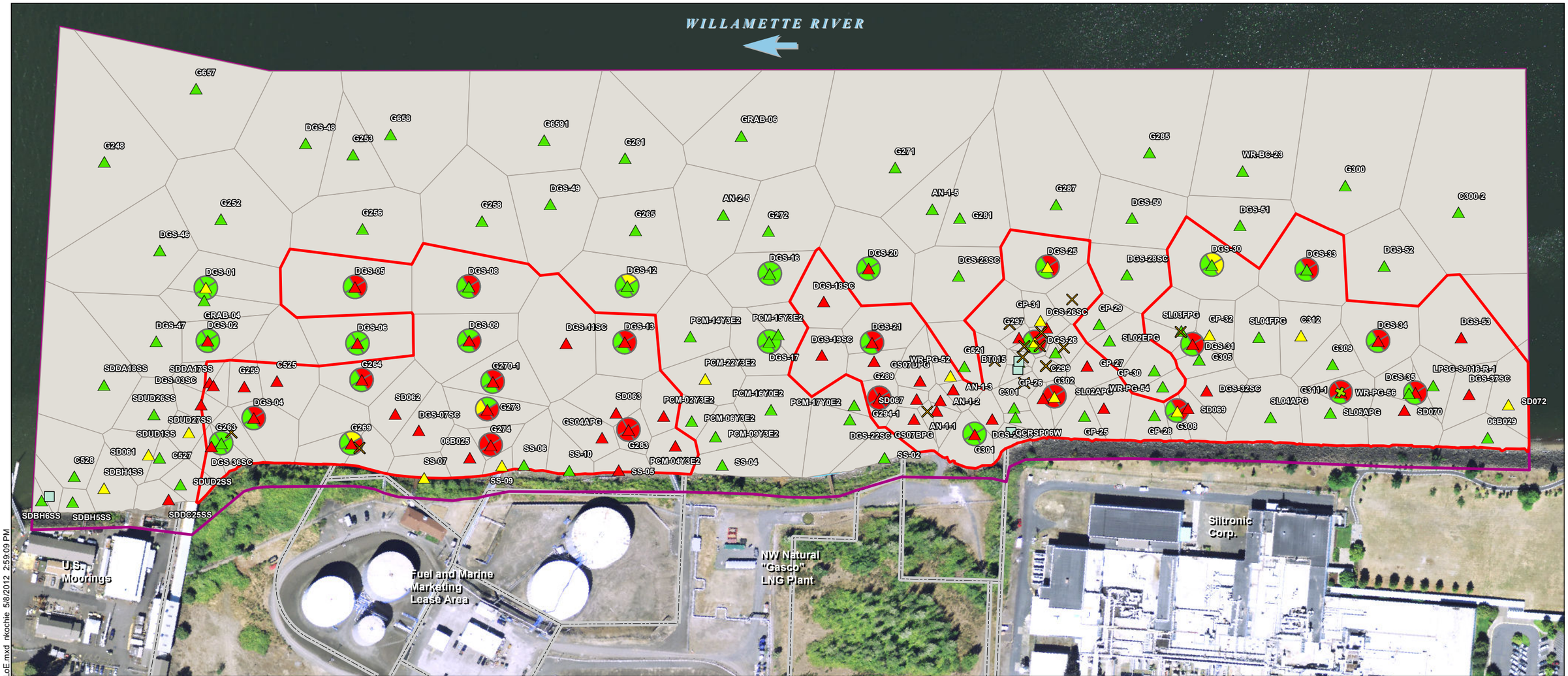

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- TZW HQ ≥ 100
- Total DDxs HQ ≥ 1

Benthic Tissue HQ gt 1 empirical

- BEHP HQ ≥ 1
- Tributyltin ion HQ ≥ 1
- Total DDx HQ ≥ 1
- Total PCBs HQ ≥ 1
- Metal HQ ≥ 1

- hit, models agree
- models dissagree
- No-hit, models agree or only one-model available
- Surface Thiessen
- TBT HQ ≥ 1
- Hybrid PCBs

- Revised Comprehensive Benthic Risk Area
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action Pilot Cap

Bioassay Test Interpretation

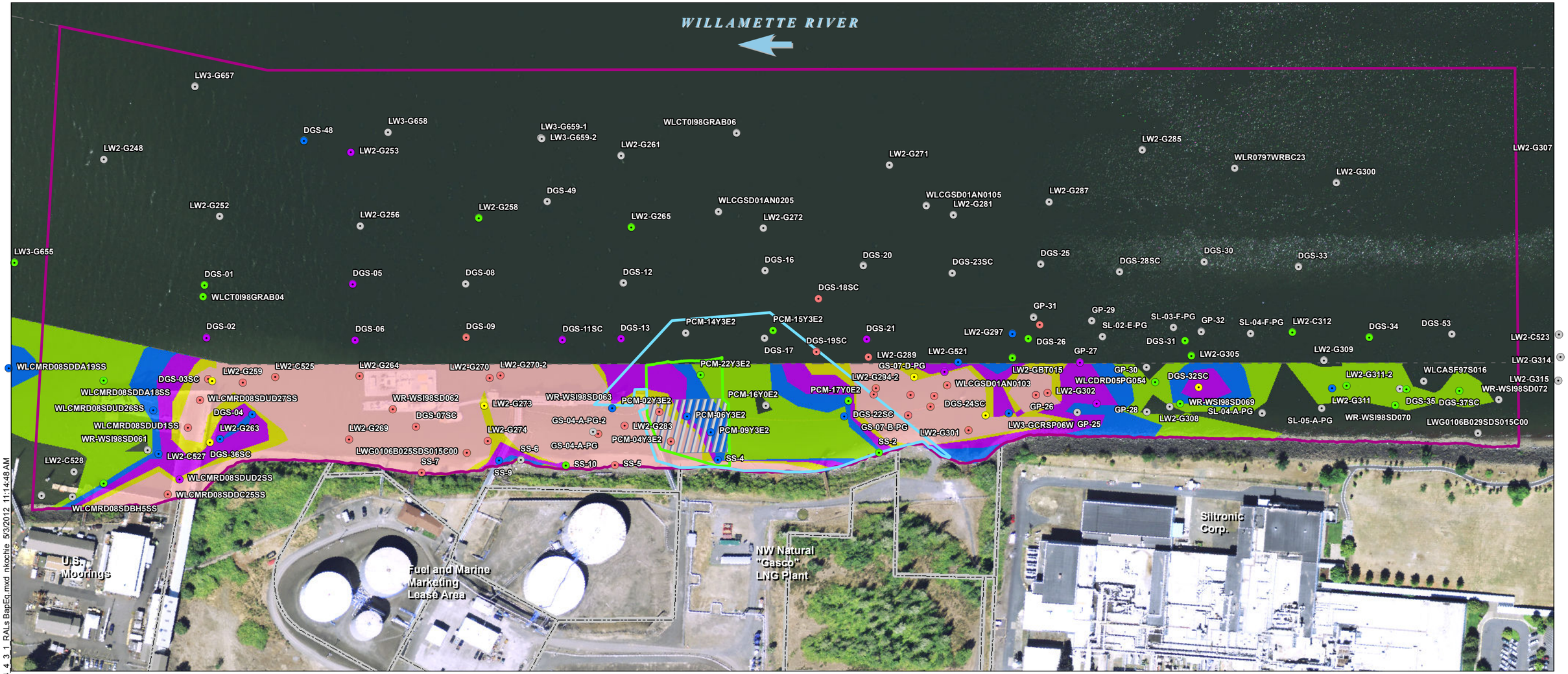
- REA Level 0
- REA Level 1
- REA Level 2
- REA Level 3

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4.4.2-1
Comprehensive Benthic Risk Assessment Boundary
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



BapEq (µg/kg)

- < 1,500
- 1,500 - 4,000
- 4,000 - 8,000
- 8,000 - 15,000
- 15,000 - 20,000
- > 20,000

- PH draft FS Alternative B - 20,000 µg/kg
- PH draft FS Alternative C - 15,000 µg/kg
- PH draft FS Alternative D - 8000 ug/kg
- PH draft FS Alternative E - 4000 µg/kg
- PH draft FS Alternative F - 1500 µg/kg

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Pilot Cap
- Navigation Channel

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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Figure 4.4.3-1
RAL Contours - BapEq
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

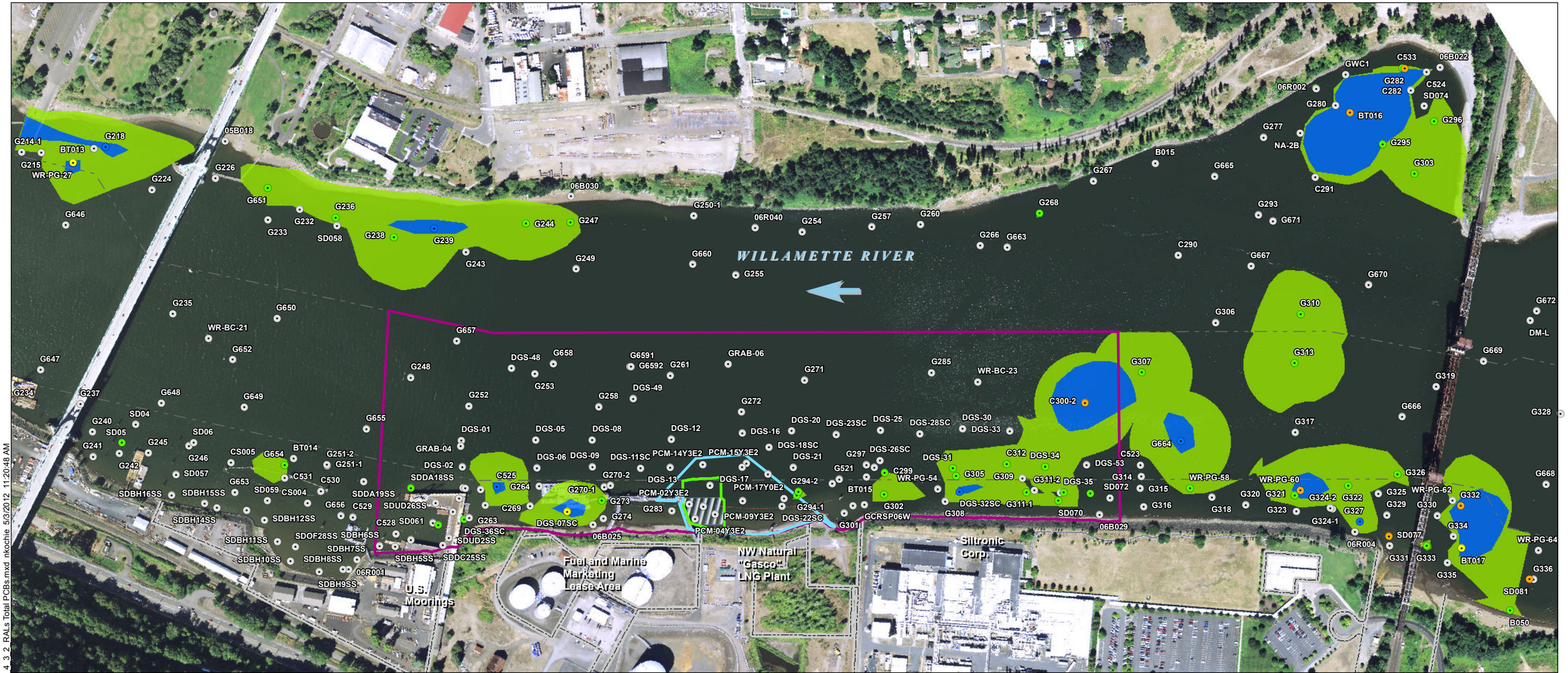

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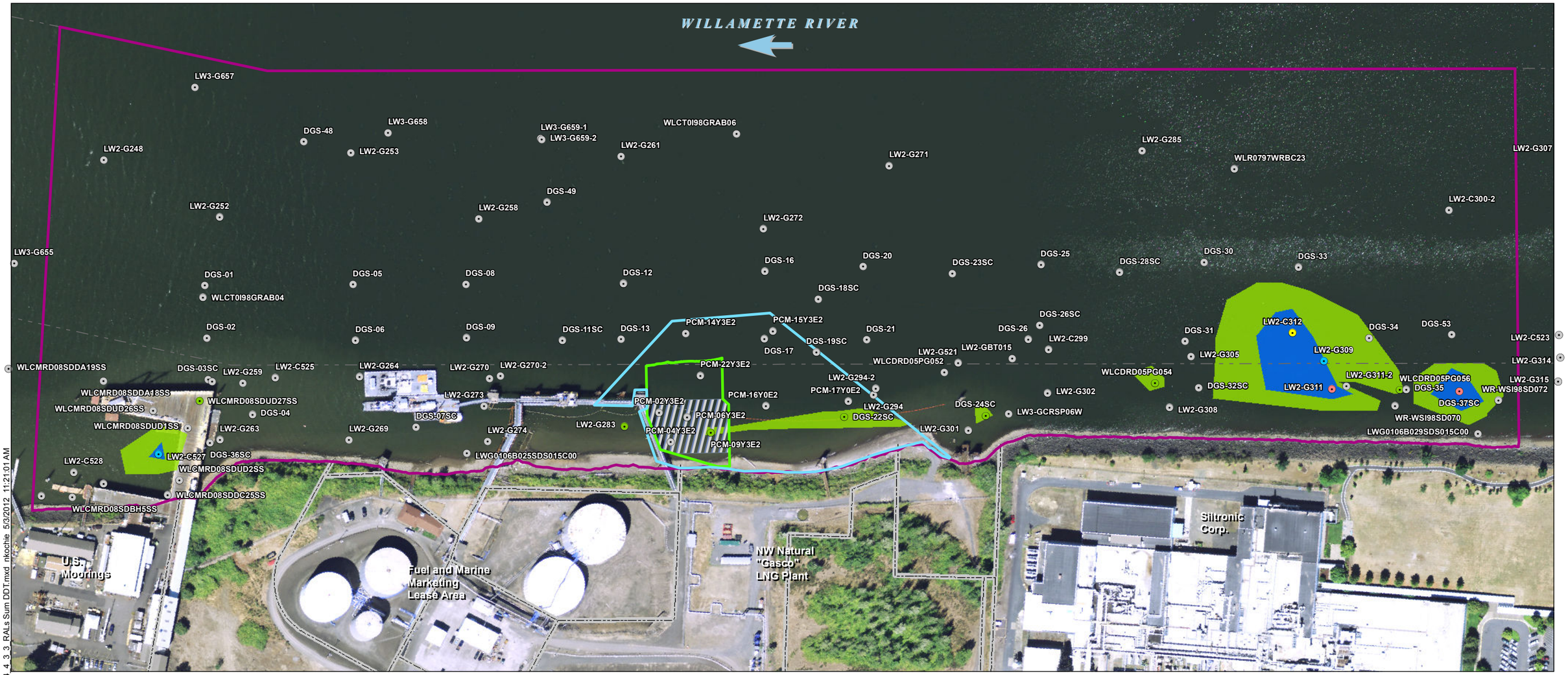
Figure 4.4.3-2
RAL Contours - Total PCBs
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



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Sum DDT (µg/kg)

- < 60
- 60 - 150
- 150 - 200
- 200 - 250
- > 250
- PH draft FS Alternative E - 150 µg/kg
- PH draft FS Alternative F - 60 µg/kg

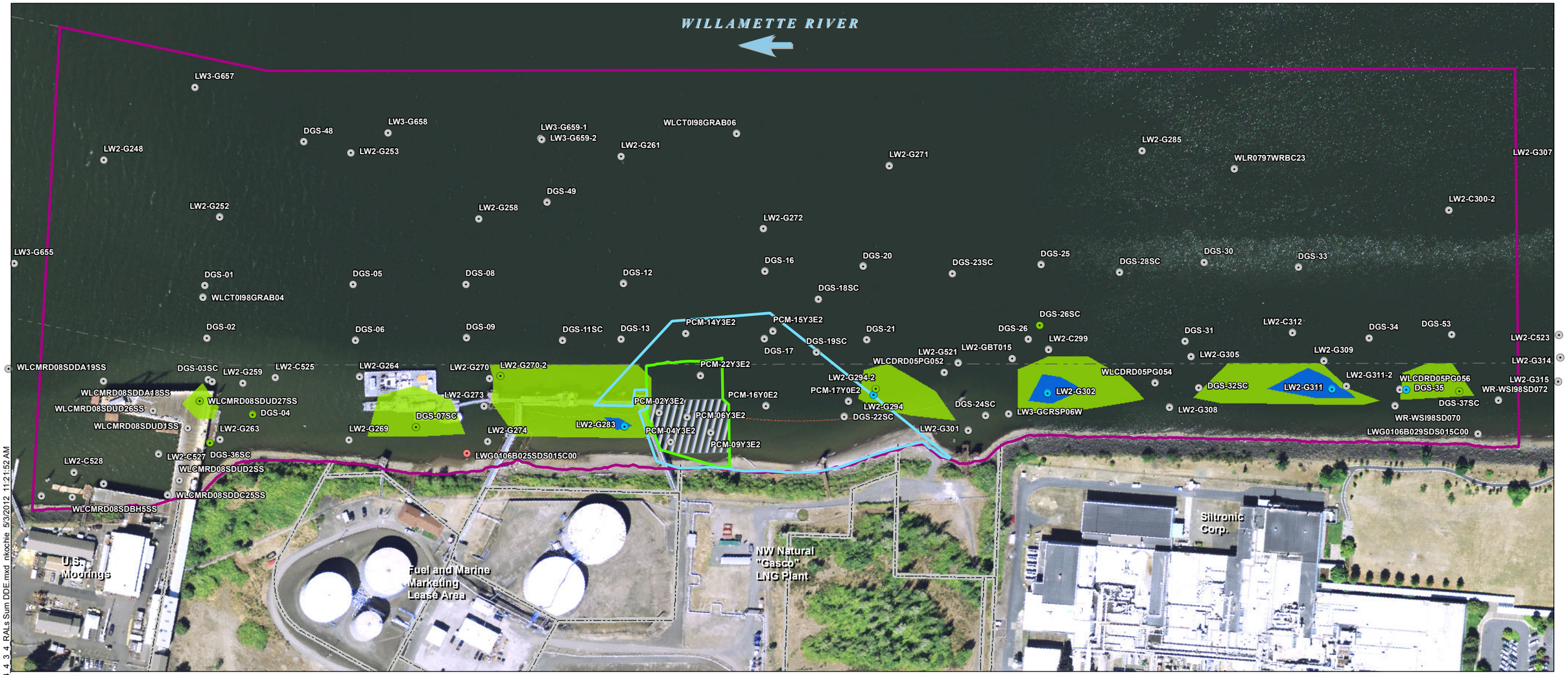
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Pilot Cap
- Navigation Channel

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4.4.3-3
RAL Contours - Sum DDT
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



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Sum DDE (µg/kg)

- < 20
- 20 - 50
- 50 - 100
- 100 - 150
- > 150
- PH draft FS Alternative E - 50 µg/kg
- PH draft FS Alternative F - 20 µg/kg

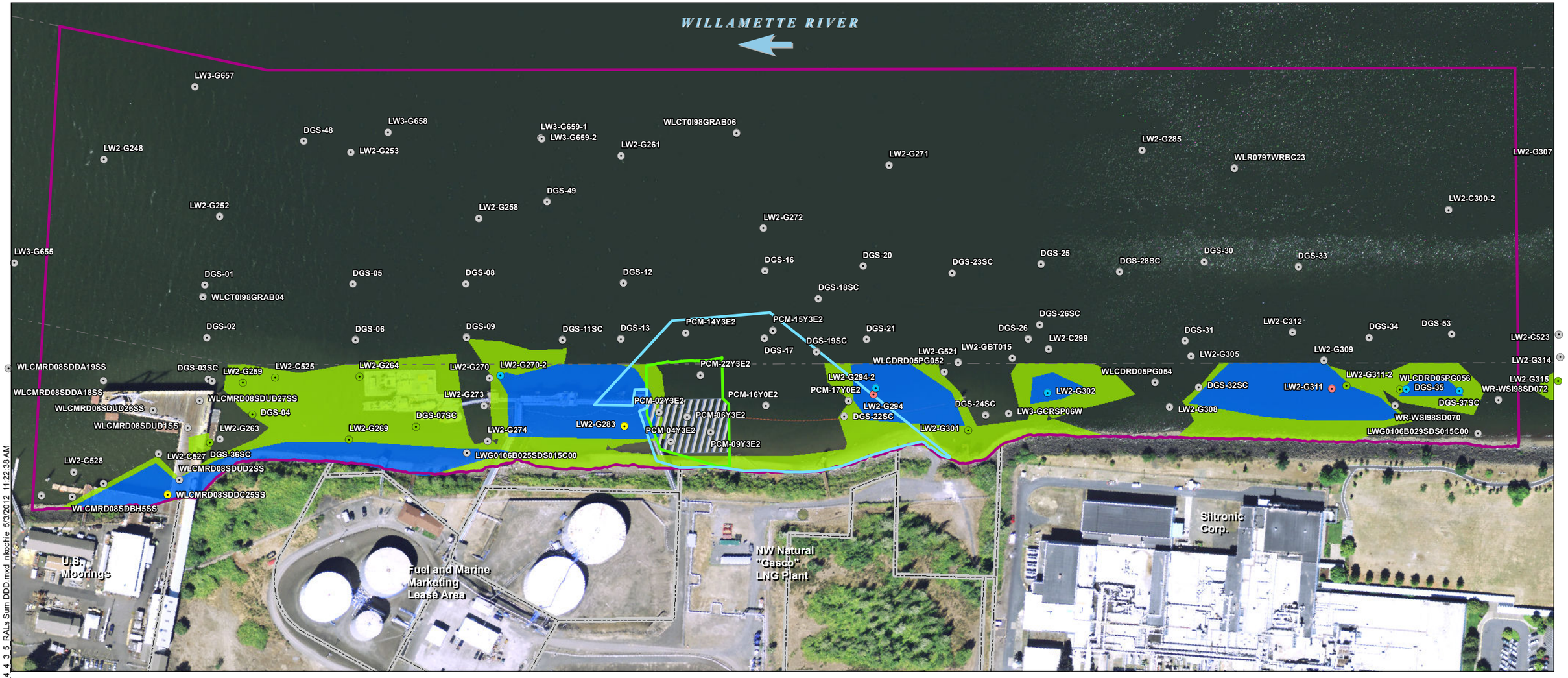
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Pilot Cap
- Navigation Channel

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4.4.3-4
RAL Contours - Sum DDE
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Sum DDD (µg/kg)

- < 50
- 50 - 100
- 100 - 200
- 200 - 500
- > 500
- PH draft FS Alternative E - 100 µg/kg
- PH draft FS Alternative F - 50 µg/kg

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Pilot Cap
- Navigation Channel

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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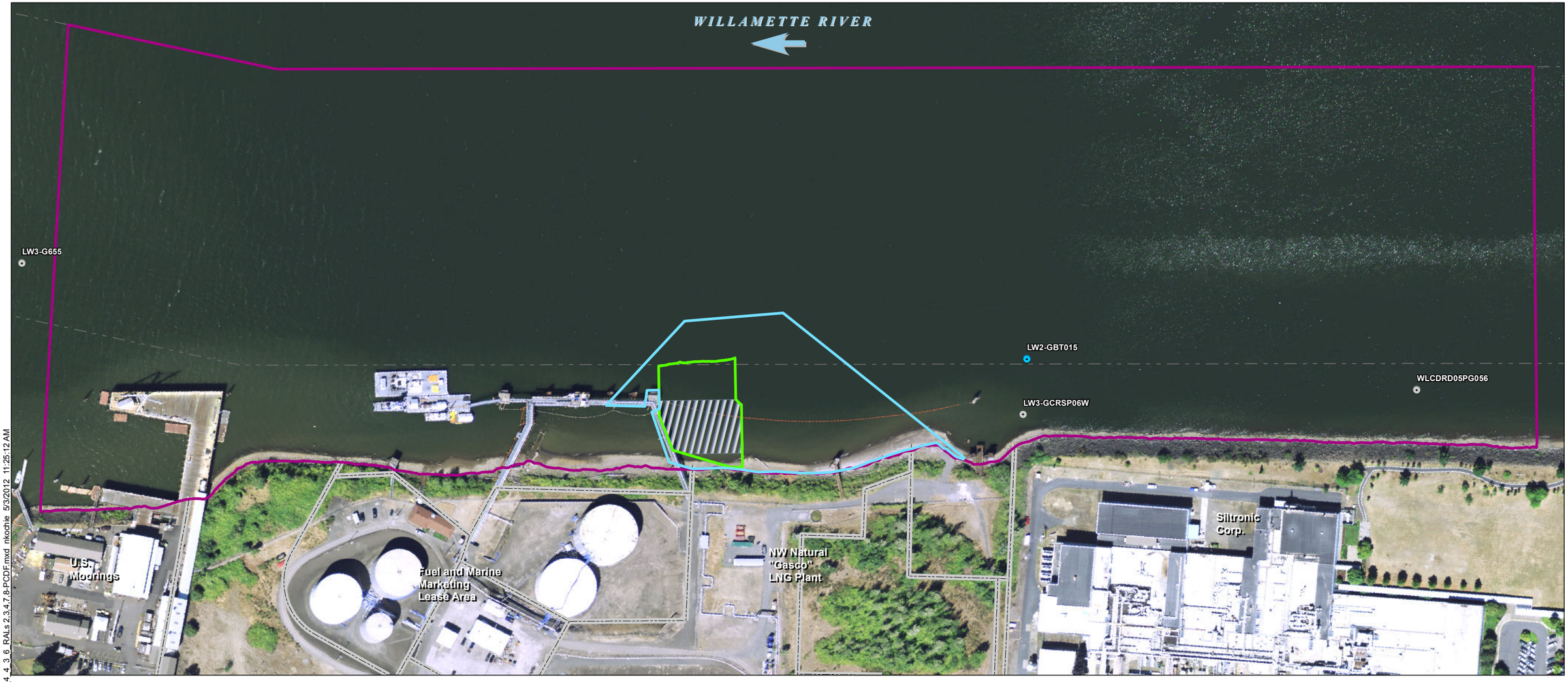
Figure 4.4.3-5
RAL Contours - Sum DDD
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Q:\Jobs\000029-02_Gasco\Maps\2012_04\AQ_Figure_4_4_3_6_RALs 2,3,4,7,8-PCDF.mxd nkoothie 5/3/2012 11:25:12 AM

2,3,4,7,8-PCDF (µg/kg)

- < 0.0025
- 0.0025 - 0.005
- 0.005 - 0.01
- 0.01 - 0.02
- > 0.02

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Pilot Cap
- Navigation Channel

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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Figure 4.4.3-6
RAL Contours - 2,3,4,7,8-PCDF
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

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- Soil Sample Location
- Soil location outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Screening Level Exceedance
- Screening Level Exceedance outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Top of Bank
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

NOTES:
1. Screening results are presented in Tables 3-1, 3-2, and 3-3 in Appendix H.
2. The data set screened consists of soil samples collected from the 0- to 5- foot depth interval for locations sampled during the Gasco Sediments Site Data Gaps Investigation (GST-XX and GSM-XX locations) and soil samples collected from the 0- to 3.5- foot depth interval for all other locations shown. Refer to Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation.
3. Refer to Table 2-1 in Appendix H for riverbank screening levels.
4. Dibenzofuran screening level exceedances are not shown because all dibenzofuran results are below the DEQ alternative screening level for dibenzofuran of 85.0 milligrams per kilogram. Refer to Table 2-1 in Appendix H for additional details.
5. Acronyms:
EPA = Environmental Protection Agency
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD83 = North American Datum 1983
6. Arrow indicates direction of flow of river.
7. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
8. Vertical datum is NAVD88.
9. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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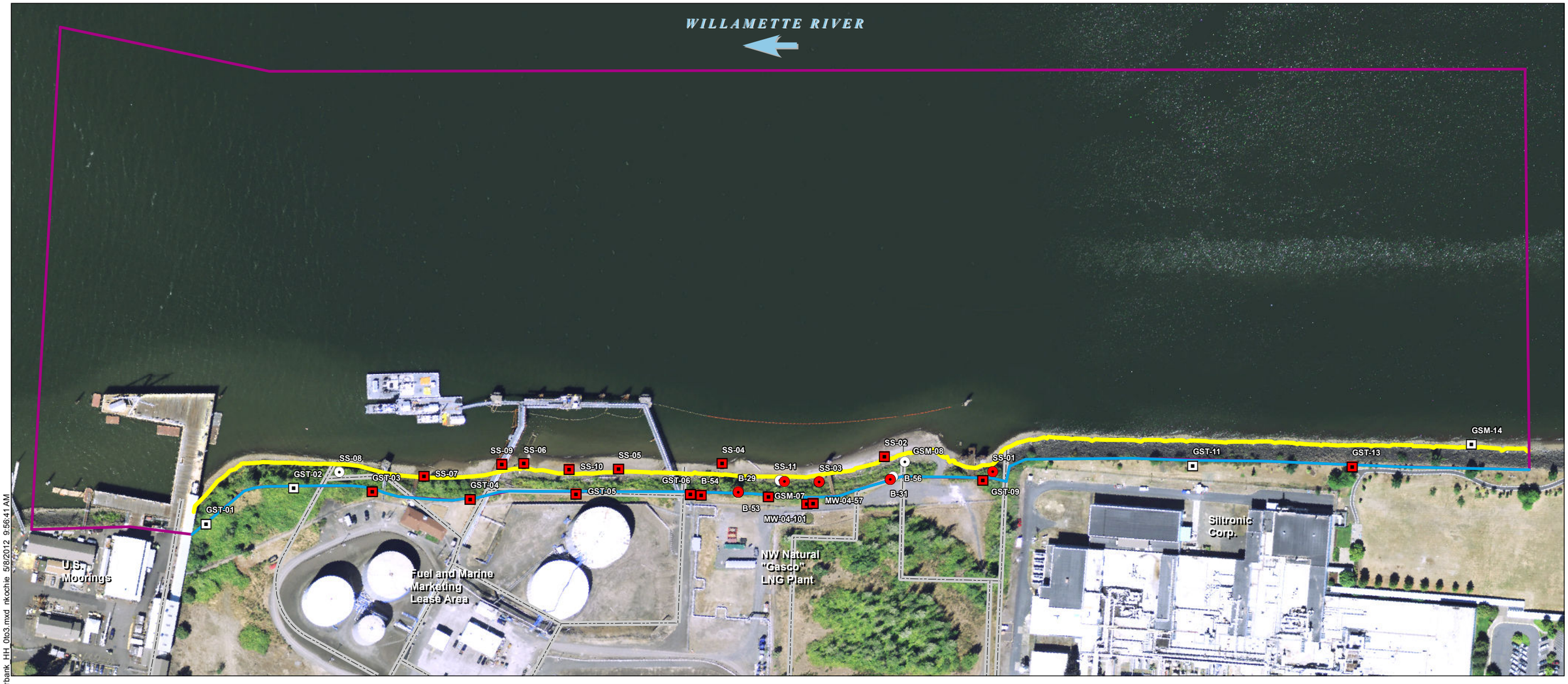
Figure 4.4.4-1
Data Screen: Ecological Receptor 0- to 3.5-Foot Riverbank Soil
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Soil Sample Location
Soil location outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
Screening Level Exceedance
Screening Level Exceedance outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
Top of Bank
Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

NOTES:
1. Screening results are presented in Tables 3-1, 3-2, and 3-3 in Appendix H.
2. The data set screened consists of soil samples collected from the 0- to 5- foot depth interval for locations sampled during the Gasco Sediments Site Data Gaps Investigation (GST-XX and GSM-XX locations) and soil samples collected from the 0- to 3.5- foot depth interval for all other locations shown. Refer to Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation.
3. Refer to Table 2-1 in Appendix H for riverbank screening levels.
4. Acronyms:
EPA = Environmental Protection Agency
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD83 = North American Datum 1983
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
6. Vertical datum is NAVD88.
7. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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Figure 4.4.4-2
Data Screen: Human Health 0- to 3.5-foot Riverbank Soil
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

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- Soil Sample Location
- Soil location outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Screening Level Exceedance
- Screening Level Exceedance outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Top of Bank
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

NOTES:
1. Screening results are presented in Tables 3-1, 3-2, and 3-3 in Appendix H.
2. The data set screened consists of soil samples collected from the 0- to 12- foot depth interval for all locations shown.
3. Refer to Table 2-1 in Appendix H for riverbank screening levels.
4. Acronyms:
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD83 = North American Datum 1983
EPA = Environmental Protection Agency
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
7. Vertical datum is NAVD88.
8. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4.4.4-3
Data Screen: Human Health 0- to 12-foot Riverbank Soil
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

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NOTES:
1. Potential hot spot evaluation was conducted generally following the DEQ's *Guidance for Identification of Hot Spots*, dated April 23, 1998.
2. Potential hot spot screening results are presented in Tables 3-1, 3-2, and 3-3 in Appendix F.
3. The data set evaluated for potential ecological hot spots consists of soil samples collected from the 0- to 5- foot depth interval for locations sampled during the Gasco Sediments Site Data Gaps Investigation (GST-XX and GSM-XX locations) and soil samples collected from the 0- to 3.5- foot depth interval for all other locations shown. Refer to Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation.
4. Locations with a HQ result greater than 50 are identified as potential ecological hot spot screening level exceedances. Refer to Table 2-1 in Appendix F for potential hot spot screening levels.
5. Dibenzofuran potential hot spot screening level exceedances are not shown because all dibenzofuran results are below the DEQ alternative screening level for dibenzofuran of 85.0 milligrams per kilogram. Refer to Table 2-1 in Appendix F for additional details.
6. Acronyms:
HQ = hazard quotient
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD83 = North American Datum 1983
EPA = Environmental Protection Agency
7. Arrow indicates direction of flow of river.
8. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
9. Vertical datum is NAVD88.
10. Aerial imagery from July 2007.

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Figure 4.4.5-1
Potential Ecological Hot Spot Data Screen: 0- to 3.5-Foot Riverbank Soil
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

Soil Sample Location

Soil location outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88

Screening Level Exceedance

Screening Level Exceedance outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88

Top of Bank

Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

NOTES:

1. Potential hot spot evaluation was conducted generally following the DEQ's *Guidance for Identification of Hot Spots*, dated April 23, 1998.
2. Potential hot spot screening results are presented in Tables 3-1, 3-2, and 3-3 in Appendix F.
3. The data set evaluated for 0- to 3.5- foot potential human health hot spots consists of soil samples collected from the 0- to 5- foot depth interval for locations sampled during the Gasco Sediments Site Data Gaps Investigation (GST-XX and GSM-XX locations) and soil samples collected from the 0- to 3.5- foot depth interval for all other locations shown. Refer to Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation.
4. A HQ greater than 100 was used to identify locations as potential human health hot spots based on carcinogenic endpoint screening level exceedances. A HQ greater than 10 was used to identify locations as potential human health hot spots based on noncarcinogenic endpoint screening level exceedances. Refer to Table 2-2 in Appendix F for potential hot spot screening levels.
5. Acronyms:
HQ = hazard quotient
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD83 = North American Datum 1983
EPA = Environmental Protection Agency
6. Arrow indicates direction of flow of river.
7. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
8. Vertical datum is NAVD88.
9. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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Figure 4.4.5-2
Potential Human Health Hot Spot Data Screen: 0- to 3.5-foot Riverbank Soil
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

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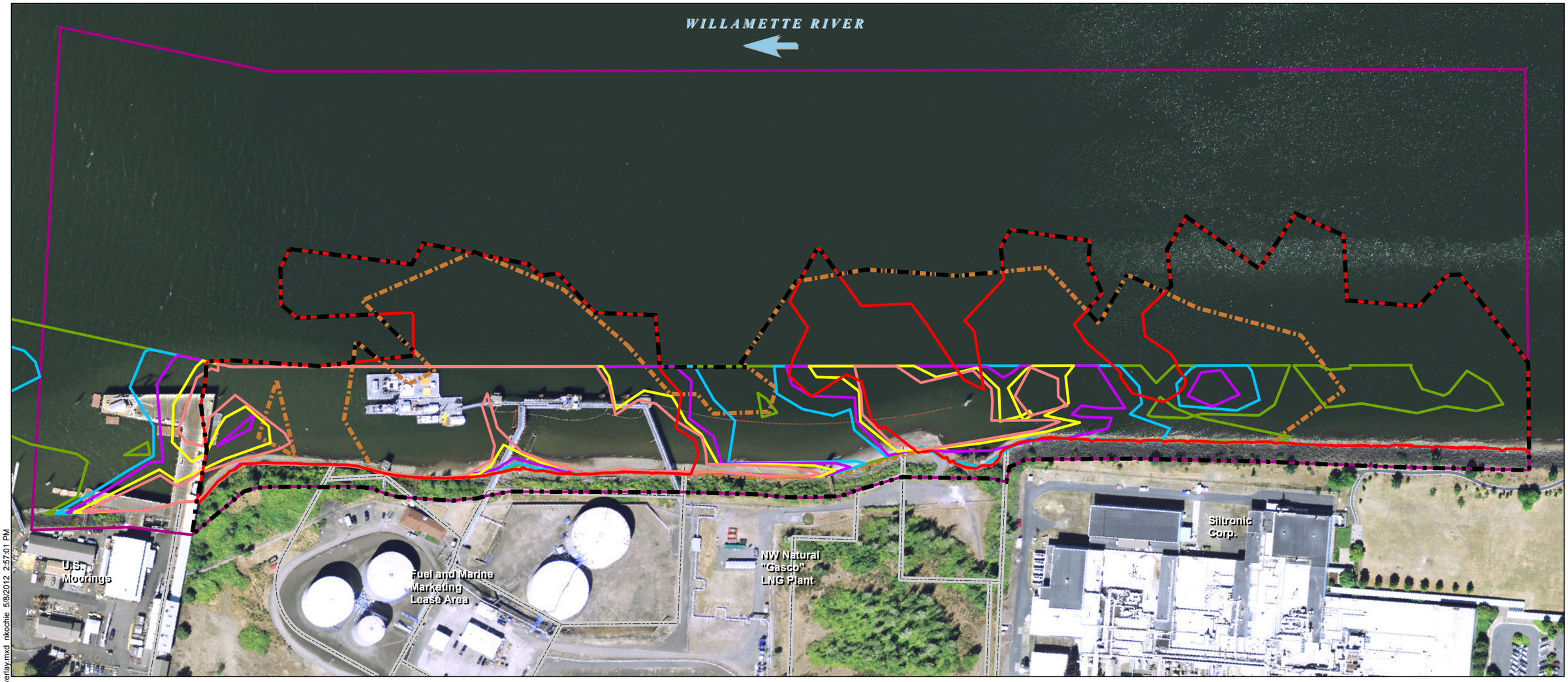
- Soil Sample Location
- Soil location outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Screening Level Exceedance
- Screening Level Exceedance outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Top of Bank
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

NOTES:
1. Potential hot spot evaluation was conducted generally following the DEQ's *Guidance for Identification of Hot Spots*, dated April 23, 1998.
2. Potential hot spot screening results are presented in Tables 3-1, 3-2, and 3-3 in Appendix F.
3. The data set evaluated for 0- to 12- foot potential human health hot spots consists of soil samples collected from the 0- to 12- foot depth interval for all locations shown.
4. A HQ greater than 100 was used to identify locations as potential human health hot spots based on carcinogenic endpoint screening level exceedances. A HQ greater than 10 was used to identify locations as potential human health hot spots based on noncarcinogenic endpoint screening level exceedances. Refer to Table 2-2 in Appendix F for potential hot spot screening levels.
5. Acronyms:
HQ = hazard quotient
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD83 = North American Datum 1983
EPA = Environmental Protection Agency
6. Arrow indicates direction of flow of river.
7. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
8. Vertical datum is NAVD88.
9. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4.4.5-3
Potential Human Health Hot Spot Data Screen: 0- to 12-foot Riverbank Soil
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Revised Comprehensive Benthic Risk Area
Substantial Product Area
PH draft FS BaPEq Alternative B RAL (20000 µg/kg)
PH draft FS BaPEq Alternative C RAL (15000 µg/kg)
PH draft FS BaPEq Alternative D RAL (8000 µg/kg)
PH draft FS BaPEq Alternative E RAL (4000 µg/kg)
PH draft FS BaPEq Alternative F RAL (1500 µg/kg)

Interim Project Area Boundary
Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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Figure 4.4.6-1
Combined Lines of Evidence
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

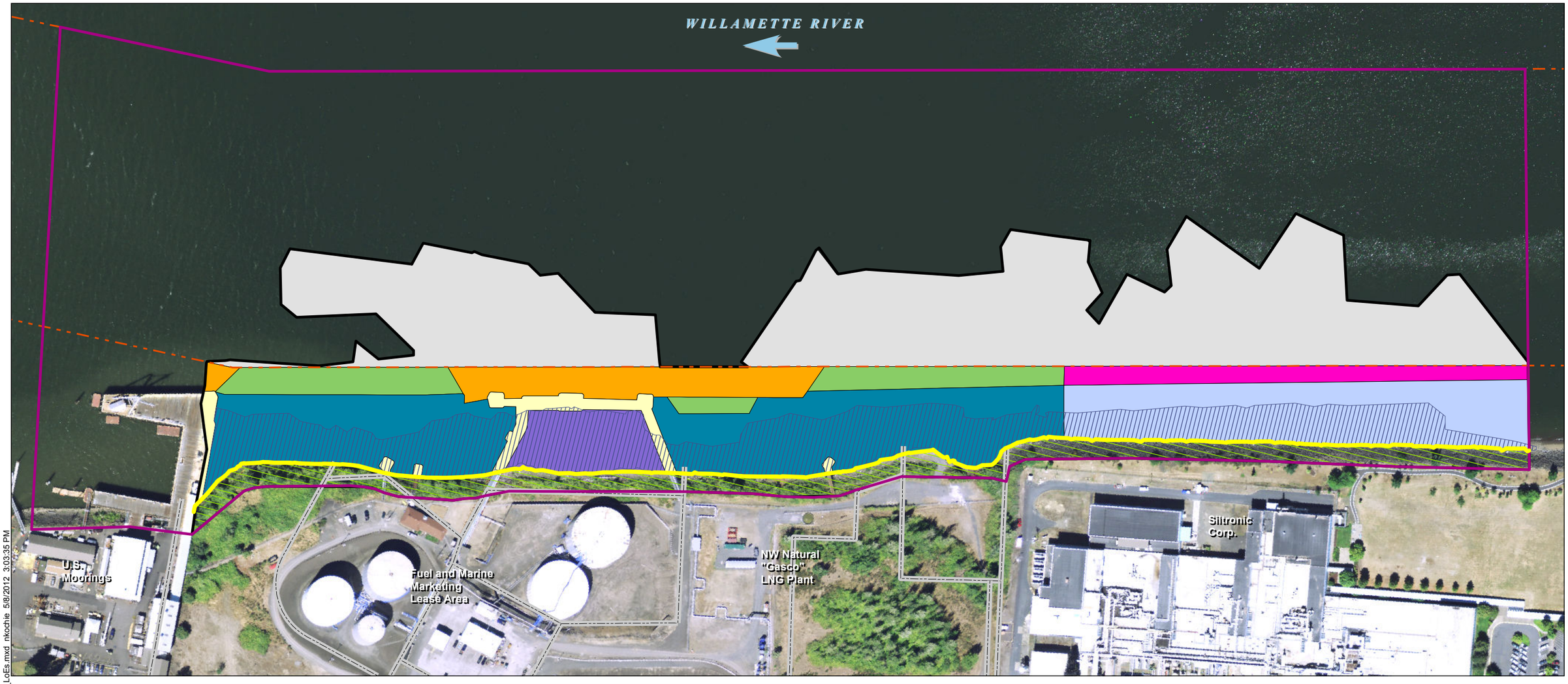

Figure 4.5-1
Sub-SMA Designations within the Interim Project Area Boundary
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

ANCHOR QEA

May 03, 2012 9:10am heriksen K:\Projects\0029-NW Natural Gas Co\Gasco Sediments\EECA and Data Report\0029-RP-001.dwg F4.7.1-1

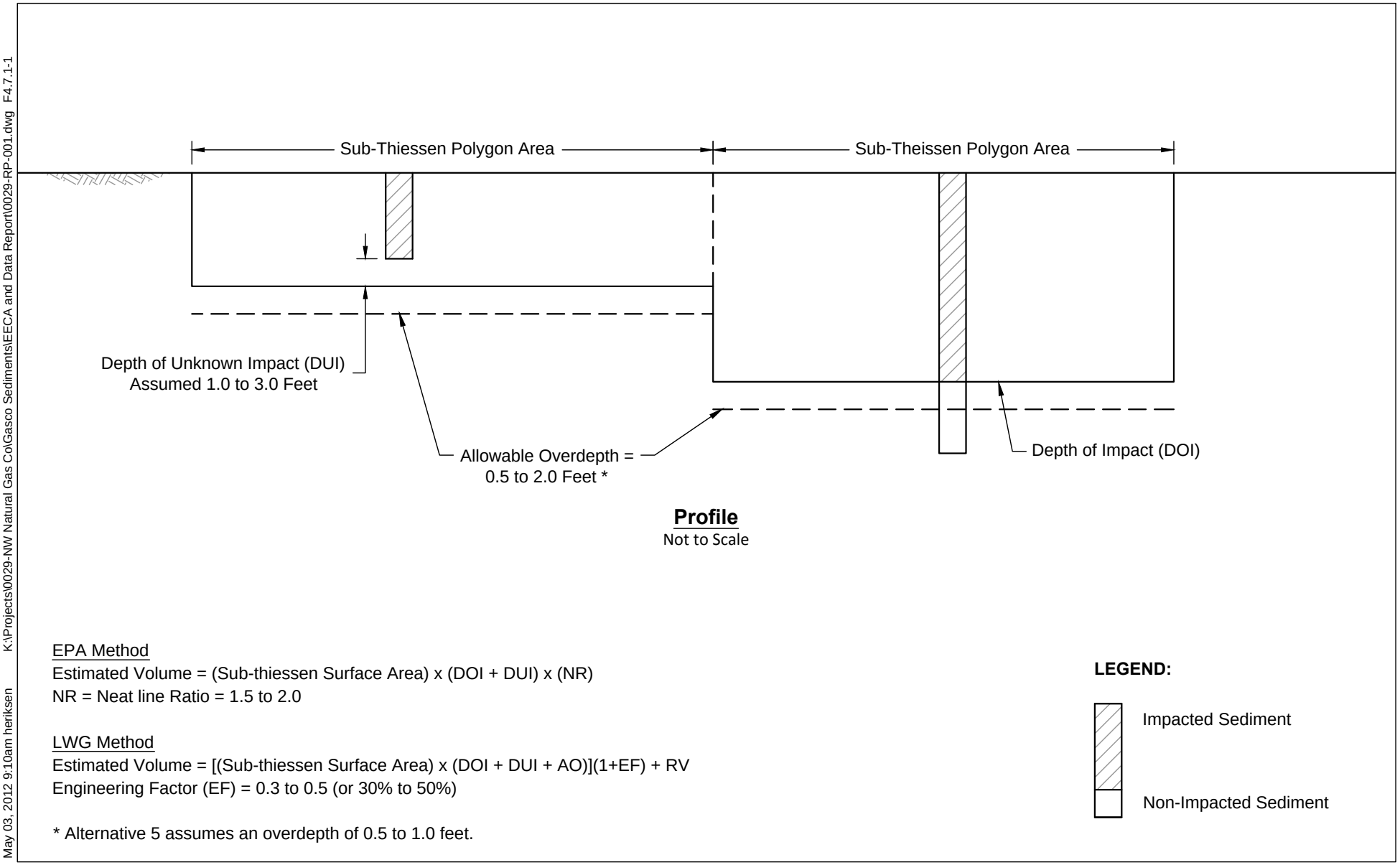

Figure 4.7.1-1
Dredge Volume Determination Method
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

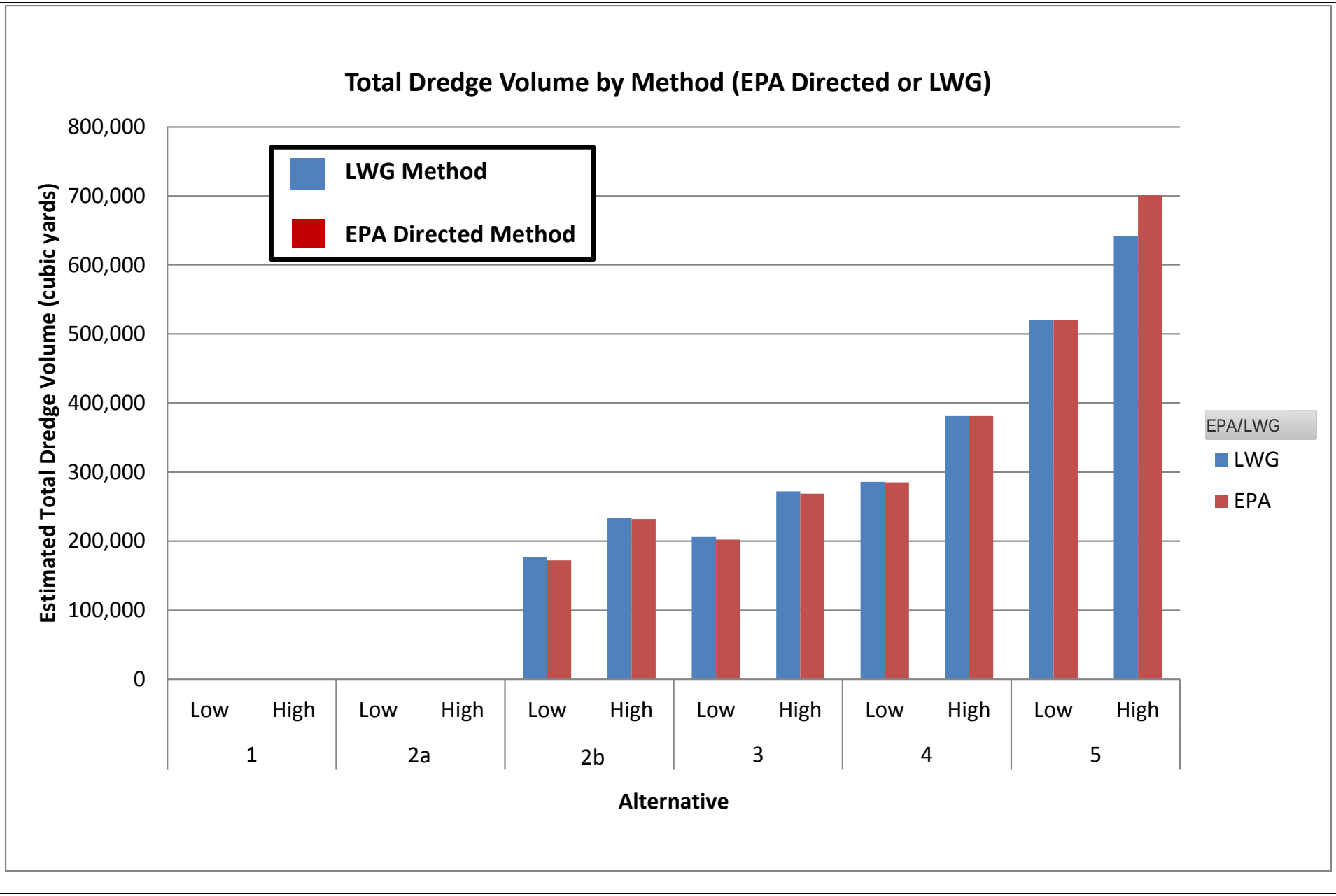

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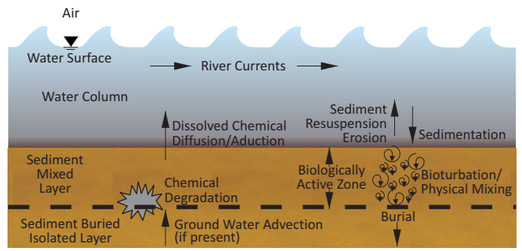
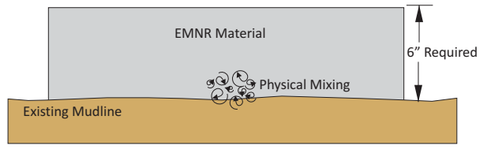
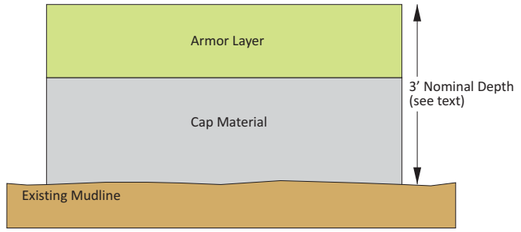
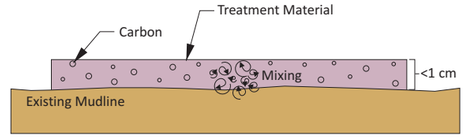
Figure 4.7.1-2
Estimated Removal Volumes
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

This presents the general characteristics of each of the major sediment remedial technologies considered in Section 6

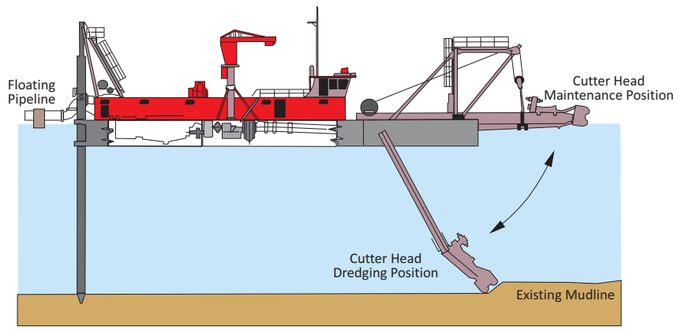


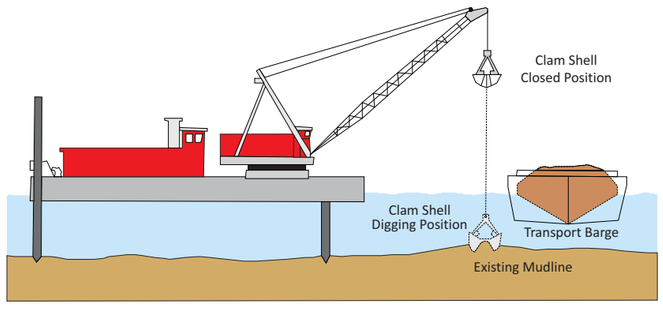




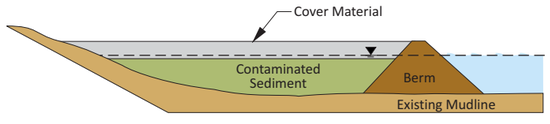


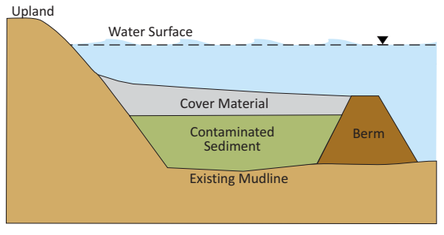
In-Place Technologies | **Monitored Natural Recovery** | **Enhanced Monitored Natural Recovery** | **Typical Cap Section** | **In-Situ Treatment**

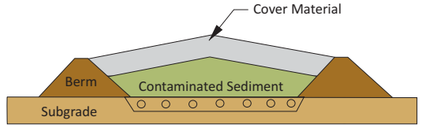


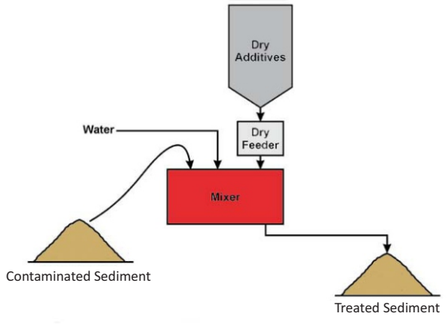


Removal Technologies | **Hydraulic Dredge** | **Mechanical Dredge**









Post-Removal Technologies | **Nearshore Confined Disposal** | **Confined Aquatic Disposal** | **Upland Confined Disposal** | **Ex-Situ Treatment**

SOURCE: Portland Harbor Site Draft Feasibility Study (Anchor QEA 2012).

5/7/2012 heriksen Projects\0029-NW Natural Gas Co\Gasco Sediments\EECA and Data Report\0029-RP-AA (Remediation Tech).cdr

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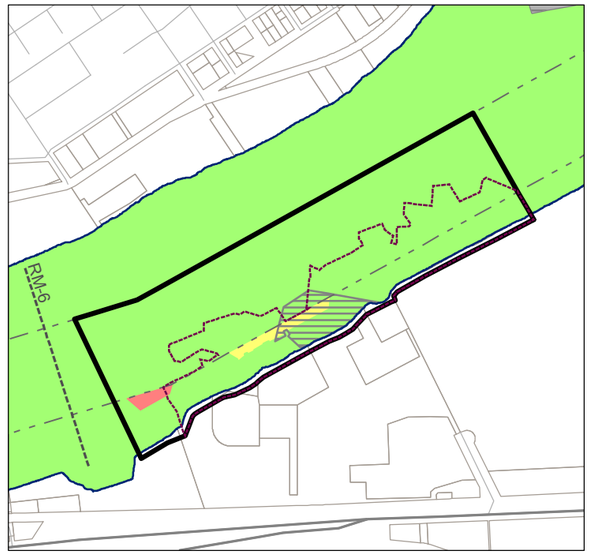
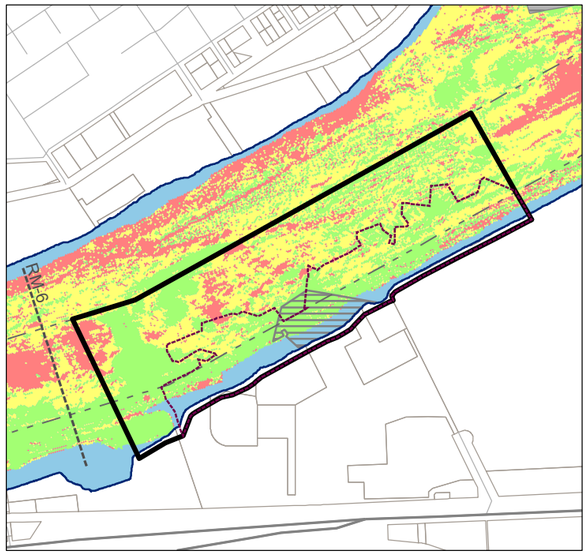
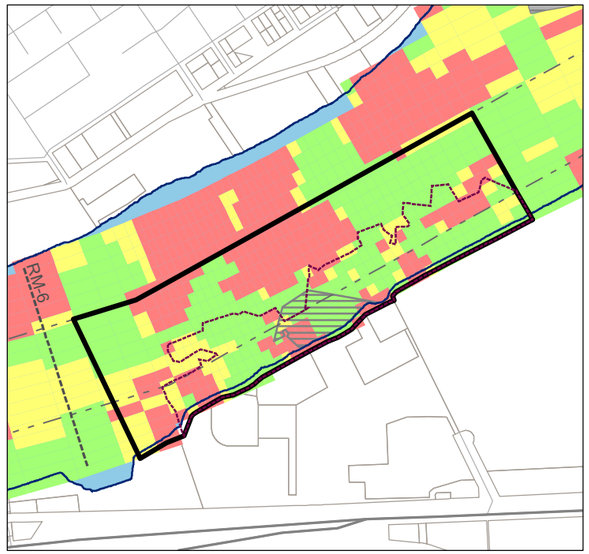
Figure 5.0-1
Summary of Screened Remediation Technologies
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



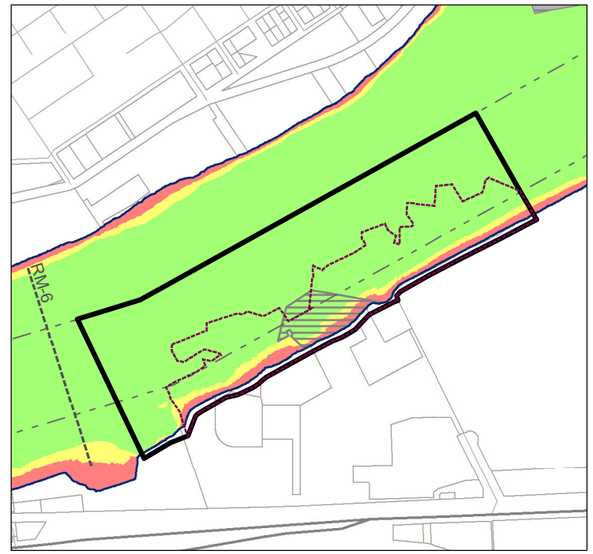
1. Future Maintenance Dredge/Berthing (Propwash) Areas



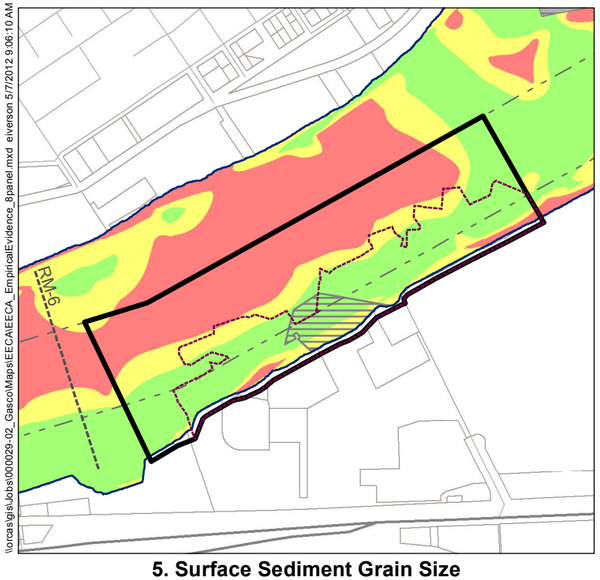
2. Net Sedimentation Rate (Year 2003-2009)



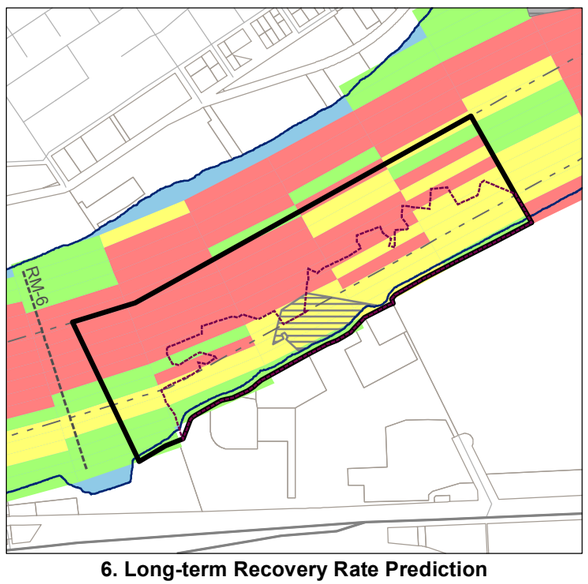
3. Surface to Subsurface Concentration Ratio



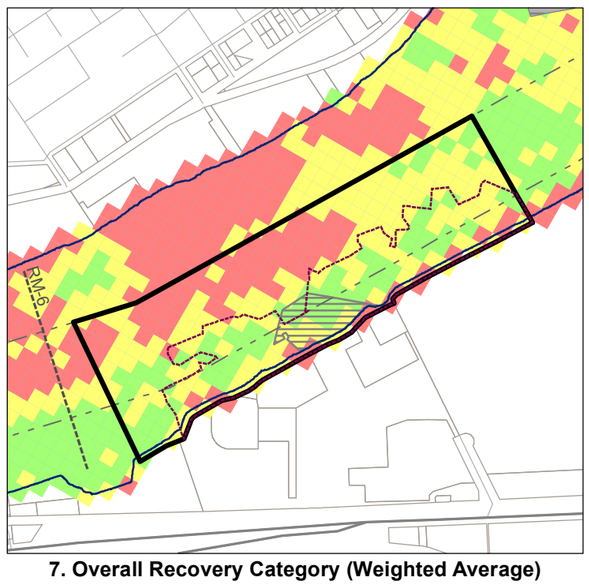
4. Wave/Wake Areas



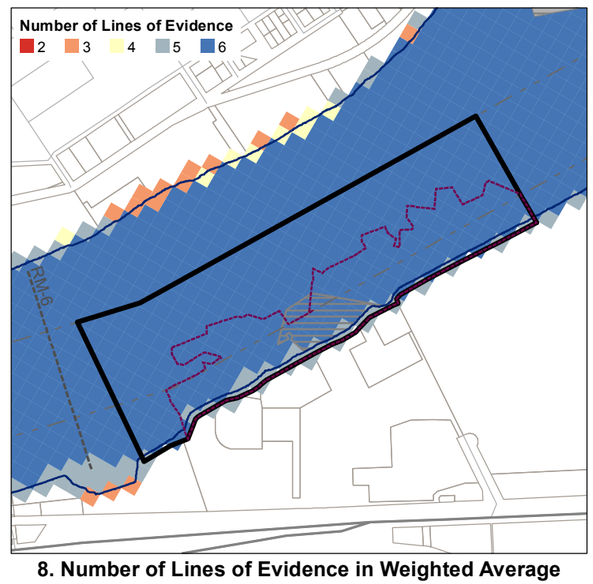
5. Surface Sediment Grain Size



6. Long-term Recovery Rate Prediction



7. Overall Recovery Category (Weighted Average)



8. Number of Lines of Evidence in Weighted Average

\\orcasvgis\Jobs\000029-02_Gasco\Maps\EECAEECA_EmpiricalEvidence_8panel.mxd eiverson 5/7/2012 9:06:10 AM

- Category 3 - Areas expected to recover
- Category 2 - Areas where recovery is somewhat less certain
- Category 1 - Areas where recovery is uncertain
- No Category Assigned
- Areas With No Data Coverage
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Interim Project Area Boundary

Overall Recovery Category (Weighted Average)

Applies to Panel 7 Only

- 2.5 - 3.0 (Category 3)
- 2.0 - 2.5 (Category 2)
- < 2.0 (Category 1)
- Existing Remediation Cap
- River miles
- Navigation Channel

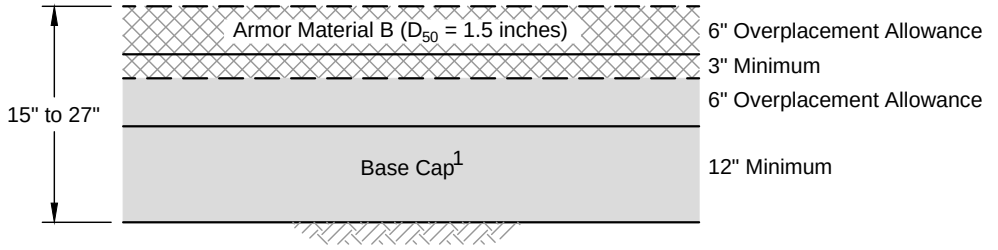
Six independent lines of evidence based on empirical data, physical information, and sediment transport modeling were combined together to evaluate the effectiveness of MNR throughout the Site (see Panel 7). The average category scores range from 3 (indicating areas where MNR is expected to be effective) to 1 (indicating areas where MNR effectiveness is uncertain). Based on this series of maps, the relative amounts of each category are used to develop an overall assessment of MNR effectiveness for each river mile.

Feet

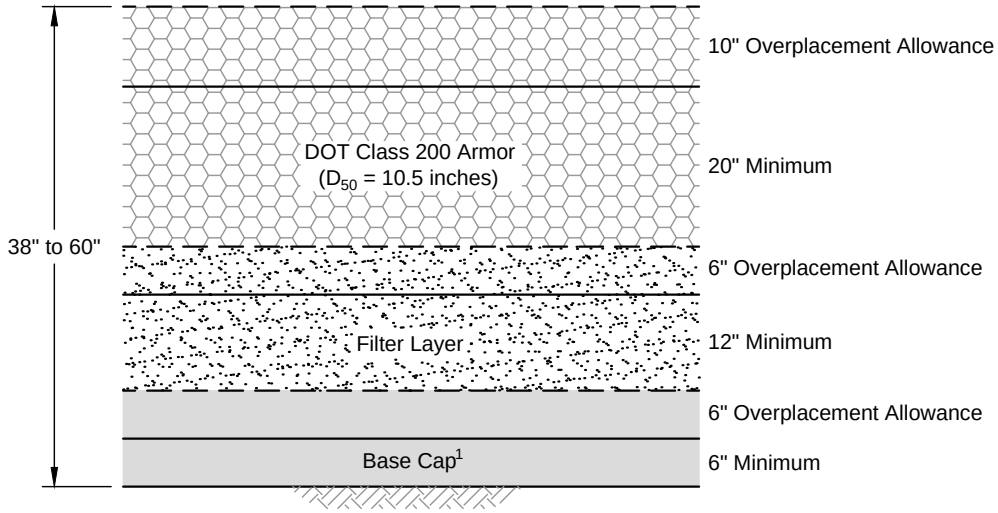
0 600 1,200 1,800 2,400

ANCHOR QEA

Figure 5.1.1.2-1
MNR Empirical/Physical Weight of Evidence Evaluation
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Armored Cap B
Not to Scale



Armored Cap Class 200
Not to Scale

1. Active materials, including either an organoclay mat or bulk organoclay, may be necessary in some areas. See report for more details.

May 03, 2012 8:42am heriksen K:\Projects\0029-NW Natural Gas Col\Gasco Sediments\EECA and Data Report\0029-RP-007 (TYP CAPS).dwg F 5.4-1

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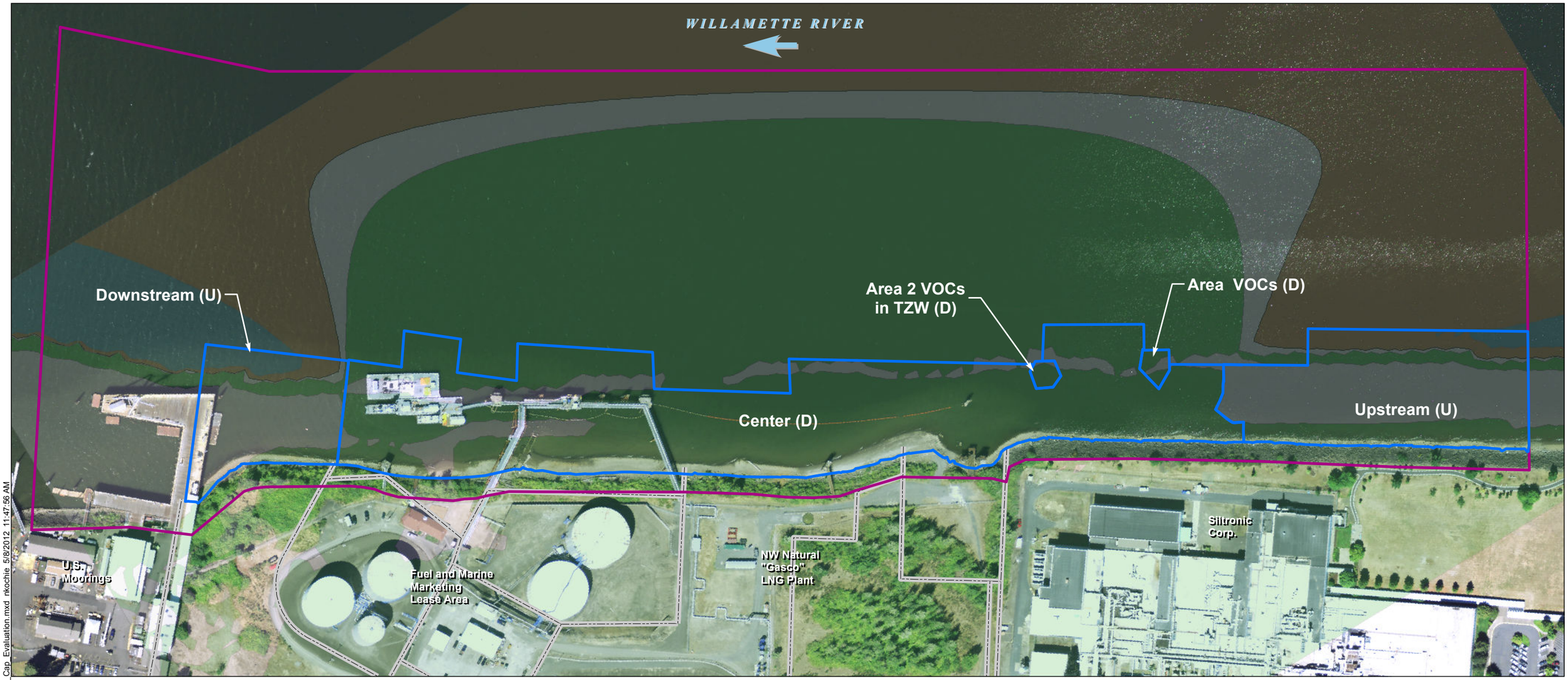
Figure 5.4-1
Typical Armored Cap Sections
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Cap Modeling Areas

Groundwater fluxes

- flux from river to groundwater
- flux to river with velocity less than <10^(-6) cm/s
- flux to river with velocity >10^(-6) cm/s, but <10^(-5) cm/s
- flux to river with velocity >10^(-5) cm/s

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

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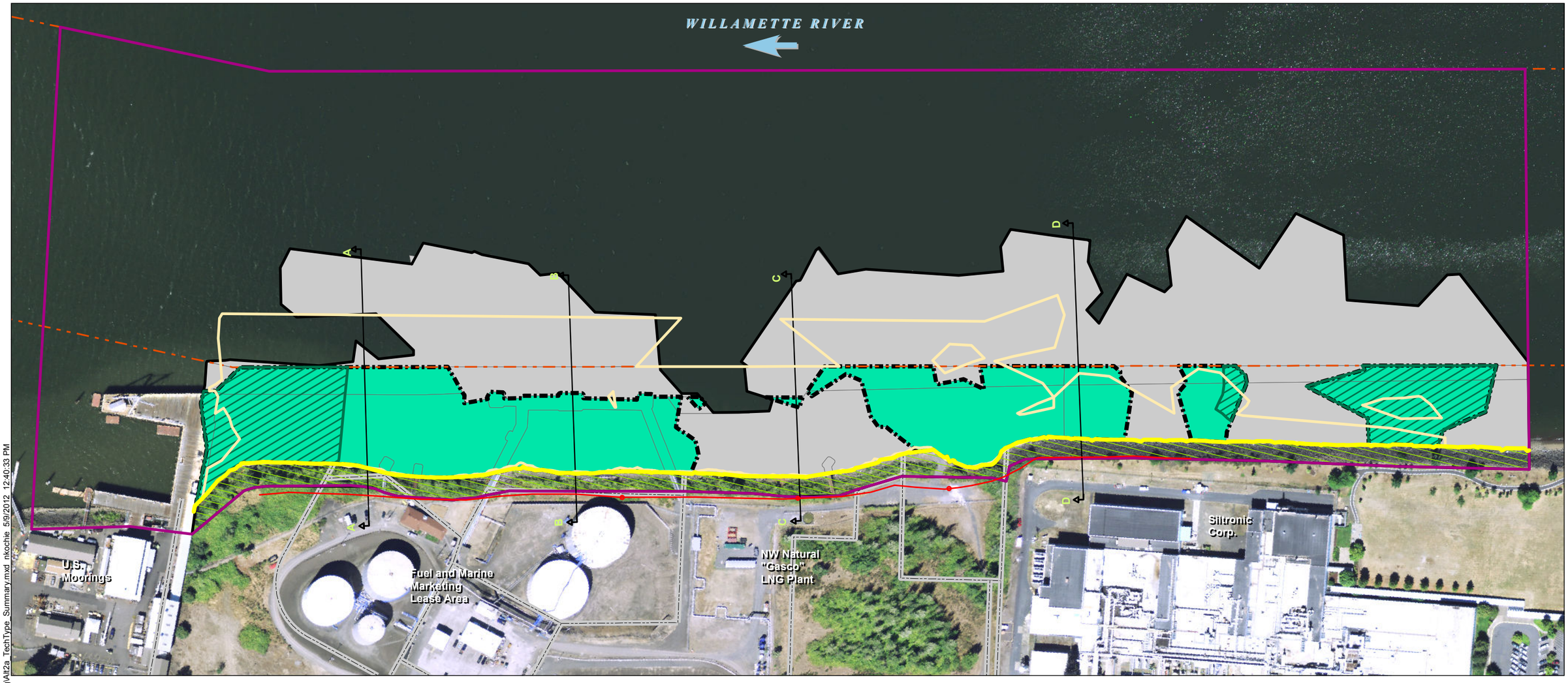
Feet
0 100 200 300 400

Figure 5.4.1-1
Delineation of Modeling Areas for Cap Evaluation
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Capping
MNR
Infiltration Barrier with Overlying Erosion Control
Alternative 2a Active Remediation Boundary
Interim Project Area Boundary
Modeled Groundwater Discharge Area (Caps Include Organoclay Amendment)

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
Federal Navigation Channel
Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
Cross Section
Fill WBZ Trench Alignment with Sump
PH draft FS Alternative B Active Remediation Boundary

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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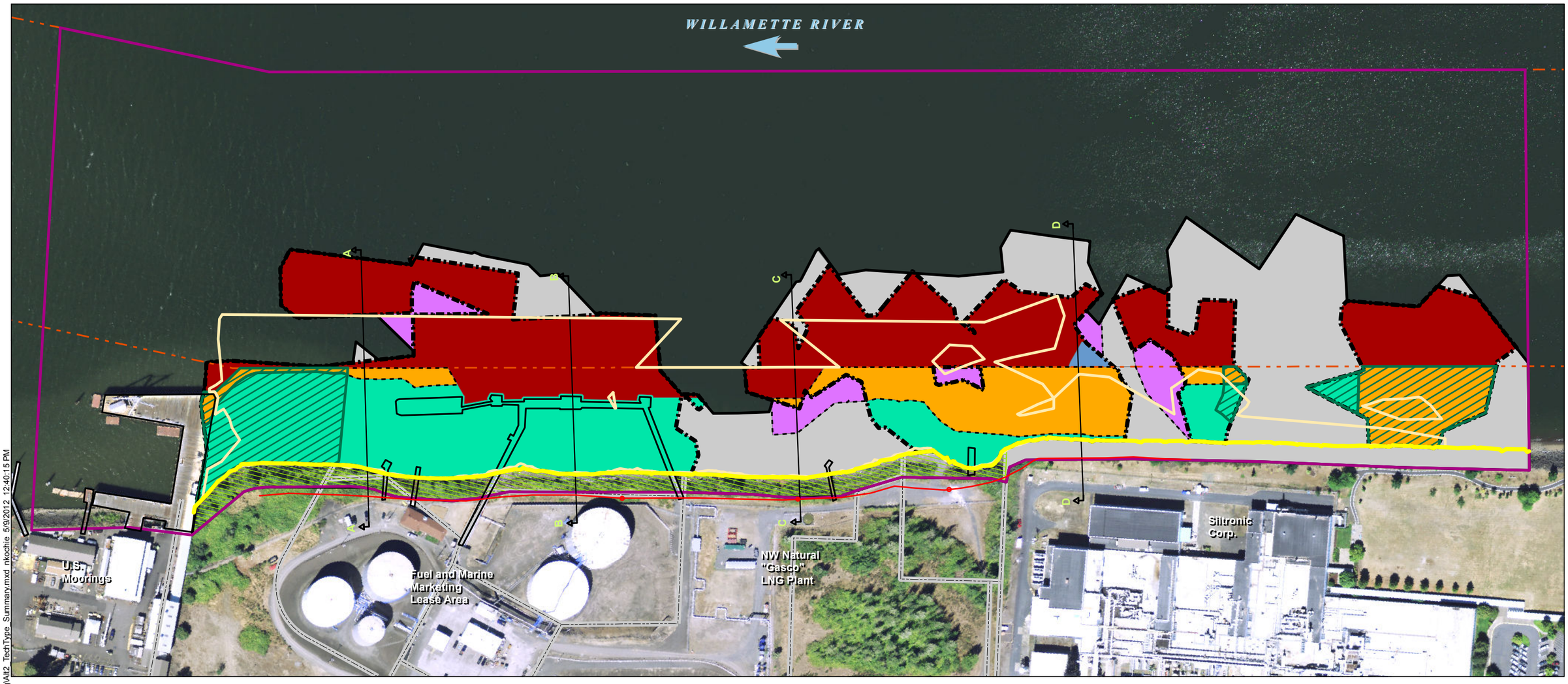
ANCHOR QEA

Figure 6.1-1
Alternative 2a Remedial Footprint and Technology Assignments
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Removal and Cover
Removal and Capping
Capping
Side Slope Removal and Cover[5]
Side Slope Removal and Capping[5]
MNR
Infiltration Barrier with Overlying Erosion Control
Alternative 2 Active Remediation Boundary
Interim Project Area Boundary

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
Federal Navigation Channel
Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
Cross Section
Proposed Fill WBZ Trench Alignment with Sump
Modeled Groundwater Discharge Area (Caps Include Organoclay Amendment)
Structures

PH draft FS Alternative B Active Remediation Boundary

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.
5. Shown extents of side slope removal and cover/capping are estimated based on extension of stable slope angles from adjacent areas with removal. Actual extents to be evaluated during design.

Feet
0 100 200 300 400

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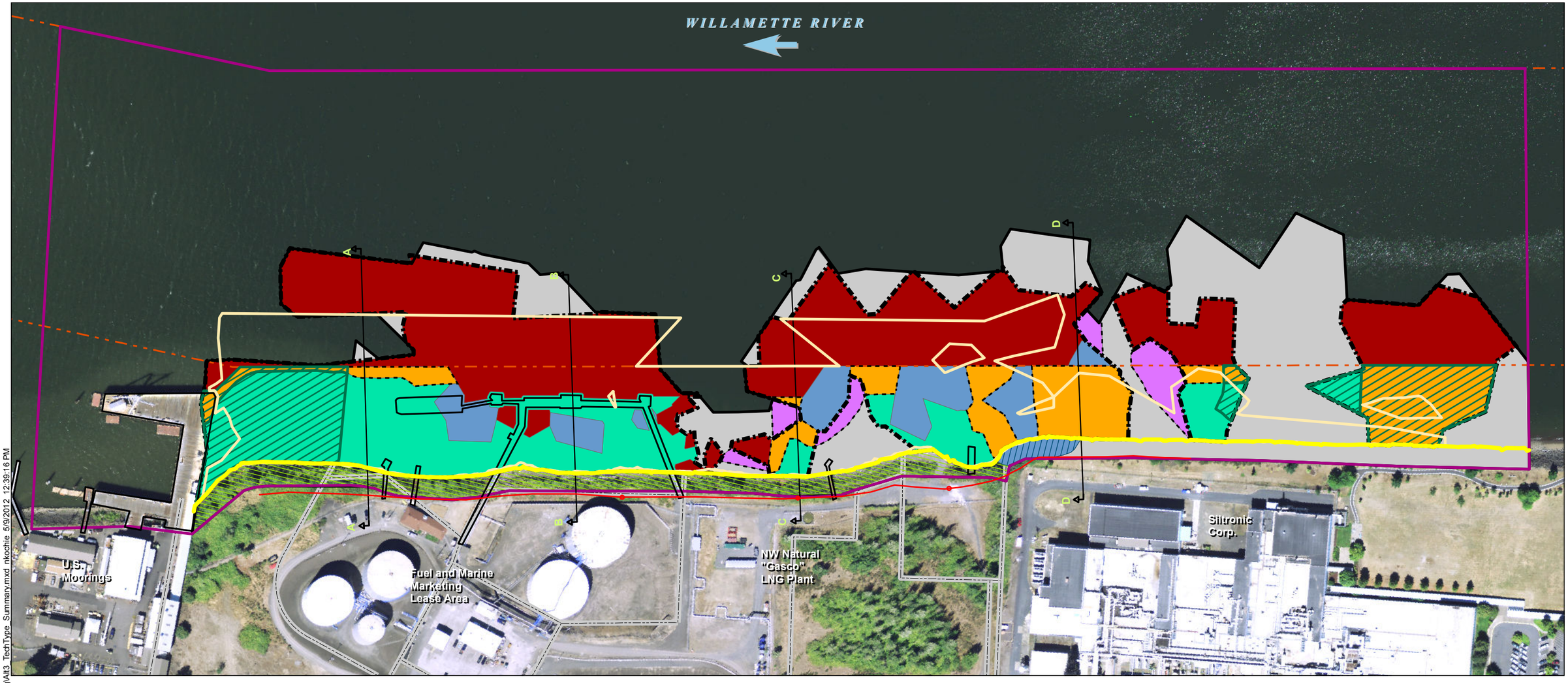
ANCHOR QEA

Figure 6.1-2
Alternative 2b Remedial Footprint and Technology Assignments
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Removal and Cover
Removal and Capping
Capping
Side Slope Removal and Cover[5]
Side Slope Removal and Capping[5]
MNR
Infiltration Barrier with Overlying Erosion Control
Alternative 3 Active Remediation Boundary
Riverbank Cutback Associated with Removal[5]

Interim Project Area Boundary
Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
Federal Navigation Channel
Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
Cross Section
Proposed Fill WBZ Trench Alignment with Sump
Modeled Groundwater Discharge Area (Caps Include Organoclay Amendment)

Structures
PH draft FS Alternative B Active Remediation Boundary

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.
5. Shown extents of side slope removal and cover/capping are estimated based on extension of stable slope angles from adjacent areas with removal. Actual extents to be evaluated during design.

Feet
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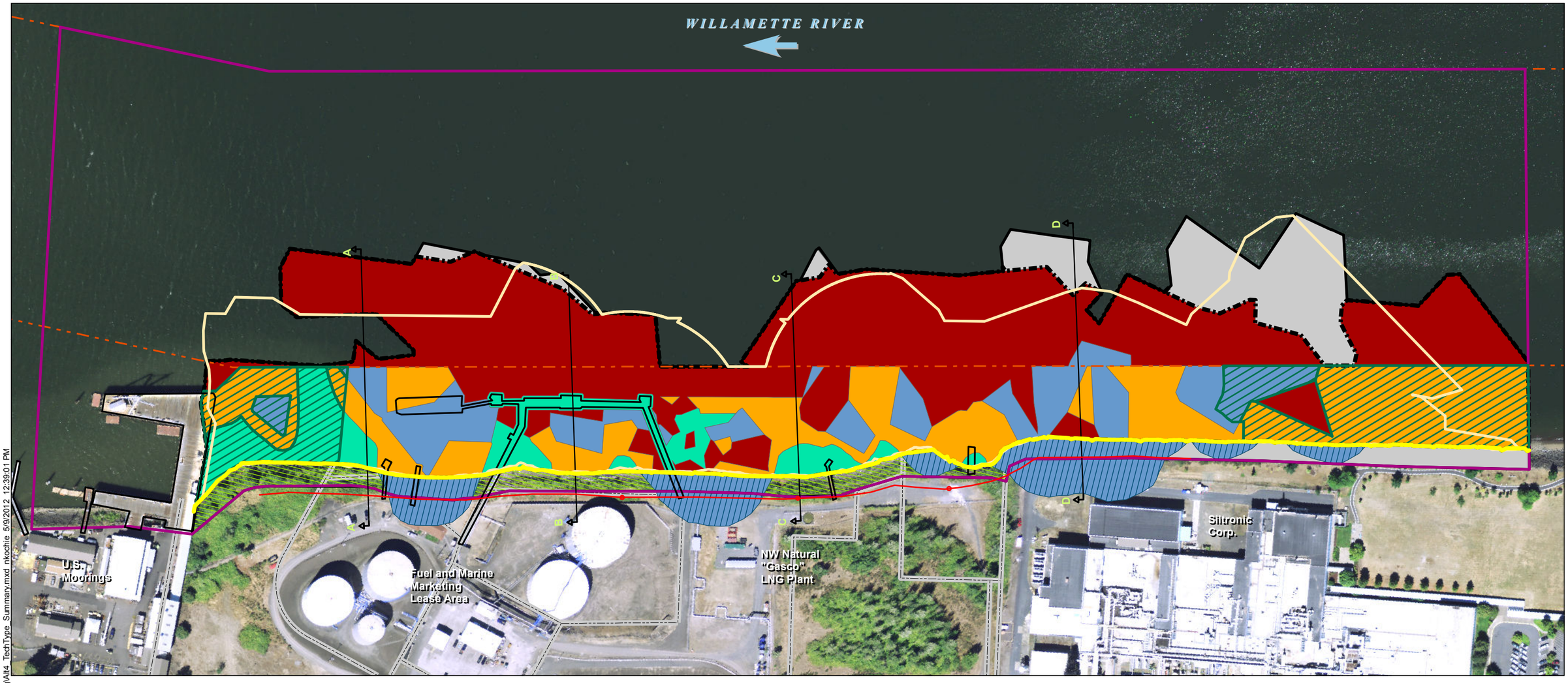
Figure 6.1-3
Alternative 3 Remedial Footprint and Technology Assignments
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Removal and Cover
Removal and Capping
Capping
Side Slope Removal and Capping[5]
MNR
Infiltration Barrier with Overlying Erosion Control
Riverbank Cutback Associated with Removal[5]
Alternative 4 Active Remediation Boundary
Interim Project Area Boundary

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
Substantial Product Area
Federal Navigation Channel
Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
Cross Section
Proposed Fill WBZ Trench Alignment with Sump
Modeled Groundwater Discharge Area (Caps Include Organoclay Amendment)

Structures
PH draft FS Alternative F Active Remediation Boundary

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.
5. Shown extents of side slope removal and cover/capping are estimated based on extension of stable slope angles from adjacent areas with removal. Actual extents to be evaluated during design.

Feet
0 100 200 300 400

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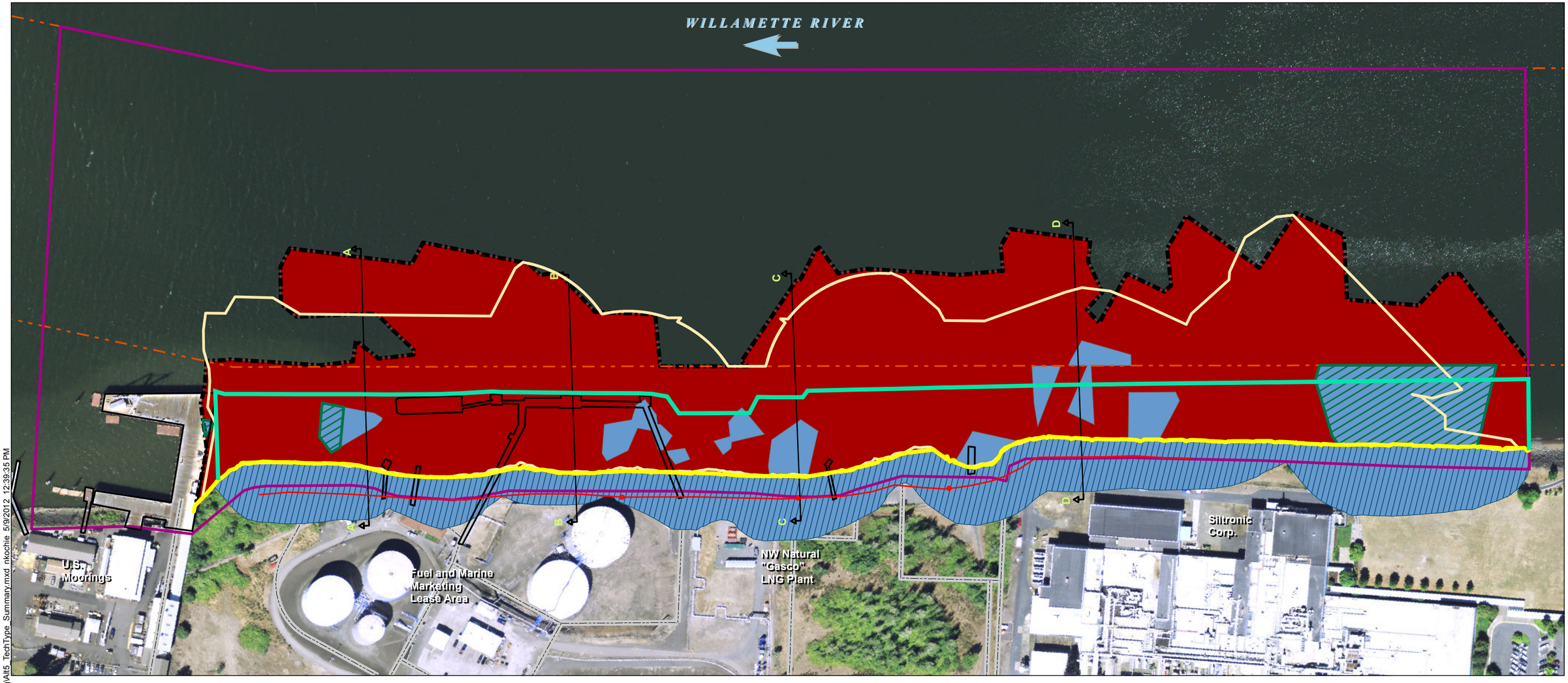
ANCHOR QEA

Figure 6.1-4
Alternative 4 Remedial Footprint and Technology Assignments
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Removal and Cover
Removal and Capping
Riverbank Cutback Associated with Removal[5]
Interim Project Area Boundary
Proposed Fill WBZ Trench Alignment with Sump
Sheetpile Wall Alignment
Structures

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
Federal Navigation Channel
Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
Cross Section
Modeled Groundwater Discharge Area (Caps Include Organoclay Amendment)
PH draft FS Alternative F Active Remediation Boundary

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.
5. Shown extents of side slope removal and cover/capping are estimated based on extension of stable slope angles from adjacent areas with removal. Actual extents to be evaluated during design.
6. Alternative 5 includes removal and replacement of the oil pipeline dock structure, and includes installation of a sheetpile wall along the deepest channel ward location (assumed alignment shown on figure) that would remain structurally stable.

Feet
0 100 200 300 400

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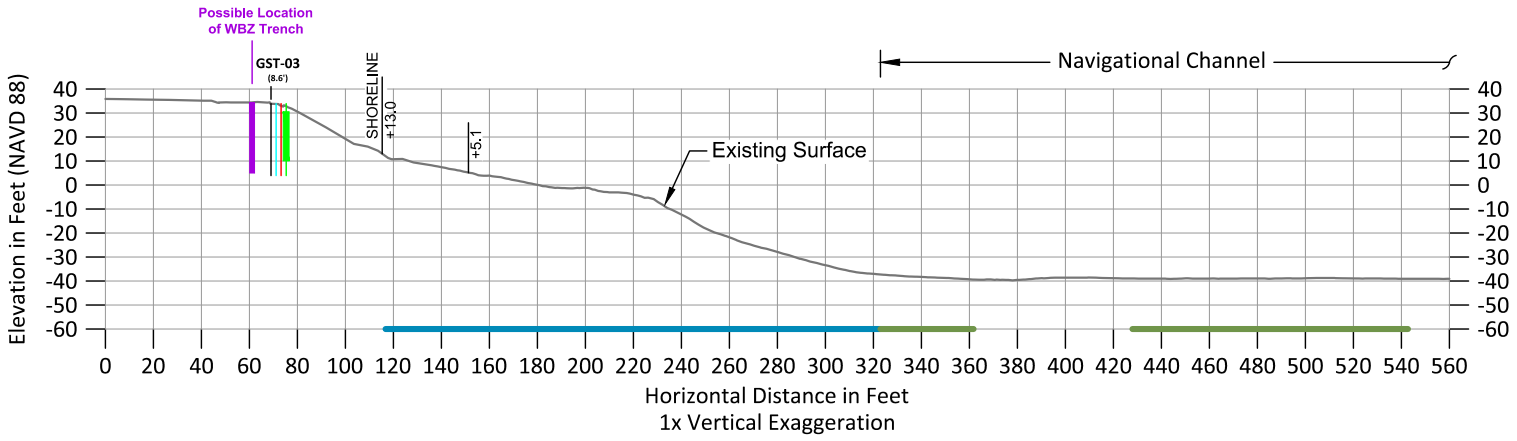
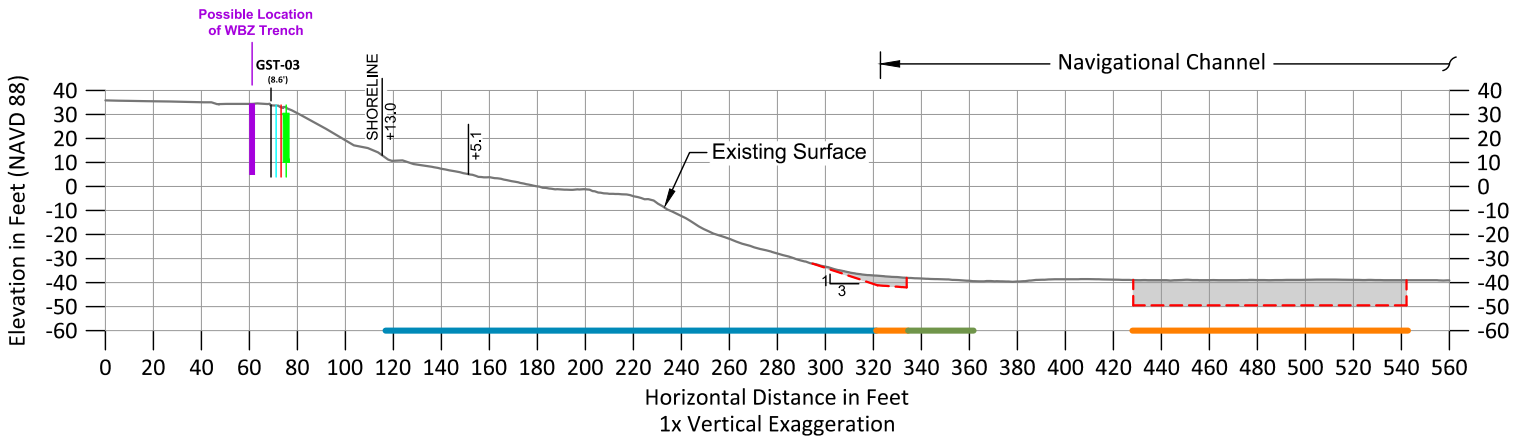
ANCHOR QEA

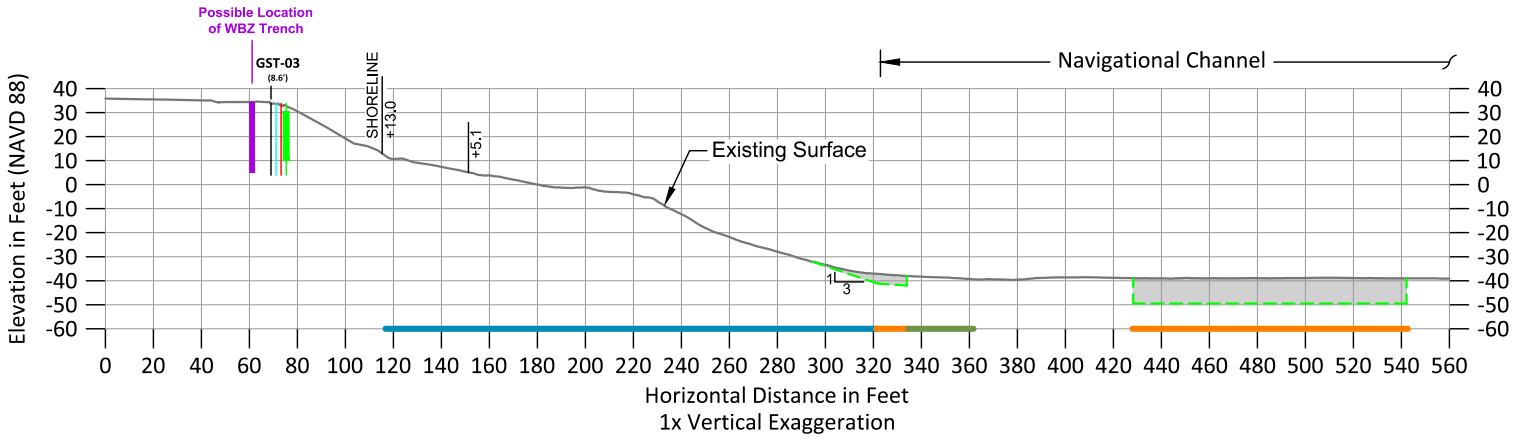
Figure 6.1-5
Alternative 5 Remedial Footprint and Technology Assignments
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



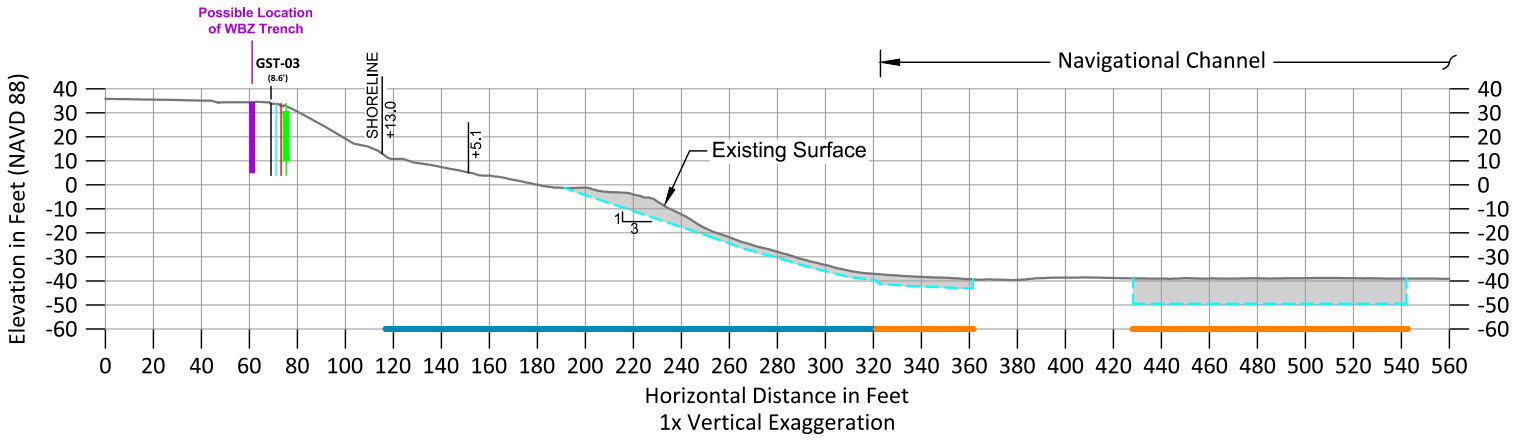
ALTERNATIVE 2A



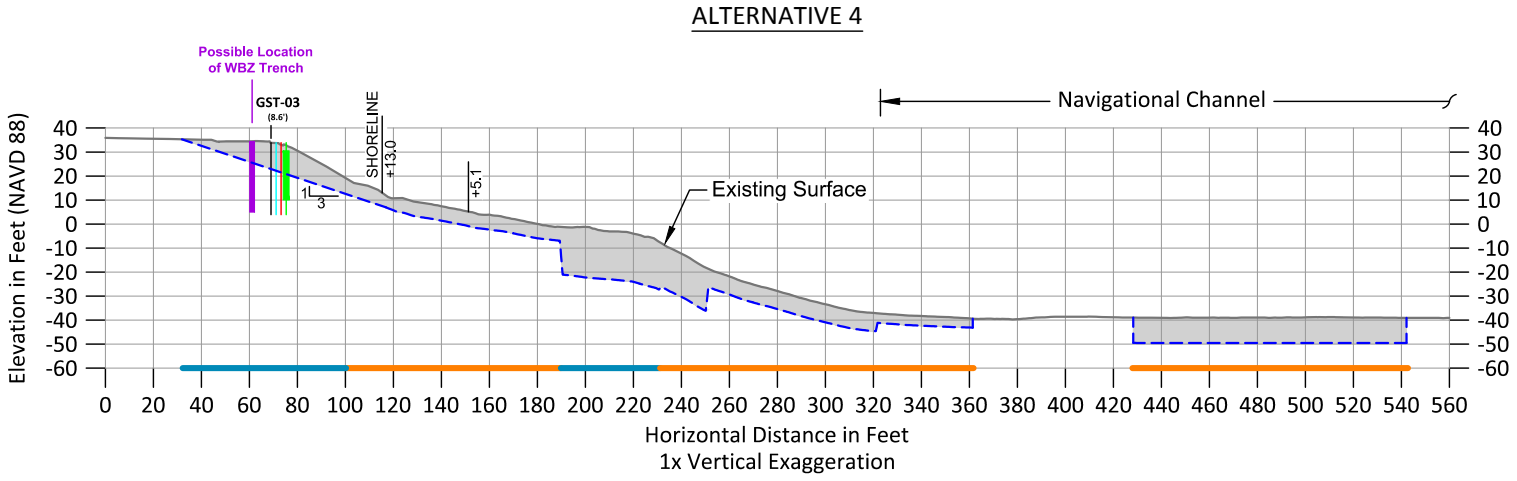
ALTERNATIVE 2B



ALTERNATIVE 3



ALTERNATIVE 4



ALTERNATIVE 5

LEGEND:

C11-A (-31.1') Exploration Number (Offset Distance in Feet)

Exploration Location

Bottom of Exploration

Pencil Pitch Lamp Black

Tar — Liquid Substantial Product (e.g., Oil, NAPL)

Existing Surface

Proposed Dredge Cut

Substantial Product Elevation

Post-Removal Elevation

- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

Post-Removal Action

- Cover
- Engineered Cap
- MNR

0 80 Scale in Feet

HORIZONTAL DATUM: Oregon State Plane North HARN, International Feet.
VERTICAL DATUM: NAVD 88, Feet.

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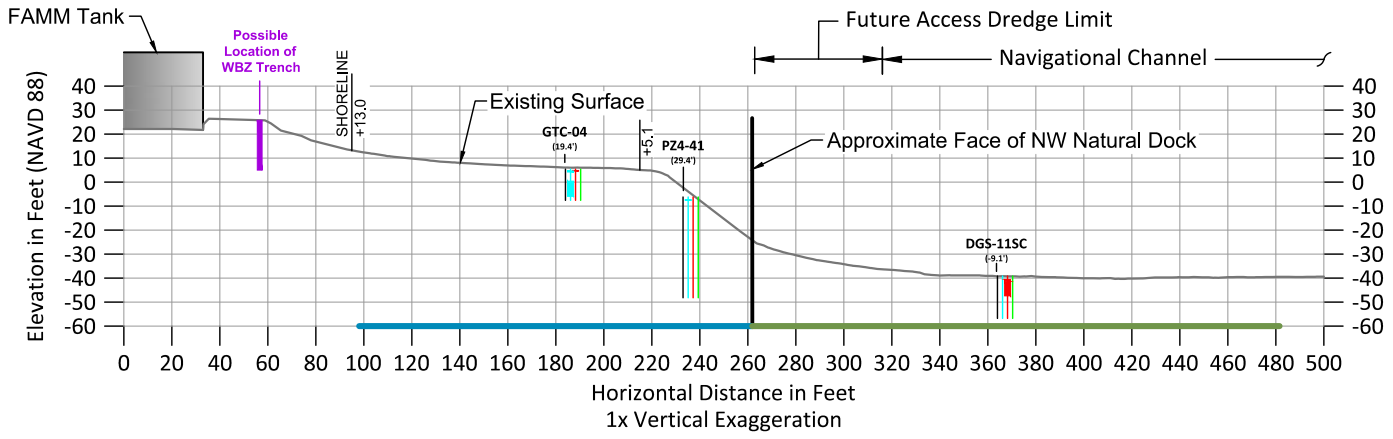
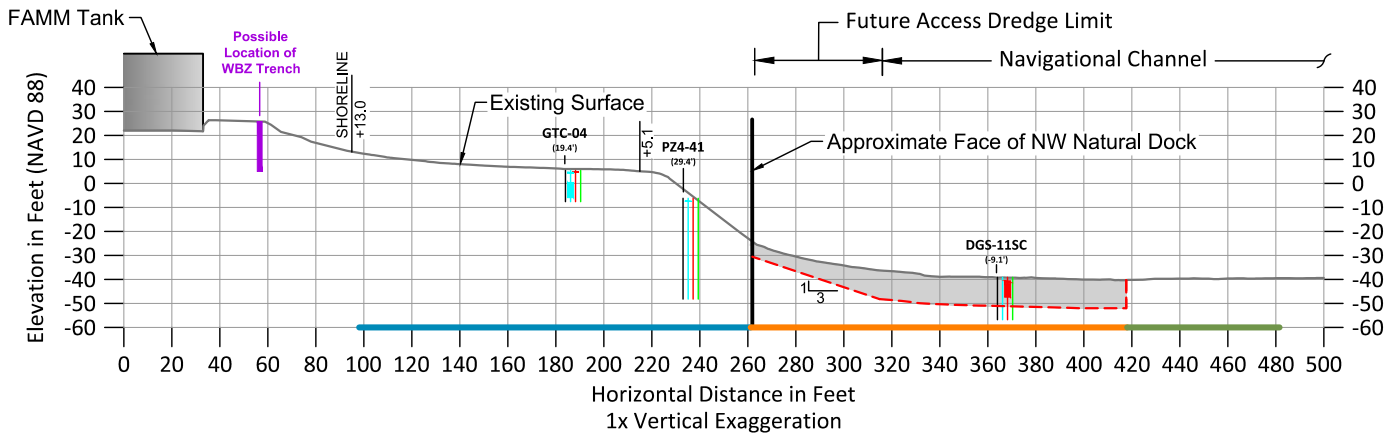
May 04, 2012 4:18pm heriksen

Figure 6.3.4-1
Remedial Alternatives Technology Application and Depth of Removal for Cross Section A-A'
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

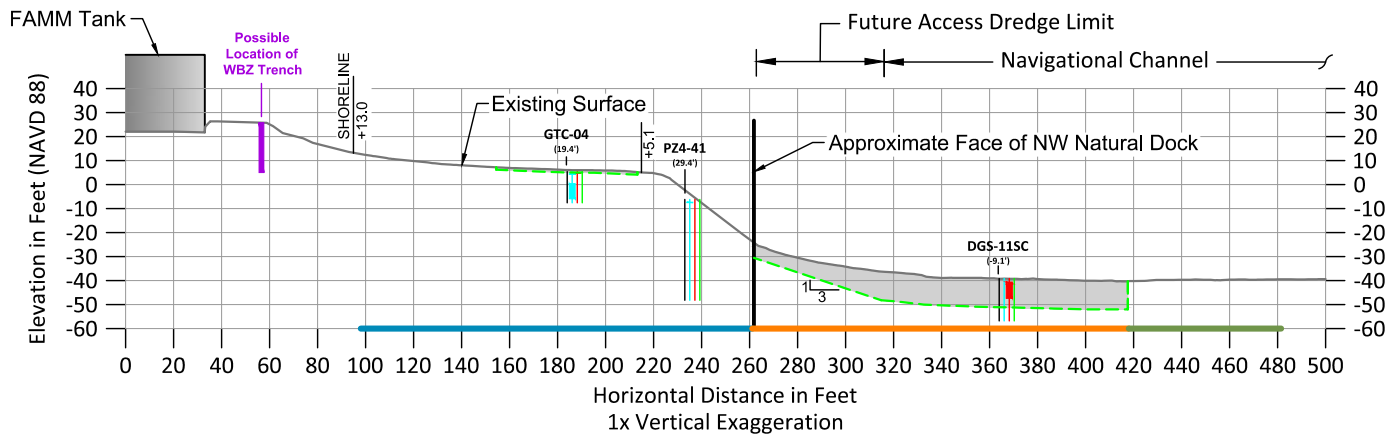
ANCHOR QEA



ALTERNATIVE 2A



ALTERNATIVE 2B



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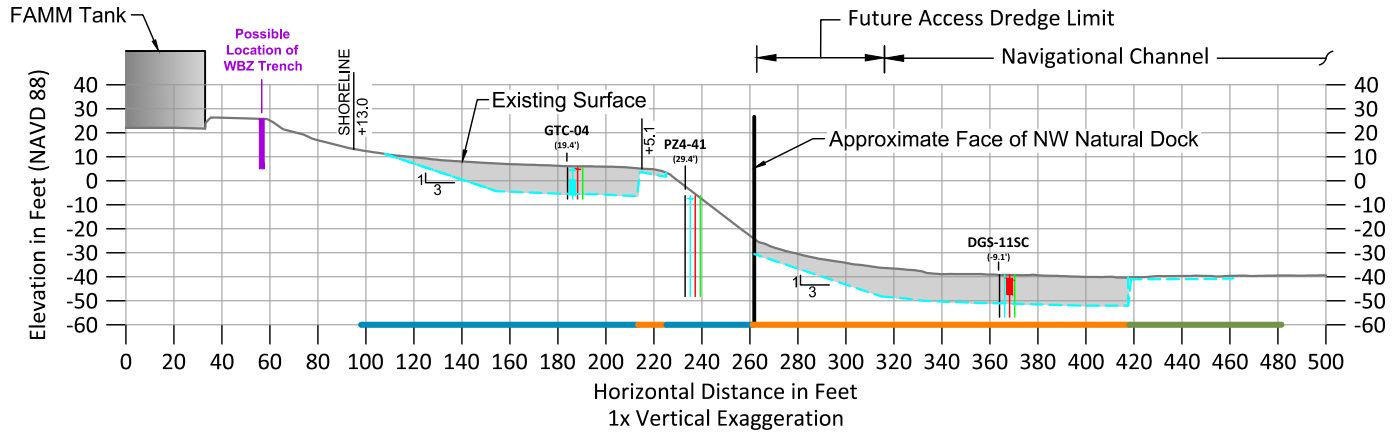

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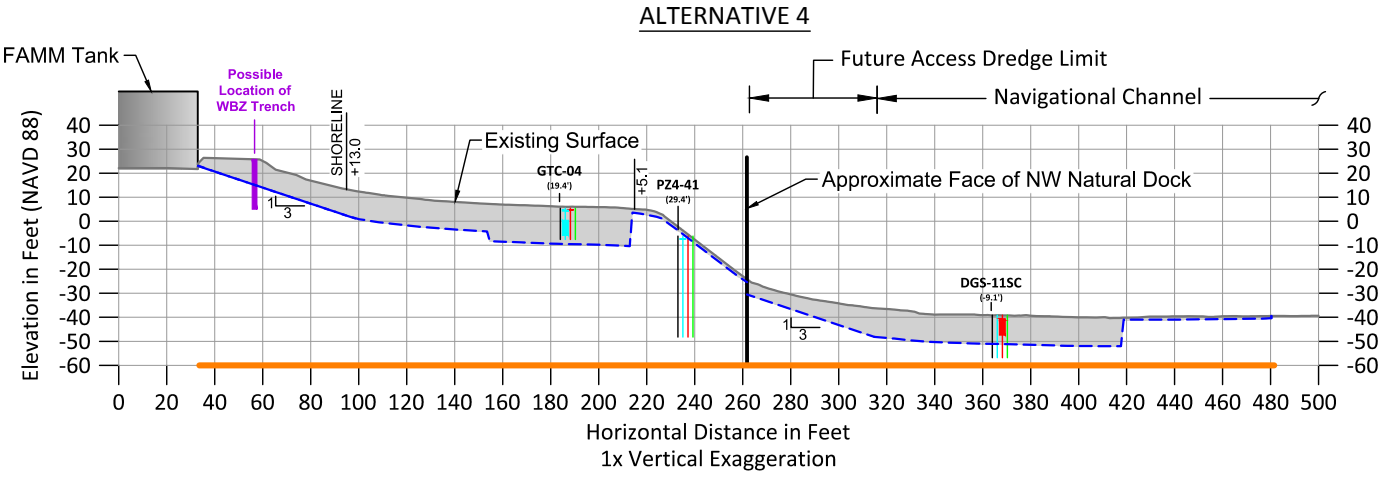

ALTERNATIVE 5

LEGEND:

C11-A (-31.1') Exploration Number (Offset Distance in Feet) Exploration Location

Bottom of Exploration
Pencil Pitch Lamp Black
Tar — Liquid Substantial Product (e.g., Oil, NAPL)

Existing Surface

Proposed Dredge Cut

Substantial Product Elevation

Post-Removal Elevation
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

Post-Removal Action
- Cover
- Engineered Cap
- MNR

0 80
Scale in Feet

HORIZONTAL DATUM: Oregon State Plane North HARN, International Feet.
VERTICAL DATUM: NAVD 88, Feet.

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May 08, 2012 1:35pm heriksen

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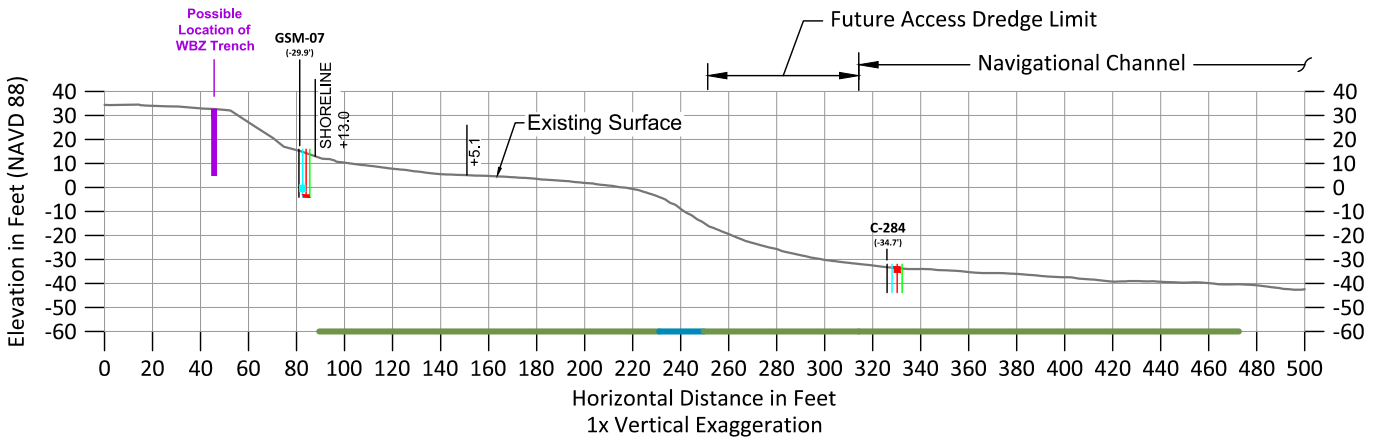
Figure 6.3.4-2
Remedial Alternatives Technology Application and Depth of Removal for Cross Section B-B'
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



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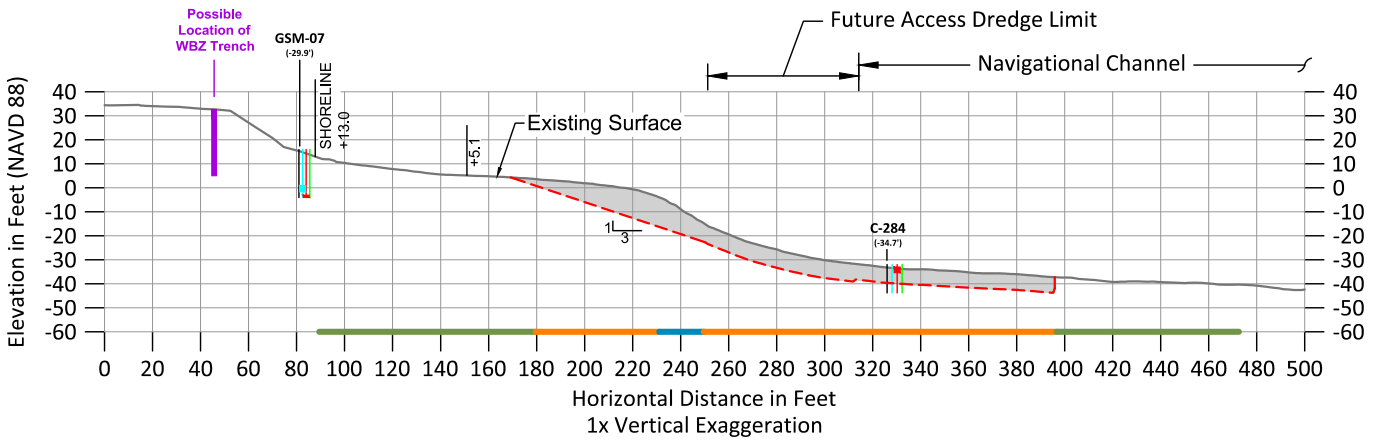
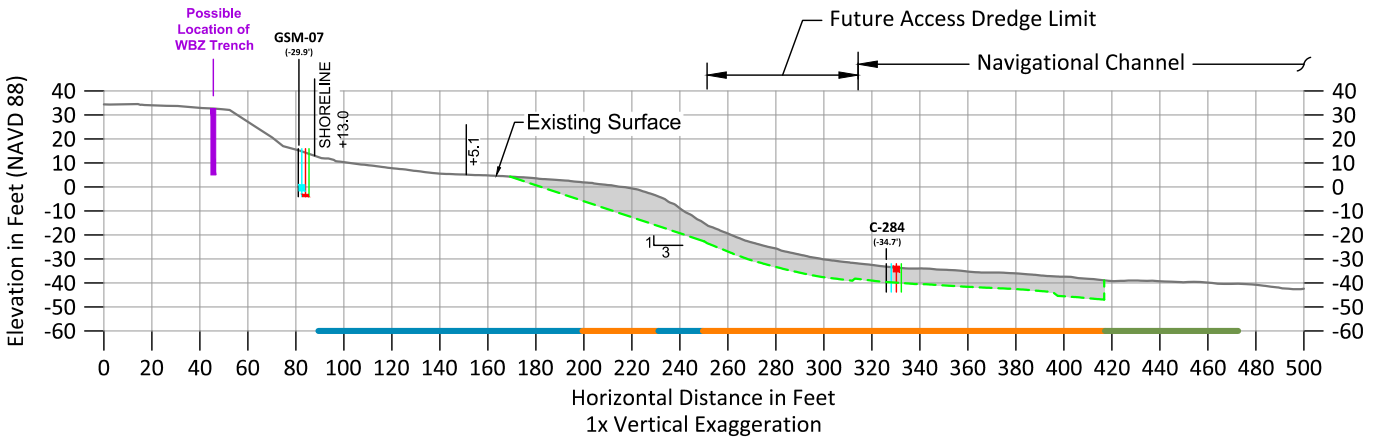


ALTERNATIVE 2B



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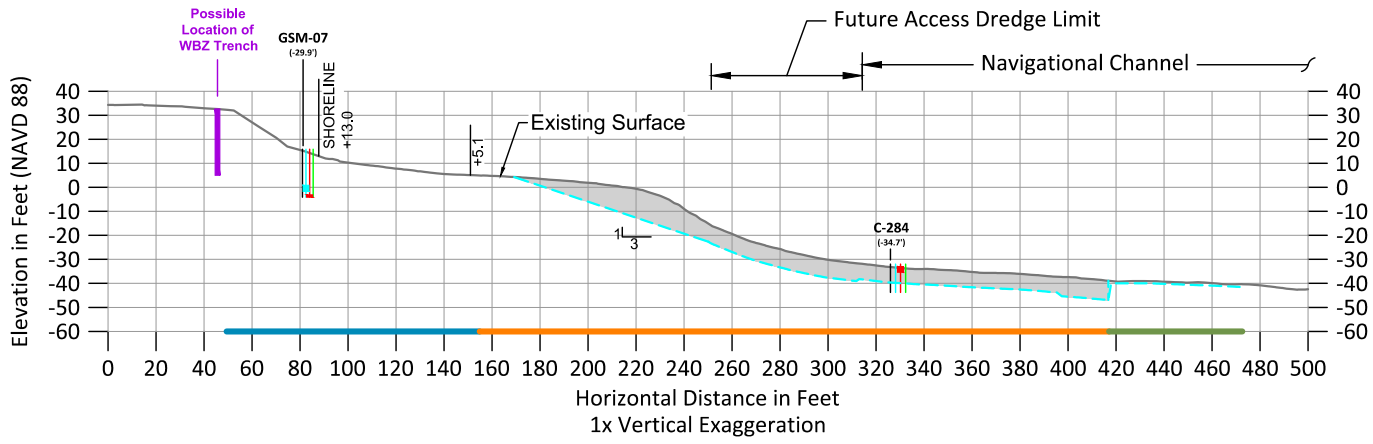
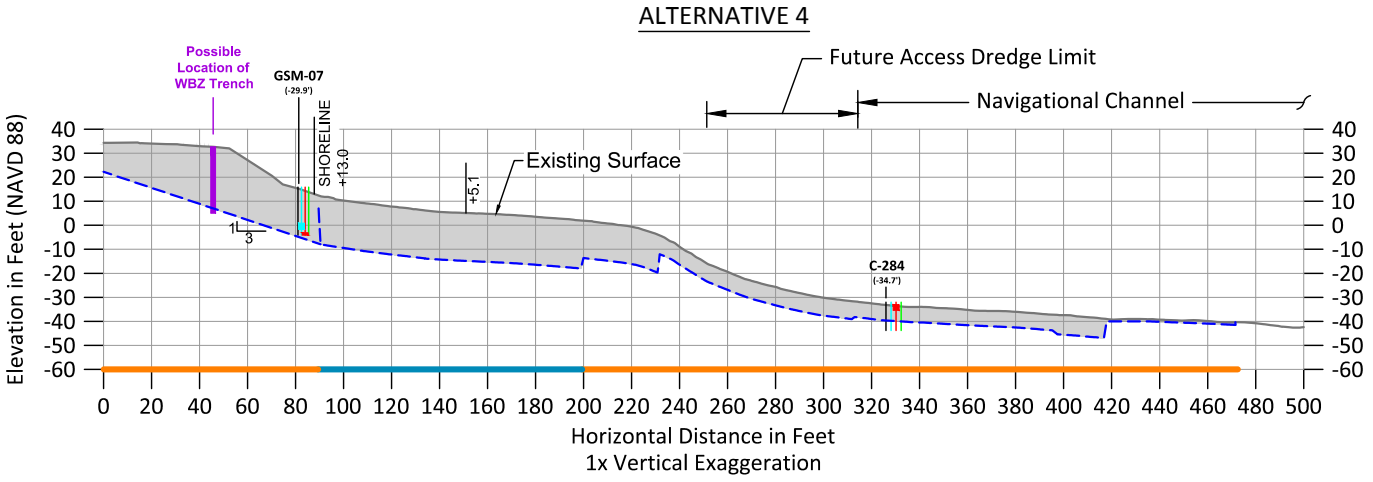


ALTERNATIVE 4



ALTERNATIVE 5

LEGEND:

C11-A (-31.1') — Exploration Number (Offset Distance in Feet); Exploration Location

Bottom of Exploration
Tar — Pencil Pitch Lamp Black
Liquid Substantial Product (e.g., Oil, NAPL)

Existing Surface

Proposed Dredge Cut

Substantial Product Elevation

Post-Removal Elevation
- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

Post-Removal Action
- Cover
- Engineered Cap
- MNR

0 — 80 Scale in Feet

HORIZONTAL DATUM: Oregon State Plane North HARN, International Feet.
VERTICAL DATUM: NAVD 88, Feet.

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May 04, 2012 4:19pm heriksen

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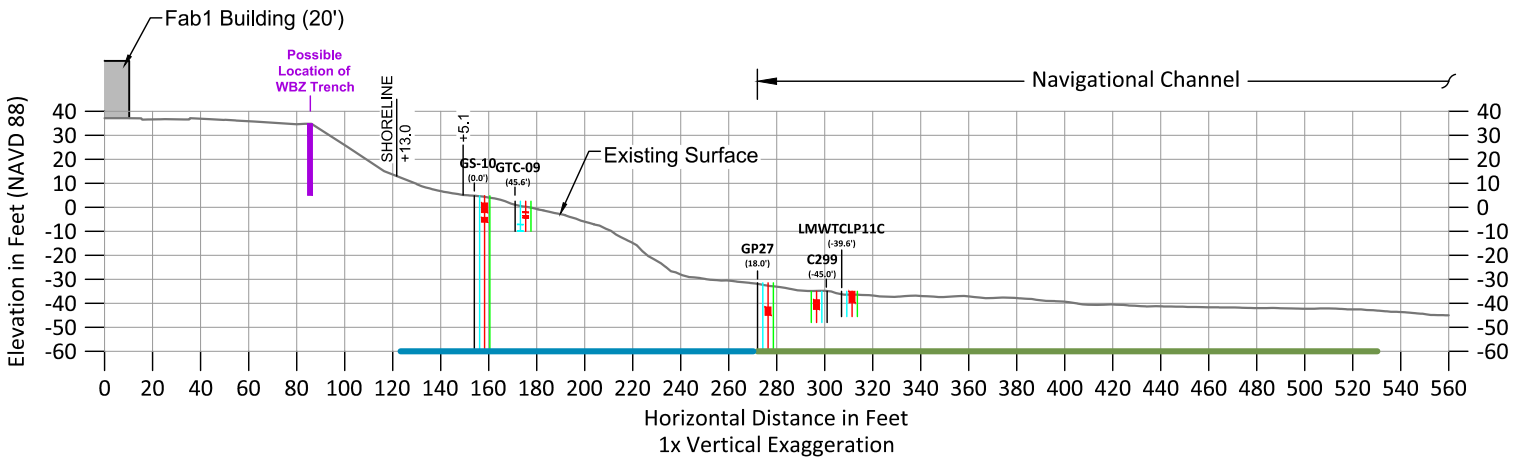
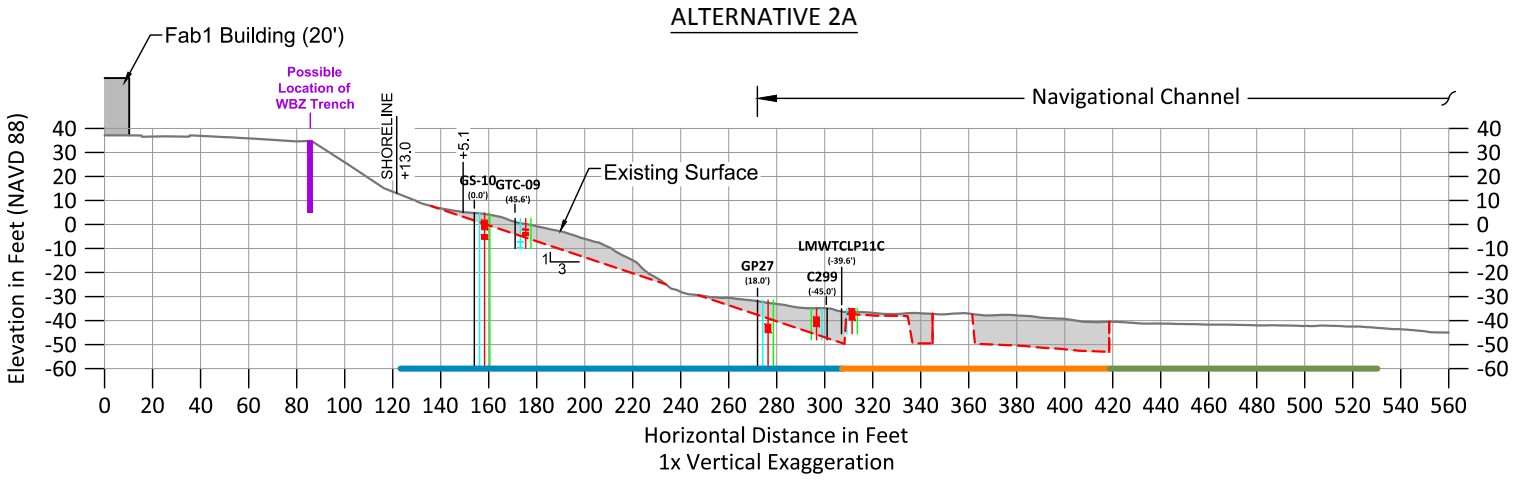
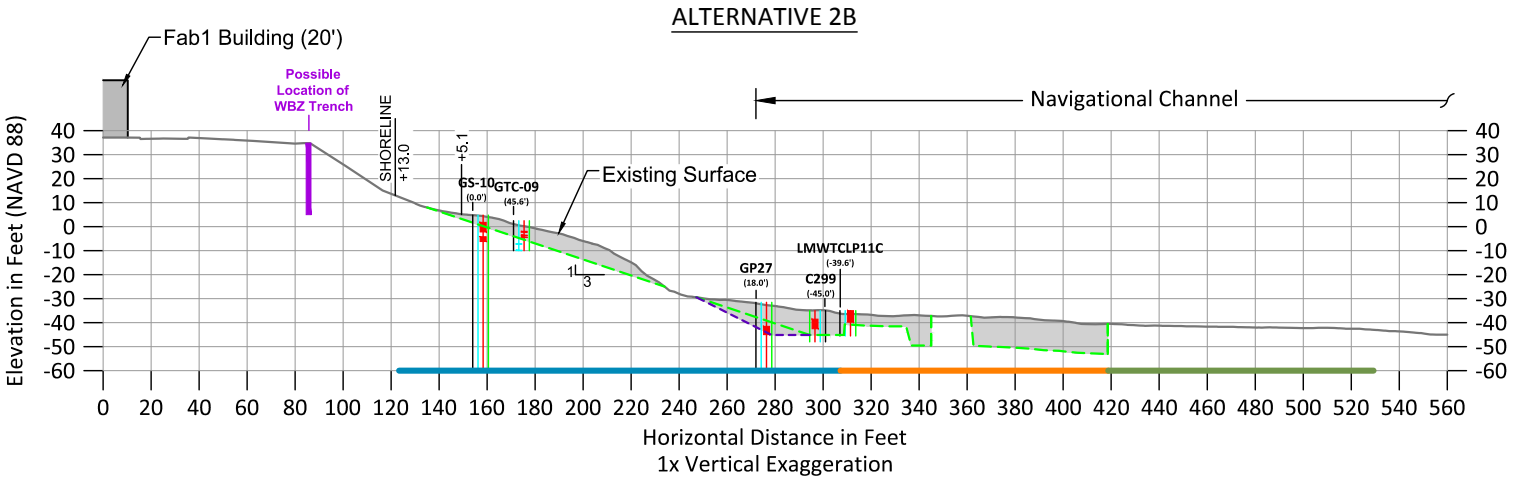
Figure 6.3.4-3
Remedial Alternatives Technology Application and Depth of Removal for Cross Section C-C'
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



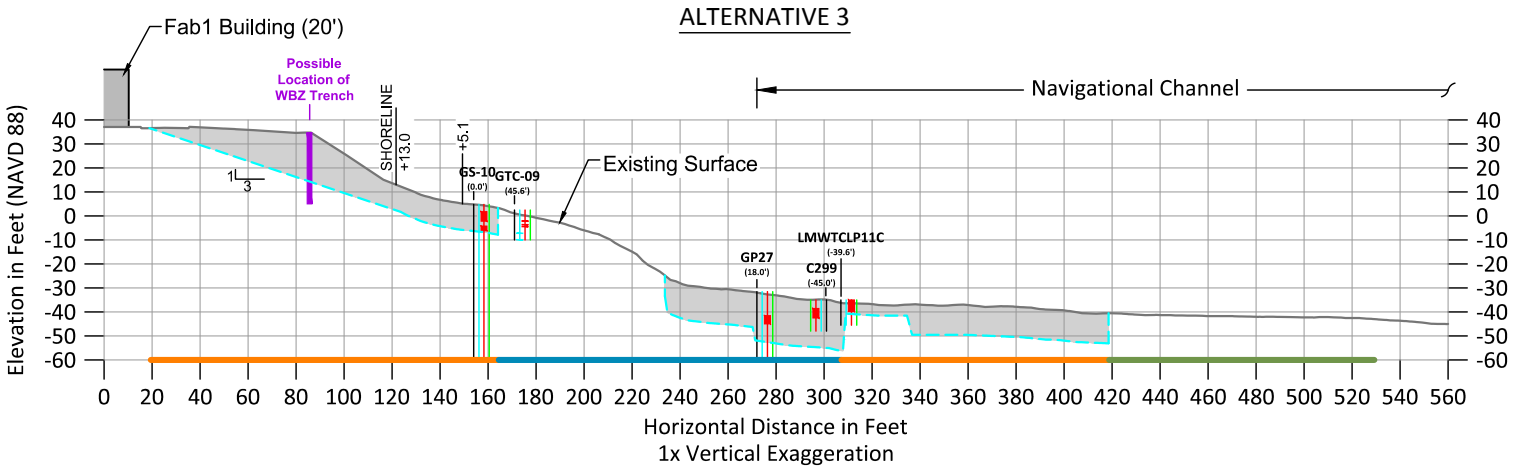
ALTERNATIVE 2A



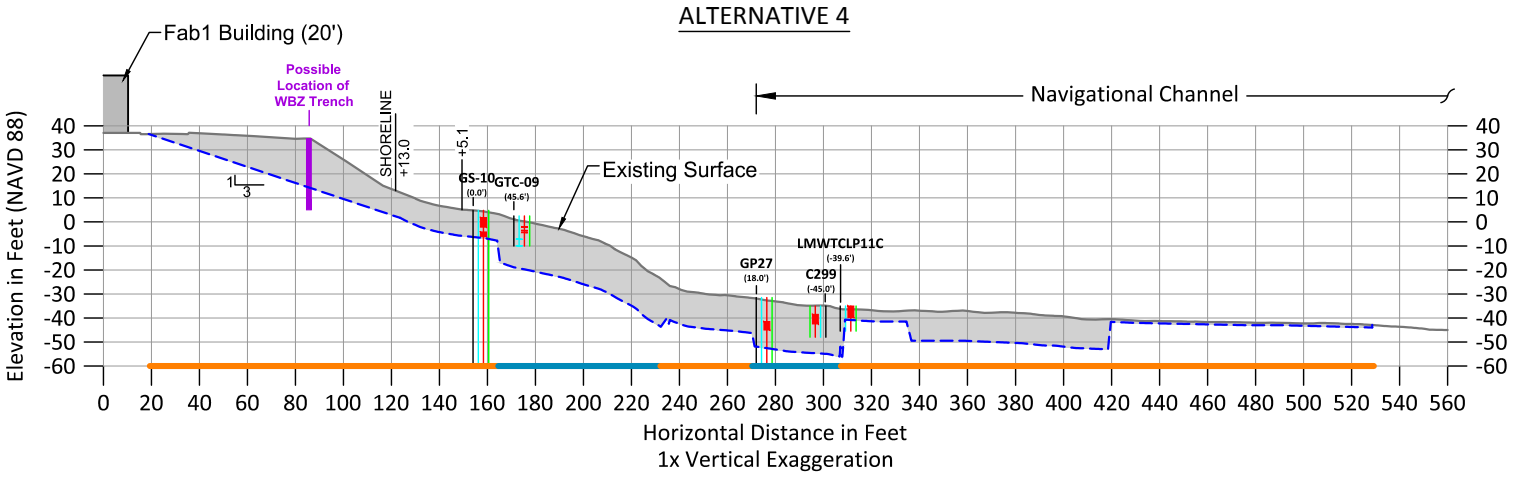
ALTERNATIVE 2B



ALTERNATIVE 3



ALTERNATIVE 4



ALTERNATIVE 5

LEGEND:

C11-A (-31.1') Exploration Number (Offset Distance in Feet)

Exploration Location

Bottom of Exploration

Tar — Pencil Pitch Lamp Black — Liquid Substantial Product (e.g., Oil, NAPL)

Existing Surface

Proposed Dredge Cut

Substantial Product Elevation

Post-Removal Elevation

- Alternative 2
- Alternative 3
- Alternative 4
- Alternative 5

Post-Removal Action

- Cover
- Engineered Cap
- MNR

0 80 Scale in Feet

HORIZONTAL DATUM: Oregon State Plane North HARN, International Feet.
VERTICAL DATUM: NAVD 88, Feet.

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May 08, 2012 1:38pm heriksen

Figure 6.3.4-4
Remedial Alternatives Technology Application and Depth of Removal for Cross Section D-D'
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

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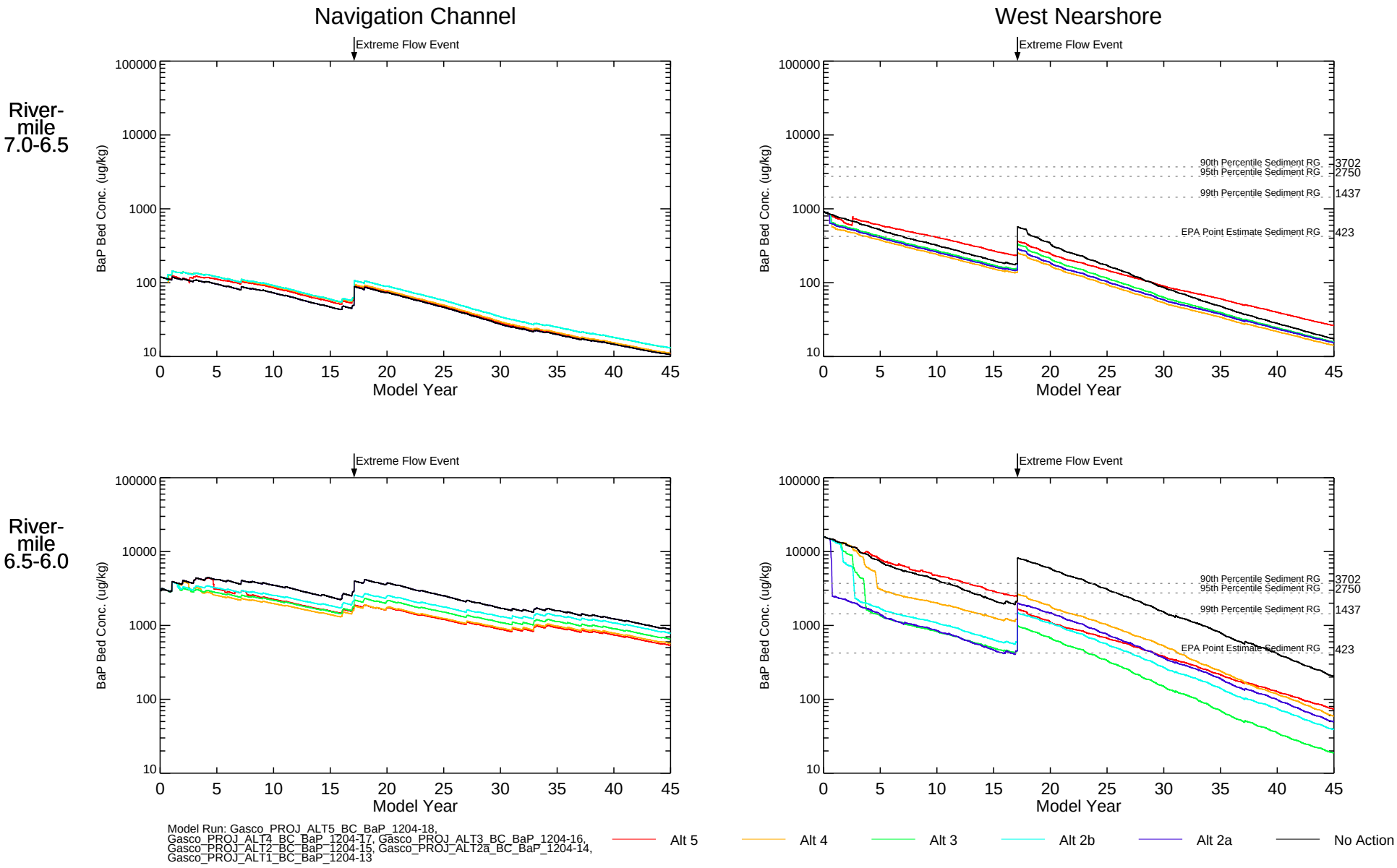
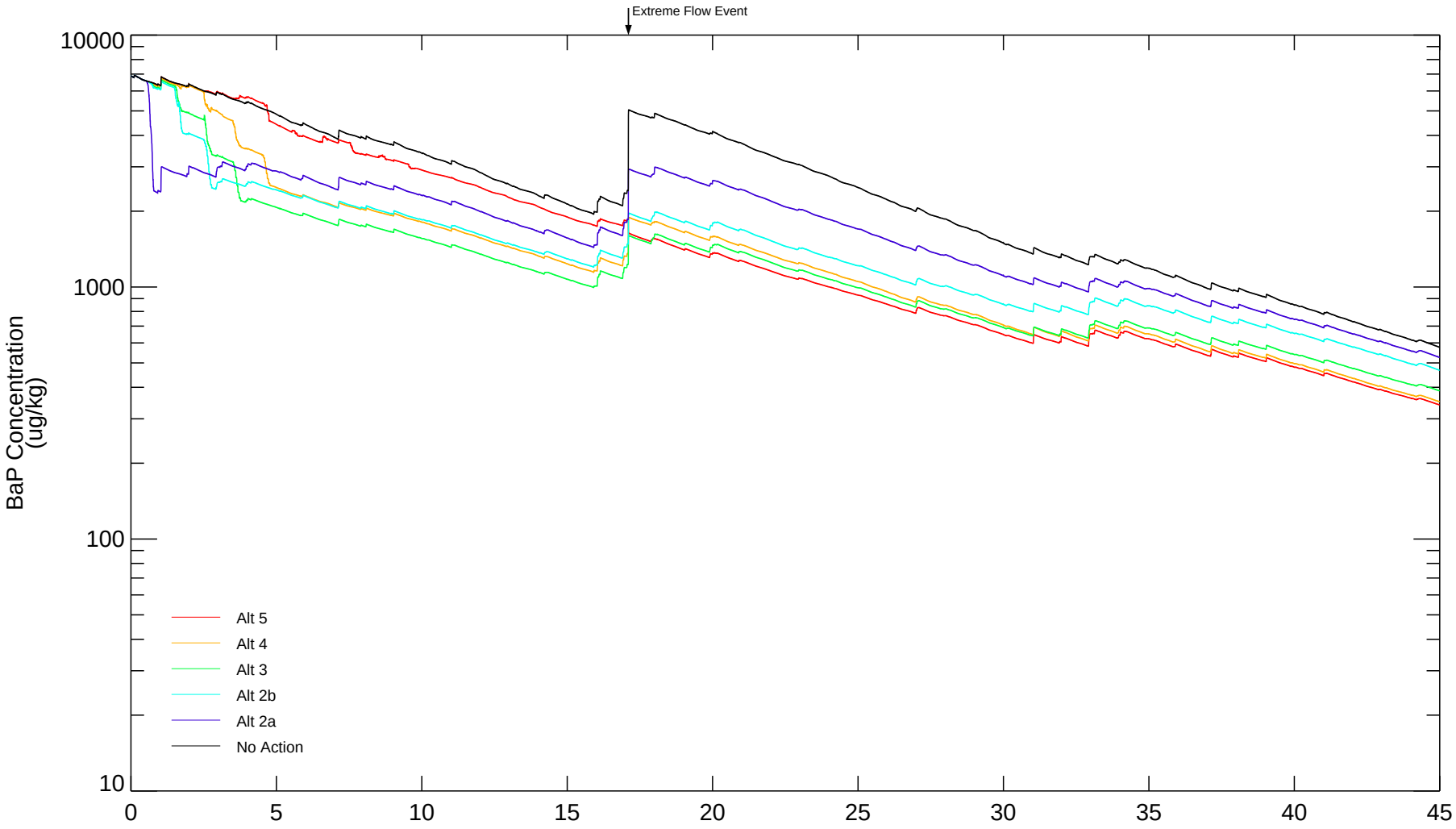


Figure 7.2.2.1-1a

Time Series of Surface Sediment (Top 1-ft) BaP SWACs by 1/2 River Mile Navigation Channel and West Nearshore Areas
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Model Run: Gasco_PROJ_ALT5_BC_BaP_1204-18, Gasco_PROJ_ALT4_BC_BaP_1204-17, Gasco_PROJ_ALT3_BC_BaP_1204-16, Gasco_PROJ_ALT2_BC_BaP_1204-15, Gasco_PROJ_ALT2a_BC_BaP_1204-14, Gasco_PROJ_ALT1_BC_BaP_1204-13

Figure 7.2.2.1-1b

Time Series of Surface Sediment (Top 1-ft) BaP SWACs in Gasco Sediments Site Area of Interest

Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

ANCHOR QEA

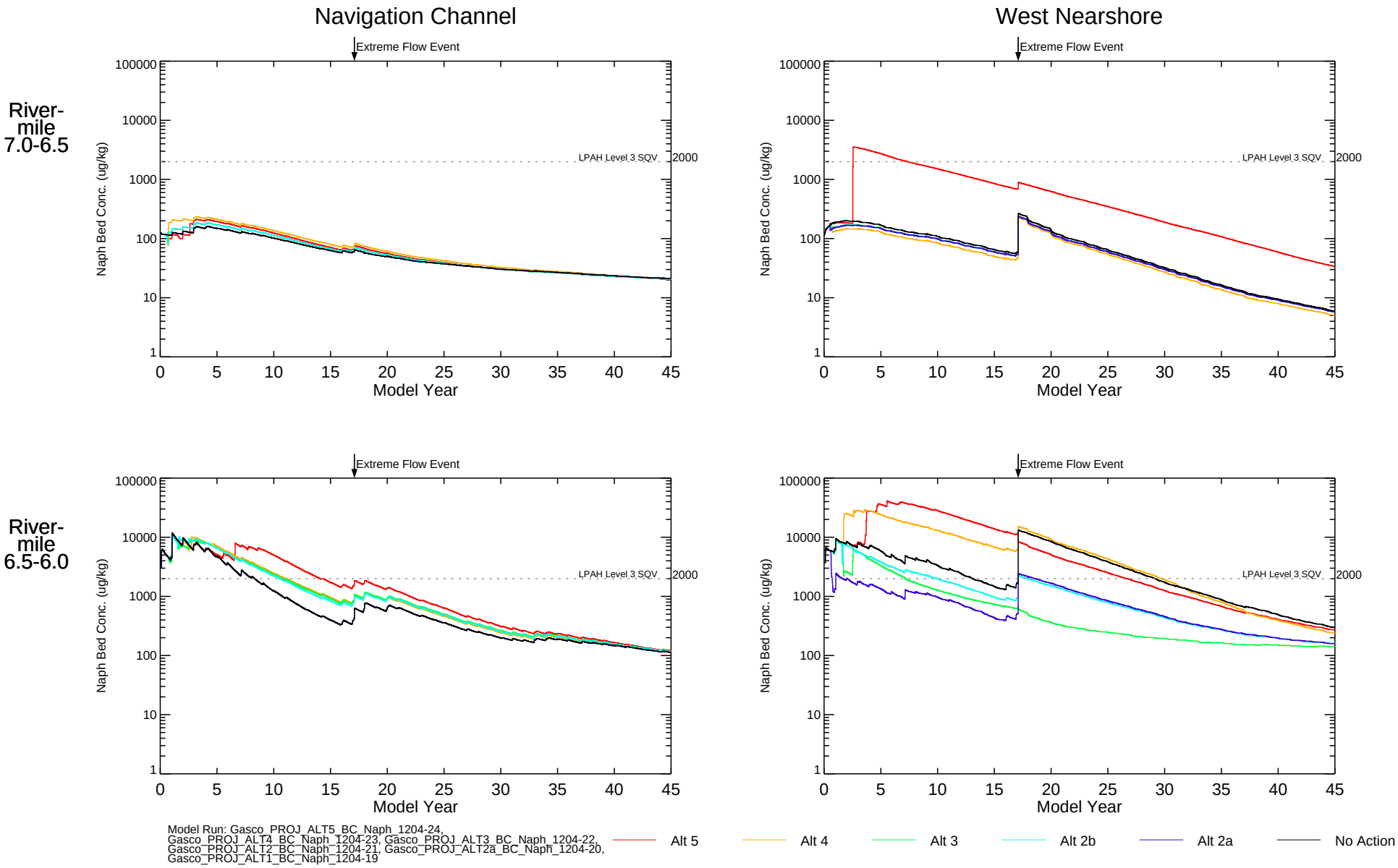
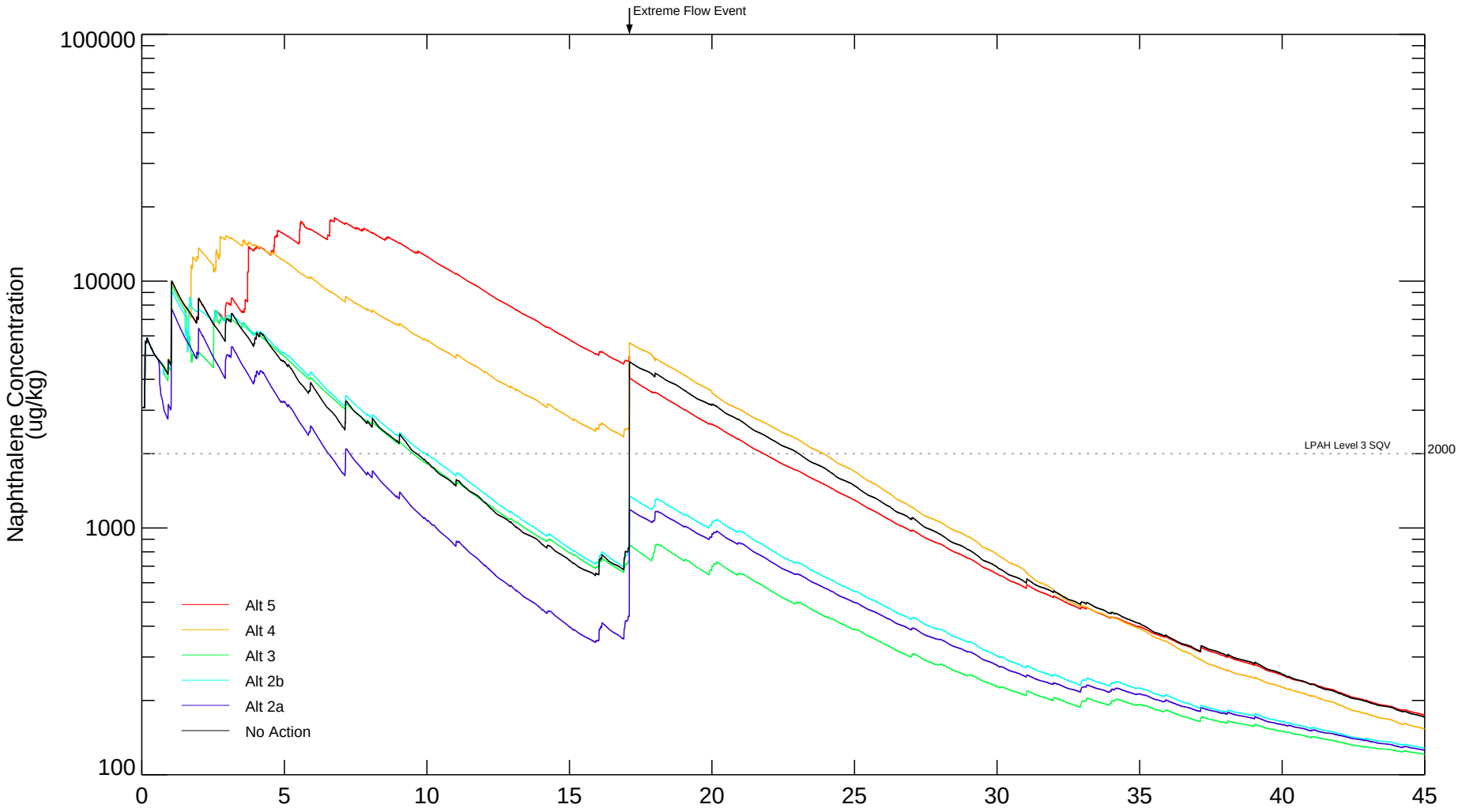


Figure 7.2.2.1-2a

Time Series of Surface Sediment (Top 1-ft) Naphthalene SWACs by 1/2 River Mile Navigation Channel and West Nearshore Areas
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



Model Run: Gasco_PROJ_ALT5_BC_Naph_1204-24, Gasco_PROJ_ALT4_BC_Naph_1204-23, Gasco_PROJ_ALT3_BC_Naph_1204-22, Gasco_PROJ_ALT2_BC_Naph_1204-21, Gasco_PROJ_ALT2a_BC_Naph_1204-20, Gasco_PROJ_ALTI_BC_Naph_1204-19

Figure 7.2.2.1-2b

Time Series of Surface Sediment (Top 1-ft) Naphthalene SWACs in Gasco Sediments Site Area of Interest

Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

ANCHOR QEA

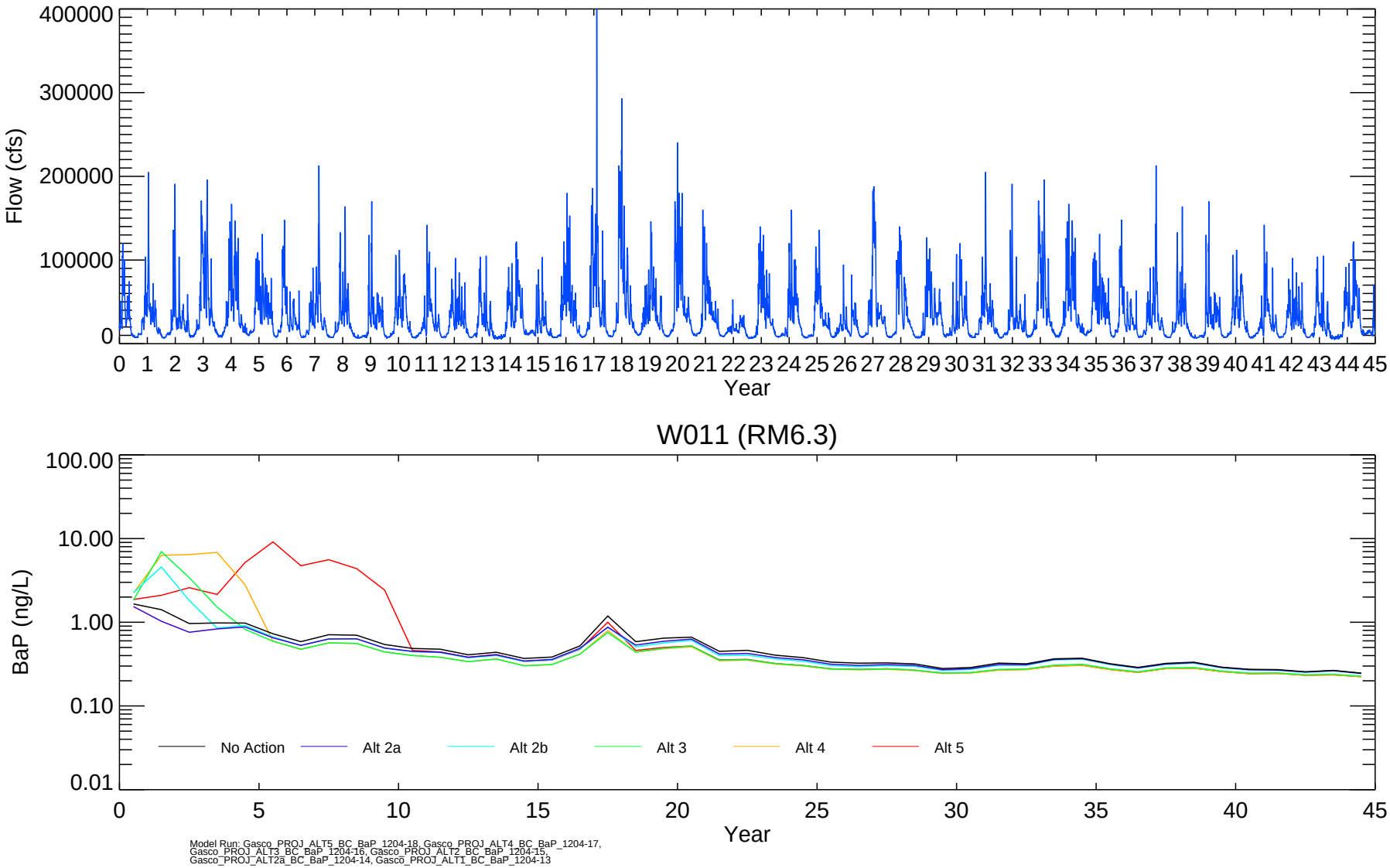


Figure 7.2.2.1-3

Temporal Profiles of Model-predicted Water Column BaP Concentrations

Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

ANCHOR QEA

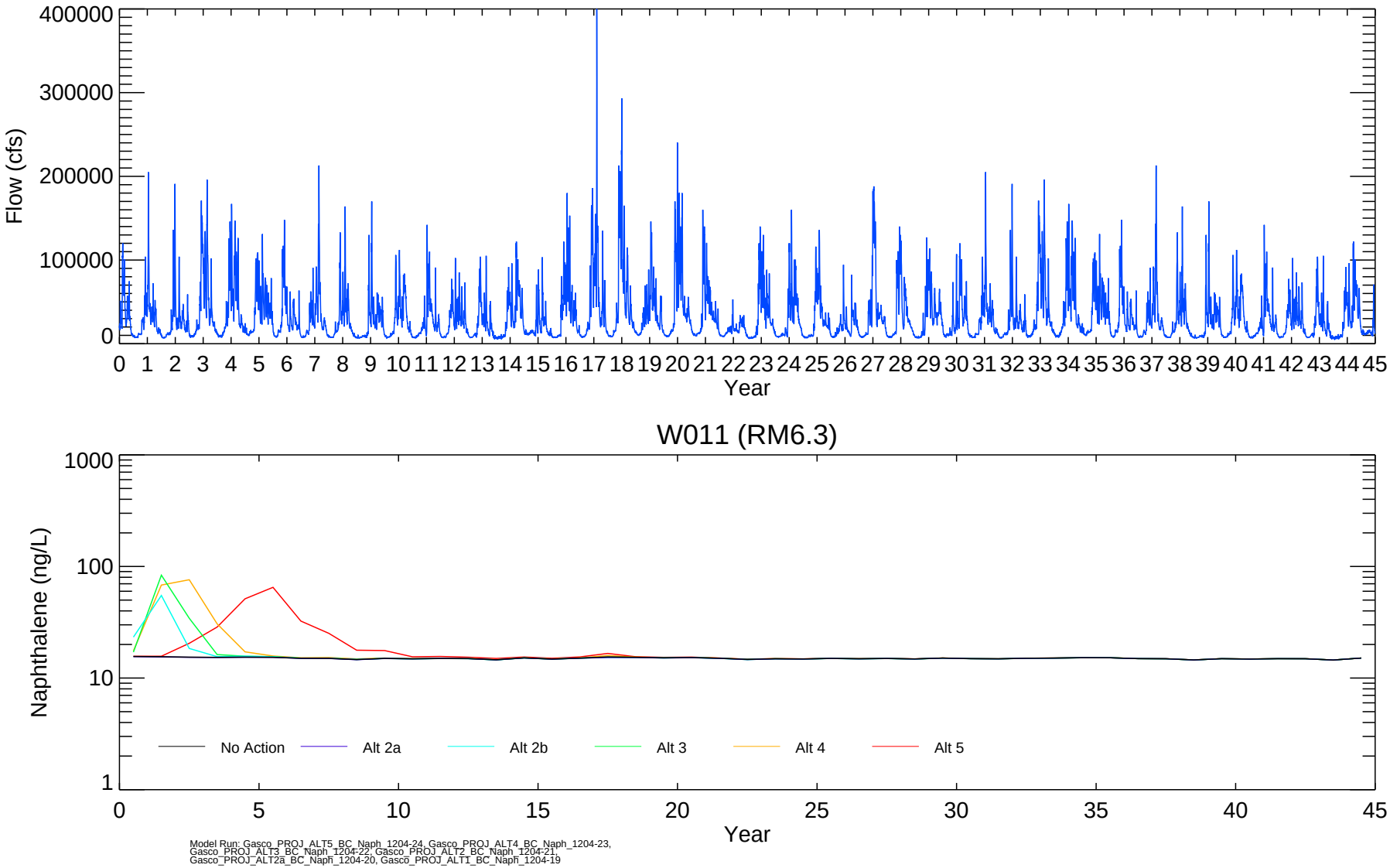
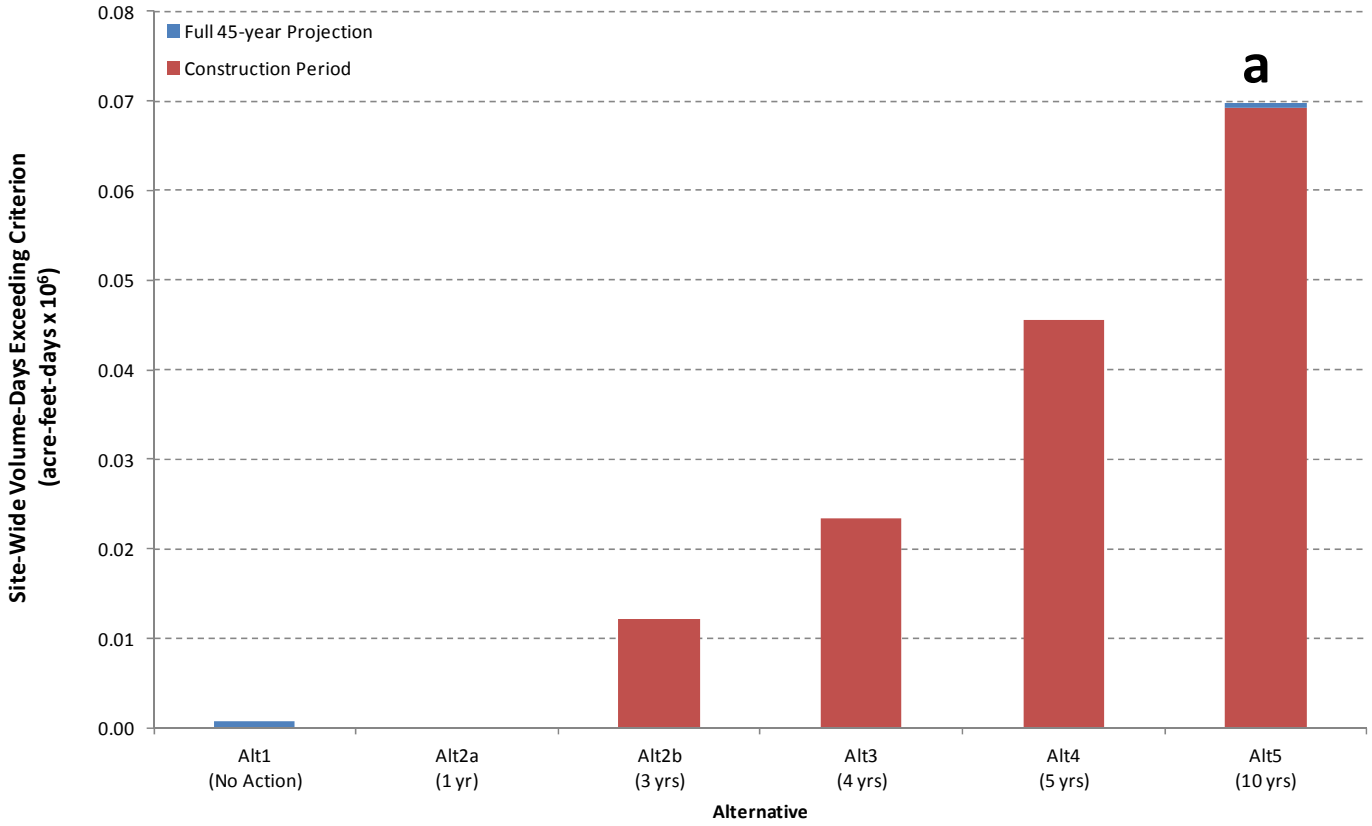


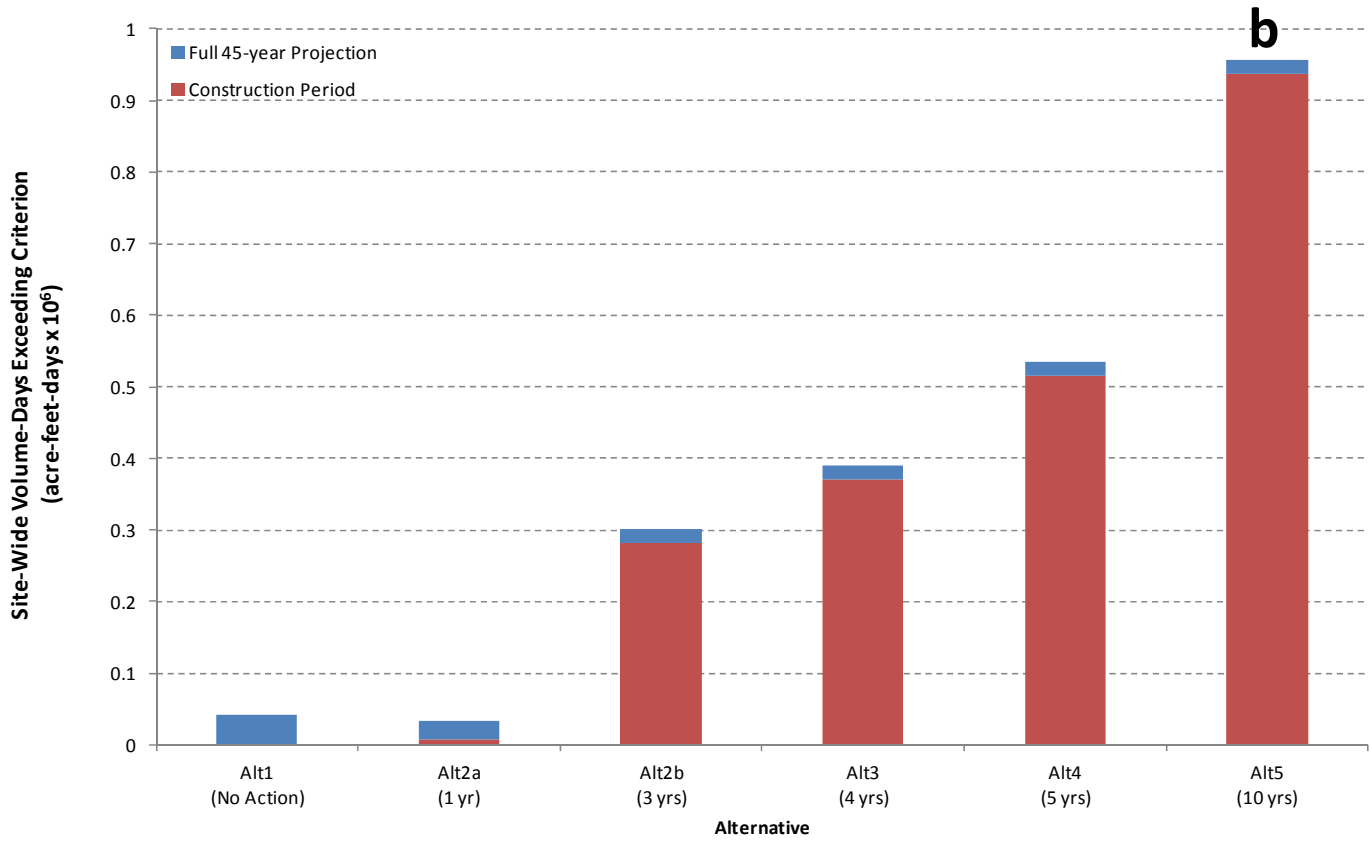
Figure 7.2.2.1-4

Temporal Profiles of Model-predicted Water Column Naphthalene Concentrations

Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

ANCHOR QEA





Note: Duration of construction period for each alternative shown in parentheses.

Figure 8.2.1-1a-b
a. Projected Volume-Days Exceeding BaP Maximum Contaminant Level (0.2 µg/L)
b. Projected Volume-Days Exceeding BaP Human Fish Consumption Water Quality Standard (0.018 µg/L)
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

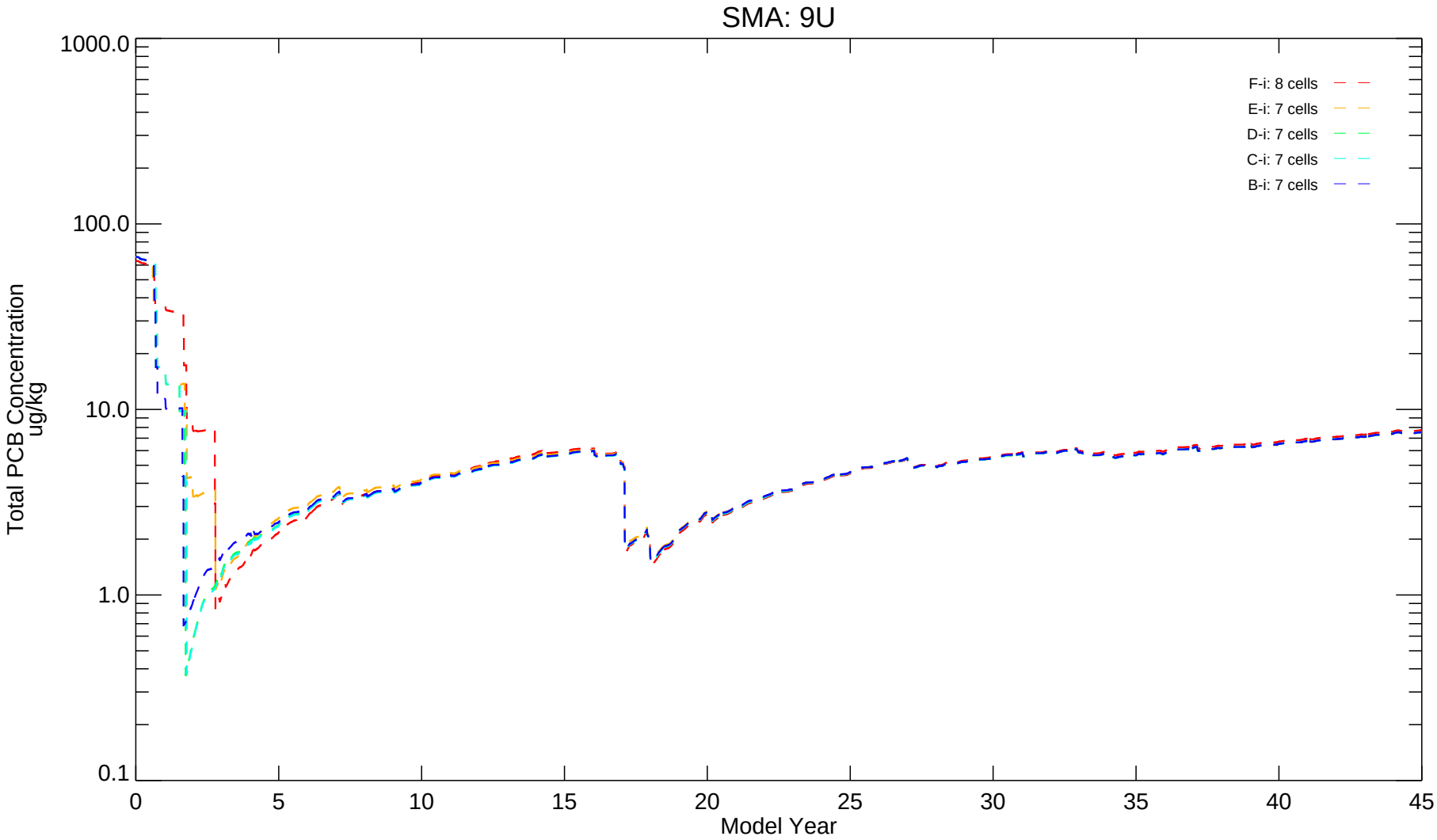


Figure 8.3.3-1

Time Series of Surface Sediment (Top 1-ft) Total PCB SWACs of Capping Cells in Example SMAs

Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

Number of cells included in SWAC are posted in legend next to alternative name

MCS - H:\010142-01_LWG-Willamette\model\EFDC\Post_process\Bed_Sed\plot\batch\proj_45\temp\plot_chem_bed_temp_bat_proj_45_FS_rem_specific_6panel_gasco_version.pro Fri May 04 12:44:01 2012

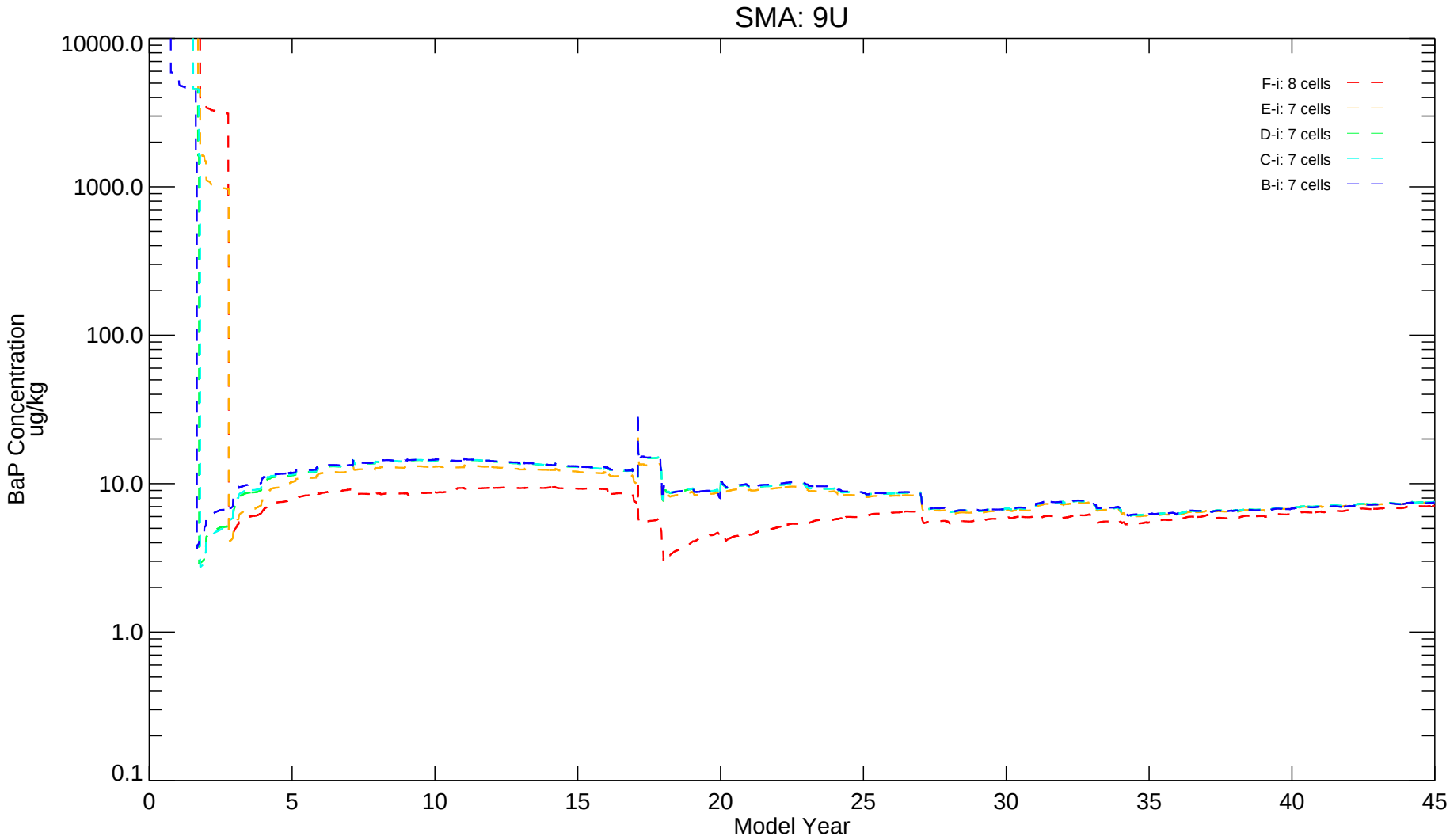


Figure 8.3.3-2

Time Series of Surface Sediment (Top 1-ft) BaP SWACs of Capping Cells in Example SMAs

Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

Number of cells included in SWAC are posted in legend next to alternative name

MCS - H:\010142-01_LWG-Willamette\model\EFDC\Post_process\Bed_Sed\plot\batch\proj_45\temp\plot_chem_bed_temp_bat_proj_45_FS_rem_specific_6panel_gasco_version.pro Fri May 04 12:48:34 2012

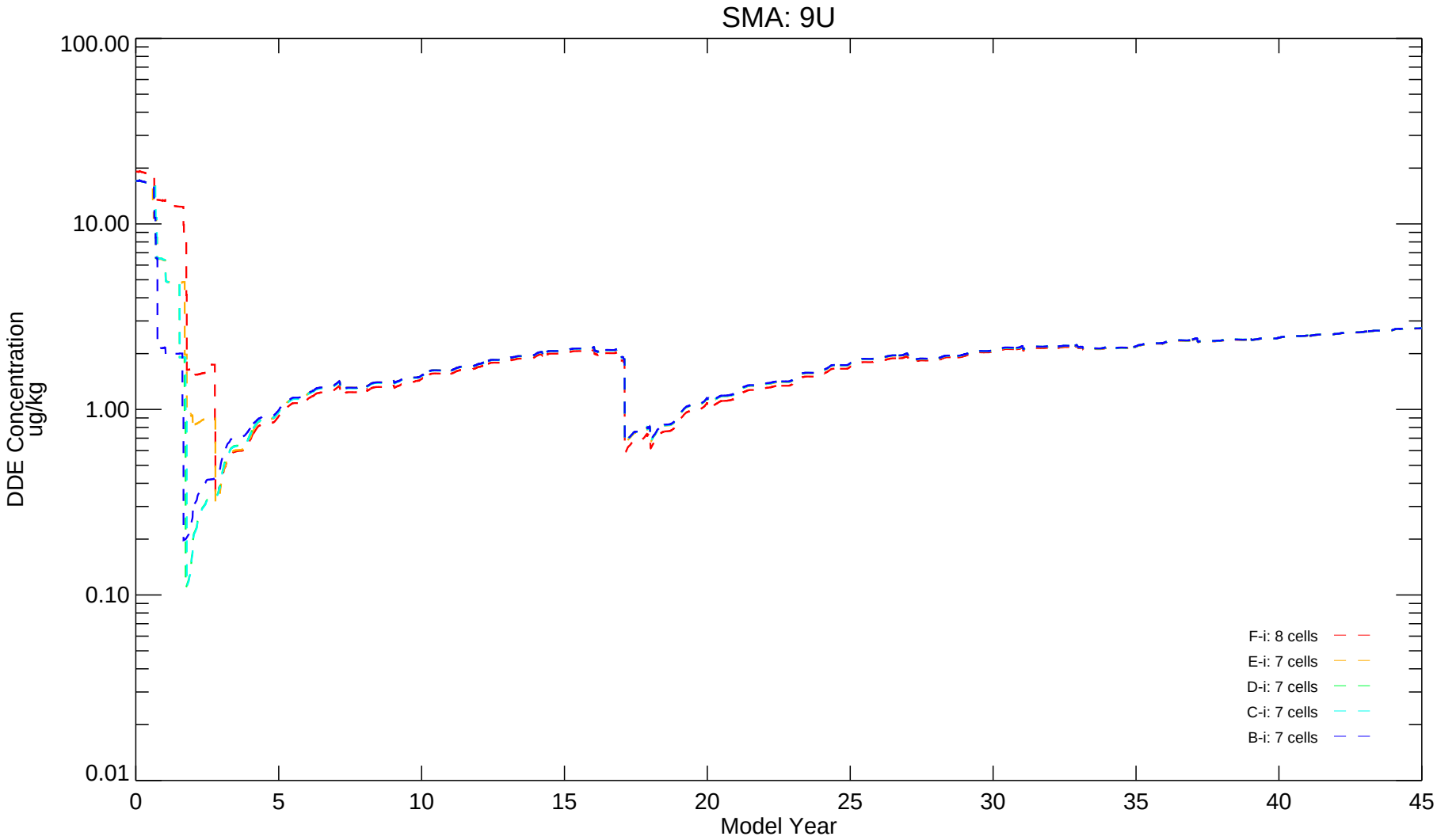


Figure 8.3.3-3

Time Series of Surface Sediment (Top 1-ft) DDE SWACs of Capping Cells in Example SMAs

Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

Number of cells included in SWAC are posted in legend next to alternative name

MCS - H:\010142-01_LWG-Willamette\model\EFDC\Post_process\Bed_Sed\plot\batch\proj_45\temp\plot_chem_bed_temp_bat_proj_45_FS_rem_specific_6panel_gasco_version.pro Fri May 04 12:53:15 2012

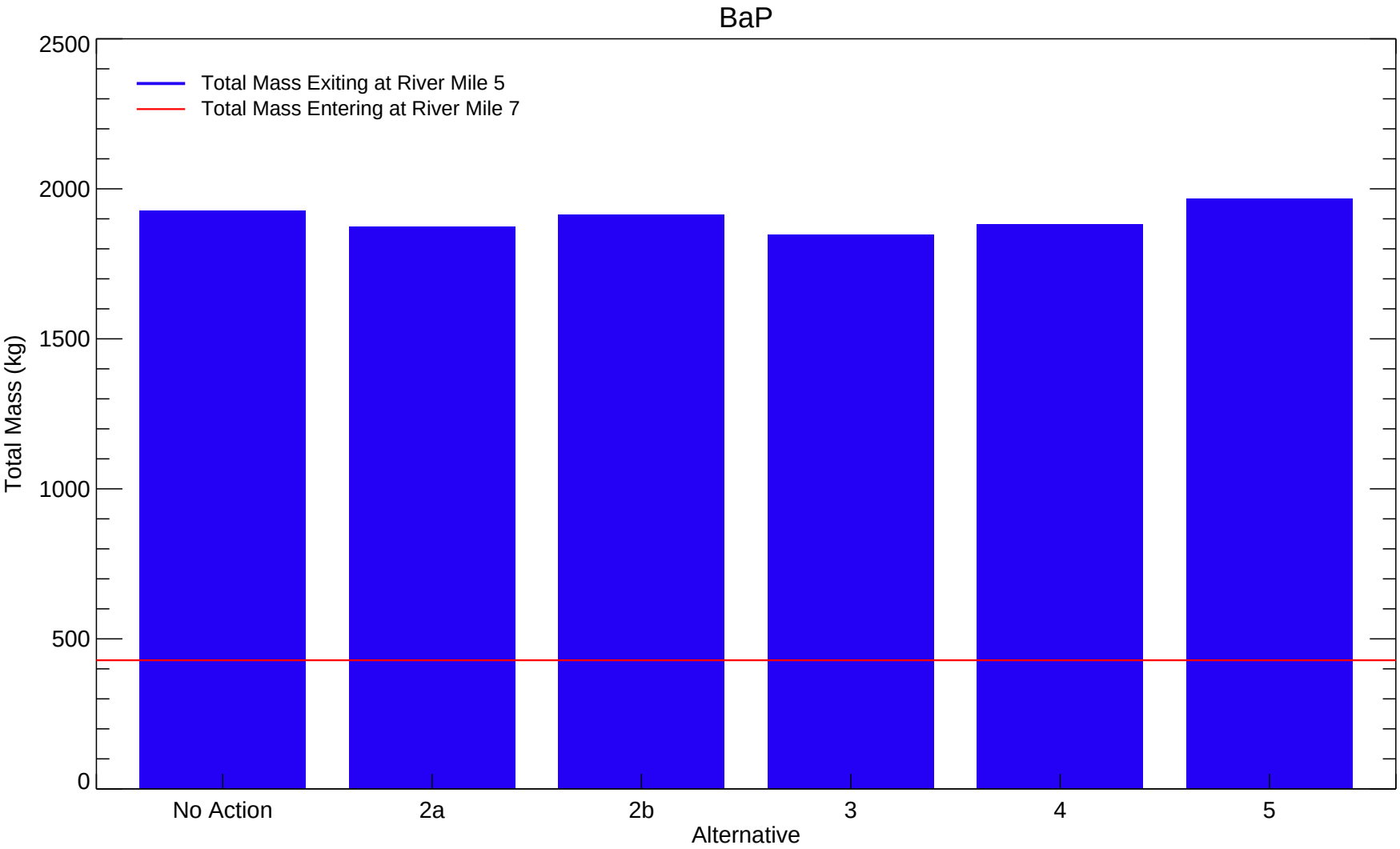
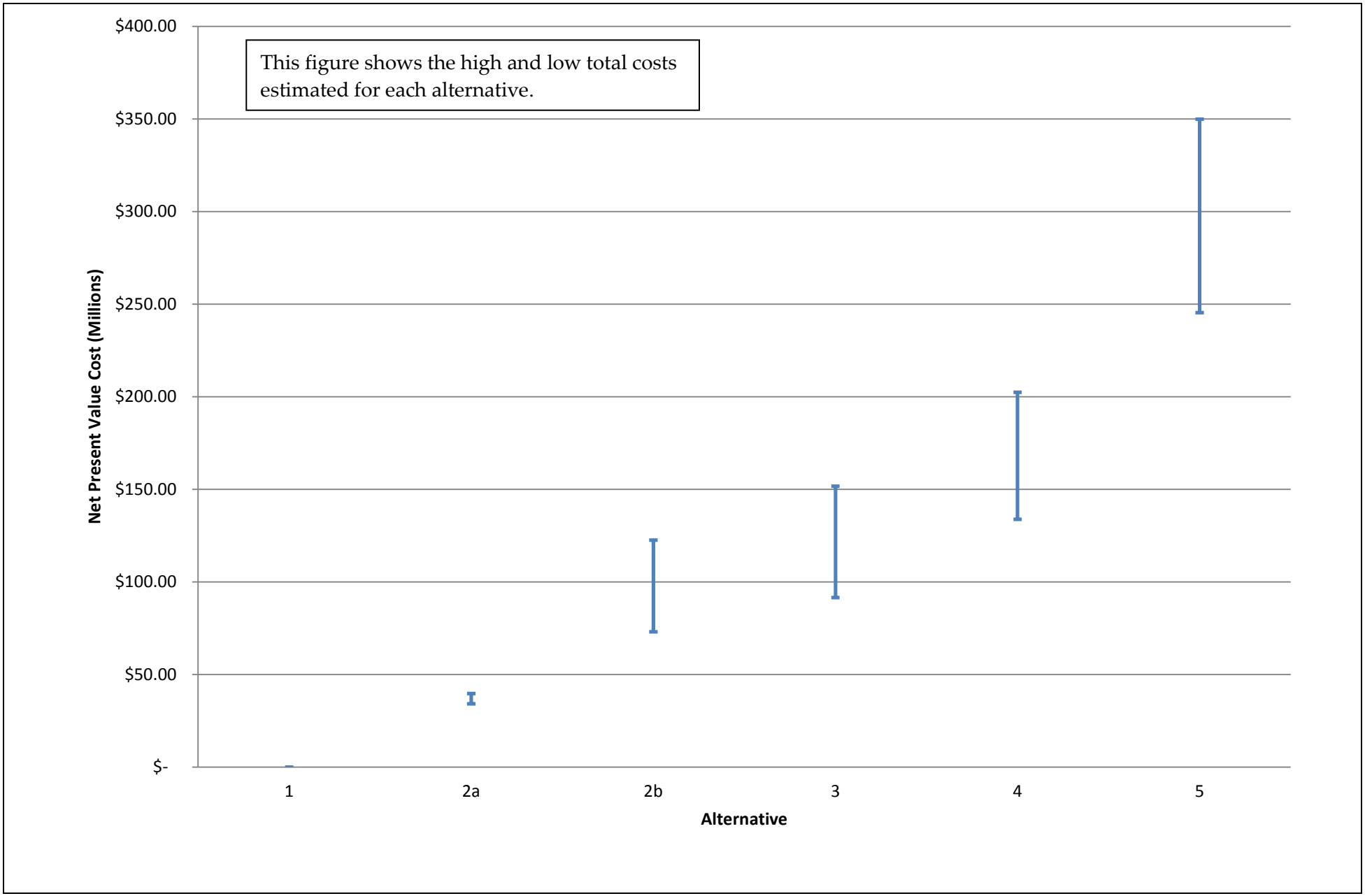


Figure 8.3.5-1

Projected Downstream Transport for BaP for All Alternatives over the 45-year Model Simulation

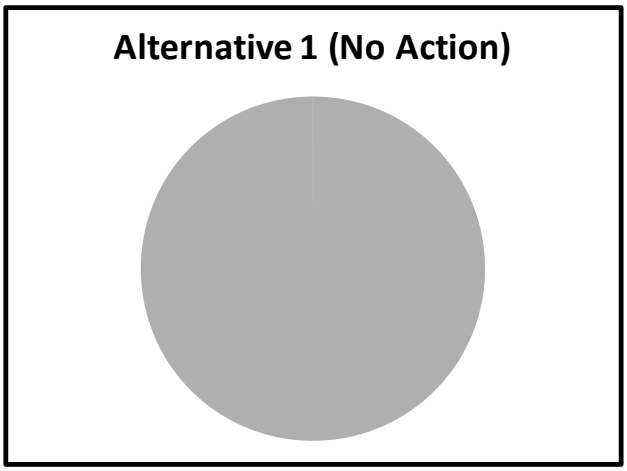
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

ANCHOR QEA

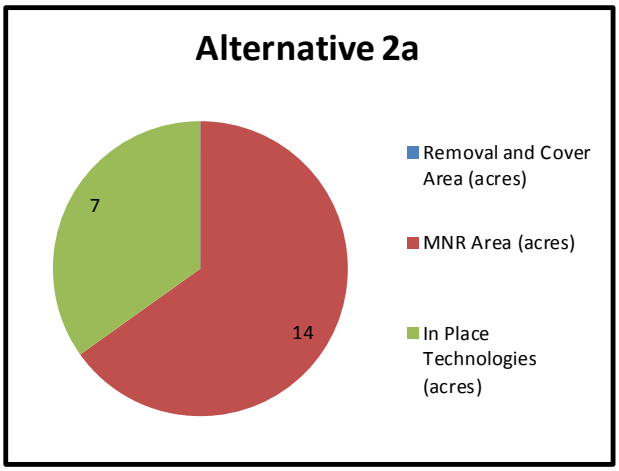


ANCHOR QEA

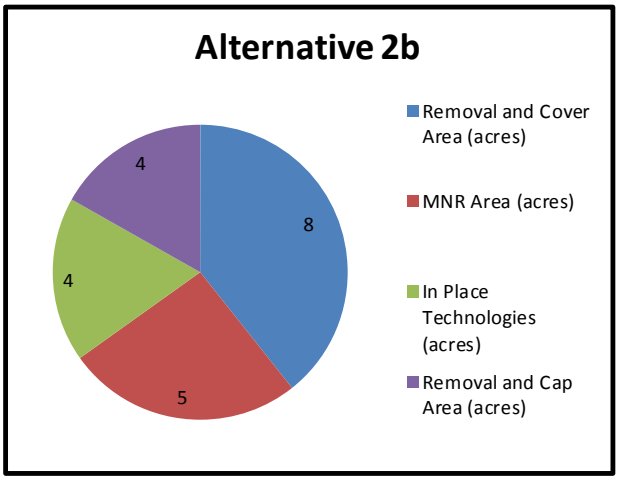
Figure 8.7-1
Net Present Value Costs for Each Alternative
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



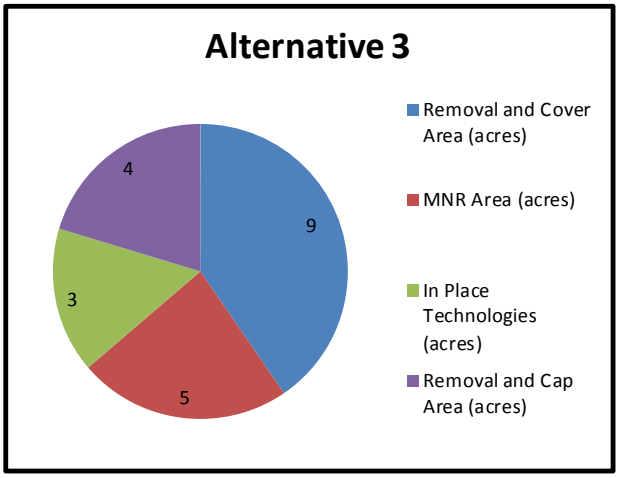
Total Area Actively Remediated = 0 acres



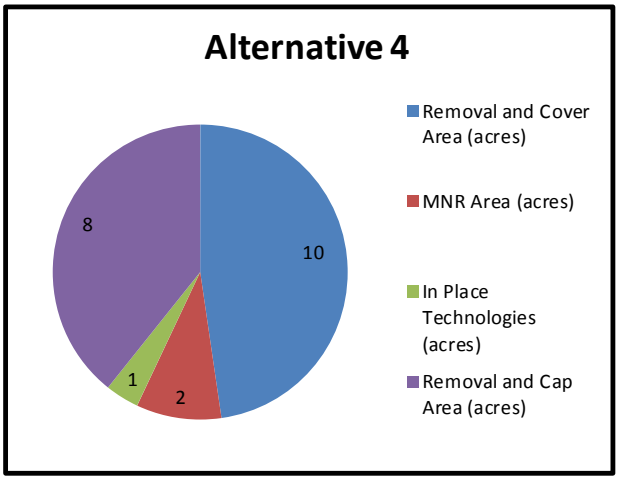
Total Area Actively Remediated = 7 acres



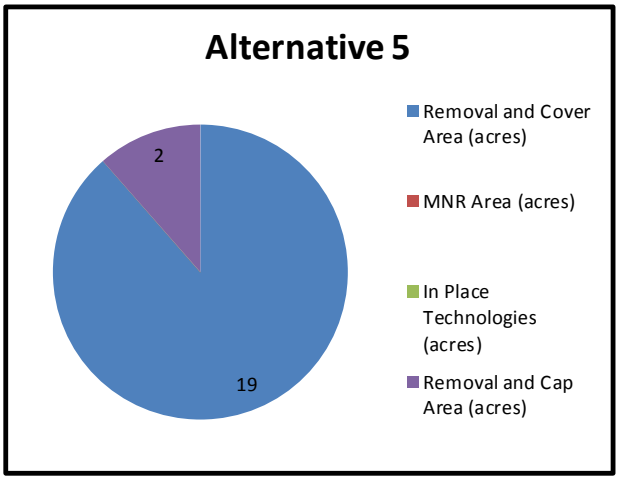
Total Area Actively Remediated = 16 acres



Total Area Actively Remediated = 16 acres



Total Area Actively Remediated = 19 acres



Total Area Actively Remediated = 21 acres

Note: Per Section 5, in place technologies including EMNR, in-situ treatment, and various capping technologies that in many cases are expected to be similarly protective. For EE/CA purposes only, capping is the assumed in place technology.

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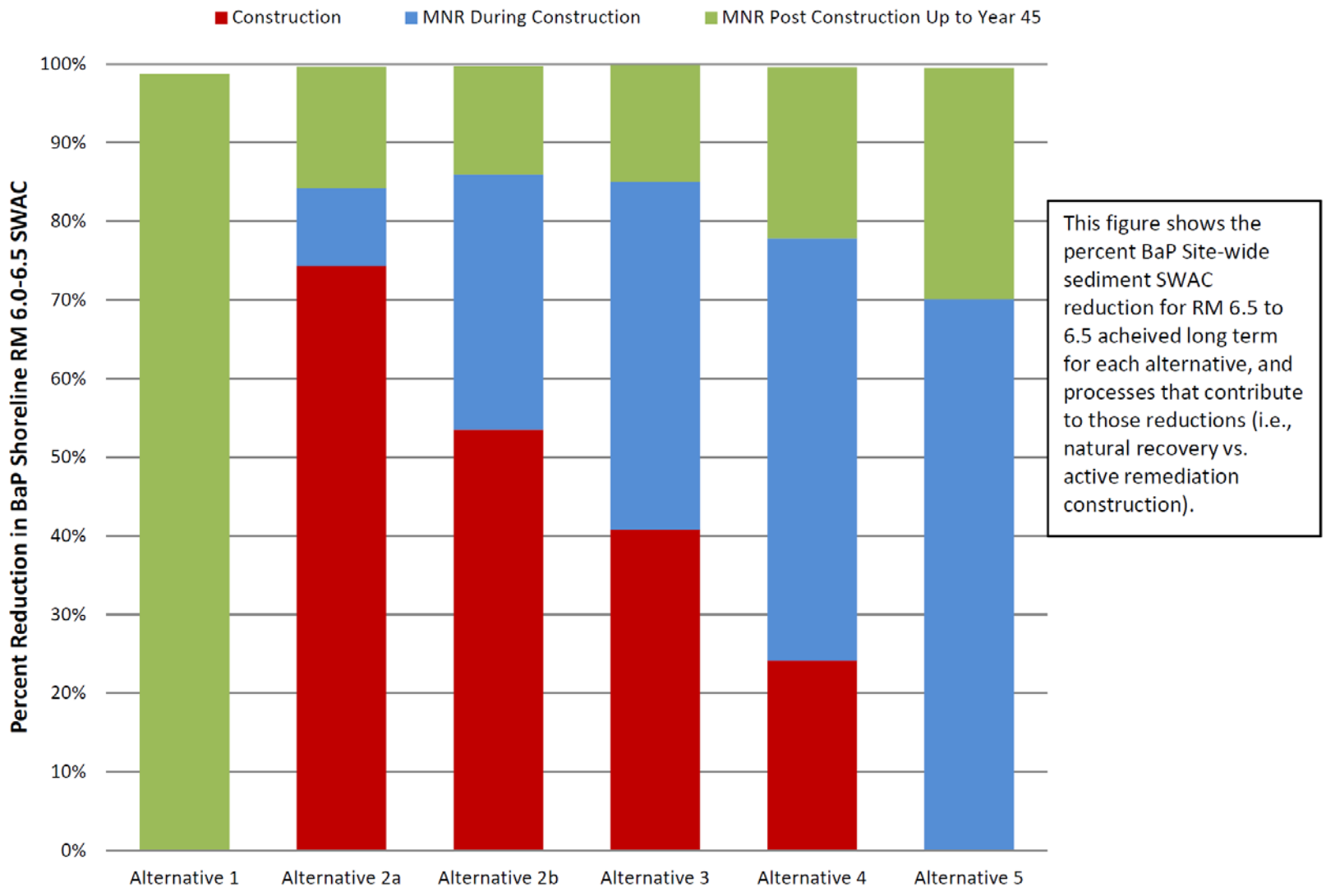
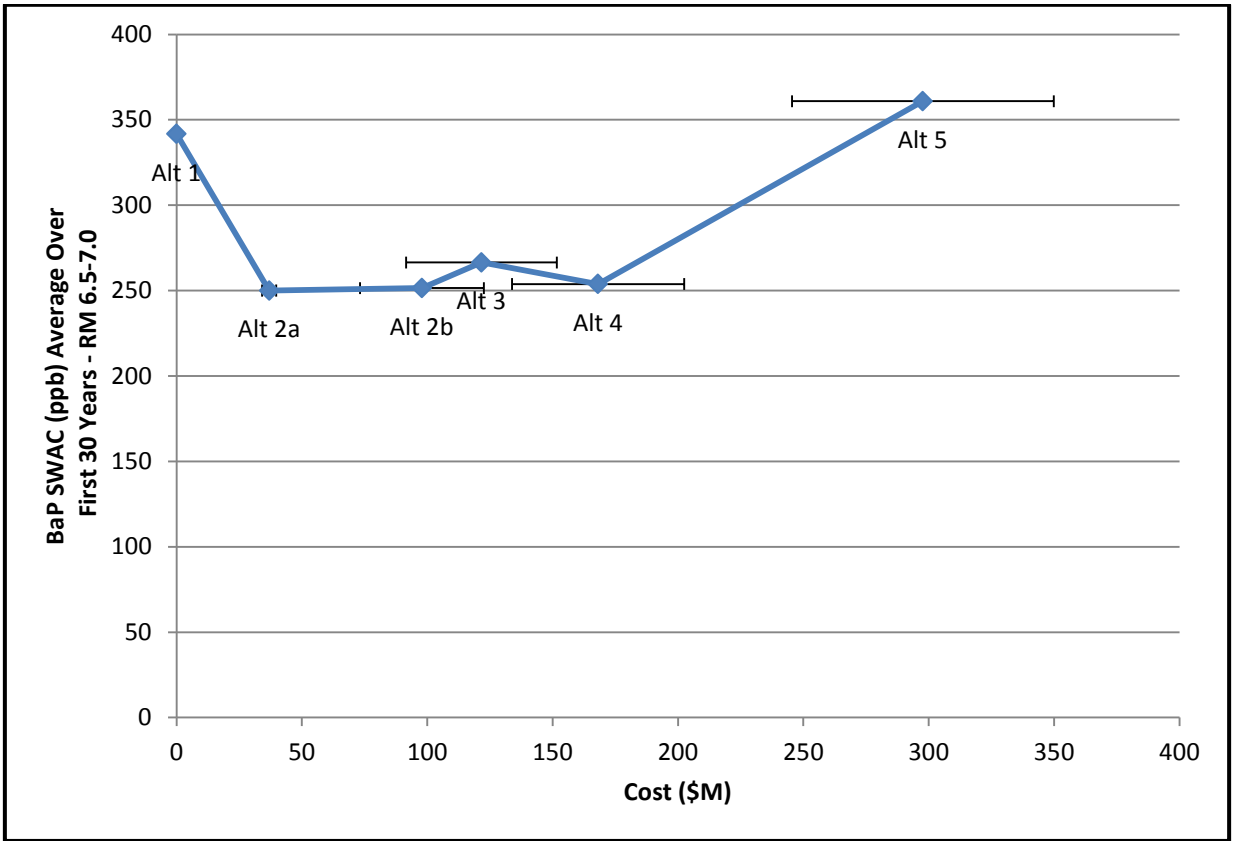
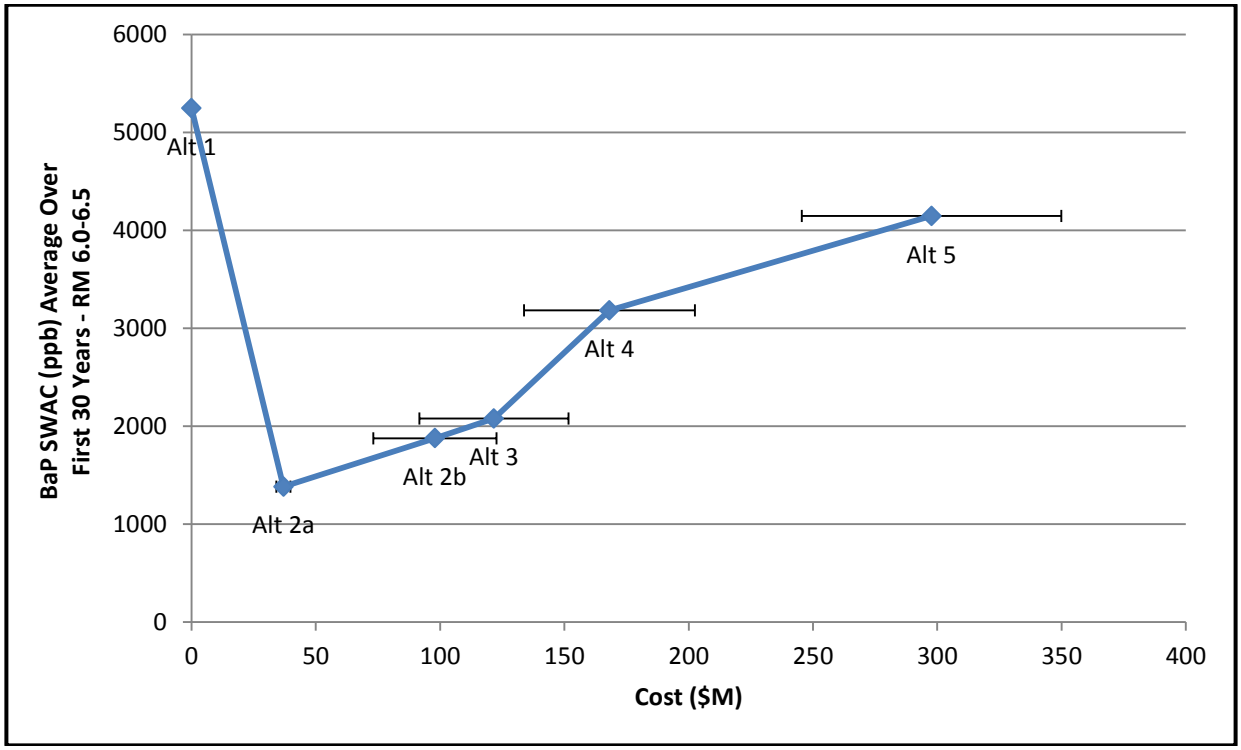
Figure 9.2-1
Technology Area Coverage by Alternative
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



ANCHOR QEA

Figure 9.2.3-1
Projected Percent Reductions in BaP SWAC Shoreline RM 6.5-7.0 at Year 45
for All Alternatives Provided by Remedial Construction and MNR
Gasco Sediments Cleanup Action





Note: These figures compare the 30-year time-averaged BaP sediment SWACs achieved to the costs for each alternative, with quantified uncertainties in the cost parameter.

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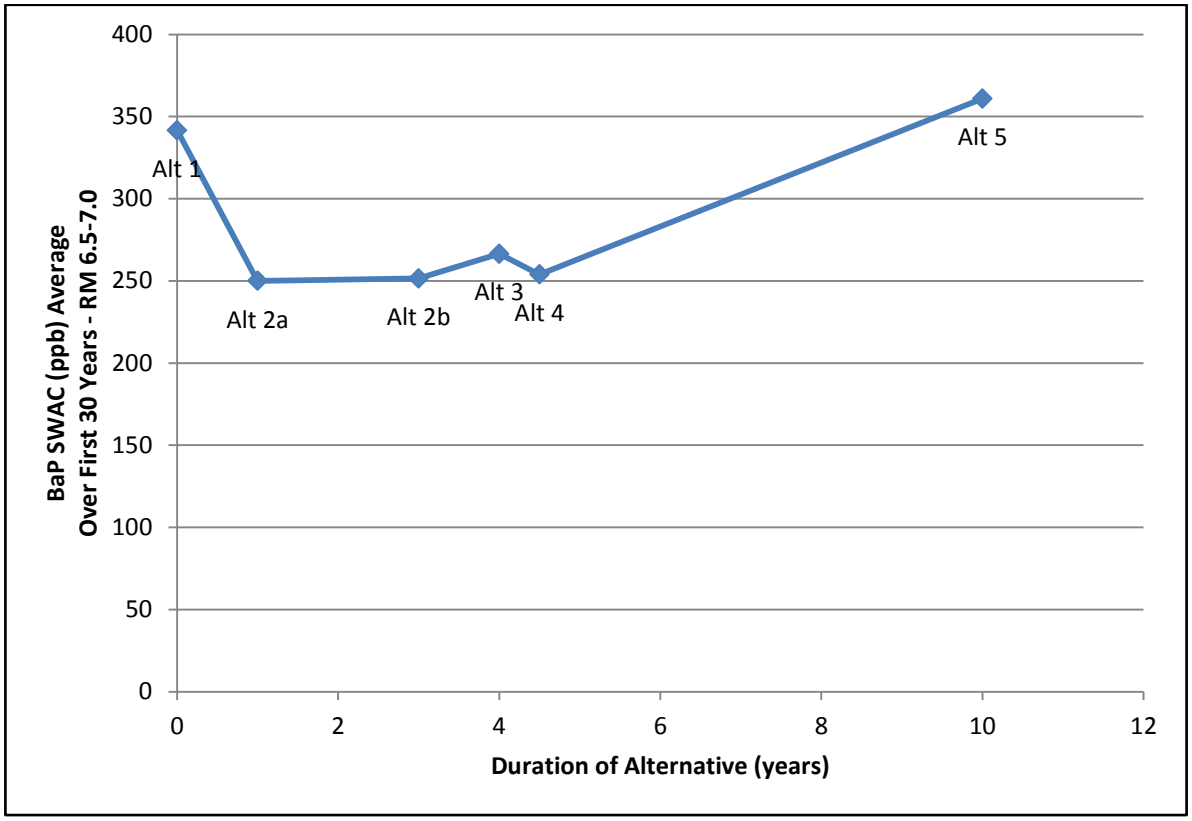
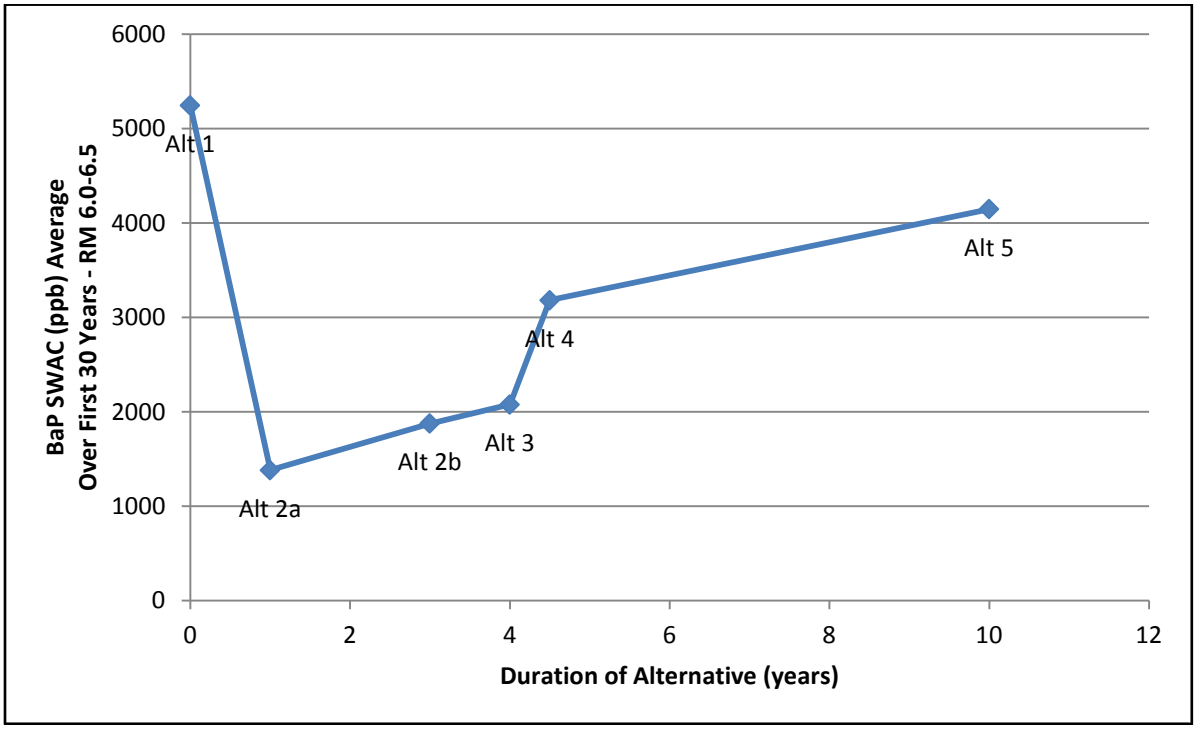
Figure 9.2.8-1
Sediment BaP SWAC Versus Cost
for All Alternatives
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action





Note: These figures compare the 30-year time-averaged BaP sediment SWACs achieved to the duration of each alternative. Increasing duration is a good metric of increasing short-term impacts and implementability issues created by the alternatives.

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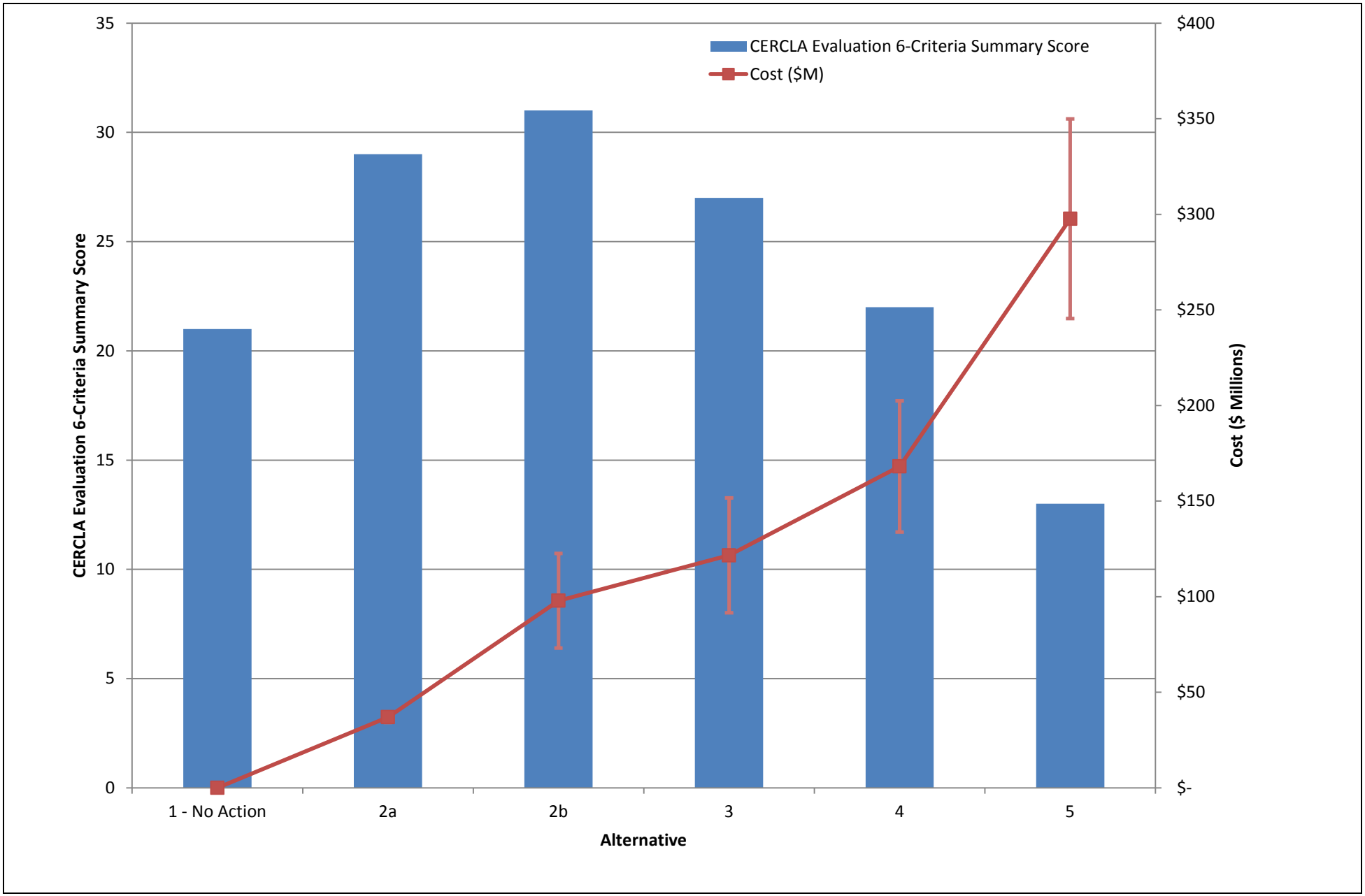
Figure 9.2.8-2
Sediment BaP SWAC Versus Duration
for All Alternatives
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action



ANCHOR QEA

Figure 9.2.8-3
Summary Score Versus Cost for All Alternatives
Draft Engineering Evaluation/Cost Analysis
Gasco Sediments Cleanup Action

APPENDIX A
DRAFT DATA GAPS INVESTIGATION REPORT

DRAFT
APPENDIX A
DATA GAPS INVESTIGATION REPORT

DRAFT ENGINEERING EVALUATION/COST ANALYSIS
GASCO SEDIMENTS CLEANUP ACTION

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LIST OF ACRONYMS AND ABBREVIATIONS

1,1-DCE	1,1-dichloroethene
°C	Degrees Celcius
AIR	Project Area Identification Report
Anchor QEA	Anchor QEA, LLC
AOC	Administrative Settlement Agreement and Order on Consent
ARI	Analytical Resources, Incorporated
ASTM	ASTM International
AWQC	Ambient Water Quality Criteria
bml	below mud line
cis-1,2-DCE	cis- 1,2- dichloroethene
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
cm	centimeter
COC	chain-of-custody
CU-triaxial	Consolidated Undrained Triaxial test
CVOC	Chlorinated volatile organic compound
DCE	dichoroethene
DEQ	Oregon Department of Environmental Quality
DO	dissolved oxygen
DP	Direct Push
DRET	Dredging Elutriate Test
EE/CA	Engineering Evaluation/Cost Analysis
EPA	U.S. Environmental Protection Agency
EPH	Extractable Petroleum Hydrocarbons
eV	electron volt
EVS	environmental visualization system
FCR	Field Change Request Form
FS	Feasibility Study
FSP	Field Sampling Plan
Ft	Feet
HASP	Health and Safety Plan
HCN	Hydrogen Cyanide

HH-org	National Recommended Water Quality Criteria for human health, organism only
ID	Identification
IDW	Investigative Derived Waste
LCS/LCSD	Laboratory Control Sample/ Laboratory Control Sample Duplicate
LDC	Laboratory Data Consultants
LWG	Lower Willamette Group
MFA	Maul Foster & Alongi, Inc.
µg/L	micrograms per liter
MRL	Method reporting limit
MS/MSD	Matrix Spike/ Matrix Spike Duplicate
NAPL	Non-aqueous phase liquid
NAS	Northwest Aquatic Sciences
NAVD88	North American Vertical Datum of 1988
ORELAP	Oregon Environmental Laboratory Accreditation Program
ORP	Oxidation reduction potential
oz	ounce
PAHs	polycyclic aromatic hydrocarbon
PCBs	polychlorinated biphenyls
PID	Photoionization Detector
Portland Harbor Site	Portland Harbor Superfund Site
QA/QC	quality control/quality assurance
QAPP	Data Gaps Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
Report	Draft Data Gaps Investigation Report
RL	Reporting Limit
RPD	Relative percent deviation
SBLT	sequential batch leachate test
SEF	Sediment Evaluation Framework
Siltronic	Siltronic Corporation
SM	Standard Method
SPT	Standard penetration test
SOW	Statement of Work
SVOCs	semivolatile organic compounds
trans-1,2-DCE	trans- 1,2-dichloroethene

TCE	trichloroethene
TCLP	toxic characteristic leaching procedure
TOC	Total organic carbon
TVS	Total volatile solids
TZW	transition zone water
USACE	U.S. Army Corps of Engineers
VC	vinyl chloride
VOCs	volatile organic compounds
VPH	Volatile petroleum hydrocarbons

EXECUTIVE SUMMARY

This *Draft Data Gaps Investigation Report* (Report) has been prepared by Anchor QEA, LLC (Anchor QEA) and Maul Foster Alongi (MFA) on behalf of NW Natural and Siltronic Corporation (Siltronic) to document the work completed and the results from the data gaps investigation conducted at the Gasco Sediments Site during September and October 2010 and April 2011. The investigation, which consisted of the sampling and testing of sediment, riverbank soil, transitional zone water (TZW), and groundwater, was performed in offshore and riverbank areas of the Willamette River adjacent to the NW Natural "Gasco" and Siltronic properties in Portland, Oregon (Figure 1-1). Anchor QEA personnel conducted the sediment and soil sampling and MFA personnel conducted the TZW and groundwater sampling. The work was conducted under the *Administrative Settlement Agreement and Order on Consent* (AOC, Docket No. CERCLA 10-2009-0255) and attached Statement of Work (SOW) entered between NW Natural, Siltronic, and the U.S. Environmental Protection Agency (EPA) on September 9, 2009. This Report fulfills the requirements of Section 3.5 of the SOW.

Investigation Objectives

The overall objective of the data gaps investigation is to address the data needs identified in the *Final Project Area Identification Report* (Final AIR; Anchor QEA 2010a) relevant to further refinement of the Project Area, conducting the Engineering Evaluation/Cost Analysis (EE/CA), and completing the design for the Gasco Sediments Site. The Final AIR identifies the following specific data needs:

- Sediment bioassay toxicity data to fill spatial gaps in the existing sediment bioassay data.
- Bulk sediment chemistry data to fill spatial or volume sediment chemistry gaps in existing data and in bioassay locations to provide synoptic data.
- Visual observations of the substantial presence of product (substantial product, as defined in Section 3.6.2.1 of the SOW) in sediment cores and riverbank borings to fill spatial and volume data gaps in the existing substantial product extents.
- Geotechnical testing (e.g., grain size, Atterberg limits, consolidation and triaxial tests) and chemical mobility testing (i.e., leachate and elutriate tests) of sediment and riverbank soils to support EE/CA alternatives evaluation and/or design.
- Riverbank soils chemistry to fill spatial volume data gaps.
- Confirmation of the present nature and extent of the trichloroethene (TCE) groundwater plume entering the Willamette River at Area 1 for the purpose of informing the remedial

alternatives analysis.

- Data necessary to estimate in-river attenuation rates for TCE and its degradation products.

Work Completed

The following is a summary of the work completed to achieve these objectives:

1. Fifty-four surface sediment grab samples were collected and analyzed for chemical, geotechnical, and benthic toxicity parameters and evaluated for substantial product.
2. Twenty-three sediment cores were collected using a vessel-mounted vibracore device and evaluated for substantial product. Twenty surface sediment samples and 82 subsurface sediment samples were analyzed for chemical and geotechnical parameters. In addition:
   - Seven samples were submitted for the dredging elutriate test (DRET);
   - Four samples were submitted for the sequential batch leachate test and toxicity characteristic leaching procedure (TCLP) analysis;
   - Seven samples were submitted for waste characterization (toxicity, corrosivity, and ignitability); and
   - Two samples were submitted for bench scale treatability tests.
3. Nine soil borings were drilled located along the top of the riverbank and three soil borings were installed along the toe of riverbank slope using a Geoprobe™ rig. The cores were evaluated for substantial product and field screened for the presence of volatile organic compounds (VOCs) and hydrogen cyanide. Soil samples were analyzed as follows:
   - Twenty-six soil samples were analyzed for chemical parameters;
   - Four samples were submitted for the consolidated undrained triaxial test;
   - Seventy-six samples were analyzed for other geotechnical parameters (moisture content, grain size, specific gravity, Atterburg limits);
   - Three samples were submitted for waste characterization (toxicity, corrosivity, and ignitability); and
   - One sample was submitted for bench scale waste treatability tests.
4. Eleven TZW samples and five in-river groundwater samples were collected using a barge-mounted Geoprobe™ rig and submitted for laboratory analysis for VOCs.

Conclusions

The data gaps investigation activities and results meet the objectives described in the Final AIR (Anchor QEA 2010a). Investigation findings have been incorporated into the EE/CA for the Gasco Sediments Site.

1 INTRODUCTION

This *Draft Data Gaps Investigation Report* (Report) has been prepared by Anchor QEA, LLC (Anchor QEA) and Maul Foster Alongi (MFA) on behalf of NW Natural and Siltronic Corporation (Siltronic) to document the work completed and the results from the data gaps investigation conducted at the Gasco Sediments Site (Site) during September and October 2010 and April 2011. The investigation, which consisted of the sampling and testing of sediment, riverbank soil, transitional zone water (TZW), and groundwater, was performed in offshore and riverbank areas of the Willamette River adjacent to the NW Natural "Gasco" and Siltronic properties in Portland, Oregon (Figure 1-1). The work was conducted under the *Administrative Settlement Agreement and Order on Consent* (AOC, Docket No. CERCLA 10-2009-0255) and attached Statement of Work (SOW) entered between NW Natural, Siltronic, and the U.S. Environmental Protection Agency (EPA) on September 9, 2009. This Report fulfills the requirements of Section 3.5 of the SOW.

The EPA-approved *Final Project Area Identification Report* (Final AIR; Anchor QEA 2010a) identifies data needs relevant to further refine the initial Project Area (shown in Figure 1-2), conduct the Engineering Evaluation/Cost Analysis (EE/CA), and complete the design for the Gasco Sediments Site. The *Final Data Gaps Quality Assurance Project Plan (QAPP),* Appendix A of the Final AIR, defines the investigation scope and objectives to address the data gaps and contains the field sampling, analytical, and quality assurance/quality control (QA/QC) procedures followed during the investigation activities. Additional data gap investigation activities were conducted following the EPA-approved scope of work presented in the April 12, 2011, letter from Ryan Barth, P.E. of Anchor QEA to Sean Sheldrake of EPA entitled *Scope of Work for Benthic Toxicity Testing - Gasco Project Area Identification Report Data Gasps Sampling* (Data Gaps Retest SOW; Anchor QEA 2011a).

The investigation was conducted by Anchor QEA and MFA personnel on behalf of NW Natural and Siltronic, respectively. Anchor QEA managed the in-water (sediment) and riverbank investigation, while MFA managed the TZW and groundwater investigation.

The following subsections summarize project background information, investigation objectives, and Report organization. A summary of investigation work completed, results, and discussion is presented in subsequent Report sections.

1.1 Project Background

The Gasco Sediments Site is located along the western bank of the Willamette River within the Portland Harbor, a heavily industrialized reach downstream and north of downtown Portland, Oregon (Figure 1-1). Figure 1-2 shows general features of the Gasco and Siltronic properties and adjacent offshore areas. Refer to the *Final Work Plan, Gasco Sediments Cleanup Action* (Final Work Plan; Anchor QEA 2010b) for historical activities near the site and current site uses.

The Gasco Sediments Site is located within the greater Portland Harbor Superfund Site (Portland Harbor Site), which is currently in the feasibility study (FS) phase of work. The integration of the Gasco Sediments Site remedial activities with those of the greater Portland Harbor Site is discussed in Section 1 of the *Draft Engineering Evaluation/Cost Analysis, Gasco Sediments Cleanup Action* (Draft EE/CA, Anchor QEA 2012).

Numerous investigations have been conducted at the Gasco Sediments Site, on the adjacent properties, and within the greater Portland Harbor Site to evaluate the nature and extent of contamination and to assess the ecological and human health risks in these areas. The Final Work Plan summarizes those investigation findings relevant to the Gasco Sediments Site. These existing data were used to define an initial Project Area (shown on Figure 1-2) in the Final AIR. The data collected during this investigation are used to develop the interim Project Area in the EE/CA. The final Project Area will be determined after the Portland Harbor draft FS is available and will be presented in the preliminary design report for the Gasco Sediments Site.

1.2 Investigation Objectives

As defined in the Final Data Gaps QAPP, the overall objective of the data gaps investigation is to address the data needs identified in the Final AIR relevant to further refinement of the initial Project Area shown on Figure 1-2, conducting the EE/CA, and completing the design for the Gasco Sediments Site. The Final AIR identifies the following specific data needs:

- Sediment bioassay toxicity data to fill spatial gaps in the existing sediment bioassay data.
- Bulk sediment chemistry data to fill spatial or volume sediment chemistry gaps in existing data and in bioassay locations to provide synoptic data.
- Visual observations of the substantial presence of product (substantial product, as defined in Section 3.6.2.1 of the SOW) in sediment cores and riverbank borings to fill spatial and volume data gaps in the existing substantial product extents.

- Geotechnical testing (e.g., grain size, Atterberg limits, consolidation and tri-axial tests) and chemical mobility testing (leachate and elutriate tests) of sediment and riverbank soils to support EE/CA alternatives evaluation and/or design.
- Riverbank soils chemistry to fill spatial volume data gaps.
- Confirmation of the present nature and extent of the trichloroethene (TCE) groundwater plume entering the Willamette River at Area 1 for the purpose of informing the remedial alternatives analysis.
- Data necessary to estimate in-river attenuation rates for TCE and its degradation products.

1.3 Document Organization

The remainder of this Report is organized into the following sections:

- Section 2 summarizes the in-water sediment investigation work completed and results.
- Section 3 summarizes the riverbank soil investigation.
- Section 4 summarizes the TZW and groundwater investigation.
- Section 5 summarizes the chemical and physical data quality.
- Section 6 summarizes the references used in this report.

2 IN-WATER INVESTIGATION

The following subsections summarize the in-water sampling activities.

2.1 In-water Investigation Sampling Summary

The in-water investigation consisted of the collection of surface sediment grab samples and sediment cores for evaluation for substantial product and chemical, geotechnical, and benthic toxicity testing. Surface sediment grab samples were collected by Anchor QEA personnel during two events. Surface sediment samples were collected from 23 locations (20 primary locations and three reference locations) during the October 2010 initial collection event. Surface sediment samples were collected from an additional 31 locations (20 primary locations, eight contingency locations, and three reference locations) during the April 2011 retest event. Surface sediment samples were evaluated for substantial product and submitted for chemical, geotechnical, and benthic toxicity testing.

Twenty-three sediment cores (19 primary cores and four contingency cores) were collected by Anchor QEA personnel using a vessel-mounted vibratory core sampler during a single event in October 2010. The cores were visually evaluated for substantial product (as defined in Section 3.6.2.1 of the SOW) and sediment samples were submitted for chemical and geotechnical testing, as well as dredging elutriate test (DRET), sequential batch leachate test (SBLT), waste characterization, and bench scale treatability testing.

Refer to Figures 2-1 and 2-2 for sediment grab sample and core locations. Data for the in-water investigation is summarized on Tables 2-3 through 2-11. In-water field data forms are provided in Attachment 2. The following subsections summarize the sampling and analysis activities completed as part of the in-water investigation and the investigation results.

2.1.1 Summary of Sample Collection and Analysis

The following subsections summarize the in-water investigation sample collection and analyses.

2.1.1.1 Surface Sediment Grabs (Initial Collection Event)

Surface sediment grab samples were collected from 23 locations during the initial collection event (October 2010) using a hydraulic van Veen grab sampling device deployed off a vessel and accepted based the criteria listed in Section 3.2.1 of the *Final Field Sampling Plan* (Final FSP), Attachment 1 to the Final Data Gaps QAPP. Samples were logged and observations recorded

on the Surface Sediment Field Grab Forms provided as Attachment 2-1. Table 2-1a lists the station identification (ID) for surface sediment grab samples collected during this event and Figure 2-1 shows the sampling locations.

The grab samples were processed on the vessel generally following the protocols outlined in Section 3.2.2 of the Final FSP. A 3-inch diameter core was subsampled from the interior of each accepted grab and evaluated for substantial of product, as defined in Section 3.6.2.1 of the SOW. The core was photographed and core observations recorded on the Sediment Core Logs included as Attachment 2-2. Photographs are included as Attachment 2-4. The remaining surface sediment was processed for laboratory analysis. Discrete samples for volatile organic compounds (VOCs) and volatile petroleum hydrocarbon (VPH) were collected immediately following opening of the grab to minimize volatilization. The sediment was then homogenized and samples collected for all other analytical tests.

The primary and reference surface sediment samples were submitted to Analytical Resources Incorporated (ARI) Laboratory in Tukwila, Washington for analysis for the following chemical and geotechnical parameters:

- Total solids by method EPA 160.3
- Total organic carbon (TOC) by EPA method 9060
- Grainsize by method ASTM International (ASTM) D422
- Moisture content by ASTM D2216
- Total volatile solids (TVS) by method EPA 160.4 (on select samples)
- Total cyanide by method EPA 335.4
- Total sulfides method EPA 376.2
- Ammonia by method EPA 350.1M
- Total Metals by EPA 6010B and 7471A
- Semivolatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons (PAHs) by method SW8270D
- VOCs by method SW8260C
- Polychlorinated biphenyls (PCBs) by method SW8082
- Pesticides by method SW8081B
- Diesel range hydrocarbons and residual range hydrocarbons by method NWTPH-Dx
- VPH by method WA-VPH (on select samples)
- Extractable Petroleum Hydrocarbons (EPH) by method NW-EPH (on select samples)

The EPH and VPH samples were initially archived. These samples were subsequently tested. Table 2-1a summarizes the analyses conducted on each surface sediment grab samples collected during the initial collection event.

Following receipt of the analytical results from ARI, surface sediment physical and chemical data were validated by Laboratory Data Consultants (LDC) in Carlsbad, California in accordance with EPA National Functional Guidelines (EPA 2004, EPA 2008).

In addition to physical and chemical testing, surface sediments were tested for benthic toxicity. A chronic 28-day freshwater amphipod (*Hyalella azteca)* test and an acute 10-day freshwater midge (*Chironomus dilutus*, formerly *C. tentans*) test were conducted on each of the 20 primary surface sediment samples. Sediment toxicity test procedures used were conducted in accordance with protocols recommended by the ASTM Method E 1706-00 (ASTM 2003) and EPA 600/R-99/064 (EPA 2000). Testing was conducted at Northwestern Aquatic Sciences located in Newport, Oregon. The bioassay test results were reviewed by Anchor QEA. Appendix 9 provides further detail on the bioassay testing program and Anchor QEA's review of the results.

2.1.1.2 *Surface Sediment Grabs (Retesting Event)*

Due to concerns regarding the accuracy of the midge bioassay test results (described in detail in the Data Gaps Retest SOW and summarized in Section 2.2.1.2 and Appendix 9), additional surface sediment was collected in April 2011 near the 20 primary and three reference locations sampled during the initial collection event. The samples were submitted for geotechnical and chemistry testing, as well as benthic toxicity analysis (midge only). In addition, sediment was collected in eight new contingency locations and the samples archived. Subsequently, each contingency sample was analyzed for VOCs and VPHs, and three locations analyzed for all geotechnical and chemical parameters. No contingency samples were analyzed for benthic toxicity. The sampling, analytical, and validation methods were generally consistent with the initial sampling event described in Section 2.1.1.1, except that the samples were not submitted for the chronic 28-day freshwater amphipod test (in accordance with the Data Gaps Retest SOW). The bioassay test results were reviewed by Anchor QEA. Appendix 9 provides further detail on the bioassay testing program and Anchor QEA's review of the results.

Table 2-1b provides the sample ID, location, mudline elevation, depth interval, collection date, and summarizes the analytical tests for each surface sediment grab samples collected during the retesting event. Refer to Figure 2-1 for sample locations.

2.1.1.3 *Subsurface Sediment Cores*

During the initial collection event in October 2012, sediment cores were collected from 23 locations (19 primary locations and four contingency locations) with a vibratory core sampler deployed from the bow of a vessel using an a-frame and winch assembly. Each location had a target penetration depth of 20 feet except for near-shore stations DGS-07, DGS-22, DGS-24, and DGS-36, which had a target penetration depth of 14 feet. Sediment cores were accepted based on the criteria listed in Section 3.3.1 of the Final FSP. Observations during core collection were recorded on the Surface Sediment Grab Forms provided as Attachment 2-1. Table 2-2 lists the station ID for the sediment cores and Figure 2-1 shows their locations.

Following acceptance, each sediment core was cut into sections and transported to an on-site refrigerated storage unit. Cores were securely fastened upright in the refrigerated storage until core processing. The sediment cores were processed on site in a dedicated core processing area generally following the protocols outlined in Section 3.3.2 of the Final FSP. After opening, each primary and contingency core was evaluated for substantial product (as defined in Section 3.6.2.1 of the SOW), photographed, and core observations recorded in the Subsurface Core Logs provided as Attachment 2-2. Photographs are included as Attachment 2-5.

Sediment samples were collected from the 19 primary cores and one contingency core and submitted for laboratory analysis for geotechnical and chemical parameters. The 0- to 1-foot, 1- to 4-foot, 4- to 8-foot, 8- to 12-foot, 12- to 16-foot, and greater than 16-foot core depth interval of each core was sampled, as specified in the Final FSP. Sample intervals were measured using recovered length (i.e., without any adjustment for percent recovery or compaction). When the total core length was less than 16 feet, the sample interval end depth was the end of the core. Discrete samples for VOCs and VPH were collected immediately following opening of the sediment core to minimize volatilization. The remaining sediment was homogenized by depth interval and samples collected for laboratory analysis. The samples were submitted to ARI for analysis for total solids, TOC, grainsize, moisture content, total cyanide, total metals, and SVOCs including PAHs, VOCs, PCBs, pesticides, diesel-range hydrocarbons, and residual range hydrocarbons using the analytical methods listed previously in Section 2.1.1.1.

Table 2-2 provides the sample ID, location, mudline elevation, depth interval, collection date, and summarizes the analytical tests for each subsurface sediment core samples.

Samples from additional core intervals were collected and submitted to ARI for DRET, SBLT, waste characterization, and bench scale treatability testing as follows:

DRET Tests

Samples were collected from seven cores for DRET tests following U.S. Army Corps of Engineers (USACE) guidance (USACE 2008). The tested core intervals were selected in the field targeting sediment with visual observations of substantial product. The laboratory analyzed a total and dissolved fraction of the final elutriate for all analytes in FSP Table 2-2. Site water and bulk sediment collected from the same core intervals were analyzed for the chemical parameters listed in Section 2.1.1.1 to establish a chemical concentration baseline.

SBLT Tests

Samples were collected from four cores for SBLT tests following USACE guidance (USACE 2003). The tested core intervals were selected in the field targeting a range of conditions. Sediment was selected from intervals with visual observations of substantial product as well intervals without visual impacts in an effort to test samples with a range of chemical concentrations. The laboratory prepared each leachate with dredging site water in accordance with USACE guidance (USACE 2003). Four cycles were completed and analyzed for all analytes in FSP Table 2-3. Site water and bulk sediment collected from the same core intervals were analyzed for the chemical parameters listed in Section 2.1.1.1 to establish a chemical concentration baseline.

Waste Characterization Tests

Samples were collected from seven cores for waste characterization (toxicity, corrosivity, and ignitability) by SW1311 (toxicity characteristic leaching procedure [TCLP]), EPA 9045 (corrosivity), and SW1030 (ignitability). In addition, samples from the core intervals selected for SBLT testing were also submitted for TCLP tests. The tested core intervals were selected in the field targeting sediment with visual observations of substantial product. Additional sediment was collected from each interval tested and archived for bench scale treatability tests. Bulk sediment collected from the same core intervals were analyzed for the chemical parameters listed in Section 2.1.1.1 to establish a chemical concentration baseline.

Bench Scale Treatability Tests

Archived waste characterization samples from two locations were submitted for bench scale treatability testing. The two samples were from locations where benzene was detected above the maximum concentration of contaminant for the TCLP criteria, as defined in 40 Code of Federal Regulations (CFR) 261.24). Three amendments were used: 10 percent Portland cement, 10 percent quicklime, and 5 percent quicklime. The amendments were added individually to aliquots from each location and the six amended samples submitted for TCLP analysis (VOCs only).

Figure 2-3 shows the locations of samples submitted for DRET, SBLT, and TCLP testing. Refer to Table 2-2 for core intervals tested.

Following receipt of the analytical results from ARI, all subsurface sample data was validated by LDC in accordance with EPA National Functional Guidelines (EPA 2004, EPA 2008).

2.1.2 Sampling and Analysis Deviations

This section summarizes deviations from the sediment sampling and analysis protocols presented in the Final Data Gaps QAPP that were made during the in-water investigation. Field Change Request (FCR) forms were submitted by Anchor QEA and approved by EPA prior to initiating a change in field protocol. The FCR forms are included in Attachment 1. The approved FCRs are as follows:

1. FCR form number 001 requested the collection of additional samples to support NW Natural's internal data investigations. These samples were collected from sediment cores after all data gaps samples were collected and thus did not impact the data quality objectives outlined in the QAPP. The analytical laboratory reports for these samples are presented in Attachment 9.
2. FCR form number 002 requested TCLP and DRET analyses at station DGS-11, where product was observed, in lieu of the FSP-designated TCLP and DRET analyses at station DGS-13, where product was not observed.
3. FCR form number 003 requested DRET analysis at contingency station DGS-18, where the presence of substantial product was observed, in lieu of the FSP-designed TCLP and DRET analyses at stations DGS-06 and DGS-23, where product was not observed.

4. FCR form number 004 requested the use of 14-foot core tubes in lieu of 20-foot core tubes at stations DGS-07, DGS-22, DGS-24, and DGS-36 due to insufficient water depth for clearance of the vibracore A-frame with the 20-foot core tubes.
5. FCR form number 005 requested the collection of two additional contingency cores, DGS-44, and DGS-45, to further delineate substantial product observations.

Additional deviations from the sampling and analysis protocols were identified during the field data QA/QC process. These deviations consist of the following:

1. Two surface grab stations, DGS-01 and DGS-51, were moved after several unsuccessful attempts to obtain an acceptable sample in their target location. DGS-01 was relocated approximately 48 feet upriver from the target location and DGS-51 was relocated approximately 100 feet downriver from the target location.
2. Several surface grab samples (see Tables 2-1a and 2-1b) were accepted with slightly less than 30 centimeters (cm) recovery after one or more attempts. Because the capacity of the grab sampling device was exactly 30 cm, the targeted 30 cm recovery was difficult to achieve without over-penetration. For this reason, grab samples were accepted when the recovery was greater than 75 percent of the target depth of 30 cm.
3. Subsurface core stations DGS-08, DGS-10, DGS-18, DGS-26, DGS-28, DGS-30, and DGS-44 were accepted with less than a 75 percent recovery of the length of core penetration after three attempts to collect a core. The first attempt at each station was made at the proposed station coordinates. The second attempt was made within a 20-foot radius of the proposed station and still yielded less than a 75 percent recovery. The third attempt (also relocated within a 20 foot radius) was accepted with less than 75 percent recovery.
4. The second attempt at subsurface core station DGS-20 yielded 74.4 percent recovery. This core was accepted, although it was slightly less than the acceptance criteria of 75 percent.
5. Sample DGS-13-0001-101005 was not submitted for grainsize analysis due to insufficient volume.
6. ARI used EPA methods 335.4, 350.1M, and 376.2 for total cyanide, ammonia, and sulfides analysis, respectively, rather than the Standard Method (SM) 4500 methods specified in the Final Data Gaps QAPP. These methods are nearly identical and this deviation does not impact the data quality.
7. Spectra Laboratory in Tacoma, Washington, ARI's subconsultant for the waste characterization tests, used EPA method 9045 and SW1030 for corrosivity and ignitability analysis, respectively, rather than the methods specified in the Final Data

Gaps QAPP (EPA 9040C and 110A [for corrosivity] and ASTM D93 [for ignitability]). These revised methods are more appropriate for solid waste media.

8. Surface sediment samples collected during the retest event were analyzed for eight additional compounds: benzyl alcohol, 4-methylphenol, pentachlorophenol, phenol, aldrin, endosulfan I, endosulfan II, and endosulfan sulfate.

2.2 In-water Investigation Summary of Results

The following subsections summarize the in-water investigation results.

2.2.1 Surface Sediment

2.2.1.1 Surface Sediment Physical and Chemical Results

Tables 2-4a and 2-4b present the results for surface sediment grab samples submitted for laboratory analyses of chemical and geotechnical parameters. Initial collection event sample results are presented in Table 2-4a and retest event sample results are presented in Table 2-4b. Tables 2-5a and 2-5b provide summary statistics for the chemistry results, including the minimum, maximum, and mean concentrations of detected results. Laboratory reports and data validation packages for the analyses are presented in Attachments 6 and 7, respectively.

2.2.1.2 Surface Sediment Benthic Toxicity

Freshwater bioassays were conducted on 20 sediment samples and three reference samples. Test and reference sediment sample locations are shown on Figure 2-1. As mentioned in Section 2.1.1.2, bioassay testing was conducted in two phases because the initial results for the midge bioassays were determined to be unsuitable for regulatory decision-making based on high variability within replicate test treatments and because the performance standards established for reference sediments were not met. Initial amphipod bioassay results were determined to be suitable for use. Retesting only involved the midge bioassay tests and was conducted on the same test sediments as the initial bioassay tests. Based on EPA direction, one of the reference locations was revised for the retest in order to be consistent with Lower Willamette Group's (LWG's) historical selection of reference locations. The initial and retest bioassay results are presented in Table 2-6 and are shown on Figures 2-4 and 2-5. Attachment 8 contains the interpretation of bioassay results and further evaluation of the bioassay data as well as the bioassay laboratory reports.

Based on a QA/QC review of the bioassay results presented in Attachment 8, it has been determined that the initial amphipod bioassay results and the retest midge bioassay results meet required criteria and the results are appropriate for their intended uses. A summary of project quality assurance objectives for physical and chemical testing data is provided in Section 5. The data quality review of the initial and retest sediment bioassay tests is provided in Attachment 8.

2.2.2 Subsurface Sediment

2.2.2.1 Subsurface Sediment Physical and Chemical Results

Tables 2-7a through 2-7f present the results for sediment core samples submitted for laboratory analyses of chemical and geotechnical parameters, by depth interval. Tables 2-8a and 2-8f provide summary statistics for the chemistry results, including the minimum, maximum, and mean concentrations of detected results. Table 2-9 presents the bulk sediment analytical results for the additional samples collected from the DRET, SBLT, and waste characterization sample intervals. These results are not included in the Table 2-8 statistics. Laboratory reports and data validation packages for the analyses are presented in Attachments 6 and 7, respectively.

2.2.2.2 Subsurface Sediment DRET Test Results

DRET results are summarized in Table 2-10.

2.2.2.3 Subsurface Sediment SBLT Test Results

SBLT results are summarized in Table 2-3.

2.2.2.4 Subsurface Sediment Waste Characterization

Table 2-11 presents the waste characterization results and identifies samples with TCLP results above the TCLP criteria (as defined in 40 CFR 261.24). Benzene was detected in two samples at concentrations above the associated TCLP criteria. Refer to Figure 2-3 for the location of these samples.

2.2.2.5 Sediment Bench Scale Treatability Test Results

Bench scale treatability testing was conducted on the two sediment samples containing benzene at concentrations above its TCLP criteria. Sediment bench scale treatability testing results are summarized in Table 2-11. All samples contained benzene at levels below the TCLP criteria

following the amendment by 10 percent Portland cement, 10 percent quicklime, and 5 percent quicklime.

2.3 Substantial Presence of Product

Substantial product, as defined in Section 3.6.2.1 of the SOW, was observed in nine of the 23 sediment cores at variable depths. Substantial product was not observed in any surface sediment grab samples. Figure 2-6 shows the location of the cores with product observation and depth of the deepest substantial product observation in each core. Substantial product observations are recorded in the core logs presented in Attachments 2-1 and 2-2.

2.4 In-water Health and Safety

The health and safety protocols described in the *Anchor QEA Health and Safety Plan* (Anchor QEA HASP), Attachment 2 to the Final Data Gaps QAPP were followed during the in-water investigation activities. Site workers utilized appropriate personal protection equipment, established work zones with restricted access, conducted daily safety briefings, and conducted routine air monitoring following Anchor QEA HASP protocols. Health and safety daily logs and air monitoring records are provided in Attachment 2-3.

Air monitoring for VOCs in the breathing zone was performed during sediment collection and processing using a handheld photoionization detector (PID). All results were below Anchor QEA HASP action levels, except for one detect determined to be false. Upon this detect, VOC levels were immediately retested using colorimetric tube tests and confirmed to be non-detect. The false detect was determined to be due to a PID calibration error.

2.5 In-water Investigative Derived Waste Management

Investigative derived waste (IDW) was placed in 14 labeled 55-gallon waste drums and staged on site during disposal analysis. Water in the drums was decanted and containerized. A composite IDW sample was then collected from the drums and sent to APEX Laboratory in Tigard, Oregon for disposal analysis following the IDW disposal protocols in the Final FSP. The drums then had diatomaceous earth added to remove any additional moisture. Waste Management, Inc. transported the drums to their Hillsboro Landfill, a Resource Conservation and Recovery Act (RCRA) Subtitle D landfill located in Hillsboro, Oregon. All decant, decontamination, and wash water was treated by the on-site oil/water separator, carbon remediation system.

2.6 In-water Investigation Conclusions and Discussion

The in-water investigation consisted of the collection and sampling of 54 surface sediment grab samples and 23 sediment cores to meet data needs relevant to further refinement of the initial Project Area (shown in Figure 1-2), conducting the EE/CA, and completing the design for the Gasco Sediments Site, as laid out in the Final Data Gaps QAPP. The activities and results described in this section meet the Final Data Gaps QAPP objectives for the in-water investigation and no additional in-water data gaps have been identified. Investigation findings have been incorporated into the Gasco Sediments Site Draft EE/CA.

3 RIVERBANK INVESTIGATION

The following subsections summarize the riverbank sampling activities.

3.1 Riverbank Investigation Sampling Summary

The riverbank investigation consisted of drilling and sampling nine soil borings located along the top of the riverbank and three "mid-slope" soil borings located along the toe of the riverbank. Soil samples were submitted for chemical, geotechnical, and waste characterization testing. Anchor QEA personnel conducted the riverbank investigation activities during a single event in October 2010. Refer to Figure 3-1 for soil boring locations. Data for the riverbank investigation is summarized on Tables 2-2 through 2-8. Riverbank field data forms are provided in Attachment 3.

The following subsections summarize the sampling and analysis activities completed as part of the riverbank investigation and the investigation results.

3.1.1 Summary of Sample Collection and Analysis

The nine top of bank soil borings were drilled and sampled using rotosonic drilling methods. Soil samples from the top of riverbank borings were collected with a 1.5–foot split spoon and a 5-foot core barrel. The three mid-slope soil borings were drilled and sampled with direct-push drilling methods. Soil samples from the mid-slope borings were collected with a 1.5-foot split spoon and a 5-foot core barrel equipped with acetate sample liners. In addition, thin-walled 2.5-foot Shelby tubes were collected from each boring when a suitable fine-grained cohesive unit was present. Shelby tubes were collected at nine riverbank boring locations

Soil samples were collected in 5-foot intervals. The actual sample depth intervals varied slightly due to conditions at each boring location. In each 5-foot interval, the top 1.5 feet was sampled with a 2-inch diameter split spoon to collect blow counts for standard penetration test (SPT) analysis. The remaining 3.5 feet of the 5-foot interval was collected within a core barrel.

Soil samples were processed on-site in a dedicated processing area. After opening, each sample interval was evaluated for substantial product using the definitions described in Section 3.6.2.1 of the SOW with the following exception: modifying factor 3 was not applied. Modifying factor 3 indicates that if the top 5 feet of a core has no substantial product, then deeper product should be judged as "not substantial" even if relatively thick layers of product exist at greater depths.

This modifying factor was not applied because it is unknown to what extent portions of the riverbank may need to be reconfigured to support the future EPA-approved sediment remedy. Photographs were taken of each sample interval and the interval was visually logged according to ASTM D 2488 *Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)* (ASTM 2000). Soil boring logs are included as Attachment 3-1 and Attachment 3-3 contains photographs.

Soil samples were collected from each interval for laboratory analysis. Samples for VOCs and EPH testing were collected from soil intervals immediately following opening to minimize volatilization. Samples for the remaining analysis were collected after visual logging of the soil. Equal volumes of soil were collected along the entire 5-foot sample interval, homogenized in a stainless steel bowl, and placed in sample containers. Select samples were submitted for chemical, geotechnical, waste characterization, and bench scale treatability testing as described below. Table 3-1 summarizes the analysis conducted on each sample interval. Additional soil was collected from each interval for field screening, also described below.

Samples collected from the top and bottom 5-foot interval from each boring were submitted to ARI for laboratory analysis for total solids, TOC, metals, SVOCs, VOCs, PCBs, pesticides, diesel range hydrocarbons and residual range hydrocarbons using the methods listed previously in Section 2.1.1.1. In addition, samples were submitted to ARI and archived for EPH and VPH analysis. The EPH and VPH archive samples were subsequently analyzed using the methods listed in Section 2.1.1.1 per EPAs electronic email communication dated September 15, 2011directing NW Natural and Siltronic Corporation to analyze the sediment and riverbank samples for these additional analytes.

Samples from each interval were submitted to ARI and archived for geotechnical analysis. Each interval was tested for moisture content by the method listed in Section 2.1.1.1. Select intervals were selected for grainsize analysis (by the method listed in Section 2.1.1.1), Atterberg limits (by ASTM D422), and specific gravity (by ASTM D854) based on a review of the boring logs. Intervals selected for testing represented of the range of soil types observed during the investigation.

Samples from three intervals were submitted to ARI for waste characterization (toxicity, corrosivity, and ignitability) by SW1311 (TCLP), EPA 9045 (corrosivity), and SW1030 (ignitability). The tested intervals were selected in the field targeting soil with visual

observations of substantial product. Archived soil from one of the locations was submitted for bench scale treatability testing. The sample was from a location where benzene was detected above the maximum concentration of contaminant for the TCLP criteria, as defined in 40 CFR 261.24. Three amendments were used: 10 percent Portland cement, 10 percent quicklime, and 5 percent quicklime. The amendments were added individually to aliquots from the sample and the three amended samples submitted for TCLP analysis (VOCs only). Figure 3-2 shows waste characterization sample locations.

The Shelby tubes were submitted to ARI for consolidated undrained triaxial test (CU-Triaxial) and one-dimensional consolidation analysis by ASTM D-4767. Figure 3-3 shows CU-Triaxial and one-dimensional consolidation sample locations. The tubes were stored upright at ARI's refrigerated storage until test initiation, at which time the core was extruded, logged, and loaded onto the testing equipment. One-dimensional consolidation testing was performed on two riverbank sample locations. CU-triaxial testing was performed on the remaining four riverbank sample locations. The strength parameters (friction angle and cohesion) were determined using two methods:

- Setting failure of the samples equal to the maximum deviator stress, or at 15 percent strain, whichever occurs first
- Setting failure of the sample equal to the maximum effective stress ratio

Soil field screening consisted of VOC headspace, hydrogen cyanide (HCN) headspace, and ultraviolet fluorescence. Equal soil volumes along each 2.5 foot interval were collected in sealable plastic bags immediately following sample collection and allowed to volatize for at least 10 minutes. The headspace vapors were then analyzed with a PID equipped with a 10.6 electron volt (eV) bulb. The soil samples were also screened for the presence of manufactured gas plant (MGP) waste using short wavelength (2,500 to 3,000 angstroms) and long wavelength (3,000 to 4,000 angstrom) ultraviolet fluorescence.

Table 3-1 provides the sample ID, location, ground surface elevation, depth interval, collection date, and summarizes the tests performed on each soil sample.

Following receipt of the analytical results from ARI, all soil sample data was validated by LDC in accordance with EPA National Functional Guidelines (EPA 2004, EPA 2008).

3.1.2 Sampling and Analysis Deviations

Several deviations from the riverbank sampling and analysis protocols identified in the QAPP (Anchor QEA 2010a) occurred during the Data Gaps study. These deviations consist of the following:

1. A Shelby tube sample was not collected from borings GST-02, GST-03, and GST-05 because no appropriate cohesive material was present.
2. A sample was not collected from 12.5 to 15 feet in GST-02 because there was no sample recovery from that interval.
3. A sample was not collected from 10 to 15 feet in GST-03 because there was no appropriate material for collection. The sample consisted entirely of broken brick pieces.

3.2 Riverbank Investigation Summary of Results

The following sections summarize riverbank investigation results. Results for the riverbank investigation are summarized in Tables 3-2 through 3-6. Laboratory reports and data validation packages for the analyses are presented in Attachments 6 and 7, respectively.

3.2.1 Geology

The soils encountered in the top of riverbank borings consist of a fill unit overlying native alluvial sediments consisting of interspersed thin layers silt and fine to medium grained sand. On the Gasco property, the fill unit generally consists of gravelly silt with varying amounts of anthropogenic material such as concrete debris, brick debris, metal debris, wood chips, and lampblack. On the Siltronic property (GST-11, GST-13, and GSM-14), the fill unit consists of a medium to coarse grained sand. In the top of riverbank borings, the fill unit ranged in thickness from 16.3 feet in GST-01 to 30.8 feet in GST-11. In the mid-slope borings, the fill unit ranged in thickness from 6.7 feet in GSM-14 to 8.3 feet in GSM-07 and GSM-08. The elevation of the fill/native interface ranged from +15.51 feet North American Vertical Datum of 1988 (NAVD88) at GST-01 to +4.21 feet NAVD88 at GSM-14. Boring logs depicting these observations are presented in Attachment 3-1.

The native soils encountered below the fill unit consist of a discontinuous low to high plasticity silt layer interspersed with thin layers of sandy silt, silty sand, and fine- to medium-grained sand.

3.2.2 Field Screening

Table 3-2 presents the VOC headspace, HCN headspace, and ultraviolet field screening results for the soil samples.

3.2.3 Soil Physical and Chemical Results

Table 3-3 presents the results for soil samples submitted for laboratory analyses of chemical and geotechnical parameters. Laboratory reports and data validation packages for the analyses are presented in Attachments 6 and 7, respectively.

3.2.4 Waste Characterization

Table 3-4presents the waste characterization results and identifies the samples with TCLP results above the TCLP criteria (as defined in 40 CFR 261.24). Benzene was detected in one sample station (GST-09) at concentrations above the associated TCLP criteria. Refer to Figure 3-1 for the location of this sample.

3.2.5 Soil Bench Scale Treatment Test Results

Bench scale treatment testing was conducted on one soil sample station (GST-09) containing benzene at concentrations above its associated TCLP criteria. Soil bench scale treatment testing results are summarized in Table 3-4. All amended samples contained benzene at levels below its TCLP criteria.

3.2.6 CU-Triaxial and Consolidation Testing

Table 3-5 summarizes the test results and presents strength results using both methods described in Section 3.1.1. Table 3-6 presents the estimated pre-consolidation stress, compression ratio, recompression ratio, and coefficient of consolidation for both samples analyzed. The full laboratory report, including graphs, can be found in data package RT85, which is contained in Attachment 6.

3.3 Substantial Presence of Product

Substantial product (as defined in SOW Section 3.6.2.1, without modifying factor 3) was observed in four of the 12 riverbank soil borings at variable depths. Figure 3-4 identifies the riverbank boring locations where substantial product was observed and the depth of the

deepest observation in each boring. Substantial product observations are recorded in the soil boring logs presented in Attachment 3-1.

3.4 Riverbank Health and Safety

The health and safety protocols for riverbank data collection described in the Anchor QEA HASP were generally followed during the riverbank investigation activities. Site workers utilized appropriate personal protection equipment, established work zones with restricted access, conducted daily safety briefings, and conducted routine air monitoring following Anchor QEA HASP protocols. Health and safety daily safety briefing forms and air monitoring records are provided in Attachment 3-2.

Air monitoring in the breathing zone for VOC and HCN vapors was performed during drilling and sampling activities using a handheld PID. No VOC or HCN vapors were detected in the breathing zone during the riverbank investigation activities.

3.5 Riverbank Investigative Derived Waste Management

All riverbank investigative IDW was placed in seven labeled 55-gallon waste drums temporarily staged on site. The drums were checked for water and found to be dry. Riverbank investigation IDW was sampled and disposed at Hillsboro Landfill with the in-water investigation IDW (as described in Section 2.5). All decontamination and wash water was treated by the on-site oil/water separator, carbon remediation system.

3.6 Riverbank Investigation Conclusions and Discussion

The riverbank investigation consisted of the drilling and sampling of nine soil borings to meet data needs relevant to further refinement of the initial Project Area (shown in Figure 1-2), conducting the EE/CA, and completing the design for the Gasco Sediments Site, as laid out in the Final Data Gaps QAPP (Anchor QEA 2010a). The activities and results described in this section meet the Final Data Gaps QAPP objectives for the riverbank investigation and no additional riverbank data gaps have been identified. Investigation findings have been incorporated into the Gasco Sediments Site Draft EE/CA.

4 TRANSITION ZONE WATER AND IN-RIVER GROUNDWATER INVESTIGATION

The following subsections summarize the TZW and in-river groundwater sampling activities.

4.1 Transition Zone Water and In-River Groundwater Sampling Summary

Area 1 TZW[1] and in-river groundwater were sampled by MFA personnel from September 13 to 21, 2010, using a Geoprobe™ drilling unit from a support barge (shown on Figure 4-1). The objectives of the sampling were to: 1) confirm ongoing natural attenuation (based on changes in chlorinated volatile organic compound [CVOC] concentrations in TZW and groundwater); and 2) further characterize the lateral extent of Area 1, the footprint of the dissolved CVOC plume at the mudline beneath the river (based on CVOC concentrations in TZW). Samples were collected from a subset of the locations sampled during the 2004/2005 sampling event to evaluate natural attenuation of TCE and its degradation products in TZW and in-river groundwater, and from several new locations (i.e., GP-201 through GP-207) to further delineate Area 1 TZW impacts. Eleven TZW and five in-river groundwater samples were collected. Sampling locations were identified in the AIR QAPP. Table 4-1 provides the sample ID, location, mudline elevation, depth interval, collection date, and requested tests for the TZW and groundwater samples.

Analytical data for the 2010 Area 1 TZW and in-river groundwater sampling event are summarized in Table 4-2. The analytical results for the 2004/2005 in-river transition zone samples have been previously described in the In-River Investigation Report (MFA 2005a), the Supplemental Investigation Report (MFA 2005b), summarized in the Final Data Gaps QAPP (Anchor QEA 2010), and included for reference in Table 4-2 at locations used for comparison between the two sampling events (i.e., GP30, GP32, GP61, GP38, and GP65).

4.1.1 Summary of Sample Collection and Analysis

Sample collection was completed using methods and equipment consistent with previous investigations and the Final Data Gaps QAPP, and described as follows.

TZW and in-river groundwater samples were collected by lowering a 3-inch-diameter temporary conductor casing into the river to the mudline. A metal disk (approximately 1.5 foot diameter) with a 6-inch flange was attached to the bottom of the conductor casing to minimize

[1] TZW is defined as groundwater collected from up to 1 foot below mudline. The exception is GP32, where a TZW sample was collected from 0 to2 feet below mudline, in order to replicate the 2004 sampling approach.

the infiltration of surface water into the water sampler. A 1.5-inch-outside-diameter Geoprobe™ water sampler was lowered inside the conductor casing to the same vertical location using standard direct push (DP) rods. The water sample screen was decontaminated with successive rinses of hexane and distilled water before each use. A Teflon ring was affixed to the rod to serve as a plunger. After the casing and DP rods were on the mudline, trip rods were extended inside the rods to advance the water sampler to the desired depth and then pulled back, exposing the screen. Samples were collected in the order of shallowest to deepest.

In-river groundwater and TZW samples were analyzed for VOCs by EPA Method 8260B. The results are summarized in Table 4-2, with the appropriate qualifiers assigned. Field Sampling Data Forms are included in Attachment 4. The third-party data validation report (provided in Attachment 7) is discussed in Section 5.

4.1.1 Sampling and Analysis Deviations

During the in-river groundwater sampling, well casing was inadvertently withdrawn from two boreholes (GP-61 at 5 feet below mudline [bml] and GP-65 at 3.7 feet bml) before bentonite grout was injected for abandonment. A FCR form (provided in Attachment 1) was submitted to the EPA documenting this deviation from the Data Gaps FSP.

The Final Data Gaps QAPP specified a 2-foot diameter isolation disc with a flange to isolate TZW from the overlaying surface water. Because the moonhole on the work barge was less than 2 feet in diameter, a 1.5-foot diameter isolation disk and flange were substituted.

4.2 Transition Zone Water and In-River Groundwater Summary of CVOC Results

TCE was detected in five samples. Concentrations ranged from 0.22 milligrams per liter (µg/L) (GP65-W-3.0) to 2 µg/L (GP30-W-50.0) (see Table 4-3 for a summary of TCE and degradation product analytical results, and Figure 4-2). *Cis*-1,2-dichloroethene (cis-1,2-DCE) was detected in 13 samples. Concentrations ranged from 0.26 µg/L (GP203-W-1.0) to 526 µg/L (GP65-W-3.0) (see Table 4-3 and Figure 4-2). Cis-1,2-DCE is the primary degradation product of TCE under anaerobic conditions. *Trans*-1,2-dichloethene (trans-1,2-DCE) (the secondary degradation product of TCE) was detected in two samples. Concentrations ranged from 1.47 µg/L (GP200-W-1.0) to 1.84 µg/L (GP65-W-3.0). 1,1-dichloroethene (1,1-DCE) (the tertiary anaerobic degradation product of TCE) was detected in three samples. Concentrations ranged from 0.23

µg/L (GP38-W-1.0) to 2.53 µg/L (GP200-W-1.0). Vinyl chloride (VC) was detected in 12 samples. Concentrations ranged from 0.95 µg/L (GP32-W-2.0) to 1880 µg/L (GP-30-W-25.0) (see Table 4-3 and Figure 4-2). VC is the degradation product of dichloroethene (DCE) isomers.

4.2.1 Comparison to Screening Criteria

TCE was detected in five samples; cis-1,2-DCE was detected in 13 samples, and VC was detected in 11 samples. Similar to the screening performed in 2005, the results were compared to human health risk screening values for fish consumption only (HH-FCO) and Ambient Water Quality Criteria (AWQC) for freshwater (acute and chronic) ecological receptors. Ten of the VC concentrations exceeded the National Recommended Water Quality Criteria for human health, organism only (HH-org) (2.4 µg/L). No other human health risk screening values or ecological risk screening values were exceeded in the TZW or in-river groundwater samples. While there were several VC exceedances of the HH-ORG criteria, concentrations of VC have decreased in all but one location (GP65-W-3.0) since the 2004/2005 sampling event.

4.2.2 In-River Groundwater and Transition Zone Water Chemistry

The objectives of the sampling were to 1) confirm ongoing natural attenuation (based on changes in chlorinated volatile organic compound (CVOC) concentrations in TZW and groundwater); and 2) further characterize the lateral extent of Area 1, the footprint of the dissolved CVOC plume at the mudline beneath the river (based on CVOC concentrations in TZW). As discussed in the following section, the data confirm ongoing natural attenuation, and further indicate that the lateral extent of Area 1 has diminished significantly since the 2004/2005 sampling event.

4.2.2.1 Confirmation of Natural Attenuation

Multiple lines of evidence confirm ongoing natural attenuation by reductive dechlorination, including:

- Decreasing concentrations
- Changes in relative contaminant distribution caused by sequential dechlorination
- Geochemical conditions favoring reductive dechlorination.

Decreasing concentrations over time is a basic, yet significant line of evidence demonstrating the occurrence of natural attenuation. To evaluate concentration changes of TCE and breakdown products, TZW and in-river groundwater data collected in Area 1 during the

2004/2005 sampling event are compared to collocated TZW and in-river groundwater data collected in 2010 (see Table 4-3).

Concentrations of TCE and TCE primary degradation products from the 2010 sampling event are plotted in Figure 4-2. TCE concentrations have decreased in all TZW and in-river groundwater samples, with the exception of GP-32 at 24 feet, which were non-detect in both sampling events (see Table 4-3). The greatest reduction in TCE concentrations occurred in GP-30 and GP-65. Note that the rate of TCE and other daughter product concentration decreases are independent of the sample depth.

Concentrations of cis-1,2-DCE have decreased in all TZW and in-river groundwater samples collected during the 2004/2005 and 2010 sampling events (see Table 4-3). The most significant cis-1,2-DCE decreases have occurred at GP-65 (at 1 and 3 feet bml) and at GP-30 and GP-32. Figure 4-2 shows concentrations of VC collected in TZW and in-river groundwater samples from 2010. Concentrations have decreased most significantly at GP-32, with reductions occurring at all other locations with the exception of GP-65. Concentrations of cis-1,2-DCE and VC at GP-32 (at 2 feet bml) likely represent recently completed (i.e., tail-end) dechlorination in this portion of the plume (see Table 4-3) as demonstrated by the steep VC concentration gradient. In 2010, concentrations of VC were higher than concentrations of cis-1,2-DCE at most locations, suggesting that degradation of cis-1,2-DCE has progressed significantly since 2004/2005.

Concentrations of TCE in TZW and in-river groundwater have all reduced to levels near or below the detection limit in all but two samples (GP-30 at 25 and 50 feet bml). However, the presence of cis-1,2-DCE and VC at GP-30 in 2010 suggest that degradation is still actively occurring at this location. Sharply decreasing cis-1,2-DCE concentrations at GP-65 coupled with slightly increasing concentrations of VC in the same location suggest that degradation is currently occurring at this location as well. Large reductions in TCE daughter product concentrations demonstrated in all TZW and in-river groundwater samples suggest that degradation by reductive dechlorination has occurred, or is occurring (e.g., GP-65 and GP-30), throughout the downgradient portion of the plume.

Changes in relative percent composition of degradation products also confirm ongoing attenuation. As reductive dechlorination occurs, the relative composition of DCE isomers decreases with a relative increase in VC. Figure 4-3 compares the percent composition (based

on molar concentrations, which normalize the comparison units between the different compounds) of cis-1,2-DCE, and VC between the 2004/2005 and 2010 data sets. In every sample, the percent composition of VC has increased relative to cis-1,2-DCE, confirming ongoing reductive dechlorination. As shown in Figure 4-4, the total molar mass (i.e., the mole sum of TCE and breakdown products, which is used to compare stoichiometric equivalents among the different compounds) has decreased in all of the replicated sample locations, confirming a net loss of CVOCs.

Geochemical conditions favoring biodegradation are an important line of evidence in demonstrating the efficacy of natural attenuation (EPA 1999). Hydrogeologic and geochemical data can be used to indirectly demonstrate the type(s) of natural attenuation processes active at the Gasco Sediments Site. Of the pertinent geochemical data, the concentration of dissolved oxygen (DO) and the oxidation reduction potential (ORP) are the most important for determining if subsurface conditions supporting biodegradation are present (EPA 1998).

TZW and in-river groundwater physical field parameters recorded during the 2010 sampling event are summarized in Table 4-4. The range of DO and ORP values in TZW and in-river groundwater samples occur in the range favoring reductive dechlorination at all locations. The low DO values and the strongly negative ORP values found at all locations are both requisites to support microbial dechlorination (EPA 1998).

4.2.2.2 *Updated Lateral Extent of Area 1*

Concentrations of TCE, cis-1,2-DCE, and VC from the 2010 and 2004/2005 sampling events were modeled using the environmental visualization system (EVS) software package. The isoconcentrations shown on Figures 4-5 through 4-7 were drawn using the 2-dimensional kriging routine in the EVS software for TZW samples. Each figure compares the 2004/2005 data set with the combination of the 2004/2005 and 2010 TZW data sets. Replicate TZW data collected in 2010 from locations GP30, GP32, GP38, and GP65 replaced the 2004/2005 TZW from these locations; otherwise, all TZW data from 2004/2005 were assumed to remain stable. This assumption is conservative and likely overestimates the true lateral extent of Area 1, because as noted in section 4.2.2, the overall contaminant mass decreased significantly. The software was

used to determine isoconcentration boundaries for the 2010 and 2004/2005 sampling events based on the following screening criteria[2]:

- TCE exceeding 3.0 μg/L
- Cis-1,2-DCE exceeding 70 μg/L
- VC exceeding 2.4 μg/L

The modeled isoconcentration boundaries for the 2010 and 2004/2005 sampling event for TCE are presented in Figure 4-5. Because TCE was not detected at concentrations greater than 3 μg/L during the 2010 sampling event, no isoconcentration boundary was determined for the 2010 sampling event. The reduction in area (i.e., from 0.08 acres to 0 acres) between the two events is therefore 100 percent. Concentrations of TCE exceeding 3.0 μg/L in 2004/2005 were generally localized in the center of Area 1.

The modeled isoconcentration boundaries for the 2010 and 2004/2005 sampling event for cis-1,2-DCE are presented in Figure 4-6. The isoconcentration boundary of cis-1,2-DCE above 70 μg/L was smaller for the 2010 sampling event than for the 2004/2005 sampling event. The reduction in area (i.e., from 0.62 acres to 0.19 acres) between the two events was calculated to be 70.2 percent. Concentrations of cis-1,2-DCE exceeding 70 μg/L were generally localized to the center of Area 1.

The modeled isoconcentration boundaries for the 2010 and 2004/2005 sampling event for VC is presented in Figure 4-7. The isoconcentration boundary VC above the 2.4 ug/L screening level was smaller for the 2010 sampling event than for the 2004/2005 sampling event. The reduction in area (i.e., from 2.2 acres to 1.4 acres) between the two events was calculated to be 35.9 percent.

4.3 Transition Zone Water and In-River Groundwater Investigation Conclusions and Discussion

The following conclusions have been developed based upon the TZW and in-river groundwater data collected to date:

[2] DEQ directed the use of these screening criteria in 2005 for the purpose of mapping TZW data and prioritizing the site for upland source control. These criteria were carried forward with the 2010 data set for consistency. Trans-1,2-DCE and 1,1-DCE were not mapped due to a lack of screening criteria exceedances.

1. During the recent sampling, TCE was detected in five samples; cis-1,2-DCE was detected in 13 samples, and VC was detected in 12 samples. Ten of the VC concentrations exceeded the HH-org (2.4 μg/L). No other human health risk screening values or ecological risk screening values were exceeded in the TZW or in-river groundwater samples.
2. While there were several VC exceedances of the HH-org criteria, concentrations of VC have decreased in all but one location (GP65-W-3) since the 2004/2005 sampling event.
3. Natural attenuation of TCE and its degradation products by reductive dechlorination has been confirmed as an ongoing process.
4. Based upon isoconcentration contours for cis-1,2-DCE and VC, the lateral extent of Area 1 has been reduced respectively by 70 percent (from 0.62 acres to 0.19 acres) and 35 per cent (from 2.2 acres to 1.4 acres) since 2004/2005, respectively. TCE is not present above the HH-org screening level value.

4.4 Transition Zone Water and Groundwater Data Gaps

The potential data gaps driving the investigation of Area 1 TZW and groundwater included 1) determining whether or not natural attenuation is occurring; and 2) further evaluating the lateral extent of Area 1. As noted previously, the data show that natural attenuation by reductive dechlorination is occurring, and the lateral extent of Area 1 has significantly diminished since collection of the 2004/2005 data. No other data gaps remain regarding the nature and extent of TCE and its degradation products in Area 1.

5 PHYSICAL AND CHEMICAL DATA QUALITY

This section summarizes project QA objectives for physical and chemical testing data and findings of data validation activities. Biological data is not discussed in this section. These data were reviewed in-house and QA/QC findings are summarized in Attachment 7.

5.1 Testing Labs and Methods

The majority of sediment, soil, and elutriate physical and chemical testing was performed by ARI Laboratory, a Washington State Department of Ecology- (Ecology-) and Oregon Environmental Laboratory Accreditation Program- (ORELAP-) certified laboratory in Tukwila, Washington. Free cyanide was performed at Apex Laboratory in Tigard, Oregon (Ecology- and ORELAP-certified). Corrosivity and ignitability was performed at Spectra Laboratories in Tacoma, Washington. TZW and groundwater VOC testing was performed by Specialty Analytical of Clackamas, Oregon.

All analyses conformed to procedures described in the approved Final Data Gaps QAPP and Final FSP except for the analytical method deviations described in Section 2.1.2, which did not impact data quality. Attachment 6 provides the laboratory reports and Attachment 7 provides the data validation reports.

Chemical testing adhered to one or more of the following QA/QC procedures and analysis protocols: SW-846 (EPA 1986), ASTM, USACE, and Ecology.

5.2 Data Quality Objectives

The Final Data Gaps QAPP was written to support generation of data of sufficient quality to meet data gaps investigation objections. The quality of the laboratory data is assessed by precision, accuracy, representativeness, comparability, and completeness. Applicable quantitative goals for these data quality parameters were listed in Tables A-1 through A-6 of the QAPP. Each parameter is discussed as follows:

- **Precision:** Laboratory precision was measured with laboratory control sample (LCS)/ laboratory control sample duplicate (LCSD) analyses; matrix spike (MS)/matrix spike duplicate (MSD) analyses; and laboratory duplicate analyses. Precision goals were generally met, and in cases where they were not, data were qualified as estimated per EPA National Functional Guidelines (EPA 2004, 2008).
- **Accuracy and Bias:** Accuracy was measured with initial and ongoing calibrations,

surrogate spikes, LCS/LCSD, and MS/MSD sample percent recoveries. Accuracy goals were generally met, and in cases where they were not, data were qualified as estimated per National Functional Guidelines (EPA 2004, 2008). In these instances, the usability of the data was determined by the extent of the exceedance. The validation reports submitted in Attachment 7 specify the specific outliers and whether the bias was high or low.

- **Representativeness:** The list of analytes was identified to provide a comprehensive assessment of the known and potential contaminants at the site.
- **Comparability:** The laboratory used common traceable calibration standards, spiking standards, and reference materials. Specific information can be found in the laboratory data packages.
- **Completeness:** Completeness is a measure of the amount of data determined to be valid in proportion to the amount of data collected. The completeness goal of 90 percent was met.

5.3 Quality Assurance/Quality Control Findings

The overall data QA/QC program for the Data Gaps Investigation evaluation followed procedures detailed in the QAPP, which are consistent with current EPA protocols. QA/QC steps and findings are discussed in the following sections.

5.3.1 Field Quality Assurance/Quality Control

Field QA/QC procedures used for this project included using unique sample identification, the collection of field blanks and rinse blanks to measure potential field and equipment contamination, collection of trip blanks to measure VOC field/transport contamination, and the collection of field duplicates to measure sample homogenization precision. Field QA/QC samples and results are briefly discussed below and summarized in Tables 5-1a (soil and sediment) and 5-1b (TZW and groundwater).

5.3.1.1 Sample Identification

Each sediment and soil sample were assigned a unique identifier, which included the location ID, matrix ID, depth interval (except for surface grabs), and collection date (e.g., DGS-03SC-0001-101005 is a sediment core collected from location DGS-03 at a depth of 0 to 1 feet, collected on October 5, 2010).

5.3.1.2 *Field, Rinse, and Trip Blanks*

A field blank and rinse blank were collected for each type of sampling equipment utilized (surface grabs, sediment cores, and soil borings). No analytes were detected in the field and rinse blank samples, except toluene at 0.3 µg/L in the field and rinse blank collected with the retesting surface grab sampling event. All associated results were either non-detect or significantly higher (greater than five times) than the blank concentration.

VOC samples were consolidated into coolers with a designated trip blank. All trip blanks were free of VOC compounds with the exception of chloromethane in Trip Blank 1009120-07 from the TZW and groundwater sampling event. Chloromethane was non-detect in all associated samples.

5.3.1.3 *Field Duplicates*

Field duplicates were collected to measure sample homogenization precision. Summaries of the field duplicate relative percent difference (RPD) values can be found in the associated data validation reports (Attachment 7). The precision (calculated RPD) between the sample and duplicate were screened against 50 percent; however, when concentrations are below or near (less than five times) the reporting limit (RL), the RPD values were considered insignificant because the percent error increases as the number approaches the method reporting limit (MRL). The following signification high RPD values were identified:

- The duplicate of sample GST-02SO-25-30-101004 yielded three significantly high RPD values in the SVOC analysis, one significant RPD value in the VOC analysis, and four significant RPD values in the EPH analysis.
- The duplicate of sample DGS-03SC-0408-101005 yielded 15 significantly high RPD values in the SVOC analysis, one significant RPD value in the VOC analysis, and one significant RPD value in the pesticide analysis.
- The duplicate of samples DGS-31SG-101012 and DGS-12SG-110418 yielded one significantly high RPD value in the SVOC analysis.
- The duplicate of sample DGS-47SG-110420 yielded a significantly high RPD value of cyanide.
- The duplicate of sample DGS-48SG-110420 yielded 18 significantly high RPD values in the SVOC analysis.

In summary, 44 out of approximately 889 results (5 percent) yielded RPD values that exceeded 50 percent. The SVOC fraction of samples DGS-03SC-0408-101005 and DGS-48SG-110420 encompassed the majority (33) of these values, suggesting analyte-specific matrix interference issues rather than sample heterogeneity. Overall, with the exception mentioned previously, the field duplicate precision was within project data quality objectives indicating that samples were thoroughly homogenized.

5.3.2 Chain of Custody

Chain–of-custody (COC) forms were used to track sample custody and document the proper handling and integrity of the samples. After preparation, all sample containers were delivered to the analytical laboratory according to appropriate sample handling procedures (i.e., transported at <6 degrees Celsius [°C]). All sediment and soil samples were picked up by a private courier service and relinquished under signature by Anchor QEA staff or securely sealed in coolers with signed custody seals. At the lab, samples were logged in and then immediately placed in refrigerated storage; some samples were placed in frozen storage for archiving.

In-river groundwater and TZW samples were placed on ice in laboratory-supplied shipping containers immediately after the samples were collected. A representative of the analytical laboratory met MFA personnel on site to complete COC paperwork at the time that samples were relinquished to the laboratory.

The COC forms are included in Attachment 5 as well as with the corresponding laboratory reports in Attachment 6.

5.3.3 Laboratory Quality Assurance/Quality Control

Project-specific control limits were used to assess the precision and accuracy of method blank, LCS/LCSD, MS/MSD, and laboratory replicate samples. Laboratory-generated control limits were used to assess the accuracy of surrogate spike recoveries. Method-specific criteria were used to assess the accuracy of the initial and continuing calibrations. The project-specific control limits (data quality objectives) and frequencies of these QC samples are listed in Tables A-2, A-3, A- 4, and A-5 of the QAPP. Any QC results that exceeded these criteria were qualified in the validation process. A summary of all qualified data can be found in the data validation reports in Attachment 7.

5.3.4 Data Review and Validation

All sediment and soil chemical data submitted in this Report were validated by LDC under EPA guidelines (SW-846) and the National Functional Guidelines for Data Review (EPA 2004, 2008). Ninety percent of the sediment/soil data received a Level III data validation and 10 percent of the data received a Level IV validation. In-river groundwater and TZW data collected by MFA were submitted for an EPA Level IV validation by LDC. Data validation reports are provided in Attachment 7.

Data validation verified the accuracy and precision of chemical determinations performed during this investigation. Data qualifiers assigned as a result of the data validation and their definitions are shown on each of the respective analytical results tables. Data may have been qualified as biased or estimated for a particular analysis based on method or technical criteria. Data qualified with a "J" indicates that the associated numerical value is the approximate concentration of the analyte. Data qualified with a "UJ" indicates the approximate RL, below which the analyte was not detected. Consequently, these data qualifications are not expected to impact the data quality objectives.

All sediment and soil data were determined to be useable as reported from the laboratory or as qualified in this Report for the purposes of the Data Gaps investigation objectives, except for the results listed in Table 5-2, as follows. Due to low MS/MSD percent recoveries, hexachlorobenzene and pyridine were each rejected in one sample. Other rejections included several VOCs in four samples due to hold time issues and 4,4'-dichlorodiphenyltrichloroethane (DDT) in three samples due to breakdown product percent recovery failure. Most of the rejections were associated with bulk sediment VOC samples that were not part of the primary data gaps investigation and were added to provide additional information (bulk chemistry concentrations) for DRET, TCLP, and SBLT analyses. Additionally, LDC assigned an advisory "R" qualifier to the least-technically acceptable result if more than one result was reported by the laboratory (i.e., dilution). These rejections do not impact the completeness of the data and have not been included in Table 5-2.

The groundwater and TZW data review found that the analysis was conducted within all specifications of the method, and that no results were rejected in the sample group. The QC criteria were met and considered acceptable.

As detailed in Attachment 8 of this Report, a data quality review of the initial and retest sediment bioassay tests was conducted to verify that test results met appropriate QA/QC performance criteria established for these freshwater bioassay tests. The freshwater sediment toxicity tests were conducted in accordance with available standard protocols (EPA 2000; ASTM 2001) by Northwest Aquatic Sciences (NAS). The sediment toxicity test data quality review compared test results and conditions against QA/QC performance criteria provided in the *Final Data Gaps Quality Assurance Project Plan* (Anchor QEA 2010c) and the *Sediment Evaluation Framework for the Pacific Northwest* (SEF; USACE et al. 2009). Test conditions for the bioassays are presented in the NAS bioassay laboratory reports (see Attachment 8). The data quality review determined that the initial amphipod bioassay results and the retest midge bioassay results meet required criteria and the results are appropriate for their intended uses.

Despite the rejections discussed, the overall completeness goal of 90 percent for the project was met. Out of approximately 23,370 data points, 60 were rejected or incomplete, resulting in a completeness recovery of 99.7 percent. Rejected data will not be used for any purpose. Unqualified and J-qualified data is usable for all purposes in the EE/CA.

5.3.5 Additional QA/QC Findings

Sample temperature was measured by the analytical laboratory upon receipt. The temperatures recorded by ARI for one shipment of samples—nine coolers containing surface sediment grab samples from the initial sampling event—are above the recommended temperature of 6°C (9.3°C, 7.6°C, 10.0°C, 14.4°C, 10.2°C, 11.8°C, 12.1°C, 10.0°C, and 10.5°C, respectively), resulting in qualified (estimated) VOC results for these samples. The temperatures recorded for all other sample shipments were below 6°C.

Due to laboratory oversight, VOCs were not analyzed or analyzed out of hold in several of the bulk sediment samples associated with the elutriate samples (DRET and SBLT). Associated VOC results were either rejected or qualified as estimated if detected.

ARI encountered some analytical difficulties during the grain size analysis for samples GST-02SO-15-20-101004, GST-02SO-20-25-101004, GST-03SO-0-5-101005, GST-03SO-15-20-101005, GST-04SO-0-5-101006, and GST-04SO-10-12-101006. The laboratory described a "tar-like" material, likely lampblack, that melted into one large mass during the oven-drying step. Grain size could not be reported for these six samples. Additionally, insufficient sample volume was

available for grainsize analysis on samples DGS-13SC-0001-101005 and DGS-18SC-0001-101008. These findings are summarized in Table 5-2.

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TABLES

Table 2-1a
Data Gaps Surface Sediment Grab Sample Summary - Initial Event

Station ID	Sample ID	Sample Type	X Coordinates[1]	Y Coordinates[1]	Mudline Elevation (feet) NAVD88	Start Depth (cm)	End Depth (cm)	Sample Date/Time	Analyses
DGS-01	DGS-01SG-101014	N	7623322.11	706359.32	-47.0	0	30	10/14/2010 10:18	Bulk Chemistry[3], Bioassay[4], VPH, EPH
DGS-02	DGS-02SG-101014	N	7623228.10	706284.44	-37.9	0	30	10/14/2010 8:29	Bulk Chemistry[3], Bioassay[4]
DGS-04	DGS-04SG-101013	N	7623223.77	706108.32	-0.3	0	25	10/13/2010 16:16	Bulk Chemistry[3], Bioassay[4], VPH, EPH
DGS-05	DGS-05SG-101014	N	7623539.94	706229.39	-39.1	0	27	10/14/2010 11:02	Bulk Chemistry[3], Bioassay[4]
DGS-06	DGS-06SG-101014	N	7623483.30	706131.94	-39.7	0	29	10/14/2010 11:46	Bulk Chemistry[3], Bioassay[4], VPH, EPH
DGS-08	DGS-08SG-101013	N	7623745.40	706117.74	-39.1	0	30	10/13/2010 13:56	Bulk Chemistry[3], Bioassay[4], VPH, EPH
DGS-09	DGS-09SG-101013	N	7623678.65	706014.80	-40.5	0	30	10/13/2010 15:18	Bulk Chemistry[3], Bioassay[4]
DGS-12	DGS-12SG-101013	N	7624007.08	705948.35	-39.7	0	27	10/13/2010 13:16	Bulk Chemistry[3], Bioassay[4], VPH, EPH
DGS-13	DGS-13SG-101013	N	7623954.73	705844.04	-37.9	0	30	10/13/2010 14:40	Bulk Chemistry[3], Bioassay[4], VPH, EPH
DGS-16	DGS-16SG-101013	N	7624267.37	705815.66	-40.0	0	26	10/13/2010 11:12	Bulk Chemistry[3], Bioassay[4]
DGS-17	DGS-17SG-101013	N	7624198.11	705698.99	-35.4	0	30	10/13/2010 12:30	Bulk Chemistry[3], Bioassay[4]
DGS-20	DGS-20SG-101013	N	7624444.28	705727.19	-40.4	0	30	10/13/2010 9:37	Bulk Chemistry[3], Bioassay[4], VPH, EPH
DGS-21	DGS-21SG-101013	N	7624377.83	705596.34	-34.9	0	30	10/13/2010 10:19	Bulk Chemistry[3], Bioassay[4], VPH, EPH
DGS-25	DGS-25SG-101012	N	7624755.45	705542.20	-41.5	0	26	10/12/2010 16:11	Bulk Chemistry[3], Bioassay[4], VPH, EPH
DGS-26	DGS-26SG-101013	N	7624696.34	705438.86	-37.3	0	30	10/13/2010 8:56	Bulk Chemistry[3], Bioassay[4], VPH, EPH
DGS-30	DGS-30SG-101012	N	7625043.78	705375.67	-40.7	0	29	10/12/2010 10:02	Bulk Chemistry[3], Bioassay[4], VPH, EPH
DGS-31	DGS-31SG-101012	N	7624935.60	705259.11	-36.6	0	30	10/12/2010 14:51	Bulk Chemistry[3], Bioassay[4], VPH, EPH
	DGS-81SG-101012[2]	FD	7624935.60	705259.11	-36.6	0	30	10/12/2010 14:53	Bulk Chemistry[3]
DGS-33	DGS-33SG-101012	N	7625203.25	705260.21	-38.9	0	29	10/12/2010 11:10	Bulk Chemistry[3], Bioassay[4]
DGS-34	DGS-34SG-101012	N	7625253.15	705060.94	-38.0	0	30	10/12/2010 12:43	Bulk Chemistry[3], Bioassay[4], VPH, EPH
DGS-35	DGS-35SG-101012	N	7625264.42	704938.49	-10.1	0	27	10/12/2010 13:35	Bulk Chemistry[3], Bioassay[4]
U2C-2	U2C-2-101014	REF[5]	7645834.70	665245.07	1.6	0	25	10/14/2010 13:50	Bulk Chemistry[3], Bioassay[4]
U4Q-1	U4Q-1-101014	REF[5]	7651295.12	652812.24	0.2	0	30	10/14/2010 15:24	Bulk Chemistry[3], Bioassay[4]
U4Q-2	U4Q-2-101014	REF[5]	7651368.21	652871.63	5.7	0	25	10/14/2010 14:46	Bulk Chemistry[3], Bioassay[4]

Table 2-1a
Data Gaps Surface Sediment Grab Sample Summary - Initial Event

Notes:

cm = centimeters

EPH = Extractable Petroleum Hydrocarbons

FD = field duplicate

N = normal

NAVD88 = North American Vertical Datum 1988

REF = reference

VPH = volatile petroleum hydrocarbons

Footnotes

1 = Coordinates are provided in northing and easting in North American Datum (NAD)83HARN, Oregon State Plane, North International Feet.

2 = DGS-81SG-101012 is a field duplicate of DGS-31SG-101012.

3 = Bulk Chemistry testing included total solids (TS), total organic carbon (TOC), Cyanide, Ammonia, Sulfide, Metals, semivolatile organic compounds (SVOCs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), Pesticides, total petroleum hydrocarbons (TPH; see FSP Table 1-1 for individual analytes).

4 = Bioassay testing included 28-day chronic Hyalella azteca toxicity test, 10-day acute Chironomus dilutus toxicity test.

5 = Reference sediments were selected based on the sampling locations used in the Portland Harbor Remedial Investigation/Feasibility Study (RI/FS) Baseline Ecological Risk Assessment.

Table 2-1b
Data Gaps Surface Sediment Grab Sample Summary - Retested Event

Station ID	Sample ID	Sample Type	X Coordinates[1]	Y Coordinates[1]	Mudline Elevation (feet) NAVD88	Start Depth (cm)	End Depth (cm)	Sample Date/Time	Analyses
DGS-01	DGS-01SG-110420	N	7623279.45	706381.91	-51	0	23	4/20/2011 11:10	Bulk Chemistry[3], Bioassay[4]
DGS-02	DGS-02SG-110420	N	7623227.86	706288.03	-37.2	0	29	4/20/2011 10:31	Bulk Chemistry[3], Bioassay[4]
DGS-04	DGS-04SG-110420	N	7623226.96	706106.41	0.93	0	29	4/20/2011 9:53	Bulk Chemistry[3], Bioassay[4]
DGS-05	DGS-05SG-110418	N	7623539.09	706228.02	-40.1	0	25	4/18/2011 11:28	Bulk Chemistry[3], Bioassay[4]
DGS-06	DGS-06SG-110420	N	7623484.72	706127.89	-41	0	26	4/20/2011 9:17	Bulk Chemistry[3], Bioassay[4]
DGS-08	DGS-08SG-110418	N	7623736.22	706110.28	-40.5	0	25	4/18/2011 9:47	Bulk Chemistry[3], Bioassay[4]
DGS-09	DGS-09SG-110418	N	7623680.82	706015.96	-40	0	27	4/18/2011 10:42	Bulk Chemistry[3], Bioassay[4]
DGS-12	DGS-12SG-110418	N	7624011.73	705946.58	-39.6	0	25	4/18/2011 13:17	Bulk Chemistry[3], Bioassay[4]
	DGS-62SG-110418[2]	FD	7624011.73	705946.58	-39.6	0	25	4/18/2011 13:19	Bulk Chemistry[3] (except VOC)
DGS-13	DGS-13SG-110418	N	7623948.96	705851.43	-41.4	0	26	4/18/2011 14:06	Bulk Chemistry[3], Bioassay[4]
DGS-16	DGS-16SG-110418	N	7624271.74	705819.19	-40.4	0	25	4/18/2011 14:55	Bulk Chemistry[3], Bioassay[4]
	DGS-66SG-110418[2]	FD	7624271.74	705819.19	-40.4	0	25	4/18/2011 14:58	VOC
DGS-17	DGS-17SG-110418	N	7624199.98	705701.86	-35.8	0	28.5	4/18/2011 15:32	Bulk Chemistry[3], Bioassay[4]
DGS-20	DGS-20SG-110419	N	7624447.84	705724.90	-41.1	0	27	4/19/2011 8:49	Bulk Chemistry[3], Bioassay[4]
DGS-21	DGS-21SG-110419	N	7624377.23	705593.37	-36.5	0	27.5	4/19/2011 14:20	Bulk Chemistry[3], Bioassay[4]
DGS-25	DGS-25SG-110419	N	7624760.13	705541.71	-42.7	0	25	4/19/2011 9:41	Bulk Chemistry[3], Bioassay[4]
DGS-26	DGS-26SG-110419	N	7624659.74	705424.69	-35.8	0	26.5	4/19/2011 15:01	Bulk Chemistry[3], Bioassay[4]
DGS-30	DGS-30SG-110419	N	7625047.24	705374.29	-42.6	0	25	4/19/2011 10:23	Bulk Chemistry[3], Bioassay[4]
DGS-31	DGS-31SG-110419	N	7624930.88	705256.75	-35.9	0	27	4/19/2011 15:34	Bulk Chemistry[3], Bioassay[4]
DGS-33	DGS-33SG-110419	N	7625206.43	705266.87	-40.2	0	25	4/19/2011 11:31	Bulk Chemistry[3], Bioassay[4]
DGS-34	DGS-34SG-110419	N	7625255.95	705069.31	-37	0	26	4/19/2011 12:38	Bulk Chemistry[3], Bioassay[4]
DGS-35	DGS-35SG-110419	N	7625266.49	704940.56	-9.9	0	26.5	4/19/2011 13:39	Bulk Chemistry[3], Bioassay[4]
DGS-46	DGS-46SG-110420	N	7623239.07	706494.78	-53.7	0	23.8	4/20/2011 14:26	NH3, S2, VOC, VPH, EPH
DGS-47	DGS-47SG-110420	N	7623137.99	706341.13	-35.1	0	24.5	4/20/2011 13:44	NH3, S2, VOC, VPH, EPH
	DGS-97SG-110420[2]	FD	7623137.99	706341.13	-35.1	0	24.5	4/20/2011 13:47	NH3, S2, VOC, VPH, EPH
DGS-48	DGS-48SG-110420	N	7623603.13	706528.73	-44.8	0	25	4/20/2011 12:33	Bulk Chemistry[3], VPH, EPH
	DGS-98SG-110420[2]	FD	7623603.13	706528.73	-44.8	0	25	4/20/2011 12:33	Bulk Chemistry[3]
DGS-49	DGS-49SG-110420	N	7623963.83	706168.05	-39.3	0	24	4/20/2011 13:03	Bulk Chemistry[3], VPH, EPH
DGS-50	DGS-50SG-110420	N	7624957.49	705538.75	-44.4	0	24.5	4/20/2011 15:04	NH3, S2, VOC, VPH, EPH
DGS-51	DGS-51SG-110421	N	7625137.21	705413.30	-40.2	0	25	4/20/2011 8:51	NH3, S2, VOC, VPH, EPH
DGS-52	DGS-52SG-110421	N	7625344.79	705193.34	-42.1	0	25	4/20/2011 8:00	NH3, S2, VOC, VPH, EPH

Table 2-1b
Data Gaps Surface Sediment Grab Sample Summary - Retested Event

Station ID	Sample ID	Sample Type	X Coordinates[1]	Y Coordinates[1]	Mudline Elevation (feet) NAVD88	Start Depth (cm)	End Depth (cm)	Sample Date/Time	Analyses
DGS-53	DGS-53SG-110420	N	7625403.33	704988.72	-34.6	0	24	4/20/2011 16:18	Bulk Chemistry[3], VPH, EPH
U3C2	U3C2SG-110421	REF[5]	7647673.95	659839.92	-77.3	0	25	4/20/2011 12:00	Bulk Chemistry[3], Bioassay[4]
U4Q1	U4Q1SG-110421	REF[5]	7651293.36	652815.51	1.7	0	24	4/20/2011 13:37	Bulk Chemistry[3], Bioassay[4]
U4Q2	U4Q2SG-110421	REF[5]	7651375.30	652868.04	5.5	0	28.8	4/20/2011 12:55	Bulk Chemistry[3], Bioassay[4]

Notes:
cm = centimeters

EPH = Extractable Petroleum Hydrocarbons

FD = field duplicate

ft = feet

N = normal

NAVD88 = North American Vertical Datum 1988

NH3 = ammonia

REF = reference

S2 = Sulfide

VOC = volatile organic compunds

VPH = volatile petroleum hydrocarbons

Footnotes

1 = Coordinates are provided in northing and easting in North American Datum 1983 (NAD 83) High Accuracy Reference Network, Oregon State Plane, North International Feet.

2 = DGS-62SG-110418 is a FD of DGS-12SG-110418; DGS-66SG-110418 is a FD of DGS-16SG-110418; DGS-97SG-110420 is a FD of DGS-47SG-110420; and DGS-98SG-110420 is a FD of DGS-48SG-110420.

3 = Bulk Chemistry testing included total solids (TS), total organic carbon (TOC), Cyanide, Ammonia, Sulfide, Metals, semivolatile organic compounds (SVOCs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), Pesticides, total petroleum hydrocarbons (TPH; see FSP Table 1-1 for individual analytes).

4 = Bioassay testing included a 10-day acute Chironomus dilutus toxicity test.

5 = Reference sediments were selected based on the sampling locations used in the Portland Harbor Remedial Investigation/Feasibility Study (RI/FS) Baseline Ecological Risk Assessment.

Table 2-2
Data Gaps Sediment Core Sample Summary

Station ID	Sample ID	Sample Type	X Coordinates[1]	Y Coordinates[1]	Mudline Elevation (feet) NAVD88	Start Depth (feet)	End Depth (feet)	Sample Date/Time	Analyses
DGS-03	DGS-03SC-0001-101005	N	7623187.59	706214.27	-24.6	0	1	10/5/2010 15:58	Bulk Chemistry[6]
	DGS-03SC-0104-101005	N				1	4	10/5/2010 16:00	Bulk Chemistry[6]
	DGS-03SC-0408-101005	N				4	8	10/5/2010 16:00	Bulk Chemistry[6]
	DGS-53SC-0408-101005[2]	FD				4	8	10/5/2010 16:00	Bulk Chemistry[6]
	DGS-03SC-0812-101005	N				8	12	10/5/2010 16:02	Bulk Chemistry[6]
	DGS-03SC-1215.3-101005	N				12	15.3	10/5/2010 16:39	Bulk Chemistry[6]
DGS-06	DGS-06SC-0001-101007	N	7623484.05	706132.96	-40.3	0	1	10/7/2010 15:16	Bulk Chemistry[6]
	DGS-06SC-0104-101007	N				1	4	10/7/2010 15:16	Bulk Chemistry[6]
	DGS-06SC-0408-101007	N				4	8	10/7/2010 15:18	Bulk Chemistry[6]
	DGS-06SC-0812-101007	N				8	12	10/7/2010 15:18	Bulk Chemistry[6]
	DGS-06SC-1216-101007	N				12	16	10/7/2010 15:20	Bulk Chemistry[6]
	DGS-06SC-1616.6-101007	N				16	16.6	10/7/2010 15:20	Bulk Chemistry[6]
DGS-07	DGS-07SC-0001-101012	N	7623500.23	705913.04	-0.8	0	1	10/12/2010 15:42	Bulk Chemistry[6]
	DGS-07SC-0104-101012	N				1	4	10/12/2010 15:44	Bulk Chemistry[6]
	DGS-07SC-0113.4-101012	N				1	13.4	10/12/2010 15:45	SBLT[9], TCLP[10]
	DGS-07SC-0408-101012	N				4	8	10/12/2010 15:45	Bulk Chemistry[6]
	DGS-07SC-0812-101012	N				8	12	10/12/2010 15:45	Bulk Chemistry[6]
	DGS-07SC-1213.4-101012	N				12	13.4	10/12/2010 15:42	Bulk Chemistry[6]
DGS-08	DGS-08SC-0001-101007	N	7623746.04	706120.82	-39.1	0	1	10/7/2010 8:52	Bulk Chemistry[6]
	DGS-08SC-0104-101007	N				1	4	10/7/2010 8:53	Bulk Chemistry[6]
	DGS-08SC-0408-101007	N				4	8	10/7/2010 8:54	Bulk Chemistry[6]
	DGS-08SC-089.3-101007	N				8	9.3	10/7/2010 8:54	Bulk Chemistry[6]
DGS-10	DGS-10SC-0001-101007	N	7623897.34	706006.74	-39.4	0	1	10/7/2010 13:32	Archive
	DGS-10SC-0104-101007	N				1	4	10/7/2010 13:50	Archive
	DGS-10SC-0408-101007	N				4	8	10/7/2010 13:51	Archive
	DGS-10SC-0812-101007	N				8	12	10/7/2010 13:51	Archive
	DGS-10SC-1212.5-101007	N				12	12.5	10/7/2010 13:51	Archive

Table 2-2
Data Gaps Sediment Core Sample Summary

Station ID	Sample ID	Sample Type	X Coordinates[1]	Y Coordinates[1]	Mudline Elevation (feet) NAVD88	Start Depth (feet)	End Depth (feet)	Sample Date/Time	Analyses
DGS-11	DGS-11SC-0001-101006	N	7623846.55	705910.83	-39.1	0	1	10/6/2010 11:22	Bulk Chemistry[6]
	DGS-11SC-0104-101006	N				1	4	10/6/2010 11:25	Bulk Chemistry[6]
	DGS-11SC-0408-101006	N				4	8	10/6/2010 11:25	Bulk Chemistry[6]
	DGS-11SC-0812-101006	N				8	12	10/6/2010 11:26	Bulk Chemistry[6]
	DGS-11SC-1.58.2-101006	N				1.5	8.2	10/6/2010 13:33	DRET[7], Waste Characterization[8], Bench Scale Treatment[11]
	DGS-11SC-1216-101006	N				12	16	10/6/2010 11:26	Bulk Chemistry[6]
	DGS-11SC-1617.5-101006	N				16	17.5	10/6/2010 12:27	Bulk Chemistry[6]
DGS-13	DGS-13SC-0001-101005	N	7623950.68	705842.69	-38.3	0	1	10/5/2010 12:22	Bulk Chemistry[6, 12]
	DGS-13SC-0006-101005	N				0	6	10/5/2010 14:42	SBLT[9], TCLP[10]
	DGS-13SC-0104-101005	N				1	4	10/5/2010 12:24	Bulk Chemistry[6]
	DGS-13SC-0408-101005	N				4	8	10/5/2010 12:27	Bulk Chemistry[6]
	DGS-13SC-0812-101005	N				8	12	10/5/2010 12:29	Bulk Chemistry[6]
	DGS-13SC-1216-101005	N				12	16	10/5/2010 12:29	Bulk Chemistry[6]
	DGS-13SC-1617-101005	N				16	17	10/5/2010 12:30	Bulk Chemistry[6]
DGS-18	DGS-18SC-0001-101008	N	7624336.27	705714.83	-39.1	0	1	10/8/2010 13:52	Bulk Chemistry[6, 12]
	DGS-18SC-004.5-101008	N				0	4.5	10/8/2010 13:34	DRET[7], Waste Characterization[8]
	DGS-18SC-0104-101008	N				1	4	10/8/2010 13:53	Bulk Chemistry[6]
	DGS-18SC-015.5-101008	N				1	5.5	10/8/2010 13:35	SBLT[9], TCLP[10]
	DGS-18SC-0408-101008	N				4	8	10/8/2010 13:54	Bulk Chemistry[6]
	DGS-18SC-089.6-101008	N				8	9.6	10/8/2010 13:54	Bulk Chemistry[6]
DGS-19	DGS-19SC-0001-101006	N	7624277.12	705623.89	-34.6	0	1	10/6/2010 15:22	Bulk Chemistry[6]
	DGS-19SC-0104-101006	N				1	4	10/6/2010 15:23	Bulk Chemistry[6]
	DGS-19SC-0408-101006	N				4	8	10/6/2010 15:23	Bulk Chemistry[6]
	DGS-19SC-0812-101006	N				8	12	10/6/2010 15:24	Bulk Chemistry[6]
	DGS-19SC-1214.7-101006	N				12	14.7	10/6/2010 16:02	Bulk Chemistry[6]

Table 2-2
Data Gaps Sediment Core Sample Summary

Station ID	Sample ID	Sample Type	X Coordinates[1]	Y Coordinates[1]	Mudline Elevation (feet) NAVD88	Start Depth (feet)	End Depth (feet)	Sample Date/Time	Analyses
DGS-20	DGS-20SC-0001-101008	N	7624442.63	705726.08	-40.9	0	1	10/8/2010 9:17	Bulk Chemistry[6]
	DGS-20SC-0104-101008	N				1	4	10/8/2010 9:18	Bulk Chemistry[6]
	DGS-20SC-0408-101008	N				4	8	10/8/2010 9:18	Bulk Chemistry[6]
	DGS-20SC-0812-101008	N				8	12	10/8/2010 9:19	Bulk Chemistry[6]
	DGS-20SC-1213.7-101008	N				12	13.7	10/8/2010 9:19	Bulk Chemistry[6]
DGS-22	DGS-22SC-0001-101012	N	7624258.40	705482.59	1.3	0	1	10/12/2010 13:42	Bulk Chemistry[6]
	DGS-22SC-0104-101012	N				1	4	10/12/2010 13:42	Bulk Chemistry[6]
	DGS-22SC-0408-101012	N				4	8	10/12/2010 13:43	Bulk Chemistry[6]
	DGS-72SC-0408-101012[3]	FD				4	8	10/12/2010 13:43	Bulk Chemistry[6]
	DGS-22SC-0812-101012	N				8	12	10/12/2010 13:43	Bulk Chemistry[6]
	DGS-22SC-1.92.9-101012	N				1.9	2.9	10/12/2010 13:43	DRET[7], Waste Characterization[8]
	DGS-22SC-1213.3-101012	N				12	13.3	10/12/2010 13:43	Bulk Chemistry[6]
DGS-23	DGS-23SC-0001-101008	N	7624596.94	705618.73	-42.1	0	1	10/8/2010 11:41	Bulk Chemistry[6]
	DGS-23SC-0104-101008	N				1	4	10/8/2010 11:42	Bulk Chemistry[6]
	DGS-23SC-0114.4-101008	N				1	14.4	10/8/2010 11:42	Archive
	DGS-23SC-0408-101008	N				4	8	10/8/2010 11:42	Bulk Chemistry[6]
	DGS-23SC-0812-101008	N				8	12	10/8/2010 11:42	Bulk Chemistry[6]
	DGS-23SC-1214.4-101008	N				12	14.4	10/8/2010 11:42	Bulk Chemistry[6]
DGS-24	DGS-24SC-0001-101012	N	7624505.93	705335.97	0.0	0	1	10/12/2010 9:50	Bulk Chemistry[6]
	DGS-24SC-0104-101012	N				1	4	10/12/2010 9:53	Bulk Chemistry[6]
	DGS-24SC-0408-101012	N				4	8	10/12/2010 9:54	Bulk Chemistry[6]
	DGS-24SC-0811.3-101012	N				8	11.3	10/12/2010 9:54	Bulk Chemistry[6]
	DGS-24SC-6.710.7-101012	N				6.7	10.7	10/12/2010 9:54	DRET[7], Waste Characterization[8], Bench Scale Treatment[11]
DGS-25	DGS-25SC-0001-101007	N	7624758.33	705541.57	-41.7	0	1	10/7/2010 11:20	Bulk Chemistry[6]
	DGS-25SC-0104-101007	N				1	4	10/7/2010 11:21	Bulk Chemistry[6]
	DGS-25SC-0408-101007	N				4	8	10/7/2010 11:22	Bulk Chemistry[6]
	DGS-25SC-0812-101007	N				8	12	10/7/2010 11:23	Bulk Chemistry[6]
	DGS-75SC-0812-101007[4]	FD				8	12	10/7/2010 11:23	Bulk Chemistry[6]
	DGS-25SC-1214.5-101007	N				12	14.5	10/7/2010 11:23	Bulk Chemistry[6]

Table 2-2
Data Gaps Sediment Core Sample Summary

Station ID	Sample ID	Sample Type	X Coordinates[1]	Y Coordinates[1]	Mudline Elevation (feet) NAVD88	Start Depth (feet)	End Depth (feet)	Sample Date/Time	Analyses
DGS-26	DGS-26SC-0001-101011	N	7624694.88	705437.08	-37.7	0	1	10/11/2010 12:16	Bulk Chemistry[6]
	DGS-26SC-0104-101011	N				1	4	10/11/2010 12:17	Bulk Chemistry[6]
	DGS-26SC-015.4-101011	N				1	5.4	10/11/2010 12:47	DRET[7], Waste Characterization[8, 10], SBLT[9]
	DGS-26SC-0408-101011	N				4	8	10/11/2010 12:18	Bulk Chemistry[6]
	DGS-26SC-0811.3-101011	N				8	11.3	10/11/2010 12:47	Bulk Chemistry[6]
DGS-28	DGS-28SC-0001-101007	N	7624889.70	705445.50	-41.2	0	1	10/7/2010 10:27	Bulk Chemistry[6]
	DGS-28SC-0104-101007	N				1	4	10/7/2010 10:28	Bulk Chemistry[6]
	DGS-28SC-0408-101007	N				4	8	10/7/2010 10:30	Bulk Chemistry[6]
	DGS-28SC-0809-101007	N				8	9	10/7/2010 10:31	Bulk Chemistry[6]
DGS-30	DGS-30SC-0001-101006	N	7625045.99	705375.36	-41.9	0	1	10/6/2010 9:19	Bulk Chemistry[6]
	DGS-30SC-0104-101006	N				1	4	10/6/2010 9:20	Bulk Chemistry[6]
	DGS-30SC-0408-101006	N				4	8	10/6/2010 9:21	Bulk Chemistry[6]
	DGS-30SC-0812-101006	N				8	12	10/6/2010 9:23	Bulk Chemistry[6]
	DGS-30SC-1213.9-101006	N				12	13.9	10/6/2010 10:21	Bulk Chemistry[6]
DGS-31	DGS-31SC-0001-101011	N	7624938.60	705255.19	-37.2	0	1	10/11/2010 14:13	Bulk Chemistry[6]
	DGS-31SC-0104-101011	N				1	4	10/11/2010 14:13	Bulk Chemistry[6]
	DGS-31SC-011.9-101011	N				1	1.9	10/11/2010 14:14	DRET[7], Waste Characterization[8]
	DGS-31SC-0408-101011	N				4	8	10/11/2010 14:13	Bulk Chemistry[6]
	DGS-31SC-0812-101011	N				8	12	10/11/2010 14:14	Bulk Chemistry[6]
	DGS-31SC-1215.5-101011	N				12	15.5	10/11/2010 14:14	Bulk Chemistry[6]
DGS-32	DGS-32SC-0001-101011	N	7624906.91	705161.30	-20.7	0	1	10/11/2010 16:07	Bulk Chemistry[6]
	DGS-32SC-0104-101011	N				1	4	10/11/2010 16:08	Bulk Chemistry[6]
	DGS-32SC-0408-101011	N				4	8	10/11/2010 16:09	Bulk Chemistry[6]
	DGS-32SC-0812-101011	N				8	12	10/11/2010 16:09	Bulk Chemistry[6]
	DGS-32SC-1213.6-101011	N				12	13.6	10/11/2010 16:09	Bulk Chemistry[6]
	DGS-32SC-2.83.8-101011	N				2.8	3.8	10/11/2010 16:09	DRET[7], Waste Characterization[8]
DGS-36	DGS-36SC-0001-101012	N	7623124.24	706101.57	4.7	0	1	10/12/2010 11:34	Bulk Chemistry[6]
	DGS-36SC-0104-101012	N				1	4	10/12/2010 11:35	Bulk Chemistry[6]
	DGS-36SC-0408-101012	N				4	8	10/12/2010 11:36	Bulk Chemistry[6]
	DGS-36SC-0810-101012	N				8	10	10/12/2010 11:50	Bulk Chemistry[6]

Table 2-2
Data Gaps Sediment Core Sample Summary

Station ID	Sample ID	Sample Type	X Coordinates[1]	Y Coordinates[1]	Mudline Elevation (feet) NAVD88	Start Depth (feet)	End Depth (feet)	Sample Date/Time	Analyses
DGS-37	DGS-37SC-0001-101011	N	7625358.09	704882.02	-6.5	0	1	10/11/2010 9:41	Bulk Chemistry[6]
	DGS-37SC-0104-101011	N				1	4	10/11/2010 9:42	Bulk Chemistry[6]
	DGS-87SC-0104-101011[5]	FD				1	4	10/11/2010 9:42	Bulk Chemistry[6]
	DGS-37SC-0408-101011	N				4	8	10/11/2010 9:42	Bulk Chemistry[6]
	DGS-37SC-0812-101011	N				8	12	10/11/2010 9:43	Bulk Chemistry[6]
	DGS-37SC-1216-101011	N				12	16	10/11/2010 9:44	Bulk Chemistry[6]
	DGS-37SC-1619-101011	N				16	19	10/11/2010 10:21	Bulk Chemistry[6]
DGS-44	DGS-44SC-0001-101011	N	7623782.65	706164.42	-39.9	0	1	10/11/2010 8:50	Archive
	DGS-44SC-0104-101011	N				1	4	10/11/2010 8:50	Archive
	DGS-44SC-0408-101011	N				4	8	10/11/2010 8:51	Archive
	DGS-44SC-0809-101011	N				8	9	10/11/2010 9:01	Archive
DGS-45	DGS-45SC-0001-101012	N	7624977.39	705314.30	-40.3	0	1	10/12/2010 8:40	Archive
	DGS-45SC-0104-101012	N				1	4	10/12/2010 8:41	Archive
	DGS-45SC-0408-101012	N				4	8	10/12/2010 8:41	Archive
	DGS-45SC-0810.4-101012	N				8	10.4	10/12/2010 8:41	Archive

Table 2-2
Data Gaps Sediment Core Sample Summary

Notes:

DRET = Dredging Elutriate Test

FD = field duplicate

N = normal

NAVD88 = North American Vertical Datum 1988

TCLP = Toxicity Characteristic Leaching Procedure

SBLT = sequential batch leach test

Footnotes

1 = Coordinates are provided in northing and easting in North American Datum (NAD)83 HARN, Oregon State Plane, North International Feet.

2 = DGS-53SC-0408-101005 is a field duplicate of DGS-03SC-0408-101005.

3 = DGS-72SC-0408-101012 is a field duplicate of DGS-22SC-0408-101012.

4 = DGS-75SC-0812-101007 is a field duplicate of DGS-75SC-0812-101007.

5 = DGS-87SC-0104-101011 is a field duplicate of DGS-37SC-0104-101011.

6 = Bulk Chemistry testing included total solids (TS), total organic carbon (TOC), total Cyanide, Grain size, Metals, semivolatile organic compounds (SVOCs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), Pesticides, total petroleum hydrocarbons [(TPH); see FSP Table 1-1 for individual analytes)] and archive.

7 = DRET testing included total, amenable, and free Cyanide, Zinc, SVOCs, VOCs, PCBs, Pesticides, and TPH (see FSP Table 1-2 for individual analytes).

8 = Waste characterization testing included pH (Corrosivity), Ignitability, and TCLP testing for Metals, SVOCs, VOCs, PCBs, Pesticides, Herbicides, and TPH (see FSP Table 1-3 for individual analytes).

9 = SBLT testing included total, amenable, and free Cyanide, Metals, SVOCs, VOCs, PCBs, Pesticides, and TPH (see FSP Table 1-14 for individual analytes).

10 = TCLP testing for CDF placement included Metals, SVOCs, VOCs, PCBs, Pesticides, Herbicides, and TPH (see FSP Table 1-3 for individual analytes).

11 = Bench scale treatability testing was triggered for VOCs and included 5 percent quick lime, 10 percent quick lime, and 10 percent Portland cement (see FSP Table 1-1 for individual analytes).

12 = Due to insufficient volume grainsize, analysis could not be conducted.

Table 2-3
Data Gaps Sediment Sample SBLT Test Results

Location ID	DGS-07SC	DGS-07SC	DGS-07SC	DGS-07SC	DGS-13SC	DGS-13SC
Sample ID	DGS-07SC-0113.4-101012-1	DGS-07SC-0113.4-101012-2	DGS-07SC-0113.4-101012-3	DGS-07SC-0113.4-101012-4	DGS-13SC-0006-101005-1	DGS-13SC-0006-101005-2
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/5/2010	10/5/2010
Depth	1 - 13.4 feet	1 - 13.4 feet	1 - 13.4 feet	1 - 13.4 feet	0 - 6 feet	0 - 6 feet
Sample Type	N	N	N	N	N	N
SBLT Cycle Number	1	2	3	4	1	2
Conventional Parameters (mg/l)						
Cyanide, total	**0.62 J**	**0.027 J**	**0.029**	**0.039**	**0.066**	**0.038**
Cyanide, available	**0.013**	**0.0033**	**0.0033 J**	**0.0032 J**	0.002 U	0.002 U
Cyanide, free	**0.007**	**0.0038 J**	0.005 U	**0.0022 J**	0.005 U	0.005 U
Metals (µg/l)						
Arsenic	**28 J**	**17.4**	**14.8**	**12**	**15 J**	**9.4**
Cadmium	**6.6**	**2.5**	**1.9**	**1.3**	**1.3**	**0.4**
Chromium	**300**	**98**	**71**	**53**	**110**	**34**
Copper	**813**	**240**	**198**	**147**	**309**	**98.6**
Lead	**480**	**133**	**112**	**96**	**130**	**39**
Mercury	**6.5**	**2.1**	**1.6**	**1.1**	**0.2**	0.1 U
Nickel	**312**	**108**	**70.9**	**52.8**	**79.2 J**	**30.6**
Silver	1.3 UJ	0.5 UJ	0.3 UJ	0.3 UJ	**1.6 J**	**0.8**
Zinc	**1950**	**870**	**520 J**	**320 J**	**520**	**250**
Volatile Organics (µg/l)						
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, cis-	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, trans-	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	**3.6**	1 U	**1.1**	1 U	1 U	1 U
Ethylbenzene	**30**	1 U	**27**	**16**	1 U	1 U
m,p-Xylene	2 U	2 U	2 U	2 U	2 U	2 U
o-Xylene	**4.4**	1 U	**4**	**2.3**	1 U	1 U
Toluene	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	1 U	1 U	1 U	1 U	1 U	1 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	**40 T**	2 UT	**34 T**	**20 T**	2 UT	2 UT
LWG RA Total Xylene[8] (Calculated U = 1/2)	**5.4 T**	2 UT	**5 T**	**3.3 T**	2 UT	2 UT
Polycyclic Aromatic Hydrocarbons (µg/l)						
1-Methylnaphthalene	**160**	**200**	**200**	**190**	**36**	**32**
2-Methylnaphthalene	**210**	**280**	**300**	**220**	**20**	**18**
Acenaphthene	**240**	**250**	**210**	**200**	**81**	**75**
Acenaphthylene	10 U	10 U	1 U	1 U	1 U	1 U
Anthracene	**93**	**94**	**55**	**60**	**11**	**8.6**
Benzo(a)anthracene	**44**	**54**	**32**	**39**	**1.9**	**1.8**
Benzo(b,j,k)fluoranthenes	**54**	**68**	**40**	**48**	**1.3**	**1.2**
Benzo(a)pyrene	**42**	**54**	**31**	**38**	1 U	1 U
Benzo(g,h,i)perylene	**17**	**23**	**21**	**26**	1 U	1 U
Chrysene	**45**	**55**	**31**	**38**	**2.3**	**2**

Table 2-3
Data Gaps Sediment Sample SBLT Test Results

Location ID	DGS-07SC	DGS-07SC	DGS-07SC	DGS-07SC	DGS-13SC	DGS-13SC
Sample ID	DGS-07SC-0113.4-101012-1	DGS-07SC-0113.4-101012-2	DGS-07SC-0113.4-101012-3	DGS-07SC-0113.4-101012-4	DGS-13SC-0006-101005-1	DGS-13SC-0006-101005-2
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/5/2010	10/5/2010
Depth	1 - 13.4 feet	1 - 13.4 feet	1 - 13.4 feet	1 - 13.4 feet	0 - 6 feet	0 - 6 feet
Sample Type	N	N	N	N	N	N
SBLT Cycle Number	1	2	3	4	1	2
Dibenzo(a,h)anthracene	10 U	10 U	1 U	1 U	1 U	1 U
Fluoranthene	**230**	**250**	**150**	**160**	**24**	**17**
Fluorene	**130**	**130**	**100**	**100**	**34**	**27**
Indeno(1,2,3-c,d)pyrene	**14**	**20**	**14**	**18**	1 U	1 U
Naphthalene	**320**	**610**	**700**	**360**	**18**	**7.3**
Perylene	**11**	**16**	**9.9**	**12**	1 U	1 U
Phenanthrene	**590**	**580**	**400**	**380**	**98**	**79**
Pyrene	**260**	**280**	**200**	**210**	**29**	**19**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**1600 T**	**1900 T**	**1800 T**	**1300 T**	**260 T**	**220 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**710 T**	**810 T**	**520 T**	**580 T**	**60 T**	**43 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**2300 T**	**2800 T**	**2300 T**	**1900 T**	**320 T**	**260 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**58 T**	**73 T**	**40 T**	**49 T**	**1.4 T**	**1.4 T**
Semivolatile Organics (µg/l)						
Carbazole	**84**	**68**	**56 J**	**53 J**	**26**	**19**
Dibenzofuran	**21**	**21**	**17**	**16**	**6.3**	**5**
PCB Aroclors (µg/l)						
Aroclor 1016	1 UJ	1 U	1 U	1 U	1 U	1 U
Aroclor 1221	1 UJ	1 U	1 U	1 U	1 U	1 U
Aroclor 1232	1 UJ	1 U	1 U	1 U	1 U	1 U
Aroclor 1242	1 UJ	1 U	1 U	1 U	1 U	1 U
Aroclor 1248	1 UJ	1 U	1 U	1 U	1 U	1 U
Aroclor 1254	1 UJ	1 U	1 U	1 U	1 U	1 U
Aroclor 1260	1 UJ	1 U	1 U	1 U	1 U	1 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	1 UJT	1 UT	1 UT	1 UT	1 UT	1 UT
Pesticides (µg/l)						
2,4'-DDD (o,p'-DDD)	0.5 U	0.5 U	**0.11**	**0.13 J**	0.1 U	0.1 U
2,4'-DDE (o,p'-DDE)	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDT (o,p'-DDT)	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDD (p,p'-DDD)	**0.81**	0.5 U	**0.26**	**0.32 J**	0.1 U	0.1 U
4,4'-DDEe (p,p'-DDE)	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT (p,p'-DDT)	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
alpha-Hexachlorocyclohexane (BHC)	0.25 U	0.25 U	0.05 U	0.05 U	0.05 U	0.05 U
alpha-Chlordane (cis-Chlordane)	0.25 U	0.25 U	0.05 U	0.05 U	0.05 U	0.05 U
beta-Hexachlorocyclohexane (BHC)	0.25 U	0.25 U	0.05 U	0.05 U	0.05 U	0.05 U
gamma-Chlordane (trans-Chlordane)	0.25 U	0.25 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-Nonachlor	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
delta-Hexachlorocyclohexane (BHC)	0.25 UJ	0.25 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 U
Dieldrin	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U

Table 2-3
Data Gaps Sediment Sample SBLT Test Results

Location ID	DGS-07SC	DGS-07SC	DGS-07SC	DGS-07SC	DGS-13SC	DGS-13SC
Sample ID	DGS-07SC-0113.4-101012-1	DGS-07SC-0113.4-101012-2	DGS-07SC-0113.4-101012-3	DGS-07SC-0113.4-101012-4	DGS-13SC-0006-101005-1	DGS-13SC-0006-101005-2
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/5/2010	10/5/2010
Depth	1 - 13.4 feet	1 - 13.4 feet	1 - 13.4 feet	1 - 13.4 feet	0 - 6 feet	0 - 6 feet
Sample Type	N	N	N	N	N	N
SBLT Cycle Number	1	2	3	4	1	2
Endrin	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
Endrin ketone	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.25 U	0.25 U	0.05 U	0.05 U	0.05 U	0.05 U
Heptachlor epoxide	0.25 U	0.25 U	0.05 U	0.05 U	0.05 U	0.05 U
Oxychlordane	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
trans-Nonachlor	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
Hexachlorobenzene	0.25 UJ	0.25 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	0.5 UT	0.5 UT	**0.21 T**	**0.23 JT**	0.1 UT	0.1 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	**1.3 T**	0.5 UT	**0.36 T**	**0.42 JT**	0.1 UT	0.1 UT
LWG RA Sum DDD (Calculated U = 1/2)	**1.1 T**	0.5 UT	**0.37 T**	**0.45 JT**	0.1 UT	0.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.5 UT	0.5 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.5 UT	0.5 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Total DDx (Calculated U = 1/2)	**2.1 T**	0.5 UT	**0.57 T**	**0.65 JT**	0.1 UT	0.1 UT
LWG RA Total Chlordane[2] (Calculated U = 1/2)	0.5 UT	0.5 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	**2.8 J**	**6.9**	**1.6 J**	**1.8**	**0.81**	**0.77**
Motor Oil Range	**1.5 J**	**5.2**	**0.92 J**	**1.2**	**0.53**	**0.72**
LWG RA TPH[5] (Calculated U = 1/2)	**4.3 JT**	**12 T**	**2.5 JT**	**3 T**	**1.3 T**	**1.5 T**

Table 2-3
Data Gaps Sediment Sample SBLT Test Results

Location ID	DGS-13SC	DGS-13SC	DGS-18SC	DGS-18SC	DGS-18SC	DGS-18SC
Sample ID	DGS-13SC-0006-101005-3	DGS-13SC-0006-101005-4	DGS-18SC-015.5-101008-1	DGS-18SC-015.5-101008-2	DGS-18SC-015.5-101008-3	DGS-18SC-015.5-101008-4
Sample Date	10/5/2010	10/5/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010
Depth	0 - 6 feet	0 - 6 feet	1 - 5.5 feet	1 - 5.5 feet	1 - 5.5 feet	1 - 5.5 feet
Sample Type	N	N	N	N	N	N
SBLT Cycle Number	3	4	1	2	3	4
Conventional Parameters (mg/l)						
Cyanide, total	**0.032**	**0.028**	**0.007**	0.005 U	0.005 U	0.005 U
Cyanide, available	0.002 U	0.002 U	0.002 U	**0.002**	**0.002**	0.002 U
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Metals (µg/l)						
Arsenic	**7.1**	**5.1**	**3 J**	**2.2 J**	**2.3 J**	**1.8**
Cadmium	**0.3**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chromium	**26**	**14 J**	**33**	**22**	**26**	**16**
Copper	**57.7**	**29.8**	**72.7**	**39.4**	**41.8**	**25.2**
Lead	**24**	**13**	**16**	**9**	**10**	**7**
Mercury	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	**21.9**	12.9 U	26.5 U	**--**	**25.8**	**17**
Silver	**0.4**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Zinc	**169**	**106**	**170**	**104 J**	**110 J**	**125**
Volatile Organics (µg/l)						
1,1-Dichloroethene	10 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, cis-	10 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, trans-	10 U	1 U	1 U	1 U	1 U	1 U
Benzene	10 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	10 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	20 U	2 U	2 U	2 U	2 U	2 U
o-Xylene	10 U	1 U	1 U	1 U	1 U	1 U
Toluene	10 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	10 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	10 U	1 U	1 U	1 U	1 U	1 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	20 UT	2 UT	2 UT	2 UT	2 UT	2 UT
LWG RA Total Xylene[8] (Calculated U = 1/2)	20 UT	2 UT	2 UT	2 UT	2 UT	2 UT
Polycyclic Aromatic Hydrocarbons (µg/l)						
1-Methylnaphthalene	**25**	**29**	**180**	**96**	**76**	**4.1**
2-Methylnaphthalene	**14**	**16**	1 U	1 U	1 U	1 U
Acenaphthene	**67**	**73**	**110**	**80**	**73**	**36**
Acenaphthylene	1 U	1 U	1 U	1 U	1 U	**2.2**
Anthracene	**7**	**6.8**	**33**	**30**	**19**	1 U
Benzo(a)anthracene	**1.1**	1 U	**7.3**	**8.2**	**5.3**	**2.5**
Benzo(b,j,k)fluoranthenes	1 U	1 U	**6.8**	**7.3**	**4.7**	**2**
Benzo(a)pyrene	1 U	1 U	**5.6**	**6.3**	**4.1**	**1.7**
Benzo(g,h,i)perylene	1 U	1 U	**4.6**	**5.3**	**3.1**	**1.1**
Chrysene	**1.5**	**1.2**	**12**	**13**	**8.4**	**3.6**

Table 2-3
Data Gaps Sediment Sample SBLT Test Results

Location ID	DGS-13SC	DGS-13SC	DGS-18SC	DGS-18SC	DGS-18SC	DGS-18SC
Sample ID	DGS-13SC-0006-101005-3	DGS-13SC-0006-101005-4	DGS-18SC-015.5-101008-1	DGS-18SC-015.5-101008-2	DGS-18SC-015.5-101008-3	DGS-18SC-015.5-101008-4
Sample Date	10/5/2010	10/5/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010
Depth	0 - 6 feet	0 - 6 feet	1 - 5.5 feet	1 - 5.5 feet	1 - 5.5 feet	1 - 5.5 feet
Sample Type	N	N	N	N	N	N
SBLT Cycle Number	3	4	1	2	3	4
Dibenzo(a,h)anthracene	1 U	1 U	1 U	1 U	1 U	1 U
Fluoranthene	**13**	**12**	**31**	**30**	**22**	**13**
Fluorene	**23**	**24**	**65**	**53**	**32**	1 U
Indeno(1,2,3-c,d)pyrene	1 U	1 U	**2.3**	**2.8**	**1.7**	1 U
Naphthalene	**6.6**	**11**	1 U	1 U	1 U	1 U
Perylene	1 U	1 U	**2.9**	**2.8**	**1.7**	1 U
Phenanthrene	**68**	**66**	**150**	**76**	**11**	**2.1**
Pyrene	**15**	**12**	**42**	**39**	**29**	**17**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**190 T**	**200 T**	**360 T**	**240 T**	**140 T**	**42 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**33 T**	**28 T**	**110 T**	**110 T**	**79 T**	**42 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**220 T**	**230 T**	**470 T**	**350 T**	**220 T**	**84 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**1.2 T**	**1.2 T**	**7.8 T**	**8.6 T**	**5.8 T**	**2.7 T**
Semivolatile Organics (µg/l)						
Carbazole	**17**	**14**	**19**	**12**	**6.8**	1 U
Dibenzofuran	**4.1**	**4.3**	**13**	**9.4**	**6**	1 U
PCB Aroclors (µg/l)						
Aroclor 1016	1 U	1 U	1 U	1 UJ	1 U	1 U
Aroclor 1221	1 U	1 U	1 UJ	1 UJ	1 U	1 U
Aroclor 1232	1 U	1 U	1 U	1 UJ	1 U	1 U
Aroclor 1242	1 U	1 U	1 U	1 UJ	1 U	1 U
Aroclor 1248	1 U	1 U	1 U	1 UJ	1 U	1 U
Aroclor 1254	1 U	1 U	1 U	1 UJ	1 U	1 U
Aroclor 1260	1 U	1 U	1 U	1 UJ	1 U	1 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	1 UT	1 UT	1 UJT	1 UJT	1 UT	1 UT
Pesticides (µg/l)						
2,4'-DDD (o,p'-DDD)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDE (o,p'-DDE)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDT (o,p'-DDT)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDD (p,p'-DDD)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDEe (p,p'-DDE)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT (p,p'-DDT)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
alpha-Hexachlorocyclohexane (BHC)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
alpha-Chlordane (cis-Chlordane)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
beta-Hexachlorocyclohexane (BHC)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
gamma-Chlordane (trans-Chlordane)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-Nonachlor	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
delta-Hexachlorocyclohexane (BHC)	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U
Dieldrin	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Table 2-3
Data Gaps Sediment Sample SBLT Test Results

Location ID	DGS-13SC	DGS-13SC	DGS-18SC	DGS-18SC	DGS-18SC	DGS-18SC
Sample ID	DGS-13SC-0006-101005-3	DGS-13SC-0006-101005-4	DGS-18SC-015.5-101008-1	DGS-18SC-015.5-101008-2	DGS-18SC-015.5-101008-3	DGS-18SC-015.5-101008-4
Sample Date	10/5/2010	10/5/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010
Depth	0 - 6 feet	0 - 6 feet	1 - 5.5 feet	1 - 5.5 feet	1 - 5.5 feet	1 - 5.5 feet
Sample Type	N	N	N	N	N	N
SBLT Cycle Number	3	4	1	2	3	4
Endrin	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Endrin ketone	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Heptachlor epoxide	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Oxychlordane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
trans-Nonachlor	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Hexachlorobenzene	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Total DDx (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Total Chlordane[2] (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	**0.38**	**0.35**	**1.9 J**	**0.62 J**	**0.97 J**	**0.6**
Motor Oil Range	**0.2**	0.2 U	**0.37**	0.2 UJ	**0.29**	0.2 U
LWG RA TPH[5] (Calculated U = 1/2)	**0.58 T**	**0.45 T**	**2.3 JT**	**0.72 JT**	**1.3 JT**	**0.7 T**

Table 2-3
Data Gaps Sediment Sample SBLT Test Results

Location ID	DGS-26SC	DGS-26SC	DGS-26SC	DGS-26SC	
Sample ID	DGS-26SC-015.4-101011-1	DGS-26SC-015.4-101011-2	DGS-26SC-015.4-101011-3	DGS-26SC-015.4-101011-4	Sitewater
Sample Date	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/28/2010
Depth	1 - 5.4 feet	1 - 5.4 ft	1 - 5.4 feet	1 - 5.4 feet	
Sample Type	N	N	N	N	N
SBLT Cycle Number	1	2	3	4	NA
Conventional Parameters (mg/l)					
Cyanide, total	**0.006**	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, available	**0.0023**	0.002 U	0.002 U	**0.0042**	0.002 U
Cyanide, free	**0.0025 J**	0.005 U	0.005 U	0.005 U	--
Metals (µg/l)					
Arsenic	**2.8 J**	**1.8**	**1.7**	**1.5**	**0.4**
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chromium	**29**	**23**	**17**	**18**	0.5 U
Copper	**94.6**	**41.5**	**40.5**	**24.4**	**3**
Lead	**9**	**6**	**6**	**4**	1 U
Mercury	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	**30.1**	**20**	**19.4**	**17.5**	0.5 U
Silver	**0.3**	0.2 U	0.2 U	0.2 U	0.2 U
Zinc	**108 J**	**141 J**	**141**	**100**	**5**
Volatile Organics (µg/l)					
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, cis-	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, trans-	1 U	1 U	1 U	1 U	1 U
Benzene	1 U	**2.2**	1 U	1 U	1 U
Ethylbenzene	1 U	**35**	1 U	1 U	1 U
m,p-Xylene	2 U	2 U	2 U	2 U	2 U
o-Xylene	1 U	**5.2**	1 U	1 U	1 U
Toluene	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	1 U	1 U	1 U	1 U	1 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	2 UT	**44 T**	2 UT	2 UT	2 UT
LWG RA Total Xylene[8] (Calculated U = 1/2)	2 UT	**6.2 T**	2 UT	2 UT	2 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
1-Methylnaphthalene	**460**	**370**	**330**	**290**	1 U
2-Methylnaphthalene	**320**	**250**	**220**	**140**	1 U
Acenaphthene	**610**	**480**	**440**	**420**	1 U
Acenaphthylene	**4.8**	**1.8**	1 U	1 U	1 U
Anthracene	**74**	**48**	**39**	**45**	1 U
Benzo(a)anthracene	**22**	**8**	**7**	**14**	1 U
Benzo(b,j,k)fluoranthenes	**27**	**8.2**	**7.8**	**19**	1 U
Benzo(a)pyrene	**23**	**7**	**6.4**	**16**	1 U
Benzo(g,h,i)perylene	**13**	**3.6**	**4.4**	**12**	1 U
Chrysene	**28**	**11**	**9.5**	**19**	1 U

Table 2-3
Data Gaps Sediment Sample SBLT Test Results

Location ID	DGS-26SC	DGS-26SC	DGS-26SC	DGS-26SC	
Sample ID	DGS-26SC-015.4-101011-1	DGS-26SC-015.4-101011-2	DGS-26SC-015.4-101011-3	DGS-26SC-015.4-101011-4	Sitewater
Sample Date	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/28/2010
Depth	1 - 5.4 feet	1 - 5.4 ft	1 - 5.4 feet	1 - 5.4 feet	
Sample Type	N	N	N	N	N
SBLT Cycle Number	1	2	3	4	NA
Dibenzo(a,h)anthracene	1 U	1 U	1 U	**1.8**	1 U
Fluoranthene	**130**	**66**	**55**	**72**	1 U
Fluorene	**160**	**130**	**120**	**130**	1 U
Indeno(1,2,3-c,d)pyrene	**9.6**	**2.6**	**2.8**	**7.8**	1 U
Naphthalene	**2800**	**1800**	**1200**	**59**	1 U
Perylene	**6.8**	**2.2**	**2.1**	**5**	1 U
Phenanthrene	**620**	**430**	**360**	**360**	1 U
Pyrene	**150**	**72**	**62**	**100**	1 U
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**4600 T**	**3100 T**	**2400 T**	**1200 T**	1 UT
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**400 T**	**180 T**	**160 T**	**260 T**	1 UT
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**5000 T**	**3300 T**	**2500 T**	**1400 T**	1 UT
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**29 T**	**9.4 T**	**8.7 T**	**22 T**	1 UT
Semivolatile Organics (µg/l)					
Carbazole	**68 J**	**58**	**42**	**35**	1 U
Dibenzofuran	**34**	**24**	**22**	**24**	1 U
PCB Aroclors (µg/l)					
Aroclor 1016	1 U	1 UJ	1 U	1 U	1 U
Aroclor 1221	1 U	1 UJ	1 U	1 U	1 U
Aroclor 1232	1 U	1 UJ	1 U	1 U	1 U
Aroclor 1242	1 U	1 UJ	1 U	1 U	1 U
Aroclor 1248	1 U	1 UJ	1 U	1 U	1 U
Aroclor 1254	1 U	1 UJ	1 U	1 U	1 U
Aroclor 1260	1 U	1 UJ	1 U	1 U	1 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	1 UT	1 UJT	1 UT	1 UT	1 UT
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDE (o,p'-DDE)	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDT (o,p'-DDT)	0.5 U	0.1 UJ	0.1 UJ	0.1 U	0.1 U
4,4'-DDD (p,p'-DDD)	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDEe (p,p'-DDE)	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT (p,p'-DDT)	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
alpha-Hexachlorocyclohexane (BHC)	0.25 U	0.05 U	0.05 U	0.05 U	0.05 UJ
alpha-Chlordane (cis-Chlordane)	0.25 U	0.05 U	0.05 U	0.05 U	0.05 U
beta-Hexachlorocyclohexane (BHC)	0.25 U	0.05 U	0.05 U	0.05 U	0.05 U
gamma-Chlordane (trans-Chlordane)	0.25 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-Nonachlor	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
delta-Hexachlorocyclohexane (BHC)	0.25 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Dieldrin	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U

Table 2-3
Data Gaps Sediment Sample SBLT Test Results

Location ID	DGS-26SC	DGS-26SC	DGS-26SC	DGS-26SC	
Sample ID	DGS-26SC-015.4-101011-1	DGS-26SC-015.4-101011-2	DGS-26SC-015.4-101011-3	DGS-26SC-015.4-101011-4	Sitewater
Sample Date	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/28/2010
Depth	1 - 5.4 feet	1 - 5.4 ft	1 - 5.4 feet	1 - 5.4 feet	
Sample Type	N	N	N	N	N
SBLT Cycle Number	1	2	3	4	NA
Endrin	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
Endrin ketone	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.25 U	0.05 U	0.05 U	0.05 U	0.05 U
Heptachlor epoxide	0.25 U	0.05 UJ	0.05 U	0.05 U	0.05 U
Oxychlordane	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
trans-Nonachlor	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
Hexachlorobenzene	0.25 UJ	0.05 UJ	0.05 U	0.05 UJ	0.05 UJ
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	0.5 UT	0.1 UJT	0.1 UJT	0.1 UT	0.1 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	0.5 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.5 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.5 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.5 UT	0.1 UJT	0.1 UJT	0.1 UT	0.1 UT
LWG RA Total DDx (Calculated U = 1/2)	0.5 UT	0.1 UJT	0.1 UJT	0.1 UT	0.1 UT
LWG RA Total Chlordane[2] (Calculated U = 1/2)	0.5 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	**3.2 J**	**3**	**2.4**	**1.3 J**	0.1 U
Motor Oil Range	**0.38 J**	**0.23**	0.2 U	0.2 UJ	0.2 U
LWG RA TPH[5] (Calculated U = 1/2)	**3.6 JT**	**3.2 T**	**2.5 T**	**1.4 JT**	0.2 UT

Table 2-3
Data Gaps Sediment Sample SBLT Test Results

Notes:
Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = calculation or summation applied
N = Normal Field Sample
FD = Field Duplicate
-- Results not reported or not applicable
Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.
Significant figures applied to all calculated totals
Table contains validated data

Footnotes
[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured
[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene
[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene
[4] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured
[5] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene
[6] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene
[7] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene
[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene
[9] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors

Acronyms
cPAH = carcinogenic PAH
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
EPH = extractable petroleum hydrocarbon
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
mg/kg = milligrams per kilograms
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons
µg/kg = micrograms per kilogram
VPH = volatile petroleum hydrocarbon

Table 2-4a
Data Gaps Surface Sediment Physical and Chemical Results - Initial Event

Location ID	DGS-01SG	DGS-02SG	DGS-04SG	DGS-05SG	DGS-06SG	DGS-08SG	DGS-09SG	DGS-12SG
Sample ID	DGS-01SG-101014	DGS-02SG-101014	DGS-04SG-101013	DGS-05SG-101014	DGS-06SG-101014	DGS-08SG-101013	DGS-09SG-101013	DGS-12SG-101013
Sample Date	10/14/2010	10/14/2010	10/13/2010	10/14/2010	10/14/2010	10/13/2010	10/13/2010	10/13/2010
Depth	0 to 30 cm	0 to 30 cm	0 to 25 cm	0 to 27 cm	0 to 29 cm	0 to 30 cm	0 to 30 cm	0 to 27 cm
Sample Type	N	N	N	N	N	N	N	N
Conventional Parameters (mg/kg)								
Ammonia as nitrogen	**109**	**157**	**282**	**24.5**	**126**	**32.1**	**98.1**	**53.7 J**
Cyanide, total	**2.26**	**8.23**	**1.31**	**0.82**	**4.37**	**0.164**	**5.05**	**0.868**
Sulfide	2.31 UJ	**25.2 J**	**37.1**	**20.1 J**	**21.6 J**	1.47 U	1.55 U	1.84 UJ
Conventional Parameters (percent)								
Total organic carbon	**1.71**	**2.3**	**2.19**	**1.95**	**2.66**	**1.39**	**2.24**	**2.44**
Total solids	**35.4**	**46.5**	**54.3**	**68.8**	**47.9**	**72.2**	**56.5**	**55.6**
Total solids (preserved)[1]	**41**	**41.6**	**53.8**	**64.7**	**50.1**	**64.1**	**61.3**	**52.8**
Total volatile solids	--	--	--	--	--	--	--	--
Grain Size (percent)								
Total Gravel	**1.6 T**	0.1 UT	0.1 UT	**0.6 T**	0.1 UT	0.1 UT	**1.6 T**	0.1 UT
Total Sand	**41 T**	**20 T**	**8.4 T**	**84 T**	**35 T**	**84 T**	**63 T**	**48 T**
Total Silt	**45 T**	**67 T**	**72 T**	**13 T**	**55 T**	**12 T**	**28 T**	**40 T**
Total Clay	**13 T**	**14 T**	**20 T**	**2.7 T**	**10 T**	**4.2 T**	**7 T**	**12 T**
Total Fines (silt + clay)	**58 T**	**80 T**	**92 T**	**15 T**	**65 T**	**16 T**	**35 T**	**52 T**
Total Grain Size	**101 T**	**101 T**	**100 T**	**100 T**	**100 T**	**100 T**	**100 T**	**100 T**
Metals (mg/kg)								
Arsenic	10 U	10 U	9 U	7 U	10 U	7 U	9 U	9 U
Cadmium	**0.6**	**0.7**	**0.7**	**0.3**	**0.5**	**0.3**	**0.5**	**0.5**
Chromium	**40**	**44**	**39.3**	**20.8**	**33**	**17.7**	**22.9**	**29.2**
Copper	**47.1 J**	**54 J**	**48.7 J**	**19.2 J**	**40.6 J**	**19.7 J**	**28.2 J**	**34.1**
Lead	**13**	**17**	**23**	**5**	**14**	**6**	**10**	**17**
Mercury	**0.07**	**0.09**	**0.3**	0.03 U	**0.07**	0.03 U	**0.05**	**0.06**
Nickel	**33**	**34**	**33**	**20**	**31**	**20**	**22**	**26**
Silver	0.8 U	0.7 U	0.5 U	0.4 U	0.7 U	0.4 U	0.5 U	0.5 U
Zinc	**122**	**145**	**155**	**68**	**119**	**71**	**87**	**108**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	2.6 UJ	2 UJ	1.6 UJ	1.1 UJ	1.6 UJ	1.1 UJ	1.6 UJ	1.6 UJ
1,2-Dichloroethene, cis-	2.6 UJ	2 UJ	1.6 UJ	1.1 UJ	1.6 UJ	1.1 UJ	1.6 UJ	1.6 UJ
1,2-Dichloroethene, trans-	2.6 UJ	2 UJ	1.6 UJ	1.1 UJ	1.6 UJ	1.1 UJ	1.6 UJ	1.6 UJ
Benzene	2.6 UJ	2 UJ	1.6 UJ	**1.5 J**	1.6 UJ	1.1 UJ	1.6 UJ	1.6 UJ
Ethylbenzene	2.6 UJ	2 UJ	1.6 UJ	1.1 UJ	1.6 UJ	1.1 UJ	1.6 UJ	**2.1 J**
m,p-Xylene	2.6 UJ	2 UJ	1.6 UJ	**1.9 J**	1.6 UJ	1.1 UJ	1.6 UJ	1.6 UJ
o-Xylene	2.6 UJ	2 UJ	1.6 UJ	**8.1 J**	1.6 UJ	1.1 UJ	1.6 UJ	**2.4 J**
Toluene	2.6 UJ	2 UJ	1.6 UJ	**1.2 J**	1.6 UJ	1.1 UJ	1.6 UJ	1.6 UJ
Trichloroethene (TCE)	2.6 UJ	2 UJ	1.6 UJ	1.1 UJ	1.6 UJ	1.1 UJ	1.6 UJ	1.6 UJ
Vinyl chloride	2.6 UJ	2 UJ	1.6 UJ	1.1 UJ	1.6 UJ	1.1 UJ	1.6 UJ	1.6 UJ
LWG RA Total BTEX[6] (Calculated U = 1/2)	2.6 UJT	2 UJT	1.6 UJT	**13 JT**	1.6 UJT	1.1 UJT	1.6 UJT	**6.9 JT**
LWG RA Total Xylene[9] (Calculated U = 1/2)	2.6 UJT	2 UJT	1.6 UJT	**10 JT**	1.6 UJT	1.1 UJT	1.6 UJT	**3.2 JT**
PAHs (µg/kg)								
1-Methylnaphthalene	**230**	**430**	**2000**	**10000**	**400**	**550**	**910**	**770**
2-Methylnaphthalene	**290**	**540**	**2000**	**12000**	**400**	65 U	**850**	61 U

Table 2-4a
Data Gaps Surface Sediment Physical and Chemical Results - Initial Event

Location ID	DGS-01SG	DGS-02SG	DGS-04SG	DGS-05SG	DGS-06SG	DGS-08SG	DGS-09SG	DGS-12SG
Sample ID	DGS-01SG-101014	DGS-02SG-101014	DGS-04SG-101013	DGS-05SG-101014	DGS-06SG-101014	DGS-08SG-101013	DGS-09SG-101013	DGS-12SG-101013
Sample Date	10/14/2010	10/14/2010	10/13/2010	10/14/2010	10/14/2010	10/13/2010	10/13/2010	10/13/2010
Depth	0 to 30 cm	0 to 30 cm	0 to 25 cm	0 to 27 cm	0 to 29 cm	0 to 30 cm	0 to 30 cm	0 to 27 cm
Sample Type	N	N	N	N	N	N	N	N
Acenaphthene	**590**	**2100**	**5900**	**18000**	**1700**	**1600**	**1400**	**3300**
Acenaphthylene	**79**	**820**	**1100**	**650**	**320**	65 U	**460**	**190**
Anthracene	**680**	**3200**	**2800**	**8100**	**1500**	**240**	**1400**	**700**
Benzo(a)anthracene	**860**	**13000**	**8400**	**4800**	**5100**	**220 J**	**3500**	**1100**
Benzo(a)pyrene	**1200**	**20000**	**13000**	**6900**	**7100**	**300 J**	**4300**	**1600**
Benzo(g,h,i)perylene	**400**	**5600**	**4900**	**1800**	**2200**	**230 J**	**1900**	**1000**
Benzo(b,j,k)fluoranthenes	**1700**	**24000**	**16000**	**7700**	**9200**	**390 J**	**5800**	**2000**
Chrysene	**1100**	**15000**	**9900**	**7100**	**6200**	**250 J**	**4300**	**1300**
Dibenzo(a,h)anthracene	65 U	**280**	**260**	**88**	190 U	65 U	190 U	61 U
Fluoranthene	**1900**	**28000**	**18000**	**22000**	**8200**	**890 J**	**7100**	**3500**
Fluorene	**390**	**1200**	**3100**	**8000**	**900**	**570**	**1400**	**1100**
Indeno(1,2,3-c,d)pyrene	**350**	**5100**	**4400**	**1600**	**2000**	**170 J**	**1800**	**850**
Naphthalene	**640**	**1300**	**3800**	**1700**	**710**	65 U	**600**	**160**
Perylene	**340**	**4600**	**3400**	**1600**	**1700**	**110**	**1200**	**460**
Phenanthrene	**2000**	**14000**	**15000**	**47000**	**7000**	**1500 J**	**9000**	**5000**
Pyrene	**2000**	**33000**	**21000**	**25000**	**10000**	**1000 J**	**9100**	**3800**
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	**4700 T**	**23000 T**	**34000 T**	**95000 T**	**13000 T**	**4000 JT**	**15000 T**	**10000 T**
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	**9500 T**	**140000 T**	**96000 T**	**77000 T**	**50000 T**	**3500 JT**	**38000 T**	**15000 T**
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	**14000 T**	**170000 T**	**130000 T**	**170000 T**	**63000 T**	**7500 JT**	**53000 T**	**26000 T**
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	**1400 T**	**22000 T**	**15000 T**	**7600 T**	**7900 T**	**370 JT**	**4900 T**	**1800 T**
Semivolatile Organics (µg/kg)								
Carbazole	**100**	**710**	**340**	**1800**	**250**	65 U	190 U	**380**
Dibenzofuran	**160**	**210**	**510**	**1300**	190 U	65 U	190 U	61 U
PCB Aroclors (µg/kg)								
Aroclor 1016	33 U	32 U	32 U	31 U	32 U	32 U	32 U	32 U
Aroclor 1221	33 UJ	32 UJ	32 UJ	31 UJ	32 UJ	32 UJ	32 UJ	32 U
Aroclor 1232	33 U	32 U	32 U	31 U	32 U	32 U	32 U	32 U
Aroclor 1242	33 U	32 U	32 U	31 U	32 U	32 U	32 U	32 U
Aroclor 1248	33 U	32 U	32 U	31 U	32 U	32 U	32 U	32 U
Aroclor 1254	33 U	32 U	**44**	31 U	32 U	32 U	32 U	32 U
Aroclor 1260	33 U	32 U	**37**	31 U	32 U	32 U	32 U	32 U
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	33 UJT	32 UJT	**160 JT**	31 UJT	32 UJT	32 UJT	32 UJT	32 UT
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	16 U	16 U	**5.1**	16 U	16 U	3.2 U	16 U	3.2 U
2,4'-DDE (o,p'-DDE)	16 U	16 U	3.2 U	16 U	16 U	3.2 U	16 U	3.2 U
2,4'-DDT (o,p'-DDT)	16 U	16 U	3.2 U	16 U	16 U	3.2 U	16 U	3.2 U
4,4'-DDD (p,p'-DDD)	16 U	**19**	**19**	16 U	16 U	3.2 U	16 U	**3.6 J**
4,4'-DDE (p,p'-DDE)	16 U	16 U	**12 J**	16 U	16 U	3.2 U	16 U	**4.6**
4,4'-DDT (p,p'-DDT)	16 U	16 U	**270**	16 U	16 U	3.2 U	**63**	**9.8**
alpha-Hexachlorocyclohexane (BHC)	8.1 U	8.1 U	1.6 U	7.8 U	8.1 U	1.6 U	8 U	1.6 U
alpha-Chlordane (cis-Chlordane)	8.1 U	8.1 U	1.6 U	7.8 U	8.1 U	1.6 U	8 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	8.1 U	8.1 U	1.6 U	7.8 U	8.1 U	1.6 U	8 U	1.6 U

Table 2-4a
Data Gaps Surface Sediment Physical and Chemical Results - Initial Event

Location ID	DGS-01SG	DGS-02SG	DGS-04SG	DGS-05SG	DGS-06SG	DGS-08SG	DGS-09SG	DGS-12SG
Sample ID	DGS-01SG-101014	DGS-02SG-101014	DGS-04SG-101013	DGS-05SG-101014	DGS-06SG-101014	DGS-08SG-101013	DGS-09SG-101013	DGS-12SG-101013
Sample Date	10/14/2010	10/14/2010	10/13/2010	10/14/2010	10/14/2010	10/13/2010	10/13/2010	10/13/2010
Depth	0 to 30 cm	0 to 30 cm	0 to 25 cm	0 to 27 cm	0 to 29 cm	0 to 30 cm	0 to 30 cm	0 to 27 cm
Sample Type	N	N	N	N	N	N	N	N
gamma-Chlordane (trans-Chlordane)	8.1 U	8.1 U	1.6 U	7.8 U	8.1 U	1.6 U	8 U	1.6 U
cis-Nonachlor	16 U	16 U	3.2 U	16 U	16 U	3.2 U	16 U	3.2 U
delta-Hexachlorocyclohexane (BHC)	8.1 UJ	8.1 UJ	1.6 UJ	7.8 UJ	8.1 UJ	1.6 UJ	8 UJ	1.6 U
Dieldrin	16 U	16 U	3.2 U	16 U	16 U	3.2 U	16 U	3.2 U
Endrin	16 U	16 U	3.2 U	16 U	16 U	3.2 U	16 U	3.2 U
Endrin ketone	16 U	16 U	3.2 U	16 U	16 U	3.2 U	16 U	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8.1 U	8.1 U	1.6 U	7.8 U	8.1 U	1.6 U	8 U	1.6 U
Heptachlor epoxide	8.1 U	8.1 U	3.2 U	7.8 U	8.1 U	1.6 U	8 U	1.6 U
Oxychlordane	16 U	16 U	3.2 U	16 U	16 U	3.2 U	16 U	3.2 U
trans-Nonachlor	16 U	16 U	3.2 U	16 U	16 U	3.2 U	16 U	3.2 U
Hexachlorobenzene	8.1 UJ	8.1 UJ	1.6 UJ	7.8 UJ	8.1 UJ	1.6 UJ	8 UJ	1.6 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	16 UT	**8.3 T**	16 UT	16 UT	3.2 UT	16 UT	3.2 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	**35 T**	**300 JT**	16 UT	16 UT	3.2 UT	**79 T**	**18 JT**
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	**27 T**	**24 T**	16 UT	16 UT	3.2 UT	16 UT	**5.2 JT**
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	16 UT	**14 JT**	16 UT	16 UT	3.2 UT	16 UT	**6.2 T**
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	16 UT	**270 T**	16 UT	16 UT	3.2 UT	**71 T**	**11 T**
LWG RA Total DDx (Calculated U = 1/2)	16 UT	**59 T**	**310 JT**	16 UT	16 UT	3.2 UT	**100 T**	**23 JT**
LWG RA Total Chlordane[2] (Calculated U = 1/2)	16 UT	16 UT	3.2 UT	16 UT	16 UT	3.2 UT	16 UT	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	**86**	**140**	**210**	**790**	**160**	**18**	**220**	**52**
Motor Oil Range	**330**	**510**	**410**	**780**	**490**	**61**	**500**	**120**
LWG RA Total Petroleum Hydrocarbons[5] (Calculated U = 1/2)	**420 T**	**650 T**	**620 T**	**1600 T**	**650 T**	**79 T**	**720 T**	**170 T**
Volatile Petroleum Hydrocarbons (VPH) (µg/kg)								
C5-C6 Aliphatic	25000 UJ	--	15000 UJ	--	17000 UJ	8100 UJ	--	15000 UJ
C6-C8 Aliphatic	25000 UJ	--	15000 UJ	--	17000 UJ	8100 UJ	--	15000 UJ
C8-C10 Aliphatic	25000 UJ	--	15000 UJ	--	17000 UJ	8100 UJ	--	15000 UJ
C10-C12 Aliphatic	25000 UJ	--	15000 UJ	--	17000 UJ	8100 UJ	--	15000 UJ
C8-C10 Aromatic	25000 UJ	--	15000 UJ	--	17000 UJ	8100 UJ	--	15000 UJ
C10-C12 Aromatic	25000 UJ	--	15000 UJ	--	17000 UJ	8100 UJ	--	15000 UJ
C12-C13 Aromatic	25000 UJ	--	15000 UJ	--	17000 UJ	8100 UJ	--	15000 UJ
Benzene	2500 UJ	--	1500 UJ	--	1700 UJ	810 UJ	--	1500 UJ
Ethylbenzene	2500 UJ	--	1500 UJ	--	1700 UJ	810 UJ	--	1500 UJ
m,p-Xylene	5100 UJ	--	3100 UJ	--	3300 UJ	1600 UJ	--	3000 UJ
Methyl tert-butyl ether (MTBE)	2500 UJ	--	1500 UJ	--	1700 UJ	810 UJ	--	1500 UJ
n-Decane (C10)	2500 UJ	--	1500 UJ	--	1700 UJ	810 UJ	--	1500 UJ
n-Dodecane (C12)	2500 UJ	--	1500 UJ	--	1700 UJ	810 UJ	--	1500 UJ
n-Hexane	2500 UJ	--	1500 UJ	--	1700 UJ	810 UJ	--	1500 UJ
n-Octane (C8)	2500 UJ	--	1500 UJ	--	1700 UJ	810 UJ	--	1500 UJ
n-Pentane (C5)	2500 UJ	--	1500 UJ	--	1700 UJ	810 UJ	--	1500 UJ
o-Xylene	2500 UJ	--	1500 UJ	--	1700 UJ	810 UJ	--	1500 UJ
Toluene	2500 UJ	--	1500 UJ	--	1700 UJ	810 UJ	--	1500 UJ

Table 2-4a
Data Gaps Surface Sediment Physical and Chemical Results - Initial Event

Location ID	DGS-01SG	DGS-02SG	DGS-04SG	DGS-05SG	DGS-06SG	DGS-08SG	DGS-09SG	DGS-12SG
Sample ID	DGS-01SG-101014	DGS-02SG-101014	DGS-04SG-101013	DGS-05SG-101014	DGS-06SG-101014	DGS-08SG-101013	DGS-09SG-101013	DGS-12SG-101013
Sample Date	10/14/2010	10/14/2010	10/13/2010	10/14/2010	10/14/2010	10/13/2010	10/13/2010	10/13/2010
Depth	0 to 30 cm	0 to 30 cm	0 to 25 cm	0 to 27 cm	0 to 29 cm	0 to 30 cm	0 to 30 cm	0 to 27 cm
Sample Type	N	N	N	N	N	N	N	N
Extractable Petroleum Hydrocarbons (EPH) (µg/kg)								
C8-C10 Aliphatics	4700 U	--	3400 U	--	3900 U	2400 U	--	3200 U
C8-C10 Aromatics	4700 U	--	3400 U	--	39000 U	2400 U	--	3200 U
C10-C12 Aliphatics	4700 U	--	3400 U	--	3900 U	2400 U	--	3200 U
C10-C12 Aromatics	4700 U	--	3400 U	--	39000 U	2400 U	--	3200 U
C12-C16 Aliphatics	4700 U	--	**4100**	--	3900 U	2400 U	--	3200 U
C12-C16 Aromatics	4700 U	--	**4100**	--	39000 U	**2800**	--	**5200**
C16-C21 Aliphatics	**7700**	--	**7400**	--	**4100 J**	2400 U	--	**5200**
C16-C21 Aromatics	**39000**	--	**18000**	--	**900000**	**16000**	--	**21000**
C21-C34 Aliphatics	**14000 J**	--	**35000 J**	--	**15000 J**	2400 UJ	--	**13000 J**
C21-C34 Aromatics	**49000**	--	**13000**	--	**1800000**	**26000**	--	**51000**

Table 2-4a
Data Gaps Surface Sediment Physical and Chemical Results - Initial Event

Location ID	DGS-13SG	DGS-16SG	DGS-17SG	DGS-20SG	DGS-21SG	DGS-25SG	DGS-26SG	DGS-30SG
Sample ID	DGS-13SG-101013	DGS-16SG-101013	DGS-17SG-101013	DGS-20SG-101013	DGS-21SG-101013	DGS-25SG-101012	DGS-26SG-101013	DGS-30SG-101012
Sample Date	10/13/2010	10/13/2010	10/13/2010	10/13/2010	10/13/2010	10/12/2010	10/13/2010	10/12/2010
Depth	0 to 30 cm	0 to 26 cm	0 to 30 cm	0 to 30 cm	0 to 30 cm	0 to 26 cm	0 to 30 cm	0 to 29 cm
Sample Type	N	N	N	N	N	N	N	N
Conventional Parameters (mg/kg)								
Ammonia as nitrogen	**55.6**	**52.1 J**	**20.8 J**	**11.2 J**	**109 J**	**17.7 J**	**87.9 J**	**46.4 J**
Cyanide, total	**0.912**	**0.185**	**0.427**	0.148 U	**0.297**	0.141 U	**0.703**	**0.31**
Sulfide	1.45 U	1.36 UJ	1.77 UJ	**159 J**	2.03 UJ	**70.2 J**	2.22 UJ	1.53 UJ
Conventional Parameters (percent)								
Total organic carbon	**1.94**	**2.01**	**1.71**	**2.74**	**2.2**	**1.94**	**2.25**	**1.61**
Total solids	**69.2**	**66.9**	**71.9**	**67.4**	**50.8**	**69.2**	**44.5**	**62.1**
Total solids (preserved)[1]	**67.2**	**71.7**	**53.7**	**59.1**	**45.9**	**62.2**	**42.9**	**63.6**
Total volatile solids	--	--	--	--	--	--	--	--
Grain Size (percent)								
Total Gravel	0.1 UT	0.1 UT	**1.5 T**	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
Total Sand	**82 T**	**78 T**	**82 T**	**81 T**	**40 T**	**75 T**	**20 T**	**76 T**
Total Silt	**14 T**	**18 T**	**13 T**	**16 T**	**47 T**	**20 T**	**64 T**	**19 T**
Total Clay	**4.2 T**	**3.9 T**	**4 T**	**4 T**	**13 T**	**4.9 T**	**16 T**	**5.5 T**
Total Fines (silt + clay)	**18 T**	**21 T**	**17 T**	**20 T**	**60 T**	**25 T**	**80 T**	**24 T**
Total Grain Size	**100 T**	**100 T**	**100 T**	**101 T**	**100 T**	**100 T**	**100 T**	**100 T**
Metals (mg/kg)								
Arsenic	7 U	7 U	7 U	8 U	10 U	8 U	10 U	8 U
Cadmium	0.3 U	**0.3**	0.3 U	**0.3**	**0.5**	**0.3**	**0.5**	**0.3**
Chromium	**18.1**	**20.3**	**17.9**	**19.8**	**32**	**21.4**	**36**	**21**
Copper	**17.3 J**	**20**	**13.8**	**20.1**	**38.3**	**21.9**	**41.2**	**21.9**
Lead	**5**	**6**	**4**	**6**	**13**	**7**	**12**	**6**
Mercury	0.03 U	**0.05**	0.03 U	0.03 U	**0.06**	0.04 U	**0.06**	0.03 U
Nickel	**14**	**20**	**12**	**20**	**26**	**22**	**29**	**21**
Silver	0.4 U	0.4 U	0.4 U	0.5 U	0.6 U	0.5 U	0.7 U	0.5 U
Zinc	**57**	**79**	**63**	**75**	**109**	**79**	**111**	**80**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	1 UJ	1.3 UJ	1.1 UJ	1.2 UJ	1.6 UJ	1.2 UJ	1.8 UJ	1.2 UJ
1,2-Dichloroethene, cis-	1 UJ	1.3 UJ	1.1 UJ	1.2 UJ	1.6 UJ	1.2 UJ	1.8 UJ	1.2 UJ
1,2-Dichloroethene, trans-	1 UJ	1.3 UJ	1.1 UJ	1.2 UJ	1.6 UJ	1.2 UJ	1.8 UJ	1.2 UJ
Benzene	1 UJ	1.3 UJ	1.1 UJ	1.2 UJ	1.6 UJ	1.2 UJ	**130 J**	1.2 UJ
Ethylbenzene	1 UJ	1.3 UJ	1.1 UJ	1.2 UJ	1.6 UJ	1.2 UJ	**240 J**	1.2 UJ
m,p-Xylene	1 UJ	1.3 UJ	1.1 UJ	1.2 UJ	1.6 UJ	1.2 UJ	**78 J**	**1.8 J**
o-Xylene	1 UJ	1.3 UJ	1.1 UJ	1.2 UJ	1.6 UJ	1.2 UJ	**100 J**	1.2 UJ
Toluene	1 UJ	1.3 UJ	1.1 UJ	1.2 UJ	1.6 UJ	1.2 UJ	**25 J**	1.2 UJ
Trichloroethene (TCE)	1 UJ	1.3 UJ	1.1 UJ	1.2 UJ	1.6 UJ	1.2 UJ	1.8 UJ	1.2 UJ
Vinyl chloride	1 UJ	1.3 UJ	1.1 UJ	1.2 UJ	1.6 UJ	1.2 UJ	1.8 UJ	1.2 UJ
LWG RA Total BTEX[6] (Calculated U = 1/2)	1 UJT	1.3 UJT	1.1 UJT	1.2 UJT	1.6 UJT	1.2 UJT	**570 JT**	**4.2 JT**
LWG RA Total Xylene[9] (Calculated U = 1/2)	1 UJT	1.3 UJT	1.1 UJT	1.2 UJT	1.6 UJT	1.2 UJT	**180 JT**	**2.4 JT**
PAHs (µg/kg)								
1-Methylnaphthalene	**2300**	63 U	**210**	60 U	**360**	61 U	**4800**	65 U
2-Methylnaphthalene	**2900**	63 U	**250**	60 U	**290**	61 U	**1800**	65 U

Table 2-4a
Data Gaps Surface Sediment Physical and Chemical Results - Initial Event

Location ID	DGS-13SG	DGS-16SG	DGS-17SG	DGS-20SG	DGS-21SG	DGS-25SG	DGS-26SG	DGS-30SG
Sample ID	DGS-13SG-101013	DGS-16SG-101013	DGS-17SG-101013	DGS-20SG-101013	DGS-21SG-101013	DGS-25SG-101012	DGS-26SG-101013	DGS-30SG-101012
Sample Date	10/13/2010	10/13/2010	10/13/2010	10/13/2010	10/13/2010	10/12/2010	10/13/2010	10/12/2010
Depth	0 to 30 cm	0 to 26 cm	0 to 30 cm	0 to 30 cm	0 to 30 cm	0 to 26 cm	0 to 30 cm	0 to 29 cm
Sample Type	N	N	N	N	N	N	N	N
Acenaphthene	**7400**	**140**	**310**	60 U	**2700**	61 U	**8500**	65 U
Acenaphthylene	**350**	63 U	**190**	60 U	**510**	61 U	64 U	65 U
Anthracene	**3100**	**200**	**310**	60 U	**1300**	61 U	**270**	65 U
Benzo(a)anthracene	**6600**	**500**	**560**	**86**	**4600**	61 U	**120**	65 U
Benzo(a)pyrene	**8600**	**690**	**730**	**150**	**6800**	61 U	**170**	65 U
Benzo(g,h,i)perylene	**2700**	**500**	**530**	**99**	**4800**	61 U	**110**	65 U
Benzo(b,j,k)fluoranthenes	**9100**	**830**	**1100**	**200**	**8000**	**70**	**250**	**84**
Chrysene	**7700**	**620**	**700**	**99**	**5100**	61 U	**150**	65 U
Dibenzo(a,h)anthracene	**1000**	63 U	62 U	60 U	**200**	61 U	64 U	65 U
Fluoranthene	**16000**	**960**	**1500**	**160**	**10000**	**73**	**470**	**84**
Fluorene	**3000**	**91**	**190**	60 U	**1400**	61 U	**1500**	65 U
Indeno(1,2,3-c,d)pyrene	**2700**	**390**	**430**	**76**	**3800**	61 U	**97**	65 U
Naphthalene	**8100**	63 U	**1800**	60 U	**430**	61 U	**12000**	65 U
Perylene	**1900**	**190**	**220**	60 U	**1800**	61 U	**90**	65 U
Phenanthrene	**20000**	**680**	**1500**	**120**	**11000**	61 U	**2600**	65 U
Pyrene	**17000**	**1100**	**1600**	**500**	**11000**	**120**	**480**	**94**
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	**45000 T**	**1200 T**	**4500 T**	**300 T**	**18000 T**	61 UT	**27000 T**	65 UT
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	**71000 T**	**5600 T**	**7200 T**	**1400 T**	**54000 T**	**450 T**	**1900 T**	**460 T**
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	**120000 T**	**6800 T**	**12000 T**	**1700 T**	**72000 T**	**660 T**	**29000 T**	**680 T**
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	**11000 T**	**810 T**	**860 T**	**200 T**	**7800 T**	61 UT	**220 T**	65 UT
Semivolatile Organics (µg/kg)								
Carbazole	**420**	63 U	**100**	60 U	180 U	61 U	**1300**	65 U
Dibenzofuran	**550**	63 U	62 U	60 U	180 U	61 U	**280**	65 U
PCB Aroclors (µg/kg)								
Aroclor 1016	32 U	33 U	32 U	32 U	32 U	31 U	33 U	32 U
Aroclor 1221	32 UJ	33 U	32 U	32 U	32 U	31 U	33 U	32 U
Aroclor 1232	32 U	33 U	32 U	32 U	32 U	31 U	33 U	32 U
Aroclor 1242	32 U	33 U	32 U	32 U	32 U	31 U	33 U	32 U
Aroclor 1248	32 U	33 U	32 U	32 U	32 U	31 U	33 U	32 U
Aroclor 1254	32 U	33 U	32 U	32 U	32 U	31 U	33 U	32 U
Aroclor 1260	32 U	33 U	32 U	32 U	32 U	31 U	33 U	32 U
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	32 UJT	33 UT	32 UT	32 UT	32 UT	31 UT	33 UT	32 UT
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	16 U	3.2 U	3.2 U	3.1 U	**3.3 J**	3.2 U	3.2 U	3.2 U
2,4'-DDE (o,p'-DDE)	16 U	3.2 U	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U
2,4'-DDT (o,p'-DDT)	16 U	3.2 U	3.2 U	3.1 U	**4.1 J**	3.2 U	3.2 U	3.2 U
4,4'-DDD (p,p'-DDD)	16 U	**2.2 J**	3.2 U	**1.3 J**	**7.7**	**1.6 J**	**3.1 J**	**1.5 J**
4,4'-DDE (p,p'-DDE)	16 U	3.2 U	3.2 U	3.1 U	**3.5 J**	3.2 U	**2.2 J**	3.2 U
4,4'-DDT (p,p'-DDT)	16 U	3.2 U	3.2 U	**2.9 J**	**24**	3.2 U	3.2 U	**1.5 J**
alpha-Hexachlorocyclohexane (BHC)	7.8 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U
alpha-Chlordane (cis-Chlordane)	7.8 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	7.8 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U

Table 2-4a
Data Gaps Surface Sediment Physical and Chemical Results - Initial Event

Location ID	DGS-13SG	DGS-16SG	DGS-17SG	DGS-20SG	DGS-21SG	DGS-25SG	DGS-26SG	DGS-30SG
Sample ID	DGS-13SG-101013	DGS-16SG-101013	DGS-17SG-101013	DGS-20SG-101013	DGS-21SG-101013	DGS-25SG-101012	DGS-26SG-101013	DGS-30SG-101012
Sample Date	10/13/2010	10/13/2010	10/13/2010	10/13/2010	10/13/2010	10/12/2010	10/13/2010	10/12/2010
Depth	0 to 30 cm	0 to 26 cm	0 to 30 cm	0 to 30 cm	0 to 30 cm	0 to 26 cm	0 to 30 cm	0 to 29 cm
Sample Type	N	N	N	N	N	N	N	N
gamma-Chlordane (trans-Chlordane)	7.8 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U
cis-Nonachlor	16 U	3.2 U	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U
delta-Hexachlorocyclohexane (BHC)	7.8 UJ	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U
Dieldrin	16 U	3.2 U	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U
Endrin	16 U	3.2 U	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U
Endrin ketone	16 U	3.2 U	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	7.8 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U
Heptachlor epoxide	7.8 U	1.6 U	1.6 U	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U
Oxychlordane	16 U	3.2 U	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U
trans-Nonachlor	16 U	3.2 U	3.2 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U
Hexachlorobenzene	7.8 UJ	1.6 U	**-- R**	1.5 U	1.6 U	1.6 U	1.6 U	1.6 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	3.2 UT	3.2 UT	3.1 UT	**9 JT**	3.2 UT	3.2 UT	3.2 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	**5.4 JT**	3.2 UT	**5.8 JT**	**35 JT**	**4.8 JT**	**6.9 JT**	**4.6 JT**
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	**3.8 JT**	3.2 UT	**2.9 JT**	**11 JT**	**3.2 JT**	**4.7 JT**	**3.1 JT**
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	3.2 UT	3.2 UT	3.1 UT	**5.1 JT**	3.2 UT	**3.8 JT**	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	3.2 UT	3.2 UT	**4.5 JT**	**28 JT**	3.2 UT	3.2 UT	**3.1 JT**
LWG RA Total DDx (Calculated U = 1/2)	16 UT	**10 JT**	3.2 UT	**10 JT**	**44 JT**	**9.6 JT**	**12 JT**	**9.4 JT**
LWG RA Total Chlordane[2] (Calculated U = 1/2)	16 UT	3.2 UT	3.2 UT	3.1 UT	3.2 UT	3.2 UT	3.2 UT	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	**110**	**13**	**320**	**9.4**	**140**	7 U	**19**	7.2 U
Motor Oil Range	**250**	**43**	**360**	**35**	**280**	**21**	**63**	**34**
LWG RA Total Petroleum Hydrocarbons[5] (Calculated U = 1/2)	**360 T**	**56 T**	**680 T**	**44 T**	**420 T**	**25 T**	**82 T**	**38 T**
Volatile Petroleum Hydrocarbons (VPH) (µg/kg)								
C5-C6 Aliphatic	8800 UJ	--	--	9200 UJ	16000 UJ	9900 UJ	19000 UJ	10000 UJ
C6-C8 Aliphatic	8800 UJ	--	--	9200 UJ	16000 UJ	9900 UJ	19000 UJ	10000 UJ
C8-C10 Aliphatic	8800 UJ	--	--	9200 UJ	16000 UJ	9900 UJ	19000 UJ	10000 UJ
C10-C12 Aliphatic	8800 UJ	--	--	9200 UJ	16000 UJ	9900 UJ	19000 UJ	10000 UJ
C8-C10 Aromatic	8800 UJ	--	--	9200 UJ	16000 UJ	9900 UJ	19000 UJ	10000 UJ
C10-C12 Aromatic	8800 UJ	--	--	9200 UJ	16000 UJ	9900 UJ	19000 UJ	10000 UJ
C12-C13 Aromatic	8800 UJ	--	--	9200 UJ	16000 UJ	9900 UJ	19000 UJ	10000 UJ
Benzene	880 UJ	--	--	920 UJ	1600 UJ	990 UJ	1900 UJ	1000 UJ
Ethylbenzene	880 UJ	--	--	920 UJ	1600 UJ	990 UJ	1900 UJ	1000 UJ
m,p-Xylene	1800 UJ	--	--	1800 UJ	3100 UJ	2000 UJ	3700 UJ	2000 UJ
Methyl tert-butyl ether (MTBE)	880 UJ	--	--	920 UJ	1600 UJ	990 UJ	1900 UJ	1000 UJ
n-Decane (C10)	880 UJ	--	--	920 UJ	1600 UJ	990 UJ	1900 UJ	1000 UJ
n-Dodecane (C12)	880 UJ	--	--	920 UJ	1600 UJ	990 UJ	1900 UJ	1000 UJ
n-Hexane	880 UJ	--	--	920 UJ	1600 UJ	990 UJ	1900 UJ	1000 UJ
n-Octane (C8)	880 UJ	--	--	920 UJ	1600 UJ	990 UJ	1900 UJ	1000 UJ
n-Pentane (C5)	880 UJ	--	--	920 UJ	1600 UJ	990 UJ	1900 UJ	1000 UJ
o-Xylene	880 UJ	--	--	920 UJ	1600 UJ	990 UJ	1900 UJ	1000 UJ
Toluene	880 UJ	--	--	920 UJ	1600 UJ	990 UJ	1900 UJ	1000 UJ

Table 2-4a
Data Gaps Surface Sediment Physical and Chemical Results - Initial Event

Location ID	DGS-13SG	DGS-16SG	DGS-17SG	DGS-20SG	DGS-21SG	DGS-25SG	DGS-26SG	DGS-30SG
Sample ID	DGS-13SG-101013	DGS-16SG-101013	DGS-17SG-101013	DGS-20SG-101013	DGS-21SG-101013	DGS-25SG-101012	DGS-26SG-101013	DGS-30SG-101012
Sample Date	10/13/2010	10/13/2010	10/13/2010	10/13/2010	10/13/2010	10/12/2010	10/13/2010	10/12/2010
Depth	0 to 30 cm	0 to 26 cm	0 to 30 cm	0 to 30 cm	0 to 30 cm	0 to 26 cm	0 to 30 cm	0 to 29 cm
Sample Type	N	N	N	N	N	N	N	N
Extractable Petroleum Hydrocarbons (EPH) (µg/kg)								
C8-C10 Aliphatics	2900 U	--	--	2600 U	3400 U	2800 U	3700 U	2800 U
C8-C10 Aromatics	2900 U	--	--	2600 U	3400 U	2800 U	3700 U	2800 U
C10-C12 Aliphatics	2900 U	--	--	2600 U	3400 U	2800 U	3700 U	2800 U
C10-C12 Aromatics	2900 U	--	--	2600 U	3400 U	2800 U	**6900**	2800 U
C12-C16 Aliphatics	2900 U	--	--	2600 U	3400 U	2800 U	3700 U	2800 U
C12-C16 Aromatics	**5500**	--	--	2600 U	**4500**	2800 U	**10000**	2800 U
C16-C21 Aliphatics	2900 U	--	--	2600 U	**4800**	2800 U	3700 U	2800 U
C16-C21 Aromatics	**42000**	--	--	2600 U	**34000**	2800 U	**5400**	2800 U
C21-C34 Aliphatics	**3600 J**	--	--	**5200 J**	**22000 J**	**2800 J**	**6300 J**	**5300 J**
C21-C34 Aromatics	**51000**	--	--	2600 U	**61000**	2800 U	3700 U	2800 U

Table 2-4a
Data Gaps Surface Sediment Physical and Chemical Results - Initial Event

Location ID	DGS-31SG	DGS-31SG	DGS-33SG	DGS-34SG	DGS-35SG	U2C-2	U4Q-1	U4Q-2
Sample ID	DGS-31SG-101012	DGS-81SG-101012	DGS-33SG-101012	DGS-34SG-101012	DGS-35SG-101012	U2C-2-101014	U4Q-1-101014	U4Q-2-101014
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/14/2010	10/14/2010	10/14/2010
Depth	0 to 30 cm	0 to 30 cm	0 to 29 cm	0 to 30 cm	0 to 27 cm	0 to 25 cm	0 to 30 cm	0 to 25 cm
Sample Type	N	FD	N	N	N	N	N	N
Conventional Parameters (mg/kg)								
Ammonia as nitrogen	**77.3 J**	**76.3 J**	**35.7 J**	**102 J**	**201 J**	**27.5**	**81.1**	**73.5**
Cyanide, total	**2.5**	**2.3**	0.155 U	**0.626**	**2.04**	0.156 U	0.2 U	0.162 U
Sulfide	1.76 UJ	1.83 UJ	1.67 UJ	**5.27 J**	**23.9 J**	1.57 UJ	**25 J**	**12.4 J**
Conventional Parameters (percent)								
Total organic carbon	**2.27**	**1.87**	**1.53**	**2.4**	**1.88**	**1.05**	**2.12**	**1.04**
Total solids	**46.8**	**48**	**63.2**	**49.4**	**51.6**	**62**	**49.2**	**60.2**
Total solids (preserved)[1]	**55.3**	**53.1**	**58.6**	**54.2**	**52.8**	**60.5**	**48**	**60.1**
Total volatile solids	**--**	**--**	**--**	**--**	**--**	**4.49**	**7.23**	**5.17**
Grain Size (percent)								
Total Gravel	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	**0.2 T**	0.1 UT	0.1 UT
Total Sand	**32 T**	**31 T**	**72 T**	**44 T**	**10 T**	**67 T**	**29 T**	**47 T**
Total Silt	**53 T**	**54 T**	**23 T**	**44 T**	**70 T**	**28 T**	**63 T**	**47 T**
Total Clay	**15 T**	**15 T**	**5.3 T**	**12 T**	**20 T**	**4.8 T**	**8.3 T**	**5.9 T**
Total Fines (silt + clay)	**68 T**	**68 T**	**28 T**	**56 T**	**90 T**	**32 T**	**71 T**	**53 T**
Total Grain Size	**100 T**	**100 T**	**100 T**	**100 T**	**100 T**	**100 T**	**100 T**	**100 T**
Metals (mg/kg)								
Arsenic	10 U	10 U	8 U	10 U	9 U	8 U	10 U	9 U
Cadmium	**0.5**	**0.5**	**0.3**	**0.5**	**0.8**	**0.4**	**0.5**	**0.4**
Chromium	**33**	**32**	**20.4**	**28**	**35.5**	**30.5**	**37**	**33.9**
Copper	**41**	**40.4**	**22.5**	**34.9**	**46.2**	**29.4 J**	**37.3 J**	**32.1 J**
Lead	**16**	**17**	**8**	**12**	**26**	**23**	**8**	**8**
Mercury	**0.06**	**0.07**	0.03 U	**0.11**	**0.42**	**0.04**	**0.05**	**0.04**
Nickel	**27**	**27**	**21**	**23**	**31**	**27**	**30**	**29**
Silver	0.6 U	0.6 U	0.5 U	0.6 U	0.5 U	0.5 U	0.6 U	0.5 U
Zinc	**119**	**116**	**80**	**102**	**162**	**120**	**96**	**87**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	1.7 UJ	1.8 UJ	1.3 UJ	1.6 UJ	1.7 UJ	1.3 UJ	1.7 UJ	1.6 UJ
1,2-Dichloroethene, cis-	1.7 UJ	1.8 UJ	1.3 UJ	1.6 UJ	1.7 UJ	1.3 UJ	1.7 UJ	1.6 UJ
1,2-Dichloroethene, trans-	1.7 UJ	1.8 UJ	1.3 UJ	1.6 UJ	1.7 UJ	1.3 UJ	1.7 UJ	1.6 UJ
Benzene	**12 J**	**13 J**	1.3 UJ	1.6 UJ	1.7 UJ	1.3 UJ	1.7 UJ	1.6 UJ
Ethylbenzene	**17 J**	**16 J**	1.3 UJ	1.6 UJ	1.7 UJ	1.3 UJ	1.7 UJ	1.6 UJ
m,p-Xylene	**3.7 J**	**3.5 J**	**1.9 J**	1.6 UJ	1.7 UJ	1.3 UJ	1.7 UJ	1.6 UJ
o-Xylene	**3.8 J**	**3.2 J**	1.3 UJ	1.6 UJ	1.7 UJ	1.3 UJ	1.7 UJ	1.6 UJ
Toluene	**2.5 J**	**2.3 J**	1.3 UJ	1.6 UJ	1.7 UJ	1.3 UJ	1.7 UJ	1.6 UJ
Trichloroethene (TCE)	1.7 UJ	1.8 UJ	1.3 UJ	1.6 UJ	1.7 UJ	1.3 UJ	1.7 UJ	1.6 UJ
Vinyl chloride	1.7 UJ	1.8 UJ	1.3 UJ	1.6 UJ	1.7 UJ	1.3 UJ	1.7 UJ	1.6 UJ
LWG RA Total BTEX[6] (Calculated U = 1/2)	**39 JT**	**38 JT**	**4.5 JT**	1.6 UJT	1.7 UJT	1.3 UJT	1.7 UJT	1.6 UJT
LWG RA Total Xylene[9] (Calculated U = 1/2)	**7.5 JT**	**6.7 JT**	**2.6 JT**	1.6 UJT	1.7 UJT	1.3 UJT	1.7 UJT	1.6 UJT
PAHs (µg/kg)								
1-Methylnaphthalene	**1200**	**1500**	63 U	61 U	**960**	64 U	66 U	66 U
2-Methylnaphthalene	62 U	**75**	63 U	61 U	**210**	64 U	66 U	66 U

Table 2-4a
Data Gaps Surface Sediment Physical and Chemical Results - Initial Event

Location ID	DGS-31SG	DGS-31SG	DGS-33SG	DGS-34SG	DGS-35SG	U2C-2	U4Q-1	U4Q-2
Sample ID	DGS-31SG-101012	DGS-81SG-101012	DGS-33SG-101012	DGS-34SG-101012	DGS-35SG-101012	U2C-2-101014	U4Q-1-101014	U4Q-2-101014
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/14/2010	10/14/2010	10/14/2010
Depth	0 to 30 cm	0 to 30 cm	0 to 29 cm	0 to 30 cm	0 to 27 cm	0 to 25 cm	0 to 30 cm	0 to 25 cm
Sample Type	N	FD	N	N	N	N	N	N
Acenaphthene	**6000**	**6900**	63 U	**320**	**4700**	64 U	66 U	66 U
Acenaphthylene	**1800**	65 U	63 U	61 U	**300**	64 U	66 U	66 U
Anthracene	**560**	**710**	63 U	**91**	**2800**	64 U	66 U	66 U
Benzo(a)anthracene	**160**	**220**	63 U	**170**	**3000**	64 U	66 U	66 U
Benzo(a)pyrene	**220**	**310**	63 U	**290**	**2900**	64 U	66 U	66 U
Benzo(g,h,i)perylene	**190**	**240**	63 U	**270**	**1800**	64 U	66 U	66 U
Benzo(b,j,k)fluoranthenes	**300**	**420**	**110**	**400**	**3700**	64 U	66 U	66 U
Chrysene	**200**	**300**	**69**	**270**	**3800**	64 U	66 U	66 U
Dibenzo(a,h)anthracene	62 U	65 U	63 U	61 U	190 U	64 U	66 U	66 U
Fluoranthene	**840**	**1100**	**110**	**540**	**10000**	64 U	66 U	66 U
Fluorene	**3600**	**4300**	63 U	**230**	**3300**	64 U	66 U	66 U
Indeno(1,2,3-c,d)pyrene	**140**	**200**	63 U	**200**	**1400**	64 U	66 U	66 U
Naphthalene	62 U	65 U	63 U	61 U	**200**	64 U	66 U	66 U
Perylene	**92**	**130**	63 U	**98**	**740**	64 U	66 U	**97**
Phenanthrene	**5600**	**6800**	**78**	**1300**	**19000**	64 U	66 U	66 U
Pyrene	**760**	**990**	**130**	**580**	**11000**	64 U	66 U	66 U
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	**18000 T**	**19000 T**	**270 T**	**2000 T**	**31000 T**	64 UT	66 UT	66 UT
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	**2800 T**	**3800 T**	**580 T**	**2800 T**	**38000 T**	64 UT	66 UT	66 UT
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	**20000 T**	**23000 T**	**840 T**	**4800 T**	**68000 T**	64 UT	66 UT	66 UT
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	**280 T**	**380 T**	**69 T**	**360 T**	**3400 T**	64 UT	66 UT	66 UT
Semivolatile Organics (µg/kg)								
Carbazole	**710**	**820**	63 U	61 U	190 U	64 U	66 U	66 U
Dibenzofuran	**110**	65 U	63 U	61 U	**430**	64 U	66 U	66 U
PCB Aroclors (µg/kg)								
Aroclor 1016	32 U	33 U	32 U	32 U	32 U	32 U	32 U	33 U
Aroclor 1221	32 U	33 U	32 U	32 U	32 U	32 UJ	32 UJ	33 UJ
Aroclor 1232	32 U	33 U	32 U	32 U	32 U	32 U	32 U	33 U
Aroclor 1242	32 U	33 U	32 U	32 U	32 U	32 U	32 U	33 U
Aroclor 1248	32 U	33 U	32 U	32 U	32 U	32 U	32 U	33 U
Aroclor 1254	32 U	33 U	32 U	32 U	32 U	32 U	32 U	33 U
Aroclor 1260	32 U	33 U	32 U	32 U	32 U	32 U	32 U	33 U
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	32 UT	33 UT	32 UT	32 UT	32 UT	32 UJT	32 UJT	33 UJT
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	**1.6 J**	**1.7 J**	3.2 U	**2.2 J**	**21**	3.3 U	3.2 U	3.2 U
2,4'-DDE (o,p'-DDE)	3.2 U	3.2 U	3.2 U	3.2 U	16 U	3.3 U	3.2 U	3.2 U
2,4'-DDT (o,p'-DDT)	3.2 U	3.2 U	3.2 U	3.2 U	16 U	3.3 U	3.9 U	3.2 U
4,4'-DDD (p,p'-DDD)	**3.4 J**	**3.9 J**	**1.5 J**	**5.3**	**66**	3.3 U	3.2 U	3.2 U
4,4'-DDE (p,p'-DDE)	**3.6 J**	3.2 U	3.2 U	3.2 U	**28**	3.3 U	3.2 U	3.2 U
4,4'-DDT (p,p'-DDT)	**2 J**	3.2 U	**7.4**	**1.5 J**	**34**	3.3 U	3.2 U	3.2 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	1.6 U	1.6 U	8.1 U	1.6 U	1.6 U	1.6 U
alpha-Chlordane (cis-Chlordane)	1.6 U	1.6 U	1.6 U	1.6 U	8.1 U	1.6 U	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	1.6 U	1.6 U	8.1 U	1.6 U	1.6 U	1.6 U

Table 2-4a
Data Gaps Surface Sediment Physical and Chemical Results - Initial Event

Location ID	DGS-31SG	DGS-31SG	DGS-33SG	DGS-34SG	DGS-35SG	U2C-2	U4Q-1	U4Q-2
Sample ID	DGS-31SG-101012	DGS-81SG-101012	DGS-33SG-101012	DGS-34SG-101012	DGS-35SG-101012	U2C-2-101014	U4Q-1-101014	U4Q-2-101014
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/14/2010	10/14/2010	10/14/2010
Depth	0 to 30 cm	0 to 30 cm	0 to 29 cm	0 to 30 cm	0 to 27 cm	0 to 25 cm	0 to 30 cm	0 to 25 cm
Sample Type	N	FD	N	N	N	N	N	N
gamma-Chlordane (trans-Chlordane)	1.6 U	1.6 U	1.6 U	1.6 U	8.1 U	1.6 U	1.6 U	1.6 U
cis-Nonachlor	3.2 U	3.2 U	3.2 U	3.2 U	16 U	3.3 U	3.2 U	3.2 U
delta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	1.6 U	1.6 U	8.1 U	1.6 UJ	1.6 UJ	1.6 UJ
Dieldrin	3.2 U	3.2 U	3.2 U	3.2 U	16 U	3.3 U	3.2 U	3.2 U
Endrin	3.2 U	3.2 U	3.2 U	3.2 U	16 U	3.3 U	3.2 U	3.2 U
Endrin ketone	3.2 U	3.2 U	3.2 U	3.2 U	16 U	3.3 U	3.2 U	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.6 U	1.6 U	1.6 U	8.1 U	1.6 U	1.6 U	1.6 U
Heptachlor epoxide	1.6 U	1.6 U	1.6 U	1.6 U	8.1 U	1.6 U	1.6 U	1.6 U
Oxychlordane	3.2 U	3.2 U	3.2 U	3.2 U	16 U	3.3 U	3.2 U	3.2 U
trans-Nonachlor	3.2 U	3.2 U	3.2 U	3.2 U	16 U	3.3 U	3.2 U	3.2 U
Hexachlorobenzene	1.6 U	1.6 U	1.6 U	1.6 U	8.1 U	1.6 UJ	1.6 UJ	1.6 UJ
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	**4.8 JT**	**4.9 JT**	3.2 UT	**5.4 JT**	**37 T**	3.3 UT	3.9 UT	3.2 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	**9 JT**	**7.1 JT**	**11 JT**	**8.4 JT**	**130 T**	3.3 UT	3.2 UT	3.2 UT
LWG RA Sum DDD (Calculated U = 1/2)	**5 JT**	**5.6 JT**	**3.1 JT**	**7.5 JT**	**87 T**	3.3 UT	3.2 UT	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	**5.2 JT**	3.2 UT	3.2 UT	3.2 UT	**36 T**	3.3 UT	3.2 UT	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	**3.6 JT**	3.2 UT	**9 T**	**3.1 JT**	**42 T**	3.3 UT	3.9 UT	3.2 UT
LWG RA Total DDx (Calculated U = 1/2)	**14 JT**	**12 JT**	**15 JT**	**14 JT**	**160 T**	3.3 UT	3.9 UT	3.2 UT
LWG RA Total Chlordane[2] (Calculated U = 1/2)	3.2 UT	3.2 UT	3.2 UT	3.2 UT	16 UT	3.3 UT	3.2 UT	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	**12**	**28**	7.2 U	**13**	**100**	**12**	9.2 U	**10**
Motor Oil Range	**36**	**67**	**33**	**61**	**160**	**85**	**97**	**85**
LWG RA Total Petroleum Hydrocarbons[5] (Calculated U = 1/2)	**48 T**	**95 T**	**37 T**	**74 T**	**260 T**	**97 T**	**100 T**	**95 T**
Volatile Petroleum Hydrocarbons (VPH) (µg/kg)								
C5-C6 Aliphatic	17000 UJ	--	--	16000 UJ	--	--	--	--
C6-C8 Aliphatic	17000 UJ	--	--	16000 UJ	--	--	--	--
C8-C10 Aliphatic	17000 UJ	--	--	16000 UJ	--	--	--	--
C10-C12 Aliphatic	17000 UJ	--	--	16000 UJ	--	--	--	--
C8-C10 Aromatic	17000 UJ	--	--	16000 UJ	--	--	--	--
C10-C12 Aromatic	17000 UJ	--	--	16000 UJ	--	--	--	--
C12-C13 Aromatic	17000 UJ	--	--	16000 UJ	--	--	--	--
Benzene	1700 UJ	--	--	1600 UJ	--	--	--	--
Ethylbenzene	1700 UJ	--	--	1600 UJ	--	--	--	--
m,p-Xylene	3300 UJ	--	--	3200 UJ	--	--	--	--
Methyl tert-butyl ether (MTBE)	1700 UJ	--	--	1600 UJ	--	--	--	--
n-Decane (C10)	1700 UJ	--	--	1600 UJ	--	--	--	--
n-Dodecane (C12)	1700 UJ	--	--	1600 UJ	--	--	--	--
n-Hexane	1700 UJ	--	--	1600 UJ	--	--	--	--
n-Octane (C8)	1700 UJ	--	--	1600 UJ	--	--	--	--
n-Pentane (C5)	1700 UJ	--	--	1600 UJ	--	--	--	--
o-Xylene	1700 UJ	--	--	1600 UJ	--	--	--	--
Toluene	1700 UJ	--	--	1600 UJ	--	--	--	--

Table 2-4a
Data Gaps Surface Sediment Physical and Chemical Results - Initial Event

Location ID	DGS-31SG	DGS-31SG	DGS-33SG	DGS-34SG	DGS-35SG	U2C-2	U4Q-1	U4Q-2
Sample ID	DGS-31SG-101012	DGS-81SG-101012	DGS-33SG-101012	DGS-34SG-101012	DGS-35SG-101012	U2C-2-101014	U4Q-1-101014	U4Q-2-101014
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/14/2010	10/14/2010	10/14/2010
Depth	0 to 30 cm	0 to 30 cm	0 to 29 cm	0 to 30 cm	0 to 27 cm	0 to 25 cm	0 to 30 cm	0 to 25 cm
Sample Type	N	FD	N	N	N	N	N	N
Extractable Petroleum Hydrocarbons (EPH) (µg/kg)								
C8-C10 Aliphatics	3600 U	--	--	3500 U	--	--	--	--
C8-C10 Aromatics	3600 U	--	--	3500 U	--	--	--	--
C10-C12 Aliphatics	3600 U	--	--	3500 U	--	--	--	--
C10-C12 Aromatics	3600 U	--	--	3500 U	--	--	--	--
C12-C16 Aliphatics	3600 U	--	--	3500 U	--	--	--	--
C12-C16 Aromatics	**12000**	--	--	3500 U	--	--	--	--
C16-C21 Aliphatics	**6500**	--	--	3500 U	--	--	--	--
C16-C21 Aromatics	**16000**	--	--	3500 U	--	--	--	--
C21-C34 Aliphatics	**15000 J**	--	--	**14000 J**	--	--	--	--
C21-C34 Aromatics	**5800**	--	--	**4500**	--	--	--	--

Table 2-4a
Data Gaps Surface Sediment Physical and Chemical Results - Initial Event

Notes:

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R = Rejected

T = calculation or summation applied

N = Normal Field Sample

FD = Field Duplicate

-- Results not reported or not applicable

Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.

Significant figures applied to all calculated totals

Table contains validated data

Footnotes

[1] = preserved total solids were analyzed from the sulfide jar containing zinc acetate

[2] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[3] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[4] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[5] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[6] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[7] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

[8] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[9] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[10] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

Acronyms

cm = centimeter
cPAH = carcinogenic PAH

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
EPH = extractable petroleum hydrocarbon
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
mg/kg = milligrams per kilograms
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = toxic equivalents quotient

TPH = Total Petroleum Hydrocarbons

µg/kg = micrograms per kilogram

VPH = volatile petroleum hydrocarbon

Table 2-4b
Data Gaps Surface Sediment Physical and Chemical Results - Retested Event

Location ID	DGS-01	DGS-02	DGS-04	DGS-05	DGS-06	DGS-08	DGS-09	DGS-12
Sample ID	DGS-01SG-110420	DGS-02SG-110420	DGS-04SG-110420	DGS-05SG-110418	DGS-06SG-110420	DGS-08SG-110418	DGS-09SG-110418	DGS-12SG-110418
Sample Date	4/20/2011	4/20/2011	4/20/2011	4/18/2011	4/20/2011	4/18/2011	4/18/2011	4/18/2011
Depth	0 - 23 cm	0 - 29 cm	0 - 29 cm	0 - 25 cm	0 - 26 cm	0 - 25 cm	0 - 27 cm	0 - 25 cm
Sample Type	N	N	N	N	N	N	N	N
Conventional Parameters (mg/kg)								
Ammonia as nitrogen	**68.8 J**	**134 J**	**317 J**	**36.4**	**113 J**	**62.6**	**125**	**51**
Cyanide, total	**1.52**	**6.83**	**28.3**	**0.479 J**	**3.9**	**1.48 J**	**5.6 J**	**0.19 J**
Sulfide	2.11 U	**60.2**	**57.9**	1.43 U	**268**	**8.59**	**24.4**	1.54 U
Conventional Parameters (percent)								
Total organic carbon	**2.2**	**2.06**	**1.83**	**3.35**	**1.51**	**1.88**	**2.1**	**1.66**
Total solids	**45.5**	**48.6**	**52.4**	**69.7**	**58.1**	**65.1**	**54.5**	**67**
Total solids (preserved)[1]	**46.6**	**41.8**	**57**	**69.4**	**51.8**	**64.4**	**55.7**	**64.6**
Total volatile solids	**8.94**	**7.34**	**7.38**	**2.96**	**4.93**	**3.71**	**5.74**	**3.7**
Grain Size (percent)								
Total Gravel	**0.3 T**	**0.1 T**	**0.1 T**	0.1 UT	**0.4 T**	0.1 UT	**0.2 T**	**0.2 T**
Total Sand	**24.2 T**	**19.9 T**	**12.9 T**	**88 T**	**56.1 T**	**67.9 T**	**45.2 T**	**79.3 T**
Total Silt	**63.2 T**	**66.5 T**	**87 T**	**8 T**	**35.1 T**	**25.9 T**	**43.9 T**	**17 T**
Total Clay	**12.4 T**	**13.5 T**	0.1 UT	**2.6 T**	**8.2 T**	**6.1 T**	**10.5 T**	**3.4 T**
Total Fines (silt + clay)	**75.6 T**	**80 T**	**87 T**	**10.6 T**	**43.3 T**	**32 T**	**54.4 T**	**20.4 T**
Total Grain Size	**100 T**	**100 T**	**100 T**	**99 T**	**100 T**	**100 T**	**100 T**	**100 T**
Metals (mg/kg)								
Arsenic	**10**	**10**	**11**	**7**	**9**	**8**	9 U	**7**
Cadmium	0.4 U	**0.4**	**0.5**	0.3 U	0.3 U	**0.3**	**0.5**	**0.3**
Chromium	**36**	**38**	**33.5**	**19.2**	**25.9**	**22**	**30.7**	**20.3**
Copper	**41.1**	**47**	**46.6**	**20.8**	**29.8**	**24.4**	**37.1**	**21.2**
Lead	**10**	**17**	**26**	**6**	**11**	**7**	**12**	**7**
Mercury	**0.06 J**	**0.08 J**	**0.37 J**	0.03 UJ	**0.06 J**	**0.04 J**	**0.06 J**	**0.03 J**
Nickel	**29**	**38**	**34**	**20**	**22**	**22**	**27**	**20**
Silver	0.7 U	0.6 U	0.6 U	0.4 U	0.5 U	0.4 U	0.5 U	0.4 U
Zinc	**104**	**129**	**138**	**72**	**87**	**89**	**109**	**74**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	2.1 U	2 U	1.7 U	14 U	1.5 U	1.4 U	1.8 U	1.4 U
1,2-Dichloroethene, cis-	2.1 U	2 U	1.7 U	14 U	1.5 U	1.4 U	1.8 U	1.4 U
1,2-Dichloroethene, trans-	2.1 U	2 U	1.7 U	14 U	1.5 U	1.4 U	1.8 U	1.4 U
Benzene	2.1 U	2 U	1.7 U	**25**	1.5 U	1.4 U	1.8 U	**9.1**
Ethylbenzene	2.1 U	2 U	1.7 U	**980**	1.5 U	1.4 U	1.8 U	**1.4**
m,p-Xylene	2.1 U	2 U	1.7 U	**60**	1.5 U	1.4 U	1.8 U	**3.2**
o-Xylene	2.1 U	2 U	1.7 U	**230**	1.5 U	1.4 U	1.8 U	**14**
Toluene	2.1 U	2 U	**3.6**	**16**	1.5 U	1.4 U	1.8 U	1.4 U
Trichloroethene (TCE)	2.1 U	2 U	1.7 U	14 U	1.5 U	1.4 U	1.8 U	1.4 U
Vinyl chloride	2.1 U	2 U	1.7 U	14 U	1.5 U	1.4 U	1.8 U	1.4 U
LWG RA Total BTEX[6] (Calculated U = 1/2)	2.1 UT	2 UT	**7 T**	**1310 T**	1.5 UT	1.4 UT	1.8 UT	**28 T**
LWG RA Total Xylene[9] (Calculated U = 1/2)	2.1 UT	2 UT	1.7 UT	**290 T**	1.5 UT	1.4 UT	1.8 UT	**17 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)								
1-Methylnaphthalene	**170**	**240**	**2100**	**8200**	**900**	**280**	**1100**	**440**
2-Methylnaphthalene	**240**	**550**	**1400**	**11000**	**1000**	**50**	**2900**	**230**
Acenaphthene	**440**	**1100**	**3100**	**18000**	**3600**	**3300**	**9100**	**900**
Acenaphthylene	**100**	**330**	**560**	**910**	**630**	**73**	**9500**	**96**
Anthracene	**680**	**1200**	**6600**	**8200**	**1600**	**410**	**20000**	**220**
Benzo(a)anthracene	**810**	**4900**	**5400**	**6800**	**5500**	**570**	**42000 J**	**380**
Benzo(b,j,k)fluoranthenes	**1400**	**5500**	**6900**	**9500**	**8500**	**1100**	**66000**	**760**
Benzo(a)pyrene	**1100**	**6600**	**5200**	**8700**	**7200**	**770**	**12000**	**560**
Benzo(g,h,i)perylene	**990**	**6100**	**4900**	**7200**	**7000**	**840**	**57000**	**450**

Table 2-4b
Data Gaps Surface Sediment Physical and Chemical Results - Retested Event

Location ID	DGS-01	DGS-02	DGS-04	DGS-05	DGS-06	DGS-08	DGS-09	DGS-12
Sample ID	DGS-01SG-110420	DGS-02SG-110420	DGS-04SG-110420	DGS-05SG-110418	DGS-06SG-110420	DGS-08SG-110418	DGS-09SG-110418	DGS-12SG-110418
Sample Date	4/20/2011	4/20/2011	4/20/2011	4/18/2011	4/20/2011	4/18/2011	4/18/2011	4/18/2011
Depth	0 - 23 cm	0 - 29 cm	0 - 29 cm	0 - 25 cm	0 - 26 cm	0 - 25 cm	0 - 27 cm	0 - 25 cm
Sample Type	N	N	N	N	N	N	N	N
Chrysene	**980**	**6300**	**8200**	**8100**	**7100**	**730**	**50000 J**	**450**
Dibenzo(a,h)anthracene	**170**	**1100**	**840**	**1000**	**1200**	**110**	**8600**	**73**
Fluoranthene	**1900**	**7700**	**12000**	**29000**	**10000**	**1700**	**150000**	**1200**
Fluorene	**290**	**600**	**4500**	**7700**	**1500**	**1100**	**6900**	**300**
Indeno(1,2,3-c,d)pyrene	**650**	**3900**	**3000**	**4600**	**4000**	**490**	**34000**	**300**
Naphthalene	**590**	**1200**	**2800**	**14000**	**3200**	**150**	**9100**	**9000**
Perylene	**320**	**1600**	**1200**	**2000**	**1800**	**230**	**16000**	**180**
Phenanthrene	**1700**	**6500**	**7300**	**51000**	**9400**	**2900**	**120000**	**1400**
Pyrene	**2400**	**11000**	**19000**	**35000**	**15000**	**2100**	**200000 J**	**1300**
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	**4000 T**	**11000 T**	**26000 T**	**110000 T**	**21000 T**	**8000 T**	**180000 T**	**12000 T**
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	**10000 T**	**53000 T**	**65000 T**	**110000 T**	**66000 T**	**8000 T**	**620000 JT**	**5000 T**
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	**14000 T**	**65000 T**	**92000 T**	**220000 T**	**86000 T**	**16000 T**	**800000 JT**	**18000 T**
LWG RA Total cPAH TEQ[7] (EPA 1993) (Calculated U = 1/2)	**1600 T**	**9100 T**	**7600 T**	**12000 T**	**10000 T**	**1100 T**	**35000 JT**	**780 T**
Semivolatile Organics (µg/kg)								
Carbazole	**150**	**520**	**1500**	**2300**	**440**	**41**	**760**	**110**
Dibenzofuran	**100**	**140**	**640**	**1400**	**240**	**23**	**620**	**56**
4-Methylphenol (p-Cresol)	**52 J**	**120**	**550**	180 U	**77 J**	**14 J**	**120 J**	**26**
Benzyl alcohol	**300**	**120**	**100**	180 UJ	96 U	**30 J**	**170 J**	**40 J**
Pentachlorophenol	480 U	480 U	480 U	920 U	480 U	95 U	960 U	90 U
Phenol	95 U	96 U	**63 J**	180 U	96 U	**17 J**	190 U	**15 J**
PCB Aroclors (µg/kg)								
Aroclor 1016	4 U	3.8 U	3.8 U	19 U	3.9 U	20 U	19 U	19 U
Aroclor 1221	4 U	3.8 U	3.8 U	19 U	3.9 U	20 U	19 U	19 U
Aroclor 1232	4 U	3.8 U	3.8 U	19 U	3.9 U	20 U	19 U	19 U
Aroclor 1242	4 U	3.8 U	3.8 U	19 U	3.9 U	20 U	19 U	19 U
Aroclor 1248	**6**	**13**	11 U	19 U	9.6 U	20 U	19 U	19 U
Aroclor 1254	**10 J**	**14**	**26**	19 U	**9.4**	20 U	19 U	19 U
Aroclor 1260	**7.8**	**11**	**32**	19 U	**7.4**	20 U	19 U	19 U
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	**32 JT**	**46 T**	**71 T**	19 UT	**29 T**	20 UT	19 UT	19 UT
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	20 U	**11**	9.8 U	20 UJ	9.9 U	1.9 UJ	19 UJ	1.9 UJ
2,4'-DDE (o,p'-DDE)	20 U	9.7 U	9.8 U	20 U	9.9 U	1.9 U	19 U	1.9 U
2,4'-DDT (o,p'-DDT)	20 U	9.7 U	9.8 U	20 UJ	9.9 U	1.9 UJ	19 UJ	1.9 UJ
4,4'-DDD (p,p'-DDD)	20 U	**20**	**48**	20 UJ	**15**	**3.2 NJ**	**40 NJ**	**4.4 J**
4,4'-DDE (p,p'-DDE)	20 U	9.7 U	**16 J**	20 U	9.9 U	1.9 U	19 U	1.9 U
4,4'-DDT (p,p'-DDT)	20 U	9.7 U	9.8 U	20 UJ	9.9 U	**-- R**	**-- R**	**6.2 J**
Aldrin	9.9 U	4.8 U	4.9 U	9.9 U	5 U	0.95 U	9.5 U	0.96 U
alpha-Hexachlorocyclohexane (BHC)	9.9 U	4.8 U	4.9 U	9.9 U	5 U	0.95 U	9.5 U	0.96 U
alpha-Chlordane (cis-Chlordane)	9.9 U	4.8 U	4.9 U	9.9 U	5 U	0.95 U	9.5 U	0.96 U
beta-Hexachlorocyclohexane (BHC)	9.9 U	16 U	30 U	9.9 U	9.2 U	0.95 U	9.5 U	0.96 U
gamma-Chlordane (trans-Chlordane)	9.9 U	4.8 U	4.9 U	9.9 U	5 U	**1.9**	9.5 U	0.96 U
cis-Nonachlor	20 U	9.7 U	9.8 U	20 U	9.9 U	1.9 U	19 U	1.9 U
delta-Hexachlorocyclohexane (BHC)	9.9 UJ	4.8 UJ	4.9 UJ	9.9 UJ	5 UJ	0.95 UJ	9.5 UJ	0.96 UJ
Dieldrin	20 U	9.7 U	9.8 U	20 U	9.9 U	1.9 U	19 U	1.9 U
Endosulfan sulfate	20 U	9.7 U	9.8 U	20 UJ	42 U	1.9 UJ	19 UJ	9 UJ
Endosulfan-alpha (I)	9.9 U	4.8 U	4.9 U	9.9 U	5 U	0.95 U	9.5 U	0.96 U
Endosulfan-beta (II)	20 U	9.7 U	9.8 U	20 U	9.9 U	1.9 U	19 U	1.9 U
Endrin	20 U	9.7 U	9.8 U	20 U	9.9 U	1.9 U	19 U	1.9 U
Endrin ketone	20 U	9.7 U	9.8 U	20 UJ	9.9 U	1.9 UJ	19 UJ	1.9 UJ

Table 2-4b
Data Gaps Surface Sediment Physical and Chemical Results - Retested Event

Location ID	DGS-01	DGS-02	DGS-04	DGS-05	DGS-06	DGS-08	DGS-09	DGS-12
Sample ID	DGS-01SG-110420	DGS-02SG-110420	DGS-04SG-110420	DGS-05SG-110418	DGS-06SG-110420	DGS-08SG-110418	DGS-09SG-110418	DGS-12SG-110418
Sample Date	4/20/2011	4/20/2011	4/20/2011	4/18/2011	4/20/2011	4/18/2011	4/18/2011	4/18/2011
Depth	0 - 23 cm	0 - 29 cm	0 - 29 cm	0 - 25 cm	0 - 26 cm	0 - 25 cm	0 - 27 cm	0 - 25 cm
Sample Type	N	N	N	N	N	N	N	N
gamma-Hexachlorocyclohexane (BHC) (Lindane)	9.9 U	4.8 U	4.9 U	9.9 U	5 U	0.95 U	9.5 U	0.96 U
Heptachlor epoxide	9.9 U	4.8 U	4.9 U	9.9 U	5 U	0.95 U	9.5 U	0.96 U
Oxychlordane	20 U	9.7 U	9.8 U	20 U	9.9 U	1.9 U	19 U	1.9 U
trans-Nonachlor	20 U	9.7 U	9.8 U	20 U	**29**	1.9 U	19 U	14 U
Hexachlorobenzene	9.9 U	4.8 U	4.9 U	9.9 U	5 U	0.95 U	9.5 U	0.96 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	20 UT	**21 T**	9.8 UT	20 UJT	9.9 UT	1.9 UJT	19 UJT	1.9 UJT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	20 UT	**30 T**	**69 JT**	20 UJT	**25 T**	**4.2 NJT**	**50 NJT**	**12 JT**
LWG RA Sum DDD (Calculated U = 1/2)	20 UT	**31 T**	**53 T**	20 UJT	**20 T**	**4.2 NJT**	**50 NJT**	**5.4 JT**
LWG RA Sum DDE (Calculated U = 1/2)	20 UT	9.7 UT	**21 JT**	20 UT	9.9 UT	1.9 UT	19 UT	1.9 UT
LWG RA Sum DDT (Calculated U = 1/2)	20 UT	9.7 UT	9.8 UT	20 UJT	9.9 UT	1.9 UJT	19 UJT	**7.2 JT**
LWG RA Total DDx (Calculated U = 1/2)	20 UT	**50 T**	**84 JT**	20 UJT	**40 T**	**7.0 NJT**	**78 NJT**	**14 JT**
LWG RA Total Chlordane[2] (Calculated U = 1/2)	20 UT	9.7 UT	9.8 UT	20 UT	**44 T**	**5.2 T**	19 UT	14 UT
LWG RA Total Endosulfan (Calculated U = 1/2)	20 UT	9.7 UT	9.8 UT	20 UJT	42 UT	1.9 UJT	19 UJT	9 UJT
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	**26**	**100**	**250**	**320**	**140**	**28**	**120**	**31**
Motor Oil Range	**120**	**280**	**400**	**260**	**320**	**76**	**300**	**100**
LWG RA Total Petroleum Hydrocarbons[5] (TPH) (Calculated U = 1/2)	**150 T**	**380 T**	**650 T**	**580 T**	**460 T**	**100 T**	**420 T**	**130 T**
Volatile Petroleum Hydrocarbons (VPH) (µg/kg)								
C5-C6 Aliphatics	--	--	--	--	--	--	--	--
C6-C8 Aliphatics	--	--	--	--	--	--	--	--
C8-C10 Aliphatics	--	--	--	--	--	--	--	--
C10-C12 Aliphatics	--	--	--	--	--	--	--	--
C8-C10 Aromatics	--	--	--	--	--	--	--	--
C10-C12 Aromatics	--	--	--	--	--	--	--	--
C12-C13 Aromatics	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--
n-Hexane	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (EPH) (µg/kg)								
C8-C10 Aliphatics	--	--	--	--	--	--	--	--
C8-C10 Aromatics	--	--	--	--	--	--	--	--
C10-C12 Aliphatics	--	--	--	--	--	--	--	--
C10-C12 Aromatics	--	--	--	--	--	--	--	--
C12-C16 Aliphatics	--	--	--	--	--	--	--	--
C12-C16 Aromatics	--	--	--	--	--	--	--	--
C16-C21 Aliphatics	--	--	--	--	--	--	--	--
C16-C21 Aromatics	--	--	--	--	--	--	--	--
C21-C34 Aliphatics	--	--	--	--	--	--	--	--
C21-C34 Aromatics	--	--	--	--	--	--	--	--

Table 2-4b
Data Gaps Surface Sediment Physical and Chemical Results - Retested Event

Location ID	DGS-12	DGS-13	DGS-16	DGS-16	DGS-17	DGS-20	DGS-21	DGS-25
Sample ID	DGS-62SG-110418	DGS-13SG-110418	DGS-16SG-110418	DGS-66SG-110418	DGS-17SG-110418	DGS-20SG-110419	DGS-21SG-110419	DGS-25SG-110419
Sample Date	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/19/2011	4/19/2011	4/19/2011
Depth	0 - 25 cm	0 - 26 cm	0 - 25 cm	0 - 25 cm	0 - 28.5 cm	0 - 27 cm	0 - 27.5 cm	0 - 25 cm
Sample Type	FD	N	N	FD	N	N	N	N
Conventional Parameters (mg/kg)								
Ammonia as nitrogen	**51.9**	**103**	**39.5**	--	**26.2**	**25**	**164**	**33.9**
Cyanide, total	**0.184 J**	**0.634 J**	**0.197 J**	--	**0.244 J**	0.138 UJ	**1.12 J**	0.143 UJ
Sulfide	1.56 U	**2.98**	**9.04**	--	**1.81**	**265**	**34.4**	**194**
Conventional Parameters (percent)								
Total organic carbon	**1.39**	**2.06**	**2.26**	--	**2.19**	**1.23**	**2.01**	**1.62**
Total solids	**66**	**63.2**	**72.1**	--	**72.8**	**70.8**	**55.9**	**69**
Total solids (preserved)[1]	**64**	**56.6**	**71.6**	--	**71.5**	**72.4**	**52.9**	**72.5**
Total volatile solids	**3.99**	**4.17**	**3.19**	--	**2.01**	**2.75**	**5.74**	**2.73**
Grain Size (percent)								
Total Gravel	**0.1 T**	**0.1 T**	0.1 UT	--	0.1 UT	0.1 UT	0.1 UT	0.1 UT
Total Sand	**81.3 T**	**66.4 T**	**80 T**	--	**85.2 T**	**79.4 T**	**38.2 T**	**85.5 T**
Total Silt	**14.2 T**	**26.1 T**	**16.7 T**	--	**9.9 T**	**16.1 T**	**50.1 T**	**10.8 T**
Total Clay	**4.2 T**	**5.8 T**	**3 T**	--	**2.6 T**	**4.3 T**	**11.7 T**	**3.8 T**
Total Fines (silt + clay)	**18.4 T**	**31.9 T**	**19.7 T**	--	**12.5 T**	**20.4 T**	**61.8 T**	**14.6 T**
Total Grain Size	**100 T**	**98 T**	**100 T**	--	**98 T**	**100 T**	**100 T**	**100 T**
Metals (mg/kg)								
Arsenic	7 U	8 U	**9**	--	7 U	**8**	9 U	**7**
Cadmium	0.3 U	0.3 U	**0.3**	--	0.3 U	0.3 U	**0.3**	0.3 U
Chromium	**19.7**	**19.8**	**19.5**	--	**16.6**	**18.8**	**26.6**	**17.5**
Copper	**25.2**	**23.1**	**21.5**	--	**15.6**	**19.8**	**35.1**	**18.2**
Lead	**9**	**6**	**6**	--	**5**	**5**	**12**	**5**
Mercury	**0.04 J**	**0.05 J**	0.03 UJ	--	**0.03 J**	0.03 UJ	**0.19 J**	0.03 UJ
Nickel	**19**	**17**	**19**	--	**16**	**18**	**21**	**18**
Silver	0.4 U	0.5 U	0.4 U	--	0.4 U	0.4 U	0.5 U	0.4 U
Zinc	**67**	**65**	**79**	--	**59**	**67**	**93**	**64**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	--	1.4 U	1.3 U	1.3 U	1.2 U	1.4 U	1.7 U	1.2 U
1,2-Dichloroethene, cis-	--	1.4 U	1.3 U	1.3 U	1.2 U	1.4 U	1.7 U	**4.1**
1,2-Dichloroethene, trans-	--	1.4 U	1.3 U	1.3 U	1.2 U	1.4 U	1.7 U	1.2 U
Benzene	--	1.4 U	1.3 U	1.3 U	1.2 U	1.4 U	1.7 U	1.2 U
Ethylbenzene	--	1.4 U	1.3 U	1.3 U	1.2 U	1.4 U	1.7 U	1.2 U
m,p-Xylene	--	1.4 U	1.3 U	1.3 U	1.2 U	1.4 U	1.7 U	1.2 U
o-Xylene	--	1.4 U	1.3 U	1.3 U	1.2 U	1.4 U	1.7 U	1.2 U
Toluene	--	1.4 U	1.3 U	1.3 U	1.2 U	1.4 U	1.7 U	1.2 U
Trichloroethene (TCE)	--	1.4 U	1.3 U	1.3 U	1.2 U	1.4 U	1.7 U	1.2 U
Vinyl chloride	--	1.4 U	1.3 U	1.3 U	1.2 U	1.4 U	1.7 U	**2.3**
LWG RA Total BTEX[6] (Calculated U = 1/2)	--	1.4 UT	1.3 UT	1.3 UT	1.2 UT	1.4 UT	1.7 UT	1.2 UT
LWG RA Total Xylene[9] (Calculated U = 1/2)	--	1.4 UT	1.3 UT	1.3 UT	1.2 UT	1.4 UT	1.7 UT	1.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
1-Methylnaphthalene	**490**	**6500**	**17 J**	--	**200**	**9.1 J**	**240**	18 U
2-Methylnaphthalene	**210**	**11000**	**34**	--	**220**	**18**	**790**	18 U
Acenaphthene	**950**	**12000**	**120**	--	**1100**	**22**	**4100**	**950**
Acenaphthylene	**53**	**1100**	**24**	--	**110**	**18**	**460**	18 U
Anthracene	**190**	**4800**	**49**	--	**1200**	**20**	**1400**	**24**
Benzo(a)anthracene	**300**	**5800**	**170**	--	**500**	**110**	**4400**	**24**
Benzo(b,j,k)fluoranthenes	**570**	**9400**	**310**	--	**960**	**190**	**8000**	**35**
Benzo(a)pyrene	**430**	**8300**	**230**	--	**750**	**150**	**6600**	**19**
Benzo(g,h,i)perylene	**430**	**8200**	**200**	--	**730**	**130**	**6900**	**20**

Table 2-4b
Data Gaps Surface Sediment Physical and Chemical Results - Retested Event

Location ID	DGS-12	DGS-13	DGS-16	DGS-16	DGS-17	DGS-20	DGS-21	DGS-25
Sample ID	DGS-62SG-110418	DGS-13SG-110418	DGS-16SG-110418	DGS-66SG-110418	DGS-17SG-110418	DGS-20SG-110419	DGS-21SG-110419	DGS-25SG-110419
Sample Date	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/19/2011	4/19/2011	4/19/2011
Depth	0 - 25 cm	0 - 26 cm	0 - 25 cm	0 - 25 cm	0 - 28.5 cm	0 - 27 cm	0 - 27.5 cm	0 - 25 cm
Sample Type	FD	N	N	FD	N	N	N	N
Chrysene	**360**	**7200**	**240**	--	**620**	**150**	**5500**	**32**
Dibenzo(a,h)anthracene	**54**	**980**	**26**	--	**100**	**21**	**880**	18 U
Fluoranthene	**1000**	**18000**	**620**	--	**1700**	**200**	**13000**	**57**
Fluorene	**350**	**6200**	**40**	--	**680**	**10 J**	**2100**	**63**
Indeno(1,2,3-c,d)pyrene	**270**	**4800**	**130**	--	**460**	**88**	**4000**	**13 J**
Naphthalene	**7800**	**12000**	**88**	--	**470**	**46**	**2100**	**24**
Perylene	**140**	**2000**	**90**	--	**200**	**70**	**1700**	**24**
Phenanthrene	**1200**	**27000**	**140**	--	**2400**	**44**	**16000**	**21**
Pyrene	**1200**	**22000**	**800**	--	**2000**	**500**	**16000**	**520**
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	**11000 T**	**74000 T**	**500 T**	--	**6200 T**	**180 JT**	**27000 T**	**1100 T**
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	**4600 T**	**85000 T**	**2700 T**	--	**7800 T**	**1500 T**	**65000 T**	**730 JT**
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	**15000 T**	**160000 T**	**3200 T**	--	**14000 T**	**1700 JT**	**92000 T**	**1800 JT**
LWG RA Total cPAH TEQ[7] (EPA 1993) (Calculated U = 1/2)	**600 T**	**11000 T**	**320 T**	--	**1000 T**	**210 T**	**9100 T**	**35 JT**
Semivolatile Organics (µg/kg)								
Carbazole	**110**	**520**	19 U	--	**390**	18 U	**160**	18 U
Dibenzofuran	**66**	**1000**	19 U	--	**250**	18 U	**150**	18 U
4-Methylphenol (p-Cresol)	**70**	180 U	19 U	--	19 U	18 U	**72 J**	18 U
Benzyl alcohol	**47 J**	180 UJ	19 UJ	--	19 UJ	18 UJ	96 UJ	18 UJ
Pentachlorophenol	98 UJ	900 UJ	96 U	--	95 U	91 U	480 UJ	91 U
Phenol	20 U	180 U	19 U	--	19 U	18 U	96 U	18 U
PCB Aroclors (µg/kg)								
Aroclor 1016	19 U	19 U	19 U	--	19 U	19 U	19 U	19 U
Aroclor 1221	19 U	19 U	19 U	--	19 U	19 U	19 U	19 U
Aroclor 1232	19 U	19 U	19 U	--	19 U	19 U	19 U	19 U
Aroclor 1242	19 U	19 U	19 U	--	19 U	19 U	19 U	19 U
Aroclor 1248	19 U	19 U	19 U	--	19 U	19 U	19 U	19 U
Aroclor 1254	19 U	19 U	19 U	--	19 U	19 U	19 U	19 U
Aroclor 1260	19 U	19 U	19 U	--	19 U	19 U	19 U	19 U
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	19 UT	19 UT	19 UT	--	19 UT	19 UT	19 UT	19 UT
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	19 U	19 U	1.9 UJ	--	19 UJ	1.9 UJ	19 U	1.9 U
2,4'-DDE (o,p'-DDE)	19 U	19 U	1.9 U	--	19 U	1.9 U	19 U	1.9 U
2,4'-DDT (o,p'-DDT)	19 U	19 U	1.9 UJ	--	19 UJ	1.9 UJ	19 U	**7.4**
4,4'-DDD (p,p'-DDD)	19 U	19 U	**2.4 NJ**	--	19 U	1.9 U	19 U	1.9 U
4,4'-DDE (p,p'-DDE)	19 U	19 U	1.9 U	--	19 U	1.9 U	19 U	1.9 U
4,4'-DDT (p,p'-DDT)	19 U	19 U	**-- R**	--	19 UJ	1.9 UJ	19 U	1.9 U
Aldrin	9.6 U	9.6 U	0.96 U	--	9.3 U	0.97 U	9.7 U	0.94 U
alpha-Hexachlorocyclohexane (BHC)	9.6 U	9.6 U	0.96 U	--	9.3 U	0.97 U	9.7 U	0.94 U
alpha-Chlordane (cis-Chlordane)	9.6 U	9.6 U	0.96 U	--	9.3 U	0.97 U	9.7 U	0.94 U
beta-Hexachlorocyclohexane (BHC)	9.6 U	9.6 U	0.96 U	--	9.3 U	0.97 U	9.7 U	0.94 U
gamma-Chlordane (trans-Chlordane)	9.6 U	9.6 U	0.96 U	--	9.3 U	0.97 U	9.7 U	0.94 U
cis-Nonachlor	19 U	19 U	1.9 U	--	19 U	1.9 U	19 U	1.9 U
delta-Hexachlorocyclohexane (BHC)	9.6 UJ	9.6 UJ	0.96 UJ	--	9.3 UJ	0.97 UJ	9.7 UJ	0.94 UJ
Dieldrin	19 U	19 U	1.9 U	--	19 U	1.9 U	19 U	1.9 U
Endosulfan sulfate	19 U	19 U	1.9 UJ	--	19 UJ	1.9 UJ	19 U	1.9 U
Endosulfan-alpha (I)	9.6 U	9.6 U	0.96 U	--	9.3 U	0.97 U	9.7 U	0.94 U
Endosulfan-beta (II)	19 U	19 U	1.9 U	--	19 U	1.9 U	19 U	1.9 U
Endrin	19 U	19 U	1.9 U	--	19 U	1.9 U	19 U	1.9 U
Endrin ketone	19 U	19 U	1.9 UJ	--	19 UJ	1.9 UJ	19 U	1.9 U

Table 2-4b
Data Gaps Surface Sediment Physical and Chemical Results - Retested Event

Location ID	DGS-12	DGS-13	DGS-16	DGS-16	DGS-17	DGS-20	DGS-21	DGS-25
Sample ID	DGS-62SG-110418	DGS-13SG-110418	DGS-16SG-110418	DGS-66SG-110418	DGS-17SG-110418	DGS-20SG-110419	DGS-21SG-110419	DGS-25SG-110419
Sample Date	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/19/2011	4/19/2011	4/19/2011
Depth	0 - 25 cm	0 - 26 cm	0 - 25 cm	0 - 25 cm	0 - 28.5 cm	0 - 27 cm	0 - 27.5 cm	0 - 25 cm
Sample Type	FD	N	N	FD	N	N	N	N
gamma-Hexachlorocyclohexane (BHC) (Lindane)	9.6 U	9.6 U	0.96 U	--	9.3 U	0.97 U	9.7 U	0.94 U
Heptachlor epoxide	9.6 U	9.6 U	0.96 U	--	9.3 U	0.97 U	9.7 U	0.94 U
Oxychlordane	19 U	19 U	1.9 U	--	19 U	1.9 U	19 U	1.9 U
trans-Nonachlor	19 U	19 U	1.9 U	--	19 U	1.9 U	19 U	1.9 U
Hexachlorobenzene	9.6 U	9.6 U	0.96 U	--	9.3 U	0.97 U	9.7 U	0.94 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	19 UT	19 UT	1.9 UJT	--	19 UJT	1.9 UJT	19 UT	**9.3 T**
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	19 UT	19 UT	**3.3 NJT**	--	19 UJT	1.9 UJT	19 UT	1.9 UT
LWG RA Sum DDD (Calculated U = 1/2)	19 UT	19 UT	**3.3 NJT**	--	19 UJT	1.9 UJT	19 UT	1.9 UT
LWG RA Sum DDE (Calculated U = 1/2)	19 UT	19 UT	1.9 UT	--	19 UT	1.9 UT	19 UT	1.9 UT
LWG RA Sum DDT (Calculated U = 1/2)	19 UT	19 UT	1.9 UJT	--	19 UJT	1.9 UJT	19 UT	**8.3 T**
LWG RA Total DDx (Calculated U = 1/2)	19 UT	19 UT	**6.2 NJT**	--	19 UJT	1.9 UJT	19 UT	**12 T**
LWG RA Total Chlordane[2] (Calculated U = 1/2)	19 UT	19 UT	1.9 UT	--	19 UT	1.9 UT	19 UT	1.9 UT
LWG RA Total Endosulfan (Calculated U = 1/2)	19 UT	19 UT	1.9 UJT	--	19 UJT	1.9 UJT	19 UT	1.9 UT
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	34 U	**810**	**10**	--	**43**	6.5 U	**120**	6.5 U
Motor Oil Range	69 U	**800**	**47**	--	**92**	**26**	**230**	**26**
LWG RA Total Petroleum Hydrocarbons[5] (TPH) (Calculated U = 1/2)	69 UT	**1600 T**	**57 T**	--	**140 T**	**29 T**	**350 T**	**29 T**
Volatile Petroleum Hydrocarbons (VPH) (µg/kg)								
C5-C6 Aliphatics	--	--	--	--	--	--	--	--
C6-C8 Aliphatics	--	--	--	--	--	--	--	--
C8-C10 Aliphatics	--	--	--	--	--	--	--	--
C10-C12 Aliphatics	--	--	--	--	--	--	--	--
C8-C10 Aromatics	--	--	--	--	--	--	--	--
C10-C12 Aromatics	--	--	--	--	--	--	--	--
C12-C13 Aromatics	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--
n-Decane (C10)	--	--	--	--	--	--	--	--
n-Dodecane (C12)	--	--	--	--	--	--	--	--
n-Hexane	--	--	--	--	--	--	--	--
n-Octane (C8)	--	--	--	--	--	--	--	--
n-Pentane (C5)	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--
Extractable Petroleum Hydrocarbons (EPH) (µg/kg)								
C8-C10 Aliphatics	--	--	--	--	--	--	--	--
C8-C10 Aromatics	--	--	--	--	--	--	--	--
C10-C12 Aliphatics	--	--	--	--	--	--	--	--
C10-C12 Aromatics	--	--	--	--	--	--	--	--
C12-C16 Aliphatics	--	--	--	--	--	--	--	--
C12-C16 Aromatics	--	--	--	--	--	--	--	--
C16-C21 Aliphatics	--	--	--	--	--	--	--	--
C16-C21 Aromatics	--	--	--	--	--	--	--	--
C21-C34 Aliphatics	--	--	--	--	--	--	--	--
C21-C34 Aromatics	--	--	--	--	--	--	--	--

Table 2-4b
Data Gaps Surface Sediment Physical and Chemical Results - Retested Event

Location ID	DGS-26	DGS-30	DGS-31	DGS-33	DGS-34	DGS-35	DGS-46	DGS-47
Sample ID	DGS-26SG-110419	DGS-30SG-110419	DGS-31SG-110419	DGS-33SG-110419	DGS-34SG-110419	DGS-35SG-110419	DGS-46SG-110420	DGS-47SG-110420
Sample Date	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/20/2011	4/20/2011
Depth	0 - 26.5 cm	0 - 25 cm	0 - 27 cm	0 - 25 cm	0 - 26 cm	0 - 26.5 cm	0 - 23.8 cm	0 - 24.5 cm
Sample Type	N	N	N	N	N	N	N	N
Conventional Parameters (mg/kg)								
Ammonia as nitrogen	100	54.1	141	55.1	9.1	239	75.7	114
Cyanide, total	0.9 J	0.16 UJ	1.7 J	0.139 UJ	0.183 UJ	4.32 J	0.54 J	5.81 J
Sulfide	1.41 U	45	19.8	1.4 U	27.8	17.1	12.9	42.5
Conventional Parameters (percent)								
Total organic carbon	1.75	4.67	1.67	1.5	2.17	1.9	--	--
Total solids	66.4	61.3	51.2	70.1	53.2	47.4	48.1	47.3
Total solids (preserved)[1]	70.7	68.7	49.9	71.4	54.3	51.6	37.8	41.8
Total volatile solids	2.72	5.01	6.03	2.64	6.49	8.68	--	--
Grain Size (percent)								
Total Gravel	0.1 U T	0.7 T	0.1 UT	0.1 T	0.1 UT	0.1 UT	--	--
Total Sand	79.3 T	87.6 T	29.7 T	80 T	31.4 T	12 T	--	--
Total Silt	15.5 T	8.5 T	56.2 T	14.6 T	57.5 T	70.4 T	--	--
Total Clay	5.1 T	2.9 T	14.2 T	5 T	11.1 T	17.5 T	--	--
Total Fines (silt + clay)	20.6 T	11.4 T	70.4 T	19.6 T	68.6 T	87.9 T	--	--
Total Grain Size	100 T	100 T	100 T	100 T	100 T	100 T	--	--
Metals (mg/kg)								
Arsenic	8	12	9	9	10	10 U	--	--
Cadmium	0.4	0.3 U	0.5	0.3 U	0.6	0.7	--	--
Chromium	21.7	20	34	19.4	34.1	39	--	--
Copper	36.5	20	45.1	51.2	42.1	51.6	--	--
Lead	12	5	26	6	20	23	--	--
Mercury	0.04 UJ	0.1 J	0.09 J	0.04 J	0.1 J	0.48 J	--	--
Nickel	23	21	27	19	27	31	--	--
Silver	0.4 U	0.5 U	0.5 U	0.4 U	0.5 U	0.7 U	--	--
Zinc	89	69	128	75	166	174	--	--
Volatile Organics (µg/kg)								
1,1-Dichloroethene	1.4 U	1.5 U	1.9 U	1.2 U	1.8 U	2.1 U	2 U	2.3 U
1,2-Dichloroethene, cis-	1.4 U	1.5 U	1.9 U	1.2 U	1.8 U	2.1 U	2 U	2.3 U
1,2-Dichloroethene, trans-	1.4 U	1.5 U	1.9 U	1.2 U	1.8 U	2.1 U	2 U	2.3 U
Benzene	1.4 U	11	18	1.2 U	1.8 U	2.1 U	2 U	2.3 U
Ethylbenzene	1.4 U	1.5 U	11	1.2 U	1.8 U	2.1 U	2 U	2.3 U
m,p-Xylene	1.4 U	1.5 U	10	1.2 U	1.8 U	2.1 U	2 U	2.3 U
o-Xylene	1.4 U	1.5 U	23	1.2 U	1.8 U	2.1 U	2 U	2.3 U
Toluene	1.4 U	1.5 U	3.4	1.2 U	1.8 U	2.1 U	2 U	2.3 U
Trichloroethene (TCE)	1.4 U	1.5 U	1.9 U	1.2 U	1.8 U	2.1 U	2 U	2.3 U
Vinyl chloride	1.4 U	1.5 U	1.9 U	1.2 U	1.8 U	2.1 U	2 U	2.3 U
LWG RA Total BTEX[6] (Calculated U = 1/2)	1.4 UT	14 T	65 T	1.2 UT	1.8 UT	2.1 UT	2 UT	2.3 UT
LWG RA Total Xylene[9] (Calculated U = 1/2)	1.4 UT	1.5 UT	33 T	1.2 UT	1.8 UT	2.1 UT	2 UT	2.3 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
1-Methylnaphthalene	120	19 U	3400	18 U	680	310	--	--
2-Methylnaphthalene	360	19 U	560	16 J	2200	830	--	--
Acenaphthene	7900	28	19000	49	23000	1800	--	--
Acenaphthylene	220	19 U	190	18 U	110 J	240	--	--
Anthracene	1800	86	1600	22	16000	1300	--	--
Benzo(a)anthracene	1400	77	1100	45	4300	2500	--	--
Benzo(b,j,k)fluoranthenes	2200	15 J	1600	84	3000	3400	--	--
Benzo(a)pyrene	1900	19 U	1300	56	1600	2600	--	--
Benzo(g,h,i)perylene	1500	19 U	960	56	560	2000	--	--

Table 2-4b
Data Gaps Surface Sediment Physical and Chemical Results - Retested Event

Location ID	DGS-26	DGS-30	DGS-31	DGS-33	DGS-34	DGS-35	DGS-46	DGS-47
Sample ID	DGS-26SG-110419	DGS-30SG-110419	DGS-31SG-110419	DGS-33SG-110419	DGS-34SG-110419	DGS-35SG-110419	DGS-46SG-110420	DGS-47SG-110420
Sample Date	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/20/2011	4/20/2011
Depth	0 - 26.5 cm	0 - 25 cm	0 - 27 cm	0 - 25 cm	0 - 26 cm	0 - 26.5 cm	0 - 23.8 cm	0 - 24.5 cm
Sample Type	N	N	N	N	N	N	N	N
Chrysene	**1900**	**94**	**1500**	**65**	**4400**	**3500**	--	--
Dibenzo(a,h)anthracene	**220**	19 U	**160**	18 U	**160 J**	**340**	--	--
Fluoranthene	**5000**	**280**	**4100**	**120**	**28000**	**8000**	--	--
Fluorene	**3100**	**12 J**	**9800**	**21**	**20000**	**1400**	--	--
Indeno(1,2,3-c,d)pyrene	**1000**	19 U	**640**	**37**	**480**	**1300**	--	--
Naphthalene	**780**	**15 J**	**810**	**34**	**2400**	**1600**	--	--
Perylene	**480**	**26**	**380**	**44**	**470**	**740**	--	--
Phenanthrene	**12000**	**27**	**14000**	**100**	**65000**	**10000**	--	--
Pyrene	**5800**	**2800**	**4300**	**190**	**21000**	**9100**	--	--
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	**26000 T**	**190 JT**	**46000 T**	**250 JT**	**130000 JT**	**17000 T**	--	--
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	**21000 T**	**3300 JT**	**16000 T**	**660 T**	**64000 JT**	**33000 T**	--	--
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	**47000 T**	**3500 JT**	**62000 T**	**910 JT**	**190000 JT**	**50000 T**	--	--
LWG RA Total cPAH TEQ[7] (EPA 1993) (Calculated U = 1/2)	**2600 T**	**29 JT**	**1800 T**	**82 T**	**2500 JT**	**3700 T**	--	--
Semivolatile Organics (µg/kg)								
Carbazole	**110**	19 U	**1400**	18 U	**1400**	**190**	--	--
Dibenzofuran	**120**	19 U	**310**	18 U	**7300**	**250**	--	--
4-Methylphenol (p-Cresol)	**28 J**	**27**	**86**	18 U	**110 J**	**570**	--	--
Benzyl alcohol	37 UJ	**72 J**	38 UJ	**22 J**	190 UJ	**120 J**	--	--
Pentachlorophenol	190 UJ	94 U	190 UJ	90 U	950 UJ	470 UJ	--	--
Phenol	37 U	19 U	**31 J**	**9.9 J**	190 U	**57 J**	--	--
PCB Aroclors (µg/kg)								
Aroclor 1016	18 U	18 U	19 U	19 U	19 U	20 U	--	--
Aroclor 1221	18 U	18 U	19 U	19 U	19 U	20 U	--	--
Aroclor 1232	18 U	18 U	19 U	19 U	19 U	20 U	--	--
Aroclor 1242	18 U	18 U	19 U	19 U	19 U	20 U	--	--
Aroclor 1248	18 U	18 U	**34**	19 U	**56**	20 U	--	--
Aroclor 1254	18 U	18 U	**38**	19 U	**60**	78 U	--	--
Aroclor 1260	18 U	18 U	**25**	19 U	**46**	**35**	--	--
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	18 UT	18 UT	**140 T**	19 UT	**200 T**	**120 T**	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	18 U	**2.1**	19 U	1.9 U	19 U	**38**	--	--
2,4'-DDE (o,p'-DDE)	18 U	1.9 U	19 U	1.9 U	19 U	**26**	--	--
2,4'-DDT (o,p'-DDT)	18 U	**4.7**	19 U	**2.9**	19 U	20 U	--	--
4,4'-DDD (p,p'-DDD)	18 U	**3.9**	19 U	**1.9**	19 U	**120**	--	--
4,4'-DDE (p,p'-DDE)	18 U	1.9 U	19 U	1.9 U	19 U	**26**	--	--
4,4'-DDT (p,p'-DDT)	18 U	**12**	19 U	**2**	19 U	**25**	--	--
Aldrin	9.2 U	0.94 U	9.4 U	0.95 U	9.5 U	9.8 U	--	--
alpha-Hexachlorocyclohexane (BHC)	9.2 U	0.94 U	9.4 U	0.95 U	9.5 U	9.8 U	--	--
alpha-Chlordane (cis-Chlordane)	9.2 U	0.94 U	9.4 U	0.95 U	9.5 U	9.8 U	--	--
beta-Hexachlorocyclohexane (BHC)	9.2 U	0.94 U	9.4 U	0.95 U	9.5 U	9.8 U	--	--
gamma-Chlordane (trans-Chlordane)	9.2 U	0.94 U	9.4 U	**1.1**	9.5 U	9.8 U	--	--
cis-Nonachlor	18 U	1.9 U	19 U	1.9 U	19 U	20 U	--	--
delta-Hexachlorocyclohexane (BHC)	9.2 UJ	0.94 UJ	9.4 UJ	0.95 UJ	9.5 UJ	9.8 UJ	--	--
Dieldrin	18 U	1.9 U	19 U	1.9 U	19 U	20 U	--	--
Endosulfan sulfate	18 U	1.9 U	19 U	1.9 U	19 U	20 U	--	--
Endosulfan-alpha (I)	9.2 U	0.94 U	9.4 U	0.95 U	9.5 U	9.8 U	--	--
Endosulfan-beta (II)	18 U	1.9 U	19 U	1.9 U	19 U	20 U	--	--
Endrin	18 U	1.9 U	19 U	1.9 U	19 U	20 U	--	--
Endrin ketone	18 U	1.9 U	19 U	1.9 U	19 U	20 U	--	--

Table 2-4b
Data Gaps Surface Sediment Physical and Chemical Results - Retested Event

Location ID	DGS-26	DGS-30	DGS-31	DGS-33	DGS-34	DGS-35	DGS-46	DGS-47
Sample ID	DGS-26SG-110419	DGS-30SG-110419	DGS-31SG-110419	DGS-33SG-110419	DGS-34SG-110419	DGS-35SG-110419	DGS-46SG-110420	DGS-47SG-110420
Sample Date	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/20/2011	4/20/2011
Depth	0 - 26.5 cm	0 - 25 cm	0 - 27 cm	0 - 25 cm	0 - 26 cm	0 - 26.5 cm	0 - 23.8 cm	0 - 24.5 cm
Sample Type	N	N	N	N	N	N	N	N
gamma-Hexachlorocyclohexane (BHC) (Lindane)	9.2 U	0.94 U	9.4 U	0.95 U	9.5 U	9.8 U	--	--
Heptachlor epoxide	9.2 U	0.94 U	9.4 U	0.95 U	9.5 U	9.8 U	--	--
Oxychlordane	18 U	1.9 U	19 U	1.9 U	19 U	20 U	--	--
trans-Nonachlor	18 U	1.9 U	19 U	1.9 U	19 U	20 U	--	--
Hexachlorobenzene	9.2 U	0.94 U	9.4 U	0.95 U	9.5 U	9.8 U	--	--
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	18 UT	**7.8 T**	19 UT	**4.8 T**	19 UT	**74 T**	--	--
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	18 UT	**17 T**	19 UT	**4.8 T**	19 UT	**170 T**	--	--
LWG RA Sum DDD (Calculated U = 1/2)	18 UT	**6.0 T**	19 UT	**2.8 T**	19 UT	**160 T**	--	--
LWG RA Sum DDE (Calculated U = 1/2)	18 UT	1.9 UT	19 UT	1.9 UT	19 UT	**52 T**	--	--
LWG RA Sum DDT (Calculated U = 1/2)	18 UT	**17 T**	19 UT	**4.9 T**	19 UT	**35 T**	--	--
LWG RA Total DDx (Calculated U = 1/2)	18 UT	**25 T**	19 UT	**9.6 T**	19 UT	**240 T**	--	--
LWG RA Total Chlordane[2] (Calculated U = 1/2)	18 UT	1.9 UT	19 UT	**4.4 T**	19 UT	20 UT	--	--
LWG RA Total Endosulfan (Calculated U = 1/2)	18 UT	1.9 UT	19 UT	1.9 UT	19 UT	20 UT	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	**280**	**28**	**86**	**13**	**190**	**170**	--	--
Motor Oil Range	**190**	**200**	**150**	**130**	**240**	**370**	--	--
LWG RA Total Petroleum Hydrocarbons[5] (TPH) (Calculated U = 1/2)	**470 T**	**230 T**	**240 T**	**140 T**	**430 T**	**540 T**	--	--
Volatile Petroleum Hydrocarbons (VPH) (µg/kg)								
C5-C6 Aliphatics	--	--	--	--	--	--	27000 UJ	25000 UJ
C6-C8 Aliphatics	--	--	--	--	--	--	27000 UJ	25000 UJ
C8-C10 Aliphatics	--	--	--	--	--	--	27000 UJ	25000 UJ
C10-C12 Aliphatics	--	--	--	--	--	--	27000 UJ	25000 UJ
C8-C10 Aromatics	--	--	--	--	--	--	27000 UJ	25000 UJ
C10-C12 Aromatics	--	--	--	--	--	--	27000 UJ	25000 UJ
C12-C13 Aromatics	--	--	--	--	--	--	27000 UJ	25000 UJ
Benzene	--	--	--	--	--	--	2700 UJ	2500 UJ
Ethylbenzene	--	--	--	--	--	--	2700 UJ	2500 UJ
m,p-Xylene	--	--	--	--	--	--	5400 UJ	5000 UJ
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	2700 UJ	2500 UJ
n-Decane (C10)	--	--	--	--	--	--	2700 UJ	2500 UJ
n-Dodecane (C12)	--	--	--	--	--	--	2700 UJ	2500 UJ
n-Hexane	--	--	--	--	--	--	2700 UJ	2500 UJ
n-Octane (C8)	--	--	--	--	--	--	2700 UJ	2500 UJ
n-Pentane (C5)	--	--	--	--	--	--	2700 UJ	2500 UJ
o-Xylene	--	--	--	--	--	--	2700 UJ	2500 UJ
Toluene	--	--	--	--	--	--	2700 UJ	2500 UJ
Extractable Petroleum Hydrocarbons (EPH) (µg/kg)								
C8-C10 Aliphatics	--	--	--	--	--	--	3500 UJ	3400 UJ
C8-C10 Aromatics	--	--	--	--	--	--	3500 UJ	3400 UJ
C10-C12 Aliphatics	--	--	--	--	--	--	3500 UJ	3400 UJ
C10-C12 Aromatics	--	--	--	--	--	--	3500 UJ	3400 UJ
C12-C16 Aliphatics	--	--	--	--	--	--	3500 UJ	3400 UJ
C12-C16 Aromatics	--	--	--	--	--	--	3500 UJ	3400 UJ
C16-C21 Aliphatics	--	--	--	--	--	--	3500 UJ	**10000 J**
C16-C21 Aromatics	--	--	--	--	--	--	3500 UJ	**28000 J**
C21-C34 Aliphatics	--	--	--	--	--	--	**9100 J**	**14000 J**
C21-C34 Aromatics	--	--	--	--	--	--	**4700 J**	**86000 J**

Table 2-4b
Data Gaps Surface Sediment Physical and Chemical Results - Retested Event

Location ID	DGS-47	DGS-48	DGS-48	DGS-49	DGS-50	DGS-51	DGS-52	DGS-53
Sample ID	DGS-97SG-110420	DGS-48SG-110420	DGS-98SG-110420	DGS-49SG-110420	DGS-50SG-110420	DGS-51SG-110421	DGS-52SG-110421	DGS-53SG-110420
Sample Date	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/21/2011	4/21/2011	4/20/2011
Depth	0 - 24.5 cm	0 - 25 cm	0 - 25 cm	0 - 24 cm	0 - 24.5 cm	0 - 25 cm	0 - 25 cm	0 - 24 cm
Sample Type	FD	N	FD	N	N	N	N	N
Conventional Parameters (mg/kg)								
Ammonia as nitrogen	**96.2**	**10.3**	--	**1.36**	**17.9**	**10.2**	**45.4**	**81.9**
Cyanide, total	**2.56 J**	0.133 U	--	0.135 U	0.13 UJ	0.136 UJ	0.14 UJ	**0.625 J**
Sulfide	**32.8**	**3.23**	--	**2.13**	1.28 U	1.35 U	**13.3**	**26.8**
Conventional Parameters (percent)								
Total organic carbon	--	**0.353**	**0.392**	**0.886**	--	--	--	**1.7**
Total solids	**47.4**	**75**	**79.1**	**74.1**	**74.8**	**71.4**	**70.3**	**53.9**
Total solids (preserved)[1]	**41.2**	**73.9**	--	**76.7**	**78**	**73.5**	**65.3**	**53.7**
Total volatile solids	--	**1.65**	**1.59**	**1.64**	--	--	--	**6.01**
Grain Size (percent)								
Total Gravel	--	**4 T**	--	**0.6 T**	--	--	--	0.1 UT
Total Sand	--	**89.3 T**	--	**90.5 T**	--	--	--	**34.7 T**
Total Silt	--	**3.4 T**	--	**7.3 T**	--	--	--	**52.1 T**
Total Clay	--	**0.9 T**	--	0.1 UT	--	--	--	**13.1 T**
Total Fines (silt + clay)	--	**4.3 T**	--	**7.3 T**	--	--	--	**65.2 T**
Total Grain Size	--	**98 T**	--	**98 T**	--	--	--	**100 T**
Metals (mg/kg)								
Arsenic	--	**7**	**8**	**7**	--	--	--	**10**
Cadmium	--	0.3 U	0.3 U	0.3 U	--	--	--	0.4 U
Chromium	--	**14.9**	**14.8**	**12.7**	--	--	--	**32.6**
Copper	--	**16.1**	**16.1**	**13.7**	--	--	--	**40.4**
Lead	--	**4**	**3**	**3**	--	--	--	**19**
Mercury	--	0.03 U	0.03 UJ	**0.03**	--	--	--	**0.06 J**
Nickel	--	**17**	**17**	**16**	--	--	--	**25**
Silver	--	0.4 U	0.4 U	0.4 U	--	--	--	0.5 U
Zinc	--	**59**	**56**	**54**	--	--	--	**118**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	2.2 U	1.2 U	--	1.2 U	1.2 U	1.1 U	1.3 U	1.6 U
1,2-Dichloroethene, cis-	2.2 U	1.2 U	--	1.2 U	1.2 U	1.1 U	1.3 U	1.6 U
1,2-Dichloroethene, trans-	2.2 U	1.2 U	--	1.2 U	1.2 U	1.1 U	1.3 U	1.6 U
Benzene	2.2 U	1.2 U	--	1.2 U	1.2 U	1.1 U	1.3 U	1.6 U
Ethylbenzene	2.2 U	1.2 U	--	1.2 U	1.2 U	1.1 U	1.3 U	1.6 U
m,p-Xylene	2.2 U	1.2 U	--	1.2 UJ	1.2 U	1.1 U	1.3 U	1.6 U
o-Xylene	2.2 U	1.2 U	--	1.2 UJ	1.2 U	1.1 U	1.3 U	1.6 U
Toluene	2.2 U	1.2 U	--	1.2 U	1.2 U	1.1 U	1.3 U	1.6 U
Trichloroethene (TCE)	2.2 U	1.2 U	--	1.2 U	1.2 U	1.1 U	1.3 U	1.6 U
Vinyl chloride	2.2 U	1.2 U	--	1.2 U	1.2 U	1.1 U	1.3 U	1.6 U
LWG RA Total BTEX[6] (Calculated U = 1/2)	2.2 UT	1.2 UT	--	1.2 UJT	1.2 UT	1.1 UT	1.3 UT	1.6 UT
LWG RA Total Xylene[9] (Calculated U = 1/2)	2.2 UT	1.2 UT	--	1.2 UJT	1.2 UT	1.1 UT	1.3 UT	1.6 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
1-Methylnaphthalene	--	**13 J**	**160**	19 U	--	--	--	**170**
2-Methylnaphthalene	--	**11 J**	**330**	19 U	--	--	--	**800 J**
Acenaphthene	--	**240**	**2000**	**200**	--	--	--	**8500**
Acenaphthylene	--	**63**	**560**	**75**	--	--	--	19 U
Anthracene	--	**130**	**2100**	**130**	--	--	--	**1800**
Benzo(a)anthracene	--	**410**	**4600**	**530**	--	--	--	**770**
Benzo(b,j,k)fluoranthenes	--	**650**	**5600**	**830**	--	--	--	**790**
Benzo(a)pyrene	--	**580**	**4800**	**720**	--	--	--	**440**
Benzo(g,h,i)perylene	--	**430**	**3700 J**	**620**	--	--	--	**280 J**

Table 2-4b
Data Gaps Surface Sediment Physical and Chemical Results - Retested Event

Location ID	DGS-47	DGS-48	DGS-48	DGS-49	DGS-50	DGS-51	DGS-52	DGS-53
Sample ID	DGS-97SG-110420	DGS-48SG-110420	DGS-98SG-110420	DGS-49SG-110420	DGS-50SG-110420	DGS-51SG-110421	DGS-52SG-110421	DGS-53SG-110420
Sample Date	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/21/2011	4/21/2011	4/20/2011
Depth	0 - 24.5 cm	0 - 25 cm	0 - 25 cm	0 - 24 cm	0 - 24.5 cm	0 - 25 cm	0 - 25 cm	0 - 24 cm
Sample Type	FD	N	FD	N	N	N	N	N
Chrysene	--	530	5800	540	--	--	--	1000
Dibenzo(a,h)anthracene	--	66	760	87	--	--	--	53
Fluoranthene	--	1200	14000 J	1600	--	--	--	6400
Fluorene	--	100	1400	55	--	--	--	10000
Indeno(1,2,3-c,d)pyrene	--	290	2500	410	--	--	--	210
Naphthalene	--	43	1100	17 J	--	--	--	1300
Perylene	--	140	1200	180	--	--	--	190 J
Phenanthrene	--	260	9400	20	--	--	--	29000
Pyrene	--	1600	17000	2600	--	--	--	5100
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	--	850 JT	17000 T	510 JT	--	--	--	51000 JT
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	--	5800 T	59000 JT	7900 T	--	--	--	15000 JT
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	--	6600 JT	76000 JT	8400 JT	--	--	--	66000 JT
LWG RA Total cPAH TEQ[7] (EPA 1993) (Calculated U = 1/2)	--	780 T	6800 T	990 T	--	--	--	670 T
Semivolatile Organics (µg/kg)								
Carbazole	--	19 U	47 J	19 U	--	--	--	140 J
Dibenzofuran	--	19 U	68	19 U	--	--	--	640 J
4-Methylphenol (p-Cresol)	--	19 U	19 UJ	19 U	--	--	--	99
Benzyl alcohol	--	19 U	19 U	19 U	--	--	--	180 J
Pentachlorophenol	--	94 U	94 UJ	96 U	--	--	--	190 U
Phenol	--	19 U	11 J	19 U	--	--	--	180
PCB Aroclors (µg/kg)								
Aroclor 1016	--	3.6 U	20 U	3.9 U	--	--	--	19 U
Aroclor 1221	--	3.6 U	20 U	3.9 U	--	--	--	19 U
Aroclor 1232	--	3.6 U	20 U	3.9 U	--	--	--	19 U
Aroclor 1242	--	3.6 U	20 U	3.9 U	--	--	--	19 U
Aroclor 1248	--	3.6 U	20 U	3.9 U	--	--	--	19 U
Aroclor 1254	--	3.6 U	20 U	3.9 U	--	--	--	19 U
Aroclor 1260	--	3.6 U	20 U	3.9 U	--	--	--	19 U
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	--	3.6 UT	20 UT	3.9 UT	--	--	--	19 UT
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	1.8 U	1.9 UJ	1.9 U	--	--	--	3.1 U
2,4'-DDE (o,p'-DDE)	--	1.8 U	1.9 UJ	1.9 U	--	--	--	2.4 U
2,4'-DDT (o,p'-DDT)	--	1.8 U	1.9 UJ	1.9 U	--	--	--	1.9 U
4,4'-DDD (p,p'-DDD)	--	1.8 U	1.9 UJ	1.9 U	--	--	--	1.9 U
4,4'-DDE (p,p'-DDE)	--	1.8 U	1.9 U	1.9 U	--	--	--	7.8
4,4'-DDT (p,p'-DDT)	--	1.8 U	1.9 UJ	1.9 U	--	--	--	1.9 U
Aldrin	--	0.9 U	0.95 U	0.95 U	--	--	--	0.96 U
alpha-Hexachlorocyclohexane (BHC)	--	0.9 U	0.95 U	0.95 U	--	--	--	0.96 U
alpha-Chlordane (cis-Chlordane)	--	0.9 U	0.95 U	0.95 U	--	--	--	0.96 U
beta-Hexachlorocyclohexane (BHC)	--	0.9 U	0.95 U	0.95 U	--	--	--	0.96 U
gamma-Chlordane (trans-Chlordane)	--	0.9 U	0.95 U	0.95 U	--	--	--	0.96 U
cis-Nonachlor	--	1.8 U	1.9 UJ	1.9 U	--	--	--	1.9 U
delta-Hexachlorocyclohexane (BHC)	--	0.9 UJ	0.95 UJ	0.95 UJ	--	--	--	0.96 UJ
Dieldrin	--	1.8 U	1.9 U	1.9 U	--	--	--	1.9 U
Endosulfan sulfate	--	1.8 U	1.9 UJ	1.9 U	--	--	--	1.9 U
Endosulfan-alpha (I)	--	0.9 U	0.95 U	0.95 U	--	--	--	0.96 U
Endosulfan-beta (II)	--	1.8 U	1.9 UJ	1.9 U	--	--	--	1.9 U
Endrin	--	1.8 UJ	1.9 UJ	1.9 UJ	--	--	--	3.7 J
Endrin ketone	--	1.8 U	1.9 UJ	1.9 U	--	--	--	1.9 U

Table 2-4b
Data Gaps Surface Sediment Physical and Chemical Results - Retested Event

Location ID	DGS-47	DGS-48	DGS-48	DGS-49	DGS-50	DGS-51	DGS-52	DGS-53
Sample ID	DGS-97SG-110420	DGS-48SG-110420	DGS-98SG-110420	DGS-49SG-110420	DGS-50SG-110420	DGS-51SG-110421	DGS-52SG-110421	DGS-53SG-110420
Sample Date	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/21/2011	4/21/2011	4/20/2011
Depth	0 - 24.5 cm	0 - 25 cm	0 - 25 cm	0 - 24 cm	0 - 24.5 cm	0 - 25 cm	0 - 25 cm	0 - 24 cm
Sample Type	FD	N	FD	N	N	N	N	N
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	0.9 U	0.95 U	0.95 U	--	--	--	**1.4**
Heptachlor epoxide	--	0.9 U	0.95 U	0.95 U	--	--	--	0.96 U
Oxychlordane	--	1.8 U	1.9 UJ	1.9 U	--	--	--	1.9 U
trans-Nonachlor	--	1.8 U	1.9 UJ	**6.8**	--	--	--	1.9 U
Hexachlorobenzene	--	0.9 U	0.95 UJ	0.95 U	--	--	--	**1.9**
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	--	1.8 UT	1.9 UJT	1.9 UT	--	--	--	3.1 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	--	1.8 UT	1.9 UJT	1.9 UT	--	--	--	**9.7 T**
LWG RA Sum DDD (Calculated U = 1/2)	--	1.8 UT	1.9 UJT	1.9 UT	--	--	--	3.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	1.8 UT	1.9 UJT	1.9 UT	--	--	--	**9.0 T**
LWG RA Sum DDT (Calculated U = 1/2)	--	1.8 UT	1.9 UJT	1.9 UT	--	--	--	1.9 UT
LWG RA Total DDx (Calculated U = 1/2)	--	1.8 UT	1.9 UJT	1.9 UT	--	--	--	**13 T**
LWG RA Total Chlordane[2] (Calculated U = 1/2)	--	1.8 UT	1.9 UJT	**9.7 T**	--	--	--	1.9 UT
LWG RA Total Endosulfan (Calculated U = 1/2)	--	1.8 UT	1.9 UJT	1.9 UT	--	--	--	1.9 UT
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	**7.8 J**	**11**	**6 J**	--	--	--	**120**
Motor Oil Range	--	**20**	**15**	12 U	--	--	--	**120**
LWG RA Total Petroleum Hydrocarbons[5] (TPH) (Calculated U = 1/2)	--	**28 JT**	**26 T**	**12 JT**	--	--	--	**240T**
Volatile Petroleum Hydrocarbons (VPH) (µg/kg)								
C5-C6 Aliphatics	26000 UJ	8000 U	--	8000 U	7500 U	8000 U	15000 U	19000 UJ
C6-C8 Aliphatics	26000 UJ	8000 U	--	8000 U	7500 U	8000 U	15000 U	19000 UJ
C8-C10 Aliphatics	26000 UJ	8000 U	--	8000 U	7500 U	8000 U	15000 U	19000 UJ
C10-C12 Aliphatics	26000 UJ	8000 U	--	8000 U	7500 U	8000 U	15000 U	19000 UJ
C8-C10 Aromatics	26000 UJ	8000 U	--	8000 U	7500 U	8000 U	15000 U	19000 UJ
C10-C12 Aromatics	26000 UJ	8000 U	--	8000 U	7500 U	8000 U	15000 U	19000 UJ
C12-C13 Aromatics	26000 UJ	8000 U	--	8000 U	7500 U	8000 U	15000 U	19000 UJ
Benzene	2600 UJ	800 U	--	800 U	750 U	800 U	1500 U	1900 UJ
Ethylbenzene	2600 UJ	800 U	--	800 U	750 U	800 U	1500 U	1900 UJ
m,p-Xylene	5100 UJ	1600 U	--	1600 U	1500 U	1600 U	3000 U	3700 UJ
Methyl tert-butyl ether (MTBE)	2600 UJ	800 U	--	800 U	750 U	800 U	1500 U	1900 UJ
n-Decane (C10)	2600 UJ	800 U	--	800 U	750 U	800 U	1500 U	1900 UJ
n-Dodecane (C12)	2600 UJ	800 U	--	800 U	750 U	800 U	1500 U	1900 UJ
n-Hexane	2600 UJ	800 U	--	800 U	750 U	800 U	1500 U	1900 UJ
n-Octane (C8)	2600 UJ	800 U	--	800 U	750 U	800 U	1500 U	1900 UJ
n-Pentane (C5)	2600 UJ	800 U	--	800 U	750 U	800 U	1500 U	1900 UJ
o-Xylene	2600 UJ	800 U	--	800 U	750 U	800 U	1500 U	1900 UJ
Toluene	2600 UJ	800 U	--	800 U	750 U	800 U	1500 U	1900 UJ
Extractable Petroleum Hydrocarbons (EPH) (µg/kg)								
C8-C10 Aliphatics	3700 UJ	2400 UJ	--	2500 UJ	2600 UJ	2600 UJ	2600 UJ	3300 UJ
C8-C10 Aromatics	3700 UJ	2400 UJ	--	2500 UJ	2600 UJ	2600 UJ	2600 UJ	3300 UJ
C10-C12 Aliphatics	3700 UJ	2400 UJ	--	2500 UJ	2600 UJ	2600 UJ	2600 UJ	3300 UJ
C10-C12 Aromatics	3700 UJ	2400 UJ	--	2500 UJ	2600 UJ	2600 UJ	2600 UJ	3300 UJ
C12-C16 Aliphatics	3700 UJ	2400 UJ	--	2500 UJ	2600 UJ	2600 UJ	2600 UJ	3300 UJ
C12-C16 Aromatics	3700 UJ	2400 UJ	--	2500 UJ	2600 UJ	2600 UJ	2600 UJ	**9000 J**
C16-C21 Aliphatics	**6700 J**	2400 UJ	--	2500 UJ	2600 UJ	2600 UJ	2600 UJ	**5000 J**
C16-C21 Aromatics	**41000 J**	**3300 J**	--	2500 UJ	2600 UJ	2600 UJ	2600 UJ	**46000 J**
C21-C34 Aliphatics	**45000 J**	2400 UJ	--	2500 UJ	2600 UJ	2600 UJ	**7100 J**	**29000 J**
C21-C34 Aromatics	**89000 J**	**3200 J**	--	2500 UJ	2600 UJ	2600 UJ	2600 UJ	**15000 J**

Table 2-4b
Data Gaps Surface Sediment Physical and Chemical Results - Retested Event

Notes:

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R = Rejected

T = calculation or summation applied

N = Normal Field Sample

FD = Field Duplicate

-- Results not reported or not applicable

Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.

Significant figures applied to all calculated totals

Table contains validated data

Footnotes

[1] = preserved total solids were analyzed from the sulfide jar containing zinc acetate

[2] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[3] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[4] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[5] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[6] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[7] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

[8] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[9] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[10] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

Acronyms

cm = centimeter
cPAH = carcinogenic PAH

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
EPH = extractable petroleum hydrocarbon
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
mg/kg = milligrams per kilograms
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = toxic equivalents quotient

TPH = Total Petroleum Hydrocarbons

µg/kg = micrograms per kilogram

VPH = volatile petroleum hydrocarbon

Table 2-5a
Data Gaps Surface Sediment Chemical Result
Statistics - Initial Event

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Conventional Parameters (mg/kg)						
Ammonia as nitrogen	21	21	100	11.2	282	84.5
Cyanide, total	21	18	86	0.164	8.23	1.85
Sulfide	21	8	38	5.27	159	45.3
Conventional Parameters (percent)						
Moisture (water) content	13	13	100	42.84	122.9	82
Total organic carbon	21	21	100	1.39	2.74	2.06
Metals (mg/kg)						
Arsenic	21	0	0	ND	ND	ND
Cadmium	21	19	90	0.3	0.8	0.5
Chromium	21	21	100	17.7	44	28
Copper	21	21	100	13.8	54	32
Lead	21	21	100	4	26	12
Mercury	21	13	62	0.05	0.42	0.11
Nickel	21	21	100	12	34	24
Silver	21	0	0	ND	ND	ND
Zinc	21	21	100	57	162	100
Volatile Organics (µg/kg)						
1,1-Dichloroethene	21	0	0	ND	ND	ND
cis-1,2-Dichloroethene	21	0	0	ND	ND	ND
trans-1,2-Dichloroethene	21	0	0	ND	ND	ND
Benzene	21	4	19	1.5	130	39
Ethylbenzene	21	4	19	2.1	240	69
m,p-Xylene	21	6	29	1.8	78	15
o-Xylene	21	5	24	2.4	100	24
Toluene	21	4	19	1.2	25	8
Trichloroethene (TCE)	21	0	0	ND	ND	ND
Vinyl chloride	21	0	0	ND	ND	ND
LWG RA Total BTEX[7]	21	7	33	4.2	570	97
LWG RA Total Xylene[8]	21	7	33	2.4	180	30
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	21	15	71	210	10000	1775
2-Methylnaphthalene	21	12	57	75	12000	1800
Acenaphthene	21	17	81	140	18000	4209
Acenaphthylene	21	12	57	79	1800	564
Anthracene	21	17	81	91	8100	1645
Benzo(a)anthracene	21	18	86	86	13000	2944
Benzo(a)pyrene	21	18	86	150	20000	4181
Benzo(g,h,i)perylene	21	18	86	99	5600	1626
Benzo(b,j,k)fluoranthenes	21	21	100	70	24000	4350
Chrysene	21	19	90	69	15000	3377
Dibenzo(a,h)anthracene	21	5	24	88	1000	366
Fluoranthene	21	21	100	73	28000	6258
Fluorene	21	17	81	91	8000	2016
Indeno(1,2,3-c,d)pyrene	21	18	86	76	5100	1428
Naphthalene	21	12	57	160	12000	2620

Table 2-5a
Data Gaps Surface Sediment Chemical Result
Statistics - Initial Event

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Perylene	21	17	81	90	4600	1098
Phenanthrene	21	19	90	78	47000	8904
Pyrene	21	21	100	94	33000	7155
LWG RA Total 10 of 17 HPAH[3]	21	21	100	450	140000	29476
LWG RA Total 17 PAH[4]	21	21	100	660	170000	47285
LWG RA Total 7 of 17 LPAH[2]	21	19	90	270	95000	19209
LWG RA Total cPAH TEQ[9] (EPA 1993)	21	19	90	69	22000	4545
Semivolatile Organics (µg/kg)						
Carbazole	21	11	52	100	1800	630
Dibenzofuran	21	8	38	110	1300	444
PCB Aroclors (µg/kg)						
Aroclor 1016	21	0	0	ND	ND	ND
Aroclor 1221	21	0	0	ND	ND	ND
Aroclor 1232	21	0	0	ND	ND	ND
Aroclor 1242	21	0	0	ND	ND	ND
Aroclor 1248	21	0	0	ND	ND	ND
Aroclor 1254	21	1	5	44	44	44
Aroclor 1260	21	1	5	37	37	37
LWG RA Total PCB Aroclors[5]	21	1	5	160	160	160
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	21	6	29	1.6	21	5.8
2,4'-DDE (o,p'-DDE)	21	0	0	ND	ND	ND
2,4'-DDT (o,p'-DDT)	21	1	5	4.1	4.1	4.1
4,4'-DDD (p,p'-DDD)	21	14	67	1.3	66	10
4,4'-DDE (p,p'-DDE)	21	6	29	2.2	28	9
4,4'-DDT (p,p'-DDT)	21	10	48	1.5	270	42
alpha-Chlordane (cis-Chlordane)	21	0	0	ND	ND	ND
alpha-Hexachlorocyclohexane (BHC)	21	0	0	ND	ND	ND
gamma-Chlordane (trans-Chlordane)	21	0	0	ND	ND	ND
beta-Hexachlorocyclohexane (BHC)	21	0	0	ND	ND	ND
cis-Nonachlor	21	0	0	ND	ND	ND
delta-Hexachlorocyclohexane (BHC)	21	0	0	ND	ND	ND
Dieldrin	21	0	0	ND	ND	ND
Endrin	21	0	0	ND	ND	ND
Endrin ketone	21	0	0	ND	ND	ND
gamma-Hexachlorocyclohexane (BHC) (Lindane)	21	0	0	ND	ND	ND
Heptachlor epoxide	21	0	0	ND	ND	ND
Oxychlordane	21	0	0	ND	ND	ND
trans-Nonachlor	21	0	0	ND	ND	ND
Hexachlorobenzene	21	0	0	ND	ND	ND
LWG RA Sum 2,4 DDT, DDE, DDD	21	6	29	4.8	37	12
LWG RA Sum 4,4 DDT, DDE, DDD	21	15	71	4.6	300	44
LWG RA Sum DDD	21	14	67	2.9	87	14
LWG RA Sum DDE	21	6	29	3.8	36	12
LWG RA Sum DDT	21	10	48	3.1	270	45

Table 2-5a
Data Gaps Surface Sediment Chemical Result
Statistics - Initial Event

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
LWG RA Total Chlordane[1]	21	0	0	ND	ND	ND
LWG RA Total DDx	21	15	71	9.4	310	53

Table 2-5a
Data Gaps Surface Sediment Chemical Result
Statistics - Initial Event

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	21	18	86	9.4	790	136
Motor Oil Range	21	21	100	21	780	221
LWG RA Total Petroleum Hydrocarbons[6]	21	21	100	25	1600	339
Volatile Petroleum Hydrocarbons (µg/kg)						
C5-C6 Aliphatic	13	0	0	ND	ND	ND
C6-C8 Aliphatic	13	0	0	ND	ND	ND
C8-C10 Aliphatic	13	0	0	ND	ND	ND
C10-C12 Aliphatic	13	0	0	ND	ND	ND
C8-C10 Aromatic	13	0	0	ND	ND	ND
C10-C12 Aromatic	13	0	0	ND	ND	ND
C12-C13 Aromatic	13	0	0	ND	ND	ND
Benzene	13	0	0	ND	ND	ND
Ethylbenzene	13	0	0	ND	ND	ND
m,p-Xylene	13	0	0	ND	ND	ND
Methyl tert-butyl ether (MTBE)	13	0	0	ND	ND	ND
n-Decane (C10)	13	0	0	ND	ND	ND
n-Dodecane (C12)	13	0	0	ND	ND	ND
n-Hexane	13	0	0	ND	ND	ND
n-Octane (C8)	13	0	0	ND	ND	ND
n-Pentane (C5)	13	0	0	ND	ND	ND
o-Xylene	13	0	0	ND	ND	ND
Toluene	13	0	0	ND	ND	ND
Extractable Petroleum Hydrocarbons (µg/kg)						
C8-C10 Aliphatics	13	0	0	ND	ND	ND
C8-C10 Aromatics	13	0	0	ND	ND	ND
C10-C12 Aliphatics	13	0	0	ND	ND	ND
C10-C12 Aromatics	13	1	8	6900	6900	6900
C12-C16 Aliphatics	13	1	8	4100	4100	4100
C12-C16 Aromatics	13	7	54	2800	12000	6300
C16-C21 Aliphatics	13	6	46	4100	7700	5950
C16-C21 Aromatics	13	9	69	5400	900000	121267
C21-C34 Aliphatics	13	12	92	2800	35000	12600
C21-C34 Aromatics	13	9	69	4500	1800000	229033

Table 2-5a
Data Gaps Surface Sediment Chemical Result
Statistics - Initial Event

Notes:

Only detections are included in the minimum, maximum, and mean sample concentrations

Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[5] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

[6] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[7] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

Acronyms

BTEX = benzene, toluene, ethylbenzene, xylenes

cPAH = carcinogenic PAH

HPAH = high-molecular weight PAH

LPAH = low-molecular-weight PAH

LWG = Lower Willamette Group

mg/kg = milligrams per kilograms

ND = not detect
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = Toxic Equivalents Quotient
TPH = Total Petroleum Hydrocarbons
µg/kg = micrograms per kilogram

Table 2-5b
Data Gaps Surface Sediment Chemical Result Statistics - Retested Event

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Conventional Parameters (mg/kg)						
Ammonia as nitrogen	30	30	100	1.36	317	80.1
Cyanide, total	30	20	67	0.184	28.3	3.36
Sulfide	30	22	73	1.81	268	53.2
Conventional Parameters (percent)						
Total organic carbon	25	25	100	0.353	4.67	1.85
Total volatile solids	25	25	100	1.59	8.94	4.47
Metals (mg/kg)						
Arsenic	25	19	76	7	12	8.7
Cadmium	25	11	44	0.3	0.7	0.44
Chromium	25	25	100	12.7	39	24.3
Copper	25	25	100	13.7	51.6	30.4
Lead	25	25	100	3	26	10.6
Mercury	25	18	72	0.03	0.48	0.11
Nickel	25	25	100	16	38	22.5
Silver	25	0	0	ND	ND	ND
Zinc	25	25	100	54	174	91.4
Volatile Organics (µg/kg)						
1,1-Dichloroethene	30	0	0	ND	ND	ND
cis-1,2-Dichloroethene	30	1	3	4.1	4.1	4.1
trans-1,2-Dichloroethene	30	0	0	ND	ND	ND
Benzene	30	4	13	9.1	25	15.8
Ethylbenzene	30	3	10	1.4	980	331
m,p-Xylene	30	3	10	3.2	60	24
o-Xylene	30	3	10	14	230	89
Toluene	30	3	10	3.4	16	7.7
Trichloroethene (TCE)	30	0	0	ND	ND	ND
Vinyl chloride	30	1	3	2.3	2.3	2.3
LWG RA Total BTEX[7]	30	5	17	7	1311	285
LWG RA Total Xylene[8]	30	3	10	17.2	290	113
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	25	21	84	9.1	8200	1226
2-Methylnaphthalene	25	22	88	11	11000	1580
Acenaphthene	25	25	100	22	23000	4860
Acenaphthylene	25	21	84	18	9500	734
Anthracene	25	25	100	20	20000	2862
Benzo(a)anthracene	25	25	100	24	42000	3736
Benzo(a)pyrene	25	24	96	19	12000	3025
Benzo(b,j,k)fluoranthenes	25	25	100	15	66000	5492
Benzo(g,h,i)perylene	25	24	96	20	57000	4633
Chrysene	25	25	100	32	50000	4612
Dibenzo(a,h)anthracene	25	22	88	21	8600	773
Fluoranthene	25	25	100	57	150000	12671
Fluorene	25	25	100	10	20000	3129
Indeno(1,2,3-c,d)pyrene	25	24	96	13	34000	2815
Naphthalene	25	25	100	15	14000	2827
Perylene	25	25	100	24	16000	1256
Phenanthrene	25	25	100	20	120000	15472
Pyrene	25	25	100	190	200000	15932
LWG RA Total 10 of 17 HPAH[3]	25	25	100	662	619600	53180
LWG RA Total 17 PAH[4]	25	25	100	913	797100	84339
LWG RA Total 7 of 17 LPAH[2]	25	25	100	178	177500	31159
LWG RA Total cPAH TEQ (EPA 1993)[9]	25	25	100	29.24	34850	4783
Semivolatile Organics (µg/kg)						
4-Methylphenol (p-Cresol)	25	15	60	14	570	135

Table 2-5b
Data Gaps Surface Sediment Chemical Result Statistics - Retested Event

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Benzyl alcohol	25	11	44	22	300	109
Carbazole	25	18	72	41	2300	572
Dibenzofuran	25	18	72	23	7300	743
Pentachlorophenol	25	0	0	ND	ND	ND
Phenol	25	8	32	9.9	180	48
PCB Aroclors (µg/kg)						
Aroclor 1016	25	0	0	ND	ND	ND
Aroclor 1221	25	0	0	ND	ND	ND
Aroclor 1232	25	0	0	ND	ND	ND
Aroclor 1242	25	0	0	ND	ND	ND
Aroclor 1248	25	4	16	6	56	27.3
Aroclor 1254	25	6	24	9.4	60	26.2
Aroclor 1260	25	7	28	7.4	46	23.5
LWG RA Total PCB Aroclors[5]	25	7	28	29.4	200	91
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	25	3	12	2.1	38	17
2,4'-DDE (o,p'-DDE)	25	1	4	26	26	26
2,4'-DDT (o,p'-DDT)	25	3	12	2.9	7.4	5
4,4'-DDD (p,p'-DDD)	25	10	40	1.9	120	25.9
4,4'-DDE (p,p'-DDE)	25	3	12	7.8	26	16.6
4,4'-DDT (p,p'-DDT)	25	4	16	2	25	11.3
Aldrin	25	0	0	ND	ND	ND
alpha-Chlordane (cis-Chlordane)	25	0	0	ND	ND	ND
alpha-Hexachlorocyclohexane (BHC)	25	0	0	ND	ND	ND
beta-Chlordane (trans-Chlordane)	25	2	8	1.1	1.9	1.5
beta-Hexachlorocyclohexane (BHC)	25	0	0	ND	ND	ND
cis-Nonachlor	25	0	0	ND	ND	ND
delta-Hexachlorocyclohexane (BHC)	25	0	0	ND	ND	ND
Dieldrin	25	0	0	ND	ND	ND
Endosulfan sulfate	25	0	0	ND	ND	ND
Endosulfan-alpha (I)	25	0	0	ND	ND	ND
Endosulfan-beta (II)	25	0	0	ND	ND	ND
Endrin	25	1	4	3.7	3.7	3.7
Endrin ketone	25	0	0	ND	ND	ND
gamma-Hexachlorocyclohexane (BHC) (Lindane)	25	1	4	1.4	1.4	1.4
Heptachlor epoxide	25	0	0	ND	ND	ND
Oxychlordane	25	0	0	ND	ND	ND
trans-Nonachlor	25	2	8	6.8	29	17.9
Hexachlorobenzene	25	1	4	1.9	1.9	1.9
LWG RA Sum 2,4 DDT, DDE, DDD	25	5	20	4.8	74	23.3
LWG RA Sum 4,4 DDT, DDE, DDD	25	11	44	3.35	171	35.9
LWG RA Sum DDD	25	10	40	2.85	158	33.3
LWG RA Sum DDE	25	3	12	9	52	27.3
LWG RA Sum DDT	25	5	20	4.9	35	14.4
LWG RA Total Chlordane[1]	25	4	16	4.42	43.9	15.8
LWG RA Total DDx	25	12	48	6.2	245	48.7
LWG RA Total Endosulfan	25	0	0	ND	ND	ND
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	25	22	88	6	810	132
Motor Oil Range	25	23	92	15	800	196
LWG RA Total Petroleum Hydrocarbons[6]	25	24	96	12	1610	310
Volatile Petroleum Hydrocarbons (µg/kg)						
C5-C6 Aliphatics	9	0	0	ND	ND	ND
C6-C8 Aliphatics	9	0	0	ND	ND	ND
C8-C10 Aliphatics	9	0	0	ND	ND	ND

Table 2-5b
Data Gaps Surface Sediment Chemical Result
Statistics - Retested Event

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
C10-C12 Aliphatics	9	0	0	ND	ND	ND
C8-C10 Aromatics	9	0	0	ND	ND	ND
C10-C12 Aromatics	9	0	0	ND	ND	ND
C12-C13 Aromatics	9	0	0	ND	ND	ND
Benzene	9	0	0	ND	ND	ND
Ethylbenzene	9	0	0	ND	ND	ND
m,p-Xylene	9	0	0	ND	ND	ND
Methyl tert-butyl ether (MTBE)	9	0	0	ND	ND	ND
n-Decane (C10)	9	0	0	ND	ND	ND
n-Dodecane (C12)	9	0	0	ND	ND	ND
n-Hexane	9	0	0	ND	ND	ND
n-Octane (C8)	9	0	0	ND	ND	ND
n-Pentane (C5)	9	0	0	ND	ND	ND
o-Xylene	9	0	0	ND	ND	ND
Toluene	9	0	0	ND	ND	ND
Extractable Petroleum Hydrocarbons (µg/kg)						
C8-C10 Aliphatics	9	0	0	ND	ND	ND
C8-C10 Aromatics	9	0	0	ND	ND	ND
C10-C12 Aliphatics	9	0	0	ND	ND	ND
C10-C12 Aromatics	9	0	0	ND	ND	ND
C12-C16 Aliphatics	9	0	0	ND	ND	ND
C12-C16 Aromatics	9	1	11	9000	9000	9000
C16-C21 Aliphatics	9	3	33	5000	10000	7233
C16-C21 Aromatics	9	4	44	3300	46000	29575
C21-C34 Aliphatics	9	5	56	7100	45000	20840
C21-C34 Aromatics	9	5	56	3200	89000	39580

Table 2-5b
Data Gaps Surface Sediment Chemical Result
Statistics - Retested Event

Notes:

Only detections are included in the minimum, maximum, and mean sample concentrations

Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[5] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

[6] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[7] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

Acronyms

BTEX = benzene, toluene, ethylbenzene, xylenes

cPAH = carcinogenic PAH

HPAH = high-molecular weight PAH

LPAH = low-molecular-weight PAH

LWG = Lower Willamette Group

mg/kg = milligrams per kilograms

ND = not detect
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = Toxic Equivalents Quotient
TPH = Total Petroleum Hydrocarbons
µg/kg = micrograms per kilogram

Table 2-6
Data Gaps Sediment Bioassay Results
Summary - Initial and Retested Events

	Location ID	Initial *Hyalella azteca* 28-Day Amphipod Sediment Toxicity Test (Mean ± SD)		Retest C*hironomus dilutus* 10-Day Midge Sediment Toxicity Test (Mean ± SD)	
		Percent Survival	Mean Total Biomass (mg)	Percent Survival	Mean Total Ash-Free Dry Weight (mg)
	Negative Control	95.0 ± 7.6	1.94 ± 0.21	90.4 ± 5.5	7.10 ± 1.22
Test Samples	DGS-01SG	88.8 ± 11.3	1.81 ± 0.29	77.5 ± 17.5	6.95 ± 1.38
	DGS-02SG	93.8 ± 7.4	1.37 ± 0.09	83.8 ± 19.2	6.26 ± 1.72
	DGS-04SG	91.3 ± 11.3	1.58 ± 0.69	20.0 ± 14.1	0.60 ± 0.69
	DGS-05SG	91.3 ± 8.3	1.87 ± 0.38	46.3 ± 32.0	3.76 ± 2.71
	DGS-06SG	92.5 ± 7.1	1.58 ± 0.14	81.3 ± 18.1	5.98 ± 1.09
	DGS-08SG	88.8 ± 9.9	1.72 ± 0.41	65.0 ± 29.8	4.72 ± 1.94
	DGS-09SG	90.0 ± 14.1	1.41 ± 0.18	76.3 ± 31.1	4.85 ± 2.20
	DGS-12SG	92.5 ± 10.4	1.32 ± 0.12	75.0 ± 22.7	5.78 ± 1.61
	DGS-13SG	97.5 ± 4.6	1.54 ± 0.18	42.5 ± 25.5	2.52 ± 1.85
	DGS-16SG	93.8 ± 7.4	1.37 ± 0.19	75.0 ± 26.2	5.67 ± 1.83
	DGS-17SG	95.0 ± 10.7	1.57 ± 0.14	73.8 ± 26.7	5.91 ± 1.87
	DGS-20SG	96.3 ± 5.2	1.61 ± 0.14	86.3 ± 20.0	6.53 ± 1.20
	DGS-21SG	96.3 ± 7.4	1.34 ± 0.16	58.8 ± 27.0	3.70 ± 1.88
	DGS-25SG	90.0 ± 17.7	1.34 ± 0.17	55.0 ± 26.7	4.45 ± 2.09
	DGS-26SG	97.5 ± 4.6	1.43 ± 0.08	42.5 ± 23.1	1.57 ± 0.87
	DGS-30SG	87.5 ± 11.6	1.33 ± 0.16	72.5 ± 18.3	5.21 ± 0.73
	DGS-31SG	95.0 ± 7.6	1.39 ± 0.35	56.3 ± 21.3	3.35 ± 1.01
	DGS-33SG	97.5 ± 4.6	1.39 ± 0.10	61.3 ± 19.6	4.88 ± 2.18
	DGS-34SG	88.8 ± 8.3	1.35 ± 0.15	26.3 ± 16.0	0.82 ± 0.91
	DGS-35SG	82.5 ± 14.9	1.49 ± 0.38	30.0 ± 23.9	0.66 ± 0.47
Reference	U2C-2	87.5 ± 10.4	1.47 ± 0.22	--	--
	U3C-2	--	--	80.0 ± 15.1	5.20 ± 1.21
	U4Q-1	92.5 ± 10.4	1.49 ± 0.19	80.0 ± 18.5	7.09 ± 1.55
	U4Q-2	93.8 ± 7.4	1.40 ± 0.18	78.8 ± 14.6	6.88 ± 0.65

Notes:
mg = milligram
SD = standard deviation

Table 2-7a
Data Gaps Sub-surface Sediment (0-1 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC
Sample ID	DGS-03SC-0001-101005	DGS-06SC-0001-101007	DGS-07SC-0001-101012	DGS-08SC-0001-101007	DGS-11SC-0001-101006	DGS-13SC-0001-101005
Sample Date	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010
Depth	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	**2.51**	**6.01**	**78.1**	**0.243**	**4.82**	**4.21**
Conventional Parameters (percent)						
Moisture (water) content	**95.02**	**90.79**	**104.5**	**36.24**	**46.08**	**--**
Total organic carbon	**1.83**	**1.72**	**2.86**	**1.26**	**1.77**	**2.57**
Total solids	**51**	**52.3**	**47.4**	**72.6**	**68.6**	**66.8**
Grain Size (percent)						
Total Gravel	**0.1 T**	0.1 UT	0.1 UT	**0.2 T**	0.1 UT	**--**
Total Sand	**41 T**	**21 T**	**9.3 T**	**93 T**	**64 T**	**--**
Total Silt	**42 T**	**63 T**	**73 T**	**6.6 T**	**32 T**	**--**
Total Clay	**16 T**	**16 T**	**17 T**	0.1 UT	**4.2 T**	**--**
Total Fines (silt + clay)	**59 T**	**79 T**	**91 T**	**6.6 T**	**36 T**	**--**
Total Grain Size	**99.9 T**	**99.9 T**	**100 T**	**100 T**	**100 T**	**--**
Metals (mg/kg)						
Arsenic	**16**	10 U	10 U	6 U	7 U	7 U
Cadmium	**0.6**	**0.6**	**0.8**	**0.3**	**0.4**	**0.3**
Chromium	**853 J**	**36**	**41**	**16.6**	**19.5**	**21.2 J**
Copper	**196 J**	**56.5**	**100**	**16.5**	**25.8**	**29.9 J**
Lead	**32 J**	**34**	**37**	**6**	**14**	**10 J**
Mercury	**0.13**	**0.17**	**0.27 J**	**0.07**	**0.06**	**0.05**
Nickel	**610 J**	**44**	**109**	**18**	**18**	**18 J**
Silver	0.6 U	0.6 U	0.6 U	0.4 U	0.4 U	0.4 U
Zinc	**367 J**	**179**	**229**	**59**	**103**	**79 J**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.7 U	1.7 U	1.9 U	1.3 U	1.4 U	1.4 U
1,2-Dichloroethene, cis-	1.7 U	1.7 U	1.9 U	1.3 U	1.4 U	1.4 U
1,2-Dichloroethene, trans-	1.7 U	1.7 U	1.9 U	1.3 U	1.4 U	1.4 U
Benzene	1.7 U	1.7 U	**2**	1.3 U	**27**	1.4 U
Ethylbenzene	1.7 U	1.7 U	**2**	1.3 U	**12**	1.4 U
m,p-Xylene	1.7 U	1.7 U	**4.6**	1.3 U	**10**	**3.2**
o-Xylene	1.7 U	1.7 U	**13**	1.3 U	**6.4**	**4.4**
Toluene	1.7 U	1.7 U	**2.9**	1.3 U	**7.6**	1.4 U
Trichloroethene (TCE)	1.7 U	1.7 U	1.9 U	1.3 U	1.4 U	1.4 U
Vinyl chloride	1.7 U	1.7 U	1.9 U	1.3 U	1.4 U	1.4 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	1.7 UT	1.7 UT	**25 T**	1.3 UT	**63 T**	**9.7 T**
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.7 UT	1.7 UT	**18 T**	1.3 UT	**16 T**	**7.6 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	**760**	620 U	**5800**	**1400**	**3800**	**2400**
2-Methylnaphthalene	**430**	620 U	**9000**	330 U	**6300**	**3600**
Acenaphthene	**4300**	**5400**	**8600**	**6400**	**18000**	**9800**
Acenaphthylene	**900**	**870**	**1200**	330 U	3300 U	**830**
Anthracene	**4400**	**6400**	**12000**	**1600**	**9000**	**5000**
Benzo(a)anthracene	**13000**	**18000**	**22000**	**2100**	**8200**	**8600**
Benzo(b,j,k)fluoranthenes	**21000**	**28000**	**32000**	**3200**	**11000**	**12000**
Benzo(a)pyrene	**19000**	**24000**	**26000**	**2900**	**10000**	**14000**
Benzo(g,h,i)perylene	**18000**	**17000**	**12000**	**2100**	**7100**	**13000**
Chrysene	**17000**	**24000**	**28000**	**2900**	**10000**	**11000**
Dibenzo(a,h)anthracene	**4100**	**4500**	**690**	**340**	3300 U	**2200**
Fluoranthene	**24000**	**47000**	**51000**	**6400**	**27000**	**21000**

Table 2-7a
Data Gaps Sub-surface Sediment (0-1 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC
Sample ID	DGS-03SC-0001-101005	DGS-06SC-0001-101007	DGS-07SC-0001-101012	DGS-08SC-0001-101007	DGS-11SC-0001-101006	DGS-13SC-0001-101005
Sample Date	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010
Depth	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet
Sample Type	N	N	N	N	N	N
Fluorene	**3300**	**4200**	**7200**	**2800**	**8900**	**4800**
Indeno(1,2,3-c,d)pyrene	**12000**	**12000**	**11000**	**1400**	**5100**	**8500**
Naphthalene	**810**	**1000**	**4400**	330 U	**36000**	**3700**
Perylene	**4200**	**5700**	**6300**	**780**	3300 U	**3100**
Phenanthrene	**21000**	**44000**	**61000**	**9700**	**52000**	**24000**
Pyrene	**38000**	**69000**	**66000**	**8300**	**32000**	**27000**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**35000 T**	**62000 T**	**100000 T**	**21000 T**	**130000 T**	**52000 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**170000 T**	**240000 T**	**250000 T**	**30000 T**	**110000 T**	**120000 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**200000 T**	**310000 T**	**350000 T**	**51000 T**	**240000 T**	**170000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**28000 T**	**34000 T**	**33000 T**	**3900 T**	**14000 T**	**19000 T**
Semivolatile Organics (µg/kg)						
Carbazole	**1300**	**1200**	**2300**	330 U	3300 U	**480**
Dibenzofuran	310 U	620 U	**870**	330 U	3300 U	**480**
PCB Aroclors (µg/kg)						
Aroclor 1016	33 U	32 U	32 U	52 U	32 U	32 U
Aroclor 1221	33 U	32 U	32 UJ	52 U	32 U	32 U
Aroclor 1232	33 U	32 U	32 U	52 U	32 U	32 U
Aroclor 1242	33 U	32 U	32 U	52 U	32 U	32 U
Aroclor 1248	33 U	**57**	**100**	52 U	65 U	32 U
Aroclor 1254	33 U	80 U	95 U	52 U	32 U	32 U
Aroclor 1260	33 U	**44**	**88**	52 U	32 U	32 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	33 UT	**200 T**	**300 JT**	52 UT	65 UT	32 UT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	16 U	16 U	**20**	5.2 U	16 U	16 U
2,4'-DDE (o,p'-DDE)	16 U	16 U	16 U	5.2 U	16 U	16 U
2,4'-DDT (o,p'-DDT)	16 U	16 U	16 U	5.2 U	16 U	16 U
4,4'-DDD (p,p'-DDD)	16 U	**81**	**74 J**	5.2 U	**9.2 J**	16 U
4,4'-DDE (p,p'-DDE)	**9.1 J**	**24**	**32**	5.2 U	16 U	16 U
4,4'-DDT (p,p'-DDT)	16 U	**9.2 J**	**16**	5.2 U	16 U	16 U
alpha-Hexachlorocyclohexane (BHC)	8 U	8 U	8.1 U	2.6 U	7.9 U	8 U
alpha-Chlordane (cis-Chlordane)	8 U	8 U	8.1 U	2.6 U	7.9 U	8 U
beta-Hexachlorocyclohexane (BHC)	8 U	37 U	40 U	2.6 U	7.9 U	8 U
gamma-Chlordane (trans-Chlordane)	8 U	8 U	14 U	2.6 U	7.9 U	8 U
cis-Nonachlor	16 U	16 U	16 U	5.2 U	16 U	16 U
delta-Hexachlorocyclohexane (BHC)	8 UJ	8 U	8.1 U	2.6 U	7.9 U	8 UJ
Dieldrin	16 U	16 U	16 U	5.2 U	16 U	16 U
Endrin	16 U	16 U	16 U	5.2 U	16 U	16 U
Endrin ketone	16 U	16 U	16 U	5.2 U	16 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8 U	8 U	8.1 U	2.6 U	7.9 U	8 U
Heptachlor epoxide	8 U	8 U	16 U	2.6 U	7.9 U	8 U
Oxychlordane	16 U	16 U	16 U	5.2 U	16 U	16 U
trans-Nonachlor	16 U	16 U	16 U	5.2 U	16 U	16 U
Hexachlorobenzene	8 U	8 U	8.1 U	2.6 U	7.9 U	8 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	16 UT	**36 T**	5.2 UT	16 UT	16 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	**25 JT**	**110 JT**	**120 JT**	5.2 UT	**25 JT**	16 UT
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	**89 T**	**94 JT**	5.2 UT	**17 JT**	16 UT
LWG RA Sum DDE (Calculated U = 1/2)	**17 JT**	**32 T**	**40 T**	5.2 UT	16 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	**17 JT**	**24 T**	5.2 UT	16 UT	16 UT
LWG RA Total DDx (Calculated U = 1/2)	**49 JT**	**140 JT**	**160 JT**	5.2 UT	**49 JT**	16 UT

Table 2-7a
Data Gaps Sub-surface Sediment (0-1 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC
Sample ID	DGS-03SC-0001-101005	DGS-06SC-0001-101007	DGS-07SC-0001-101012	DGS-08SC-0001-101007	DGS-11SC-0001-101006	DGS-13SC-0001-101005
Sample Date	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010
Depth	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet
Sample Type	N	N	N	N	N	N
LWG RA Total Chlordane[1] (Calculated U = 1/2)	16 UT	16 UT	16 UT	5.2 UT	16 UT	16 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**300**	**780**	**1200 J**	**40**	**450**	**220**
Motor Oil Range	**760**	**1400**	**2000**	**58**	**620**	**400**
LWG RA Total Petroleum Hydrocarbons (TPH)[4] (Calculated U = 1/2)	**1100 T**	**2200 T**	**3200 JT**	**98 T**	**1100 T**	**620 T**

Table 2-7a
Data Gaps Sub-surface Sediment (0-1 feet) Physical and Chemical Results

Location ID	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC
Sample ID	DGS-18SC-0001-101008	DGS-19SC-0001-101006	DGS-20SC-0001-101008	DGS-22SC-0001-101012	DGS-23SC-0001-101008	DGS-24SC-0001-101012
Sample Date	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/12/2010
Depth	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	**0.483**	**1.94**	0.136 U	**0.379**	0.127 U	**0.458**
Conventional Parameters (percent)						
Moisture (water) content	--	**88.56**	**37.79**	**39.48**	**30.76**	**64.37**
Total organic carbon	**2.59 J**	**2.48**	**0.686**	**1.65**	**0.309**	**1.19**
Total solids	**67.3 J**	**51.6**	**72.2**	**71.5**	**77.2**	**61.3**
Grain Size (percent)						
Total Gravel	--	**2.3 T**	**0.7 T**	**0.7 T**	0.1 UT	0.1 UT
Total Sand	--	**27 T**	**90 T**	**76 T**	**93 T**	**32 T**
Total Silt	--	**63 T**	**6.4 T**	**19 T**	**4.1 T**	**57 T**
Total Clay	--	**7.7 T**	**3.1 T**	**4.7 T**	**2.7 T**	**11 T**
Total Fines (silt + clay)	--	**71 T**	**9.5 T**	**23 T**	**6.8 T**	**68 T**
Total Grain Size	--	**99.7 T**	**99.9 T**	**99.8 T**	**100 T**	**99.9 T**
Metals (mg/kg)						
Arsenic	7 U	9 U	7 U	7 U	6 U	8 U
Cadmium	**0.4**	**0.5**	**0.3**	**0.3**	0.3 U	**0.6**
Chromium	**23**	**31.3**	**16.9**	**22.1**	**16.3**	**28.9**
Copper	**27.9**	**48.9**	**18.2**	**18.9**	**17**	**36.1**
Lead	**9**	**21**	**5**	**5**	3 U	**13**
Mercury	**0.04**	**0.09**	**0.04**	**0.03 J**	0.03 U	**0.05 J**
Nickel	**22**	**26**	**18**	**14**	**20**	**25**
Silver	0.4 U	0.5 U	0.4 U	0.4 U	0.4 U	0.5 U
Zinc	**89**	**142**	**72**	**53**	**49**	**104**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	14 U	1.7 U	1.3 U	1.2 U	1.3 U	1.5 U
1,2-Dichloroethene, cis-	14 U	1.7 U	1.3 U	1.2 U	1.3 U	1.5 U
1,2-Dichloroethene, trans-	14 U	1.7 U	1.3 U	1.2 U	1.3 U	1.5 U
Benzene	14 U	**29**	1.3 U	1.2 U	1.3 U	1.5 U
Ethylbenzene	14 U	**160**	1.3 U	1.2 U	1.3 U	1.5 U
m,p-Xylene	**14**	**58**	1.3 U	1.2 U	1.3 U	1.5 U
o-Xylene	**38**	**44**	1.3 U	1.2 U	1.3 U	1.5 U
Toluene	14 U	1.7 U	1.3 U	1.2 U	1.3 U	1.5 U
Trichloroethene (TCE)	14 U	1.7 U	1.3 U	1.2 U	1.3 U	1.5 U
Vinyl chloride	14 U	1.7 U	1.3 U	1.2 U	1.3 U	1.5 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	**73 T**	**290 T**	1.3 UT	1.2 UT	1.3 UT	1.5 UT
LWG RA Total Xylene[8] (Calculated U = 1/2)	**52 T**	**100 T**	1.3 UT	1.2 UT	1.3 UT	1.5 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	**30000**	**19000**	62 U	200 U	62 U	**3500**
2-Methylnaphthalene	**28000**	**36000**	62 U	200 U	62 U	**4800**
Acenaphthene	**22000**	**44000**	62 U	**1000**	**170**	**10000**
Acenaphthylene	**2200**	3300 U	62 U	**240**	62 U	**790**
Anthracene	**22000**	**15000**	62 U	**1300**	62 U	**7000**
Benzo(a)anthracene	**21000**	**13000**	**86**	**2100**	62 U	**11000**
Benzo(b,j,k)fluoranthenes	**23000**	**20000**	**140**	**3800**	62 U	**20000**
Benzo(a)pyrene	**20000**	**19000**	**130**	**3200**	62 U	**14000**
Benzo(g,h,i)perylene	**16000**	**16000**	**140**	**2500**	62 U	**9400**
Chrysene	**21000**	**17000**	**120**	**2800**	62 U	**14000**
Dibenzo(a,h)anthracene	**3700**	3300 U	62 U	200 U	62 U	**510**
Fluoranthene	**51000**	**49000**	**220**	**5600**	62 U	**27000**

Table 2-7a
Data Gaps Sub-surface Sediment (0-1 feet) Physical and Chemical Results

Location ID	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC
Sample ID	DGS-18SC-0001-101008	DGS-19SC-0001-101006	DGS-20SC-0001-101008	DGS-22SC-0001-101012	DGS-23SC-0001-101008	DGS-24SC-0001-101012
Sample Date	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/12/2010
Depth	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet
Sample Type	N	N	N	N	N	N
Fluorene	**21000**	**17000**	62 U	**570**	**76**	**5200**
Indeno(1,2,3-c,d)pyrene	**11000**	**10000**	**81**	**1800**	62 U	**7900**
Naphthalene	**9200**	**150000**	62 U	**210**	62 U	**2000**
Perylene	**5000**	**5300**	62 U	**900**	62 U	**4100**
Phenanthrene	**120000**	**97000**	62 U	**4400**	62 U	**31000**
Pyrene	**63000 J**	**63000**	**360 J**	**6200**	62 UJ	**28000**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**220000 T**	**360000 T**	62 UT	**7800 T**	**400 T**	**61000 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**230000 JT**	**210000 T**	**1300 JT**	**28000 T**	62 UJT	**130000 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**450000 JT**	**570000 T**	**1500 JT**	**36000 T**	**680 JT**	**190000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**29000 T**	**25000 T**	**190 T**	**4100 T**	62 UT	**18000 T**
Semivolatile Organics (µg/kg)						
Carbazole	**1400**	3300 U	62 U	200 U	**67**	**1800**
Dibenzofuran	**2700**	3300 U	62 U	200 U	62 U	**860**
PCB Aroclors (µg/kg)						
Aroclor 1016	33 U	32 U	32 U	33 U	32 U	32 U
Aroclor 1221	33 U	32 U	32 U	33 UJ	32 U	32 UJ
Aroclor 1232	33 U	32 U	32 U	33 U	32 U	32 U
Aroclor 1242	33 U	32 U	32 U	33 U	32 U	32 U
Aroclor 1248	33 U	64 U	32 U	33 U	32 U	32 U
Aroclor 1254	33 U	32 U	32 U	33 U	32 U	32 U
Aroclor 1260	33 U	32 U	32 U	33 U	32 U	32 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	33 UT	64 UT	32 UT	33 UJT	32 UT	32 UJT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	16 U	16 U	3.2 U	16 U	3.2 U	16 U
2,4'-DDE (o,p'-DDE)	16 U	16 U	3.2 U	16 U	3.2 U	16 U
2,4'-DDT (o,p'-DDT)	16 U	16 U	3.2 U	16 U	3.2 U	16 U
4,4'-DDD (p,p'-DDD)	16 U	16 U	3.2 U	16 U	3.2 U	**22**
4,4'-DDE (p,p'-DDE)	16 U	16 U	3.2 U	16 U	3.2 U	16 U
4,4'-DDT (p,p'-DDT)	16 U	16 U	**8.1**	**94**	3.2 U	**72**
alpha-Hexachlorocyclohexane (BHC)	8.1 U	7.9 U	1.6 U	8 U	1.6 U	7.8 U
alpha-Chlordane (cis-Chlordane)	8.1 U	7.9 U	1.6 U	8 U	1.6 U	7.8 U
beta-Hexachlorocyclohexane (BHC)	8.1 U	7.9 U	1.6 U	8 U	1.6 U	7.8 U
gamma-Chlordane (trans-Chlordane)	8.1 U	10 U	1.6 U	8 U	1.6 U	7.8 U
cis-Nonachlor	16 U	16 U	3.2 U	16 U	3.2 U	16 U
delta-Hexachlorocyclohexane (BHC)	8.1 U	7.9 U	1.6 U	8 U	1.6 U	7.8 U
Dieldrin	16 U	16 U	3.2 U	16 U	3.2 U	16 U
Endrin	16 U	16 U	3.2 U	16 U	3.2 U	16 U
Endrin ketone	16 U	16 U	3.2 U	16 U	3.2 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8.1 U	7.9 U	1.6 U	8 U	1.6 U	7.8 U
Heptachlor epoxide	8.1 U	7.9 U	1.6 U	8 U	1.6 U	7.8 U
Oxychlordane	16 U	16 U	3.2 U	16 U	3.2 U	16 U
trans-Nonachlor	16 U	16 U	3.2 U	16 U	3.2 U	16 U
Hexachlorobenzene	8.1 U	7.9 U	1.6 U	8 U	1.6 U	7.8 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	16 UT	3.2 UT	16 UT	3.2 UT	16 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	16 UT	**11 T**	**110 T**	3.2 UT	**100 T**
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	16 UT	3.2 UT	16 UT	3.2 UT	**30 T**
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	16 UT	3.2 UT	16 UT	3.2 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	16 UT	**9.7 T**	**100 T**	3.2 UT	**80 T**
LWG RA Total DDx (Calculated U = 1/2)	16 UT	16 UT	**16 T**	**130 T**	3.2 UT	**130 T**

Table 2-7a
Data Gaps Sub-surface Sediment (0-1 feet) Physical and Chemical Results

Location ID	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC
Sample ID	DGS-18SC-0001-101008	DGS-19SC-0001-101006	DGS-20SC-0001-101008	DGS-22SC-0001-101012	DGS-23SC-0001-101008	DGS-24SC-0001-101012
Sample Date	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/12/2010
Depth	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet
Sample Type	N	N	N	N	N	N
LWG RA Total Chlordane[1] (Calculated U = 1/2)	16 UT	16 UT	3.2 UT	16 UT	3.2 UT	16 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**5100**	**620**	6.8 U	**61 J**	6.8 U	**280 J**
Motor Oil Range	**3200**	**800**	14 U	**170**	14 U	**420**
LWG RA Total Petroleum Hydrocarbons (TPH)[4] (Calculated U = 1/2)	**8300 T**	**1400 T**	14 UT	**230 JT**	14 UT	**700 JT**

Table 2-7a
Data Gaps Sub-surface Sediment (0-1 feet) Physical and Chemical Results

Location ID	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC	DGS-32SC
Sample ID	DGS-25SC-0001-101007	DGS-26SC-0001-101011	DGS-28SC-0001-101007	DGS-30SC-0001-101006	DGS-31SC-0001-101011	DGS-32SC-0001-101011
Sample Date	10/7/2010	10/11/2010	10/7/2010	10/6/2010	10/11/2010	10/11/2010
Depth	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	**0.277**	**0.878**	**0.282**	0.131 U	**2.26**	**1.25**
Conventional Parameters (percent)						
Moisture (water) content	**47.47**	**35.93**	**45.59**	**34.77**	**92.67**	**94.71**
Total organic carbon	**1.35**	**3.5**	**2.1**	**3.06**	**2.09**	**2.16**
Total solids	**69.3**	**70.5**	**68.6**	**74.3**	**51.4**	**51.5**
Grain Size (percent)						
Total Gravel	**0.4 T**	**0.1 T**	**1.4 T**	**0.4 T**	0.1 UT	**0.1 T**
Total Sand	**76 T**	**72 T**	**87 T**	**91 T**	**32 T**	**25 T**
Total Silt	**23 T**	**19 T**	**11 T**	**9 T**	**50 T**	**59 T**
Total Clay	0.1 UT	**8.7 T**	0.1 UT	0.1 UT	**19 T**	**15 T**
Total Fines (silt + clay)	**23 T**	**28 T**	**11 T**	**9 T**	**68 T**	**74 T**
Total Grain Size	**99.8 T**	**99.9 T**	**100 T**	**100 T**	**99.9 T**	**99.9 T**
Metals (mg/kg)						
Arsenic	7 U	7 U	7 U	20 U	9 U	9 U
Cadmium	**0.4**	**0.4**	0.3 U	0.6 U	**0.5**	**0.5**
Chromium	**22.6**	**23.3**	**20.6**	**21**	**32.1**	**31.4**
Copper	**27.5**	**27.7**	**25.1**	**23**	**42.2**	**39**
Lead	**8**	**13**	**5**	6 U	**23**	**23**
Mercury	**0.04**	**0.05**	0.03 U	0.03 U	**0.11**	**0.09**
Nickel	**22**	**22**	**20**	**22**	**26**	**25**
Silver	0.4 U	0.4 U	0.4 U	0.9 U	0.6 U	0.6 U
Zinc	**76**	**81**	**64**	**71**	**129**	**128**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.4 U	1.5 U	1.3 U	1.3 U	1.9 U	2 U
1,2-Dichloroethene, cis-	**1.7**	**430 J**	**6.2**	1.3 U	1.9 U	2 U
1,2-Dichloroethene, trans-	1.4 U	**3.3 J**	1.3 U	1.3 U	1.9 U	2 U
Benzene	1.4 U	**92 J**	1.3 U	1.3 U	**16**	2 U
Ethylbenzene	1.4 U	**4800 J**	1.3 U	1.3 U	**16**	**3.1**
m,p-Xylene	1.4 U	**1300 J**	1.3 U	1.3 U	**5**	**9.8**
o-Xylene	1.4 U	**1400 J**	1.3 U	1.3 U	**4.6**	**12**
Toluene	1.4 U	**89 J**	1.3 U	1.3 U	**3.8**	2 U
Trichloroethene (TCE)	1.4 U	**13 J**	1.3 U	1.3 U	1.9 U	2 U
Vinyl chloride	1.4 U	**120 J**	**1.9**	1.3 U	1.9 U	2 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	1.4 UT	**7700 JT**	1.3 UT	1.3 UT	**45 T**	**27 T**
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.4 UT	**2700 JT**	1.3 UT	1.3 UT	**9.6 T**	**22 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	64 U	**140000**	60 U	**110**	**8200**	**1600**
2-Methylnaphthalene	64 U	**140000**	60 U	**200**	**1000**	**1300**
Acenaphthene	**310**	**220000**	60 U	**110**	**24000**	**11000**
Acenaphthylene	64 U	**5800**	60 U	61 U	**950**	**1500**
Anthracene	**480**	**79000**	60 U	61 U	**9500**	**11000**
Benzo(a)anthracene	**680**	**49000**	60 U	**140**	**7200**	**13000**
Benzo(b,j,k)fluoranthenes	**980**	**69000**	**72**	**130**	**9500**	**15000**
Benzo(a)pyrene	**700**	**58000**	60 U	**99**	**7500**	**12000**
Benzo(g,h,i)perylene	**400**	**38000**	60 U	**86**	**5100**	**6300**
Chrysene	**1200**	**61000**	**60**	**170**	**8500**	**14000**
Dibenzo(a,h)anthracene	**140**	**5700**	60 U	61 U	**260**	**400**
Fluoranthene	**2300**	**190000**	**120**	**160**	**26000**	**40000**

Table 2-7a
Data Gaps Sub-surface Sediment (0-1 feet) Physical and Chemical Results

Location ID	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC	DGS-32SC
Sample ID	DGS-25SC-0001-101007	DGS-26SC-0001-101011	DGS-28SC-0001-101007	DGS-30SC-0001-101006	DGS-31SC-0001-101011	DGS-32SC-0001-101011
Sample Date	10/7/2010	10/11/2010	10/7/2010	10/6/2010	10/11/2010	10/11/2010
Depth	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet
Sample Type	N	N	N	N	N	N
Fluorene	**150**	**91000**	60 U	61 U	**13000**	**9000**
Indeno(1,2,3-c,d)pyrene	**300**	**28000**	60 U	61 U	**4000**	**5400**
Naphthalene	**93**	**530000**	60 U	**2400**	**750**	**1000**
Perylene	**200**	**15000**	**81**	61 U	**2000**	**3300**
Phenanthrene	**240**	**440000**	60 U	**160**	**58000**	**68000**
Pyrene	**3300**	**220000**	**370**	**1200**	**28000**	**46000**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**1300 T**	**1500000 T**	60 UT	**3000 T**	**110000 T**	**100000 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**10000 T**	**720000 T**	**770 T**	**2000 T**	**96000 T**	**150000 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**11000 T**	**2200000 T**	**980 T**	**5000 T**	**200000 T**	**250000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**1000 T**	**78000 T**	**73 T**	**160 T**	**9800 T**	**16000 T**
Semivolatile Organics (µg/kg)						
Carbazole	64 U	**14000**	60 U	61 U	**2200**	**240**
Dibenzofuran	64 U	**13000**	60 U	61 U	**1300**	**1700**
PCB Aroclors (µg/kg)						
Aroclor 1016	32 U	56 U	32 U	32 U	32 U	32 U
Aroclor 1221	32 U	56 UJ	32 U	32 U	32 UJ	32 UJ
Aroclor 1232	32 U	56 U	32 U	32 U	32 U	32 U
Aroclor 1242	32 U	56 U	32 U	32 U	32 U	32 U
Aroclor 1248	80 U	56 U	32 U	32 U	**74**	**93**
Aroclor 1254	480 U	56 U	32 U	32 U	65 U	81 U
Aroclor 1260	32 U	56 U	32 U	32 U	**47**	**48**
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	480 UT	56 UJT	32 UT	32 UT	**220 JT**	**250 JT**
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	29 U	3.2 U	3.1 U	**190**	16 U
2,4'-DDE (o,p'-DDE)	3.2 U	29 U	3.2 U	3.1 U	80 U	16 U
2,4'-DDT (o,p'-DDT)	**3.3**	29 U	3.2 U	3.1 U	80 U	16 U
4,4'-DDD (p,p'-DDD)	**3.5**	29 U	3.2 U	3.1 U	**1200**	**24 J**
4,4'-DDE (p,p'-DDE)	**1.9 J**	29 U	3.2 U	3.1 U	80 U	16 U
4,4'-DDT (p,p'-DDT)	**16**	29 U	**8.9**	3.1 U	**200**	**18**
alpha-Hexachlorocyclohexane (BHC)	2.3 U	15 U	1.6 U	1.6 U	40 U	8.2 U
alpha-Chlordane (cis-Chlordane)	1.6 U	15 U	1.6 U	1.6 U	40 U	8.2 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	15 U	1.6 U	1.6 U	40 U	8.2 U
gamma-Chlordane (trans-Chlordane)	1.6 U	25 U	1.6 U	1.6 U	40 U	8.2 U
cis-Nonachlor	3.2 U	29 U	3.2 U	3.1 U	80 U	16 U
delta-Hexachlorocyclohexane (BHC)	1.6 U	15 U	1.6 U	1.6 U	40 U	8.2 U
Dieldrin	3.2 U	29 U	3.2 U	3.1 U	80 U	16 U
Endrin	3.2 U	29 U	3.2 U	3.1 U	80 U	16 U
Endrin ketone	3.2 U	29 U	3.2 U	3.1 U	80 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	2.1 U	15 U	1.6 U	1.6 U	40 U	8.2 U
Heptachlor epoxide	1.6 U	15 U	1.6 U	1.6 U	40 U	8.2 U
Oxychlordane	3.2 U	29 U	3.2 U	3.1 U	80 U	16 U
trans-Nonachlor	3.2 U	29 U	3.2 U	3.1 U	80 U	16 U
Hexachlorobenzene	1.6 U	15 U	1.6 U	1.6 U	40 U	8.2 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	**6.5 T**	29 UT	3.2 UT	3.1 UT	**270 T**	16 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	**21 JT**	29 UT	**12 T**	3.1 UT	**1400 T**	**50 JT**
LWG RA Sum DDD (Calculated U = 1/2)	**5.1 T**	29 UT	3.2 UT	3.1 UT	**1400 T**	**32 JT**
LWG RA Sum DDE (Calculated U = 1/2)	**3.5 JT**	29 UT	3.2 UT	3.1 UT	80 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	**19 T**	29 UT	**11 T**	3.1 UT	**240 T**	**26 T**
LWG RA Total DDx (Calculated U = 1/2)	**28 JT**	29 UT	**17 T**	3.1 UT	**1700 T**	**74 JT**

Table 2-7a
Data Gaps Sub-surface Sediment (0-1 feet) Physical and Chemical Results

Location ID	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC	DGS-32SC
Sample ID	DGS-25SC-0001-101007	DGS-26SC-0001-101011	DGS-28SC-0001-101007	DGS-30SC-0001-101006	DGS-31SC-0001-101011	DGS-32SC-0001-101011
Sample Date	10/7/2010	10/11/2010	10/7/2010	10/6/2010	10/11/2010	10/11/2010
Depth	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet	0 - 1 feet
Sample Type	N	N	N	N	N	N
LWG RA Total Chlordane[1] (Calculated U = 1/2)	3.2 UT	29 UT	3.2 UT	3.1 UT	80 UT	16 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**34**	**3800**	**18**	**8.9**	**620**	**930**
Motor Oil Range	**110**	**2200**	**64**	**51**	**600**	**970**
LWG RA Total Petroleum Hydrocarbons (TPH)[4] (Calculated U = 1/2)	**140 T**	**6000 T**	**82 T**	**60 T**	**1200 T**	**1900 T**

Table 2-7a
Data Gaps Sub-surface Sediment (0-1 feet) Physical and Chemical Results

Location ID	DGS-36SC	DGS-37SC
Sample ID	DGS-36SC-0001-101012	DGS-37SC-0001-101011
Sample Date	10/12/2010	10/11/2010
Depth	0 - 1 feet	0 - 1 feet
Sample Type	N	N
Conventional Parameters (mg/kg)		
Cyanide, total	**58.7**	**1.11**
Conventional Parameters (percent)		
Moisture (water) content	**92.83**	**67.65**
Total organic carbon	**4.16**	**0.348**
Total solids	**52.2**	**59.1**
Grain Size (percent)		
Total Gravel	0.1 UT	0.1 UT
Total Sand	**14 T**	**20 T**
Total Silt	**71 T**	**66 T**
Total Clay	**15 T**	**14 T**
Total Fines (silt + clay)	**86 T**	**80 T**
Total Grain Size	**100 T**	**100 T**
Metals (mg/kg)		
Arsenic	9 U	8 U
Cadmium	**0.6**	**0.6**
Chromium	**42.4**	**31.4**
Copper	**80.5**	**40**
Lead	**236**	**39**
Mercury	**0.31 J**	**0.16**
Nickel	**38**	**27**
Silver	0.5 U	0.5 U
Zinc	**146**	**187**
Volatile Organics (µg/kg)		
1,1-Dichloroethene	1.8 U	1.6 U
1,2-Dichloroethene, cis-	1.8 U	1.6 U
1,2-Dichloroethene, trans-	1.8 U	1.6 U
Benzene	**13**	1.6 U
Ethylbenzene	**110**	1.6 U
m,p-Xylene	**9.5**	1.6 U
o-Xylene	**14**	1.6 U
Toluene	**9.7**	1.6 U
Trichloroethene (TCE)	1.8 U	1.6 U
Vinyl chloride	1.8 U	1.6 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	**160 T**	1.6 UT
LWG RA Total Xylene[8] (Calculated U = 1/2)	**24 T**	1.6 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)		
1-Methylnaphthalene	**10000**	200 U
2-Methylnaphthalene	**3400**	200 U
Acenaphthene	**13000**	**2900**
Acenaphthylene	**1200**	200 U
Anthracene	**10000**	**1100**
Benzo(a)anthracene	**12000**	**1800**
Benzo(b,j,k)fluoranthenes	**20000**	**2500**
Benzo(a)pyrene	**14000**	**1700**
Benzo(g,h,i)perylene	**11000**	**1200**
Chrysene	**16000**	**2400**
Dibenzo(a,h)anthracene	**480**	200 U
Fluoranthene	**43000**	**6400**

Table 2-7a
Data Gaps Sub-surface Sediment (0-1 feet) Physical and Chemical Results

Location ID	DGS-36SC	DGS-37SC
Sample ID	DGS-36SC-0001-101012	DGS-37SC-0001-101011
Sample Date	10/12/2010	10/11/2010
Depth	0 - 1 feet	0 - 1 feet
Sample Type	N	N
Fluorene	**12000**	**1800**
Indeno(1,2,3-c,d)pyrene	**8700**	**920**
Naphthalene	**19000**	**280**
Perylene	**4000**	**560**
Phenanthrene	**40000**	**7400**
Pyrene	**48000**	**6100**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**99000 T**	**14000 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**170000 T**	**23000 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**270000 T**	**37000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**19000 T**	**2300 T**
Semivolatile Organics (µg/kg)		
Carbazole	**1300**	200 U
Dibenzofuran	**2100**	**1100**
PCB Aroclors (µg/kg)		
Aroclor 1016	32 U	32 U
Aroclor 1221	32 UJ	32 UJ
Aroclor 1232	32 U	32 U
Aroclor 1242	32 U	32 U
Aroclor 1248	79 U	190 U
Aroclor 1254	130 U	160 U
Aroclor 1260	95 U	190 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	130 UJT	190 UJT
Pesticides (µg/kg)		
2,4'-DDD (o,p'-DDD)	16 U	**22**
2,4'-DDE (o,p'-DDE)	16 U	13 U
2,4'-DDT (o,p'-DDT)	16 U	3.2 U
4,4'-DDD (p,p'-DDD)	**88**	**92**
4,4'-DDE (p,p'-DDE)	**18 J**	**21**
4,4'-DDT (p,p'-DDT)	16 U	**290**
alpha-Hexachlorocyclohexane (BHC)	7.8 U	1.6 U
alpha-Chlordane (cis-Chlordane)	7.8 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	170 U	13 U
gamma-Chlordane (trans-Chlordane)	23 U	14 U
cis-Nonachlor	16 U	3.2 U
delta-Hexachlorocyclohexane (BHC)	7.8 U	1.6 U
Dieldrin	16 U	3.2 U
Endrin	16 U	3.2 U
Endrin ketone	16 U	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	7.8 U	8.9 U
Heptachlor epoxide	61 U	14 U
Oxychlordane	16 U	3.2 U
trans-Nonachlor	16 U	3.2 U
Hexachlorobenzene	**18 J**	**3.4**
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	**30 T**
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	**110 JT**	**400 T**
LWG RA Sum DDD (Calculated U = 1/2)	**96 T**	**110 T**
LWG RA Sum DDE (Calculated U = 1/2)	**26 JT**	**28 T**
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	**290 T**
LWG RA Total DDx (Calculated U = 1/2)	**140 JT**	**430 T**

Table 2-7a
Data Gaps Sub-surface Sediment (0-1 feet) Physical and Chemical Results

Location ID	DGS-36SC	DGS-37SC
Sample ID	DGS-36SC-0001-101012	DGS-37SC-0001-101011
Sample Date	10/12/2010	10/11/2010
Depth	0 - 1 feet	0 - 1 feet
Sample Type	N	N
LWG RA Total Chlordane[1] (Calculated U = 1/2)	23 UT	14 UT
Total Petroleum Hydrocarbons (mg/kg)		
Diesel Range Hydrocarbons	**1100 J**	**150**
Motor Oil Range	**1500**	**300**
LWG RA Total Petroleum Hydrocarbons (TPH)[4] (Calculated U = 1/2)	**2600 JT**	**450 T**

Table 2-7a
Data Gaps Sub-surface Sediment (0-1 feet) Physical and Chemical Results

Notes:

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

T = calculation or summation applied

N = Normal Field Sample

-- Results not reported or not applicable

Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.

Significant figures applied to all calculated totals

Table contains validated data

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[5] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[6] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

[7] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

Acronyms

cPAH = carcinogenic PAH

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

HPAH = high molecular weight polycyclic aromatic hydrocarbon

LPAH = low-molecular-weight PAH

LWG = Lower Willamette Group

mg/kg = milligrams per kilograms

PAH = polycyclic aromatic hydrocarbon

PCBs = polychlorinated biphenyls

RA = Risk Assessment

TEQ = toxic equivalents quotient

TPH = Total Petroleum Hydrocarbons

µg/kg = micrograms per kilogram

VPH = volatile petroleum hydrocarbon

Table 2-7b
Data Gaps Sub-surface Sediment (1-4 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC
Sample ID	DGS-03SC-0104-101005	DGS-06SC-0104-101007	DGS-07SC-0104-101012	DGS-08SC-0104-101007	DGS-11SC-0104-101006	DGS-13SC-0104-101005
Sample Date	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010
Depth	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	**54.6**	**1.37**	**26.1**	**0.258**	**2.26**	**3.26**
Conventional Parameters (percent)						
Moisture (water) content	**87.12**	**44.54**	**99.27**	**35.32**	**45.66**	**59.33**
Total organic carbon	**2.31**	**1.91**	**3.65**	**2.02**	**5.81**	**1.62**
Total solids	**53.2**	**70.9**	**49.9**	**73.8**	**67.1**	**62.9**
Grain Size (percent)						
Total Gravel	**1.2 T**	**0.1 T**	**0.2 T**	**0.5 T**	**0.2 T**	**0.5 T**
Total Sand	**21 T**	**88 T**	**6.8 T**	**97 T**	**76 T**	**54 T**
Total Silt	**58 T**	**13 T**	**74.6 T**	**2.1 T**	**22 T**	**32 T**
Total Clay	**19 T**	0.1 UT	**19 T**	0.1 UT	**2.4 T**	**13 T**
Total Fines (silt + clay)	**78 T**	**13 T**	**93 T**	**2.1 T**	**24 T**	**46 T**
Total Grain Size	**100 T**	**100 T**	**100 T**	**99.9 T**	**100 T**	**99.8 T**
Metals (mg/kg)						
Arsenic	10 U	7 U	9 U	6 U	7 U	8 U
Cadmium	**0.6**	**0.3**	**0.8**	0.3 U	**0.6**	**0.4**
Chromium	**58 J**	**18.7**	**40.4**	**15.3**	**24.1**	**29.9 J**
Copper	**53.5 J**	**21.9**	**63.8**	**15.2**	**30.8**	**36.9 J**
Lead	**41 J**	**7**	**46**	**4**	**19**	**16 J**
Mercury	**0.26**	**0.12**	**0.51 J**	**0.02**	**0.11**	**0.06**
Nickel	**39 J**	**21**	**77**	**17**	**24**	**28 J**
Silver	0.6 U	0.4 U	0.6 U	0.4 U	0.4 U	0.5 U
Zinc	**307 J**	**70**	**220**	**56**	**122**	**107 J**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.8 U	1.2 U	150 U	1.3 U	160 U	1.6 U
1,2-Dichloroethene, cis-	1.8 U	1.2 U	150 U	1.3 U	160 U	1.6 U
1,2-Dichloroethene, trans-	1.8 U	1.2 U	150 U	1.3 U	160 U	1.6 U
Benzene	1.8 U	1.2 U	150 U	**1.5**	**7000 J**	**1.7 J**
Ethylbenzene	1.8 U	1.2 U	**1800**	1.3 U	**12000 J**	**2.5 J**
m,p-Xylene	1.8 U	1.2 U	150 U	1.3 U	**12000 J**	**2.1 J**
o-Xylene	1.8 U	1.2 U	**290**	**2.3**	**6000 J**	**3.2 J**
Toluene	1.8 U	1.2 U	150 U	1.3 U	**2300 J**	1.6 U
Trichloroethene (TCE)	1.8 U	1.2 U	150 U	1.3 U	160 U	1.6 U
Vinyl chloride	1.8 U	1.2 U	150 U	1.3 U	160 U	1.6 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	1.8 UT	1.2 UT	**2300 T**	**5.8 T**	**39000 JT**	**10 JT**
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.8 UT	1.2 UT	**360 T**	**3 T**	**18000 JT**	**5.3 JT**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	**2600**	620 U	**26000**	**12000**	**58000**	**2700**
2-Methylnaphthalene	**540**	620 U	**40000**	**12000**	**110000**	**180**
Acenaphthene	**6000**	**3000**	**18000**	**24000**	**120000**	**7200**
Acenaphthylene	**790**	620 U	1800 U	**890**	**6600**	**400**
Anthracene	**5800**	**2500**	**31000**	**11000**	**59000**	**2800**
Benzo(a)anthracene	**10000**	**5000**	**39000**	**10000**	**44000**	**2800**
Benzo(b,j,k)fluoranthenes	**15000**	**8800**	**50000**	**14000**	**60000**	**3400**
Benzo(a)pyrene	**14000**	**7200**	**40000**	**13000**	**58000**	**3500**
Benzo(g,h,i)perylene	**13000**	**5200**	**10000**	**9500**	**38000**	**2700**
Chrysene	**15000**	**6400**	**49000**	**13000**	**58000**	**4000**
Dibenzo(a,h)anthracene	**2900**	**1200**	1800 U	**1800**	6500 U	**550**
Fluoranthene	**20000**	**13000**	**76000**	**41000**	**180000**	**8000**

Table 2-7b
Data Gaps Sub-surface Sediment (1-4 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC
Sample ID	DGS-03SC-0104-101005	DGS-06SC-0104-101007	DGS-07SC-0104-101012	DGS-08SC-0104-101007	DGS-11SC-0104-101006	DGS-13SC-0104-101005
Sample Date	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010
Depth	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet
Sample Type	N	N	N	N	N	N
Fluorene	**4800**	**1700**	**20000**	**12000**	**57000**	**3700**
Indeno(1,2,3-c,d)pyrene	**9000**	**3600**	**9600**	**6700**	**26000**	**1800**
Naphthalene	**890**	620 U	**3200**	820 U	**560000**	**210**
Perylene	**3100**	**1800**	**8100**	**3600**	**14000**	**860**
Phenanthrene	**29000**	**14000**	**130000**	**82000**	**370000**	**18000**
Pyrene	**35000**	**17000**	**100000**	**56000**	**210000**	**13000**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**48000 T**	**22000 T**	**240000 T**	**140000 T**	**1300000 T**	**32000 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**130000 T**	**67000 T**	**370000 T**	**160000 T**	**680000 T**	**40000 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**180000 T**	**90000 T**	**620000 T**	**310000 T**	**2000000 T**	**72000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**20000 T**	**10000 T**	**51000 T**	**18000 T**	**74000 T**	**4900 T**
Semivolatile Organics (µg/kg)						
Carbazole	**900**	620 U	**3400**	**4000**	**15000**	**920**
Dibenzofuran	**670**	620 U	**2800**	**1600**	**8200**	**890**
PCB Aroclors (µg/kg)						
Aroclor 1016	32 U	32 U	66 U	120 U	32 U	31 U
Aroclor 1221	32 U	32 U	66 UJ	120 U	32 U	31 U
Aroclor 1232	32 U	32 U	66 U	120 U	32 U	31 U
Aroclor 1242	32 U	32 U	66 U	120 U	32 U	31 U
Aroclor 1248	**61**	32 U	98 U	120 U	49 U	31 U
Aroclor 1254	48 U	32 U	150 U	120 U	40 U	31 U
Aroclor 1260	**54**	32 U	**150**	120 U	**33**	31 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	**200 T**	32 UT	**410 JT**	120 UT	**140 T**	31 UT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	16 U	16 U	**33 J**	65 U	16 U	16 U
2,4'-DDE (o,p'-DDE)	16 U	16 U	34 U	65 U	16 U	16 U
2,4'-DDT (o,p'-DDT)	16 U	16 U	34 U	65 U	16 U	16 U
4,4'-DDD (p,p'-DDD)	16 U	16 U	**130**	65 U	16 U	16 U
4,4'-DDE (p,p'-DDE)	**17**	16 U	**52**	65 U	**8.3 J**	**6.4 J**
4,4'-DDT (p,p'-DDT)	**25**	16 U	34 U	65 U	16 U	16 U
alpha-Hexachlorocyclohexane (BHC)	8 U	8.2 U	17 U	32 U	29 U	7.9 U
alpha-Chlordane (cis-Chlordane)	8 U	8.2 U	17 U	32 U	7.8 U	7.9 U
beta-Hexachlorocyclohexane (BHC)	8 U	8.2 U	91 U	32 U	18 U	7.9 U
gamma-Chlordane (trans-Chlordane)	8 U	8.2 U	22 U	32 U	24 U	7.9 U
cis-Nonachlor	16 U	16 U	34 U	65 U	16 U	16 U
delta-Hexachlorocyclohexane (BHC)	8 UJ	8.2 U	17 U	32 U	7.8 U	7.9 UJ
Dieldrin	16 U	16 U	34 U	65 U	16 U	16 U
Endrin	16 U	16 U	34 U	65 U	16 U	16 U
Endrin ketone	16 U	16 U	34 U	65 U	16 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8 U	8.2 U	17 U	32 U	7.8 U	7.9 U
Heptachlor epoxide	8 U	8.2 U	47 U	32 U	7.8 U	7.9 U
Oxychlordane	16 U	16 U	34 U	65 U	16 U	16 U
trans-Nonachlor	16 U	16 U	34 U	65 U	16 U	16 U
Hexachlorobenzene	8 U	8.2 U	17 U	32 U	7.8 U	7.9 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	16 UT	**67 JT**	65 UT	16 UT	16 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	**50 T**	16 UT	**200 T**	65 UT	**24 JT**	**22 JT**
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	16 UT	**160 JT**	65 UT	16 UT	16 UT
LWG RA Sum DDE (Calculated U = 1/2)	**25 T**	16 UT	**69 T**	65 UT	**16 JT**	**14 JT**
LWG RA Sum DDT (Calculated U = 1/2)	**33 T**	16 UT	34 UT	65 UT	16 UT	16 UT
LWG RA Total DDx (Calculated U = 1/2)	**74 T**	16 UT	**270 JT**	65 UT	**48 JT**	**46 JT**

Table 2-7b
Data Gaps Sub-surface Sediment (1-4 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC
Sample ID	DGS-03SC-0104-101005	DGS-06SC-0104-101007	DGS-07SC-0104-101012	DGS-08SC-0104-101007	DGS-11SC-0104-101006	DGS-13SC-0104-101005
Sample Date	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010
Depth	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet
Sample Type	N	N	N	N	N	N
LWG RA Total Chlordane[1] (Calculated U = 1/2)	16 UT	16 UT	34 UT	65 UT	24 UT	16 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**380**	**160**	**4700 J**	**410**	**2200**	**250**
Motor Oil Range	**630**	**360**	**8000**	**390**	**2400**	**430**
LWG RA Total Petroleum Hydrocarbons[4] (TPH) (Calculated U = 1/2)	**1000 T**	**520 T**	**13000 JT**	**800 T**	**4600 T**	**680 T**

Table 2-7b
Data Gaps Sub-surface Sediment (1-4 feet) Physical and Chemical Results

Location ID	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC
Sample ID	DGS-18SC-0104-101008	DGS-19SC-0104-101006	DGS-20SC-0104-101008	DGS-22SC-0104-101012	DGS-23SC-0104-101008	DGS-24SC-0104-101012
Sample Date	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/12/2010
Depth	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	0.124 U	**2.28**	0.13 U	**1.3**	0.126 U	**5.64**
Conventional Parameters (percent)						
Moisture (water) content	**24.51**	**73.59**	**29.26**	**70.36**	**32.07**	**40.73**
Total organic carbon	**0.231 J**	**5.21**	**0.143**	**4.49**	**0.516**	**1.71**
Total solids	**79.5 J**	**56.4**	**75.9**	**58.7**	**78**	**65.1**
Grain Size (percent)						
Total Gravel	0.1 UT	**1.2 T**	**0.5 T**	0.1 UT	0.1 UT	**6.7 T**
Total Sand	**95 T**	**39 T**	**93 T**	**17 T**	**94 T**	**59 T**
Total Silt	**3.6 T**	**49 T**	**4.5 T**	**66 T**	**3.5 T**	**29 T**
Total Clay	**1 T**	**11 T**	**1.7 T**	**17 T**	**2 T**	**5.8 T**
Total Fines (silt + clay)	**4.6 T**	**60 T**	**6.2 T**	**83 T**	**5.5 T**	**35 T**
Total Grain Size	**99.9 T**	**100 T**	**99.9 T**	**100 T**	**100 T**	**99.9 T**
Metals (mg/kg)						
Arsenic	6 U	8 U	6 U	8 U	6 U	7 U
Cadmium	**0.2**	**0.6**	0.3 U	**0.6**	**0.2**	**0.5**
Chromium	**15.1**	**31.4**	**14.7**	**33.5**	**17.2**	**22.8**
Copper	**16**	**41.4**	**17.6**	**49.8**	**16.7**	**31.1**
Lead	**3**	**27**	**3**	**23**	2 U	**14**
Mercury	**0.12**	**0.09**	0.02 U	**0.21 J**	0.03 U	**0.05 J**
Nickel	**18**	**27**	**18**	**30**	**20**	**21**
Silver	0.4 U	0.5 U	0.4 U	0.5 U	0.4 U	0.4 U
Zinc	**54**	**149**	**55**	**140**	**49**	**94**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	73 U	450 U	1.3 U	1.7 U	1.2 U	1.2 U
1,2-Dichloroethene, cis-	73 U	450 U	1.3 U	1.7 U	1.2 U	1.2 U
1,2-Dichloroethene, trans-	73 U	450 U	1.3 U	1.7 U	1.2 U	1.2 U
Benzene	73 U	**1900 J**	1.3 U	**12**	1.2 U	**4.7 J**
Ethylbenzene	73 U	**25000 J**	1.3 U	**2**	1.2 U	**41 J**
m,p-Xylene	73 U	**8600 J**	1.3 U	**3.9**	1.2 U	**12 J**
o-Xylene	73 U	**5800 J**	1.3 U	**2.5**	1.2 U	**28 J**
Toluene	73 U	450 U	1.3 U	1.7 U	1.2 U	**1.9 J**
Trichloroethene (TCE)	73 U	450 U	1.3 U	1.7 U	1.2 U	1.2 U
Vinyl chloride	73 U	450 U	1.3 U	1.7 U	1.2 U	1.2 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	73 UT	**42000 JT**	1.3 UT	**21 T**	1.2 UT	**88 JT**
LWG RA Total Xylene[8] (Calculated U = 1/2)	73 UT	**14000 JT**	1.3 UT	**6.4 T**	1.2 UT	**40 JT**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	**12000**	**130000**	62 U	**3300**	64 U	**6500**
2-Methylnaphthalene	**3000**	**250000**	62 U	**500**	64 U	**8500**
Acenaphthene	**10000**	**270000**	62 U	**27000**	**150**	**23000**
Acenaphthylene	**970**	13000 U	62 U	**660**	64 U	**960**
Anthracene	**7400**	**86000**	62 U	**31000**	64 U	**8700**
Benzo(a)anthracene	**9200**	**63000**	62 U	**29000**	64 U	**7600**
Benzo(b,j,k)fluoranthenes	**9400**	**82000**	62 U	**28000**	64 U	**11000**
Benzo(a)pyrene	**9500**	**82000**	62 U	**37000**	64 U	**9000**
Benzo(g,h,i)perylene	**6800**	**60000**	**63**	**9300**	64 U	**4200**
Chrysene	**12000**	**76000**	62 U	**37000**	64 U	**8700**
Dibenzo(a,h)anthracene	**1700**	13000 U	62 U	**440**	64 U	**220**
Fluoranthene	**21000**	**240000**	62 U	**98000**	64 U	**32000**

Table 2-7b
Data Gaps Sub-surface Sediment (1-4 feet) Physical and Chemical Results

Location ID	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC
Sample ID	DGS-18SC-0104-101008	DGS-19SC-0104-101006	DGS-20SC-0104-101008	DGS-22SC-0104-101012	DGS-23SC-0104-101008	DGS-24SC-0104-101012
Sample Date	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/12/2010
Depth	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet
Sample Type	N	N	N	N	N	N
Fluorene	**7700**	**91000**	62 U	**12000**	64 U	**9300**
Indeno(1,2,3-c,d)pyrene	**4800**	**41000**	62 U	**8400**	64 U	**3800**
Naphthalene	**2600**	**2300000**	62 U	**1200**	64 U	**3800**
Perylene	**2000**	**19000**	62 U	**6800**	64 U	**2500**
Phenanthrene	**41000**	**520000**	62 U	**140000**	64 U	**64000**
Pyrene	**25000 J**	**280000**	62 UJ	**120000**	64 UJ	**40000**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**73000 T**	**3500000 T**	62 UT	**210000 T**	**340 T**	**120000 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**99000 JT**	**930000 T**	**310 JT**	**370000 T**	64 UJT	**120000 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**170000 JT**	**4500000 T**	**530 JT**	**580000 T**	**630 JT**	**230000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**14000 T**	**110000 T**	62 UT	**44000 T**	64 UT	**11000 T**
Semivolatile Organics (µg/kg)						
Carbazole	**890**	**19000**	62 U	**1600**	64 U	**1200**
Dibenzofuran	**910**	**14000**	62 U	**1300**	64 U	**1600**
PCB Aroclors (µg/kg)						
Aroclor 1016	31 U	32 U	32 U	33 U	33 U	32 U
Aroclor 1221	31 U	32 U	32 U	33 UJ	33 U	32 UJ
Aroclor 1232	31 U	32 U	32 U	33 U	33 U	32 U
Aroclor 1242	31 U	32 U	32 U	33 U	33 U	32 U
Aroclor 1248	31 U	**82**	32 U	33 U	33 U	32 U
Aroclor 1254	31 U	73 U	32 U	33 U	33 U	32 U
Aroclor 1260	31 U	**48**	32 U	33 U	33 U	32 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	31 UT	**230 T**	32 UT	33 UJT	33 UT	32 UJT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	16 U	3.3 U	16 U	3.3 U	16 U
2,4'-DDE (o,p'-DDE)	3.2 U	16 U	3.3 U	16 U	3.3 U	16 U
2,4'-DDT (o,p'-DDT)	3.2 U	16 U	3.3 U	16 U	3.3 U	16 U
4,4'-DDD (p,p'-DDD)	3.2 U	16 U	3.3 U	16 U	3.3 U	**23 J**
4,4'-DDE (p,p'-DDE)	3.2 U	**13 J**	3.3 U	16 U	3.3 U	16 U
4,4'-DDT (p,p'-DDT)	3.2 U	16 U	3.3 U	16 U	3.3 U	16 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	24 U	1.6 U	8.2 U	1.6 U	8 U
alpha-Chlordane (cis-Chlordane)	1.6 U	8.2 U	1.6 U	8.2 U	1.6 U	8 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	8.2 U	1.6 U	15 U	1.6 U	8 U
gamma-Chlordane (trans-Chlordane)	1.6 U	30 U	1.6 U	12 U	1.6 U	8 U
cis-Nonachlor	3.2 U	16 U	3.3 U	16 U	3.3 U	16 U
delta-Hexachlorocyclohexane (BHC)	1.6 U	8.2 U	1.6 U	8.2 U	1.6 U	8 U
Dieldrin	3.2 U	16 U	3.3 U	16 U	3.3 U	16 U
Endrin	3.2 U	16 U	3.3 U	16 U	3.3 U	16 U
Endrin ketone	3.2 U	16 U	3.3 U	16 U	3.3 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	8.2 U	1.6 U	8.2 U	1.6 U	8 U
Heptachlor epoxide	1.6 U	8.2 U	1.6 U	8.2 U	1.6 U	8 U
Oxychlordane	3.2 U	16 U	3.3 U	16 U	3.3 U	16 U
trans-Nonachlor	3.2 U	16 U	3.3 U	16 U	3.3 U	16 U
Hexachlorobenzene	1.6 U	8.2 U	1.6 U	8.2 U	1.6 U	8 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	16 UT	3.3 UT	16 UT	3.3 UT	16 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	**29 JT**	3.3 UT	16 UT	3.3 UT	**39 JT**
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	16 UT	3.3 UT	16 UT	3.3 UT	**31 JT**
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	**21 JT**	3.3 UT	16 UT	3.3 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	16 UT	3.3 UT	16 UT	3.3 UT	16 UT
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	**53 JT**	3.3 UT	16 UT	3.3 UT	**63 JT**

Table 2-7b
Data Gaps Sub-surface Sediment (1-4 feet) Physical and Chemical Results

Location ID	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC
Sample ID	DGS-18SC-0104-101008	DGS-19SC-0104-101006	DGS-20SC-0104-101008	DGS-22SC-0104-101012	DGS-23SC-0104-101008	DGS-24SC-0104-101012
Sample Date	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/12/2010
Depth	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet
Sample Type	N	N	N	N	N	N
LWG RA Total Chlordane[1] (Calculated U = 1/2)	3.2 UT	30 UT	3.3 UT	16 UT	3.3 UT	16 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**81**	**2700**	6.9 U	**1200 J**	7 U	**260 J**
Motor Oil Range	**64**	**2300**	14 U	**1900**	14 U	**380**
LWG RA Total Petroleum Hydrocarbons[4] (TPH) (Calculated U = 1/2)	**140 T**	**5000 T**	14 UT	**3100 JT**	14 UT	**640 JT**

Table 2-7b
Data Gaps Sub-surface Sediment (1-4 feet) Physical and Chemical Results

Location ID	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC	DGS-32SC
Sample ID	DGS-25SC-0104-101007	DGS-26SC-0104-101011	DGS-28SC-0104-101007	DGS-30SC-0104-101006	DGS-31SC-0104-101011	DGS-32SC-0104-101011
Sample Date	10/7/2010	10/11/2010	10/7/2010	10/6/2010	10/11/2010	10/11/2010
Depth	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	0.129 U	0.106 U	0.119 U	0.119 U	**1.22**	**4.32**
Conventional Parameters (percent)						
Moisture (water) content	**29.3**	**9.58**	**24.54**	**21.55**	**43.09**	**74.4**
Total organic carbon	**0.148**	**1.34**	**0.093**	**0.115**	**1.08**	**1.32**
Total solids	**76.2**	**91.8**	**82.8**	**81.5**	**69.5**	**56.1**
Grain Size (percent)						
Total Gravel	**1.2 T**	0.1 UT	0.1 UT	0.1 UT	**0.3 T**	0.1 UT
Total Sand	**97 T**	**96 T**	**99 T**	**98 T**	**81 T**	**31 T**
Total Silt	**1.5 T**	**1.6 T**	**1.1 T**	**2.1 T**	**13 T**	**56 T**
Total Clay	0.1 UT	**2.8 T**	0.1 UT	0.1 UT	**5.9 T**	**13 T**
Total Fines (silt + clay)	**1.5 T**	**4.4 T**	**1.1 T**	**2.1 T**	**19 T**	**69 T**
Total Grain Size	**100 T**	**100 T**	**99.9 T**	**100 T**	**100 T**	**100 T**
Metals (mg/kg)						
Arsenic	6 U	5 U	6 U	6 U	7 U	20 U
Cadmium	0.2 U	0.2 U	0.2 U	**0.2**	**0.4**	0.8 U
Chromium	**13.3**	**14.6**	**13.5**	**13.1**	**20.1**	**31**
Copper	**15.1**	**14.4**	**14.4**	**15.4**	**23.2**	**42.9**
Lead	2 U	**2**	**2**	2 U	**10**	**42**
Mercury	0.03 U	0.02 U	0.03 U	0.03 U	**0.08**	**0.16**
Nickel	**17**	**17**	**16**	**17**	**21**	**27**
Silver	0.4 U	0.3 U	0.3 U	0.3 U	0.4 U	1 U
Zinc	**45**	**45**	**46**	**49**	**94**	**199**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.2 U	11 U	1.2 U	1.2 U	1.3 U	1.8 U
1,2-Dichloroethene, cis-	1.2 U	11 U	1.2 U	1.2 U	**1.5**	1.8 U
1,2-Dichloroethene, trans-	1.2 U	11 U	1.2 U	1.2 U	1.3 U	1.8 U
Benzene	1.2 U	11 U	1.2 U	1.2 U	**15**	**3.3 J**
Ethylbenzene	1.2 U	11 U	1.2 U	1.2 U	**10**	**16 J**
m,p-Xylene	1.2 U	11 U	1.2 U	1.2 U	**3.5**	**33 J**
o-Xylene	1.2 U	11 U	1.2 U	1.2 U	**2**	**35 J**
Toluene	1.2 U	11 U	1.2 U	1.2 U	**5.2**	**2.8 J**
Trichloroethene (TCE)	1.2 U	11 U	1.2 U	1.2 U	1.3 U	1.8 U
Vinyl chloride	1.2 U	11 U	1.2 U	1.2 U	**3.6**	1.8 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	1.2 UT	11 UT	1.2 UT	1.2 UT	**36 T**	**90 JT**
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.2 UT	11 UT	1.2 UT	1.2 UT	**5.5 T**	**68 JT**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	64 U	**5400**	59 U	**130**	**5100**	**38000**
2-Methylnaphthalene	64 U	**3600**	59 U	**240**	**970**	**54000**
Acenaphthene	64 U	**12000**	59 U	**220**	**12000**	**61000**
Acenaphthylene	64 U	**620**	59 U	59 U	**800**	**3000**
Anthracene	64 U	**6300**	59 U	**100**	**8200**	**48000**
Benzo(a)anthracene	64 U	**4800**	59 U	59 U	**7000**	**32000**
Benzo(b,j,k)fluoranthenes	64 U	**7400**	59 U	**76**	**8600**	**28000**
Benzo(a)pyrene	64 U	**6000**	59 U	**73**	**6700**	**28000**
Benzo(g,h,i)perylene	64 U	**4600**	59 U	59 U	**4000**	**8600**
Chrysene	64 U	**5800**	59 U	**65**	**8000**	**39000**
Dibenzo(a,h)anthracene	64 U	**200**	59 U	59 U	**230**	**540**
Fluoranthene	64 U	**12000**	59 U	**140**	**14000**	**100000**

Table 2-7b
Data Gaps Sub-surface Sediment (1-4 feet) Physical and Chemical Results

Location ID	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC	DGS-32SC
Sample ID	DGS-25SC-0104-101007	DGS-26SC-0104-101011	DGS-28SC-0104-101007	DGS-30SC-0104-101006	DGS-31SC-0104-101011	DGS-32SC-0104-101011
Sample Date	10/7/2010	10/11/2010	10/7/2010	10/6/2010	10/11/2010	10/11/2010
Depth	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet
Sample Type	N	N	N	N	N	N
Fluorene	64 U	**6700**	59 U	**78**	**7600**	**39000**
Indeno(1,2,3-c,d)pyrene	64 U	**3500**	59 U	59 U	**3300**	**7700**
Naphthalene	64 U	**5400**	59 U	**2800**	**470**	**12000**
Perylene	64 U	**1800**	59 U	59 U	**1900**	**6000**
Phenanthrene	64 U	**39000**	59 U	**380**	**50000**	**250000**
Pyrene	64 U	**14000**	59 U	**180**	**28000**	**130000**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	64 UT	**74000 T**	59 UT	**3800 T**	**80000 T**	**470000 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	64 UT	**58000 T**	59 UT	**650 T**	**80000 T**	**370000 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	64 UT	**130000 T**	59 UT	**4500 T**	**160000 T**	**840000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	64 UT	**7800 T**	59 UT	**120 T**	**8800 T**	**35000 T**
Semivolatile Organics (µg/kg)						
Carbazole	64 U	**1100**	59 U	59 U	**1100**	**11000**
Dibenzofuran	64 U	**1100**	59 U	59 U	**1200**	**7100**
PCB Aroclors (µg/kg)						
Aroclor 1016	31 U	33 U	33 U	32 U	33 U	63 U
Aroclor 1221	31 U	33 UJ	33 U	32 U	33 UJ	63 UJ
Aroclor 1232	31 U	33 U	49 U	32 U	33 U	63 U
Aroclor 1242	31 U	33 U	33 U	32 U	33 U	63 U
Aroclor 1248	31 U	33 U	33 U	32 U	33 U	**180**
Aroclor 1254	31 U	33 U	33 U	32 U	33 U	160 U
Aroclor 1260	31 U	33 U	33 U	32 U	33 U	**100**
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	31 UT	33 UJT	49 UT	32 UT	33 UJT	**490 JT**
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	16 U	3.3 U	3.2 U	17 U	31 U
2,4'-DDE (o,p'-DDE)	3.2 U	16 U	3.3 U	3.2 U	17 U	31 U
2,4'-DDT (o,p'-DDT)	3.2 U	16 U	3.3 U	3.2 U	17 U	31 U
4,4'-DDD (p,p'-DDD)	3.2 U	16 U	3.3 U	3.2 U	**24**	**120 J**
4,4'-DDE (p,p'-DDE)	3.2 U	16 U	3.3 U	3.2 U	17 U	31 U
4,4'-DDT (p,p'-DDT)	3.2 U	16 U	3.3 U	3.2 U	17 U	31 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	8.2 U	1.6 U	1.6 U	8.3 U	28 U
alpha-Chlordane (cis-Chlordane)	1.6 U	8.2 U	1.6 U	1.6 U	8.3 U	16 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	8.2 U	1.6 U	1.6 U	8.3 U	58 U
gamma-Chlordane (trans-Chlordane)	1.6 U	8.2 U	1.6 U	1.6 U	8.3 U	38 U
cis-Nonachlor	3.2 U	16 U	3.3 U	3.2 U	17 U	31 U
delta-Hexachlorocyclohexane (BHC)	1.6 U	8.2 U	1.6 U	1.6 U	8.3 U	16 U
Dieldrin	3.2 U	16 U	3.3 U	3.2 U	17 U	31 U
Endrin	3.2 U	16 U	3.3 U	3.2 U	17 U	31 U
Endrin ketone	3.2 U	16 U	3.3 U	3.2 U	17 U	31 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	8.2 U	1.6 U	1.6 U	8.3 U	16 U
Heptachlor epoxide	1.6 U	8.2 U	1.6 U	1.6 U	8.3 U	16 U
Oxychlordane	3.2 U	16 U	3.3 U	3.2 U	17 U	31 U
trans-Nonachlor	3.2 U	16 U	3.3 U	3.2 U	17 U	31 U
Hexachlorobenzene	1.6 U	8.2 U	1.6 U	1.6 U	8.3 U	16 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	16 UT	3.3 UT	3.2 UT	17 UT	31 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	16 UT	3.3 UT	3.2 UT	**41 T**	**150 JT**
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	16 UT	3.3 UT	3.2 UT	**33 T**	**140 JT**
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	16 UT	3.3 UT	3.2 UT	17 UT	31 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	16 UT	3.3 UT	3.2 UT	17 UT	31 UT
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	16 UT	3.3 UT	3.2 UT	**67 T**	**200 JT**

Table 2-7b
Data Gaps Sub-surface Sediment (1-4 feet) Physical and Chemical Results

Location ID	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC	DGS-32SC
Sample ID	DGS-25SC-0104-101007	DGS-26SC-0104-101011	DGS-28SC-0104-101007	DGS-30SC-0104-101006	DGS-31SC-0104-101011	DGS-32SC-0104-101011
Sample Date	10/7/2010	10/11/2010	10/7/2010	10/6/2010	10/11/2010	10/11/2010
Depth	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet	1 - 4 feet
Sample Type	N	N	N	N	N	N
LWG RA Total Chlordane[1] (Calculated U = 1/2)	3.2 UT	16 UT	3.3 UT	3.2 UT	17 UT	38 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6.3 U	**260**	6.1 U	6 U	**400**	**2400**
Motor Oil Range	13 U	**170**	12 U	12 U	**380**	**1900**
LWG RA Total Petroleum Hydrocarbons[4] (TPH) (Calculated U = 1/2)	13 UT	**430 T**	12 UT	12 UT	**780 T**	**4300 T**

Table 2-7b
Data Gaps Sub-surface Sediment (1-4 feet) Physical and Chemical Results

Location ID	DGS-36SC	DGS-37SC	DGS-37SC
Sample ID	DGS-36SC-0104-101012	DGS-37SC-0104-101011	DGS-87SC-0104-101011
Sample Date	10/12/2010	10/11/2010	10/11/2010
Depth	1 - 4 feet	1 - 4 feet	1 - 4 feet
Sample Type	N	N	FD
Conventional Parameters (mg/kg)			
Cyanide, total	**47.8**	**2.15**	**2.13**
Conventional Parameters (percent)			
Moisture (water) content	**55.51**	**77.68**	**75.74**
Total organic carbon	**1.29**	**2.33**	**1.28**
Total solids	**62.7**	**55**	**55.3**
Grain Size (percent)			
Total Gravel	**0.3 T**	0.1 UT	0.1 UT
Total Sand	**43 T**	**19 T**	**20 T**
Total Silt	**49 T**	**62 T**	**61 T**
Total Clay	**7.3 T**	**19 T**	**19 T**
Total Fines (silt + clay)	**56 T**	**82 T**	**81 T**
Total Grain Size	**100 T**	**100 T**	**100 T**
Metals (mg/kg)			
Arsenic	7 U	9 U	8 U
Cadmium	**0.5**	**0.7**	**0.7**
Chromium	**38.1**	**40.7**	**41.1**
Copper	**54.8**	**49.3**	**51.1**
Lead	**35**	**37**	**36**
Mercury	**0.08 J**	**0.17**	**0.15**
Nickel	**36**	**33**	**32**
Silver	0.4 U	0.5 U	0.5 U
Zinc	**110**	**249**	**243**
Volatile Organics (µg/kg)			
1,1-Dichloroethene	1.3 U	2 U	1.9 U
1,2-Dichloroethene, cis-	1.3 U	2 U	1.9 U
1,2-Dichloroethene, trans-	1.3 U	2 U	1.9 U
Benzene	**4.6**	2 U	1.9 U
Ethylbenzene	1.3 U	2 U	1.9 U
m,p-Xylene	1.3 U	2 U	**2**
o-Xylene	1.3 U	2 U	**3.5**
Toluene	1.3 U	2 U	1.9 U
Trichloroethene (TCE)	1.3 U	2 U	1.9 U
Vinyl chloride	1.3 U	2 U	1.9 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	**7.2 T**	2 UT	**8.4 T**
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.3 UT	2 UT	**5.5 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)			
1-Methylnaphthalene	**220**	**340**	**310**
2-Methylnaphthalene	**130**	200 U	190 U
Acenaphthene	**2700**	**1800**	**1700**
Acenaphthylene	**540**	200 U	190 U
Anthracene	**4000**	**760**	**740**
Benzo(a)anthracene	**5600**	**1300**	**1300**
Benzo(b,j,k)fluoranthenes	**8900**	**1900**	**2000**
Benzo(a)pyrene	**6000**	**1200**	**1300**
Benzo(g,h,i)perylene	**3700**	**770**	**690**
Chrysene	**6900**	**1600**	**1700**
Dibenzo(a,h)anthracene	**160**	200 U	190 U
Fluoranthene	**23000**	**4000**	**4100**

Table 2-7b
Data Gaps Sub-surface Sediment (1-4 feet) Physical and Chemical Results

Location ID	DGS-36SC	DGS-37SC	DGS-37SC
Sample ID	DGS-36SC-0104-101012	DGS-37SC-0104-101011	DGS-87SC-0104-101011
Sample Date	10/12/2010	10/11/2010	10/11/2010
Depth	1 - 4 feet	1 - 4 feet	1 - 4 feet
Sample Type	N	N	FD
Fluorene	**3100**	**1300**	**1300**
Indeno(1,2,3-c,d)pyrene	**3200**	**640**	**590**
Naphthalene	**420**	**520**	**340**
Perylene	**2000**	**410**	**420**
Phenanthrene	**5900**	**5200**	**5200**
Pyrene	**28000**	**4000**	**4000**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**17000 T**	**9800 T**	**9500 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**85000 T**	**16000 T**	**16000 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**100000 T**	**25000 T**	**25000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**7900 T**	**1700 T**	**1800 T**
Semivolatile Organics (µg/kg)			
Carbazole	**460**	200 U	190 U
Dibenzofuran	**470**	**720**	**760**
PCB Aroclors (µg/kg)			
Aroclor 1016	31 U	33 U	32 U
Aroclor 1221	31 UJ	33 UJ	32 UJ
Aroclor 1232	31 U	33 U	32 U
Aroclor 1242	31 U	33 U	32 U
Aroclor 1248	31 U	330 U	320 U
Aroclor 1254	31 U	330 U	320 U
Aroclor 1260	31 U	410 U	400 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	31 UJT	410 UJT	400 UJT
Pesticides (µg/kg)			
2,4'-DDD (o,p'-DDD)	15 U	**37 J**	**40 J**
2,4'-DDE (o,p'-DDE)	15 U	16 U	16 U
2,4'-DDT (o,p'-DDT)	15 U	16 U	16 U
4,4'-DDD (p,p'-DDD)	15 U	**110**	**97**
4,4'-DDE (p,p'-DDE)	15 U	**37**	**26**
4,4'-DDT (p,p'-DDT)	15 U	**74**	**100**
alpha-Hexachlorocyclohexane (BHC)	7.7 U	8.3 U	8 U
alpha-Chlordane (cis-Chlordane)	7.7 U	8.3 U	8 U
beta-Hexachlorocyclohexane (BHC)	40 U	26 U	14 U
gamma-Chlordane (trans-Chlordane)	7.7 U	8.3 U	8 U
cis-Nonachlor	15 U	16 U	16 U
delta-Hexachlorocyclohexane (BHC)	7.7 U	8.3 U	8 U
Dieldrin	15 U	16 U	16 U
Endrin	15 U	16 U	16 U
Endrin ketone	15 U	16 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	7.7 U	8.3 U	8 U
Heptachlor epoxide	7.7 U	31 U	17 U
Oxychlordane	15 U	16 U	16 U
trans-Nonachlor	15 U	16 U	16 U
Hexachlorobenzene	7.7 U	8.3 U	8 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	15 UT	**53 JT**	**56 JT**
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	15 UT	**220 T**	**220 T**
LWG RA Sum DDD (Calculated U = 1/2)	15 UT	**150 JT**	**140 JT**
LWG RA Sum DDE (Calculated U = 1/2)	15 UT	**45 T**	**34 T**
LWG RA Sum DDT (Calculated U = 1/2)	15 UT	**82 T**	**110 T**
LWG RA Total DDx (Calculated U = 1/2)	15 UT	**270 JT**	**280 JT**

Table 2-7b
Data Gaps Sub-surface Sediment (1-4 feet) Physical and Chemical Results

Location ID	DGS-36SC	DGS-37SC	DGS-37SC
Sample ID	DGS-36SC-0104-101012	DGS-37SC-0104-101011	DGS-87SC-0104-101011
Sample Date	10/12/2010	10/11/2010	10/11/2010
Depth	1 - 4 feet	1 - 4 feet	1 - 4 feet
Sample Type	N	N	FD
LWG RA Total Chlordane[1] (Calculated U = 1/2)	15 UT	16 UT	16 UT
Total Petroleum Hydrocarbons (mg/kg)			
Diesel Range Hydrocarbons	**230 J**	**220**	**190**
Motor Oil Range	**380**	**420**	**380**
LWG RA Total Petroleum Hydrocarbons[4] (TPH) (Calculated U = 1/2)	**610 JT**	**640 T**	**570 T**

Table 2-7b
Data Gaps Sub-surface Sediment (1-4 feet) Physical and Chemical Results

Notes:

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

T = calculation or summation applied

N = Normal Field Sample

FD = Field Duplicate

Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.

Significant figures applied to all calculated totals

Table contains validated data

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[5] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[6] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

[7] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

Acronyms

cPAH = carcinogenic PAH

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

HPAH = high molecular weight polycyclic aromatic hydrocarbon

LPAH = low-molecular-weight PAH

LWG = Lower Willamette Group

mg/kg = milligrams per kilograms

PAH = polycyclic aromatic hydrocarbon

PCBs = polychlorinated biphenyls

RA = Risk Assessment

TEQ = toxic equivalents quotient

TPH = Total Petroleum Hydrocarbons

µg/kg = micrograms per kilogram

VPH = volatile petroleum hydrocarbon

Table 2-7c
Data Gaps Sub-surface Sediment (4-8 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC
Sample ID	DGS-03SC-0408-101005	DGS-53SC-0408-101005	DGS-06SC-0408-101007	DGS-07SC-0408-101012	DGS-08SC-0408-101007	DGS-11SC-0408-101006
Sample Date	10/5/2010	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010
Depth	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet
Sample Type	N	FD	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	**28.7**	**27.3**	**0.325**	**95.2**	**1.14**	**0.24**
Conventional Parameters (percent)						
Moisture (water) content	**--**	**45.15**	**34.21**	**86.35**	**35.65**	**38.31**
Total organic carbon	**2.47**	**2.5**	**2.91**	**3.15**	**3.37**	**5.39**
Total solids	**69.2**	**68.2**	**74.4**	**55**	**75.2**	**72.2**
Grain Size (percent)						
Total Gravel	**0.1 T**	**0.8 T**	0.1 UT	**0.1 T**	**0.1 T**	0.1 UT
Total Sand	**72 T**	**66 T**	**96 T**	**9.8 T**	**83 T**	**88 T**
Total Silt	**16 T**	**18 T**	**4 T**	**73 T**	**17 T**	**10 T**
Total Clay	**12 T**	**15 T**	0.1 UT	**17 T**	0.1 UT	**2.1 T**
Total Fines (silt + clay)	**28 T**	**33 T**	**4 T**	**90 T**	**17 T**	**12 T**
Total Grain Size	**100 T**	**100 T**	**99.9 T**	**100 T**	**99.9 T**	**100 T**
Metals (mg/kg)						
Arsenic	7 U	7 U	6 U	9 U	6 U	7 U
Cadmium	**0.3**	**0.4**	**0.3**	**0.8**	**0.3**	0.3 U
Chromium	**24.4 J**	**26.6 J**	**17.8**	**40.3**	**26.7**	**17.4**
Copper	**28.8 J**	**30.2 J**	**17.1**	**61.5**	**20.7**	**17.8**
Lead	**21 J**	**17 J**	3 U	**37**	**7**	**3**
Mercury	**0.09**	**0.09**	0.03 U	**0.67 J**	**0.11**	0.03 U
Nickel	**25 J**	**25 J**	**21**	**53**	**24**	**20**
Silver	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U
Zinc	**98 J**	**98 J**	**50**	**172**	**65**	**51**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.3 U	1.2 U	1.2 U	130 U	11 U	300 U
1,2-Dichloroethene, cis-	1.3 U	1.2 U	1.2 U	130 U	11 U	300 U
1,2-Dichloroethene, trans-	1.3 U	1.2 U	1.2 U	130 U	11 U	300 U
Benzene	**2.2 J**	1.2 U	1.2 U	130 U	**19**	**3500**
Ethylbenzene	**8.7 J**	1.2 U	1.2 U	**4900**	**840**	**7900**
m,p-Xylene	**2.2 J**	1.2 U	1.2 U	**160**	**140**	**10000**
o-Xylene	**6.2 J**	1.2 U	1.2 U	**180**	**210**	**4000**
Toluene	1.3 U	1.2 U	1.2 U	130 U	11 U	**8600**
Trichloroethene (TCE)	1.3 U	1.2 U	1.2 U	130 U	11 U	300 U
Vinyl chloride	1.3 U	1.2 U	1.2 U	130 U	11 U	300 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	**20 JT**	1.2 UT	1.2 UT	**5400 T**	**1200 T**	**34000 T**
LWG RA Total Xylene[8] (Calculated U = 1/2)	**8.4 JT**	1.2 UT	1.2 UT	**340 T**	**350 T**	**14000 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	**3800**	**5900**	64 U	**14000**	**86000**	**39000**
2-Methylnaphthalene	**1900**	**2400**	64 U	**22000**	**170000**	**75000**
Acenaphthene	**6600**	**12000**	**89**	**18000**	**130000**	**92000**
Acenaphthylene	**450**	**2800**	64 U	**950**	**2600**	**15000**
Anthracene	**4600**	**9900**	**270**	**18000**	**44000**	**57000**
Benzo(a)anthracene	**4500**	**12000**	**250**	**24000**	**37000**	**42000**
Benzo(b,j,k)fluoranthenes	**5300**	**16000**	**450**	**34000**	**48000**	**57000**
Benzo(a)pyrene	**5000**	**14000**	**350**	**28000**	**44000**	**52000**
Benzo(g,h,i)perylene	**5200**	**14000**	**320**	**9100**	**34000**	**33000**
Chrysene	**5400**	**16000**	**380**	**28000**	**48000**	**56000**
Dibenzo(a,h)anthracene	**1100**	**3000**	**65**	**610**	**6000**	**7200**
Fluoranthene	**15000**	**37000**	**870**	**64000**	**120000**	**170000**

Table 2-7c
Data Gaps Sub-surface Sediment (4-8 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC
Sample ID	DGS-03SC-0408-101005	DGS-53SC-0408-101005	DGS-06SC-0408-101007	DGS-07SC-0408-101012	DGS-08SC-0408-101007	DGS-11SC-0408-101006
Sample Date	10/5/2010	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010
Depth	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet
Sample Type	N	FD	N	N	N	N
Fluorene	**4700**	**7700**	64 U	**14000**	**50000**	**52000**
Indeno(1,2,3-c,d)pyrene	**3800**	**9000**	**200**	**8500**	**23000**	**25000**
Naphthalene	**730**	**1200**	**400**	**30000**	**600000**	**680000**
Perylene	**1400**	**3600**	**100**	**6600**	**12000**	**12000**
Phenanthrene	**29000**	**60000**	**1000**	**95000**	**280000**	**350000**
Pyrene	**26000**	**51000**	**1200**	**81000**	**160000**	**200000**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**48000 T**	**96000 T**	**1900 T**	**200000 T**	**1300000 T**	**1300000 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**71000 T**	**170000 T**	**4100 T**	**280000 T**	**520000 T**	**640000 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**120000 T**	**270000 T**	**5900 T**	**480000 T**	**1800000 T**	**2000000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**7500 T**	**21000 T**	**510 T**	**35000 T**	**61000 T**	**72000 T**
Semivolatile Organics (µg/kg)						
Carbazole	**900**	**1200**	64 U	**4000**	**7000**	**15000**
Dibenzofuran	**620**	**930**	64 U	**1800**	**8600**	**7000**
PCB Aroclors (µg/kg)						
Aroclor 1016	31 U	32 U	33 U	32 U	33 U	32 U
Aroclor 1221	31 U	32 U	33 U	32 UJ	33 U	32 U
Aroclor 1232	31 U	32 U	33 U	32 U	33 U	32 U
Aroclor 1242	31 U	32 U	33 U	32 U	33 U	32 U
Aroclor 1248	31 U	32 U	33 U	40 U	33 U	32 U
Aroclor 1254	31 U	32 U	33 U	110 U	33 U	32 U
Aroclor 1260	31 U	32 U	33 U	**92**	33 U	32 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	31 UT	32 UT	33 UT	**230 JT**	33 UT	32 UT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	16 U	33 U	3.3 U	**62**	16 U	16 U
2,4'-DDE (o,p'-DDE)	16 U	33 U	3.3 U	32 U	16 U	16 U
2,4'-DDT (o,p'-DDT)	16 U	33 U	3.3 U	32 U	16 U	16 U
4,4'-DDD (p,p'-DDD)	16 U	33 U	3.3 U	**360**	16 U	16 U
4,4'-DDE (p,p'-DDE)	**7.4 J**	33 U	3.3 U	**48**	16 U	16 U
4,4'-DDT (p,p'-DDT)	**240**	**410**	3.3 U	**34**	16 U	16 U
alpha-Hexachlorocyclohexane (BHC)	7.8 U	16 U	1.6 U	16 U	8.2 U	8 U
alpha-Chlordane (cis-Chlordane)	7.8 U	16 U	1.6 U	16 U	8.2 U	8 U
beta-Hexachlorocyclohexane (BHC)	7.8 U	16 U	1.6 U	45 U	16 U	8 U
gamma-Chlordane (trans-Chlordane)	7.8 U	16 U	1.6 U	16 U	110 U	24 U
cis-Nonachlor	16 U	33 U	3.3 U	32 U	16 U	16 U
delta-Hexachlorocyclohexane (BHC)	7.8 UJ	16 UJ	1.6 U	16 U	8.2 U	8 U
Dieldrin	16 U	33 U	3.3 U	32 U	16 U	16 U
Endrin	16 U	33 U	3.3 U	32 U	16 U	16 U
Endrin ketone	16 U	33 U	3.3 U	32 U	16 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	7.8 U	16 U	1.6 U	16 U	8.2 U	8 U
Heptachlor epoxide	7.8 U	16 U	1.6 U	26 U	8.2 U	8 U
Oxychlordane	16 U	33 U	3.3 U	32 U	16 U	16 U
trans-Nonachlor	16 U	33 U	3.3 U	32 U	16 U	16 U
Hexachlorobenzene	7.8 U	16 U	1.6 U	16 U	8.2 U	8 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	33 UT	3.3 UT	**94 T**	16 UT	16 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	**260 JT**	**440 T**	3.3 UT	**440 T**	16 UT	16 UT
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	33 UT	3.3 UT	**420 T**	16 UT	16 UT
LWG RA Sum DDE (Calculated U = 1/2)	**15 JT**	33 UT	3.3 UT	**64 T**	16 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	**250 T**	**430 T**	3.3 UT	**50 T**	16 UT	16 UT
LWG RA Total DDx (Calculated U = 1/2)	**280 JT**	**490 T**	3.3 UT	**540 T**	16 UT	16 UT

Table 2-7c
Data Gaps Sub-surface Sediment (4-8 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC
Sample ID	DGS-03SC-0408-101005	DGS-53SC-0408-101005	DGS-06SC-0408-101007	DGS-07SC-0408-101012	DGS-08SC-0408-101007	DGS-11SC-0408-101006
Sample Date	10/5/2010	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010
Depth	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet
Sample Type	N	FD	N	N	N	N
LWG RA Total Chlordane (Calculated U = 1/2)	16 UT	33 UT	3.3 UT	32 UT	110 UT	24 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**320**	**310**	**7.7**	**2400 J**	**2800**	**2300**
Motor Oil Range	**440**	**420**	13 U	**3900**	**2000**	**2400**
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)	**760 T**	**730 T**	**14 T**	**6300 JT**	**4800 T**	**4700 T**

Table 2-7c
Data Gaps Sub-surface Sediment (4-8 feet) Physical and Chemical Results

Location ID	DGS-13SC	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-22SC
Sample ID	DGS-13SC-0408-101005	DGS-18SC-0408-101008	DGS-19SC-0408-101006	DGS-20SC-0408-101008	DGS-22SC-0408-101012	DGS-72SC-0408-101012
Sample Date	10/5/2010	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/12/2010
Depth	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet
Sample Type	N	N	N	N	N	FD
Conventional Parameters (mg/kg)						
Cyanide, total	0.136 U	0.118 U	**1.36**	0.125 U	**0.921**	**0.755**
Conventional Parameters (percent)						
Moisture (water) content	**42.8**	**22.17**	**39.84**	**27.27**	**63.47**	**64.02**
Total organic carbon	**1.16**	**0.172 J**	**4.45**	**0.151**	**3.19**	**2.66**
Total solids	**71.5**	**82.5 J**	**71.9**	**78.2**	**61.1**	**61**
Grain Size (percent)						
Total Gravel	0.1 UT	0.1 UT	0.1 UT	**0.1 T**	0.1 UT	0.1 UT
Total Sand	**90 T**	**99 T**	**88 T**	**95 T**	**16 T**	**17 T**
Total Silt	**8 T**	**1.3 T**	**13 T**	**3.9 T**	**69 T**	**68 T**
Total Clay	**2.4 T**	0.1 UT	0.1 UT	**1 T**	**14 T**	**15 T**
Total Fines (silt + clay)	**10 T**	**1.3 T**	**13 T**	**4.9 T**	**83 T**	**83 T**
Total Grain Size	**100 T**	**100 T**	**100 T**	**100 T**	**99.9 T**	**100 T**
Metals (mg/kg)						
Arsenic	7 U	6 U	7 U	6 U	8 U	8 U
Cadmium	0.3 U	0.2 U	**0.3**	0.2 U	**0.6**	**0.6**
Chromium	**21.2 J**	**14.8**	**17.3**	**15.4**	**34.4**	**34.4**
Copper	**22.3 J**	**15.4**	**20.1**	**16**	**45**	**43.8**
Lead	3 UJ	2 U	**8**	2 U	**22**	**21**
Mercury	**0.03**	0.03 U	**0.04**	0.02 U	**0.2 J**	**0.22 J**
Nickel	**24 J**	**18**	**18**	**20**	**30**	**30**
Silver	0.4 U	0.3 U	0.4 U	0.4 U	0.5 U	0.5 U
Zinc	**50 J**	**51**	**62**	**47**	**110**	**110**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.4 U	66 U	260 U	1.3 U	1.5 U	1.5 U
1,2-Dichloroethene, cis-	1.4 U	66 U	260 U	1.3 U	1.5 U	1.5 U
1,2-Dichloroethene, trans-	1.4 U	66 U	260 U	1.3 U	1.5 U	1.5 U
Benzene	1.4 U	66 U	**4800 J**	1.3 U	**2**	1.5 U
Ethylbenzene	1.4 U	66 U	**29000 J**	1.3 U	**1.9**	1.5 U
m,p-Xylene	1.4 U	66 U	**10000 J**	1.3 U	**2.2**	1.5 U
o-Xylene	1.4 U	66 U	**6800 J**	1.3 U	**2.8**	1.5 U
Toluene	1.4 U	66 U	260 U	1.3 U	1.5 U	1.5 U
Trichloroethene (TCE)	1.4 U	66 U	260 U	1.3 U	1.5 U	1.5 U
Vinyl chloride	1.4 U	66 U	260 U	1.3 U	1.5 U	1.5 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	1.4 UT	66 UT	**51000 JT**	1.3 UT	**9.7 T**	1.5 UT
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.4 UT	66 UT	**17000 JT**	1.3 UT	**5 T**	1.5 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	**420 J**	**5200**	**120000**	61 U	**3100**	**3500**
2-Methylnaphthalene	62 U	**5600**	**240000**	61 U	**1600**	**1300**
Acenaphthene	**1200 J**	**5300**	**260000**	61 U	**11000**	**11000**
Acenaphthylene	62 U	**350**	6400 U	61 U	**770**	**660**
Anthracene	**68 J**	**5200**	**84000**	61 U	**11000**	**8600**
Benzo(a)anthracene	62 U	**3200**	**59000**	61 U	**13000**	**10000**
Benzo(b,j,k)fluoranthenes	62 U	**2200**	**86000**	61 U	**24000**	**19000**
Benzo(a)pyrene	62 U	**2700**	**84000**	61 U	**20000**	**16000**
Benzo(g,h,i)perylene	62 U	**1800**	**76000**	61 U	**10000**	**7500**
Chrysene	62 U	**4100**	**78000**	61 U	**17000**	**13000**
Dibenzo(a,h)anthracene	62 U	**460**	**12000**	61 U	370 U	360 U
Fluoranthene	62 U	**7200**	**230000**	61 U	**55000**	**43000**

Table 2-7c
Data Gaps Sub-surface Sediment (4-8 feet) Physical and Chemical Results

Location ID	DGS-13SC	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-22SC
Sample ID	DGS-13SC-0408-101005	DGS-18SC-0408-101008	DGS-19SC-0408-101006	DGS-20SC-0408-101008	DGS-22SC-0408-101012	DGS-72SC-0408-101012
Sample Date	10/5/2010	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/12/2010
Depth	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet
Sample Type	N	N	N	N	N	FD
Fluorene	**390 J**	**4400**	**86000**	61 U	**5500**	**5100**
Indeno(1,2,3-c,d)pyrene	62 U	**1200**	**47000**	61 U	**8500**	**6400**
Naphthalene	**74 J**	310 U	**1800000**	61 U	**2900**	**2100**
Perylene	**71 J**	**610**	**20000**	61 U	**5900**	**4600**
Phenanthrene	**930 J**	**29000**	**470000**	**110**	**64000**	**54000**
Pyrene	62 U	**11000 J**	**280000**	61 UJ	**71000**	**55000**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**2700 JT**	**50000 T**	**2900000 T**	**290 T**	**97000 T**	**83000 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	62 UT	**34000 JT**	**950000 T**	61 UJT	**220000 T**	**170000 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**3000 JT**	**84000 JT**	**3900000 T**	**570 JT**	**320000 T**	**250000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	62 UT	**3800 T**	**120000 T**	61 UT	**25000 T**	**20000 T**
Semivolatile Organics (µg/kg)						
Carbazole	**330 J**	310 U	**19000**	61 U	**530**	**540**
Dibenzofuran	62 U	**700**	**13000**	61 U	**570**	**550**
PCB Aroclors (µg/kg)						
Aroclor 1016	31 U	32 U	32 U	31 U	32 U	33 U
Aroclor 1221	31 U	32 U	32 U	31 U	32 UJ	33 UJ
Aroclor 1232	31 U	32 U	32 U	31 U	32 U	33 U
Aroclor 1242	31 U	32 U	32 U	31 U	32 U	33 U
Aroclor 1248	31 U	32 U	32 U	31 U	32 U	33 U
Aroclor 1254	31 U	32 U	32 U	31 U	32 U	33 U
Aroclor 1260	31 U	32 U	32 U	31 U	32 U	33 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	31 UT	32 UT	32 UT	31 UT	32 UJT	33 UJT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.1 U	16 U	16 U	3.2 U	16 U	16 U
2,4'-DDE (o,p'-DDE)	3.1 U	16 U	16 U	3.2 U	16 U	16 U
2,4'-DDT (o,p'-DDT)	3.1 U	16 U	16 U	3.2 U	16 U	16 U
4,4'-DDD (p,p'-DDD)	3.1 U	16 U	16 U	3.2 U	16 U	16 U
4,4'-DDE (p,p'-DDE)	3.1 U	16 U	16 U	3.2 U	16 U	16 U
4,4'-DDT (p,p'-DDT)	3.1 U	16 U	16 U	3.2 U	16 U	16 U
alpha-Hexachlorocyclohexane (BHC)	1.5 U	8.2 U	8.2 U	1.6 U	8 U	8 U
alpha-Chlordane (cis-Chlordane)	1.5 U	8.2 U	8.2 U	1.6 U	8 U	8 U
beta-Hexachlorocyclohexane (BHC)	1.5 U	8.2 U	8.2 U	1.6 U	8 U	8 U
gamma-Chlordane (trans-Chlordane)	1.5 U	8.2 U	20 U	1.6 U	8 U	8 U
cis-Nonachlor	3.1 U	16 U	16 U	3.2 U	16 U	16 U
delta-Hexachlorocyclohexane (BHC)	1.5 UJ	8.2 U	8.2 U	1.6 U	8 U	8 U
Dieldrin	3.1 U	16 U	16 U	3.2 U	16 U	16 U
Endrin	3.1 U	16 U	16 U	3.2 U	16 U	16 U
Endrin ketone	3.1 U	16 U	16 U	3.2 U	16 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.5 U	8.2 U	8.2 U	1.6 U	8 U	8 U
Heptachlor epoxide	1.5 U	8.2 U	8.2 U	1.6 U	8 U	8 U
Oxychlordane	3.1 U	16 U	16 U	3.2 U	16 U	16 U
trans-Nonachlor	3.1 U	16 U	16 U	3.2 U	16 U	16 U
Hexachlorobenzene	1.5 U	8.2 U	8.2 U	1.6 U	8 U	8 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.1 UT	16 UT	16 UT	3.2 UT	16 UT	16 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.1 UT	16 UT	16 UT	3.2 UT	16 UT	16 UT
LWG RA Sum DDD (Calculated U = 1/2)	3.1 UT	16 UT	16 UT	3.2 UT	16 UT	16 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.1 UT	16 UT	16 UT	3.2 UT	16 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.1 UT	16 UT	16 UT	3.2 UT	16 UT	16 UT
LWG RA Total DDx (Calculated U = 1/2)	3.1 UT	16 UT	16 UT	3.2 UT	16 UT	16 UT

Table 2-7c
Data Gaps Sub-surface Sediment (4-8 feet) Physical and Chemical Results

Location ID	DGS-13SC	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-22SC
Sample ID	DGS-13SC-0408-101005	DGS-18SC-0408-101008	DGS-19SC-0408-101006	DGS-20SC-0408-101008	DGS-22SC-0408-101012	DGS-72SC-0408-101012
Sample Date	10/5/2010	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/12/2010
Depth	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet
Sample Type	N	N	N	N	N	FD
LWG RA Total Chlordane (Calculated U = 1/2)	3.1 UT	16 UT	20 UT	3.2 UT	16 UT	16 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	7 U	**340**	**2900**	6.7 U	**730 J**	**760 J**
Motor Oil Range	14 U	**220**	**2200**	13 U	**1200**	**1200**
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)	14 UT	**560 T**	**5100 T**	13 UT	**1900 JT**	**2000 JT**

Table 2-7c
Data Gaps Sub-surface Sediment (4-8 feet) Physical and Chemical Results

Location ID	DGS-23SC	DGS-24SC	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC
Sample ID	DGS-23SC-0408-101008	DGS-24SC-0408-101012	DGS-25SC-0408-101007	DGS-26SC-0408-101011	DGS-28SC-0408-101007	DGS-30SC-0408-101006
Sample Date	10/8/2010	10/12/2010	10/7/2010	10/11/2010	10/7/2010	10/6/2010
Depth	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	0.126 U	**4.98**	0.116 U	0.116 U	0.114 U	0.116 U
Conventional Parameters (percent)						
Moisture (water) content	**29.79**	**34.76**	**23.19**	**21.37**	**15.45**	**20.48**
Total organic carbon	**0.166**	**5.26**	**0.11**	**0.334**	**0.056**	**0.094**
Total solids	**76.9**	**73.6**	**84.4**	**85.2**	**86.1**	**84.7**
Grain Size (percent)						
Total Gravel	0.1 UT	**4.4 T**	**0.3 T**	**0.1 T**	**0.3 T**	0.1 UT
Total Sand	**97 T**	**59 T**	**98 T**	**96 T**	**99 T**	**98 T**
Total Silt	**2.3 T**	**32 T**	**1.3 T**	**1.5 T**	**1 T**	**1.7 T**
Total Clay	**1 T**	**4.5 T**	0.1 UT	**2.2 T**	0.1 UT	0.1 UT
Total Fines (silt + clay)	**3.3 T**	**36 T**	**1.3 T**	**3.7 T**	**1 T**	**1.7 T**
Total Grain Size	**100 T**	**100 T**	**99.9 T**	**99.9 T**	**100 T**	**99.9 T**
Metals (mg/kg)						
Arsenic	6 U	7 U	6 U	6 U	5 U	5 U
Cadmium	0.2 U	**0.5**	0.2 U	**0.2**	0.2 U	0.2 U
Chromium	**15.8**	**28.7**	**14.3**	**15.5**	**12.9**	**13**
Copper	**16.4**	**31.2**	**15.8**	**15.6**	**13.7**	**14.7**
Lead	2 U	**24**	2 U	2 U	2 U	2 U
Mercury	0.03 U	**0.08 J**	0.03 U	0.02 U	0.02 U	0.03 U
Nickel	**19**	**26**	**19**	**18**	**16**	**17**
Silver	0.4 U	0.4 U	0.3 U	0.3 U	0.3 U	0.3 U
Zinc	**47**	**134**	**45**	**47**	**43**	**46**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.3 U	1500 U	1.2 U	7.4 U	1 U	1.2 U
1,2-Dichloroethene, cis-	1.3 U	1500 U	1.2 U	7.4 U	**2.3**	1.2 U
1,2-Dichloroethene, trans-	1.3 U	1500 U	1.2 U	7.4 U	1 U	1.2 U
Benzene	1.3 U	**3800**	1.2 U	7.4 U	1 U	1.2 U
Ethylbenzene	1.3 U	**22000**	1.2 U	7.4 U	1 U	1.2 U
m,p-Xylene	1.3 U	**19000**	1.2 U	7.4 U	1 U	1.2 U
o-Xylene	1.3 U	**10000**	1.2 U	7.4 U	1 U	1.2 U
Toluene	1.3 U	1500 U	1.2 U	7.4 U	1 U	1.2 U
Trichloroethene (TCE)	1.3 U	1500 U	1.2 U	7.4 U	1 U	1.2 U
Vinyl chloride	1.3 U	1500 U	1.2 U	7.4 U	1 U	1.2 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	1.3 UT	**56000 T**	1.2 UT	7.4 UT	1 UT	1.2 UT
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.3 UT	**29000 T**	1.2 UT	7.4 UT	1 UT	1.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	61 U	**260000**	62 U	**5200**	63 U	60 U
2-Methylnaphthalene	61 U	**470000**	62 U	**4300**	63 U	60 U
Acenaphthene	61 U	**420000**	62 U	**12000**	63 U	60 U
Acenaphthylene	61 U	**18000**	62 U	**490**	63 U	60 U
Anthracene	61 U	**190000**	62 U	**5500**	63 U	60 U
Benzo(a)anthracene	61 U	**130000**	62 U	**3900**	63 U	60 U
Benzo(b,j,k)fluoranthenes	61 U	**200000**	62 U	**6000**	63 U	60 U
Benzo(a)pyrene	61 U	**160000**	62 U	**5000**	63 U	60 U
Benzo(g,h,i)perylene	61 U	**22000**	62 UJ	**3200**	63 U	60 U
Chrysene	61 U	**170000**	62 U	**4800**	63 U	60 U
Dibenzo(a,h)anthracene	61 U	**1200**	62 U	190 U	63 U	60 U
Fluoranthene	61 U	**550000**	62 U	**11000**	63 U	60 U

Table 2-7c
Data Gaps Sub-surface Sediment (4-8 feet) Physical and Chemical Results

Location ID	DGS-23SC	DGS-24SC	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC
Sample ID	DGS-23SC-0408-101008	DGS-24SC-0408-101012	DGS-25SC-0408-101007	DGS-26SC-0408-101011	DGS-28SC-0408-101007	DGS-30SC-0408-101006
Sample Date	10/8/2010	10/12/2010	10/7/2010	10/11/2010	10/7/2010	10/6/2010
Depth	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet
Sample Type	N	N	N	N	N	N
Fluorene	61 U	**180000**	62 U	**5900**	63 U	60 U
Indeno(1,2,3-c,d)pyrene	61 U	**20000**	62 U	**2500**	63 U	60 U
Naphthalene	61 U	**2800000**	**260**	**7300**	63 U	**260**
Perylene	61 U	48000 U	62 U	**1400**	63 U	60 U
Phenanthrene	61 U	**1100000**	62 U	**34000**	63 U	60 U
Pyrene	61 UJ	**680000**	62 U	**13000**	63 U	60 U
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	61 UT	**5200000 T**	**450 T**	**69000 T**	63 UT	**440 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	61 UJT	**1900000 T**	62 UJT	**49000 T**	63 UT	60 UT
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	61 UJT	**7100000 T**	**720 JT**	**120000 T**	63 UT	**710 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	61 UT	**200000 T**	62 UT	**6300 T**	63 UT	60 UT
Semivolatile Organics (µg/kg)						
Carbazole	61 U	**28000**	62 U	**1000**	63 U	60 U
Dibenzofuran	61 U	**17000**	62 U	**970**	63 U	60 U
PCB Aroclors (µg/kg)						
Aroclor 1016	31 U	44 U	32 U	32 U	33 U	32 U
Aroclor 1221	31 U	44 UJ	32 U	32 UJ	33 U	32 U
Aroclor 1232	31 U	44 U	32 U	32 U	33 U	32 U
Aroclor 1242	31 U	44 U	32 U	32 U	33 U	32 U
Aroclor 1248	31 U	**66**	32 U	32 U	33 U	32 U
Aroclor 1254	31 U	66 U	32 U	32 U	33 U	32 U
Aroclor 1260	31 U	**49**	32 U	32 U	33 U	32 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	31 UT	**240 JT**	32 UT	32 UJT	33 UT	32 UT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.1 U	44 U	3.3 U	16 U	3.3 U	3.2 U
2,4'-DDE (o,p'-DDE)	3.1 U	44 U	3.3 U	16 U	3.3 U	3.2 U
2,4'-DDT (o,p'-DDT)	3.1 U	44 U	3.3 U	16 U	3.3 U	3.2 U
4,4'-DDD (p,p'-DDD)	3.1 U	**160**	3.3 U	16 U	3.3 U	3.2 U
4,4'-DDE (p,p'-DDE)	3.1 U	44 U	3.3 U	16 U	3.3 U	3.2 U
4,4'-DDT (p,p'-DDT)	3.1 U	44 U	3.3 U	16 U	3.3 U	3.2 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	22 U	1.6 U	7.9 U	1.6 U	1.6 U
alpha-Chlordane (cis-Chlordane)	1.6 U	22 U	1.6 U	7.9 U	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	22 U	1.6 U	7.9 U	1.6 U	1.6 U
gamma-Chlordane (trans-Chlordane)	1.6 U	35 U	1.6 U	7.9 U	1.6 U	1.6 U
cis-Nonachlor	3.1 U	44 U	3.3 U	16 U	3.3 U	3.2 U
delta-Hexachlorocyclohexane (BHC)	1.6 U	22 U	1.6 U	7.9 U	1.6 U	1.6 U
Dieldrin	3.1 U	44 U	3.3 U	16 U	3.3 U	3.2 U
Endrin	3.1 U	44 U	3.3 U	16 U	3.3 U	3.2 U
Endrin ketone	3.1 U	44 U	3.3 U	16 U	3.3 U	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	22 U	1.6 U	7.9 U	1.6 U	1.6 U
Heptachlor epoxide	1.6 U	22 U	1.6 U	7.9 U	1.6 U	1.6 U
Oxychlordane	3.1 U	44 U	3.3 U	16 U	3.3 U	3.2 U
trans-Nonachlor	3.1 U	44 U	3.3 U	16 U	3.3 U	3.2 U
Hexachlorobenzene	1.6 U	22 U	1.6 U	7.9 U	1.6 U	1.6 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.1 UT	44 UT	3.3 UT	16 UT	3.3 UT	3.2 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.1 UT	**200 T**	3.3 UT	16 UT	3.3 UT	3.2 UT
LWG RA Sum DDD (Calculated U = 1/2)	3.1 UT	**180 T**	3.3 UT	16 UT	3.3 UT	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.1 UT	44 UT	3.3 UT	16 UT	3.3 UT	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.1 UT	44 UT	3.3 UT	16 UT	3.3 UT	3.2 UT
LWG RA Total DDx (Calculated U = 1/2)	3.1 UT	**270 T**	3.3 UT	16 UT	3.3 UT	3.2 UT

Table 2-7c
Data Gaps Sub-surface Sediment (4-8 feet) Physical and Chemical Results

Location ID	DGS-23SC	DGS-24SC	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC
Sample ID	DGS-23SC-0408-101008	DGS-24SC-0408-101012	DGS-25SC-0408-101007	DGS-26SC-0408-101011	DGS-28SC-0408-101007	DGS-30SC-0408-101006
Sample Date	10/8/2010	10/12/2010	10/7/2010	10/11/2010	10/7/2010	10/6/2010
Depth	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet
Sample Type	N	N	N	N	N	N
LWG RA Total Chlordane (Calculated U = 1/2)	3.1 UT	44 UT	3.3 UT	16 UT	3.3 UT	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6.7 U	**5100 J**	6.2 U	**210**	5.7 U	6 U
Motor Oil Range	13 U	**3800**	12 U	**150**	11 U	12 U
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)	13 UT	**8900 JT**	12 UT	**360 T**	11 UT	12 UT

Table 2-7c
Data Gaps Sub-surface Sediment (4-8 feet) Physical and Chemical Results

Location ID	DGS-31SC	DGS-32SC	DGS-36SC	DGS-37SC
Sample ID	DGS-31SC-0408-101011	DGS-32SC-0408-101011	DGS-36SC-0408-101012	DGS-37SC-0408-101011
Sample Date	10/11/2010	10/11/2010	10/12/2010	10/11/2010
Depth	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet
Sample Type	N	N	N	N
Conventional Parameters (mg/kg)				
Cyanide, total	**0.202**	**2.76**	**13.1**	**1.62**
Conventional Parameters (percent)				
Moisture (water) content	**26.85**	**70.52**	**46.54**	**81.99**
Total organic carbon	**0.234**	**4.84**	**1.2**	**2.9**
Total solids	**75**	**57.4**	**67.3**	**56.4**
Grain Size (percent)				
Total Gravel	0.1 UT	0.1 UT	0.1 UT	**0.1 T**
Total Sand	**94 T**	**23 T**	**39 T**	**6 T**
Total Silt	**2.6 T**	**62 T**	**53 T**	**59 T**
Total Clay	**2.9 T**	**15 T**	**8.5 T**	**35 T**
Total Fines (silt + clay)	**5.5 T**	**77 T**	**61 T**	**94 T**
Total Grain Size	**100 T**	**100 T**	**99.9 T**	**99.9 T**
Metals (mg/kg)				
Arsenic	6 U	8 U	20 U	8 U
Cadmium	**0.2**	**0.7**	0.7 U	**0.7**
Chromium	**16.1**	**35.4**	**65**	**35.6**
Copper	**16.5**	**48.8**	**42.5**	**49.6**
Lead	**3**	**35**	**78**	**29**
Mercury	0.02 U	**0.36**	**0.05 J**	**0.38**
Nickel	**20**	**30**	**32**	**30**
Silver	0.4 U	0.5 U	1 U	0.5 U
Zinc	**50**	**165**	**93**	**181**
Volatile Organics (µg/kg)				
1,1-Dichloroethene	1.2 U	1.8 U	1.3 U	1.9 U
1,2-Dichloroethene, cis-	**2.3**	1.8 U	1.3 U	1.9 U
1,2-Dichloroethene, trans-	1.2 U	1.8 U	1.3 U	1.9 U
Benzene	1.2 U	**180**	1.3 U	1.9 U
Ethylbenzene	1.2 U	**4000**	**3.8**	1.9 U
m,p-Xylene	1.2 U	**420**	1.3 U	1.9 U
o-Xylene	1.2 U	**990**	1.3 U	1.9 U
Toluene	1.2 U	**10 J**	1.3 U	1.9 U
Trichloroethene (TCE)	1.2 U	1.8 U	1.3 U	1.9 U
Vinyl chloride	1.2 U	1.8 U	1.3 U	1.9 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	1.2 UT	**5600 JT**	**6.4 T**	1.9 UT
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.2 UT	**1400 T**	1.3 UT	1.9 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)				
1-Methylnaphthalene	62 U	**78000**	**560**	**930**
2-Methylnaphthalene	**66**	**110000**	**220**	**370**
Acenaphthene	62 U	**110000**	**2700**	**1700**
Acenaphthylene	62 U	**4900**	**370**	**210**
Anthracene	62 U	**89000**	**3700**	**2100**
Benzo(a)anthracene	**230**	**55000**	**4500**	**2200**
Benzo(b,j,k)fluoranthenes	**440**	**48000**	**7700**	**3100**
Benzo(a)pyrene	**380**	**44000**	**6300**	**2300**
Benzo(g,h,i)perylene	**380**	**14000**	**3200**	**1200 J**
Chrysene	**300**	**69000**	**5800**	**3100 J**
Dibenzo(a,h)anthracene	62 U	**910**	200 U	190 U
Fluoranthene	**610**	**190000**	**13000**	**6400 J**

Table 2-7c
Data Gaps Sub-surface Sediment (4-8 feet) Physical and Chemical Results

Location ID	DGS-31SC	DGS-32SC	DGS-36SC	DGS-37SC
Sample ID	DGS-31SC-0408-101011	DGS-32SC-0408-101011	DGS-36SC-0408-101012	DGS-37SC-0408-101011
Sample Date	10/11/2010	10/11/2010	10/12/2010	10/11/2010
Depth	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet
Sample Type	N	N	N	N
Fluorene	62 U	**66000**	**2000**	**1400**
Indeno(1,2,3-c,d)pyrene	**240**	**13000**	**2700**	**980**
Naphthalene	**270**	**62000**	**1900**	**830 J**
Perylene	**140**	**10000**	**2000**	**620**
Phenanthrene	**130**	**460000**	**14000**	**9800**
Pyrene	**840**	**230000**	**15000**	**7500 J**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**590 T**	**900000 T**	**25000 T**	**16000 JT**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**3500 T**	**660000 T**	**58000 T**	**27000 JT**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**4000 T**	**1600000 T**	**83000 T**	**43000 JT**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**500 T**	**57000 T**	**7900 T**	**3000 JT**
Semivolatile Organics (µg/kg)				
Carbazole	62 U	**22000**	**380**	190 U
Dibenzofuran	62 U	**8800**	**230**	**270**
PCB Aroclors (µg/kg)				
Aroclor 1016	31 U	63 U	32 U	32 U
Aroclor 1221	31 UJ	63 UJ	32 UJ	32 UJ
Aroclor 1232	31 U	95 U	32 U	32 U
Aroclor 1242	31 U	63 U	32 U	32 U
Aroclor 1248	31 U	63 U	32 U	160 U
Aroclor 1254	31 U	160 U	32 U	160 U
Aroclor 1260	31 U	**80**	32 U	130 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	31 UJT	**330 JT**	32 UJT	160 UJT
Pesticides (µg/kg)				
2,4'-DDD (o,p'-DDD)	3.2 U	**110 J**	16 U	**36**
2,4'-DDE (o,p'-DDE)	3.2 U	32 U	16 U	16 U
2,4'-DDT (o,p'-DDT)	3.2 U	32 U	16 U	16 U
4,4'-DDD (p,p'-DDD)	3.2 U	**320 J**	16 U	**120**
4,4'-DDE (p,p'-DDE)	3.2 U	120 U	16 U	**32 J**
4,4'-DDT (p,p'-DDT)	3.2 U	32 U	16 U	**28 J**
alpha-Hexachlorocyclohexane (BHC)	1.6 U	37 U	7.8 U	8.1 U
alpha-Chlordane (cis-Chlordane)	1.6 U	16 U	7.8 U	8.1 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	16 U	12 U	8.1 U
gamma-Chlordane (trans-Chlordane)	1.6 U	54 U	7.8 U	8.1 U
cis-Nonachlor	3.2 U	32 U	16 U	16 U
delta-Hexachlorocyclohexane (BHC)	1.6 U	16 U	7.8 U	8.1 U
Dieldrin	3.2 U	32 U	16 U	16 U
Endrin	3.2 U	32 U	16 U	16 U
Endrin ketone	3.2 U	32 U	16 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	16 U	7.8 U	8.1 U
Heptachlor epoxide	1.6 U	16 U	7.8 U	8.1 U
Oxychlordane	3.2 U	32 U	16 U	16 U
trans-Nonachlor	3.2 U	32 U	16 U	16 U
Hexachlorobenzene	1.6 U	16 U	7.8 U	8.1 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	**140 JT**	16 UT	**52 T**
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	**400 JT**	16 UT	**180 JT**
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	**430 JT**	16 UT	**160 T**
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	120 UT	16 UT	**40 JT**
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	32 UT	16 UT	**36 JT**
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	**540 JT**	16 UT	**230 JT**

Table 2-7c
Data Gaps Sub-surface Sediment (4-8 feet) Physical and Chemical Results

Location ID	DGS-31SC	DGS-32SC	DGS-36SC	DGS-37SC
Sample ID	DGS-31SC-0408-101011	DGS-32SC-0408-101011	DGS-36SC-0408-101012	DGS-37SC-0408-101011
Sample Date	10/11/2010	10/11/2010	10/12/2010	10/11/2010
Depth	4 - 8 feet	4 - 8 feet	4 - 8 feet	4 - 8 feet
Sample Type	N	N	N	N
LWG RA Total Chlordane (Calculated U = 1/2)	3.2 UT	54 UT	16 UT	16 UT
Total Petroleum Hydrocarbons (mg/kg)				
Diesel Range Hydrocarbons	6.7 U	**4300**	**170 J**	**170 J**
Motor Oil Range	**21**	**3000**	**280**	**270**
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)	**24 T**	**7300 T**	**450 JT**	**440 JT**

Table 2-7c
Data Gaps Sub-surface Sediment (4-8 feet) Physical and Chemical Results

Notes:

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

T = calculation or summation applied

N = Normal Field Sample

FD = Field Duplicate

-- Results not reported or not applicable

Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.

Significant figures applied to all calculated totals

Table contains validated data

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[5] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[6] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

[7] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

Acronyms

cPAH = carcinogenic PAH

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

HPAH = high molecular weight polycyclic aromatic hydrocarbon

LPAH = low-molecular-weight PAH

LWG = Lower Willamette Group

mg/kg = milligrams per kilograms

PAH = polycyclic aromatic hydrocarbon

PCBs = polychlorinated biphenyls

RA = Risk Assessment

TEQ = toxic equivalents quotient

TPH = Total Petroleum Hydrocarbons

µg/kg = micrograms per kilogram

VPH = volatile petroleum hydrocarbon

Table 2-7d
Data Gaps Sub-surface Sediment (8-12 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC
Sample ID	DGS-03SC-0812-101005	DGS-06SC-0812-101007	DGS-07SC-0812-101012	DGS-08SC-089.3-101007	DGS-11SC-0812-101006	DGS-13SC-0812-101005
Sample Date	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010
Depth	8 - 12 feet	8 - 12 feet	8 - 12 feet	8 - 9.3 feet	8 - 12 feet	8 - 12 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	**0.603**	0.124 U	**29.9**	0.128 U	0.132 U	**0.177**
Conventional Parameters (percent)						
Moisture (water) content	**38.82**	**29.21**	**79.55**	**34.51**	**40.44**	**29.3**
Total organic carbon	**1.04**	**0.14**	**6.21**	**0.092**	**1.1**	**0.137**
Total solids	**71**	**78.8**	**55.7**	**75.5**	**74.5**	**76.9**
Grain Size (percent)						
Total Gravel	0.1 UT	0.1 UT	0.1 UT	0.1 UT	**0.1 T**	0.1 UT
Total Sand	**72 T**	**96 T**	**11 T**	**98 T**	**95 T**	**90 T**
Total Silt	**13 T**	**3.8 T**	**74 T**	**1.9 T**	**5.2 T**	**0.6 T**
Total Clay	**15 T**	0.1 UT	**16 T**	0.1 UT	0.1 UT	**9.3 T**
Total Fines (silt + clay)	**28 T**	**3.8 T**	**89 T**	**1.9 T**	**5.2 T**	**9.9 T**
Total Grain Size	**100 T**	**99.8 T**	**100 T**	**100 T**	**100 T**	**99.9 T**
Metals (mg/kg)						
Arsenic	7 U	6 U	8 U	6 U	7 U	6 U
Cadmium	0.3 U	0.2 U	**0.8**	0.2 U	0.3 U	0.2 U
Chromium	**18.8 J**	**16.6**	**39.6**	**15**	**17.9**	**15 J**
Copper	**19.6 J**	**16.6**	**58.4**	**15.1**	**19**	**15.5 J**
Lead	3 UJ	2 U	**35**	2 U	3 U	2 UJ
Mercury	0.03 U	0.03 U	**0.44 J**	0.02 U	0.03 U	0.03 U
Nickel	**21 J**	**22**	**43**	**18**	**21**	**19 J**
Silver	0.4 U	0.4 U	**0.8**	0.4 U	0.4 U	0.4 U
Zinc	**53 J**	**48**	**153**	**47**	**51**	**47 J**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.2 U	1.2 U	130 U	1.2 U	3.4 U	1.1 U
1,2-Dichloroethene, cis-	1.2 U	1.2 U	130 U	1.2 U	3.4 U	1.1 U
1,2-Dichloroethene, trans-	1.2 U	1.2 U	130 U	1.2 U	3.4 U	1.1 U
Benzene	1.2 U	1.2 U	**280**	1.2 U	**42**	1.1 U
Ethylbenzene	1.2 U	**1.7**	**3500**	1.2 U	**28**	1.1 U
m,p-Xylene	1.2 U	1.2 U	**170**	1.2 U	**7.4**	1.1 U
o-Xylene	1.2 U	1.2 U	**770**	1.2 U	**13**	1.1 U
Toluene	1.2 U	1.2 U	130 U	1.2 U	**5.8**	1.1 U
Trichloroethene (TCE)	1.2 U	1.2 U	130 U	1.2 U	3.4 U	1.1 U
Vinyl chloride	1.2 U	1.2 U	130 U	1.2 U	3.4 U	1.1 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	1.2 UT	**4.1 T**	**4800 T**	1.2 UT	**96 T**	1.1 UT
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.2 UT	1.2 UT	**940 T**	1.2 UT	**20 T**	1.1 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	62 U	63 U	**57000**	62 U	**3000**	65 U
2-Methylnaphthalene	62 U	63 U	**95000**	62 U	**5800**	65 U
Acenaphthene	**210**	63 U	**100000**	62 U	**13000**	65 U
Acenaphthylene	62 U	63 U	**1500**	62 U	**660**	65 U
Anthracene	62 U	63 U	**73000**	62 U	**7300**	65 U
Benzo(a)anthracene	**95**	63 U	**51000**	62 U	**5900**	65 U
Benzo(b,j,k)fluoranthenes	**110**	**70**	**46000**	62 U	**9200**	65 U
Benzo(a)pyrene	**110**	63 U	**56000**	62 U	**8600**	65 U
Benzo(g,h,i)perylene	**65**	63 U	**12000**	62 U	**4500**	65 U
Chrysene	**150**	63 U	**65000**	62 U	**7500**	65 U
Dibenzo(a,h)anthracene	62 U	63 U	**640**	62 U	**1200**	65 U
Fluoranthene	**160**	**110**	**200000**	62 U	**23000**	65 U

Table 2-7d
Data Gaps Sub-surface Sediment (8-12 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC
Sample ID	DGS-03SC-0812-101005	DGS-06SC-0812-101007	DGS-07SC-0812-101012	DGS-08SC-089.3-101007	DGS-11SC-0812-101006	DGS-13SC-0812-101005
Sample Date	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010
Depth	8 - 12 feet	8 - 12 feet	8 - 12 feet	8 - 9.3 feet	8 - 12 feet	8 - 12 feet
Sample Type	N	N	N	N	N	N
Fluorene	62 U	63 U	**57000**	62 U	**6600**	65 U
Indeno(1,2,3-c,d)pyrene	62 U	63 U	**11000**	62 U	**3600**	65 U
Naphthalene	62 U	63 U	**93000**	62 U	**19000**	65 U
Perylene	**160**	63 U	**9500**	62 U	**1900**	65 U
Phenanthrene	**280**	**120**	**400000**	62 U	**44000**	65 U
Pyrene	**300**	**110**	**250000**	62 U	**28000**	65 U
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**1100 T**	**480 T**	**690000 T**	62 UT	**91000 T**	65 UT
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**1700 T**	**790 T**	**1500000 T**	62 UT	**190000 T**	65 UT
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**640 T**	**310 T**	**820000 T**	62 UT	**96000 T**	65 UT
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**160 T**	**76 T**	**68000 T**	62 UT	**12000 T**	65 UT
Semivolatile Organics (µg/kg)						
Carbazole	62 U	63 U	**6100**	62 U	**1100**	65 U
Dibenzofuran	62 U	63 U	**5800**	62 U	**670**	65 U
PCB Aroclors (µg/kg)						
Aroclor 1016	32 U	32 U	32 U	33 U	32 U	32 U
Aroclor 1221	32 U	32 U	32 UJ	33 U	32 U	32 U
Aroclor 1232	32 U	32 U	32 U	33 U	32 U	32 U
Aroclor 1242	32 U	32 U	32 U	33 U	32 U	32 U
Aroclor 1248	32 U	32 U	32 U	33 U	32 U	32 U
Aroclor 1254	32 U	32 U	96 U	33 U	32 U	32 U
Aroclor 1260	32 U	32 U	**120**	33 U	32 U	32 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	32 UT	32 UT	**250 JT**	33 UT	32 UT	32 UT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	3.3 U	**99**	3.3 U	16 U	3.3 U
2,4'-DDE (o,p'-DDE)	3.2 U	3.3 U	32 U	3.3 U	16 U	3.3 U
2,4'-DDT (o,p'-DDT)	3.2 U	3.3 U	32 U	3.3 U	16 U	3.3 U
4,4'-DDD (p,p'-DDD)	3.2 U	3.3 U	**400**	3.3 U	16 U	3.3 U
4,4'-DDE (p,p'-DDE)	3.2 U	3.3 U	**45**	3.3 U	16 U	3.3 U
4,4'-DDT (p,p'-DDT)	3.2 U	3.3 U	**67**	3.3 U	16 U	3.3 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	16 U	1.6 U	7.9 U	1.6 U
alpha-Chlordane (cis-Chlordane)	1.6 U	1.6 U	16 U	1.6 U	7.9 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	58 U	1.6 U	7.9 U	1.6 U
gamma-Chlordane (trans-Chlordane)	1.6 U	1.6 U	22 U	1.6 U	7.9 U	1.6 U
cis-Nonachlor	3.2 U	3.3 U	32 U	3.3 U	16 U	3.3 U
delta-Hexachlorocyclohexane (BHC)	1.6 UJ	1.6 U	16 U	1.6 U	7.9 U	1.6 UJ
Dieldrin	3.2 U	3.3 U	32 U	3.3 U	16 U	3.3 U
Endrin	3.2 U	3.3 U	32 U	3.3 U	16 U	3.3 U
Endrin ketone	3.2 U	3.3 U	32 U	3.3 U	16 U	3.3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.6 U	16 U	1.6 U	7.9 U	1.6 U
Heptachlor epoxide	1.6 U	1.6 U	18 U	1.6 U	7.9 U	1.6 U
Oxychlordane	3.2 U	3.3 U	32 U	3.3 U	16 U	3.3 U
trans-Nonachlor	3.2 U	3.3 U	32 U	3.3 U	16 U	3.3 U
Hexachlorobenzene	1.6 U	1.6 U	16 U	1.6 U	7.9 U	1.6 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	3.3 UT	**130 T**	3.3 UT	16 UT	3.3 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	3.3 UT	**510 T**	3.3 UT	16 UT	3.3 UT
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	3.3 UT	**500 T**	3.3 UT	16 UT	3.3 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	3.3 UT	**61 T**	3.3 UT	16 UT	3.3 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	3.3 UT	**83 T**	3.3 UT	16 UT	3.3 UT
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	3.3 UT	**640 T**	3.3 UT	16 UT	3.3 UT

Table 2-7d
Data Gaps Sub-surface Sediment (8-12 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC
Sample ID	DGS-03SC-0812-101005	DGS-06SC-0812-101007	DGS-07SC-0812-101012	DGS-08SC-089.3-101007	DGS-11SC-0812-101006	DGS-13SC-0812-101005
Sample Date	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010
Depth	8 - 12 feet	8 - 12 feet	8 - 12 feet	8 - 9.3 feet	8 - 12 feet	8 - 12 feet
Sample Type	N	N	N	N	N	N
LWG RA Total Chlordane[1] (Calculated U = 1/2)	3.2 UT	3.3 UT	32 UT	3.3 UT	16 UT	3.3 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6.8 U	6.5 U	**4000 J**	6.6 U	**250**	6.5 U
Motor Oil Range	14 U	13 U	**3200**	13 U	**240**	13 U
LWG RA Total Petroleum Hydrocarbons (TPH)[4] (Calculated U = 1/2)	14 UT	13 UT	**7200 JT**	13 UT	**490 T**	13 UT

Table 2-7d
Data Gaps Sub-surface Sediment (8-12 feet) Physical and Chemical Results

Location ID	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC
Sample ID	DGS-18SC-089.6-101008	DGS-19SC-0812-101006	DGS-20SC-0812-101008	DGS-22SC-0812-101012	DGS-23SC-0812-101008	DGS-24SC-0811.3-101012
Sample Date	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/12/2010
Depth	8 - 9.6 feet	8 - 12 feet	8 - 12 feet	8 - 12 feet	8 - 12 feet	8 - 11.3 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	0.124 U	0.125 U	0.115 U	**0.172**	0.121 U	**2.5**
Conventional Parameters (percent)						
Moisture (water) content	**28.12**	**32.01**	**26.64**	**61.3**	**23.01**	**35.4**
Total organic carbon	**0.042 J**	**0.266**	**0.054**	**2.61**	**0.036**	**4.61**
Total solids	**80.2 J**	**77.3**	**84.9**	**62.6**	**82.2**	**72.9**
Grain Size (percent)						
Total Gravel	0.1 UT	**1 T**	0.1 UT	0.1 UT	**0.2 T**	**0.3 T**
Total Sand	**98 T**	**98 T**	**98 T**	**27 T**	**98 T**	**76 T**
Total Silt	**1.4 T**	**1.1 T**	**1.3 T**	**39 T**	**1.7 T**	**21 T**
Total Clay	0.1 UT	0.1 UT	**0.5 T**	**34 T**	**0.5 T**	**2.4 T**
Total Fines (silt + clay)	**1.4 T**	**1.1 T**	**1.8 T**	**73 T**	**2.2 T**	**24 T**
Total Grain Size	**99.9 T**	**100 T**	**100 T**	**100 T**	**100 T**	**100 T**
Metals (mg/kg)						
Arsenic	6 U	6 U	6 U	8 U	6 U	7 U
Cadmium	0.2 U	0.2 U	0.2 U	**0.6**	0.2 U	**0.3**
Chromium	**13.8**	**15.1**	**13.6**	**33.3**	**14.4**	**22.3**
Copper	**15.8**	**16.3**	**15**	**42.8**	**14.7**	**23**
Lead	2 U	2 U	2 U	**23**	2 U	**10**
Mercury	0.03 U	0.02 U	0.03 U	**0.2 J**	0.03 U	**0.07 J**
Nickel	**18**	**18**	**17**	**30**	**17**	**23**
Silver	0.4 U	0.4 U	0.3 U	0.5 U	0.3 U	0.4 U
Zinc	**46**	**48**	**46**	**104**	**45**	**71**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.3 U	320 U	1.2 U	1.6 U	1.3 U	420 U
1,2-Dichloroethene, cis-	1.3 U	320 U	1.2 U	1.6 U	1.3 U	420 U
1,2-Dichloroethene, trans-	1.3 U	320 U	1.2 U	1.6 U	1.3 U	420 U
Benzene	1.3 U	320 U	1.2 U	**56**	1.3 U	**2600**
Ethylbenzene	1.3 U	320 U	1.2 U	**8.1**	1.3 U	**5800**
m,p-Xylene	1.3 U	320 U	1.2 U	**5.6**	1.3 U	**3600**
o-Xylene	1.3 U	320 U	1.2 U	**2.4**	1.3 U	**2000**
Toluene	1.3 U	320 U	1.2 U	**3.2**	1.3 U	**530**
Trichloroethene (TCE)	1.3 U	320 U	1.2 U	1.6 U	1.3 U	420 U
Vinyl chloride	1.3 U	320 U	1.2 U	1.6 U	1.3 U	420 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	1.3 UT	320 UT	1.2 UT	**75 T**	1.3 UT	**15000 T**
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.3 UT	320 UT	1.2 UT	**8 T**	1.3 UT	**5600 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	65 U	**1600 J**	61 U	**510**	65 U	**270000**
2-Methylnaphthalene	65 U	**1200 J**	61 U	370 U	65 U	**510000**
Acenaphthene	65 U	**4800**	61 U	**4600 J**	65 U	**410000**
Acenaphthylene	65 U	**220**	61 U	370 U	65 U	**11000**
Anthracene	65 U	**2800 J**	61 U	**6500**	65 U	**150000**
Benzo(a)anthracene	65 U	**1900**	61 U	**7800**	65 U	**110000**
Benzo(b,j,k)fluoranthenes	65 U	**2000**	61 U	**14000 J**	65 U	**160000**
Benzo(a)pyrene	65 U	**2100**	61 U	**12000**	65 U	**130000**
Benzo(g,h,i)perylene	65 U	**1100**	61 U	**5700 J**	65 U	**21000**
Chrysene	65 U	**2500**	61 U	**9600**	65 U	**140000**
Dibenzo(a,h)anthracene	65 U	**290**	61 U	370 U	65 U	**940**
Fluoranthene	65 U	**5900**	61 U	**25000**	65 U	**410000**

Table 2-7d
Data Gaps Sub-surface Sediment (8-12 feet) Physical and Chemical Results

Location ID	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC
Sample ID	DGS-18SC-089.6-101008	DGS-19SC-0812-101006	DGS-20SC-0812-101008	DGS-22SC-0812-101012	DGS-23SC-0812-101008	DGS-24SC-0811.3-101012
Sample Date	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/12/2010
Depth	8 - 9.6 feet	8 - 12 feet	8 - 12 feet	8 - 12 feet	8 - 12 feet	8 - 11.3 feet
Sample Type	N	N	N	N	N	N
Fluorene	65 U	**2900**	61 U	**2500 J**	65 U	**170000**
Indeno(1,2,3-c,d)pyrene	65 U	**810**	61 U	**4600 J**	65 U	**18000**
Naphthalene	65 U	**320 J**	61 U	**1200**	65 U	**2500000**
Perylene	65 U	**480**	61 U	**3600 J**	65 U	**17000**
Phenanthrene	65 U	**18000**	61 U	**26000**	65 U	**960000**
Pyrene	65 UJ	**7400**	61 UJ	**39000**	65 UJ	**510000**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	65 UJT	**24000 T**	61 UJT	**120000 JT**	65 UJT	**1500000 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	65 UJT	**54000 JT**	61 UJT	**160000 JT**	65 UJT	**6200000 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	65 UT	**30000 JT**	61 UT	**41000 JT**	65 UT	**4700000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	65 UT	**2900 T**	61 UT	**15000 JT**	65 UT	**160000 T**
Semivolatile Organics (µg/kg)						
Carbazole	65 U	65 UJ	61 U	370 U	65 U	**30000**
Dibenzofuran	65 U	**380**	61 U	370 U	65 U	**19000**
PCB Aroclors (µg/kg)						
Aroclor 1016	33 U	33 U	31 U	32 U	33 U	43 U
Aroclor 1221	33 U	33 U	31 U	32 UJ	33 U	43 UJ
Aroclor 1232	33 U	33 U	31 U	32 U	33 U	43 U
Aroclor 1242	33 U	33 U	31 U	32 U	33 U	43 U
Aroclor 1248	33 U	33 U	31 U	32 U	33 U	43 U
Aroclor 1254	33 U	33 U	31 U	32 U	33 U	43 U
Aroclor 1260	33 U	33 U	31 U	32 U	33 U	43 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	33 UT	33 UT	31 UT	32 UJT	33 UT	43 UJT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
2,4'-DDE (o,p'-DDE)	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
2,4'-DDT (o,p'-DDT)	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
4,4'-DDD (p,p'-DDD)	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
4,4'-DDE (p,p'-DDE)	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
4,4'-DDT (p,p'-DDT)	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	1.6 U	8 U	1.6 U	22 U
alpha-Chlordane (cis-Chlordane)	1.6 U	1.6 U	1.6 U	8 U	1.6 U	22 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	1.6 U	8 U	1.6 U	22 U
gamma-Chlordane (trans-Chlordane)	1.6 U	1.6 U	1.6 U	8 U	1.6 U	28 U
cis-Nonachlor	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
delta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	1.6 U	8 U	1.6 U	22 U
Dieldrin	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
Endrin	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
Endrin ketone	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.6 U	1.6 U	8 U	1.6 U	22 U
Heptachlor epoxide	1.6 U	1.6 U	1.6 U	8 U	1.6 U	22 U
Oxychlordane	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
trans-Nonachlor	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
Hexachlorobenzene	1.6 U	1.6 U	1.6 U	8 U	1.6 U	22 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	3.2 UT	3.1 UT	16 UT	3.3 UT	44 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	3.2 UT	3.1 UT	16 UT	3.3 UT	44 UT
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	3.2 UT	3.1 UT	16 UT	3.3 UT	44 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	3.2 UT	3.1 UT	16 UT	3.3 UT	44 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	3.2 UT	3.1 UT	16 UT	3.3 UT	44 UT
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	3.2 UT	3.1 UT	16 UT	3.3 UT	44 UT

Table 2-7d
Data Gaps Sub-surface Sediment (8-12 feet) Physical and Chemical Results

Location ID	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC
Sample ID	DGS-18SC-089.6-101008	DGS-19SC-0812-101006	DGS-20SC-0812-101008	DGS-22SC-0812-101012	DGS-23SC-0812-101008	DGS-24SC-0811.3-101012
Sample Date	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/12/2010
Depth	8 - 9.6 feet	8 - 12 feet	8 - 12 feet	8 - 12 feet	8 - 12 feet	8 - 11.3 feet
Sample Type	N	N	N	N	N	N
LWG RA Total Chlordane[1] (Calculated U = 1/2)	3.2 UT	3.2 UT	3.1 UT	16 UT	3.3 UT	44 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6.5 U	**140**	6.3 U	**530 J**	6.5 U	**4000 J**
Motor Oil Range	13 U	**120**	12 U	**1100**	13 U	**2800**
LWG RA Total Petroleum Hydrocarbons (TPH)[4] (Calculated U = 1/2)	13 UT	**260 T**	12 UT	**1600 JT**	13 UT	**6800 JT**

Table 2-7d
Data Gaps Sub-surface Sediment (8-12 feet) Physical and Chemical Results

Location ID	DGS-25SC	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC
Sample ID	DGS-25SC-0812-101007	DGS-75SC-0812-101007	DGS-26SC-0811.3-101011	DGS-28SC-0809-101007	DGS-30SC-0812-101006	DGS-31SC-0812-101011
Sample Date	10/7/2010	10/7/2010	10/11/2010	10/7/2010	10/6/2010	10/11/2010
Depth	8 - 12 feet	8 - 12 feet	8 - 11.3 feet	8 - 9 feet	8 - 12 feet	8 - 12 feet
Sample Type	N	FD	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	0.116 U	0.113 U	**0.134**	0.122 U	0.113 U	0.115 U
Conventional Parameters (percent)						
Moisture (water) content	**13.77**	**12.93**	**32.59**	**24.56**	**18.1**	**18.56**
Total organic carbon	**0.039**	**0.047**	**0.078**	**0.246**	**0.209**	**0.056**
Total solids	**85.7**	**86.9**	**77**	**80.3**	**87.1**	**85.3**
Grain Size (percent)						
Total Gravel	0.1 UT	**0.1 T**	0.1 UT	0.1 UT	0.1 UT	0.1 UT
Total Sand	**98 T**	**98 T**	**96 T**	**93 T**	**98 T**	**97 T**
Total Silt	**1.5 T**	**1.4 T**	**1.4 T**	**6.5 T**	**2.3 T**	**1 T**
Total Clay	0.1 UT	0.1 UT	**2.5 T**	0.1 UT	0.1 UT	**2 T**
Total Fines (silt + clay)	**1.5 T**	**1.4 T**	**3.9 T**	**6.5 T**	**2.3 T**	**3 T**
Total Grain Size	**99.9 T**	**100 T**	**100 T**	**100 T**	**100 T**	**100 T**
Metals (mg/kg)						
Arsenic	6 U	6 U	6 U	6 U	6 U	6 U
Cadmium	**0.2**	0.2 U	0.3 U	0.2 U	**0.4**	0.2 U
Chromium	**13.2**	**14**	**15.8**	**28.7**	**15.9**	**15.5**
Copper	**15.1**	**14.6**	**15.3**	**16.6**	**14.9**	**15**
Lead	2 U	2 U	3 U	2 U	**2**	2 U
Mercury	0.02 U	0.02 U	0.03 U	0.03 U	0.02 U	0.02 U
Nickel	**17**	**16**	**19**	**26**	**19**	**19**
Silver	0.3 U	0.3 U	0.4 U	0.3 U	0.3 U	0.3 U
Zinc	**46**	**45**	**45**	**47**	**44**	**47**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.1 U	1 U	1.2 U	1.1 U	1.2 U	1 U
1,2-Dichloroethene, cis-	1.1 U	1 U	1.2 U	1.1 U	1.2 U	1 U
1,2-Dichloroethene, trans-	1.1 U	1 U	1.2 U	1.1 U	1.2 U	1 U
Benzene	1.1 U	1 U	1.2 U	1.1 U	**16**	1 U
Ethylbenzene	1.1 U	1 U	1.2 U	1.1 U	**2.6**	1 U
m,p-Xylene	1.1 U	1 U	1.2 U	1.1 U	**1.9**	1 U
o-Xylene	1.1 U	1 U	1.2 U	1.1 U	1.2 U	1 U
Toluene	1.1 U	1 U	1.2 U	1.1 U	**3.3**	1 U
Trichloroethene (TCE)	1.1 U	1 U	1.2 U	1.1 U	1.2 U	1 U
Vinyl chloride	1.1 U	1 U	1.2 U	1.1 U	1.2 U	1 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	1.1 UT	1 UT	1.2 UT	1.1 UT	**24 T**	1 UT
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.1 UT	1 UT	1.2 UT	1.1 UT	**2.5 T**	1 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	63 U	64 U	65 U	61 U	64 U	64 U
2-Methylnaphthalene	63 U	64 U	65 U	61 U	64 U	64 U
Acenaphthene	63 U	64 U	**76**	61 U	64 U	64 U
Acenaphthylene	63 U	64 U	65 U	61 U	64 U	64 U
Anthracene	63 U	64 U	65 U	61 U	64 U	64 U
Benzo(a)anthracene	63 U	64 U	65 U	61 U	64 U	64 U
Benzo(b,j,k)fluoranthenes	63 U	64 U	65 U	61 U	64 U	64 U
Benzo(a)pyrene	63 U	64 U	65 U	61 U	64 U	64 U
Benzo(g,h,i)perylene	63 U	64 U	65 UJ	61 U	64 U	64 UJ
Chrysene	63 U	64 U	65 U	61 U	64 U	64 U
Dibenzo(a,h)anthracene	63 U	64 U	65 U	61 U	64 U	64 U
Fluoranthene	63 U	64 U	65 U	61 U	64 U	64 U

Table 2-7d
Data Gaps Sub-surface Sediment (8-12 feet) Physical and Chemical Results

Location ID	DGS-25SC	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC
Sample ID	DGS-25SC-0812-101007	DGS-75SC-0812-101007	DGS-26SC-0811.3-101011	DGS-28SC-0809-101007	DGS-30SC-0812-101006	DGS-31SC-0812-101011
Sample Date	10/7/2010	10/7/2010	10/11/2010	10/7/2010	10/6/2010	10/11/2010
Depth	8 - 12 feet	8 - 12 feet	8 - 11.3 feet	8 - 9 feet	8 - 12 feet	8 - 12 feet
Sample Type	N	FD	N	N	N	N
Fluorene	63 U	64 U	65 U	61 U	64 U	64 U
Indeno(1,2,3-c,d)pyrene	63 U	64 U	65 U	61 U	64 U	64 U
Naphthalene	63 U	64 U	65 U	61 U	**67**	64 U
Perylene	63 U	64 U	65 U	61 U	64 U	64 U
Phenanthrene	63 U	64 U	**130**	61 U	**94**	64 U
Pyrene	63 U	64 U	65 U	61 U	64 U	64 U
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	63 UT	64 UT	65 UJT	61 UT	64 UT	64 UJT
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	63 UT	64 UT	**660 JT**	61 UT	**610 T**	64 UJT
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	63 UT	64 UT	**370 T**	61 UT	**320 T**	64 UT
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	63 UT	64 UT	65 UT	61 UT	64 UT	64 UT
Semivolatile Organics (µg/kg)						
Carbazole	63 U	64 U	65 U	61 U	64 U	64 U
Dibenzofuran	63 U	64 U	65 U	61 U	64 U	64 U
PCB Aroclors (µg/kg)						
Aroclor 1016	32 U	33 U	32 U	33 U	30 U	31 U
Aroclor 1221	32 U	33 U	32 UJ	33 U	30 U	31 UJ
Aroclor 1232	32 U	33 U	32 U	33 U	30 U	31 U
Aroclor 1242	32 U	33 U	32 U	33 U	30 U	31 U
Aroclor 1248	32 U	33 U	32 U	33 U	30 U	31 U
Aroclor 1254	32 U	33 U	32 U	33 U	30 U	31 U
Aroclor 1260	32 U	33 U	32 U	33 U	30 U	31 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	32 UT	33 UT	32 UJT	33 UT	30 UT	31 UJT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	3.3 U	3.2 U	3.3 U	3 U	3.1 U
2,4'-DDE (o,p'-DDE)	3.2 U	3.3 U	3.2 U	3.3 U	3 U	3.1 U
2,4'-DDT (o,p'-DDT)	3.2 U	3.3 U	3.2 U	3.3 U	3 U	3.1 U
4,4'-DDD (p,p'-DDD)	3.2 U	3.3 U	3.2 U	3.3 U	3 U	3.1 U
4,4'-DDE (p,p'-DDE)	3.2 U	3.3 U	3.2 U	3.3 U	3 U	3.1 U
4,4'-DDT (p,p'-DDT)	3.2 U	3.3 U	3.2 U	3.3 U	3 U	3.1 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
alpha-Chlordane (cis-Chlordane)	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
gamma-Chlordane (trans-Chlordane)	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
cis-Nonachlor	3.2 U	3.3 U	3.2 U	3.3 U	3 U	3.1 U
delta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
Dieldrin	3.2 U	3.3 U	3.2 U	3.3 U	3 U	3.1 U
Endrin	3.2 U	3.3 U	3.2 U	3.3 U	3 U	3.1 U
Endrin ketone	3.2 U	3.3 U	3.2 U	3.3 U	3 U	3.1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
Heptachlor epoxide	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
Oxychlordane	3.2 U	3.3 U	3.2 U	3.3 U	3 U	3.1 U
trans-Nonachlor	3.2 U	3.3 U	3.2 U	3.3 U	3 U	3.1 U
Hexachlorobenzene	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	3.3 UT	3.2 UT	3.3 UT	3 UT	3.1 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	3.3 UT	3.2 UT	3.3 UT	3 UT	3.1 UT
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	3.3 UT	3.2 UT	3.3 UT	3 UT	3.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	3.3 UT	3.2 UT	3.3 UT	3 UT	3.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	3.3 UT	3.2 UT	3.3 UT	3 UT	3.1 UT
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	3.3 UT	3.2 UT	3.3 UT	3 UT	3.1 UT

Table 2-7d
Data Gaps Sub-surface Sediment (8-12 feet) Physical and Chemical Results

Location ID	DGS-25SC	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC
Sample ID	DGS-25SC-0812-101007	DGS-75SC-0812-101007	DGS-26SC-0811.3-101011	DGS-28SC-0809-101007	DGS-30SC-0812-101006	DGS-31SC-0812-101011
Sample Date	10/7/2010	10/7/2010	10/11/2010	10/7/2010	10/6/2010	10/11/2010
Depth	8 - 12 feet	8 - 12 feet	8 - 11.3 feet	8 - 9 feet	8 - 12 feet	8 - 12 feet
Sample Type	N	FD	N	N	N	N
LWG RA Total Chlordane[1] (Calculated U = 1/2)	3.2 UT	3.3 UT	3.2 UT	3.3 UT	3 UT	3.1 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	5.6 U	5.7 U	6.5 UJ	6.2 U	5.8 U	5.9 UJ
Motor Oil Range	11 U	11 U	13 U	12 U	12 U	12 U
LWG RA Total Petroleum Hydrocarbons (TPH)[4] (Calculated U = 1/2)	11 UT	11 UT	13 UJT	12 UT	12 UT	12 UJT

Table 2-7d
Data Gaps Sub-surface Sediment (8-12 feet) Physical and Chemical Results

Location ID	DGS-32SC	DGS-36SC	DGS-37SC
Sample ID	DGS-32SC-0812-101011	DGS-36SC-0810-101012	DGS-37SC-0812-101011
Sample Date	10/11/2010	10/12/2010	10/11/2010
Depth	8 - 12 feet	8 - 10 feet	8 - 12 feet
Sample Type	N	N	N
Conventional Parameters (mg/kg)			
Cyanide, total	**1.72**	**3.26**	**2.87**
Conventional Parameters (percent)			
Moisture (water) content	**50.35**	**48.63**	**74.58**
Total organic carbon	**1.29**	**0.824**	**3.1**
Total solids	**66.6**	**68.3**	**57.6**
Grain Size (percent)			
Total Gravel	0.1 UT	0.1 UT	**0.2 T**
Total Sand	**47 T**	**26 T**	**6.8 T**
Total Silt	**40 T**	**64 T**	**66 T**
Total Clay	**13 T**	**9.9 T**	**27 T**
Total Fines (silt + clay)	**53 T**	**74 T**	**93 T**
Total Grain Size	**99.9 T**	**99.9 T**	**99.9 T**
Metals (mg/kg)			
Arsenic	7 U	20 U	8 U
Cadmium	**0.5**	0.7 U	**0.8**
Chromium	**28**	**33**	**37.8**
Copper	**33.9**	**34.7**	**53.7**
Lead	**17**	7 U	**34**
Mercury	**0.17**	**0.03 J**	**0.57**
Nickel	**26**	**29**	**31**
Silver	0.4 U	1 U	0.5 U
Zinc	**89**	**69**	**151**
Volatile Organics (µg/kg)			
1,1-Dichloroethene	1.4 U	1.3 U	1.6 U
1,2-Dichloroethene, cis-	1.4 U	1.3 U	1.6 U
1,2-Dichloroethene, trans-	1.4 U	1.3 U	1.6 U
Benzene	1.4 U	**2.8**	1.6 U
Ethylbenzene	**3.5**	1.3 U	1.6 U
m,p-Xylene	1.4 U	**1.4**	1.6 U
o-Xylene	**2.6**	1.3 U	1.6 U
Toluene	1.4 U	1.3 U	1.6 U
Trichloroethene (TCE)	1.4 U	1.3 U	1.6 U
Vinyl chloride	1.4 U	1.3 U	1.6 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	**8.2 T**	**6.2 T**	1.6 UT
LWG RA Total Xylene[8] (Calculated U = 1/2)	**3.3 T**	**2.1 T**	1.6 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)			
1-Methylnaphthalene	**4500**	**75**	**7600**
2-Methylnaphthalene	**5300**	**100**	**12000**
Acenaphthene	**8000**	**110**	**15000**
Acenaphthylene	**500**	58 U	**490**
Anthracene	**6800**	**74**	**10000**
Benzo(a)anthracene	**5500**	**78**	**8000**
Benzo(b,j,k)fluoranthenes	**6000**	**130**	**10000**
Benzo(a)pyrene	**6400**	**100**	**10000**
Benzo(g,h,i)perylene	**5100 J**	58 U	**8400 J**
Chrysene	**7400**	**100**	**11000**
Dibenzo(a,h)anthracene	**1100**	58 U	**1700**
Fluoranthene	**16000**	**290**	**29000**

Table 2-7d
Data Gaps Sub-surface Sediment (8-12 feet) Physical and Chemical Results

Location ID	DGS-32SC	DGS-36SC	DGS-37SC
Sample ID	DGS-32SC-0812-101011	DGS-36SC-0810-101012	DGS-37SC-0812-101011
Sample Date	10/11/2010	10/12/2010	10/11/2010
Depth	8 - 12 feet	8 - 10 feet	8 - 12 feet
Sample Type	N	N	N
Fluorene	**4800**	**63**	**9100**
Indeno(1,2,3-c,d)pyrene	**3300**	58 U	**5800**
Naphthalene	300 U	**960**	**500**
Perylene	**1500**	**360**	**2400**
Phenanthrene	**39000**	**430**	**67000**
Pyrene	**22000**	**350**	**42000 J**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**73000 JT**	**1100 T**	**130000 JT**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**140000 JT**	**2900 T**	**240000 JT**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**65000 T**	**1800 T**	**110000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**9000 T**	**150 T**	**14000 T**
Semivolatile Organics (µg/kg)			
Carbazole	**1300**	58 U	**1400**
Dibenzofuran	**620**	58 U	**1300**
PCB Aroclors (µg/kg)			
Aroclor 1016	31 U	32 U	33 U
Aroclor 1221	31 UJ	32 UJ	33 UJ
Aroclor 1232	31 U	32 U	33 U
Aroclor 1242	31 U	32 U	33 U
Aroclor 1248	31 U	32 U	33 U
Aroclor 1254	31 U	32 U	160 U
Aroclor 1260	31 U	32 U	**77**
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	31 UJT	32 UJT	**240 JT**
Pesticides (µg/kg)			
2,4'-DDD (o,p'-DDD)	16 U	3.2 U	**460**
2,4'-DDE (o,p'-DDE)	16 U	3.2 U	16 U
2,4'-DDT (o,p'-DDT)	16 U	3.2 U	16 U
4,4'-DDD (p,p'-DDD)	16 U	3.2 U	**1100**
4,4'-DDE (p,p'-DDE)	16 U	3.2 U	200 U
4,4'-DDT (p,p'-DDT)	16 U	3.2 U	**430**
alpha-Hexachlorocyclohexane (BHC)	7.7 U	1.6 U	8.3 U
alpha-Chlordane (cis-Chlordane)	7.7 U	1.6 U	8.3 U
beta-Hexachlorocyclohexane (BHC)	7.7 U	1.6 U	8.3 U
gamma-Chlordane (trans-Chlordane)	7.7 U	1.6 U	47 U
cis-Nonachlor	16 U	3.2 U	16 U
delta-Hexachlorocyclohexane (BHC)	7.7 U	1.6 U	8.3 U
Dieldrin	16 U	3.2 U	16 U
Endrin	16 U	3.2 U	16 U
Endrin ketone	16 U	3.2 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	7.7 U	1.6 U	8.3 U
Heptachlor epoxide	7.7 U	1.6 U	8.3 U
Oxychlordane	16 U	3.2 U	16 U
trans-Nonachlor	16 U	3.2 U	16 U
Hexachlorobenzene	7.7 U	1.6 U	8.3 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	3.2 UT	**480 T**
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	3.2 UT	**1600 T**
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	3.2 UT	**1600 T**
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	3.2 UT	200 UT
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	3.2 UT	**440 T**
LWG RA Total DDx (Calculated U = 1/2)	16 UT	3.2 UT	**2100 T**

Table 2-7d
Data Gaps Sub-surface Sediment (8-12 feet) Physical and Chemical Results

Location ID	DGS-32SC	DGS-36SC	DGS-37SC
Sample ID	DGS-32SC-0812-101011	DGS-36SC-0810-101012	DGS-37SC-0812-101011
Sample Date	10/11/2010	10/12/2010	10/11/2010
Depth	8 - 12 feet	8 - 10 feet	8 - 12 feet
Sample Type	N	N	N
LWG RA Total Chlordane[1] (Calculated U = 1/2)	16 UT	3.2 UT	47 UT
Total Petroleum Hydrocarbons (mg/kg)			
Diesel Range Hydrocarbons	**640 J**	7.3 UJ	**980 J**
Motor Oil Range	**740**	**28**	**1300**
LWG RA Total Petroleum Hydrocarbons (TPH)[4] (Calculated U = 1/2)	**1400 JT**	**32 JT**	**2300 JT**

Table 2-7d
Data Gaps Sub-surface Sediment (8-12 feet) Physical and Chemical Results

Notes:

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

T = calculation or summation applied

N = Normal Field Sample

FD = Field Duplicate

Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.

Significant figures applied to all calculated totals

Table contains validated data

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[5] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[6] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

[7] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

Acronyms

cPAH = carcinogenic PAH

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

HPAH = high molecular weight polycyclic aromatic hydrocarbon

LPAH = low-molecular-weight PAH

LWG = Lower Willamette Group

mg/kg = milligrams per kilograms

PAH = polycyclic aromatic hydrocarbon

PCBs = polychlorinated biphenyls

RA = Risk Assessment

TEQ = toxic equivalents quotient

TPH = Total Petroleum Hydrocarbons

µg/kg = micrograms per kilogram

VPH = volatile petroleum hydrocarbon

Table 2-7e
Data Gaps Sub-surface Sediment (12-16 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-06SC	DGS-07SC	DGS-11SC	DGS-13SC	DGS-19SC
Sample ID	DGS-03SC-1215.3-101005	DGS-06SC-1216-101007	DGS-07SC-1213.4-101012	DGS-11SC-1216-101006	DGS-13SC-1216-101005	DGS-19SC-1214.7-101006
Sample Date	10/5/2010	10/7/2010	10/12/2010	10/6/2010	10/5/2010	10/6/2010
Depth	12 - 15.3 feet	12 - 16 feet	12 - 13.4 feet	12 - 16 feet	12 - 16 feet	12 - 14.7 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	**0.464**	0.135 U	**1.39**	0.116 U	**0.202**	0.128 U
Conventional Parameters (percent)						
Moisture (water) content	**33.03**	**43.61**	**70.61**	**18.11**	**38**	**30.45**
Total organic carbon	**0.369**	**0.822**	**6.78**	**0.273**	**0.874**	**0.062**
Total solids	**74**	**71.6**	**57.7**	**84.8**	**70.4**	**76.1**
Grain Size (percent)						
Total Gravel	**0.1 T**	0.1 UT	0.1 UT	0.1 UT	0.1 UT	**0.2 T**
Total Sand	**89 T**	**84 T**	**9.4 T**	**96 T**	**74 T**	**96 T**
Total Silt	**1.3 T**	**16 T**	**58 T**	**4.3 T**	**14 T**	**3.7 T**
Total Clay	**9.9 T**	0.1 UT	**33 T**	0.1 UT	**11 T**	0.1 UT
Total Fines (silt + clay)	**11 T**	**16 T**	**91 T**	**4.3 T**	**26 T**	**3.7 T**
Total Grain Size	**100 T**	**99.8 T**	**100 T**	**100 T**	**100 T**	**100 T**
Metals (mg/kg)						
Arsenic	6 U	7 U	8 U	5 U	7 U	6 U
Cadmium	0.3 U	0.3 U	**0.9**	**0.3**	0.3 U	0.2 U
Chromium	**17.3 J**	**21.2**	**35.9**	**19.5**	**24.3 J**	**15.7**
Copper	**16.2 J**	**21.1**	**54.4**	**19.3**	**23.7 J**	**15.3**
Lead	3 UJ	3 U	**30**	**3**	3 UJ	2 U
Mercury	0.02 U	0.03 U	**0.31 J**	0.03 U	0.03 U	0.03 U
Nickel	**21 J**	**24**	**36**	**24**	**26 J**	**19**
Silver	0.4 U	0.4 U	**0.5**	0.3 U	0.4 U	0.4 U
Zinc	**49 J**	**54**	**159**	**49**	**56 J**	**46**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.2 U	1.2 U	120 UJ	1.1 U	1.3 U	1.2 U
1,2-Dichloroethene, cis-	1.2 U	1.2 U	120 U	1.1 U	1.3 U	1.2 U
1,2-Dichloroethene, trans-	1.2 U	1.2 U	120 U	1.1 U	1.3 U	1.2 U
Benzene	1.2 U	1.2 U	**420**	**1.6**	1.3 U	**19**
Ethylbenzene	1.2 U	1.2 U	**1800**	1.1 UJ	1.3 U	**1.4**
m,p-Xylene	1.2 U	1.2 U	**430**	1.1 UJ	1.3 U	1.2 U
o-Xylene	1.2 U	1.2 U	**760**	1.1 UJ	1.3 U	1.2 U
Toluene	1.2 U	1.2 U	120 U	1.1 UJ	1.3 U	**2.4**
Trichloroethene (TCE)	1.2 U	1.2 U	120 U	1.1 U	1.3 U	1.2 U
Vinyl chloride	1.2 U	1.2 U	120 U	1.1 U	1.3 U	1.2 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	1.2 UT	1.2 UT	**3500 T**	**3.8 JT**	1.3 UT	**24 T**
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.2 UT	1.2 UT	**1200 T**	1.1 UJT	1.3 UT	1.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	65 U	66 U	**48000**	62 U	61 U	**190**
2-Methylnaphthalene	65 U	66 U	**82000**	62 U	61 U	61 U
Acenaphthene	65 U	66 U	**71000**	62 U	61 U	**250**
Acenaphthylene	65 U	66 U	**1600**	62 U	61 U	61 U
Anthracene	65 U	66 U	**66000**	62 U	61 U	**110**
Benzo(a)anthracene	65 U	66 U	**47000**	62 U	61 U	61 U
Benzo(b,j,k)fluoranthenes	65 U	66 U	**59000**	62 U	61 U	61 U
Benzo(a)pyrene	65 U	66 U	**59000**	62 U	61 U	61 U
Benzo(g,h,i)perylene	65 U	66 U	**15000**	62 U	61 U	61 U
Chrysene	65 U	66 U	**53000**	62 U	61 U	61 U
Dibenzo(a,h)anthracene	65 U	66 U	**720**	62 U	61 U	61 U
Fluoranthene	65 U	66 U	**170000**	62 U	61 U	**200**

Table 2-7e
Data Gaps Sub-surface Sediment (12-16 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-06SC	DGS-07SC	DGS-11SC	DGS-13SC	DGS-19SC
Sample ID	DGS-03SC-1215.3-101005	DGS-06SC-1216-101007	DGS-07SC-1213.4-101012	DGS-11SC-1216-101006	DGS-13SC-1216-101005	DGS-19SC-1214.7-101006
Sample Date	10/5/2010	10/7/2010	10/12/2010	10/6/2010	10/5/2010	10/6/2010
Depth	12 - 15.3 feet	12 - 16 feet	12 - 13.4 feet	12 - 16 feet	12 - 16 feet	12 - 14.7 feet
Sample Type	N	N	N	N	N	N
Fluorene	65 U	66 U	**44000**	62 U	61 U	**150**
Indeno(1,2,3-c,d)pyrene	65 U	66 U	**13000**	62 U	61 U	61 U
Naphthalene	65 U	66 U	**160000**	**74**	61 U	61 U
Perylene	65 U	66 U	**13000**	62 U	61 U	61 U
Phenanthrene	65 U	66 U	**270000**	**70**	61 U	**930**
Pyrene	65 U	66 U	**220000**	62 U	61 U	**210**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	65 UT	66 UT	**690000 T**	**300 T**	61 UT	**1500 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	65 UT	66 UT	**640000 T**	62 UT	61 UT	**620 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	65 UT	66 UT	**1300000 T**	**580 T**	61 UT	**2200 T**
LWG RA Total cPAH TEQ[6] (EPA 1993) (Calculated U = 1/2)	65 UT	66 UT	**72000 T**	62 UT	61 UT	61 UT
Semivolatile Organics (µg/kg)						
Carbazole	65 U	66 U	**3200**	62 U	61 U	61 U
Dibenzofuran	65 U	66 U	**4600**	62 U	61 U	61 U
PCB Aroclors (µg/kg)						
Aroclor 1016	33 U	33 U	33 U	31 U	32 U	31 U
Aroclor 1221	33 U	33 U	33 UJ	31 U	32 U	31 U
Aroclor 1232	33 U	33 U	33 U	31 U	32 U	31 U
Aroclor 1242	33 U	33 U	33 U	31 U	32 U	31 U
Aroclor 1248	33 U	33 U	33 U	31 U	32 U	31 U
Aroclor 1254	33 U	33 U	41 U	31 U	32 U	31 U
Aroclor 1260	33 U	33 U	**66**	31 U	32 U	31 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	33 UT	33 UT	**170 JT**	31 UT	32 UT	31 UT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.3 U	3.3 U	16 U	3.2 U	3.3 U	3.1 U
2,4'-DDE (o,p'-DDE)	3.3 U	3.3 U	16 U	3.2 U	3.3 U	3.1 U
2,4'-DDT (o,p'-DDT)	3.3 U	3.3 U	16 U	3.2 U	3.3 U	3.1 U
4,4'-DDD (p,p'-DDD)	3.3 U	3.3 U	16 U	3.2 U	3.3 U	3.1 U
4,4'-DDE (p,p'-DDE)	3.3 U	3.3 U	16 U	3.2 U	3.3 U	3.1 U
4,4'-DDT (p,p'-DDT)	3.3 U	3.3 U	16 U	3.2 U	3.3 U	3.1 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	8 U	1.6 U	1.6 U	1.5 U
alpha-Chlordane (cis-Chlordane)	1.6 U	1.6 U	8 U	1.6 U	1.6 U	1.5 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	8 U	1.6 U	1.6 U	1.5 U
beta-Chlordane (trans-Chlordane)	1.6 U	1.6 U	17 U	1.6 U	1.6 U	1.5 U
cis-Nonachlor	3.3 U	3.3 U	16 U	3.2 U	3.3 U	3.1 U
delta-Hexachlorocyclohexane (BHC)	1.6 UJ	1.6 U	8 U	1.6 U	1.6 UJ	1.5 U
Dieldrin	3.3 U	3.3 U	16 U	3.2 U	3.3 U	3.1 U
Endrin	3.3 U	3.3 U	16 U	3.2 U	3.3 U	3.1 U
Endrin ketone	3.3 U	3.3 U	16 U	3.2 U	3.3 U	3.1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.6 U	8 U	1.6 U	1.6 U	1.5 U
Heptachlor epoxide	1.6 U	1.6 U	8 U	1.6 U	1.6 U	1.5 U
Oxychlordane	3.3 U	3.3 U	16 U	3.2 U	3.3 U	3.1 U
trans-Nonachlor	3.3 U	3.3 U	16 U	3.2 U	3.3 U	3.1 U
Hexachlorobenzene	1.6 U	1.6 U	8 U	1.6 U	1.6 U	1.5 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.3 UT	3.3 UT	16 UT	3.2 UT	3.3 UT	3.1 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.3 UT	3.3 UT	16 UT	3.2 UT	3.3 UT	3.1 UT
LWG RA Sum DDD (Calculated U = 1/2)	3.3 UT	3.3 UT	16 UT	3.2 UT	3.3 UT	3.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.3 UT	3.3 UT	16 UT	3.2 UT	3.3 UT	3.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.3 UT	3.3 UT	16 UT	3.2 UT	3.3 UT	3.1 UT
LWG RA Total DDx (Calculated U = 1/2)	3.3 UT	3.3 UT	16 UT	3.2 UT	3.3 UT	3.1 UT

Table 2-7e
Data Gaps Sub-surface Sediment (12-16 feet) Physical and Chemical Results

Location ID	DGS-03SC	DGS-06SC	DGS-07SC	DGS-11SC	DGS-13SC	DGS-19SC
Sample ID	DGS-03SC-1215.3-101005	DGS-06SC-1216-101007	DGS-07SC-1213.4-101012	DGS-11SC-1216-101006	DGS-13SC-1216-101005	DGS-19SC-1214.7-101006
Sample Date	10/5/2010	10/7/2010	10/12/2010	10/6/2010	10/5/2010	10/6/2010
Depth	12 - 15.3 feet	12 - 16 feet	12 - 13.4 feet	12 - 16 feet	12 - 16 feet	12 - 14.7 feet
Sample Type	N	N	N	N	N	N
LWG RA Total Chlordane[1] (Calculated U = 1/2)	3.3 UT	3.3 UT	17 UT	3.2 UT	3.3 UT	3.1 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6.6 U	6.6 U	**3400 J**	5.9 U	6.9 U	6.2 U
Motor Oil Range	13 U	13 U	**3300**	12 U	14 U	12 U
LWG RA Total Petroleum Hydrocarbons (TPH)[4] (Calculated U = 1/2)	13 UT	13 UT	**6700 JT**	12 UT	14 UT	12 UT

Table 2-7e
Data Gaps Sub-surface Sediment (12-16 feet) Physical and Chemical Results

Location ID	DGS-20SC	DGS-22SC	DGS-23SC	DGS-25SC	DGS-30SC	DGS-31SC
Sample ID	DGS-20SC-1213.7-101008	DGS-22SC-1213.3-101012	DGS-23SC-1214.4-101008	DGS-25SC-1214.5-101007	DGS-30SC-1213.9-101006	DGS-31SC-1215.5-101011
Sample Date	10/8/2010	10/12/2010	10/8/2010	10/7/2010	10/6/2010	10/11/2010
Depth	12 - 13.7 feet	12 - 13.3 feet	12 - 14.4 feet	12 - 14.5 feet	12 - 13.9 feet	12 - 15.5 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	0.122 U	**0.302**	0.129 U	0.128 U	0.121 U	0.12 U
Conventional Parameters (percent)						
Moisture (water) content	**26.5**	**61.85**	**34.39**	**30.57**	**24.89**	**34.11**
Total organic carbon	**0.042**	**2.8**	**0.133**	**0.085**	**0.198**	**0.061**
Total solids	**80.4**	**61.3**	**76.6**	**77.2**	**80.8**	**81.3**
Grain Size (percent)						
Total Gravel	0.1 UT	**0.1 T**	0.1 UT	0.1 UT	**0.1 T**	0.1 UT
Total Sand	**97 T**	**30 T**	**97 T**	**97 T**	**95 T**	**94 T**
Total Silt	**2 T**	**41 T**	**2.5 T**	**2.9 T**	**4.4 T**	**1.9 T**
Total Clay	**0.5 T**	**29 T**	**1 T**	0.1 UT	0.1 UT	**3.9 T**
Total Fines (silt + clay)	**2.5 T**	**70 T**	**3.5 T**	**2.9 T**	**4.4 T**	**5.8 T**
Total Grain Size	**99.9 T**	**100 T**	**100 T**	**100 T**	**99.9 T**	**99.9 T**
Metals (mg/kg)						
Arsenic	6 U	8 U	7 U	6 U	6 U	6 U
Cadmium	0.2 U	**0.5**	**0.3**	**0.3**	0.2 U	**0.2**
Chromium	**15.9**	**33.3**	**18**	**17.5**	**17**	**17.6**
Copper	**15.6**	**41**	**17.1**	**17.1**	**16**	**16.2**
Lead	2 U	**20**	3 U	2 U	2 U	2 U
Mercury	0.02 U	**0.21 J**	0.02 U	0.03 U	0.02 U	0.02 U
Nickel	**18**	**29**	**22**	**21**	**19**	**21**
Silver	0.4 U	0.5 U	0.4 U	0.4 U	0.4 U	0.3 U
Zinc	**55**	**97**	**48**	**50**	**45**	**47**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.2 U	1.6 U	1.3 U	1.1 U	1.2 U	1.2 U
1,2-Dichloroethene, cis-	1.2 U	1.6 U	1.3 U	1.1 U	1.2 U	1.2 U
1,2-Dichloroethene, trans-	1.2 U	1.6 U	1.3 U	1.1 U	1.2 U	1.2 U
Benzene	1.2 U	1.6 U	1.3 U	1.1 U	**5.8**	1.2 U
Ethylbenzene	1.2 U	1.6 U	1.3 U	1.1 U	1.2 U	1.2 U
m,p-Xylene	1.2 U	**2.2**	1.3 U	1.1 U	1.2 U	1.2 U
o-Xylene	1.2 U	1.6 U	1.3 U	1.1 U	1.2 U	1.2 U
Toluene	1.2 U	1.6 U	1.3 U	1.1 U	1.2 U	1.2 U
Trichloroethene (TCE)	1.2 U	1.6 U	1.3 U	1.1 U	1.2 U	1.2 U
Vinyl chloride	1.2 U	1.6 U	1.3 U	1.1 U	1.2 U	1.2 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	1.2 UT	**5.4 T**	1.3 UT	1.1 UT	**8.2 T**	1.2 UT
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.2 UT	**3 T**	1.3 UT	1.1 UT	1.2 UT	1.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	65 U	**290**	63 U	66 U	63 U	61 U
2-Methylnaphthalene	65 U	**250**	63 U	66 U	63 U	61 U
Acenaphthene	65 U	**3100**	63 U	66 U	63 U	61 U
Acenaphthylene	65 U	**260**	63 U	66 U	63 U	61 U
Anthracene	65 U	**3800**	63 U	66 U	63 U	61 U
Benzo(a)anthracene	65 U	**4900**	63 U	66 U	63 U	61 U
Benzo(b,j,k)fluoranthenes	65 U	**9100**	63 U	66 U	63 U	61 U
Benzo(a)pyrene	65 U	**7800**	63 U	66 U	63 U	61 U
Benzo(g,h,i)perylene	65 U	**3600**	63 U	66 U	63 U	61 UJ
Chrysene	65 U	**6100**	63 U	66 U	63 U	61 U
Dibenzo(a,h)anthracene	65 U	180 U	63 U	66 U	63 U	61 U
Fluoranthene	65 U	**18000**	63 U	66 U	63 U	61 U

Table 2-7e
Data Gaps Sub-surface Sediment (12-16 feet) Physical and Chemical Results

Location ID	DGS-20SC	DGS-22SC	DGS-23SC	DGS-25SC	DGS-30SC	DGS-31SC
Sample ID	DGS-20SC-1213.7-101008	DGS-22SC-1213.3-101012	DGS-23SC-1214.4-101008	DGS-25SC-1214.5-101007	DGS-30SC-1213.9-101006	DGS-31SC-1215.5-101011
Sample Date	10/8/2010	10/12/2010	10/8/2010	10/7/2010	10/6/2010	10/11/2010
Depth	12 - 13.7 feet	12 - 13.3 feet	12 - 14.4 feet	12 - 14.5 feet	12 - 13.9 feet	12 - 15.5 feet
Sample Type	N	N	N	N	N	N
Fluorene	65 U	**1200**	63 U	66 U	63 U	61 U
Indeno(1,2,3-c,d)pyrene	65 U	**2800**	63 U	66 U	63 U	61 U
Naphthalene	65 U	**720**	63 U	66 U	63 U	61 U
Perylene	65 U	**2300**	63 U	66 U	63 U	61 U
Phenanthrene	65 U	**17000**	63 U	66 U	63 U	61 U
Pyrene	65 UJ	**24000**	63 UJ	66 U	63 U	61 U
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	65 UT	**26000 T**	63 UT	66 UT	63 UT	61 UT
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	65 UJT	**76000 T**	63 UJT	66 UT	63 UT	61 UJT
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	65 UJT	**100000 T**	63 UJT	66 UT	63 UT	61 UJT
LWG RA Total cPAH TEQ[6] (EPA 1993) (Calculated U = 1/2)	65 UT	**9600 T**	63 UT	66 UT	63 UT	61 UT
Semivolatile Organics (µg/kg)						
Carbazole	65 U	180 U	63 U	66 U	63 U	61 U
Dibenzofuran	65 U	180 U	63 U	66 U	63 U	61 U
PCB Aroclors (µg/kg)						
Aroclor 1016	33 U	32 U	32 U	32 U	30 U	33 U
Aroclor 1221	33 U	32 UJ	32 U	32 U	30 U	33 UJ
Aroclor 1232	33 U	32 U	32 U	32 U	30 U	33 U
Aroclor 1242	33 U	32 U	32 U	32 U	30 U	33 U
Aroclor 1248	33 U	32 U	32 U	32 U	30 U	33 U
Aroclor 1254	33 U	32 U	32 U	32 U	30 U	33 U
Aroclor 1260	33 U	32 U	32 U	32 U	30 U	33 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	33 UT	32 UJT	32 UT	32 UT	30 UT	33 UJT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.3 U	16 U	3.2 U	3.3 U	3 U	3.2 U
2,4'-DDE (o,p'-DDE)	3.3 U	16 U	3.2 U	3.3 U	3 U	3.2 U
2,4'-DDT (o,p'-DDT)	3.3 U	16 U	3.2 U	3.3 U	3 U	3.2 U
4,4'-DDD (p,p'-DDD)	3.3 U	16 U	3.2 U	3.3 U	3 U	3.2 U
4,4'-DDE (p,p'-DDE)	3.3 U	16 U	3.2 U	3.3 U	3 U	3.2 U
4,4'-DDT (p,p'-DDT)	3.3 U	16 U	3.2 U	3.3 U	3 U	3.2 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	8 U	1.6 U	1.6 U	1.5 U	1.6 U
alpha-Chlordane (cis-Chlordane)	1.6 U	8 U	1.6 U	1.6 U	1.5 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	8 U	1.6 U	1.6 U	1.5 U	1.6 U
beta-Chlordane (trans-Chlordane)	1.6 U	8 U	1.6 U	1.6 U	1.5 U	1.6 U
cis-Nonachlor	3.3 U	16 U	3.2 U	3.3 U	3 U	3.2 U
delta-Hexachlorocyclohexane (BHC)	1.6 U	8 U	1.6 U	1.6 U	1.5 U	1.6 U
Dieldrin	3.3 U	16 U	3.2 U	3.3 U	3 U	3.2 U
Endrin	3.3 U	16 U	3.2 U	3.3 U	3 U	3.2 U
Endrin ketone	3.3 U	16 U	3.2 U	3.3 U	3 U	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	8 U	1.6 U	1.6 U	1.5 U	1.6 U
Heptachlor epoxide	1.6 U	8 U	1.6 U	1.6 U	1.5 U	1.6 U
Oxychlordane	3.3 U	16 U	3.2 U	3.3 U	3 U	3.2 U
trans-Nonachlor	3.3 U	16 U	3.2 U	3.3 U	3 U	3.2 U
Hexachlorobenzene	1.6 U	8 U	1.6 U	1.6 U	1.5 U	1.6 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.3 UT	16 UT	3.2 UT	3.3 UT	3 UT	3.2 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.3 UT	16 UT	3.2 UT	3.3 UT	3 UT	3.2 UT
LWG RA Sum DDD (Calculated U = 1/2)	3.3 UT	16 UT	3.2 UT	3.3 UT	3 UT	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.3 UT	16 UT	3.2 UT	3.3 UT	3 UT	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.3 UT	16 UT	3.2 UT	3.3 UT	3 UT	3.2 UT
LWG RA Total DDx (Calculated U = 1/2)	3.3 UT	16 UT	3.2 UT	3.3 UT	3 UT	3.2 UT

Table 2-7e
Data Gaps Sub-surface Sediment (12-16 feet) Physical and Chemical Results

Location ID	DGS-20SC	DGS-22SC	DGS-23SC	DGS-25SC	DGS-30SC	DGS-31SC
Sample ID	DGS-20SC-1213.7-101008	DGS-22SC-1213.3-101012	DGS-23SC-1214.4-101008	DGS-25SC-1214.5-101007	DGS-30SC-1213.9-101006	DGS-31SC-1215.5-101011
Sample Date	10/8/2010	10/12/2010	10/8/2010	10/7/2010	10/6/2010	10/11/2010
Depth	12 - 13.7 feet	12 - 13.3 feet	12 - 14.4 feet	12 - 14.5 feet	12 - 13.9 feet	12 - 15.5 feet
Sample Type	N	N	N	N	N	N
LWG RA Total Chlordane[1] (Calculated U = 1/2)	3.3 UT	16 UT	3.2 UT	3.3 UT	3 UT	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6.6 U	**440 J**	7 U	6.6 U	6.2 U	6.1 UJ
Motor Oil Range	13 U	**920**	14 U	13 U	12 U	12 U
LWG RA Total Petroleum Hydrocarbons (TPH)[4] (Calculated U = 1/2)	13 UT	**1400 JT**	14 UT	13 UT	12 UT	12 UJT

Table 2-7e
Data Gaps Sub-surface Sediment (12-16 feet) Physical and Chemical Results

Location ID	DGS-32SC	DGS-37SC
Sample ID	DGS-32SC-1213.6-101011	DGS-37SC-1216-101011
Sample Date	10/11/2010	10/11/2010
Depth	12 - 13.6 feet	12 - 16 feet
Sample Type	N	N
Conventional Parameters (mg/kg)		
Cyanide, total	**0.216**	**1.42**
Conventional Parameters (percent)		
Moisture (water) content	**33.95**	**73.75**
Total organic carbon	**0.243**	**5.41**
Total solids	**76.6**	**57.2**
Grain Size (percent)		
Total Gravel	0.1 UT	**0.3 T**
Total Sand	**91 T**	**12 T**
Total Silt	**4.4 T**	**60 T**
Total Clay	**4.5 T**	**28 T**
Total Fines (silt + clay)	**8.9 T**	**88 T**
Total Grain Size	**100 T**	**100 T**
Metals (mg/kg)		
Arsenic	6 U	9 U
Cadmium	0.3 U	**0.9**
Chromium	**18.5**	**40.9**
Copper	**16.9**	**54.6**
Lead	3 U	**31**
Mercury	0.03 U	**0.28**
Nickel	**22**	**31**
Silver	0.4 U	**0.6**
Zinc	**47**	**177**
Volatile Organics (µg/kg)		
1,1-Dichloroethene	1.2 U	1.6 U
1,2-Dichloroethene, cis-	1.2 U	1.6 U
1,2-Dichloroethene, trans-	1.2 U	1.6 U
Benzene	1.2 U	1.6 U
Ethylbenzene	1.2 U	1.6 U
m,p-Xylene	1.2 U	1.6 U
o-Xylene	1.2 U	1.6 U
Toluene	1.2 U	1.6 U
Trichloroethene (TCE)	1.2 U	1.6 U
Vinyl chloride	1.2 U	1.6 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	1.2 UT	1.6 UT
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.2 UT	1.6 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)		
1-Methylnaphthalene	65 U	**2000**
2-Methylnaphthalene	65 U	**2100**
Acenaphthene	65 U	**4300**
Acenaphthylene	65 U	**370**
Anthracene	65 U	**7700**
Benzo(a)anthracene	65 U	**10000**
Benzo(b,j,k)fluoranthenes	65 U	**16000**
Benzo(a)pyrene	65 U	**16000**
Benzo(g,h,i)perylene	65 UJ	**14000 J**
Chrysene	65 U	**14000**
Dibenzo(a,h)anthracene	65 U	**2400**
Fluoranthene	65 U	**34000**

Table 2-7e
Data Gaps Sub-surface Sediment (12-16 feet) Physical and Chemical Results

Location ID	DGS-32SC	DGS-37SC
Sample ID	DGS-32SC-1213.6-101011	DGS-37SC-1216-101011
Sample Date	10/11/2010	10/11/2010
Depth	12 - 13.6 feet	12 - 16 feet
Sample Type	N	N
Fluorene	65 U	**3800**
Indeno(1,2,3-c,d)pyrene	65 U	**9300**
Naphthalene	65 U	**450**
Perylene	65 U	**3900**
Phenanthrene	65 U	**48000**
Pyrene	65 U	**50000 J**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	65 UT	**67000 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	65 UJT	**170000 JT**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	65 UJT	**230000 JT**
LWG RA Total cPAH TEQ[6] (EPA 1993) (Calculated U = 1/2)	65 UT	**22000 T**
Semivolatile Organics (µg/kg)		
Carbazole	65 U	310 U
Dibenzofuran	65 U	**420**
PCB Aroclors (µg/kg)		
Aroclor 1016	32 U	32 U
Aroclor 1221	32 UJ	32 UJ
Aroclor 1232	32 U	48 U
Aroclor 1242	32 U	32 U
Aroclor 1248	32 U	32 U
Aroclor 1254	32 U	**47**
Aroclor 1260	32 U	**44**
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	32 UJT	**180 JT**
Pesticides (µg/kg)		
2,4'-DDD (o,p'-DDD)	3.3 U	16 U
2,4'-DDE (o,p'-DDE)	3.3 U	16 U
2,4'-DDT (o,p'-DDT)	3.3 U	16 U
4,4'-DDD (p,p'-DDD)	3.3 U	16 U
4,4'-DDE (p,p'-DDE)	3.3 U	16 U
4,4'-DDT (p,p'-DDT)	3.3 U	16 U
alpha-Hexachlorocyclohexane (BHC)	1.7 U	7.9 U
alpha-Chlordane (cis-Chlordane)	1.7 U	7.9 U
beta-Hexachlorocyclohexane (BHC)	1.7 U	7.9 U
beta-Chlordane (trans-Chlordane)	1.7 U	7.9 U
cis-Nonachlor	3.3 U	16 U
delta-Hexachlorocyclohexane (BHC)	1.7 U	7.9 U
Dieldrin	3.3 U	16 U
Endrin	3.3 U	16 U
Endrin ketone	3.3 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.7 U	7.9 U
Heptachlor epoxide	1.7 U	7.9 U
Oxychlordane	3.3 U	16 U
trans-Nonachlor	3.3 U	16 U
Hexachlorobenzene	1.7 U	7.9 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.3 UT	16 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.3 UT	16 UT
LWG RA Sum DDD (Calculated U = 1/2)	3.3 UT	16 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.3 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.3 UT	16 UT
LWG RA Total DDx (Calculated U = 1/2)	3.3 UT	16 UT

Table 2-7e
Data Gaps Sub-surface Sediment (12-16 feet) Physical and Chemical Results

Location ID	DGS-32SC	DGS-37SC
Sample ID	DGS-32SC-1213.6-101011	DGS-37SC-1216-101011
Sample Date	10/11/2010	10/11/2010
Depth	12 - 13.6 feet	12 - 16 feet
Sample Type	N	N
LWG RA Total Chlordane[1] (Calculated U = 1/2)	3.3 UT	16 UT
Total Petroleum Hydrocarbons (mg/kg)		
Diesel Range Hydrocarbons	6.6 UJ	**1100 J**
Motor Oil Range	13 U	**1700**
LWG RA Total Petroleum Hydrocarbons (TPH)[4] (Calculated U = 1/2)	13 UJT	**2800 JT**

Table 2-7e
Data Gaps Sub-surface Sediment (12-16 feet) Physical and Chemical Results

Notes:

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

T = calculation or summation applied

N = Normal Field Sample

Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.

Significant figures applied to all calculated totals

Table contains validated data

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[5] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[6] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

[7] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

Acronyms

cPAH = carcinogenic PAH

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

HPAH = high molecular weight polycyclic aromatic hydrocarbon

LPAH = low-molecular-weight PAH

LWG = Lower Willamette Group

mg/kg = milligrams per kilograms

PAH = polycyclic aromatic hydrocarbon

PCBs = polychlorinated biphenyls

RA = Risk Assessment

TEQ = toxic equivalents quotient

TPH = Total Petroleum Hydrocarbons

µg/kg = micrograms per kilogram

VPH = volatile petroleum hydrocarbon

Table 2-7f
Data Gaps Sub-surface Sediment (16 feet- End of Core) Physical and Chemical Results

Location ID	DGS-06SC	DGS-11SC	DGS-13SC	DGS-37SC
Sample ID	DGS-06SC-1616.6-101007	DGS-11SC-1617.5-101006	DGS-13SC-1617-101005	DGS-37SC-1619-101011
Sample Date	10/7/2010	10/6/2010	10/5/2010	10/11/2010
Depth	16 - 16.6 feet	16 - 17.5 feet	16 - 17 feet	16 - 19 feet
Sample Type	N	N	N	N
Conventional Parameters (mg/kg)				
Cyanide, total	0.152 U	0.131 U	**0.133**	**0.299**
Conventional Parameters (percent)				
Moisture (water) content	**47.98**	**33.18**	**31.46**	**67.04**
Total organic carbon	**0.846**	**0.463**	**0.073**	**2.15**
Total solids	**65.2**	**74.9**	**76.7**	**60.9**
Grain Size (percent)				
Total Gravel	0.1 UT	0.1 UT	0.1 UT	**0.3 T**
Total Sand	**33 T**	**92 T**	**91 T**	**7.4 T**
Total Silt	**64 T**	**7.7 T**	**0.8 T**	**64 T**
Total Clay	**3.6 T**	0.1 UT	**7.7 T**	**28 T**
Total Fines (silt + clay)	**67 T**	**7.7 T**	**8.5 T**	**92 T**
Total Grain Size	**99.9 T**	**99.9 T**	**99.9 T**	**100 T**
Metals (mg/kg)				
Arsenic	7 U	6 U	6 U	8 U
Cadmium	**0.3**	**0.3**	**0.2**	**0.7**
Chromium	**29.2**	**24.9**	**19.8 J**	**31.9**
Copper	**33.1**	**21**	**16.5 J**	**45.3**
Lead	**4**	3 U	2 UJ	**28**
Mercury	**0.04**	0.03 U	0.02 U	**0.25**
Nickel	**27**	**29**	**26 J**	**26**
Silver	0.4 U	0.4 U	0.4 U	0.5 U
Zinc	**61**	**54**	**47 J**	**131**
Volatile Organics (µg/kg)				
1,1-Dichloroethene	1.4 U	1.3 U	1.1 U	1.6 U
1,2-Dichloroethene, cis-	1.4 U	1.3 U	1.1 U	1.6 U
1,2-Dichloroethene, trans-	1.4 U	1.3 U	1.1 U	1.6 U
Benzene	1.4 U	**19**	1.1 U	1.6 U
Ethylbenzene	1.4 U	**2.8**	1.1 U	1.6 U
m,p-Xylene	1.4 U	**2**	1.1 U	1.6 U
o-Xylene	1.4 U	1.3 U	1.1 U	1.6 U
Toluene	1.4 U	**3.9**	1.1 U	1.6 U
Trichloroethene (TCE)	1.4 U	1.3 U	1.1 U	1.6 U
Vinyl chloride	1.4 U	1.3 U	1.1 U	1.6 U
LWG RA Total BTEX[5] (Calculated U = 1/2)	1.4 UT	**28 T**	1.1 UT	1.6 UT
LWG RA Total Xylene[8] (Calculated U = 1/2)	1.4 UT	**2.7 T**	1.1 UT	1.6 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)				
1-Methylnaphthalene	60 U	61 U	64 U	310 U
2-Methylnaphthalene	60 U	61 U	64 U	310 U
Acenaphthene	60 U	61 U	64 U	**1600**
Acenaphthylene	60 U	61 U	64 U	310 U
Anthracene	60 U	61 U	64 U	**2000**
Benzo(a)anthracene	60 U	61 U	64 U	**3000**
Benzo(b,j,k)fluoranthenes	60 U	61 U	64 U	**4400**
Benzo(a)pyrene	60 U	61 U	64 U	**4200**
Benzo(g,h,i)perylene	60 U	61 U	64 U	**3700 J**
Chrysene	60 U	61 U	64 U	**3800**
Dibenzo(a,h)anthracene	60 U	61 U	64 U	**740**
Fluoranthene	60 U	61 U	64 U	**8900**

Table 2-7f
Data Gaps Sub-surface Sediment (16 feet- End of Core) Physical and Chemical Results

Location ID	DGS-06SC	DGS-11SC	DGS-13SC	DGS-37SC
Sample ID	DGS-06SC-1616.6-101007	DGS-11SC-1617.5-101006	DGS-13SC-1617-101005	DGS-37SC-1619-101011
Sample Date	10/7/2010	10/6/2010	10/5/2010	10/11/2010
Depth	16 - 16.6 feet	16 - 17.5 feet	16 - 17 feet	16 - 19 feet
Sample Type	N	N	N	N
Fluorene	60 U	61 U	64 U	**940**
Indeno(1,2,3-c,d)pyrene	60 U	61 U	64 U	**2600**
Naphthalene	60 U	61 U	64 U	310 U
Perylene	**110**	61 U	64 U	**1200**
Phenanthrene	60 U	61 U	64 U	**10000**
Pyrene	60 U	61 U	64 U	**12000**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	60 UT	61 UT	64 UT	**43000 JT**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	60 UT	61 UT	64 UT	**58000 JT**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	60 UT	61 UT	64 UT	**15000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	60 UT	61 UT	64 UT	**5900 T**
Semivolatile Organics (µg/kg)				
Carbazole	60 U	61 U	64 U	310 U
Dibenzofuran	60 U	61 U	64 U	310 U
PCB Aroclors (µg/kg)				
Aroclor 1016	32 U	30 U	32 U	32 U
Aroclor 1221	32 U	30 U	32 U	32 UJ
Aroclor 1232	32 U	30 U	32 U	32 U
Aroclor 1242	32 U	30 U	32 U	32 U
Aroclor 1248	32 U	30 U	32 U	32 U
Aroclor 1254	32 U	30 U	32 U	32 U
Aroclor 1260	32 U	30 U	32 U	32 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	32 UT	30 UT	32 UT	32 UJT
Pesticides (µg/kg)				
2,4'-DDD (o,p'-DDD)	3.2 U	3 U	3.2 U	16 U
2,4'-DDE (o,p'-DDE)	3.2 U	3 U	3.2 U	16 U
2,4'-DDT (o,p'-DDT)	3.2 U	3 U	3.2 U	16 U
4,4'-DDD (p,p'-DDD)	3.2 U	3 U	3.2 U	16 U
4,4'-DDE (p,p'-DDE)	3.2 U	3 U	3.2 U	16 U
4,4'-DDT (p,p'-DDT)	3.2 U	3 U	3.2 U	16 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.5 U	1.6 U	8 U
alpha-Chlordane (cis-Chlordane)	1.6 U	1.5 U	1.6 U	8 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.5 U	1.6 U	8 U
gamma-Chlordane (trans-Chlordane)	1.6 U	1.5 U	1.6 U	8 U
cis-Nonachlor	3.2 U	3 U	3.2 U	16 U
delta-Hexachlorocyclohexane (BHC)	1.6 U	1.5 U	1.6 UJ	8 U
Dieldrin	3.2 U	3 U	3.2 U	16 U
Endrin	3.2 U	3 U	3.2 U	16 U
Endrin ketone	3.2 U	3 U	3.2 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.5 U	1.6 U	8 U
Heptachlor epoxide	1.6 U	1.5 U	1.6 U	8 U
Oxychlordane	3.2 U	3 U	3.2 U	16 U
trans-Nonachlor	3.2 U	3 U	3.2 U	16 U
Hexachlorobenzene	1.6 U	1.5 U	1.6 U	8 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	3 UT	3.2 UT	16 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	3 UT	3.2 UT	16 UT
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	3 UT	3.2 UT	16 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	3 UT	3.2 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	3 UT	3.2 UT	16 UT
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	3 UT	3.2 UT	16 UT
LWG RA Total Chlordane[1] (Calculated U = 1/2)	3.2 UT	3 UT	3.2 UT	16 UT

Table 2-7f
Data Gaps Sub-surface Sediment (16 feet- End of Core) Physical and Chemical Results

Location ID	DGS-06SC	DGS-11SC	DGS-13SC	DGS-37SC
Sample ID	DGS-06SC-1616.6-101007	DGS-11SC-1617.5-101006	DGS-13SC-1617-101005	DGS-37SC-1619-101011
Sample Date	10/7/2010	10/6/2010	10/5/2010	10/11/2010
Depth	16 - 16.6 feet	16 - 17.5 feet	16 - 17 feet	16 - 19 feet
Sample Type	N	N	N	N
Total Petroleum Hydrocarbons (mg/kg)				
Diesel Range Hydrocarbons	7.6 U	6.7 U	6.4 U	**360 J**
Motor Oil Range	**25**	13 U	13 U	**820**
LWG RA Total Petroleum Hydrocarbons (TPH)[4] (Calculated U = 1/2)	**29 T**	13 UT	13 UT	**1200 JT**

Table 2-7f
Data Gaps Sub-surface Sediment (12-16 feet) Physical and Chemical Results

Notes:

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

T = calculation or summation applied

N = Normal Field Sample

Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.

Significant figures applied to all calculated totals

Table contains validated data

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[5] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[6] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

[7] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

Acronyms

cPAH = carcinogenic PAH

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
mg/kg = milligrams per kilograms
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = toxic equivalents quotient

TPH = Total Petroleum Hydrocarbons

µg/kg = micrograms per kilogram

VPH = volatile petroleum hydrocarbon

Table 2-8a
Data Gaps Sub-surface Sediment (0 to 1 foot)
Chemical Result Statistics

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Conventional Parameters (mg/kg)						
Cyanide, total	20	17	85	0.243	78.1	9.6
Conventional Parameters (percent)						
Total organic carbon	20	20	100	0.309	4.16	1.98
Metals (mg/kg)						
Arsenic	20	1	5	16	16	16
Cadmium	20	17	85	0.3	0.8	0.5
Chromium	20	20	100	16.3	853	67.5
Copper	20	20	100	16.5	196	44.8
Lead	20	18	90	5	236	29.6
Mercury	20	17	85	0.03	0.31	0.10
Nickel	20	20	100	14	610	57
Silver	20	0	0	ND	ND	ND
Zinc	20	20	100	49	367	120
Volatile Organics (µg/kg)						
1,1-Dichloroethene	20	0	0	ND	ND	ND
1,2-Dichloroethene, cis-	20	3	15	1.7	430	146
1,2-Dichloroethene, trans-	20	1	5	3.3	3.3	3.3
Benzene	20	6	30	2	92	30
Ethylbenzene	20	7	35	2	4800	729
m,p-Xylene	20	9	45	3.2	1300	157
o-Xylene	20	9	45	4.4	1400	171
Toluene	20	5	25	2.9	89	23
Trichloroethene (TCE)	20	1	5	13	13	13
Vinyl chloride	20	2	10	1.9	120	61
LWG RA Total BTEX[7]	20	9	45	9.7	7700	933
LWG RA Total Xylene[8]	20	9	45	7.6	2700	328
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	20	13	65	110	140000	17428
2-Methylnaphthalene	20	12	60	200	140000	19503
Acenaphthene	20	18	90	110	220000	22277
Acenaphthylene	20	11	55	240	5800	1498
Anthracene	20	16	80	480	79000	12174
Benzo(a)anthracene	20	18	90	86	49000	11273
Benzo(a)pyrene	20	18	90	99	58000	13679
Benzo(b,j,k)fluoranthenes	20	19	95	72	69000	15333
Benzo(g,h,i)perylene	20	18	90	86	38000	9740
Chrysene	20	19	95	60	61000	13218
Dibenzo(a,h)anthracene	20	12	60	140	5700	1918
Fluoranthene	20	19	95	120	190000	32484
Fluorene	20	17	85	76	91000	11882
Indeno(1,2,3-c,d)pyrene	20	17	85	81	28000	7535
Naphthalene	20	16	80	93	530000	47553
Perylene	20	16	80	81	15000	3783

Table 2-8a
Data Gaps Sub-surface Sediment (0 to 1 foot)
Chemical Result Statistics

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Phenanthrene	20	17	85	160	440000	63406
Pyrene	20	19	95	360	220000	39675
LWG RA Total 10 of 17 HPAH[3]	20	19	95	770	720000	141635
LWG RA Total 17 PAH[4]	20	20	100	680	2200000	277158
LWG RA Total 7 of 17 LPAH[2]	20	18	90	400	1500000	159806
LWG RA Total cPAH TEQ[9] (EPA 1993)	20	19	95	73	78000	17606
Semivolatile Organics (µg/kg)						
Carbazole	20	11	55	67	14000	2390
Dibenzofuran	20	9	45	480	13000	2679
PCB Aroclors (ug/kg)						
Aroclor 1016	20	0	0	ND	ND	ND
Aroclor 1221	20	0	0	ND	ND	ND
Aroclor 1232	20	0	0	ND	ND	ND
Aroclor 1242	20	0	0	ND	ND	ND
Aroclor 1248	20	4	20	57	100	81
Aroclor 1254	20	0	0	ND	ND	ND
Aroclor 1260	20	4	20	44	88	57
LWG RA Total PCB Aroclors[5]	20	4	20	200	300	243
Pesticides (ug/kg)						
2,4'-DDD (o,p'-DDD)	20	3	15	20	190	77
2,4'-DDE (o,p'-DDE)	20	0	0	ND	ND	ND
2,4'-DDT (o,p'-DDT)	20	1	5	3.3	3.3	3.3
4,4'-DDD (p,p'-DDD)	20	9	45	3.5	1200	177
4,4'-DDE (p,p'-DDE)	20	6	30	1.9	32	18
4,4'-DDT (p,p'-DDT)	20	10	50	8.1	290	73
alpha-Chlordane (cis-Chlordane)	20	0	0	ND	ND	ND
alpha-Hexachlorocyclohexane (BHC)	20	0	0	ND	ND	ND
gamma-Chlordane (trans-Chlordane)	20	0	0	ND	ND	ND
beta-Hexachlorocyclohexane (BHC)	20	0	0	ND	ND	ND
cis-Nonachlor	20	0	0	ND	ND	ND
delta-Hexachlorocyclohexane (BHC)	20	0	0	ND	ND	ND
Dieldrin	20	0	0	ND	ND	ND
Endrin	20	0	0	ND	ND	ND
Endrin ketone	20	0	0	ND	ND	ND
(Lindane)	20	0	0	ND	ND	ND
Heptachlor epoxide	20	0	0	ND	ND	ND
Oxychlordane	20	0	0	ND	ND	ND
trans-Nonachlor	20	0	0	ND	ND	ND
Hexachlorobenzene	20	2	10	3.4	18	11
LWG RA Sum 2,4 DDT, DDE, DDD	20	4	20	6.5	270	86
LWG RA Sum 4,4 DDT, DDE, DDD	20	13	65	11	1400	192
LWG RA Sum DDD	20	9	45	5.1	1400	208
LWG RA Sum DDE	20	6	30	3.5	40	24
LWG RA Sum DDT	20	10	50	9.7	290	82
LWG RA Total Chlordane[1]	20	0	0	ND	ND	ND

Table 2-8a
Data Gaps Sub-surface Sediment (0 to 1 foot)
Chemical Result Statistics

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
LWG RA Total DDx	20	13	65	16	1700	236
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	20	18	90	8.9	5100	873
Motor Oil Range	20	18	90	51	3200	868
Hydrocarbons (TPH)	20	18	90	60	8300	1743

Table 2-8a
Data Gaps Sub-surface Sediment (0 to 1 foot)
Chemical Result Statistics

Notes:

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene.

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[5] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

[6] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[7] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

Acronyms

µg/kg = micrograms per kilogram

Table 2-8b
Data Gaps Sub-surface Sediment (1 to 4 feet)
Chemical Result Statistics

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Conventional Parameters (mg/kg)						
Cyanide, total	21	14	67	0.258	54.6	11
Conventional Parameters (percent)						
Total organic carbon	21	21	100	0.093	5.81	1.84
Metals (mg/kg)						
Arsenic	21	0	0	ND	ND	ND
Cadmium	21	15	71	0.2	0.8	0.5
Chromium	21	21	100	13.1	58	26
Copper	21	21	100	14.4	63.8	32.2
Lead	21	18	86	2	46	20
Mercury	21	15	71	0.02	0.51	0.15
Nickel	21	21	100	16	77	26
Silver	21	0	0	ND	ND	ND
Zinc	21	21	100	45	307	119
Volatile Organics (µg/kg)						
1,1-Dichloroethene	21	0	0	ND	ND	ND
1,2-Dichloroethene, cis-	21	1	5	1.5	1.5	1.5
1,2-Dichloroethene, trans-	21	0	0	ND	ND	ND
Benzene	21	9	43	1.5	7000	994
Ethylbenzene	21	8	38	2	25000	4859
m,p-Xylene	21	8	38	2	12000	2582
o-Xylene	21	10	48	2	6000	1217
Toluene	21	4	19	1.9	2300	577
Trichloroethene (TCE)	21	0	0	ND	ND	ND
Vinyl chloride	21	1	5	3.6	3.6	3.6
LWG RA Total BTEX[7]	21	11	52	5.8	42000	7597
LWG RA Total Xylene[8]	21	10	48	3	18000	3249
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	21	16	76	130	130000	18913
2-Methylnaphthalene	21	14	67	130	250000	34547
Acenaphthene	21	18	86	150	270000	33321
Acenaphthylene	21	11	52	400	6600	1475
Anthracene	21	17	81	100	86000	18429
Benzo(a)anthracene	21	16	76	1300	63000	16975
Benzo(a)pyrene	21	17	81	73	82000	18969
Benzo(b,j,k)fluoranthenes	21	17	81	76	82000	19910
Benzo(g,h,i)perylene	21	17	81	63	60000	10654
Chrysene	21	17	81	65	76000	20127
Dibenzo(a,h)anthracene	21	11	52	160	2900	904
Fluoranthene	21	17	81	140	240000	52132
Fluorene	21	17	81	78	91000	16369
Indeno(1,2,3-c,d)pyrene	21	16	76	590	41000	8352
Naphthalene	21	15	71	210	2300000	192923
Perylene	21	16	76	410	19000	4643
Phenanthrene	21	17	81	380	520000	103746
Pyrene	21	17	81	180	280000	64952
LWG RA Total 10 of 17 HPAH[3]	21	18	86	310	930000	199553
LWG RA Total 17 PAH[4]	21	19	90	530	4500000	528298
LWG RA Total 7 of 17 LPAH[2]	21	18	86	340	3500000	352747
LWG RA Total cPAH TEQ[9] (EPA 1993)	21	17	81	120	110000	24707
Semivolatile Organics (µg/kg)						
Carbazole	21	13	62	460	19000	4659
Dibenzofuran	21	15	71	470	14000	2888
PCB Aroclors (µg/kg)						
Aroclor 1016	21	0	0	ND	ND	ND

Table 2-8b
Data Gaps Sub-surface Sediment (1 to 4 feet)
Chemical Result Statistics

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Aroclor 1221	21	0	0	ND	ND	ND
Aroclor 1232	21	0	0	ND	ND	ND
Aroclor 1242	21	0	0	ND	ND	ND
Aroclor 1248	21	3	14	61	180	108
Aroclor 1254	21	0	0	ND	ND	ND
Aroclor 1260	21	5	24	33	150	77
LWG RA Total PCB Aroclors[5]	21	5	24	140	490	294
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	21	3	14	33	40	37
2,4'-DDE (o,p'-DDE)	21	0	0	ND	ND	ND
2,4'-DDT (o,p'-DDT)	21	0	0	ND	ND	ND
4,4'-DDD (p,p'-DDD)	21	6	29	23	130	84
4,4'-DDE (p,p'-DDE)	21	7	33	6.4	52	23
4,4'-DDT (p,p'-DDT)	21	3	14	25	100	66
alpha-Chlordane (cis-Chlordane)	21	0	0	ND	ND	ND
alpha-Hexachlorocyclohexane (BHC)	21	0	0	ND	ND	ND
gamma-Chlordane (trans-Chlordane)	21	0	0	ND	ND	ND
beta-Hexachlorocyclohexane (BHC)	21	0	0	ND	ND	ND
cis-Nonachlor	21	0	0	ND	ND	ND
delta-Hexachlorocyclohexane (BHC)	21	0	0	ND	ND	ND
Dieldrin	21	0	0	ND	ND	ND
Endrin	21	0	0	ND	ND	ND
Endrin ketone	21	0	0	ND	ND	ND
gamma-Hexachlorocyclohexane (BHC) (Lindane)	21	0	0	ND	ND	ND
Heptachlor epoxide	21	0	0	ND	ND	ND
Oxychlordane	21	0	0	ND	ND	ND
trans-Nonachlor	21	0	0	ND	ND	ND
Hexachlorobenzene	21	0	0	ND	ND	ND
LWG RA Sum 2,4 DDT, DDE, DDD	21	3	14	53	67	59
LWG RA Sum 4,4 DDT, DDE, DDD	21	10	48	22	220	100
LWG RA Sum DDD	21	6	29	31	160	109
LWG RA Sum DDE	21	7	33	14	69	32
LWG RA Sum DDT	21	3	14	33	110	75
LWG RA Total Chlordane[1]	21	0	0	ND	ND	ND
LWG RA Total DDx	21	10	48	46	280	137
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	21	16	76	81	4700	1003
Motor Oil Range	21	16	76	64	8000	1280
LWG RA Total Petroleum Hydrocarbons (TPH)[6]	21	16	76	140	13000	2301

Table 2-8b
Data Gaps Sub-surface Sediment (1 to 4 feet)
Chemical Result Statistics

Notes:

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[5] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

[6] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[7] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

Acronyms

BTEX = benzene, toluene, ethylbenzene, xylenes
cPAH = carcinogenic PAH
HPAH = high-molecular weight PAH
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
mg/kg = milligrams per kilograms
ND = not detect
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = Toxic Equivalents Quotient
TPH = Total Petroleum Hydrocarbons
µg/kg = micrograms per kilogram

Table 2-8c
Data Gaps Sub-surface Sediment (4 to 8 feet)
Chemical Result Statistics

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Conventional Parameters (mg/kg)						
Cyanide, total	22	14	64	0.202	95.2	13
Conventional Parameters (percent)						
Moisture (water) content	21	21	100	15.45	86.35	41
Total organic carbon	22	22	100	0.056	5.39	2.13
Total solids	22	22	100	55	86.1	72
Metals (mg/kg)						
Arsenic	22	0	0	ND	ND	ND
Cadmium	22	13	59	0.2	0.8	0.45
Chromium	22	22	100	12.9	65	25
Copper	22	22	100	13.7	61.5	27
Lead	22	13	59	3	78	23
Mercury	22	12	55	0.03	0.67	0.19
Nickel	22	22	100	16	53	24
Silver	22	0	0	ND	ND	ND
Zinc	22	22	100	43	181	83
Volatile Organics (µg/kg)						
1,1-Dichloroethene	22	0	0	ND	ND	ND
1,2-Dichloroethene, cis-	22	2	9	2.3	2.3	2.3
1,2-Dichloroethene, trans-	22	0	0	ND	ND	ND
Benzene	22	7	32	2	4800	1758
Ethylbenzene	22	9	41	1.9	29000	7628
m,p-Xylene	22	8	36	2.2	19000	4966
o-Xylene	22	8	36	2.8	10000	2774
Toluene	22	2	9	10	8600	4305
Trichloroethene (TCE)	22	0	0	ND	ND	ND
Vinyl chloride	22	0	0	ND	ND	ND
LWG RA Total BTEX[7]	22	9	41	6.4	56000	17026
LWG RA Total Xylene[8]	22	8	36	5	29000	7763
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	22	15	68	420	260000	41707
2-Methylnaphthalene	22	15	68	66	470000	73650
Acenaphthene	22	16	73	89	420000	68349
Acenaphthylene	22	13	59	210	18000	3658
Anthracene	22	16	73	68	190000	33309
Benzo(a)anthracene	22	16	73	230	130000	25049
Benzo(a)pyrene	22	16	73	350	160000	30252
Benzo(b,j,k)fluoranthenes	22	16	73	440	200000	34824
Benzo(g,h,i)perylene	22	16	73	320	76000	14681
Chrysene	22	16	73	300	170000	32430
Dibenzo(a,h)anthracene	22	10	45	65	12000	3255
Fluoranthene	22	16	73	610	550000	94568
Fluorene	22	15	68	390	180000	32339
Indeno(1,2,3-c,d)pyrene	22	16	73	200	47000	10751
Naphthalene	22	18	82	74	2800000	332790
Perylene	22	16	73	71	20000	5065
Phenanthrene	22	18	82	110	1100000	169498
Pyrene	22	16	73	840	680000	117659
LWG RA Total cPAH TEQ[9] (EPA 1993)	22	16	73	500	200000	40032
LWG RA Total HPAH[3]	22	16	73	3500	1900000	359788

Table 2-8c
Data Gaps Sub-surface Sediment (4 to 8 feet)
Chemical Result Statistics

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
LWG RA Total LPAH[2]	22	20	91	290	5200000	614519
LWG RA Total PAH[4]	22	20	91	570	7100000	909245
Semivolatile Organics (µg/kg)						
Carbazole	22	13	59	330	28000	7683
Dibenzofuran	22	14	64	230	17000	4360
PCB Aroclors (µg/kg)						
Aroclor 1016	22	0	0	ND	ND	ND
Aroclor 1221	22	0	0	ND	ND	ND
Aroclor 1232	22	0	0	ND	ND	ND
Aroclor 1242	22	0	0	ND	ND	ND
Aroclor 1248	22	1	5	66	66	66
Aroclor 1254	22	0	0	ND	ND	ND
Aroclor 1260	22	3	14	49	92	74
LWG RA Total PCB Aroclors[5]	22	3	14	230	330	267
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	22	3	14	36	110	69
2,4'-DDE (o,p'-DDE)	22	0	0	ND	ND	ND
2,4'-DDT (o,p'-DDT)	22	0	0	ND	ND	ND
4,4'-DDD (p,p'-DDD)	22	4	18	120	360	240
4,4'-DDE (p,p'-DDE)	22	3	14	7.4	48	29
4,4'-DDT (p,p'-DDT)	22	4	18	28	410	178
alpha-Chlordane (cis-Chlordane)	22	0	0	ND	ND	ND
alpha-Hexachlorocyclohexane (BHC)	22	0	0	ND	ND	ND
beta-Chlordane (trans-Chlordane)	22	0	0	ND	ND	ND
beta-Hexachlorocyclohexane (BHC)	22	0	0	ND	ND	ND
cis-Nonachlor	22	0	0	ND	ND	ND
delta-Hexachlorocyclohexane (BHC)	22	0	0	ND	ND	ND
Dieldrin	22	0	0	ND	ND	ND
Endrin	22	0	0	ND	ND	ND
Endrin ketone	22	0	0	ND	ND	ND
gamma-Hexachlorocyclohexane (BHC) (Lindane)	22	0	0	ND	ND	ND
Heptachlor epoxide	22	0	0	ND	ND	ND
Oxychlordane	22	0	0	ND	ND	ND
trans-Nonachlor	22	0	0	ND	ND	ND
Hexachlorobenzene	22	0	0	ND	ND	ND
LWG RA Sum 2,4 DDT, DDE, DDD	22	3	14	52	140	95
LWG RA Sum 4,4 DDT, DDE, DDD	22	6	27	180	440	320
LWG RA Sum DDD	22	4	18	160	430	298
LWG RA Sum DDE	22	3	14	15	64	40
LWG RA Sum DDT	22	4	18	36	430	192
LWG RA Total Chlordane[1]	22	0	0	ND	ND	ND
LWG RA Total DDx	22	6	27	230	540	392
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	22	15	68	7.7	5100	1521
Motor Oil Range	22	15	68	21	3900	1433
LWG RA Total Petroleum Hydrocarbons[6] (TPH)	22	16	73	14	8900	2771

Table 2-8c
Data Gaps Sub-surface Sediment (1 to 4 feet)
Chemical Result Statistics

Notes:

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[5] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

[6] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[7] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

Acronyms

BTEX = benzene, toluene, ethylbenzene, xylenes
cPAH = carcinogenic PAH
HPAH = high-molecular weight PAH
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
mg/kg = milligrams per kilograms
ND = not detect
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = Toxic Equivalents Quotient
TPH = Total Petroleum Hydrocarbons
µg/kg = micrograms per kilogram

Table 2-8d
Data Gaps Sub-surface Sediment (8 to 12 feet)
Chemical Result Statistics

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Conventional Parameters (mg/kg)						
Cyanide, total	21	9	43	0.134	29.9	4.6
Conventional Parameters (percent)						
Total organic carbon	21	21	100	0.036	6.21	1.06
Metals (mg/kg)						
Arsenic	21	0	0	ND	ND	ND
Cadmium	21	7	33	0.2	0.8	0.5
Chromium	21	21	100	13.2	39.6	20.8
Copper	21	21	100	14.6	58.4	23.1
Lead	21	6	29	2	35	20
Mercury	21	6	29	0.03	0.57	0.25
Nickel	21	21	100	16	43	22
Silver	21	1	5	0.8	0.8	0.8
Zinc	21	21	100	44	153	64
Volatile Organics (µg/kg)						
1,1-Dichloroethene	21	0	0	ND	ND	ND
1,2-Dichloroethene, cis-	21	0	0	ND	ND	ND
1,2-Dichloroethene, trans-	21	0	0	ND	ND	ND
Benzene	21	6	29	2.8	2600	499
Ethylbenzene	21	7	33	1.7	5800	1335
m,p-Xylene	21	6	29	1.4	3600	631
o-Xylene	21	5	24	2.4	2000	558
Toluene	21	4	19	3.2	530	136
Trichloroethene (TCE)	21	0	0	ND	ND	ND
Vinyl chloride	21	0	0	ND	ND	ND
LWG RA Total BTEX[7]	21	8	38	4.1	15000	2502
LWG RA Total Xylene[8]	21	7	33	2.1	5600	939
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	21	8	38	75	270000	43036
2-Methylnaphthalene	21	7	33	100	510000	89914
Acenaphthene	21	10	48	76	410000	55580
Acenaphthylene	21	6	29	220	11000	2395
Anthracene	21	8	38	74	150000	32059
Benzo(a)anthracene	21	9	43	78	110000	21141
Benzo(a)pyrene	21	9	43	100	130000	25034
Benzo(b,j,k)fluoranthenes	21	10	48	70	160000	24751
Benzo(g,h,i)perylene	21	8	38	65	21000	7233
Chrysene	21	9	43	100	140000	27028
Dibenzo(a,h)anthracene	21	6	29	290	1700	978
Fluoranthene	21	10	48	110	410000	70946
Fluorene	21	8	38	63	170000	31620
Indeno(1,2,3-c,d)pyrene	21	7	33	810	18000	6730
Naphthalene	21	8	38	67	2500000	326881
Perylene	21	9	43	160	34000	5989
Phenanthrene	21	12	57	94	960000	129588
Pyrene	21	10	48	110	510000	89916
LWG RA Total 10 of 17 HPAH[3]	21	10	48	480	1500000	263068
LWG RA Total 17 PAH[4]	21	12	57	610	6200000	707555
LWG RA Total 7 of 17 LPAH[2]	21	12	57	310	4700000	488787

Table 2-8d
Data Gaps Sub-surface Sediment (8 to 12 feet)
Chemical Result Statistics

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
LWG RA Total cPAH TEQ[9] (EPA 1993)	21	10	48	76	160000	28129
Semivolatile Organics (µg/kg)						
Carbazole	21	5	24	1100	30000	7980
Dibenzofuran	21	6	29	380	19000	4628
PCB Aroclors (µg/kg)						
Aroclor 1016	21	0	0	ND	ND	ND
Aroclor 1221	21	0	0	ND	ND	ND
Aroclor 1232	21	0	0	ND	ND	ND
Aroclor 1242	21	0	0	ND	ND	ND
Aroclor 1248	21	0	0	ND	ND	ND
Aroclor 1254	21	0	0	ND	ND	ND
Aroclor 1260	21	2	10	77	120	99
LWG RA Total PCB Aroclors[5]	21	2	10	240	250	245
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	21	2	10	99	460	280
2,4'-DDE (o,p'-DDE)	21	0	0	ND	ND	ND
2,4'-DDT (o,p'-DDT)	21	0	0	ND	ND	ND
4,4'-DDD (p,p'-DDD)	21	2	10	400	1100	750
4,4'-DDE (p,p'-DDE)	21	1	5	45	45	45
4,4'-DDT (p,p'-DDT)	21	2	10	67	430	249
alpha-Chlordane (cis-Chlordane)[1]	21	0	0	ND	ND	ND
alpha-Hexachlorocyclohexane (BHC)	21	0	0	ND	ND	ND
gamma-Chlordane (trans-Chlordane)	21	0	0	ND	ND	ND
beta-Hexachlorocyclohexane (BHC)	21	0	0	ND	ND	ND
cis-Nonachlor	21	0	0	ND	ND	ND
delta-Hexachlorocyclohexane (BHC)	21	0	0	ND	ND	ND
Dieldrin	21	0	0	ND	ND	ND
Endrin	21	0	0	ND	ND	ND
Endrin ketone	21	0	0	ND	ND	ND
gamma-Hexachlorocyclohexane (BHC) (Lindane)	21	0	0	ND	ND	ND
Heptachlor epoxide	21	0	0	ND	ND	ND
Oxychlordane	21	0	0	ND	ND	ND
trans-Nonachlor	21	0	0	ND	ND	ND
Hexachlorobenzene	21	0	0	ND	ND	ND
LWG RA Sum 2,4 DDT, DDE, DDD	21	2	10	130	480	305
LWG RA Sum 4,4 DDT, DDE, DDD	21	2	10	510	1600	1055
LWG RA Sum DDD	21	2	10	500	1600	1050
LWG RA Sum DDE	21	1	5	61	61	61
LWG RA Sum DDT	21	2	10	83	440	262
LWG RA Total Chlordane[1]	21	0	0	ND	ND	ND
LWG RA Total DDx	21	2	10	640	2100	1370
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	21	7	33	140	4000	1506
Motor Oil Range	21	8	38	28	3200	1191
LWG RA Total Petroleum Hydrocarbons[6]	21	8	38	32	7200	2510

Table 2-8d
Data Gaps Sub-surface Sediment (1 to 4 feet)
Chemical Result Statistics

Notes:

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[5] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

[6] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[7] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

Acronyms

BTEX = benzene, toluene, ethylbenzene, xylenes
cPAH = carcinogenic PAH
HPAH = high-molecular weight PAH
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
mg/kg = milligrams per kilograms
ND = not detect
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = Toxic Equivalents Quotient
TPH = Total Petroleum Hydrocarbons
µg/kg = micrograms per kilogram

Table 2-8e
Data Gaps Sub-surface Sediment (12 to 16 feet)
Chemical Result Statistics

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Conventional Parameters (mg/kg)						
Cyanide, total	14	6	43	0.202	1.42	0.67
Conventional Parameters (percent)						
Total organic carbon	14	14	100	0.042	6.78	1.30
Metals (mg/kg)						
Arsenic	14	0	0	ND	ND	ND
Cadmium	14	7	50	0.2	0.9	0.5
Chromium	14	14	100	15.7	40.9	22.3
Copper	14	14	100	15.3	54.6	24.6
Lead	14	4	29	3	31	21
Mercury	14	3	21	0.21	0.31	0.27
Nickel	14	14	100	18	36	24
Silver	14	2	14	0.5	0.6	0.6
Zinc	14	14	100	45	177	70
Volatile Organics (µg/kg)						
1,1-Dichloroethene	14	0	0	ND	ND	ND
1,2-Dichloroethene, cis-	14	0	0	ND	ND	ND
1,2-Dichloroethene, trans-	14	0	0	ND	ND	ND
Benzene	14	4	29	1.6	420	112
Ethylbenzene	14	2	14	1.4	1800	901
m,p-Xylene	14	2	14	2.2	430	216
o-Xylene	14	1	7	760	760	760
Toluene	14	1	7	2.4	2.4	2.4
Trichloroethene (TCE)	14	0	0	ND	ND	ND
Vinyl chloride	14	0	0	ND	ND	ND
LWG RA Total BTEX[7]	14	5	36	3.8	3500	708
LWG RA Total Xylene[8]	14	2	14	3	1200	602
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	14	4	29	190	48000	12620
2-Methylnaphthalene	14	3	21	250	82000	28117
Acenaphthene	14	4	29	250	71000	19663
Acenaphthylene	14	3	21	260	1600	743
Anthracene	14	4	29	110	66000	19403
Benzo(a)anthracene	14	3	21	4900	47000	20633
Benzo(a)pyrene	14	3	21	7800	59000	27600
Benzo(b,j,k)fluoranthenes	14	3	21	9100	59000	28033
Benzo(g,h,i)perylene	14	3	21	3600	15000	10867
Chrysene	14	3	21	6100	53000	24367
Dibenzo(a,h)anthracene	14	2	14	720	2400	1560
Fluoranthene	14	4	29	200	170000	55550
Fluorene	14	4	29	150	44000	12288
Indeno(1,2,3-c,d)pyrene	14	3	21	2800	13000	8367
Naphthalene	14	4	29	74	160000	40311
Perylene	14	3	21	2300	13000	6400
Phenanthrene	14	5	36	70	270000	67200
Pyrene	14	4	29	210	220000	73553
LWG RA Total 10 of 17 HPAH[3]	14	4	29	620	640000	221655
LWG RA Total 17 PAH[4]	14	5	36	580	1300000	326556
LWG RA Total 7 of 17 LPAH[2]	14	5	36	300	690000	156960
LWG RA Total cPAH TEQ[9] (EPA 1993)	14	3	21	9600	72000	34533
Semivolatile Organics (µg/kg)						
Carbazole	14	1	7	3200	3200	3200
Dibenzofuran	14	2	14	420	4600	2510
PCB Aroclors (µg/kg)						
Aroclor 1016	14	0	0	ND	ND	ND

Table 2-8e
Data Gaps Sub-surface Sediment (12 to 16 feet)
Chemical Result Statistics

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Aroclor 1221	14	0	0	ND	ND	ND
Aroclor 1232	14	0	0	ND	ND	ND
Aroclor 1242	14	0	0	ND	ND	ND
Aroclor 1248	14	0	0	ND	ND	ND
Aroclor 1254	14	1	7	47	47	47
Aroclor 1260	14	2	14	44	66	55
LWG RA Total PCB Aroclors[5]	14	2	14	170	180	175
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	14	0	0	ND	ND	ND
2,4'-DDE (o,p'-DDE)	14	0	0	ND	ND	ND
2,4'-DDT (o,p'-DDT)	14	0	0	ND	ND	ND
4,4'-DDD (p,p'-DDD)	14	0	0	ND	ND	ND
4,4'-DDE (p,p'-DDE)	14	0	0	ND	ND	ND
4,4'-DDT (p,p'-DDT)	14	0	0	ND	ND	ND
alpha-Chlordane (cis-Chlordane)	14	0	0	ND	ND	ND
alpha-Hexachlorocyclohexane (BHC)	14	0	0	ND	ND	ND
gamma-Chlordane (trans-Chlordane)	14	0	0	ND	ND	ND
beta-Hexachlorocyclohexane (BHC)	14	0	0	ND	ND	ND
cis-Nonachlor	14	0	0	ND	ND	ND
delta-Hexachlorocyclohexane (BHC)	14	0	0	ND	ND	ND
Dieldrin	14	0	0	ND	ND	ND
Endrin	14	0	0	ND	ND	ND
Endrin ketone	14	0	0	ND	ND	ND
gamma-Hexachlorocyclohexane (BHC) (Lindane)	14	0	0	ND	ND	ND
Heptachlor epoxide	14	0	0	ND	ND	ND
Oxychlordane	14	0	0	ND	ND	ND
trans-Nonachlor	14	0	0	ND	ND	ND
Hexachlorobenzene	14	0	0	ND	ND	ND
LWG RA Sum 2,4 DDT, DDE, DDD	14	0	0	ND	ND	ND
LWG RA Sum 4,4 DDT, DDE, DDD	14	0	0	ND	ND	ND
LWG RA Sum DDD	14	0	0	ND	ND	ND
LWG RA Sum DDE	14	0	0	ND	ND	ND
LWG RA Sum DDT	14	0	0	ND	ND	ND
LWG RA Total Chlordane	14	0	0	ND	ND	ND
LWG RA Total DDx	14	0	0	ND	ND	ND
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	14	3	21	440	3400	1647
Motor Oil Range	14	3	21	920	3300	1973
LWG RA Total Petroleum Hydrocarbons (TPH)[6]	14	3	21	1400	6700	3633

Table 2-8e
Data Gaps Sub-surface Sediment (1 to 4 feet)
Chemical Result Statistics

Notes:

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[5] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

[6] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[7] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

Acronyms

BTEX = benzene, toluene, ethylbenzene, xylenes
cPAH = carcinogenic PAH
HPAH = high-molecular weight PAH
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
mg/kg = milligrams per kilograms
ND = not detect
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = Toxic Equivalents Quotient
TPH = Total Petroleum Hydrocarbons
µg/kg = micrograms per kilogram

Table 2-8f
Data Gaps Sub-surface Sediment (16 feet - End of Core)
Chemical Result Statistics

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Conventional Parameters (mg/kg)						
Cyanide, total	4	2	50	0.133	0.299	0.216
Conventional Parameters (percent)						
Total organic carbon	4	4	100	0.073	2.15	0.88
Metals (mg/kg)						
Arsenic	4	0	0	ND	ND	ND
Cadmium	4	4	100	0.2	0.7	0.4
Chromium	4	4	100	19.8	31.9	26.5
Copper	4	4	100	16.5	45.3	29.0
Lead	4	2	50	4	28	16
Mercury	4	2	50	0.04	0.25	0.15
Nickel	4	4	100	26	29	27
Silver	4	0	0	ND	ND	ND
Zinc	4	4	100	47	131	73
Volatile Organics (ug/kg)						
1,1-Dichloroethene	4	0	0	ND	ND	ND
1,2-Dichloroethene, cis-	4	0	0	ND	ND	ND
1,2-Dichloroethene, trans-	4	0	0	ND	ND	ND
Benzene	4	1	25	19	19	19
Ethylbenzene	4	1	25	2.8	2.8	2.8
m,p-Xylene	4	1	25	2	2	2
o-Xylene	4	0	0	ND	ND	ND
Toluene	4	1	25	3.9	3.9	3.9
Trichloroethene (TCE)	4	0	0	ND	ND	ND
Vinyl chloride	4	0	0	ND	ND	ND
LWG RA Total BTEX[7]	4	1	25	28	28	28
LWG RA Total Xylene[8]	4	1	25	2.7	2.7	2.7
Polycyclic Aromatic Hydrocarbons (ug/kg)						
1-Methylnaphthalene	4	0	0	ND	ND	ND
2-Methylnaphthalene	4	0	0	ND	ND	ND
Acenaphthene	4	1	25	1600	1600	1600
Acenaphthylene	4	0	0	ND	ND	ND
Anthracene	4	1	25	2000	2000	2000
Benzo(a)anthracene	4	1	25	3000	3000	3000
Benzo(a)pyrene	4	1	25	4200	4200	4200
Benzo(b,j,k)fluoranthenes	4	1	25	4400	4400	4400
Benzo(g,h,i)perylene	4	1	25	3700	3700	3700
Chrysene	4	1	25	3800	3800	3800
Dibenzo(a,h)anthracene	4	1	25	740	740	740
Fluoranthene	4	1	25	8900	8900	8900
Fluorene	4	1	25	940	940	940
Indeno(1,2,3-c,d)pyrene	4	1	25	2600	2600	2600
Naphthalene	4	0	0	ND	ND	ND
Perylene	4	2	50	110	1200	655
Phenanthrene	4	1	25	10000	10000	10000
Pyrene	4	1	25	12000	12000	12000
LWG RA Total 10 of 17 HPAH[3]	4	1	25	43000	43000	43000
LWG RA Total 17 PAH[4]	4	1	25	58000	58000	58000
LWG RA Total 7 of 17 LPAH[2]	4	1	25	15000	15000	15000
LWG RA Total cPAH TEQ[9] (EPA 1993)	4	1	25	5900	5900	5900
Semivolatile Organics (ug/kg)						
Carbazole	4	0	0	ND	ND	ND
Dibenzofuran	4	0	0	ND	ND	ND
PCB Aroclors (ug/kg)						
Aroclor 1016	4	0	0	ND	ND	ND

Table 2-8f
Data Gaps Sub-surface Sediment (16 feet - End of Core)
Chemical Result Statistics

Parameter	Sample Count (number)	Detections (number)	Detection Frequency (percent)	Sample Concentrations		
				Minimum	Maximum	Mean
Aroclor 1221	4	0	0	ND	ND	ND
Aroclor 1232	4	0	0	ND	ND	ND
Aroclor 1242	4	0	0	ND	ND	ND
Aroclor 1248	4	0	0	ND	ND	ND
Aroclor 1254	4	0	0	ND	ND	ND
Aroclor 1260	4	0	0	ND	ND	ND
LWG RA Total PCB Aroclors[5]	4	0	0	ND	ND	ND
Pesticides (ug/kg)						
2,4'-DDD (o,p'-DDD)	4	0	0	ND	ND	ND
2,4'-DDE (o,p'-DDE)	4	0	0	ND	ND	ND
2,4'-DDT (o,p'-DDT)	4	0	0	ND	ND	ND
4,4'-DDD (p,p'-DDD)	4	0	0	ND	ND	ND
4,4'-DDE (p,p'-DDE)	4	0	0	ND	ND	ND
4,4'-DDT (p,p'-DDT)	4	0	0	ND	ND	ND
alpha-Chlordane (cis-Chlordane)	4	0	0	ND	ND	ND
alpha-Hexachlorocyclohexane (BHC)	4	0	0	ND	ND	ND
beta-Chlordane (trans-Chlordane)	4	0	0	ND	ND	ND
beta-Hexachlorocyclohexane (BHC)	4	0	0	ND	ND	ND
cis-Nonachlor	4	0	0	ND	ND	ND
delta-Hexachlorocyclohexane (BHC)	4	0	0	ND	ND	ND
Dieldrin	4	0	0	ND	ND	ND
Endrin	4	0	0	ND	ND	ND
Endrin ketone	4	0	0	ND	ND	ND
gamma-Hexachlorocyclohexane (BHC) (Lindane)	4	0	0	ND	ND	ND
Heptachlor epoxide	4	0	0	ND	ND	ND
Oxychlordane	4	0	0	ND	ND	ND
trans-Nonachlor	4	0	0	ND	ND	ND
Hexachlorobenzene	4	0	0	ND	ND	ND
LWG RA Sum 2,4 DDT, DDE, DDD	4	0	0	ND	ND	ND
LWG RA Sum 4,4 DDT, DDE, DDD	4	0	0	ND	ND	ND
LWG RA Sum DDD	4	0	0	ND	ND	ND
LWG RA Sum DDE	4	0	0	ND	ND	ND
LWG RA Sum DDT	4	0	0	ND	ND	ND
LWG RA Total Chlordane[1]	4	0	0	ND	ND	ND
LWG RA Total DDx	4	0	0	ND	ND	ND
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	4	1	25	360	360	360
Motor Oil Range	4	2	50	25	820	423
LWG RA Total Petroleum Hydrocarbons[6] (TPH)	4	2	50	29	1200	615

Table 2-8f
Data Gaps Sub-surface Sediment (1 to 4 feet)
Chemical Result Statistics

Notes:

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[5] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

[6] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[7] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

Acronyms

BTEX = benzene, toluene, ethylbenzene, xylenes
cPAH = carcinogenic PAH
HPAH = high-molecular weight PAH
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
mg/kg = milligrams per kilograms
ND = not detect
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = Toxic Equivalents Quotient
TPH = Total Petroleum Hydrocarbons
µg/kg = micrograms per kilogram

Table 2-9
Data Gaps TCLP, DRET, and SBLT Sample Bulk Sediment Test Results

Location ID	DGS-07SC	DGS-11SC	DGS-13SC	DGS-18SC	DGS-18SC	DGS-22SC
Sample ID	DGS-07SC-0113.4-101012	DGS-11SC-1.58.2-101006	DGS-13SC-0006-101005	DGS-18SC-004.5-101008	DGS-18SC-015.5-101008	DGS-22SC-1.92.9-101012
Sample Date	10/12/2010	10/6/2010	10/5/2010	10/8/2010	10/8/2010	10/12/2010
Depth	1 - 13.4 feet	1.5 - 8.2 feet	0 - 6 feet	0 - 4.5 feet	1 - 5.5 feet	1.9 - 2.9 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	67	4.69	2.6	0.204	0.12 U	2.14
Conventional Parameters (None)						
Flash Point	--	--	-- Result was >210 degF	--	--	--
Ignitability	-- NF = not flammable	-- NF = not flammable	--	-- NF = not flammable	--	-- NF = not flammable
Conventional Parameters (percent)						
Moisture (water) content	--	--	49.56	--	--	--
Conventional Parameters (su)						
pH	6.89	6.21	6.96	6.03	--	6.65
Conventional Parameters (percent)						
Total solids	54.4	72.2	70.8	75.7	83.3	58
Metals (mg/kg)						
Arsenic	8 U	7 U	7 U	6 U	6 U	8 U
Barium	168	118	122	107	88.4	152
Cadmium	0.5	0.3 U	0.3 U	0.2 U	0.2 U	0.4
Chromium	36.8	22.9	27	16.3	14.9	30.6
Copper	53.8	--	28.5	--	15.6	--
Lead	34	8	8	4	4	22
Mercury	0.53 J	0.05 J	0.04 J	0.03 UJ	0.03 UJ	0.19 J
Nickel	46	--	25	--	16	--
Selenium	8 U	7 U	7 U	6 U	6 U	8 U
Silver	0.5 U	0.4 U	0.4 U	0.4 U	0.3 U	0.5 U
Zinc	155	67	75	53	51	133
Volatile Organics (µg/kg)						
1,1-Dichloroethene	-- R	--	-- R	--	-- R	--
1,2-Dichloroethane	-- R	--	-- R	--	-- R	--
1,2-Dichloroethene, cis-	-- R	--	-- R	--	-- R	--
1,2-Dichloroethene, trans-	-- R	--	-- R	--	-- R	--
2-Butanone (MEK)	-- R	--	8.8 J	--	-- R	--
Benzene	130 J	--	-- R	--	-- R	--
Carbon tetrachloride (Tetrachloromethane)	-- R	--	-- R	--	-- R	--
Chlorobenzene	-- R	--	-- R	--	-- R	--
Chloroform	-- R	--	-- R	--	-- R	--
Ethylbenzene	3400 J	--	2.4 J	--	-- R	--
m,p-Xylene	280 J	--	2.1 J	--	-- R	--
o-Xylene	580 J	--	3.8 J	--	-- R	--
Tetrachloroethene (PCE)	-- R	--	-- R	--	-- R	--
Toluene	25 J	--	-- R	--	-- R	--
Trichloroethene (TCE)	-- R	--	-- R	--	-- R	--
Vinyl chloride	-- R	--	-- R	--	-- R	--
LWG RA Total BTEX[5] (Calculated U = 1/2)	4400 JT	--	8.3 JT	--	--	--
LWG RA Total Xylene[8] (Calculated U = 1/2)	860 JT	--	5.9 JT	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(b,j,k)fluoranthenes	47000	91000	4400	2600	2200	72000
2-Methylnaphthalene	48000	110000	1300	5700	3600	3900
Acenaphthene	46000	120000	4500	3800	3600	37000
Acenaphthylene	1800	18000	400	360	200	2100
Anthracene	35000	73000	2500	3300	3300	46000
Benzo(a)anthracene	34000	63000	2700	2700	2600	48000

Table 2-9
Data Gaps TCLP, DRET, and SBLT Sample Bulk Sediment Test Results

Location ID	DGS-07SC	DGS-11SC	DGS-13SC	DGS-18SC	DGS-18SC	DGS-22SC
Sample ID	DGS-07SC-0113.4-101012	DGS-11SC-1.58.2-101006	DGS-13SC-0006-101005	DGS-18SC-004.5-101008	DGS-18SC-015.5-101008	DGS-22SC-1.92.9-101012
Sample Date	10/12/2010	10/6/2010	10/5/2010	10/8/2010	10/8/2010	10/12/2010
Depth	1 - 13.4 feet	1.5 - 8.2 feet	0 - 6 feet	0 - 4.5 feet	1 - 5.5 feet	1.9 - 2.9 feet
Sample Type	N	N	N	N	N	N
Benzo(a)pyrene	**39000**	**74000**	**3500**	**2200**	**2100**	**60000**
Benzo(g,h,i)perylene	**17000**	**31000**	**1800 J**	**1000**	**780**	**52000**
Chrysene	**39000**	**82000**	**3300**	**3100**	**2900**	**56000**
Dibenzo(a,h)anthracene	**1000**	**1500**	**88**	**74**	64 U	**1400**
Fluoranthene	**120000**	**230000**	**9600 J**	**6600**	**7500**	**150000**
Fluorene	**30000**	**69000**	**2400**	**3200**	**3300**	**24000**
Indeno(1,2,3-c,d)pyrene	**15000**	**26000**	**1600**	**800**	**660**	**37000**
Naphthalene	**87000**	**670000**	**1100**	**1200**	160 U	**12000**
Perylene	**9200**	**16000**	**970**	**530**	**490**	**17000**
Phenanthrene	**220000**	**430000**	**16000**	**20000**	**25000**	**210000**
Pyrene	**130000**	**260000**	**10000 J**	**9100**	**9500**	**180000**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**470000 T**	**1500000 T**	**28000 T**	**38000 T**	**39000 T**	**330000 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**440000 T**	**860000 T**	**37000 JT**	**28000 T**	**28000 T**	**660000 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**910000 T**	**2300000 T**	**65000 JT**	**66000 T**	**67000 T**	**990000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**50000 T**	**94000 T**	**4500 T**	**2900 T**	**2700 T**	**77000 T**
Semivolatile Organics (µg/kg)						
1,4-Dichlorobenzene	--	390 U	--	63 U	--	370 U
2-Methylphenol (o-Cresol)	--	390 U	--	63 U	--	370 U
2,4-Dinitrotoluene	--	2000 U	--	320 U	--	1800 U
2,4,5-Trichlorophenol	--	2000 U	--	320 U	--	1800 U
2,4,6-Trichlorophenol	--	2000 U	--	320 U	--	1800 U
3-Methylphenol (m-Cresol)	--	390 U	--	63 U	--	**380**
4-Methylphenol (p-Cresol)	--	390 U	--	63 U	--	**380**
Carbazole	**6000**	**19000**	**630**	**240**	**190**	**4600**
Dibenzofuran	**4500**	**9400**	**520**	**510**	**550**	**3200**
Hexachlorobutadiene	--	390 U	--	63 U	--	370 U
Hexachloroethane	--	390 U	--	63 U	--	370 U
Nitrobenzene	--	390 U	--	63 U	--	370 U
Pentachlorophenol	--	2000 U	--	320 U	--	1800 U
Phenol	--	390 U	--	63 U	--	370 U
Pyridine	--	2000 UJ	--	320 UJ	--	1800 UJ
PCB Aroclors (µg/kg)						
Aroclor 1016	32 U	31 U	32 U	32 U	31 U	32 U
Aroclor 1221	32 U	31 U	32 U	32 U	31 U	32 U
Aroclor 1232	32 U	31 U	32 U	32 U	31 U	32 U
Aroclor 1242	32 U	31 U	32 U	32 U	31 U	32 U
Aroclor 1248	32 U	31 U	32 U	32 U	31 U	32 U
Aroclor 1254	32 U	31 U	32 U	32 U	31 U	32 U
Aroclor 1260	**38**	31 U	32 U	32 U	31 U	32 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	**130 T**	31 UT	32 UT	32 UT	31 UT	32 UT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	**77 J**	32 U	32 U	3.3 U	31 U	32 U
2,4'-DDE (o,p'-DDE)	33 U	32 U	32 U	3.3 U	31 U	32 U
2,4'-DDT (o,p'-DDT)	33 U	32 U	32 U	3.3 U	31 U	32 U
4,4'-DDD (p,p'-DDD)	**160 J**	32 U	32 U	3.3 U	31 U	32 U
4,4'-DDE (p,p'-DDE)	33 U	32 U	32 U	3.3 U	31 U	32 U
4,4'-DDT (p,p'-DDT)	33 U	32 U	32 U	3.3 U	31 U	32 U
alpha-Hexachlorocyclohexane (BHC)	16 U	16 U	16 U	1.6 U	16 U	16 U
alpha-Chlordane (cis-Chlordane)	16 U	16 U	16 U	1.6 U	16 U	16 U

Table 2-9
Data Gaps TCLP, DRET, and SBLT Sample Bulk Sediment Test Results

Location ID	DGS-07SC	DGS-11SC	DGS-13SC	DGS-18SC	DGS-18SC	DGS-22SC
Sample ID	DGS-07SC-0113.4-101012	DGS-11SC-1.58.2-101006	DGS-13SC-0006-101005	DGS-18SC-004.5-101008	DGS-18SC-015.5-101008	DGS-22SC-1.92.9-101012
Sample Date	10/12/2010	10/6/2010	10/5/2010	10/8/2010	10/8/2010	10/12/2010
Depth	1 - 13.4 feet	1.5 - 8.2 feet	0 - 6 feet	0 - 4.5 feet	1 - 5.5 feet	1.9 - 2.9 feet
Sample Type	N	N	N	N	N	N
beta-Hexachlorocyclohexane (BHC)	16 U	16 U	16 U	1.6 U	16 U	16 U
beta-Chlordane (trans-Chlordane)	16 U	**21**	16 U	1.6 U	16 U	16 U
cis-Nonachlor	33 U	--	32 U	--	31 U	--
delta-Hexachlorocyclohexane (BHC)	16 UJ	16 UJ	16 UJ	1.6 UJ	16 UJ	16 UJ
Dieldrin	33 U	--	32 U	--	31 U	--
Endrin	33 U	32 U	32 U	3.3 U	31 U	32 U
Endrin ketone	33 U	32 U	32 U	3.3 U	31 U	32 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	16 U	16 U	16 U	1.6 U	16 U	16 U
Heptachlor	--	16 U	--	1.6 U	--	16 U
Heptachlor epoxide	16 U	--	16 U	--	16 U	--
Methoxychlor	--	160 U	--	16 U	--	160 U

Table 2-9
Data Gaps TCLP, DRET, and SBLT Sample Bulk Sediment Test Results

Location ID	DGS-07SC	DGS-11SC	DGS-13SC	DGS-18SC	DGS-18SC	DGS-22SC
Sample ID	**DGS-07SC-0113.4-101012**	**DGS-11SC-1.58.2-101006**	**DGS-13SC-0006-101005**	**DGS-18SC-004.5-101008**	**DGS-18SC-015.5-101008**	**DGS-22SC-1.92.9-101012**
Sample Date	**10/12/2010**	**10/6/2010**	**10/5/2010**	**10/8/2010**	**10/8/2010**	**10/12/2010**
Depth	**1 - 13.4 feet**	**1.5 - 8.2 feet**	**0 - 6 feet**	**0 - 4.5 feet**	**1 - 5.5 feet**	**1.9 - 2.9 feet**
Sample Type	**N**	**N**	**N**	**N**	**N**	**N**
Oxychlordane	33 U	--	32 U	--	31 U	--
Toxaphene	--	1600 U	--	160 U	--	1600 U
trans-Nonachlor	33 U	--	32 U	--	31 U	--
Hexachlorobenzene	16 UJ	390 U	16 UJ	63 U	16 UJ	370 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	**110 JT**	32 UT	32 UT	3.3 UT	31 UT	32 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	**190 JT**	32 UT	32 UT	3.3 UT	31 UT	32 UT
LWG RA Sum DDD (Calculated U = 1/2)	**240 JT**	32 UT	32 UT	3.3 UT	31 UT	32 UT
LWG RA Sum DDE (Calculated U = 1/2)	33 UT	32 UT	32 UT	3.3 UT	31 UT	32 UT
LWG RA Sum DDT (Calculated U = 1/2)	33 UT	32 UT	32 UT	3.3 UT	31 UT	32 UT
LWG RA Total DDx (Calculated U = 1/2)	**300 JT**	32 UT	32 UT	3.3 UT	31 UT	32 UT
LWG RA Total Chlordane[1] (Calculated U = 1/2)	33 UT	**29 T**	32 UT	1.6 UT	31 UT	16 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**3300**	**2600**	**170**	**330**	**300**	**1800**
Gasoline Range Hydrocarbons	**250 J**	--	**38 J**	--	**78 J**	--
Motor Oil Range	**3000**	**1600**	**190**	**180**	**180**	**1700**
LWG RA Total TPH[4] (Calculated U = 1/2)	**6500 JT**	**4200 JT**	**400 JT**	**510 T**	**560 JT**	**3500 JT**

Table 2-9
Data Gaps TCLP, DRET, and SBLT Sample Bulk Sediment Test Results

Location ID	DGS-24SC	DGS-26SC	DGS-31SC	DGS-32SC
Sample ID	DGS-24SC-6.710.7-101012	DGS-26SC-015.4-101011	DGS-31SC-011.9-101011	DGS-32SC-2.83.8-101011
Sample Date	10/12/2010	10/11/2010	10/11/2010	10/11/2010
Depth	6.7 - 10.7 feet	1 - 5.4 feet	1 - 1.9 feet	2.8 - 3.8 feet
Sample Type	N	N	N	N
Conventional Parameters (mg/kg)				
Cyanide, total	**4.75**	0.11 U	**1.8**	**2.81**
Conventional Parameters (None)				
Flash Point	--	--	--	--
Ignitability	-- NF = not flammable	-- NF = not flammable	-- NF = not flammable	-- NF = not flammable
Conventional Parameters (percent)				
Moisture (water) content	--	--	--	--
Conventional Parameters (su)				
pH	**6.49**	**6.23**	**6.4**	**6.65**
Conventional Parameters (percent)				
Total solids	**79.1**	**89.8**	**68.7**	**63.7**
Metals (mg/kg)				
Arsenic	6 U	5 U	7 U	20 U
Barium	**90.1**	**86.3**	**126**	**144**
Cadmium	0.2 U	0.2 U	0.3 U	0.7 U
Chromium	**20.5**	**13.7**	**25.1**	**28**
Copper	--	**14.8**	--	--
Lead	**12**	**3**	**18**	**34**
Mercury	**0.04 J**	0.02 UJ	**0.09 J**	**0.17 J**
Nickel	--	**16**	--	--
Selenium	6 U	5 U	7 U	20 U
Silver	0.4 U	0.3 U	0.4 U	1 U
Zinc	**68**	**45**	**121**	**157**
Volatile Organics (µg/kg)				
1,1-Dichloroethene	--	-- R	--	--
1,2-Dichloroethane	--	-- R	--	--
1,2-Dichloroethene, cis-	--	-- R	--	--
1,2-Dichloroethene, trans-	--	-- R	--	--
2-Butanone (MEK)	--	-- R	--	--
Benzene	--	-- R	--	--
Carbon tetrachloride (Tetrachloromethane)	--	-- R	--	--
Chlorobenzene	--	-- R	--	--
Chloroform	--	-- R	--	--
Ethylbenzene	--	-- R	--	--
m,p-Xylene	--	-- R	--	--
o-Xylene	--	-- R	--	--
Tetrachloroethene (PCE)	--	-- R	--	--
Toluene	--	-- R	--	--
Trichloroethene (TCE)	--	-- R	--	--
Vinyl chloride	--	-- R	--	--
LWG RA Total BTEX[5] (Calculated U = 1/2)	--	--	--	--
LWG RA Total Xylene[8] (Calculated U = 1/2)	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)				
Benzo(b,j,k)fluoranthenes	**270000**	**10000**	**9000 J**	**34000**
2-Methylnaphthalene	**780000**	**8200**	**1200**	**76000**
Acenaphthene	**620000**	**22000**	**16000**	**59000**
Acenaphthylene	**25000**	**820**	**870**	**3700**
Anthracene	**250000**	**8000**	**13000**	**46000**
Benzo(a)anthracene	**190000**	**6600**	**7800**	**31000**

Table 2-9
Data Gaps TCLP, DRET, and SBLT Sample Bulk Sediment Test Results

Location ID	DGS-24SC	DGS-26SC	DGS-31SC	DGS-32SC
Sample ID	DGS-24SC-6.710.7-101012	DGS-26SC-015.4-101011	DGS-31SC-011.9-101011	DGS-32SC-2.83.8-101011
Sample Date	10/12/2010	10/11/2010	10/11/2010	10/11/2010
Depth	6.7 - 10.7 feet	1 - 5.4 feet	1 - 1.9 feet	2.8 - 3.8 feet
Sample Type	N	N	N	N
Benzo(a)pyrene	**230000**	**8000**	**7100**	**28000**
Benzo(g,h,i)perylene	**190000**	**6900**	**5200 J**	**17000**
Chrysene	**230000**	**8000**	**9200**	**39000**
Dibenzo(a,h)anthracene	**3300**	**250**	**230 J**	**800**
Fluoranthene	**740000**	**23000**	**27000**	**99000**
Fluorene	**280000**	**10000**	**9900**	**38000**
Indeno(1,2,3-c,d)pyrene	**130000**	**4800**	**3700 J**	**13000**
Naphthalene	**4300000**	**15000**	**840**	**26000**
Perylene	**40000**	**2100**	**1800**	**6800**
Phenanthrene	**1600000**	**49000**	**58000**	**230000**
Pyrene	**900000**	**28000**	**30000**	**120000**
LWG RA Total 7 of 17 LPAH[2] (Calculated U = 1/2)	**7900000 T**	**110000 T**	**99810 T**	**480000 T**
LWG RA Total 10 of 17 HPAH[3] (Calculated U = 1/2)	**2900000 T**	**96000 T**	**99000 JT**	**380000 T**
LWG RA Total 17 PAH[7] (Calculated U = 1/2)	**11000000 T**	**210000 T**	**200000 JT**	**860000 T**
LWG RA Total cPAH TEQ (EPA 1993)[6] (Calculated U = 1/2)	**290000 T**	**10000 T**	**9400 JT**	**37000 T**
Semivolatile Organics (µg/kg)				
1,4-Dichlorobenzene	760 U	190 U	180 UJ	370 U
2-Methylphenol (o-Cresol)	760 U	190 U	180 U	370 U
2,4-Dinitrotoluene	3800 U	960 U	910 U	1900 U
2,4,5-Trichlorophenol	3800 U	960 U	910 U	1900 U
2,4,6-Trichlorophenol	3800 U	960 U	910 U	1900 U
3-Methylphenol (m-Cresol)	760 U	190 U	180 U	370 U
4-Methylphenol (p-Cresol)	760 U	190 U	180 U	370 U
Carbazole	**49000**	**1300**	**2900**	**14000**
Dibenzofuran	**30000**	**1600**	**1700**	**5900**
Hexachlorobutadiene	760 U	190 U	180 U	370 U
Hexachloroethane	760 U	190 U	180 U	370 U
Nitrobenzene	760 U	190 U	180 U	370 U
Pentachlorophenol	3800 U	960 U	910 U	1900 U
Phenol	760 U	190 U	180 U	370 U
Pyridine	3800 UJ	960 UJ	**-- R**	1900 UJ
PCB Aroclors (µg/kg)				
Aroclor 1016	32 U	33 U	32 U	32 U
Aroclor 1221	32 U	33 U	32 U	32 U
Aroclor 1232	32 U	33 U	32 U	32 U
Aroclor 1242	32 U	33 U	32 U	32 U
Aroclor 1248	32 U	33 U	32 U	64 U
Aroclor 1254	32 U	33 U	32 U	32 U
Aroclor 1260	32 U	33 U	32 U	32 U
LWG RA Total PCB Aroclors[9] (Calculated U = 1/2)	32 UT	33 UT	32 UT	64 UT
Pesticides (µg/kg)				
2,4'-DDD (o,p'-DDD)	320 U	33 U	32 U	32 U
2,4'-DDE (o,p'-DDE)	320 U	33 U	32 U	32 U
2,4'-DDT (o,p'-DDT)	320 U	33 U	32 U	32 U
4,4'-DDD (p,p'-DDD)	320 U	33 U	32 U	**71**
4,4'-DDE (p,p'-DDE)	320 U	33 U	32 U	32 U
4,4'-DDT (p,p'-DDT)	320 U	33 U	32 U	32 U
alpha-Hexachlorocyclohexane (BHC)	160 U	16 U	16 U	16 U
alpha-Chlordane (cis-Chlordane)	160 U	16 U	16 U	16 U

Table 2-9
Data Gaps TCLP, DRET, and SBLT Sample Bulk Sediment Test Results

Location ID	DGS-24SC	DGS-26SC	DGS-31SC	DGS-32SC
Sample ID	DGS-24SC-6.710.7-101012	DGS-26SC-015.4-101011	DGS-31SC-011.9-101011	DGS-32SC-2.83.8-101011
Sample Date	10/12/2010	10/11/2010	10/11/2010	10/11/2010
Depth	6.7 - 10.7 feet	1 - 5.4 feet	1 - 1.9 feet	2.8 - 3.8 feet
Sample Type	N	N	N	N
beta-Hexachlorocyclohexane (BHC)	160 U	16 U	16 U	16 U
beta-Chlordane (trans-Chlordane)	160 U	16 U	16 U	16 U
cis-Nonachlor	--	33 U	--	--
delta-Hexachlorocyclohexane (BHC)	160 UJ	16 UJ	16 UJ	16 UJ
Dieldrin	--	33 U	--	--
Endrin	320 U	33 U	32 U	32 U
Endrin ketone	320 U	33 U	32 U	32 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	160 U	16 U	16 U	16 U
Heptachlor	160 U	16 U	16 U	16 U
Heptachlor epoxide	--	16 U	--	--
Methoxychlor	1600 U	160 U	160 U	160 U

Table 2-9
Data Gaps TCLP, DRET, and SBLT Sample Bulk Sediment Test Results

Location ID	DGS-24SC	DGS-26SC	DGS-31SC	DGS-32SC
Sample ID	DGS-24SC-6.710.7-101012	DGS-26SC-015.4-101011	DGS-31SC-011.9-101011	DGS-32SC-2.83.8-101011
Sample Date	10/12/2010	10/11/2010	10/11/2010	10/11/2010
Depth	6.7 - 10.7 feet	1 - 5.4 feet	1 - 1.9 feet	2.8 - 3.8 feet
Sample Type	N	N	N	N
Oxychlordane	--	33 U	--	--
Toxaphene	16000 U	1600 U	1600 U	1600 U
trans-Nonachlor	--	33 U	--	--
Hexachlorobenzene	760 U	16 UJ	180 U	370 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	320 UT	33 UT	32 UT	32 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	320 UT	33 UT	32 UT	**100 T**
LWG RA Sum DDD (Calculated U = 1/2)	320 UT	33 UT	32 UT	**87 T**
LWG RA Sum DDE (Calculated U = 1/2)	320 UT	33 UT	32 UT	32 UT
LWG RA Sum DDT (Calculated U = 1/2)	320 UT	33 UT	32 UT	32 UT
LWG RA Total DDx (Calculated U = 1/2)	320 UT	33 UT	32 UT	**150 T**
LWG RA Total Chlordane[1] (Calculated U = 1/2)	160 UT	33 UT	16 UT	16 UT
Total Petroleum Hydrocarbons (mg/kg)				
Diesel Range Hydrocarbons	**10000**	**370**	**640**	**3700**
Gasoline Range Hydrocarbons	--	**35 J**	--	--
Motor Oil Range	**5100**	**170**	**390**	**2100**
LWG RA Total TPH[4] (Calculated U = 1/2)	**15000 JT**	**570 JT**	**1000 JT**	**5800 JT**

Table 2-9
Data Gaps TCLP, DRET, and SBLT Sample Bulk Sediment Test Results

Notes:

Bold = Detected result

* = Ignitability and pH results from bulk results.

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R = Rejected

T = calculation or summation applied

N = Normal Field Sample

FD = Field Duplicate

NF = Not Flammable

-- Results not reported or not applicable

Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.

Significant figures applied to all calculated totals

Table contains validated data

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[3] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

[4] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[5] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.

[6] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

[7] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

[8] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.

[9] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

Acronyms

cPAH = carcinogenic PAH
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
EPH = extractable petroleum hydrocarbon
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
mg/kg = milligrams per kilograms
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
su = standard unit
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons
µg/kg = micrograms per kilogram
VPH = volatile petroleum hydrocarbon

Table 2-10
Data Gaps Sediment Sample DRET Test Results

Location ID	DGS-11SC	DGS-11SC	DGS-18SC	DGS-18SC	DGS-22SC	DGS-22SC
Sample ID	DGS-11SC-1.58.2-101006-T	DGS-11SC-1.58.2-101006-D	DGS-18SC-004.5-101008-T	DGS-18SC-004.5-101008-D	DGS-22SC-1.92.9-101012-T	DGS-22SC-1.92.9-101012-D
Sample Date	10/6/2010	10/6/2010	10/8/2010	10/8/2010	10/12/2010	10/12/2010
Depth	1.5 - 8.2 feet	1.5 - 8.2 feet	0 - 4.5 feet	0 - 4.5 feet	1.9 - 2.9 feet	1.9 - 2.9 feet
Sample Type	N	N	N	N	N	N
Fraction	Total	Dissolved	Total	Dissolved	Total	Dissolved
Conventional Parameters (mg/l)						
Cyanide, total	**0.026**	**0.008**	0.005 U	0.005 U	**0.009**	0.005 U
Cyanide, available	**0.0026**	0.002 U	0.002 U	0.002 U	**0.0027**	0.002 U
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Metals (µg/l)						
Zinc	**80**	**20**	**40**	10 U	**190**	**20**
Volatile Organics (µg/l)						
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, cis-	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, trans-	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	2 U	2 U	2 U	2 U	2 U	2 U
o-Xylene	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	1 U	1 U	1 U	1 U	1 U	1 U
LWG RA Total BTEX[4] (Calculated U = 1/2)	2 UT	2 UT	2 UT	2 UT	2 UT	2 UT
LWG RA Total Xylene[7] (Calculated U = 1/2)	2 UT	2 UT	2 UT	2 UT	2 UT	2 UT
Polycyclic Aromatic Hydrocarbons (µg/l)						
1-Methylnaphthalene	**130**	**160**	**42**	**40**	**18**	**15**
2-Methylnaphthalene	**250**	**280**	**9.6**	**14**	**1.2**	1 U
Acenaphthene	**240**	**210**	**34**	**30**	**80**	**65**
Acenaphthylene	**37**	**32**	1 U	1 U	1 U	1 U
Anthracene	**47**	**20**	**16**	**10**	**35**	**15**
Benzo(a)anthracene	**30**	**5.1**	**4.8**	1 U	**15**	**2.3**
Benzo(b,j,k)fluoranthenes	**40**	**5.6**	**3.9**	1 U	**18**	**2**
Benzo(a)pyrene	**37**	**5.2**	**3.6**	1 U	**14**	**1.4**
Benzo(g,h,i)perylene	**24**	**3.3**	**2.2**	1 U	**9.9**	1 U
Chrysene	**36**	**4.9**	**6**	1 U	**47**	**4.6**
Dibenzo(a,h)anthracene	5 U	1 U	1 U	1 U	**2.3**	1 U
Fluoranthene	**130**	**41**	**18**	**6.9**	**59**	**26**
Fluorene	**98**	**84**	**25**	**21**	**39**	**30**
Indeno(1,2,3-c,d)pyrene	**17**	**2.1**	**1.5**	1 U	**7.2**	1 U
Naphthalene	**3200**	**3800**	1 U	1 U	**13**	**9.9**
Perylene	**9.3**	**1.3**	1 U	1 U	**3.8**	1 U
Phenanthrene	**340**	**230**	**100**	**74**	**180**	**130**
Pyrene	**150**	**47**	**25**	**8.7**	**65**	**28**
LWG RA Total 7 of 17 LPAH[1] (Calculated U = 1/2)	**4200 T**	**4700 T**	**190 T**	**150 T**	**350 T**	**250 T**
LWG RA Total 10 of 17 HPAH[2] (Calculated U = 1/2)	**470 T**	**110 T**	**65 T**	**19 T**	**240 T**	**66 T**
LWG RA Total 17 PAH[6] (Calculated U = 1/2)	**4700 T**	**4800 T**	**250 T**	**170 T**	**590 T**	**320 T**
LWG RA Total cPAH TEQ[5] (EPA 1993) (Calculated U = 1/2)	**48 T**	**7 T**	**5.1 T**	1 UT	**20 T**	**2.4 T**
Semivolatile Organics (µg/l)						
Carbazole	**87**	**87**	**2.6**	**2.5**	**12**	**11**
Dibenzofuran	**17**	**14**	**4.1**	**3.6**	**4.9**	**3.9**
PCB Aroclors (µg/l)						
Aroclor 1016	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1221	1 U	1 U	1 UJ	1 UJ	1 U	1 U
Aroclor 1232	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1242	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1248	1 U	1 U	1 U	1 U	1 U	1 U

Table 2-10
Data Gaps Sediment Sample DRET Test Results

Location ID	DGS-11SC	DGS-11SC	DGS-18SC	DGS-18SC	DGS-22SC	DGS-22SC
Sample ID	DGS-11SC-1.58.2-101006-T	DGS-11SC-1.58.2-101006-D	DGS-18SC-004.5-101008-T	DGS-18SC-004.5-101008-D	DGS-22SC-1.92.9-101012-T	DGS-22SC-1.92.9-101012-D
Sample Date	10/6/2010	10/6/2010	10/8/2010	10/8/2010	10/12/2010	10/12/2010
Depth	1.5 - 8.2 feet	1.5 - 8.2 feet	0 - 4.5 feet	0 - 4.5 feet	1.9 - 2.9 feet	1.9 - 2.9 feet
Sample Type	N	N	N	N	N	N
Fraction	Total	Dissolved	Total	Dissolved	Total	Dissolved
Aroclor 1254	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1260	1 U	1 U	1 U	1 U	1 U	1 U
LWG RA Total PCB Aroclors[8] (Calculated U = 1/2)	1 UT	1 UT	1 UJT	1 UJT	1 UT	1 UT
Pesticides (µg/l)						
2,4'-DDD (o,p'-DDD)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDE (o,p'-DDE)	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDT (o,p'-DDT)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 UJ	0.1 UJ
4,4'-DDD (p,p'-DDD)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE (p,p'-DDE)	0.1 UJ	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT (p,p'-DDT)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
alpha-Hexachlorocyclohexane (BHC)	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
beta-Hexachlorocyclohexane (BHC)	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
delta-Hexachlorocyclohexane (BHC)	0.05 UJ	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Endrin ketone	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	0.1 UJT	0.1 UT	0.1 UT	0.1 UT	0.1 UJT	0.1 UJT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	0.1 UJT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.1 UJT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UJT	0.1 UJT
LWG RA Total DDx (Calculated U = 1/2)	0.1 UJT	0.1 UT	0.1 UT	0.1 UT	0.1 UJT	0.1 UJT
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	**2.3**	**1.8**	**1 J**	**0.63 J**	**0.72**	**0.67**
Motor Oil Range	**0.98**	**0.42**	**0.48**	0.2 U	0.2 U	0.2 U
LWG RA TPH[3] (Calculated U = 1/2)	**3.3 T**	**2.2 T**	**1.5 JT**	**0.73 JT**	**0.82 T**	**0.77 T**

Table 2-10
Data Gaps Sediment Sample DRET Test Results

Location ID	DGS-24SC	DGS-24SC	DGS-26SC	DGS-26SC	DGS-31SC	DGS-31SC
Sample ID	DGS-24SC-6.710.7-101012-T	DGS-24SC-6.710.7-101012-D	DGS-26SC-015.4-101011-T	DGS-26SC-015.4-101011-D	DGS-31SC-011.9-101011-T	DGS-31SC-011.9-101011-D
Sample Date	10/12/2010	10/12/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth	6.7 - 10.7 feet	6.7 - 10.7 feet	1 - 5.4 feet	1 - 5.4 feet	1 - 1.9 feet	1 - 1.9 feet
Sample Type	N	N	N	N	N	N
Fraction	Total	Dissolved	Total	Dissolved	Total	Dissolved
Conventional Parameters (mg/l)						
Cyanide, total	**0.007**	0.005 U	0.005 U	0.005 U	**0.009**	**0.008**
Cyanide, available	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cyanide, free	**0.0021 J**	**0.002 J**	0.005 U	0.005 U	**0.0027 J**	**0.0029 J**
Metals (µg/l)						
Zinc	**20**	10 U	10 U	10 U	**90**	10 U
Volatile Organics (µg/l)						
1,1-Dichloroethene	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, cis-	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, trans-	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	1 U	1 U	1 U	1 U	1 U	1 U
m,p-Xylene	2 U	2 U	2 U	2 U	2 U	2 U
o-Xylene	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene (TCE)	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	1 U	1 U	1 U	1 U	1 U	1 U
LWG RA Total BTEX[4] (Calculated U = 1/2)	2 UT	2 UT	2 UT	2 UT	2 UT	2 UT
LWG RA Total Xylene[7] (Calculated U = 1/2)	2 UT	2 UT	2 UT	2 UT	2 UT	2 UT
Polycyclic Aromatic Hydrocarbons (µg/l)						
1-Methylnaphthalene	**290**	**260**	**38**	**38**	**23**	**23**
2-Methylnaphthalene	**510**	**450**	**25**	**26**	**2**	**2.2**
Acenaphthene	**320**	**280**	**74**	**68**	**44**	**43**
Acenaphthylene	**7**	**5.5**	1 U	1 U	1 U	1 U
Anthracene	**28**	**19**	**12**	**10**	**9**	**8.7**
Benzo(a)anthracene	**12**	**1.7**	**3.6**	**1.1**	1 U	1 U
Benzo(b,j,k)fluoranthenes	**18**	**1.9**	**5.2**	1 U	1 U	1 U
Benzo(a)pyrene	**15**	**1.5**	**4.2**	1 U	1 U	1 U
Benzo(g,h,i)perylene	**12**	**1.2**	**3.3**	1 U	1 U	1 U
Chrysene	**14**	**1.9**	**4.5**	**1.2**	1 U	1 U
Dibenzo(a,h)anthracene	1 U	1 U	1 U	1 U	1 U	1 U
Fluoranthene	**54**	**20**	**22**	**14**	**11**	**9.3**
Fluorene	**68**	**62**	**26**	**24**	**20**	**20**
Indeno(1,2,3-c,d)pyrene	**8.5**	1 U	**2.3**	1 U	1 U	1 U
Naphthalene	**6200**	**5600**	**120**	**120**	**2.7**	**4.7**
Perylene	**4**	1 U	**1.2**	1 U	1 U	1 U
Phenanthrene	**300**	**200**	**77**	**66**	**66**	**63**
Pyrene	**61**	**22**	**24**	**15**	**10**	**7.9**
LWG RA Total 7 of 17 LPAH[1] (Calculated U = 1/2)	**7400 T**	**6600 T**	**330 T**	**310 T**	**140 T**	**140 T**
LWG RA Total 10 of 17 HPAH[2] (Calculated U = 1/2)	**190 T**	**51 T**	**70 T**	**34 T**	**25 T**	**21 T**
LWG RA Total 17 PAH[6] (Calculated U = 1/2)	**7600 T**	**6700 T**	**400 T**	**350 T**	**170 T**	**160 T**
LWG RA Total cPAH TEQ[5] (EPA 1993) (Calculated U = 1/2)	**19 T**	**2.4 T**	**5.8 T**	**1.2 T**	1 UT	1 UT
Semivolatile Organics (µg/l)						
Carbazole	**69**	**69**	**6**	**5.5**	**10**	**10**
Dibenzofuran	**16**	**15**	**4.6**	**4.3**	**3.7**	**3.7**
PCB Aroclors (µg/l)						
Aroclor 1016	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1221	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1232	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1242	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1248	1 U	1 U	1 U	1 U	1 U	1 U

Table 2-10
Data Gaps Sediment Sample DRET Test Results

Location ID	DGS-24SC	DGS-24SC	DGS-26SC	DGS-26SC	DGS-31SC	DGS-31SC
Sample ID	DGS-24SC-6.710.7-101012-T	DGS-24SC-6.710.7-101012-D	DGS-26SC-015.4-101011-T	DGS-26SC-015.4-101011-D	DGS-31SC-011.9-101011-T	DGS-31SC-011.9-101011-D
Sample Date	10/12/2010	10/12/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth	6.7 - 10.7 feet	6.7 - 10.7 feet	1 - 5.4 feet	1 - 5.4 feet	1 - 1.9 feet	1 - 1.9 feet
Sample Type	N	N	N	N	N	N
Fraction	Total	Dissolved	Total	Dissolved	Total	Dissolved
Aroclor 1254	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor 1260	1 U	1 U	1 U	1 U	1 U	1 U
LWG RA Total PCB Aroclors[8] (Calculated U = 1/2)	1 UT	1 UT	1 UT	1 UT	1 UT	1 UT
Pesticides (µg/l)						
2,4'-DDD (o,p'-DDD)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDE (o,p'-DDE)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4'-DDT (o,p'-DDT)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDD (p,p'-DDD)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE (p,p'-DDE)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT (p,p'-DDT)	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
alpha-Hexachlorocyclohexane (BHC)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
beta-Hexachlorocyclohexane (BHC)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
delta-Hexachlorocyclohexane (BHC)	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Endrin ketone	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
LWG RA Total DDx (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT	0.1 UT
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	**3**	**2.4**	**0.81**	**0.67**	**0.55**	**0.45**
Motor Oil Range	**0.37**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
LWG RA TPH[3] (Calculated U = 1/2)	**3.4 T**	**2.5 T**	**0.91 T**	**0.77 T**	**0.65 T**	**0.55 T**

Table 2-10
Data Gaps Sediment Sample DRET Test Results

Location ID	DGS-32SC	DGS-32SC	
Sample ID	DGS-32SC-2.83.8-101011-T	DGS-32SC-2.83.8-101011-D	Sitewater
Sample Date	10/11/2010	10/11/2010	10/28/2010
Depth	2.8 - 3.8 feet	2.8 - 3.8 feet	
Sample Type	N	N	N
Fraction	Total	Dissolved	Total
Conventional Parameters (mg/l)			
Cyanide, total	**0.052**	**0.012**	0.005 U
Cyanide, available	**0.0069**	0.002 U	0.002 U
Cyanide, free	0.005 U	0.005 U	--
Metals (µg/l)			
Zinc	**310**	**40**	**5**
Volatile Organics (µg/l)			
1,1-Dichloroethene	1 U	1 U	1 U
1,2-Dichloroethene, cis-	1 U	1 U	1 U
1,2-Dichloroethene, trans-	1 U	1 U	1 U
Benzene	1 U	1 U	1 U
Ethylbenzene	1 U	1 U	1 U
m,p-Xylene	2 U	2 U	2 U
o-Xylene	1 U	1 U	1 U
Toluene	1 U	1 U	1 U
Trichloroethene (TCE)	1 U	1 U	1 U
Vinyl chloride	1 U	1 U	1 U
LWG RA Total BTEX[4] (Calculated U = 1/2)	2 UT	2 UT	2 UT
LWG RA Total Xylene[7] (Calculated U = 1/2)	2 UT	2 UT	2 UT
Polycyclic Aromatic Hydrocarbons (µg/l)			
1-Methylnaphthalene	**140**	**130**	1 U
2-Methylnaphthalene	**210**	**200**	1 U
Acenaphthene	**120**	**120**	1 U
Acenaphthylene	1 U	1 U	1 U
Anthracene	**28**	**20**	1 U
Benzo(a)anthracene	**8.9**	**3.1**	1 U
Benzo(b,j,k)fluoranthenes	**8.2**	**2.6**	1 U
Benzo(a)pyrene	**6.6**	**1.9**	1 U
Benzo(g,h,i)perylene	**4.1**	**1**	1 U
Chrysene	**11**	**3.7**	1 U
Dibenzo(a,h)anthracene	1 U	1 U	1 U
Fluoranthene	**39**	**20**	1 U
Fluorene	**50**	**46**	1 U
Indeno(1,2,3-c,d)pyrene	**2.9**	1 U	1 U
Naphthalene	**140**	**140**	1 U
Perylene	**1.7**	1 U	1 U
Phenanthrene	**180**	**140**	1 U
Pyrene	**47**	**24**	1 U
LWG RA Total 7 of 17 LPAH[1] (Calculated U = 1/2)	**730 T**	**670 T**	1 UT
LWG RA Total 10 of 17 HPAH[2] (Calculated U = 1/2)	**130 T**	**57 T**	1 UT
LWG RA Total 17 PAH[6] (Calculated U = 1/2)	**860 T**	**720 T**	1 UT
LWG RA Total cPAH TEQ[5] (EPA 1993) (Calculated U = 1/2)	**9.1 T**	**3 T**	1 UT
Semivolatile Organics (µg/l)			
Carbazole	**53**	**55**	1 U
Dibenzofuran	**10**	**9.3**	1 U
PCB Aroclors (µg/l)			
Aroclor 1016	1 U	1 U	1 U
Aroclor 1221	1 U	1 U	1 U
Aroclor 1232	1 U	1 U	1 U
Aroclor 1242	1 U	1 U	1 U
Aroclor 1248	1 U	1 U	1 U

Table 2-10
Data Gaps Sediment Sample DRET Test Results

Location ID	DGS-32SC	DGS-32SC	
Sample ID	DGS-32SC-2.83.8-101011-T	DGS-32SC-2.83.8-101011-D	Sitewater
Sample Date	10/11/2010	10/11/2010	10/28/2010
Depth	2.8 - 3.8 feet	2.8 - 3.8 feet	
Sample Type	N	N	N
Fraction	Total	Dissolved	Total
Aroclor 1254	1 U	1 U	1 U
Aroclor 1260	1 U	1 U	1 U
LWG RA Total PCB Aroclors[8] (Calculated U = 1/2)	1 UT	1 UT	1 UT
Pesticides (µg/l)			
2,4'-DDD (o,p'-DDD)	0.1 U	0.1 U	0.1 U
2,4'-DDE (o,p'-DDE)	0.1 U	0.1 U	0.1 U
2,4'-DDT (o,p'-DDT)	0.1 UJ	0.1 UJ	0.1 U
4,4'-DDD (p,p'-DDD)	0.1 U	0.1 U	0.1 U
4,4'-DDE (p,p'-DDE)	0.1 U	0.1 U	0.1 U
4,4'-DDT (p,p'-DDT)	0.1 U	0.1 U	0.1 U
alpha-Hexachlorocyclohexane (BHC)	0.05 U	0.05 U	0.05 UJ
beta-Hexachlorocyclohexane (BHC)	0.05 U	0.05 U	0.05 U
delta-Hexachlorocyclohexane (BHC)	0.05 UJ	0.05 UJ	0.05 UJ
Endrin ketone	0.1 U	0.1 U	0.1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.05 U	0.05 U	0.05 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	0.1 UJT	0.1 UJT	0.1 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.1 UT	0.1 UT	0.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.1 UJT	0.1 UJT	0.1 UT
LWG RA Total DDx (Calculated U = 1/2)	0.1 UJT	0.1 UJT	0.1 UT
Total Petroleum Hydrocarbons (mg/l)			
Diesel Range Hydrocarbons	**2.2**	**2**	0.1 U
Motor Oil Range	**0.39**	**0.29**	0.2 U
LWG RA TPH[3] (Calculated U = 1/2)	**2.6 T**	**2.3 T**	0.2 UT

Table 2-10
Data Gaps Sediment Sample DRET Test Results

Notes:
Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = calculation or summation applied
N = Normal Field Sample
FD = Field Duplicate
-- Results not reported or not applicable
Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.
Significant figures applied to all calculated totals
Table contains validated data

Footnotes
[1] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

[2] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene
[3] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured
[4] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene
[5] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.

[6] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.
[7] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene
[8] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors

Acronyms
cPAH = carcinogenic PAH

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

EPH = extractable petroleum hydrocarbon

HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
mg/kg = milligrams per kilograms
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons
µg/kg = micrograms per kilogram
VPH = volatile petroleum hydrocarbon

Table 2-11
Data Gaps Sediment Waste Characterization and Bench Scale Treatability Test Results

	Location ID	DGS-07SC	DGS-11SC	DGS-11SC	DGS-11SC	DGS-11SC	DGS-13SC
	Sample ID	DGS-07SC-0113.4-101012	DGS-11SC-1.58.2-101006	DGS-11SC-1.58.2-101006-PC10	DGS-11SC-1.58.2-101006-QL10	DGS-11SC-1.58.2-101006-QL5	DGS-13SC-0006-101005
	Sample Date	10/12/2010	10/6/2010	10/6/2010	10/6/2010	10/6/2010	10/5/2010
	Depth	1 to 13.4 feet	1.5 to 8.2 feet	1.5 to 8.2 feet	1.5 to 8.2 feet	1.5 to 8.2 feet	0 to 6 feet
	Sample Type	N	N	N	N	N	N
	Subtitle D						
Conventional Parameters (None)							
Ignitability *	140	**NF**	**NF**	--	--	--	--
Conventional Parameters (standard unit)							
pH *	12.5	**6.89**	**6.21**	--	--	--	**6.96**
Metals (µg/l)							
Arsenic	5000	200 U	200 U	--	--	--	200 U
Barium	100000	**540**	**440**	--	--	--	**360**
Cadmium	1000	10 U	10 U	--	--	--	10 U
Chromium	5000	20 U	20 U	--	--	--	20 U
Lead	5000	100 U	100 U	--	--	--	100 U
Mercury	200	0.1 U	0.1 U	--	--	--	0.1 U
Selenium	1000	200 U	200 U	--	--	--	200 U
Silver	5000	20 U	20 U	--	--	--	20 U
Volatile Organics (µg/l)							
1,1-Dichloroethene	700	10 U	20 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	500	10 U	20 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	7500	10 U	20 U	10 U	10 U	10 U	10 U
2-Butanone (MEK)	200000	50 U	100 U	50 U	50 U	50 U	50 U
Benzene	500	10 U	**1200 J**	10 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)		10 U	20 U	10 U	10 U	10 U	10 U
Chlorobenzene	100000	10 U	20 U	10 U	10 U	10 U	10 U
Chloroform	6000	10 U	20 U	10 U	10 U	10 U	10 U
Tetrachloroethene (PCE)	700	10 U	20 U	10 U	10 U	10 U	10 U
Trichloroethene (TCE)	500	10 U	20 U	10 U	10 U	10 U	10 U
Vinyl chloride	200	10 U	20 U	10 U	10 U	10 U	10 U
Semivolatile Organics (µg/l)							
1,4-Dichlorobenzene	7500	--	10 U	--	--	--	--
2-Methylphenol (o-Cresol)	200000	10 U	10 U	--	--	--	10 U
2,4-Dinitrotoluene	130	50 U	50 U	--	--	--	50 U
2,4,5-Trichlorophenol	400000	50 U	50 U	--	--	--	50 U
2,4,6-Trichlorophenol	2000	50 U	50 U	--	--	--	50 U
3&4-Methylphenol (m,p-Cresol)	200000	10 U	10 U	--	--	--	10 U
Hexachlorobenzene	130	10 U	10 U	--	--	--	10 U
Hexachlorobutadiene	500	10 U	10 U	--	--	--	10 U
Hexachloroethane	3000	10 U	10 U	--	--	--	10 U
Nitrobenzene	2000	10 U	10 U	--	--	--	10 U
Pentachlorophenol	100000	50 U	50 U	--	--	--	50 U
Pyridine	5000	50 U	50 U	--	--	--	50 U
PCB Aroclors (µg/l)							
Aroclor 1016		10 U	2 U	--	--	--	2 U
Aroclor 1221		10 U	2 U	--	--	--	2 U
Aroclor 1232		10 U	2 U	--	--	--	2 U
Aroclor 1242		10 U	4 U	--	--	--	2 U
Aroclor 1248		10 U	2 U	--	--	--	2 U
Aroclor 1254		10 U	2 U	--	--	--	2 U
Aroclor 1260		10 U	2 U	--	--	--	2 U
LWG RA Total PCB Aroclors[1] (Calculated U = 1/2)	50000	10 UT	4 UT	--	--	--	2 UT
Pesticides (µg/l)							
alpha-Chlordane (cis-Chlordane)		0.5 U	0.5 U	--	--	--	0.5 U
beta-Chlordane (trans-Chlordane)		0.5 U	0.5 U	--	--	--	0.5 U
Endrin	20	1 U	1 U	--	--	--	1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	400	0.5 U	0.5 U	--	--	--	0.5 U
Heptachlor	8	0.5 U	0.5 U	--	--	--	0.5 U
Heptachlor epoxide		0.5 U	0.5 U	--	--	--	0.5 U
Methoxychlor	10000	5 U	5 U	--	--	--	5 U

Table 2-11
Data Gaps Sediment Waste Characterization and Bench Scale Treatability Test Results

	Location ID	DGS-07SC	DGS-11SC	DGS-11SC	DGS-11SC	DGS-11SC	DGS-13SC
	Sample ID	DGS-07SC-0113.4-101012	DGS-11SC-1.58.2-101006	DGS-11SC-1.58.2-101006-PC10	DGS-11SC-1.58.2-101006-QL10	DGS-11SC-1.58.2-101006-QL5	DGS-13SC-0006-101005
	Sample Date	10/12/2010	10/6/2010	10/6/2010	10/6/2010	10/6/2010	10/5/2010
	Depth	1 to 13.4 feet	1.5 to 8.2 feet	1.5 to 8.2 feet	1.5 to 8.2 feet	1.5 to 8.2 feet	0 to 6 feet
	Sample Type	N	N	N	N	N	N
	Subtitle D						
Toxaphene	500	50 U	50 U	--	--	--	50 U
Total Chlordane[2] (Calculated U = 1/2)		0.5 UT	0.5 UT	--	--	--	0.5 UT
Herbicides (µg/l)							
2,4-D (2,4-Dichlorophenoxyacetic acid)	10000	5 U	5 U	--	--	--	5 U
2,4,5-TP (Silvex)	1000	1.2 U	1.2 U	--	--	--	1.2 U
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons		**1.3 J**	**2.3**	--	--	--	**0.66**
Gasoline Range Hydrocarbons		**4.4**	**26J**	--	--	--	2.5 U
Motor Oil Range		1 U	1 U	--	--	--	1 U
LWG RA Total Petroleum Hydrocarbons[3] (Calculated U = 1/2)		**6.2 JT**	**28.8 JT**	--	--	--	**2.4 JT**

Table 2-11
Data Gaps Sediment Waste Characterization and Bench Scale Treatability Test Results

	Location ID	**DGS-18SC**	**DGS-18SC**	**DGS-22SC**	**DGS-24SC**	**DGS-24SC**	**DGS-24SC**
	Sample ID	**DGS-18SC-004.5-101008**	**DGS-18SC-015.5-101008**	**DGS-22SC-1.92.9-101012**	**DGS-24SC-6.710.7-101012**	**DGS-24SC-6.710.7-101012-PC10**	**DGS-24SC-6.710.7-101012-QL10**
	Sample Date	**10/8/2010**	**10/8/2010**	**10/12/2010**	**10/12/2010**	**10/12/2010**	**10/12/2010**
	Depth	**0 to 4.5 feet**	**1 to 5.5 feet**	**1.9 to 2.9 feet**	**6.7 to 10.7 feet**	**6.7 to 10.7 feet**	**6.7 to 10.7 feet**
	Sample Type	**N**	**N**	**N**	**N**	**N**	**N**
	Subtitle D						
Conventional Parameters (None)							
Ignitability *	140	**NF**	--	**NF**	**NF**	--	--
Conventional Parameters (standard unit)							
pH *	12.5	**6.03**	--	**6.65**	**6.49**	--	--
Metals (µg/l)							
Arsenic	5000	200 U	200 U	200 U	200 U	--	--
Barium	100000	**340**	**340**	**500**	**370**	--	--
Cadmium	1000	10 U	10 U	10 U	10 U	--	--
Chromium	5000	20 U	20 U	20 U	20 U	--	--
Lead	5000	100 U	100 U	100 U	100 U	--	--
Mercury	200	0.1 U	0.1 U	0.1 U	0.1 U	--	--
Selenium	1000	200 U	200 U	200 U	200 U	--	--
Silver	5000	20 U	20 U	20 U	20 U	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	700	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	500	10 U	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	7500	10 U	10 U	10 U	10 U	--	--
2-Butanone (MEK)	200000	50 U	50 U	50 U	50 U	50 U	50 U
Benzene	500	10 U	10 U	10 U	**1000**	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)		10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	100000	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	6000	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene (PCE)	700	10 U	10 U	10 U	10 U	10 U	10 U
Trichloroethene (TCE)	500	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	200	10 U	10 U	10 U	10 U	10 U	10 U
Semivolatile Organics (µg/l)							
1,4-Dichlorobenzene	7500	10 U	--	--	--	--	--
2-Methylphenol (o-Cresol)	200000	10 U	10 U	10 U	10 U	--	--
2,4-Dinitrotoluene	130	50 U	50 U	50 U	50 U	--	--
2,4,5-Trichlorophenol	400000	50 U	50 U	50 U	50 U	--	--
2,4,6-Trichlorophenol	2000	50 U	50 U	50 U	50 U	--	--
3&4-Methylphenol (m,p-Cresol)	200000	10 U	10 U	10 U	10 U	--	--
Hexachlorobenzene	130	10 U	10 U	10 U	10 U	--	--
Hexachlorobutadiene	500	10 U	10 U	10 U	10 U	--	--
Hexachloroethane	3000	10 U	10 U	10 U	10 U	--	--
Nitrobenzene	2000	10 U	10 U	10 U	10 U	--	--
Pentachlorophenol	100000	50 U	50 U	50 U	50 U	--	--
Pyridine	5000	50 U	50 U	50 U	50 U	--	--
PCB Aroclors (µg/l)							
Aroclor 1016		2 U	10 U	10 U	10 U	--	--
Aroclor 1221		2 U	10 U	10 U	10 U	--	--
Aroclor 1232		2 U	10 U	10 U	10 U	--	--
Aroclor 1242		2 U	10 U	10 U	10 U	--	--
Aroclor 1248		5 U	10 U	10 U	10 U	--	--
Aroclor 1254		3 U	10 U	10 U	10 U	--	--
Aroclor 1260		2 U	10 U	10 U	10 U	--	--
LWG RA Total PCB Aroclors[1] (Calculated U = 1/2)	50000	5 UT	10 UT	10 UT	10 UT	--	--
Pesticides (µg/l)							
alpha-Chlordane (cis-Chlordane)		0.5 U	0.5 U	0.5 U	0.5 U	--	--
beta-Chlordane (trans-Chlordane)		0.5 U	0.5 U	0.5 U	0.5 U	--	--
Endrin	20	1 U	1 U	1 U	1 U	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	400	0.5 U	0.5 U	0.5 U	0.5 U	--	--
Heptachlor	8	0.5 U	0.5 U	0.5 U	0.5 U	--	--
Heptachlor epoxide		0.5 U	0.5 U	0.5 U	0.5 U	--	--
Methoxychlor	10000	5 U	5 U	5 U	5 U	--	--

Table 2-11
Data Gaps Sediment Waste Characterization and Bench Scale Treatability Test Results

	Location ID	DGS-18SC	DGS-18SC	DGS-22SC	DGS-24SC	DGS-24SC	DGS-24SC
	Sample ID	DGS-18SC-004.5-101008	DGS-18SC-015.5-101008	DGS-22SC-1.92.9-101012	DGS-24SC-6.710.7-101012	DGS-24SC-6.710.7-101012-PC10	DGS-24SC-6.710.7-101012-QL10
	Sample Date	10/8/2010	10/8/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010
	Depth	0 to 4.5 feet	1 to 5.5 feet	1.9 to 2.9 feet	6.7 to 10.7 feet	6.7 to 10.7 feet	6.7 to 10.7 feet
	Sample Type	N	N	N	N	N	N
	Subtitle D						
Toxaphene	500	50 U	50 U	50 U	50 U	--	--
Total Chlordane[2] (Calculated U = 1/2)		0.5 UT	0.5 UT	0.5 UT	0.5 UT	--	--
Herbicides (µg/l)							
2,4-D (2,4-Dichlorophenoxyacetic acid)	10000	5 U	5 U	5 U	5 U	--	--
2,4,5-TP (Silvex)	1000	1.2 U	1.2 U	1.2 U	1.2 U	--	--
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons		**1.1**	**1.1 J**	**0.87 J**	**2.7 J**	--	--
Gasoline Range Hydrocarbons		2.5 U	2.5 U	2.5 U	**34**	--	--
Motor Oil Range		1 U	1 U	1 U	1 U	--	--
LWG RA Total Petroleum Hydrocarbons[3] (Calculated U = 1/2)		**2.9 T**	**2.9 JT**	**2.6 JT**	**37 JT**	--	--

Table 2-11
Data Gaps Sediment Waste Characterization and Bench Scale Treatability Test Results

Location ID		**DGS-24SC**	**DGS-26SC**	**DGS-31SC**	**DGS-32SC**
Sample ID		**DGS-24SC-6.710.7-101012-QL5**	**DGS-26SC-015.4-101011**	**DGS-31SC-011.9-101011**	**DGS-32SC-2.83.8-101011**
Sample Date		**10/12/2010**	**10/11/2010**	**10/11/2010**	**10/11/2010**
Depth		**6.7 to 10.7 feet**	**1 to 5.4 feet**	**1 to 1.9 feet**	**2.8 to 3.8 feet**
Sample Type		**N**	**N**	**N**	**N**
Subtitle D					
Conventional Parameters (None)					
Ignitability *	140	--	**NF**	**NF**	**NF**
Conventional Parameters (standard unit)					
pH *	12.5	--	**6.23**	**6.4**	**6.65**
Metals (µg/l)					
Arsenic	5000	--	200 U	200 U	200 U
Barium	100000	--	**300**	**420**	**590**
Cadmium	1000	--	10 U	10 U	10 U
Chromium	5000	--	20 U	20 U	20 U
Lead	5000	--	100 U	100 U	100 U
Mercury	200	--	0.1 U	0.1 U	0.1 U
Selenium	1000	--	200 U	200 U	200 U
Silver	5000	--	20 U	20 U	20 U
Volatile Organics (µg/l)					
1,1-Dichloroethene	700	10 U	10 U	10 U	10 U
1,2-Dichloroethane	500	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	7500	--	10 U	10 U	10 U
2-Butanone (MEK)	200000	50 U	50 U	50 U	50 U
Benzene	500	10 U	10 U	10 U	10 U
Carbon tetrachloride (Tetrachloromethane)		10 U	10 U	10 U	10 U
Chlorobenzene	100000	10 U	10 U	10 U	10 U
Chloroform	6000	10 U	10 U	10 U	10 U
Tetrachloroethene (PCE)	700	10 U	10 U	10 U	10 U
Trichloroethene (TCE)	500	10 U	10 U	10 U	10 U
Vinyl chloride	200	10 U	10 U	10 U	10 U
Semivolatile Organics (µg/l)					
1,4-Dichlorobenzene	7500	--	10 U	10 U	10 U
2-Methylphenol (o-Cresol)	200000	--	10 U	10 U	10 U
2,4-Dinitrotoluene	130	--	50 U	50 U	50 U
2,4,5-Trichlorophenol	400000	--	50 U	50 U	50 U
2,4,6-Trichlorophenol	2000	--	50 U	50 U	50 U
3&4-Methylphenol (m,p-Cresol)	200000	--	10 U	10 U	10 U
Hexachlorobenzene	130	--	10 U	10 U	10 U
Hexachlorobutadiene	500	--	10 U	10 U	10 U
Hexachloroethane	3000	--	10 U	10 U	10 U
Nitrobenzene	2000	--	10 U	10 U	10 U
Pentachlorophenol	100000	--	50 U	50 U	50 U
Pyridine	5000	--	50 U	50 U	50 U
PCB Aroclors (µg/l)					
Aroclor 1016		--	10 U	10 U	10 U
Aroclor 1221		--	10 U	10 U	10 U
Aroclor 1232		--	10 U	10 U	10 U
Aroclor 1242		--	10 U	10 U	10 U
Aroclor 1248		--	10 U	10 U	10 U
Aroclor 1254		--	10 U	10 U	10 U
Aroclor 1260		--	10 U	10 U	10 U
LWG RA Total PCB Aroclors[1] (Calculated U = 1/2)	50000	--	10 UT	10 UT	10 UT
Pesticides (µg/l)					
alpha-Chlordane (cis-Chlordane)		--	0.5 U	0.5 U	0.5 U
beta-Chlordane (trans-Chlordane)		--	0.5 U	0.5 U	0.5 U
Endrin	20	--	1 U	1 U	1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	400	--	0.5 U	0.5 U	0.5 U
Heptachlor	8	--	0.5 U	0.5 U	0.5 U
Heptachlor epoxide		--	0.5 U	0.5 U	0.5 U
Methoxychlor	10000	--	5 U	5 U	5 U

Table 2-11
Data Gaps Sediment Waste Characterization and Bench Scale Treatability Test Results

Location ID		**DGS-24SC**	**DGS-26SC**	**DGS-31SC**	**DGS-32SC**
Sample ID		**DGS-24SC-6.710.7-101012-QL5**	**DGS-26SC-015.4-101011**	**DGS-31SC-011.9-101011**	**DGS-32SC-2.83.8-101011**
Sample Date		**10/12/2010**	**10/11/2010**	**10/11/2010**	**10/11/2010**
Depth		**6.7 to 10.7 feet**	**1 to 5.4 feet**	**1 to 1.9 feet**	**2.8 to 3.8 feet**
Sample Type		**N**	**N**	**N**	**N**
Subtitle D					
Toxaphene	500	--	50 U	50 U	50 U
Total Chlordane[2] (Calculated U = 1/2)		--	0.5 UT	0.5 UT	0.5 UT
Herbicides (µg/l)					
2,4-D (2,4-Dichlorophenoxyacetic acid)	10000	--	5 U	5 U	5 U
2,4,5-TP (Silvex)	1000	--	1.2 U	1.2 U	1.2 U
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons		--	**1.7 J**	**1.2 J**	**1.9 J**
Gasoline Range Hydrocarbons		--	**3.1**	2.5 U	**4.3**
Motor Oil Range		--	1 U	1 U	1 U
LWG RA Total Petroleum Hydrocarbons[3] (Calculated U = 1/2)		--	**5.3 JT**	**3 JT**	**6.7 JT**

Table 2-11
Data Gaps Sediment Waste Characterization and Bench Scale Treatability Test Results

Notes:
Detected concentration is greater than Subtitle D screening level
Bold = Detected result
* Ignitability and pH results from bulk results.
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = calculation or summation applied
N = Normal Field Sample
FD = Field Duplicate
NF = not flammable
-- Results not reported or not applicable
Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.
Significant figures applied to all calculated totals
Table contains validated data

Footnotes
[1] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors
[2] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured
[3] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured

Acronyms
cPAH = carcinogenic
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
EPH = extractable petroleum hydrocarbon
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
mg/kg = milligrams per
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons
µg/kg = micrograms per kilogram
VPH = volatile petroleum hydrocarbon

Table 3-1
Data Gaps Riverbank Soil Boring Sample Summary

Boring ID	Sample ID	Sample Type	X Coordinates[1]	Y Coordinates[1]	Ground Surface Elevation (feet NAVD88)	Start Depth (feet)	End Depth (feet)	Sample Date, Time	Analyses
GST-01	GST-01SO-0-5-101001	N	7623033.55	705971.45	31.81	0	5	10/1/10 14:15	Bulk Chemistry[2], GS, MC, VPH, EPH
	GST-01SO-5-10-101001	N				5	10	10/1/10 15:00	MC
	GST-01SO-10-15-101001	N				10	15	10/1/10 15:10	GS, MC
	GST-01SO-15-20-101004	N				15	20	10/4/10 9:20	GS, MC
	GST-01SO-20-22.5-101004[3]	N				20	22.5	10/4/10 9:40	AL, MC
	GST-01SO-22.5-25-101004	N				22.5	25	10/4/10 10:20	AL, MC
	GST-01SO-25-30-101004	N				25	30	10/4/10 11:00	Bulk Chemistry[2], AL, MC, VPH, EPH
GST-02	GST-02SO-0-5-101004	N	7623222.76	705942.49	32.64	0	5	10/4/10 13:40	Bulk Chemistry[2], GS, MC, VPH, EPH
	GST-02SO-5-10-101004	N				5	10	10/4/10 14:00	MC
	GST-02SO-10-12.5-101004	N				10	12.5	10/4/10 14:45	GS, MC
	GST-02SO-15-20-101004	N				15	20	10/4/10 15:20	GS[4], MC
	GST-02SO-20-25-101004	N				20	25	10/4/10 15:50	GS[4], MC
	GST-02SO-25-30-101004	N				25	30	10/4/10 16:25	Bulk Chemistry[2], MC, VPH, EPH
	GST-52S0-25-30-101004	D				25	30	10/4/10 16:30	Bulk Chemistry[2], MC, VPH, EPH
GST-03	GST-03SO-0-5-101005	N	7623355.07	705854.30	34.73	0	5	10/5/10 9:10	Bulk Chemistry[2], GS[4], MC, VPH, EPH
	GST-03SO-5-6-101005	N				5	6	10/5/10 9:25	MC
	GST-03SO-15-20-101005	N				15	20	10/5/10 12:30	GS[4], MC
	GST-03SO-20-22-101005	N				20	22	10/5/10 12:45	MC
	GST-03SO-22-27-101005	N				22	27	10/5/10 13:30	Bulk Chemistry[2], AL, MC, VPH, EPH
GST-04	GST-04SO-0-5-101006	N	7623516.95	705739.05	33.21	0	5	10/6/10 11:30	Bulk Chemistry[2], GS[4], MC, VPH, EPH
	GST-04SO-5-10-101006	N				5	10	10/6/10 11:50	GS[4], MC
	GST-04SO-10-12-101006[3]	N				10	12	10/6/10 12:00	AL, MC
	GST-04SO-12-15-101006	N				12	15	10/6/10 12:25	MC
	GST-04SO-15-20-101006	N				15	20	10/6/10 13:40	MC
	GST-04SO-20-21-101006	N				20	21	10/6/10 14:05	GS, MC
	GST-04SO-21-26-101006	N				21	26	10/6/10 14:40	Bulk Chemistry[2], AL, MC, VPH, EPH
GST-05	GST-05SO-0-5-101005	N	7623706.19	705638.33	26.05	0	5	10/5/10 16:00	Bulk Chemistry[2], GS, MC, VPH, EPH
	GST-05SO-5-10-101005	N				5	10	10/5/10 16:25	GS, MC
	GST-05SO-10-13.7-101006	N				10	13.7	10/6/10 8:10	GS, MC
	GST-05SO-13.7-18.7-101006	N				13.7	18.7	10/6/10 8:50	Bulk Chemistry[2], AL, MC, VPH, EPH

Table 3-1
Data Gaps Riverbank Soil Boring Sample Summary

Boring ID	Sample ID	Sample Type	X Coordinates[1]	Y Coordinates[1]	Ground Surface Elevation (feet NAVD88)	Start Depth (feet)	End Depth (feet)	Sample Date, Time	Analyses
GST-06	GST-06SO-0-5-101007	N	7623903.67	705518.30	32.07	0	5	10/7/10 9:30	Bulk Chemistry[2], GS, MC, VPH, EPH
	GST-06SO-5-10-101007	N				5	10	10/7/10 9:45	GS, MC
	GST-06SO-10-12-101007	N				10	12	10/7/10 10:10	AL, MC
	GST-06SO-12-14.5-101007[3]	N				12	14.5	10/7/10 10:20	AL, MC
	GST-06SO-15-20-101007	N				15	20	10/7/10 10:45	GS, MC
	GST-06SO-20-25-101007	N				20	25	10/7/10 11:30	Bulk Chemistry[2],MC, VPH, EPH
GST-09	GST-09SO-0-5-101008	N	7624425.30	705238.37	25.54	0	5	10/8/10 8:20	Bulk Chemistry[2], GS, MC, SG, VPH, EPH
	GST-09SO-5-10-101008	N				5	10	10/8/10 8:40	MC
	GST-09SO-10-15-101008	N				10	15	10/8/10 9:20	GS, MC
	GST-09SO-15-20-101008	N				15	20	10/8/10 9:50	GS, MC
	GST-09SO-16.5-18-101008	N				16.5	18	10/8/10 10:00	Waste Characterization[5,6]
	GST-09SO-20-22.5-101008[3]	N				20	22.5	10/8/10 10:30	CU-Triax, AL, MC
	GST-09SO-23-28-101008	N				23	28	10/8/10 12:20	Bulk Chemistry[2], AL, MC, VPH, EPH
GST-11	GST-11SO-0-5-101011	N	7624804.25	705044.86	36.22	0	5	10/11/10 9:40	Bulk Chemistry[2], GS, MC, VPH, EPH
	GST-11SO-5-10-101011	N				5	10	10/11/10 10:30	MC
	GST-11SO-10-15-101011	N				10	15	10/11/10 12:05	GS, MC
	GST-11SO-15-20-101011	N				15	20	10/11/10 12:35	MC
	GST-11SO-20-25-101011	N				20	25	10/11/10 13:15	GS, MC
	GST-11SO-25-30-101011	N				25	30	10/11/10 13:50	GS, MC
	GST-11SO-30-32-101011	N				30	32	10/11/10 14:10	AL, MC
	GST-11SO-32-34.5-101011[3]	N				32	34.5	10/11/10 14:20	CU-Triax, AL, MC
	GST-11SO-35-39-101011	N				35	39	10/11/10 15:00	GS, MC
	GST-11SO-39-44-101011	N				39	44	10/11/10 16:00	Bulk Chemistry[2],MC, VPH, EPH
	GST-61SO-39-44-101011	D				39	44	10/11/10 16:10	Bulk Chemistry[2],MC, VPH, EPH
GST-13	GST-13SO-0-5-101012	N	7625079.46	704877.18	35.31	0	5	10/12/10 9:20	Bulk Chemistry[2],MC, VPH, EPH
	GST-13SO-5-10-101012	N				5	10	10/12/10 9:50	GS, MC
	GST-13SO-10-15-101012	N				10	15	10/12/10 10:30	MC
	GST-13SO-15-20-101012	N				15	20	10/12/10 11:00	GS, MC
	GST-13SO-20-25-101012	N				20	25	10/12/10 11:30	MC
	GST-13SO-25-30-101012	N				25	30	10/12/10 12:00	GS, MC
	GST-13SO-30-32.5-101012	N				30	32.5	10/12/10 13:10	AL, MC, SG
	GST-13SO-32.5-35-101012[3]	N				32.5	35	10/12/10 13:30	CU-Triax, Consol, AL, MC
	GST-13SO-35-38-101012	N				35	38	10/12/10 14:00	AL, MC
	GST-13SO-38-43-101012	N				38	43	10/12/10 14:35	Bulk Chemistry[2], AL, MC, VPH, EPH

Table 3-1
Data Gaps Riverbank Soil Boring Sample Summary

Boring ID	Sample ID	Sample Type	X Coordinates[1]	Y Coordinates[1]	Ground Surface Elevation (feet NAVD88)	Start Depth (feet)	End Depth (feet)	Sample Date, Time	Analyses
GSM-07	GSM-07SO-0-5-100927	N	7624080.46	705443.10	15.33	0	5	9/27/10 12:00	Bulk Chemistry[2], GS, MC, VPH, EPH
	GSM-07SO5-7.5-100927[3]	N				5	7.5	9/27/10 12:50	AL, MC
	GSM-07SO7.5-10-100927	N				7.5	10	9/27/10 15:00	GS, MC
	GSM-07SO-10-15-100927	N				10	15	9/27/10 16:00	GS, MC, SG
	GSM-07SO-15-20-100927	N				15	20	9/27/10 17:20	Bulk Chemistry[2],AL, MC, Waste Characterization[5], VPH, EPH
GSM-08	GSM-08SO-0-5-100928	N	7624309.89	705352.03	15.33	0	5	9/28/10 13:05	Bulk Chemistry[2], GS, MC, VPH, EPH
	GSM-08SO-5-7.5-100928	N				5	7.5	9/28/10 14:00	GS, MC
	GSM-08SO-7.5-10-100928[3]	N				7.5	10	9/28/10 14:20	AL, MC
	GSM-08SO-10-15-100928	N				10	15	9/28/10 15:30	Bulk Chemistry[2],GS, MC, Waste Characterization[5], VPH, EPH
GSM-14	GSM-14SO-0-5-101015	N	7625309.39	704791.91	10.91	0	5	10/15/10 11:00	Bulk Chemistry[2], GS, MC, VPH, EPH
	GSM-14SO-5-10-101015	N				5	10	10/15/10 12:00	AL, MC
	GSM-14SO-10-12.5-101015[3]	N				10	12.5	10/15/10 12:35	CU-Triax, Consol, AL, MC
	GSM-14SO12.5-17.5-101015	N				12.5	17.5	10/15/10 13:40	Bulk Chemistry[2], AL, MC, VPH, EPH

Table 3-1
Data Gaps Riverbank Soil Boring Sample Summary

Notes:
AL = Atterberg Limits
Consol = consolidation test
CU-Triax = consolidated undrained triaxial test
D = Duplicate Sample
EPH = extractable petroleum hydrocarbons
GS = grain size
GS = grain size
MC = moisture content
N = Normal Sample
NAV88 = North American Vertican Datum 1988
SG = specific gravity
VPH = volatile petroleum hydrocarbons

Footnotes

[1] = Coordinates are provided in northing and easting in North American Datum 1983 (NAD)83 High Accuracy Reference Network (HARN), Oregon State Plane, North International Feet

[2] = Bulk Chemistry testing included total solids, total organic carbon, total cyanide, metals, semivolatile organic carbons (SVOCs), volatile organic carbons (VOCs), polychlorinated biphenyls (PCBs), Pesticides, total petroleum hydrocabon (TPH) (see FSP Table 1-1 for individual analytes) and archive

[3] = Shelby Tube interval

[4] = Matrix issues prevented analysis of this test

[5] = Waste characterization testing included pH, corrosivity, ignitability, and Toxicity Characteristic Leaching Procedure testing for metals, SVOCs, VOCs, PCBs, Pesticides, Herbicides, and TPH (see FSP Table 1-3 for individual analytes)

[6] = Bench Scale treatability testing was triggered for VOCs and included 5 percent quick lime, 10 percent quick lime, and 10 percent portland cement (see FSP Table 1-1 for individual analytes)

Table 3-2
Data Gaps Riverbank Soil Screening Results

Boring ID	Depth Interval (feet)	VOC Headspace (ppm)	Hydrogen Cyanide Headspace (ppm)	Ultraviolet Screening (Positive/Negative)
GST-01	0-2.5	0.0	0	Negative
	2.5-5	0.2	0	Negative
	5-7.5	0.1	0	Negative
	7.5-10	0.1	0	Negative
	10-12.5	0.1	2	Negative
	12.5-15	0.0	4	Negative
	15-17.5	0.3	0	Negative
	17.5-20	0.1	6	Negative
	20-22.5	NA[1]	NA[1]	NA[1]
	22.5-25	0.1	1	Negative
	25-27.5	0.2	0	Negative
	27.5-30	0.1	0	Negative
GST-02	0-2.5	2.5	1	Negative
	2.5-5	0.1	0	Negative
	5-7.5	1.3	1	Negative
	7.5-10	3.8	2	Negative
	10-12.5	1.0	1	Negative
	12.5-15	NA[2]	NA[2]	NA[2]
	15-17.5	1.4	1	Negative
	17.5-20	0.9	1	Negative
	20-22.5	0.7	1	Negative
	22.5-25	0.7	2	Negative
	25-27.5	0.8	1	Negative
	27.5-30	0.0	0	Negative
GST-03	0-2.5	0.1	1	Negative
	2.5-5	1.9	1	Negative
	5-7.5	2.3	2	Negative
	7.5-10	NA[2]	NA[2]	NA[2]
	10-12.5	0.3	1	Negative
	12.5-15	NA[3]	NA[3]	NA[3]
	15-17.5	1.4	2	Negative
	17.5-20	5.0	4	Negative
	20-22.5	5.5	8	Negative
	22.5-25	1.2	2	Negative
	25-27.5	0.5	1	Negative
	27.5-30	0.3	1	Negative
GST-04	0-2.5	0.0	2	Negative
	2.5-5	2.9	2	Negative
	5-7	0.2	2	Negative
	7-10	0.2	2	Negative
	10-12	NA[1]	NA[1]	NA[1]
	12-15	0.0	0	Negative
	15-17.5	11.6	3	Negative
	17.5-20	2.7	3	Negative
	20-21	2.4	29	Negative
	21-25	0.6	11	Negative
	25-27.5	0.3	3	Negative
	27.5-30	0.2	3	Negative

Table 3-2
Data Gaps Riverbank Soil Screening Results

Boring ID	Depth Interval (feet)	VOC Headspace (ppm)	Hydrogen Cyanide Headspace (ppm)	Ultraviolet Screening (Positive/Negative)
GST-05	0-2.5	0.1	1	Negative
	2.5-5	0.3	1	Negative
	5-7.5	0.3	1	Negative
	7.5-10	0.2	1	Negative
	10-12.5	0.2	1	Negative
	12.5-15	0.0	0	Negative
	15-17.5	0.2	1	Negative
	17.5-20	0.0	0	Negative
GST-06	0-2.5	0.7	0	Negative
	2.5-5	23.5	0	Negative
	5-7.5	0.2	2	Negative
	7.5-10	0.3	0	Negative
	10-12	0.4	0	Negative
	12-15	10.3	3	Negative
	15-17.5	5.8	3	Negative
	17.5-20	7.0	0	Negative
	20-22.5	1.7	0	Negative
	22.5-25	9.3	2	**Positive[4]**
	25-27.5	107	5	**Positive[5]**
	27.5-30	330	4	**Positive[5]**
GST-09	0-2.5	0.0	0	Negative
	2.5-5	0.0	0	Negative
	5-7.5	0.0	0	Negative
	7.5-10	NA[2]	NA[2]	NA[2]
	10-12.5	0.0	0	Negative
	12.5-15	0.1	0	Negative
	15-17.5	90	0	**Positive[5]**
	17.5-20	55	0	**Positive[6]**
	20-22.5	NA[1]	NA[1]	NA[1]
	22.5-25	4.6	2	Negative
	25-27.5	0.2	0	Negative
	27.5-30	0.0	0	Negative
GST-11	0-2.5	0.0	0	Negative
	2.5-5	0.0	0	Negative
	5-7.5	0.0	0	Negative
	7.5-10	0.0	0	Negative
	10-12.5	0.0	0	Negative
	12.5-15	0.0	0	Negative
	15-17.5	0.2	3	Negative
	17.5-20	0.0	8	Negative
	20-22.5	0.4	10	Negative
	22.5-25	1.0	2	Negative
	25-27.5	2.0	17	Negative
	27.5-30	0.5	33	Negative
	30-32	0.7	46	Negative
	32-35	0.2	2	Negative
	35-37.5	0.1	2	Negative
	37.5-40	0.1	0	Negative
	40-42.5	0.0	2	Negative
	42.5-45	0.0	1	Negative

Table 3-2
Data Gaps Riverbank Soil Screening Results

Boring ID	Depth Interval (feet)	VOC Headspace (ppm)	Hydrogen Cyanide Headspace (ppm)	Ultraviolet Screening (Positive/Negative)
GST-13	0-2.5	0.0	0	Negative
	2.5-5	0.0	0	Negative
	5-7.5	0.0	0	Negative
	7.5-10	0.0	0	Negative
	10-12.5	0.1	4	Negative
	12.5-15	0.0	1	Negative
	15-17.5	0.1	1	Negative
	17.5-20	0.1	2	Negative
	20-22.5	0.1	2	Negative
	22.5-25	0.2	2	Negative
	25-27.5	1.9	32	Negative
	27.5-30	0.4	10	Negative
	30-32.5	0.2	7	Negative
	32.5-35	0.1	3	Negative
	35-38	0.1	1	Negative
	38-40	0.1	2	Negative
	40-42.5	0.1	1	Negative
	42.5-45	0.1	1	Negative
GSM-07	0-2.5	0.0	0	Negative
	2.5-5	0.1	0	Negative
	5-7.5	NA[1]	NA[1]	NA[1]
	7.5-10	0.2	0	**Positive[7]**
	10-12.5	0.4	0	**Positive[7]**
	12.5-15	NA[2]	NA[2]	NA[2]
	15-17.5	2.4	1	**Positive[5]**
	17.5-20	23.3	1	**Positive[5]**
GSM-08	0-2.5	0.0	0	Negative
	2.5-5	0.0	0	Negative
	5-7.5	0.0	0	Negative
	7.5-10	NA[2]	NA[2]	NA[2]
	10-12.5	5.9	0	**Positive[5]**
	12.5-15	0.8	0	**Positive[7]**
GST-14	0-2.5	0.0	0	Negative
	2.5-5	0.0	0	Negative
	5-7.5	0.0	0	Negative
	7.5-10	0.0	0	Negative
	10-12.5	NA[2]	NA[2]	NA[2]
	12.5-15	0.0	0	Negative
	15-17.5	0.0	0	Negative

Notes:
NA = not applicable - no sample collected from interval
ppm = parts per million
VOC = volatile organic compound
[1] = Shelby tube sample collected from this interval
[2] = No Recovery in sample interval
[3] = No sample could be analyzed - only cobble-size brick pieces in sampler
[4] = Minor Yellow Fluorescence in sample
[5] = Bright yellow fluorescent smears on plastic sample bag; dark orange-red fluorescent glow in sample
[6] = Bright yellow fluorescent smears on plastic sample bag; dull orange glow and yellow bands in sample
[7] = Yellow fluorescent smears on plastic sample bag

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-01	GST-01	GST-01	GST-01	GST-01	GST-01
Sample ID	GST-01SO-0-5-101001	GST-01SO-5-10-101001	GST-01SO-10-15-101001	GST-01SO-15-20-101004	GST-01SO-20-22.5-101004	GST-01SO-22.5-25-101004
Sample Date	10/1/2010	10/1/2010	10/1/2010	10/4/2010	10/4/2010	10/4/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	20 - 22.5 feet	22.5 - 25 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	0.341	--	--	--	--	--
Conventional Parameters (None)						
Atterberg Classification	--	--	--	--	ML	ML
Ignitability	--	--	--	--	--	--
Conventional Parameters (percent)						
Liquid limit	--	--	--	--	34.1	37.2
Plastic limit	--	--	--	--	27.4	31.2
Plasticity index	--	--	--	--	6.7	6
Moisture (water) content	16.5	26.5	31.78	45.51	42.86	52.61
Total organic carbon	0.269	--	--	--	--	--
Total solids[1]	81.5	--	--	--	--	--
Conventional Parameters (standard unit)						
pH	--	--	--	--	--	--
Specific gravity	--	--	--	--	--	--
Grain Size (percent)						
Percent passing < 1.3 micron sieve	16.7	--	7.3	6.7	--	--
Percent retained 1.3 micron sieve	3.3	--	2.1	4.7	--	--
Percent retained 3.2 micron sieve	4.2	--	3.6	6.1	--	--
Percent retained 7 micron sieve	2.5	--	2.1	3.4	--	--
Percent retained 9 micron sieve	3.3	--	2.6	4	--	--
Percent retained 13 micron sieve	5.4	--	5.2	6.7	--	--
Percent retained 22 micron sieve	5	--	5.7	6.1	--	--
Percent retained 32 micron sieve	8.3	--	18	14.7	--	--
Percent retained 75 micron sieve (#200)	4.7	--	30.6	15.5	--	--
Percent retained 150 micron sieve (#100)	3.6	--	13	16.9	--	--
Percent retained 250 micron sieve (#60)	4.1	--	2.6	13.8	--	--
Percent retained 425 micron sieve (#40)	4.8	--	1.5	0.9	--	--
Percent retained 850 micron sieve (#20)	7	--	2.1	0.5	--	--
Percent retained 2000 micron sieve (#10)	4.1	--	1.4	0.1	--	--
Percent retained 4750 micron sieve (#4)	3.6	--	0.4	0.1 U	--	--
Percent retained 9500 micron sieve	3.6	--	1	0.1 U	--	--
Percent retained 12500 micron sieve	6.5	--	0.9	0.1 U	--	--
Percent retained 19000 micron sieve	9.1	--	0.1 U	0.1 U	--	--
Percent retained 25K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--
Percent retained 37.5K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--
Percent retained 50K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--
Percent retained 75K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--
Gravel	23 T	--	2.3 T	0.1 UT	--	--
Gravel, Coarse	0.1 UT	--	0.1 UT	0.1 UT	--	--
Sand, Coarse	4.1 T	--	1.4 T	0.1 T	--	--
Sand, Fine	12 T	--	46 T	46.2 T	--	--
Sand, Medium	12 T	--	3.6 T	1.4 T	--	--
Silt, Coarse	5 T	--	5.7 T	6.1 T	--	--
Silt, Fine	5.8 T	--	4.7 T	7.4 T	--	--
Silt, Medium	5.4 T	--	5.2 T	6.7 T	--	--
Silt, Very Coarse	8.3 T	--	18 T	14.7 T	--	--
Silt, Very Fine	4.2 T	--	3.6 T	6.1 T	--	--
Clay	20 T	--	9.4 T	11 T	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-01	GST-01	GST-01	GST-01	GST-01	GST-01
Sample ID	GST-01SO-0-5-101001	GST-01SO-5-10-101001	GST-01SO-10-15-101001	GST-01SO-15-20-101004	GST-01SO-20-22.5-101004	GST-01SO-22.5-25-101004
Sample Date	10/1/2010	10/1/2010	10/1/2010	10/4/2010	10/4/2010	10/4/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	20 - 22.5 feet	22.5 - 25 feet
Sample Type	N	N	N	N	N	N
Total Gravel	**23 T**	--	**2.3 T**	0.1 UT	--	--
Total Sand	**28 T**	--	**51 T**	**48 T**	--	--
Total Silt	**29 T**	--	**37 T**	**41 T**	--	--
Total Clay	**20 T**	--	**9.4 T**	**11 T**	--	--
Total Fines (silt + clay)	**49 T**	--	**47 T**	**52 T**	--	--
Total Grain Size	**99.8 T**	--	**100 T**	**100 T**	--	--
Metals (mg/kg)						
Arsenic	10 U	--	--	--	--	--
Cadmium	**0.7**	--	--	--	--	--
Chromium	**18 J**	--	--	--	--	--
Copper	**21.6 J**	--	--	--	--	--
Lead	**16 J**	--	--	--	--	--
Mercury	**0.05**	--	--	--	--	--
Nickel	**17 J**	--	--	--	--	--
Silver	0.9 U	--	--	--	--	--
Zinc	**96 J**	--	--	--	--	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.1 U	--	--	--	--	--
1,2-Dichloroethene, cis-	1.1 U	--	--	--	--	--
1,2-Dichloroethene, trans-	1.1 U	--	--	--	--	--
Benzene	1.1 U	--	--	--	--	--
Ethylbenzene	1.1 U	--	--	--	--	--
m,p-Xylene	1.1 U	--	--	--	--	--
o-Xylene	1.1 U	--	--	--	--	--
Toluene	1.1 U	--	--	--	--	--
Trichloroethene (TCE)	1.1 U	--	--	--	--	--
Vinyl chloride	1.1 U	--	--	--	--	--
LWG RA Total BTEX[6] (Calculated U = 1/2)	1.1 UT	--	--	--	--	--
LWG RA Total Xylene[9] (Calculated U = 1/2)	1.1 UT	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	60 U	--	--	--	--	--
2-Methylnaphthalene	60 U	--	--	--	--	--
Acenaphthene	60 U	--	--	--	--	--
Acenaphthylene	60 U	--	--	--	--	--
Anthracene	60 U	--	--	--	--	--
Benzo(a)anthracene	60 U	--	--	--	--	--
Benzo(b,j,k)fluoranthenes	60 U	--	--	--	--	--
Benzo(a)pyrene	60 U	--	--	--	--	--
Benzo(g,h,i)perylene	60 U	--	--	--	--	--
Chrysene	60 U	--	--	--	--	--
Dibenzo(a,h)anthracene	60 U	--	--	--	--	--
Fluoranthene	60 U	--	--	--	--	--
Fluorene	60 U	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	60 U	--	--	--	--	--
Naphthalene	60 U	--	--	--	--	--
Perylene	60 U	--	--	--	--	--
Phenanthrene	60 U	--	--	--	--	--
Pyrene	60 U	--	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-01	GST-01	GST-01	GST-01	GST-01	GST-01
Sample ID	GST-01SO-0-5-101001	GST-01SO-5-10-101001	GST-01SO-10-15-101001	GST-01SO-15-20-101004	GST-01SO-20-22.5-101004	GST-01SO-22.5-25-101004
Sample Date	10/1/2010	10/1/2010	10/1/2010	10/4/2010	10/4/2010	10/4/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	20 - 22.5 feet	22.5 - 25 feet
Sample Type	N	N	N	N	N	N
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	60 UT	--	--	--	--	--
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	60 UT	--	--	--	--	--
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	60 UT	--	--	--	--	--
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	60 UT	--	--	--	--	--
Semivolatile Organics (µg/kg)						
Carbazole	60 U	--	--	--	--	--
Dibenzofuran	60 U	--	--	--	--	--
PCB Aroclors (µg/kg)						
Aroclor 1016	32 U	--	--	--	--	--
Aroclor 1221	32 U	--	--	--	--	--
Aroclor 1232	32 U	--	--	--	--	--
Aroclor 1242	32 U	--	--	--	--	--
Aroclor 1248	32 U	--	--	--	--	--
Aroclor 1254	32 U	--	--	--	--	--
Aroclor 1260	32 U	--	--	--	--	--
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	32 UT	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	3.2 U	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	3.2 U	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	3.2 U	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	3.2 U	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	3.2 U	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	1.6 U	--	--	--	--	--
alpha-Chlordane (cis-Chlordane)	1.6 U	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	--	--	--	--	--
gamma-Chlordane (trans-Chlordane)	1.6 U	--	--	--	--	--
cis-Nonachlor	3.2 U	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	1.6 UJ	--	--	--	--	--
Dieldrin	3.2 U	--	--	--	--	--
Endrin	3.2 U	--	--	--	--	--
Endrin ketone	3.2 U	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	--	--	--	--	--
Heptachlor epoxide	1.6 U	--	--	--	--	--
Oxychlordane	3.2 U	--	--	--	--	--
trans-Nonachlor	3.2 U	--	--	--	--	--
Hexachlorobenzene	1.6 U	--	--	--	--	--
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	--	--	--	--	--
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	--	--	--	--	--
LWG RA Total Chlordane[2] (Calculated U = 1/2)	3.2 UT	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6 U	--	--	--	--	--
Motor Oil Range	**44**	--	--	--	--	--
LWG RA TPH[5] (Calculated U = 1/2)	**47 T**	--	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-01	GST-01	GST-01	GST-01	GST-01	GST-01
Sample ID	GST-01SO-0-5-101001	GST-01SO-5-10-101001	GST-01SO-10-15-101001	GST-01SO-15-20-101004	GST-01SO-20-22.5-101004	GST-01SO-22.5-25-101004
Sample Date	10/1/2010	10/1/2010	10/1/2010	10/4/2010	10/4/2010	10/4/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	20 - 22.5 feet	22.5 - 25 feet
Sample Type	N	N	N	N	N	N
Volatile Petroleum Hydrocarbons (µg/kg)						
Benzene	730 U	--	--	--	--	--
C5-C6 Aliphatic	7300 U	--	--	--	--	--
C6-C8 Aliphatic	7300 U	--	--	--	--	--
C8-C10 Aliphatic	7300 U	--	--	--	--	--
C10-C12 Aliphatic	7300 U	--	--	--	--	--
C8-C10 Aromatic	7300 U	--	--	--	--	--
C10-C12 Aromatic	7300 U	--	--	--	--	--
C12-C13 Aromatic	7300 U	--	--	--	--	--
Ethylbenzene	730 U	--	--	--	--	--
m,p-Xylene	1500 U	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	730 U	--	--	--	--	--
n-Decane (C10)	730 U	--	--	--	--	--
n-Dodecane (C12)	730 U	--	--	--	--	--
n-Hexane	730 U	--	--	--	--	--
n-Octane (C8)	730 U	--	--	--	--	--
n-Pentane (C5)	730 U	--	--	--	--	--
o-Xylene	730 U	--	--	--	--	--
Toluene	730 U	--	--	--	--	--
Extractable Petroleum Hydrocarbons (µg/kg)						
C10-C12 Aliphatics	2400 U	--	--	--	--	--
C10-C12 Aromatics	2400 U	--	--	--	--	--
C12-C16 Aliphatics	2400 U	--	--	--	--	--
C12-C16 Aromatics	2400 U	--	--	--	--	--
C16-C21 Aliphatics	2400 U	--	--	--	--	--
C16-C21 Aromatics	2400 U	--	--	--	--	--
C21-C34 Aliphatics	**3800**	--	--	--	--	--
C21-C34 Aromatics	2400 U	--	--	--	--	--
C8-C10 Aliphatics	2400 U	--	--	--	--	--
C8-C10 Aromatics	2400 U	--	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-01	GST-02	GST-02	GST-02	GST-02	GST-02
Sample ID	GST-01SO-25-30-101004	GST-02SO-0-5-101004	GST-02SO-5-10-101004	GST-02SO-10-12.5-101004	GST-02SO-15-20-101004	GST-02SO-20-25-101004
Sample Date	10/4/2010	10/4/2010	10/4/2010	10/4/2010	10/4/2010	10/4/2010
Depth	25 - 30 feet	0 - 5 feet	5 - 10 feet	10 - 12.5 feet	15 - 20 feet	20 - 25 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	0.881	0.222	--	--	--	--
Conventional Parameters (None)						
Atterberg Classification	ML	--	--	--	--	--
Ignitability	--	--	--	--	--	--
Conventional Parameters (percent)						
Liquid limit	30.3	--	--	--	--	--
Plastic limit	26.1	--	--	--	--	--
Plasticity index	4.2	--	--	--	--	--
Moisture (water) content	47.75	15.72	24.41	19.7	21.8	59.93
Total organic carbon	0.205	0.304	--	--	--	--
Total solids[1]	72.1	86.2	--	--	--	--
Conventional Parameters (standard unit)						
pH	--	--	--	--	--	--
Specific gravity	--	--	--	--	--	--
Grain Size (percent)						
Percent passing < 1.3 micron sieve	--	11.6	--	10.5	--	--
Percent retained 1.3 micron sieve	--	4.2	--	3.5	--	--
Percent retained 3.2 micron sieve	--	5.8	--	4.4	--	--
Percent retained 7 micron sieve	--	2.9	--	2.6	--	--
Percent retained 9 micron sieve	--	5.4	--	3.1	--	--
Percent retained 13 micron sieve	--	6.2	--	7.5	--	--
Percent retained 22 micron sieve	--	5.4	--	4	--	--
Percent retained 32 micron sieve	--	9.3	--	3.5	--	--
Percent retained 75 micron sieve (#200)	--	4.9	--	5.1	--	--
Percent retained 150 micron sieve (#100)	--	3.8	--	4	--	--
Percent retained 250 micron sieve (#60)	--	4.9	--	5.2	--	--
Percent retained 425 micron sieve (#40)	--	6.1	--	7.3	--	--
Percent retained 850 micron sieve (#20)	--	8.5	--	13.9	--	--
Percent retained 2000 micron sieve (#10)	--	4.9	--	11.2	--	--
Percent retained 4750 micron sieve (#4)	--	5.4	--	8.4	--	--
Percent retained 9500 micron sieve	--	4.6	--	2.2	--	--
Percent retained 12500 micron sieve	--	3.7	--	3.8	--	--
Percent retained 19000 micron sieve	--	2.4	--	0.1 U	--	--
Percent retained 25K micron sieve	--	0.1 U	--	0.1 U	--	--
Percent retained 37.5K micron sieve	--	0.1 U	--	0.1 U	--	--
Percent retained 50K micron sieve	--	0.1 U	--	0.1 U	--	--
Percent retained 75K micron sieve	--	0.1 U	--	0.1 U	--	--
Gravel	--	16 T	--	14 T	--	--
Gravel, Coarse	--	0.1 UT	--	0.1 UT	--	--
Sand, Coarse	--	4.9 T	--	11.2 T	--	--
Sand, Fine	--	14 T	--	14 T	--	--
Sand, Medium	--	15 T	--	21 T	--	--
Silt, Coarse	--	5.4 T	--	4 T	--	--
Silt, Fine	--	8.3 T	--	5.7 T	--	--
Silt, Medium	--	6.2 T	--	7.5 T	--	--
Silt, Very Coarse	--	9.3 T	--	3.5 T	--	--
Silt, Very Fine	--	5.8 T	--	4.4 T	--	--
Clay	--	16 T	--	14 T	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-01	GST-02	GST-02	GST-02	GST-02	GST-02
Sample ID	GST-01SO-25-30-101004	GST-02SO-0-5-101004	GST-02SO-5-10-101004	GST-02SO-10-12.5-101004	GST-02SO-15-20-101004	GST-02SO-20-25-101004
Sample Date	10/4/2010	10/4/2010	10/4/2010	10/4/2010	10/4/2010	10/4/2010
Depth	25 - 30 feet	0 - 5 feet	5 - 10 feet	10 - 12.5 feet	15 - 20 feet	20 - 25 feet
Sample Type	N	N	N	N	N	N
Total Gravel	--	**16 T**	--	**14 T**	--	--
Total Sand	--	**33 T**	--	**47 T**	--	--
Total Silt	--	**35 T**	--	**25 T**	--	--
Total Clay	--	**16 T**	--	**14 T**	--	--
Total Fines (silt + clay)	--	**51 T**	--	**39 T**	--	--
Total Grain Size	--	**100 T**	--	**100 T**	--	--
Metals (mg/kg)						
Arsenic	20 U	10 U	--	--	--	--
Cadmium	0.7 U	0.6 U	--	--	--	--
Chromium	**33 J**	**26 J**	--	--	--	--
Copper	**28.4 J**	**21 J**	--	--	--	--
Lead	7 UJ	**16 J**	--	--	--	--
Mercury	**0.03**	**0.05**	--	--	--	--
Nickel	**26 J**	**21 J**	--	--	--	--
Silver	1 U	0.8 U	--	--	--	--
Zinc	**56 J**	**78 J**	--	--	--	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.4 U	1.2 U	--	--	--	--
1,2-Dichloroethene, cis-	1.4 U	1.2 U	--	--	--	--
1,2-Dichloroethene, trans-	1.4 U	1.2 U	--	--	--	--
Benzene	1.4 U	1.2 U	--	--	--	--
Ethylbenzene	1.4 U	1.2 U	--	--	--	--
m,p-Xylene	1.4 U	1.2 U	--	--	--	--
o-Xylene	1.4 U	1.2 U	--	--	--	--
Toluene	1.4 U	1.2 U	--	--	--	--
Trichloroethene (TCE)	1.4 U	1.2 U	--	--	--	--
Vinyl chloride	1.4 U	1.2 U	--	--	--	--
LWG RA Total BTEX[6] (Calculated U = 1/2)	1.4 UT	1.2 UT	--	--	--	--
LWG RA Total Xylene[9] (Calculated U = 1/2)	1.4 UT	1.2 UT	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	61 U	65 U	--	--	--	--
2-Methylnaphthalene	61 U	65 U	--	--	--	--
Acenaphthene	61 U	65 U	--	--	--	--
Acenaphthylene	61 U	65 U	--	--	--	--
Anthracene	61 U	65 U	--	--	--	--
Benzo(a)anthracene	61 U	**93**	--	--	--	--
Benzo(b,j,k)fluoranthenes	61 U	**180**	--	--	--	--
Benzo(a)pyrene	61 U	**150**	--	--	--	--
Benzo(g,h,i)perylene	61 U	**130**	--	--	--	--
Chrysene	61 U	**120**	--	--	--	--
Dibenzo(a,h)anthracene	61 U	65 U	--	--	--	--
Fluoranthene	61 U	**140**	--	--	--	--
Fluorene	61 U	65 U	--	--	--	--
Indeno(1,2,3-c,d)pyrene	61 U	**91**	--	--	--	--
Naphthalene	61 U	65 U	--	--	--	--
Perylene	61 U	65 U	--	--	--	--
Phenanthrene	61 U	**110**	--	--	--	--
Pyrene	61 U	**190**	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-01	GST-02	GST-02	GST-02	GST-02	GST-02
Sample ID	GST-01SO-25-30-101004	GST-02SO-0-5-101004	GST-02SO-5-10-101004	GST-02SO-10-12.5-101004	GST-02SO-15-20-101004	GST-02SO-20-25-101004
Sample Date	10/4/2010	10/4/2010	10/4/2010	10/4/2010	10/4/2010	10/4/2010
Depth	25 - 30 feet	0 - 5 feet	5 - 10 feet	10 - 12.5 feet	15 - 20 feet	20 - 25 feet
Sample Type	N	N	N	N	N	N
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	61 UT	**300 T**	--	--	--	--
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	61 UT	**1100 T**	--	--	--	--
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	61 UT	**1400 T**	--	--	--	--
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	61 UT	**220 T**	--	--	--	--
Semivolatile Organics (µg/kg)						
Carbazole	61 U	65 U	--	--	--	--
Dibenzofuran	61 U	65 U	--	--	--	--
PCB Aroclors (µg/kg)						
Aroclor 1016	32 U	31 U	--	--	--	--
Aroclor 1221	32 U	31 U	--	--	--	--
Aroclor 1232	32 U	31 U	--	--	--	--
Aroclor 1242	32 U	31 U	--	--	--	--
Aroclor 1248	32 U	31 U	--	--	--	--
Aroclor 1254	32 U	31 U	--	--	--	--
Aroclor 1260	32 U	31 U	--	--	--	--
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	32 UT	31 UT	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	3.1 U	--	--	--	--
2,4'-DDE (o,p'-DDE)	3.2 U	3.1 U	--	--	--	--
2,4'-DDT (o,p'-DDT)	3.2 U	3.1 U	--	--	--	--
4,4'-DDD (p,p'-DDD)	3.2 U	3.1 U	--	--	--	--
4,4'-DDE (p,p'-DDE)	3.2 U	3.1 U	--	--	--	--
4,4'-DDT (p,p'-DDT)	3.2 U	3.1 U	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	--	--	--	--
alpha-Chlordane (cis-Chlordane)	1.6 U	1.6 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	--	--	--	--
gamma-Chlordane (trans-Chlordane)	1.6 U	1.6 U	--	--	--	--
cis-Nonachlor	3.2 U	3.1 U	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	1.6 UJ	1.6 UJ	--	--	--	--
Dieldrin	3.2 U	3.1 U	--	--	--	--
Endrin	3.2 U	3.1 U	--	--	--	--
Endrin ketone	3.2 U	3.1 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.6 U	--	--	--	--
Heptachlor epoxide	1.6 U	1.6 U	--	--	--	--
Oxychlordane	3.2 U	3.1 U	--	--	--	--
trans-Nonachlor	3.2 U	3.1 U	--	--	--	--
Hexachlorobenzene	1.6 U	1.6 U	--	--	--	--
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	3.1 UT	--	--	--	--
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	3.1 UT	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	3.1 UT	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	3.1 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	3.1 UT	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	3.1 UT	--	--	--	--
LWG RA Total Chlordane[2] (Calculated U = 1/2)	3.2 UT	3.1 UT	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6.9 U	5.9 U	--	--	--	--
Motor Oil Range	14 U	**31**	--	--	--	--
LWG RA TPH[5] (Calculated U = 1/2)	14 UT	**34 T**	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-01	GST-02	GST-02	GST-02	GST-02	GST-02
Sample ID	GST-01SO-25-30-101004	GST-02SO-0-5-101004	GST-02SO-5-10-101004	GST-02SO-10-12.5-101004	GST-02SO-15-20-101004	GST-02SO-20-25-101004
Sample Date	10/4/2010	10/4/2010	10/4/2010	10/4/2010	10/4/2010	10/4/2010
Depth	25 - 30 feet	0 - 5 feet	5 - 10 feet	10 - 12.5 feet	15 - 20 feet	20 - 25 feet
Sample Type	N	N	N	N	N	N
Volatile Petroleum Hydrocarbons (µg/kg)						
Benzene	940 U	670 U	--	--	--	--
C5-C6 Aliphatic	9400 U	6700 UJ	--	--	--	--
C6-C8 Aliphatic	9400 U	6700 U	--	--	--	--
C8-C10 Aliphatic	9400 U	6700 U	--	--	--	--
C10-C12 Aliphatic	9400 U	6700 U	--	--	--	--
C8-C10 Aromatic	9400 U	6700 U	--	--	--	--
C10-C12 Aromatic	9400 U	6700 U	--	--	--	--
C12-C13 Aromatic	9400 U	6700 U	--	--	--	--
Ethylbenzene	940 U	670 U	--	--	--	--
m,p-Xylene	1900 U	1300 U	--	--	--	--
Methyl tert-butyl ether (MTBE)	940 U	670 U	--	--	--	--
n-Decane (C10)	940 U	670 U	--	--	--	--
n-Dodecane (C12)	940 U	670 U	--	--	--	--
n-Hexane	940 U	670 U	--	--	--	--
n-Octane (C8)	940 U	670 U	--	--	--	--
n-Pentane (C5)	940 U	670 UJ	--	--	--	--
o-Xylene	940 U	670 U	--	--	--	--
Toluene	940 U	670 U	--	--	--	--
Extractable Petroleum Hydrocarbons (µg/kg)						
C10-C12 Aliphatics	2700 U	2300 U	--	--	--	--
C10-C12 Aromatics	2700 U	2300 U	--	--	--	--
C12-C16 Aliphatics	2700 U	2300 U	--	--	--	--
C12-C16 Aromatics	2700 U	2300 U	--	--	--	--
C16-C21 Aliphatics	2700 U	2300 U	--	--	--	--
C16-C21 Aromatics	2700 U	2300 U	--	--	--	--
C21-C34 Aliphatics	2700 U	2300 U	--	--	--	--
C21-C34 Aromatics	2700 U	2300 U	--	--	--	--
C8-C10 Aliphatics	2700 U	2300 U	--	--	--	--
C8-C10 Aromatics	2700 U	2300 U	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-02	GST-02	GST-03	GST-03	GST-03	GST-03
Sample ID	GST-02SO-25-30-101004	GST-52SO-25-30-101004	GST-03SO-0-5-101005	GST-03SO-5-6-101005	GST-03SO-15-20-101005	GST-03SO-20-22-101005
Sample Date	10/4/2010	10/4/2010	10/5/2010	10/5/2010	10/5/2010	10/5/2010
Depth	25 - 30 feet	25 - 30 feet	0 - 5 feet	5 - 6 feet	15 - 20 feet	20 - 22 feet
Sample Type	N	FD	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	17.1	19.4	3.57	--	--	--
Conventional Parameters (None)						
Atterberg Classification	--	--	--	--	--	--
Ignitability	--	--	--	--	--	--
Conventional Parameters (percent)						
Liquid limit	--	--	--	--	--	--
Plastic limit	--	--	--	--	--	--
Plasticity index	--	--	--	--	--	--
Moisture (water) content	49.74	43.27	13.92	14.83	15.74	11.11
Total organic carbon	0.914	0.702	17.7	--	--	--
Total solids[1]	69.4	69.2	84.5	--	--	--
Conventional Parameters (standard unit)						
pH	--	--	--	--	--	--
Specific gravity	--	--	--	--	--	--
Grain Size (percent)						
Percent passing < 1.3 micron sieve	--	--	--	--	--	--
Percent retained 1.3 micron sieve	--	--	--	--	--	--
Percent retained 3.2 micron sieve	--	--	--	--	--	--
Percent retained 7 micron sieve	--	--	--	--	--	--
Percent retained 9 micron sieve	--	--	--	--	--	--
Percent retained 13 micron sieve	--	--	--	--	--	--
Percent retained 22 micron sieve	--	--	--	--	--	--
Percent retained 32 micron sieve	--	--	--	--	--	--
Percent retained 75 micron sieve (#200)	--	--	--	--	--	--
Percent retained 150 micron sieve (#100)	--	--	--	--	--	--
Percent retained 250 micron sieve (#60)	--	--	--	--	--	--
Percent retained 425 micron sieve (#40)	--	--	--	--	--	--
Percent retained 850 micron sieve (#20)	--	--	--	--	--	--
Percent retained 2000 micron sieve (#10)	--	--	--	--	--	--
Percent retained 4750 micron sieve (#4)	--	--	--	--	--	--
Percent retained 9500 micron sieve	--	--	--	--	--	--
Percent retained 12500 micron sieve	--	--	--	--	--	--
Percent retained 19000 micron sieve	--	--	--	--	--	--
Percent retained 25K micron sieve	--	--	--	--	--	--
Percent retained 37.5K micron sieve	--	--	--	--	--	--
Percent retained 50K micron sieve	--	--	--	--	--	--
Percent retained 75K micron sieve	--	--	--	--	--	--
Gravel	--	--	--	--	--	--
Gravel, Coarse	--	--	--	--	--	--
Sand, Coarse	--	--	--	--	--	--
Sand, Fine	--	--	--	--	--	--
Sand, Medium	--	--	--	--	--	--
Silt, Coarse	--	--	--	--	--	--
Silt, Fine	--	--	--	--	--	--
Silt, Medium	--	--	--	--	--	--
Silt, Very Coarse	--	--	--	--	--	--
Silt, Very Fine	--	--	--	--	--	--
Clay	--	--	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-02	GST-02	GST-03	GST-03	GST-03	GST-03
Sample ID	GST-02SO-25-30-101004	GST-52SO-25-30-101004	GST-03SO-0-5-101005	GST-03SO-5-6-101005	GST-03SO-15-20-101005	GST-03SO-20-22-101005
Sample Date	10/4/2010	10/4/2010	10/5/2010	10/5/2010	10/5/2010	10/5/2010
Depth	25 - 30 feet	25 - 30 feet	0 - 5 feet	5 - 6 feet	15 - 20 feet	20 - 22 feet
Sample Type	N	FD	N	N	N	N
Total Gravel	--	--	--	--	--	--
Total Sand	--	--	--	--	--	--
Total Silt	--	--	--	--	--	--
Total Clay	--	--	--	--	--	--
Total Fines (silt + clay)	--	--	--	--	--	--
Total Grain Size	--	--	--	--	--	--
Metals (mg/kg)						
Arsenic	7 U	7 U	6 U	--	--	--
Cadmium	0.3 U	0.3 U	**0.4**	--	--	--
Chromium	**34.4 J**	**36.9 J**	**20.2 J**	--	--	--
Copper	**32.4 J**	**32.7 J**	**31.5 J**	--	--	--
Lead	**12 J**	**5 J**	**55 J**	--	--	--
Mercury	0.03 U	**0.03**	**0.08**	--	--	--
Nickel	**66 J**	**82 J**	**967 J**	--	--	--
Silver	0.4 U	0.4 U	0.3 U	--	--	--
Zinc	**94 J**	**139 J**	**103 J**	--	--	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.4 U	1.3 U	1.2 U	--	--	--
1,2-Dichloroethene, cis-	1.4 U	1.3 U	1.2 U	--	--	--
1,2-Dichloroethene, trans-	1.4 U	1.3 U	1.2 U	--	--	--
Benzene	**3.2**	**7.7**	**44**	--	--	--
Ethylbenzene	**2.5**	**6.3**	**34**	--	--	--
m,p-Xylene	**1.7**	**3.7**	**55**	--	--	--
o-Xylene	1.4 U	**2.4**	**40**	--	--	--
Toluene	1.4 U	**2.4**	**30**	--	--	--
Trichloroethene (TCE)	1.4 U	1.3 U	1.2 U	--	--	--
Vinyl chloride	1.4 U	1.3 U	1.2 U	--	--	--
LWG RA Total BTEX[6] (Calculated U = 1/2)	**8.8 T**	**22 T**	**200 T**	--	--	--
LWG RA Total Xylene[9] (Calculated U = 1/2)	**2.4 T**	**6.1 T**	**95 T**	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	**470**	**270**	**43000**	--	--	--
2-Methylnaphthalene	**830**	**450**	**65000**	--	--	--
Acenaphthene	**320**	**310**	**33000**	--	--	--
Acenaphthylene	**150**	**81**	**100000**	--	--	--
Anthracene	**800**	**600**	**120000**	--	--	--
Benzo(a)anthracene	**1300**	**1200**	**310000**	--	--	--
Benzo(b,j,k)fluoranthenes	**2000**	**1900**	**400000**	--	--	--
Benzo(a)pyrene	**2200**	**2000**	**410000**	--	--	--
Benzo(g,h,i)perylene	**2300**	**2200**	**340000**	--	--	--
Chrysene	**2100**	**1900**	**400000**	--	--	--
Dibenzo(a,h)anthracene	**400**	**380**	**100000**	--	--	--
Fluoranthene	**3400**	**2800**	**610000**	--	--	--
Fluorene	**670**	**440**	**79000**	--	--	--
Indeno(1,2,3-c,d)pyrene	**1500**	**1500**	**230000**	--	--	--
Naphthalene	**6900**	**3500**	**220000**	--	--	--
Perylene	**530**	**510**	**94000**	--	--	--
Phenanthrene	**5500**	**4100**	**760000**	--	--	--
Pyrene	**4800**	**4400**	**1000000**	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-02	GST-02	GST-03	GST-03	GST-03	GST-03
Sample ID	GST-02SO-25-30-101004	GST-52SO-25-30-101004	GST-03SO-0-5-101005	GST-03SO-5-6-101005	GST-03SO-15-20-101005	GST-03SO-20-22-101005
Sample Date	10/4/2010	10/4/2010	10/5/2010	10/5/2010	10/5/2010	10/5/2010
Depth	25 - 30 feet	25 - 30 feet	0 - 5 feet	5 - 6 feet	15 - 20 feet	20 - 22 feet
Sample Type	N	FD	N	N	N	N
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	**15000 T**	**9500 T**	**1400000 T**	--	--	--
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	**20000 T**	**18000 T**	**3800000 T**	--	--	--
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	**35000 T**	**28000 T**	**5200000 T**	--	--	--
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	**3100 T**	**2800 T**	**600000 T**	--	--	--
Semivolatile Organics (µg/kg)						
Carbazole	**290**	**210**	**25000**	--	--	--
Dibenzofuran	**110**	**66**	**8600**	--	--	--
PCB Aroclors (µg/kg)						
Aroclor 1016	32 U	32 U	32 U	--	--	--
Aroclor 1221	32 U	32 U	32 U	--	--	--
Aroclor 1232	32 U	32 U	32 U	--	--	--
Aroclor 1242	32 U	32 U	32 U	--	--	--
Aroclor 1248	32 U	32 U	32 U	--	--	--
Aroclor 1254	32 U	32 U	**58**	--	--	--
Aroclor 1260	32 U	32 U	32 U	--	--	--
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	32 UT	32 UT	**150 T**	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	3.2 U	32 U	--	--	--
2,4'-DDE (o,p'-DDE)	3.2 U	3.2 U	32 U	--	--	--
2,4'-DDT (o,p'-DDT)	3.2 U	3.2 U	32 U	--	--	--
4,4'-DDD (p,p'-DDD)	3.2 U	3.2 U	32 U	--	--	--
4,4'-DDE (p,p'-DDE)	3.2 U	3.2 U	32 U	--	--	--
4,4'-DDT (p,p'-DDT)	3.2 U	3.2 U	50 U	--	--	--
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	16 U	--	--	--
alpha-Chlordane (cis-Chlordane)	1.6 U	1.6 U	16 U	--	--	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	16 U	--	--	--
gamma-Chlordane (trans-Chlordane)	1.6 U	1.6 U	31 U	--	--	--
cis-Nonachlor	3.2 U	3.2 U	32 U	--	--	--
delta-Hexachlorocyclohexane (BHC)	1.6 UJ	1.6 UJ	16 UJ	--	--	--
Dieldrin	3.2 U	3.2 U	32 U	--	--	--
Endrin	3.2 U	3.2 U	32 U	--	--	--
Endrin ketone	3.2 U	3.2 U	**84 J**	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.6 U	16 U	--	--	--
Heptachlor epoxide	1.6 U	1.6 U	16 U	--	--	--
Oxychlordane	3.2 U	3.2 U	32 U	--	--	--
trans-Nonachlor	3.2 U	3.2 U	32 U	--	--	--
Hexachlorobenzene	1.6 U	1.6 U	16 U	--	--	--
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	3.2 UT	32 UT	--	--	--
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.2 UT	3.2 UT	50 UT	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	3.2 UT	32 UT	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	3.2 UT	32 UT	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	3.2 UT	50 UT	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	3.2 UT	50 UT	--	--	--
LWG RA Total Chlordane[2] (Calculated U = 1/2)	3.2 UT	3.2 UT	32 UT	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**83**	**54**	**6000**	--	--	--
Motor Oil Range	**280**	**160**	**18000**	--	--	--
LWG RA TPH[5] (Calculated U = 1/2)	**360 T**	**210 T**	**24000 T**	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-02	GST-02	GST-03	GST-03	GST-03	GST-03
Sample ID	GST-02SO-25-30-101004	GST-52SO-25-30-101004	GST-03SO-0-5-101005	GST-03SO-5-6-101005	GST-03SO-15-20-101005	GST-03SO-20-22-101005
Sample Date	10/4/2010	10/4/2010	10/5/2010	10/5/2010	10/5/2010	10/5/2010
Depth	25 - 30 feet	25 - 30 feet	0 - 5 feet	5 - 6 feet	15 - 20 feet	20 - 22 feet
Sample Type	N	FD	N	N	N	N
Volatile Petroleum Hydrocarbons (µg/kg)						
Benzene	1000 U	1000 U	3400 U	--	--	--
C5-C6 Aliphatic	10000 UJ	10000 UJ	34000 U	--	--	--
C6-C8 Aliphatic	10000 U	10000 U	34000 UJ	--	--	--
C8-C10 Aliphatic	10000 U	10000 U	34000 UJ	--	--	--
C10-C12 Aliphatic	10000 U	10000 U	34000 UJ	--	--	--
C8-C10 Aromatic	10000 U	10000 U	34000 U	--	--	--
C10-C12 Aromatic	10000 U	10000 U	**120000**	--	--	--
C12-C13 Aromatic	10000 U	10000 U	**71000**	--	--	--
Ethylbenzene	1000 U	1000 U	3400 U	--	--	--
m,p-Xylene	2100 U	2000 U	6900 U	--	--	--
Methyl tert-butyl ether (MTBE)	1000 U	1000 U	3400 U	--	--	--
n-Decane (C10)	1000 U	1000 U	3400 UJ	--	--	--
n-Dodecane (C12)	1000 U	1000 U	3400 UJ	--	--	--
n-Hexane	1000 U	1000 U	3400 U	--	--	--
n-Octane (C8)	1000 U	1000 U	3400 UJ	--	--	--
n-Pentane (C5)	1000 UJ	1000 UJ	3400 U	--	--	--
o-Xylene	1000 U	1000 U	3400 U	--	--	--
Toluene	1000 U	1000 U	3400 U	--	--	--
Extractable Petroleum Hydrocarbons (µg/kg)						
C10-C12 Aliphatics	2800 U	2800 U	**4200**	--	--	--
C10-C12 Aromatics	**33000**	**4400**	**130000**	--	--	--
C12-C16 Aliphatics	2800 U	2800 U	**40000**	--	--	--
C12-C16 Aromatics	**35000**	**3800**	**310000**	--	--	--
C16-C21 Aliphatics	**3500**	2800 U	**71000**	--	--	--
C16-C21 Aromatics	**290000**	**32000**	**2700000**	--	--	--
C21-C34 Aliphatics	**9800**	2800 U	**340000**	--	--	--
C21-C34 Aromatics	**570000**	**81000**	**5200000**	--	--	--
C8-C10 Aliphatics	2800 U	2800 U	2400 U	--	--	--
C8-C10 Aromatics	14000 U	2800 U	12000 U	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-03	GST-04	GST-04	GST-04	GST-04	GST-04
Sample ID	GST-03SO-22-27-101005	GST-04SO-0-5-101006	GST-04SO-5-10-101006	GST-04SO-10-12-101006	GST-04SO-12-15-101006	GST-04SO-15-20-101006
Sample Date	10/5/2010	10/6/2010	10/6/2010	10/6/2010	10/6/2010	10/6/2010
Depth	22 - 27 feet	0 - 5 feet	5 - 10 feet	10 - 12 feet	12 - 15 feet	15 - 20 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	119	5.76 J	--	--	--	--
Conventional Parameters (None)						
Atterberg Classification	Non-Plastic	--	--	CL	--	--
Ignitability	--	--	--	--	--	--
Conventional Parameters (percent)						
Liquid limit	--	--	--	31	--	--
Plastic limit	--	--	--	20.1	--	--
Plasticity index	--	--	--	10.9	--	--
Moisture (water) content	42.94	11.2	15.71	18.69	15.53	16.72
Total organic carbon	3.17	1.74	--	--	--	--
Total solids[1]	68.8	88.5	--	--	--	--
Conventional Parameters (standard unit)						
pH	--	--	--	--	--	--
Specific gravity	--	--	--	--	--	--
Grain Size (percent)						
Percent passing < 1.3 micron sieve	--	--	--	--	--	--
Percent retained 1.3 micron sieve	--	--	--	--	--	--
Percent retained 3.2 micron sieve	--	--	--	--	--	--
Percent retained 7 micron sieve	--	--	--	--	--	--
Percent retained 9 micron sieve	--	--	--	--	--	--
Percent retained 13 micron sieve	--	--	--	--	--	--
Percent retained 22 micron sieve	--	--	--	--	--	--
Percent retained 32 micron sieve	--	--	--	--	--	--
Percent retained 75 micron sieve (#200)	--	--	--	--	--	--
Percent retained 150 micron sieve (#100)	--	--	--	--	--	--
Percent retained 250 micron sieve (#60)	--	--	--	--	--	--
Percent retained 425 micron sieve (#40)	--	--	--	--	--	--
Percent retained 850 micron sieve (#20)	--	--	--	--	--	--
Percent retained 2000 micron sieve (#10)	--	--	--	--	--	--
Percent retained 4750 micron sieve (#4)	--	--	--	--	--	--
Percent retained 9500 micron sieve	--	--	--	--	--	--
Percent retained 12500 micron sieve	--	--	--	--	--	--
Percent retained 19000 micron sieve	--	--	--	--	--	--
Percent retained 25K micron sieve	--	--	--	--	--	--
Percent retained 37.5K micron sieve	--	--	--	--	--	--
Percent retained 50K micron sieve	--	--	--	--	--	--
Percent retained 75K micron sieve	--	--	--	--	--	--
Gravel	--	--	--	--	--	--
Gravel, Coarse	--	--	--	--	--	--
Sand, Coarse	--	--	--	--	--	--
Sand, Fine	--	--	--	--	--	--
Sand, Medium	--	--	--	--	--	--
Silt, Coarse	--	--	--	--	--	--
Silt, Fine	--	--	--	--	--	--
Silt, Medium	--	--	--	--	--	--
Silt, Very Coarse	--	--	--	--	--	--
Silt, Very Fine	--	--	--	--	--	--
Clay	--	--	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-03	GST-04	GST-04	GST-04	GST-04	GST-04
Sample ID	GST-03SO-22-27-101005	GST-04SO-0-5-101006	GST-04SO-5-10-101006	GST-04SO-10-12-101006	GST-04SO-12-15-101006	GST-04SO-15-20-101006
Sample Date	10/5/2010	10/6/2010	10/6/2010	10/6/2010	10/6/2010	10/6/2010
Depth	22 - 27 feet	0 - 5 feet	5 - 10 feet	10 - 12 feet	12 - 15 feet	15 - 20 feet
Sample Type	N	N	N	N	N	N
Total Gravel	--	--	--	--	--	--
Total Sand	--	--	--	--	--	--
Total Silt	--	--	--	--	--	--
Total Clay	--	--	--	--	--	--
Total Fines (silt + clay)	--	--	--	--	--	--
Total Grain Size	--	--	--	--	--	--
Metals (mg/kg)						
Arsenic	7 U	10 U	--	--	--	--
Cadmium	**1**	0.5 U	--	--	--	--
Chromium	**31.4 J**	**18**	--	--	--	--
Copper	**173 J**	**43.2 J**	--	--	--	--
Lead	**65 J**	**35**	--	--	--	--
Mercury	**0.48**	**0.06**	--	--	--	--
Nickel	**471 J**	**18**	--	--	--	--
Silver	0.4 U	0.8 U	--	--	--	--
Zinc	**226 J**	**102**	--	--	--	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.4 U	1 U	--	--	--	--
1,2-Dichloroethene, cis-	1.4 U	1 U	--	--	--	--
1,2-Dichloroethene, trans-	1.4 U	1 U	--	--	--	--
Benzene	**99**	**2.2**	--	--	--	--
Ethylbenzene	**1.8**	1 U	--	--	--	--
m,p-Xylene	**9.2**	1 U	--	--	--	--
o-Xylene	**5.9**	1 U	--	--	--	--
Toluene	**17**	1 U	--	--	--	--
Trichloroethene (TCE)	1.4 U	1 U	--	--	--	--
Vinyl chloride	1.4 U	1 U	--	--	--	--
LWG RA Total BTEX[6] (Calculated U = 1/2)	**130 T**	**4.2 T**	--	--	--	--
LWG RA Total Xylene[9] (Calculated U = 1/2)	**15 T**	1 UT	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	**27000**	310 U	--	--	--	--
2-Methylnaphthalene	**47000**	**480**	--	--	--	--
Acenaphthene	1300 U	310 U	--	--	--	--
Acenaphthylene	**90000**	**2000**	--	--	--	--
Anthracene	**80000**	**910**	--	--	--	--
Benzo(a)anthracene	**110000**	**3600**	--	--	--	--
Benzo(b,j,k)fluoranthenes	**160000**	**12000**	--	--	--	--
Benzo(a)pyrene	**140000**	**10000**	--	--	--	--
Benzo(g,h,i)perylene	**130000**	**13000 J**	--	--	--	--
Chrysene	**140000**	**6000**	--	--	--	--
Dibenzo(a,h)anthracene	**32000**	**2300**	--	--	--	--
Fluoranthene	**310000**	**3700**	--	--	--	--
Fluorene	**60000**	310 U	--	--	--	--
Indeno(1,2,3-c,d)pyrene	**100000**	**8300**	--	--	--	--
Naphthalene	**260000**	**1800**	--	--	--	--
Perylene	**35000**	**2800**	--	--	--	--
Phenanthrene	**450000**	**3000**	--	--	--	--
Pyrene	**430000**	**5300**	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-03	GST-04	GST-04	GST-04	GST-04	GST-04
Sample ID	GST-03SO-22-27-101005	GST-04SO-0-5-101006	GST-04SO-5-10-101006	GST-04SO-10-12-101006	GST-04SO-12-15-101006	GST-04SO-15-20-101006
Sample Date	10/5/2010	10/6/2010	10/6/2010	10/6/2010	10/6/2010	10/6/2010
Depth	22 - 27 feet	0 - 5 feet	5 - 10 feet	10 - 12 feet	12 - 15 feet	15 - 20 feet
Sample Type	N	N	N	N	N	N
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	**990000 T**	**8500 T**	--	--	--	--
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	**1600000 T**	**64000 JT**	--	--	--	--
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	**2500000 T**	**73000 JT**	--	--	--	--
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	**210000 T**	**15000 T**	--	--	--	--
Semivolatile Organics (µg/kg)						
Carbazole	**20000**	310 U	--	--	--	--
Dibenzofuran	**7300**	310 U	--	--	--	--
PCB Aroclors (µg/kg)						
Aroclor 1016	32 U	32 U	--	--	--	--
Aroclor 1221	32 U	32 U	--	--	--	--
Aroclor 1232	32 U	32 U	--	--	--	--
Aroclor 1242	32 U	32 U	--	--	--	--
Aroclor 1248	55 U	32 U	--	--	--	--
Aroclor 1254	32 U	32 U	--	--	--	--
Aroclor 1260	32 U	32 U	--	--	--	--
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	55 UT	32 UT	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	31 UJ	16 U	--	--	--	--
2,4'-DDE (o,p'-DDE)	31 U	16 U	--	--	--	--
2,4'-DDT (o,p'-DDT)	97 UJ	16 U	--	--	--	--
4,4'-DDD (p,p'-DDD)	31 UJ	16 U	--	--	--	--
4,4'-DDE (p,p'-DDE)	31 U	16 U	--	--	--	--
4,4'-DDT (p,p'-DDT)	31 UJ	16 U	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	16 U	8 U	--	--	--	--
alpha-Chlordane (cis-Chlordane)	16 U	8 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	16 U	8 U	--	--	--	--
gamma-Chlordane (trans-Chlordane)	16 U	8 U	--	--	--	--
cis-Nonachlor	31 UJ	16 U	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	16 UJ	8 U	--	--	--	--
Dieldrin	31 U	16 U	--	--	--	--
Endrin	31 UJ	16 U	--	--	--	--
Endrin ketone	31 UJ	16 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	35 U	8 U	--	--	--	--
Heptachlor epoxide	16 U	8 U	--	--	--	--
Oxychlordane	31 U	16 U	--	--	--	--
trans-Nonachlor	31 UJ	16 U	--	--	--	--
Hexachlorobenzene	16 U	8 U	--	--	--	--
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	97 UJT	16 UT	--	--	--	--
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	31 UJT	16 UT	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	31 UJT	16 UT	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	31 UT	16 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	97 UJT	16 UT	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	97 UJT	16 UT	--	--	--	--
LWG RA Total Chlordane[2] (Calculated U = 1/2)	31 UJT	16 UT	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**4900**	**270**	--	--	--	--
Motor Oil Range	**7200**	**3200**	--	--	--	--
LWG RA TPH[5] (Calculated U = 1/2)	**12000 T**	**3500 T**	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-03	GST-04	GST-04	GST-04	GST-04	GST-04
Sample ID	GST-03SO-22-27-101005	GST-04SO-0-5-101006	GST-04SO-5-10-101006	GST-04SO-10-12-101006	GST-04SO-12-15-101006	GST-04SO-15-20-101006
Sample Date	10/5/2010	10/6/2010	10/6/2010	10/6/2010	10/6/2010	10/6/2010
Depth	22 - 27 feet	0 - 5 feet	5 - 10 feet	10 - 12 feet	12 - 15 feet	15 - 20 feet
Sample Type	N	N	N	N	N	N
Volatile Petroleum Hydrocarbons (µg/kg)						
Benzene	1000 U	600 U	--	--	--	--
C5-C6 Aliphatic	10000 UJ	6000 UJ	--	--	--	--
C6-C8 Aliphatic	10000 U	6000 U	--	--	--	--
C8-C10 Aliphatic	10000 U	6000 U	--	--	--	--
C10-C12 Aliphatic	10000 U	6000 U	--	--	--	--
C8-C10 Aromatic	10000 U	6000 U	--	--	--	--
C10-C12 Aromatic	**11000**	6000 U	--	--	--	--
C12-C13 Aromatic	10000 U	6000 U	--	--	--	--
Ethylbenzene	1000 U	600 U	--	--	--	--
m,p-Xylene	2000 U	1200 U	--	--	--	--
Methyl tert-butyl ether (MTBE)	1000 U	600 U	--	--	--	--
n-Decane (C10)	1000 U	600 U	--	--	--	--
n-Dodecane (C12)	1000 U	600 U	--	--	--	--
n-Hexane	1000 U	600 U	--	--	--	--
n-Octane (C8)	1000 U	600 U	--	--	--	--
n-Pentane (C5)	1000 UJ	600 UJ	--	--	--	--
o-Xylene	1000 U	600 U	--	--	--	--
Toluene	1000 U	600 U	--	--	--	--
Extractable Petroleum Hydrocarbons (µg/kg)						
C10-C12 Aliphatics	2900 U	2200 U	--	--	--	--
C10-C12 Aromatics	**110000**	2200 U	--	--	--	--
C12-C16 Aliphatics	**30000**	**5100**	--	--	--	--
C12-C16 Aromatics	**170000**	**2900**	--	--	--	--
C16-C21 Aliphatics	**93000**	**23000**	--	--	--	--
C16-C21 Aromatics	**1300000**	**36000**	--	--	--	--
C21-C34 Aliphatics	**210000**	**470000 J**	--	--	--	--
C21-C34 Aromatics	**1700000**	**560000**	--	--	--	--
C8-C10 Aliphatics	2900 U	2200 U	--	--	--	--
C8-C10 Aromatics	14000 U	2200 U	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-04	GST-04	GST-05	GST-05	GST-05	GST-05
Sample ID	GST-04SO-20-21-101006	GST-04SO-21-26-101006	GST-05SO-0-5-101005	GST-05SO-5-10-101005	GST-05SO-10-13.7-101006	GST-05SO-13.7-18.7-101006
Sample Date	10/6/2010	10/6/2010	10/5/2010	10/5/2010	10/6/2010	10/6/2010
Depth	20 - 21 feet	21 - 26 feet	0 - 5 feet	5 - 10 feet	10 - 13.7 feet	13.7 - 18.7 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	--	5.04 J	1.37 J	--	--	0.632 J
Conventional Parameters (None)						
Atterberg Classification	--	Non-Plastic	--	--	ML	Non-Plastic
Ignitability	--	--	--	--	--	--
Conventional Parameters (percent)						
Liquid limit	--	--	--	--	23.6	--
Plastic limit	--	--	--	--	20.4	--
Plasticity index	--	--	--	--	3.2	--
Moisture (water) content	12.96	29.48	18.26	11.76	8.09	33.69
Total organic carbon	--	2.73	3.77	--	--	0.526
Total solids[1]	--	75.5	82.3	--	--	74
Conventional Parameters (standard unit)						
pH	--	--	--	--	--	--
Specific gravity	--	--	--	--	--	--
Grain Size (percent)						
Percent passing < 1.3 micron sieve	2.5	--	8.9	1.9	--	--
Percent retained 1.3 micron sieve	1	--	2.3	1.9	--	--
Percent retained 3.2 micron sieve	2.5	--	3.7	3	--	--
Percent retained 7 micron sieve	1.5	--	4.2	3.4	--	--
Percent retained 9 micron sieve	1.5	--	3.3	3.4	--	--
Percent retained 13 micron sieve	1.5	--	4.7	4.9	--	--
Percent retained 22 micron sieve	1.5	--	3.7	3.4	--	--
Percent retained 32 micron sieve	0.7	--	1.6	18.4	--	--
Percent retained 75 micron sieve (#200)	5.7	--	5.3	5.8	--	--
Percent retained 150 micron sieve (#100)	28.4	--	4.3	4.6	--	--
Percent retained 250 micron sieve (#60)	46	--	6.3	6.8	--	--
Percent retained 425 micron sieve (#40)	6.6	--	7.3	7.6	--	--
Percent retained 850 micron sieve (#20)	0.5	--	10	8.8	--	--
Percent retained 2000 micron sieve (#10)	0.2	--	10.2	8.7	--	--
Percent retained 4750 micron sieve (#4)	0.1 U	--	11.5	6.6	--	--
Percent retained 9500 micron sieve	0.1 U	--	6.2	4.8	--	--
Percent retained 12500 micron sieve	0.1 U	--	6.3	6	--	--
Percent retained 19000 micron sieve	0.1 U	--	0.1 U	0.1 U	--	--
Percent retained 25K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--
Percent retained 37.5K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--
Percent retained 50K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--
Percent retained 75K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--
Gravel	0.1 UT	--	24 T	17 T	--	--
Gravel, Coarse	0.1 UT	--	0.1 UT	0.1 UT	--	--
Sand, Coarse	0.2 T	--	10.2 T	8.7 T	--	--
Sand, Fine	80 T	--	16 T	17 T	--	--
Sand, Medium	7.1 T	--	17 T	16 T	--	--
Silt, Coarse	1.5 T	--	3.7 T	3.4 T	--	--
Silt, Fine	3 T	--	7.5 T	6.8 T	--	--
Silt, Medium	1.5 T	--	4.7 T	4.9 T	--	--
Silt, Very Coarse	0.7 T	--	1.6 T	18.4 T	--	--
Silt, Very Fine	2.5 T	--	3.7 T	3 T	--	--
Clay	3.5 T	--	11 T	3.8 T	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-04	GST-04	GST-05	GST-05	GST-05	GST-05
Sample ID	GST-04SO-20-21-101006	GST-04SO-21-26-101006	GST-05SO-0-5-101005	GST-05SO-5-10-101005	GST-05SO-10-13.7-101006	GST-05SO-13.7-18.7-101006
Sample Date	10/6/2010	10/6/2010	10/5/2010	10/5/2010	10/6/2010	10/6/2010
Depth	20 - 21 feet	21 - 26 feet	0 - 5 feet	5 - 10 feet	10 - 13.7 feet	13.7 - 18.7 feet
Sample Type	N	N	N	N	N	N
Total Gravel	0.1 UT	--	**24 T**	**17 T**	--	--
Total Sand	**87 T**	--	**43 T**	**42 T**	--	--
Total Silt	**9.2 T**	--	**21 T**	**36 T**	--	--
Total Clay	**3.5 T**	--	**11 T**	**3.8 T**	--	--
Total Fines (silt + clay)	**13 T**	--	**32 T**	**40 T**	--	--
Total Grain Size	**100 T**	--	**99.8 T**	**100 T**	--	--
Metals (mg/kg)						
Arsenic	--	6 U	10 U	--	--	6 U
Cadmium	--	**0.5**	**0.8**	--	--	**0.3**
Chromium	--	**24**	**20**	--	--	**24.3**
Copper	--	**39.2 J**	**35.2 J**	--	--	**23.5 J**
Lead	--	**33**	**20**	--	--	**11**
Mercury	--	**0.05**	0.03 U	--	--	**0.04**
Nickel	--	**72**	**16**	--	--	**53**
Silver	--	0.4 U	0.9 U	--	--	0.4 U
Zinc	--	**106**	**108**	--	--	**65**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	--	1.2 U	1.1 U	--	--	1.2 U
1,2-Dichloroethene, cis-	--	1.2 U	1.1 U	--	--	1.2 U
1,2-Dichloroethene, trans-	--	1.2 U	1.1 U	--	--	1.2 U
Benzene	--	1.2 U	1.1 U	--	--	**1.6**
Ethylbenzene	--	**2.2**	1.1 U	--	--	1.2 U
m,p-Xylene	--	1.2 U	1.1 U	--	--	**2.4**
o-Xylene	--	1.2 U	1.1 U	--	--	1.2 U
Toluene	--	1.2 U	1.1 U	--	--	1.2 U
Trichloroethene (TCE)	--	1.2 U	1.1 U	--	--	1.2 U
Vinyl chloride	--	1.2 U	1.1 U	--	--	1.2 U
LWG RA Total BTEX[6] (Calculated U = 1/2)	--	**4.6 T**	1.1 UT	--	--	**5.8 T**
LWG RA Total Xylene[9] (Calculated U = 1/2)	--	1.2 UT	1.1 UT	--	--	**3 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	--	**430**	**890**	--	--	**290**
2-Methylnaphthalene	--	**320**	**1900**	--	--	**90**
Acenaphthene	--	**550**	**1300**	--	--	**1800**
Acenaphthylene	--	**1400**	**6200**	--	--	**270**
Anthracene	--	**1600**	**4300**	--	--	**330**
Benzo(a)anthracene	--	**7600**	**15000**	--	--	**2000**
Benzo(b,j,k)fluoranthenes	--	**18000**	**43000**	--	--	**4000**
Benzo(a)pyrene	--	**16000**	**43000**	--	--	**4100**
Benzo(g,h,i)perylene	--	**22000**	**52000**	--	--	**3200**
Chrysene	--	**12000**	**24000**	--	--	**2800**
Dibenzo(a,h)anthracene	--	**2700**	**9200**	--	--	**590**
Fluoranthene	--	**17000**	**19000**	--	--	**4900**
Fluorene	--	**750**	**1400**	--	--	**240**
Indeno(1,2,3-c,d)pyrene	--	**14000**	**34000**	--	--	**2300**
Naphthalene	--	**11000**	**6700**	--	--	**450**
Perylene	--	**4400**	**11000**	--	--	**1000**
Phenanthrene	--	**8400**	**13000**	--	--	**820**
Pyrene	--	**30000**	**42000**	--	--	**8400**

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-04	GST-04	GST-05	GST-05	GST-05	GST-05
Sample ID	GST-04SO-20-21-101006	GST-04SO-21-26-101006	GST-05SO-0-5-101005	GST-05SO-5-10-101005	GST-05SO-10-13.7-101006	GST-05SO-13.7-18.7-101006
Sample Date	10/6/2010	10/6/2010	10/5/2010	10/5/2010	10/6/2010	10/6/2010
Depth	20 - 21 feet	21 - 26 feet	0 - 5 feet	5 - 10 feet	10 - 13.7 feet	13.7 - 18.7 feet
Sample Type	N	N	N	N	N	N
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	--	**24000 T**	**35000 T**	--	--	**4000 T**
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	--	**140000 T**	**280000 T**	--	--	**32000 T**
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	--	**160000 T**	**320000 T**	--	--	**36000 T**
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	--	**23000 T**	**61000 T**	--	--	**5500 T**
Semivolatile Organics (µg/kg)						
Carbazole	--	**280**	**330**	--	--	**64**
Dibenzofuran	--	**110**	**240**	--	--	62 U
PCB Aroclors (µg/kg)						
Aroclor 1016	--	32 U	32 U	--	--	32 U
Aroclor 1221	--	32 U	32 U	--	--	32 U
Aroclor 1232	--	32 U	32 U	--	--	32 U
Aroclor 1242	--	32 U	32 U	--	--	32 U
Aroclor 1248	--	32 U	32 U	--	--	32 U
Aroclor 1254	--	32 U	32 U	--	--	32 U
Aroclor 1260	--	32 U	32 U	--	--	32 U
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	--	32 UT	32 UT	--	--	32 UT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	16 U	16 U	--	--	3.2 U
2,4'-DDE (o,p'-DDE)	--	16 U	16 U	--	--	3.2 U
2,4'-DDT (o,p'-DDT)	--	16 U	16 U	--	--	3.2 U
4,4'-DDD (p,p'-DDD)	--	16 U	16 U	--	--	3.2 U
4,4'-DDE (p,p'-DDE)	--	16 U	16 U	--	--	3.2 U
4,4'-DDT (p,p'-DDT)	--	16 U	16 U	--	--	3.2 U
alpha-Hexachlorocyclohexane (BHC)	--	8 U	7.9 U	--	--	1.6 U
alpha-Chlordane (cis-Chlordane)	--	8 U	7.9 U	--	--	1.6 U
beta-Hexachlorocyclohexane (BHC)	--	8 U	7.9 U	--	--	1.6 U
gamma-Chlordane (trans-Chlordane)	--	8 U	7.9 U	--	--	1.6 U
cis-Nonachlor	--	16 U	16 U	--	--	3.2 U
delta-Hexachlorocyclohexane (BHC)	--	8 U	7.9 U	--	--	1.6 U
Dieldrin	--	16 U	16 U	--	--	3.2 U
Endrin	--	16 U	16 U	--	--	3.2 U
Endrin ketone	--	16 U	16 U	--	--	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	8 U	7.9 U	--	--	1.6 U
Heptachlor epoxide	--	8 U	7.9 U	--	--	1.6 U
Oxychlordane	--	16 U	16 U	--	--	3.2 U
trans-Nonachlor	--	16 U	16 U	--	--	3.2 U
Hexachlorobenzene	--	8 U	7.9 U	--	--	1.6 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	--	16 UT	16 UT	--	--	3.2 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	--	16 UT	16 UT	--	--	3.2 UT
LWG RA Sum DDD (Calculated U = 1/2)	--	16 UT	16 UT	--	--	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	16 UT	16 UT	--	--	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	16 UT	16 UT	--	--	3.2 UT
LWG RA Total DDx (Calculated U = 1/2)	--	16 UT	16 UT	--	--	3.2 UT
LWG RA Total Chlordane[2] (Calculated U = 1/2)	--	16 UT	16 UT	--	--	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	**280**	**570**	--	--	**80**
Motor Oil Range	--	**860**	**1700**	--	--	**230**
LWG RA TPH[5] (Calculated U = 1/2)	--	**1100 T**	**2300 T**	--	--	**310 T**

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-04	GST-04	GST-05	GST-05	GST-05	GST-05
Sample ID	GST-04SO-20-21-101006	GST-04SO-21-26-101006	GST-05SO-0-5-101005	GST-05SO-5-10-101005	GST-05SO-10-13.7-101006	GST-05SO-13.7-18.7-101006
Sample Date	10/6/2010	10/6/2010	10/5/2010	10/5/2010	10/6/2010	10/6/2010
Depth	20 - 21 feet	21 - 26 feet	0 - 5 feet	5 - 10 feet	10 - 13.7 feet	13.7 - 18.7 feet
Sample Type	N	N	N	N	N	N
Volatile Petroleum Hydrocarbons (µg/kg)						
Benzene	--	800 U	700 U	--	--	800 U
C5-C6 Aliphatic	--	8000 UJ	7000 UJ	--	--	8000 UJ
C6-C8 Aliphatic	--	8000 U	7000 U	--	--	8000 U
C8-C10 Aliphatic	--	8000 U	7000 U	--	--	8000 U
C10-C12 Aliphatic	--	8000 U	7000 U	--	--	8000 U
C8-C10 Aromatic	--	8000 U	7000 U	--	--	8000 U
C10-C12 Aromatic	--	8000 U	7000 U	--	--	8000 U
C12-C13 Aromatic	--	8000 U	7000 U	--	--	8000 U
Ethylbenzene	--	800 U	700 U	--	--	800 U
m,p-Xylene	--	1600 U	1400 U	--	--	1600 U
Methyl tert-butyl ether (MTBE)	--	800 U	700 U	--	--	800 U
n-Decane (C10)	--	800 U	700 U	--	--	800 U
n-Dodecane (C12)	--	800 U	700 U	--	--	800 U
n-Hexane	--	800 U	700 U	--	--	800 U
n-Octane (C8)	--	800 U	700 U	--	--	800 U
n-Pentane (C5)	--	800 UJ	700 UJ	--	--	800 UJ
o-Xylene	--	800 U	700 U	--	--	800 U
Toluene	--	800 U	700 U	--	--	800 U
Extractable Petroleum Hydrocarbons (µg/kg)						
C10-C12 Aliphatics	--	2500 U	2400 U	--	--	2600 U
C10-C12 Aromatics	--	**2900**	**4500**	--	--	2600 U
C12-C16 Aliphatics	--	**16000**	**23000**	--	--	**4200**
C12-C16 Aromatics	--	**5100**	**15000**	--	--	**5600**
C16-C21 Aliphatics	--	**82000**	**61000**	--	--	**16000**
C16-C21 Aromatics	--	**100000**	**170000**	--	--	**34000**
C21-C34 Aliphatics	--	**270000**	**160000**	--	--	**67000**
C21-C34 Aromatics	--	**330000**	**700000**	--	--	**110000**
C8-C10 Aliphatics	--	2500 U	2400 U	--	--	2600 U
C8-C10 Aromatics	--	2500 U	2400 U	--	--	2600 U

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-06	GST-06	GST-06	GST-06	GST-06	GST-06
Sample ID	GST-06SO-0-5-101007	GST-06SO-5-10-101007	GST-06SO-10-12-101007	GST-06SO-12-14.5-101007	GST-06SO-15-20-101007	GST-06SO-20-25-101007
Sample Date	10/7/2010	10/7/2010	10/7/2010	10/7/2010	10/7/2010	10/7/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 12 feet	12 - 14.5 feet	15 - 20 feet	20 - 25 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	**1.46 J**	--	--	--	--	**13.5 J**
Conventional Parameters (None)						
Atterberg Classification	--	--	**ML**	**CL**	--	--
Ignitability	--	--	--	--	--	--
Conventional Parameters (percent)						
Liquid limit	--	--	**29.2**	**29.9**	--	--
Plastic limit	--	--	**24.6**	**22**	--	--
Plasticity index	--	--	**4.6**	**7.9**	--	--
Moisture (water) content	**13.58**	**11.83**	**15.77**	**18.98**	--	**24.05**
Total organic carbon	**1.93**	--	--	--	--	**7.91**
Total solids[1]	**83.7**	--	--	--	--	**80**
Conventional Parameters (standard unit)						
pH	--	--	--	--	--	--
Specific gravity	--	--	--	--	--	--
Grain Size (percent)						
Percent passing < 1.3 micron sieve	**3.2**	**1**	--	--	**0.7**	--
Percent retained 1.3 micron sieve	**2.4**	**0.3**	--	--	**0.7**	--
Percent retained 3.2 micron sieve	**3.2**	**1.3**	--	--	**2**	--
Percent retained 7 micron sieve	**2.4**	**1**	--	--	**1.6**	--
Percent retained 9 micron sieve	**3.2**	**0.3**	--	--	**1.6**	--
Percent retained 13 micron sieve	**5.6**	**4.7**	--	--	**3.3**	--
Percent retained 22 micron sieve	**3.2**	**6**	--	--	**1**	--
Percent retained 32 micron sieve	**4.7**	**6.8**	--	--	**2.5**	--
Percent retained 75 micron sieve (#200)	**5.6**	**6.3**	--	--	**3.7**	--
Percent retained 150 micron sieve (#100)	**4.6**	**5.5**	--	--	**4.9**	--
Percent retained 250 micron sieve (#60)	**7.2**	**8**	--	--	**10.2**	--
Percent retained 425 micron sieve (#40)	**11.6**	**10.6**	--	--	**9.6**	--
Percent retained 850 micron sieve (#20)	**16.7**	**13.2**	--	--	**11.2**	--
Percent retained 2000 micron sieve (#10)	**13.6**	**9.2**	--	--	**10.2**	--
Percent retained 4750 micron sieve (#4)	**8.7**	**7**	--	--	**12.5**	--
Percent retained 9500 micron sieve	**4.3**	**3.6**	--	--	**6.2**	--
Percent retained 12500 micron sieve	0.1 U	**10.9**	--	--	**13.7**	--
Percent retained 19000 micron sieve	0.1 U	**4.1**	--	--	**4.5**	--
Percent retained 25K micron sieve	0.1 U	0.1 U	--	--	0.1 U	--
Percent retained 37.5K micron sieve	0.1 U	0.1 U	--	--	0.1 U	--
Percent retained 50K micron sieve	0.1 U	0.1 U	--	--	0.1 U	--
Percent retained 75K micron sieve	0.1 U	0.1 U	--	--	0.1 U	--
Gravel	**13 T**	**26 T**	--	--	**37 T**	--
Gravel, Coarse	0.1 UT	0.1 UT	--	--	0.1 UT	--
Sand, Coarse	**13.6 T**	**9.2 T**	--	--	**10.2 T**	--
Sand, Fine	**17 T**	**20 T**	--	--	**19 T**	--
Sand, Medium	**28.3 T**	**23.8 T**	--	--	**21 T**	--
Silt, Coarse	**3.2 T**	**6 T**	--	--	**1 T**	--
Silt, Fine	**5.6 T**	**1.3 T**	--	--	**3.2 T**	--
Silt, Medium	**5.6 T**	**4.7 T**	--	--	**3.3 T**	--
Silt, Very Coarse	**4.7 T**	**6.8 T**	--	--	**2.5 T**	--
Silt, Very Fine	**3.2 T**	**1.3 T**	--	--	**2 T**	--
Clay	**5.6 T**	**1.3 T**	--	--	**1.4 T**	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-06	GST-06	GST-06	GST-06	GST-06	GST-06
Sample ID	GST-06SO-0-5-101007	GST-06SO-5-10-101007	GST-06SO-10-12-101007	GST-06SO-12-14.5-101007	GST-06SO-15-20-101007	GST-06SO-20-25-101007
Sample Date	10/7/2010	10/7/2010	10/7/2010	10/7/2010	10/7/2010	10/7/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 12 feet	12 - 14.5 feet	15 - 20 feet	20 - 25 feet
Sample Type	N	N	N	N	N	N
Total Gravel	**13 T**	**26 T**	--	--	**37 T**	--
Total Sand	**59 T**	**53 T**	--	--	**50 T**	--
Total Silt	**22 T**	**20 T**	--	--	**12 T**	--
Total Clay	**5.6 T**	**1.3 T**	--	--	**1.4 T**	--
Total Fines (silt + clay)	**28 T**	**21 T**	--	--	**13 T**	--
Total Grain Size	**100 T**	**99.8 T**	--	--	**100 T**	--
Metals (mg/kg)						
Arsenic	10 U	--	--	--	--	6 U
Cadmium	**0.8**	--	--	--	--	**0.3**
Chromium	**24**	--	--	--	--	**29**
Copper	**185 J**	--	--	--	--	**24.1 J**
Lead	**228**	--	--	--	--	**7**
Mercury	**0.12**	--	--	--	--	**0.05**
Nickel	**20**	--	--	--	--	**39**
Silver	0.9 U	--	--	--	--	0.4 U
Zinc	**232**	--	--	--	--	**69**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.1 U	--	--	--	--	5.5 U
1,2-Dichloroethene, cis-	1.1 U	--	--	--	--	5.5 U
1,2-Dichloroethene, trans-	1.1 U	--	--	--	--	5.5 U
Benzene	1.1 U	--	--	--	--	**230**
Ethylbenzene	1.1 U	--	--	--	--	**890**
m,p-Xylene	1.1 U	--	--	--	--	**460**
o-Xylene	1.1 U	--	--	--	--	**560**
Toluene	1.1 U	--	--	--	--	**100**
Trichloroethene (TCE)	1.1 U	--	--	--	--	5.5 U
Vinyl chloride	1.1 U	--	--	--	--	5.5 U
LWG RA Total BTEX[6] (Calculated U = 1/2)	1.1 UT	--	--	--	--	**2200 T**
LWG RA Total Xylene[9] (Calculated U = 1/2)	1.1 UT	--	--	--	--	**1000 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	**180**	--	--	--	--	**48000**
2-Methylnaphthalene	**400**	--	--	--	--	**62000**
Acenaphthene	**110**	--	--	--	--	**130000**
Acenaphthylene	**920**	--	--	--	--	**10000**
Anthracene	**450**	--	--	--	--	**90000**
Benzo(a)anthracene	**2800**	--	--	--	--	**93000**
Benzo(b,j,k)fluoranthenes	**8200**	--	--	--	--	**140000**
Benzo(a)pyrene	**5500**	--	--	--	--	**140000**
Benzo(g,h,i)perylene	**7100**	--	--	--	--	**120000**
Chrysene	**4800**	--	--	--	--	**110000**
Dibenzo(a,h)anthracene	**1300**	--	--	--	--	**22000**
Fluoranthene	**2800**	--	--	--	--	**310000**
Fluorene	**96**	--	--	--	--	**62000**
Indeno(1,2,3-c,d)pyrene	**4000**	--	--	--	--	**82000**
Naphthalene	**1600**	--	--	--	--	**420000**
Perylene	**1400**	--	--	--	--	**31000**
Phenanthrene	**1100**	--	--	--	--	**470000**
Pyrene	**7200**	--	--	--	--	**460000**

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-06	GST-06	GST-06	GST-06	GST-06	GST-06
Sample ID	GST-06SO-0-5-101007	GST-06SO-5-10-101007	GST-06SO-10-12-101007	GST-06SO-12-14.5-101007	GST-06SO-15-20-101007	GST-06SO-20-25-101007
Sample Date	10/7/2010	10/7/2010	10/7/2010	10/7/2010	10/7/2010	10/7/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 12 feet	12 - 14.5 feet	15 - 20 feet	20 - 25 feet
Sample Type	N	N	N	N	N	N
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	**4700 T**	--	--	--	--	**1200000 T**
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	**44000 T**	--	--	--	--	**1500000 T**
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	**48000 T**	--	--	--	--	**2700000 T**
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	**8300 T**	--	--	--	--	**190000 T**
Semivolatile Organics (µg/kg)						
Carbazole	**84**	--	--	--	--	**16000**
Dibenzofuran	64 U	--	--	--	--	**7700**
PCB Aroclors (µg/kg)						
Aroclor 1016	31 U	--	--	--	--	33 U
Aroclor 1221	31 U	--	--	--	--	33 U
Aroclor 1232	31 U	--	--	--	--	33 U
Aroclor 1242	31 U	--	--	--	--	33 U
Aroclor 1248	31 U	--	--	--	--	33 U
Aroclor 1254	31 U	--	--	--	--	33 U
Aroclor 1260	31 U	--	--	--	--	33 U
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	31 UT	--	--	--	--	33 UT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	16 U	--	--	--	--	30 U
2,4'-DDE (o,p'-DDE)	16 U	--	--	--	--	30 U
2,4'-DDT (o,p'-DDT)	16 U	--	--	--	--	30 U
4,4'-DDD (p,p'-DDD)	16 U	--	--	--	--	30 U
4,4'-DDE (p,p'-DDE)	16 U	--	--	--	--	30 U
4,4'-DDT (p,p'-DDT)	16 U	--	--	--	--	30 U
alpha-Hexachlorocyclohexane (BHC)	7.9 U	--	--	--	--	15 U
alpha-Chlordane (cis-Chlordane)	7.9 U	--	--	--	--	15 U
beta-Hexachlorocyclohexane (BHC)	7.9 U	--	--	--	--	15 U
gamma-Chlordane (trans-Chlordane)	7.9 U	--	--	--	--	22 U
cis-Nonachlor	16 U	--	--	--	--	30 U
delta-Hexachlorocyclohexane (BHC)	7.9 U	--	--	--	--	15 U
Dieldrin	16 U	--	--	--	--	30 U
Endrin	16 U	--	--	--	--	30 U
Endrin ketone	16 U	--	--	--	--	30 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	7.9 U	--	--	--	--	15 U
Heptachlor epoxide	7.9 U	--	--	--	--	15 U
Oxychlordane	16 U	--	--	--	--	30 U
trans-Nonachlor	16 U	--	--	--	--	84 U
Hexachlorobenzene	7.9 U	--	--	--	--	15 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	--	--	--	--	30 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	--	--	--	--	30 UT
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	--	--	--	--	30 UT
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	--	--	--	--	30 UT
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	--	--	--	--	30 UT
LWG RA Total DDx (Calculated U = 1/2)	16 UT	--	--	--	--	30 UT
LWG RA Total Chlordane[2] (Calculated U = 1/2)	16 UT	--	--	--	--	84 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**57**	--	--	--	--	**2700**
Motor Oil Range	**380**	--	--	--	--	**2500**
LWG RA TPH[5] (Calculated U = 1/2)	**440 T**	--	--	--	--	**5200 T**

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-06	GST-06	GST-06	GST-06	GST-06	GST-06
Sample ID	GST-06SO-0-5-101007	GST-06SO-5-10-101007	GST-06SO-10-12-101007	GST-06SO-12-14.5-101007	GST-06SO-15-20-101007	GST-06SO-20-25-101007
Sample Date	10/7/2010	10/7/2010	10/7/2010	10/7/2010	10/7/2010	10/7/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 12 feet	12 - 14.5 feet	15 - 20 feet	20 - 25 feet
Sample Type	N	N	N	N	N	N
Volatile Petroleum Hydrocarbons (µg/kg)						
Benzene	650 U	--	--	--	--	3800 U
C5-C6 Aliphatic	6500 UJ	--	--	--	--	38000 UJ
C6-C8 Aliphatic	6500 U	--	--	--	--	38000 UJ
C8-C10 Aliphatic	6500 U	--	--	--	--	38000 UJ
C10-C12 Aliphatic	6500 U	--	--	--	--	38000 UJ
C8-C10 Aromatic	6500 U	--	--	--	--	38000 U
C10-C12 Aromatic	6500 U	--	--	--	--	**84000**
C12-C13 Aromatic	6500 U	--	--	--	--	38000 U
Ethylbenzene	650 U	--	--	--	--	3800 U
m,p-Xylene	1300 U	--	--	--	--	7600 U
Methyl tert-butyl ether (MTBE)	650 U	--	--	--	--	3800 U
n-Decane (C10)	650 U	--	--	--	--	3800 UJ
n-Dodecane (C12)	650 U	--	--	--	--	3800 UJ
n-Hexane	650 U	--	--	--	--	3800 UJ
n-Octane (C8)	650 U	--	--	--	--	3800 UJ
n-Pentane (C5)	650 UJ	--	--	--	--	3800 UJ
o-Xylene	650 U	--	--	--	--	3800 U
Toluene	650 U	--	--	--	--	3800 U
Extractable Petroleum Hydrocarbons (µg/kg)						
C10-C12 Aliphatics	2300 U	--	--	--	--	**14000**
C10-C12 Aromatics	2300 U	--	--	--	--	**410000**
C12-C16 Aliphatics	2300 U	--	--	--	--	**95000**
C12-C16 Aromatics	2300 U	--	--	--	--	**500000**
C16-C21 Aliphatics	**6800**	--	--	--	--	**82000**
C16-C21 Aromatics	**16000**	--	--	--	--	**1800000**
C21-C34 Aliphatics	**86000**	--	--	--	--	**120000**
C21-C34 Aromatics	**120000**	--	--	--	--	**1700000**
C8-C10 Aliphatics	2300 U	--	--	--	--	2500 U
C8-C10 Aromatics	2300 U	--	--	--	--	25000 U

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-09	GST-09	GST-09	GST-09	GST-09	GST-09
Sample ID	GST-09SO-0-5-101008	GST-09SO-5-10-101008	GST-09SO-10-15-101008	GST-09SO-15-20-101008	GST-09SO-16.5-18-101008	GST-09SO-20-22.5-101008
Sample Date	10/8/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	16.5 - 18 feet	20 - 22.5 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	0.11 U	--	--	--	--	--
Conventional Parameters (None)						
Atterberg Classification	--	--	--	--	--	Non-Plastic
Ignitability	--	--	--	--	NF	--
Conventional Parameters (percent)						
Liquid limit	--	--	--	--	--	--
Plastic limit	--	--	--	--	--	--
Plasticity index	--	--	--	--	--	--
Moisture (water) content	10.5	15.4	11.08	26.37	--	35.87
Total organic carbon	0.518	--	--	--	--	--
Total solids[1]	90	--	--	--	--	--
Conventional Parameters (standard unit)						
pH	--	--	--	--	5.57	--
Specific gravity	2.84	--	--	--	--	--
Grain Size (percent)						
Percent passing < 1.3 micron sieve	5.4	--	13	0.3	--	--
Percent retained 1.3 micron sieve	1.6	--	4	0.3	--	--
Percent retained 3.2 micron sieve	3.2	--	5.4	2.1	--	--
Percent retained 7 micron sieve	2.2	--	4	1	--	--
Percent retained 9 micron sieve	2.8	--	3.1	1.7	--	--
Percent retained 13 micron sieve	3.2	--	5.4	1.4	--	--
Percent retained 22 micron sieve	4.4	--	4.5	3.4	--	--
Percent retained 32 micron sieve	5.5	--	2.9	3.5	--	--
Percent retained 75 micron sieve (#200)	4.4	--	4.3	7.6	--	--
Percent retained 150 micron sieve (#100)	3.8	--	3.2	6.9	--	--
Percent retained 250 micron sieve (#60)	5	--	4.2	11.8	--	--
Percent retained 425 micron sieve (#40)	5.5	--	6.9	15.7	--	--
Percent retained 850 micron sieve (#20)	7.9	--	11.7	22.6	--	--
Percent retained 2000 micron sieve (#10)	9.2	--	11.9	10.4	--	--
Percent retained 4750 micron sieve (#4)	10.4	--	9.6	3.4	--	--
Percent retained 9500 micron sieve	5	--	4.6	6.1	--	--
Percent retained 12500 micron sieve	13.3	--	1.3	1.8	--	--
Percent retained 19000 micron sieve	7.1	--	0.1 U	0.1 U	--	--
Percent retained 25K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--
Percent retained 37.5K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--
Percent retained 50K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--
Percent retained 75K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--
Gravel	36 T	--	16 T	11 T	--	--
Gravel, Coarse	0.1 UT	--	0.1 UT	0.1 UT	--	--
Sand, Coarse	9.2 T	--	11.9 T	10.4 T	--	--
Sand, Fine	13 T	--	12 T	26 T	--	--
Sand, Medium	13 T	--	19 T	38.3 T	--	--
Silt, Coarse	4.4 T	--	4.5 T	3.4 T	--	--
Silt, Fine	5 T	--	7.1 T	2.7 T	--	--
Silt, Medium	3.2 T	--	5.4 T	1.4 T	--	--
Silt, Very Coarse	5.5 T	--	2.9 T	3.5 T	--	--
Silt, Very Fine	3.2 T	--	5.4 T	2.1 T	--	--
Clay	7 T	--	17 T	0.6 T	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-09	GST-09	GST-09	GST-09	GST-09	GST-09
Sample ID	GST-09SO-0-5-101008	GST-09SO-5-10-101008	GST-09SO-10-15-101008	GST-09SO-15-20-101008	GST-09SO-16.5-18-101008	GST-09SO-20-22.5-101008
Sample Date	10/8/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	16.5 - 18 feet	20 - 22.5 feet
Sample Type	N	N	N	N	N	N
Total Gravel	**36 T**	--	**16 T**	**11 T**	--	--
Total Sand	**36 T**	--	**42 T**	**75 T**	--	--
Total Silt	**21 T**	--	**25 T**	**13 T**	--	--
Total Clay	**7 T**	--	**17 T**	**0.6 T**	--	--
Total Fines (silt + clay)	**28 T**	--	**42 T**	**14 T**	--	--
Total Grain Size	**99.9 T**	--	**100 T**	**100 T**	--	--
Metals (mg/kg)						
Arsenic	10 U	--	--	--	--	--
Cadmium	**0.7**	--	--	--	--	--
Chromium	**14**	--	--	--	--	--
Copper	**19.2 J**	--	--	--	--	--
Lead	**21**	--	--	--	--	--
Mercury	0.02 U	--	--	--	--	--
Nickel	**13**	--	--	--	--	--
Silver	0.8 U	--	--	--	--	--
Zinc	**90**	--	--	--	--	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1 U	--	--	--	--	--
1,2-Dichloroethene, cis-	1 U	--	--	--	--	--
1,2-Dichloroethene, trans-	1 U	--	--	--	--	--
Benzene	1 U	--	--	--	--	--
Ethylbenzene	1 U	--	--	--	--	--
m,p-Xylene	1 U	--	--	--	--	--
o-Xylene	1 U	--	--	--	--	--
Toluene	1 U	--	--	--	--	--
Trichloroethene (TCE)	1 U	--	--	--	--	--
Vinyl chloride	1 U	--	--	--	--	--
LWG RA Total BTEX[6] (Calculated U = 1/2)	1 UT	--	--	--	--	--
LWG RA Total Xylene[9] (Calculated U = 1/2)	1 UT	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	61 U	--	--	--	--	--
2-Methylnaphthalene	**120**	--	--	--	--	--
Acenaphthene	61 U	--	--	--	--	--
Acenaphthylene	**340**	--	--	--	--	--
Anthracene	**300**	--	--	--	--	--
Benzo(a)anthracene	**2000 J**	--	--	--	--	--
Benzo(b,j,k)fluoranthenes	**3900 J**	--	--	--	--	--
Benzo(a)pyrene	**3700 J**	--	--	--	--	--
Benzo(g,h,i)perylene	**4700 J**	--	--	--	--	--
Chrysene	**2400 J**	--	--	--	--	--
Dibenzo(a,h)anthracene	**890**	--	--	--	--	--
Fluoranthene	**3400 J**	--	--	--	--	--
Fluorene	**89**	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	**3100**	--	--	--	--	--
Naphthalene	**400**	--	--	--	--	--
Perylene	**840**	--	--	--	--	--
Phenanthrene	**1300 J**	--	--	--	--	--
Pyrene	**6400**	--	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-09	GST-09	GST-09	GST-09	GST-09	GST-09
Sample ID	GST-09SO-0-5-101008	GST-09SO-5-10-101008	GST-09SO-10-15-101008	GST-09SO-15-20-101008	GST-09SO-16.5-18-101008	GST-09SO-20-22.5-101008
Sample Date	10/8/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	16.5 - 18 feet	20 - 22.5 feet
Sample Type	N	N	N	N	N	N
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	**2600 JT**	--	--	--	--	--
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	**30000 JT**	--	--	--	--	--
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	**33000 JT**	--	--	--	--	--
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	**5500 JT**	--	--	--	--	--
Semivolatile Organics (µg/kg)						
Carbazole	**87**	--	--	--	--	--
Dibenzofuran	61 U	--	--	--	--	--
PCB Aroclors (µg/kg)						
Aroclor 1016	31 U	--	--	--	--	--
Aroclor 1221	31 U	--	--	--	--	--
Aroclor 1232	31 U	--	--	--	--	--
Aroclor 1242	31 U	--	--	--	--	--
Aroclor 1248	31 U	--	--	--	--	--
Aroclor 1254	31 U	--	--	--	--	--
Aroclor 1260	31 U	--	--	--	--	--
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	31 UT	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	16 U	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	16 U	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	16 U	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	16 U	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	16 U	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	16 U	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	7.9 U	--	--	--	--	--
alpha-Chlordane (cis-Chlordane)	7.9 U	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	7.9 U	--	--	--	--	--
gamma-Chlordane (trans-Chlordane)	7.9 U	--	--	--	--	--
cis-Nonachlor	16 U	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	7.9 U	--	--	--	--	--
Dieldrin	16 U	--	--	--	--	--
Endrin	16 U	--	--	--	--	--
Endrin ketone	16 U	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	7.9 U	--	--	--	--	--
Heptachlor epoxide	7.9 U	--	--	--	--	--
Oxychlordane	16 U	--	--	--	--	--
trans-Nonachlor	26 U	--	--	--	--	--
Hexachlorobenzene	7.9 U	--	--	--	--	--
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	--	--	--	--	--
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UT	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	16 UT	--	--	--	--	--
LWG RA Total Chlordane[2] (Calculated U = 1/2)	26 UT	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	27 U	--	--	--	--	--
Motor Oil Range	**140**	--	--	--	--	--
LWG RA TPH[5] (Calculated U = 1/2)	**150 T**	--	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-09	GST-09	GST-09	GST-09	GST-09	GST-09
Sample ID	GST-09SO-0-5-101008	GST-09SO-5-10-101008	GST-09SO-10-15-101008	GST-09SO-15-20-101008	GST-09SO-16.5-18-101008	GST-09SO-20-22.5-101008
Sample Date	10/8/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	16.5 - 18 feet	20 - 22.5 feet
Sample Type	N	N	N	N	N	N
Volatile Petroleum Hydrocarbons (µg/kg)						
Benzene	590 U	--	--	--	--	--
C5-C6 Aliphatic	5900 UJ	--	--	--	--	--
C6-C8 Aliphatic	5900 U	--	--	--	--	--
C8-C10 Aliphatic	5900 U	--	--	--	--	--
C10-C12 Aliphatic	5900 U	--	--	--	--	--
C8-C10 Aromatic	5900 U	--	--	--	--	--
C10-C12 Aromatic	5900 U	--	--	--	--	--
C12-C13 Aromatic	5900 U	--	--	--	--	--
Ethylbenzene	590 U	--	--	--	--	--
m,p-Xylene	1200 U	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	590 U	--	--	--	--	--
n-Decane (C10)	590 U	--	--	--	--	--
n-Dodecane (C12)	590 U	--	--	--	--	--
n-Hexane	590 U	--	--	--	--	--
n-Octane (C8)	590 U	--	--	--	--	--
n-Pentane (C5)	590 UJ	--	--	--	--	--
o-Xylene	590 U	--	--	--	--	--
Toluene	590 U	--	--	--	--	--
Extractable Petroleum Hydrocarbons (µg/kg)						
C10-C12 Aliphatics	2200 U	--	--	--	--	--
C10-C12 Aromatics	2200 U	--	--	--	--	--
C12-C16 Aliphatics	2200 U	--	--	--	--	--
C12-C16 Aromatics	2200 U	--	--	--	--	--
C16-C21 Aliphatics	**6100**	--	--	--	--	--
C16-C21 Aromatics	**11000**	--	--	--	--	--
C21-C34 Aliphatics	**52000**	--	--	--	--	--
C21-C34 Aromatics	**39000**	--	--	--	--	--
C8-C10 Aliphatics	2200 U	--	--	--	--	--
C8-C10 Aromatics	2200 U	--	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-09	GST-11	GST-11	GST-11	GST-11	GST-11
Sample ID	GST-09SO-23-28-101008	GST-11SO-0-5-101011	GST-11SO-5-10-101011	GST-11SO-10-15-101011	GST-11SO-15-20-101011	GST-11SO-20-25-101011
Sample Date	10/8/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth	23 - 28 feet	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	20 - 25 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	**0.165**	0.105 U	--	--	--	--
Conventional Parameters (None)						
Atterberg Classification	**Non-Plastic**	--	--	--	--	--
Ignitability	--	--	--	--	--	--
Conventional Parameters (percent)						
Liquid limit	--	--	--	--	--	--
Plastic limit	--	--	--	--	--	--
Plasticity index	--	--	--	--	--	--
Moisture (water) content	**47.14**	**7.47**	**7.28**	**11.46**	**10.01**	**11.29**
Total organic carbon	**0.401**	**0.159**	--	--	--	--
Total solids[1]	**70.2**	**92.7**	--	--	--	--
Conventional Parameters (standard unit)						
pH	--	--	--	--	--	--
Specific gravity	--	--	--	--	--	--
Grain Size (percent)						
Percent passing < 1.3 micron sieve	--	**0.9**	--	**6.7**	--	**10.9**
Percent retained 1.3 micron sieve	--	0.1 U	--	**2.9**	--	**3.6**
Percent retained 3.2 micron sieve	--	**0.9**	--	**1.9**	--	**3.6**
Percent retained 7 micron sieve	--	**0.4**	--	**2.9**	--	**2.7**
Percent retained 9 micron sieve	--	**1.3**	--	**1.4**	--	**3.6**
Percent retained 13 micron sieve	--	0.1 U	--	**2.4**	--	**2.7**
Percent retained 22 micron sieve	--	**0.4**	--	**1.9**	--	**3.6**
Percent retained 32 micron sieve	--	**0.5**	--	**3.3**	--	**4.7**
Percent retained 75 micron sieve (#200)	--	**1.2**	--	**4.6**	--	**5.8**
Percent retained 150 micron sieve (#100)	--	**5.2**	--	**8.7**	--	**9.3**
Percent retained 250 micron sieve (#60)	--	**34**	--	**33.1**	--	**23.8**
Percent retained 425 micron sieve (#40)	--	**39.3**	--	**23.1**	--	**18**
Percent retained 850 micron sieve (#20)	--	**8.2**	--	**3.4**	--	**4.3**
Percent retained 2000 micron sieve (#10)	--	**3.5**	--	**1.2**	--	**2**
Percent retained 4750 micron sieve (#4)	--	**2.2**	--	**0.8**	--	**1.1**
Percent retained 9500 micron sieve	--	0.1 U	--	**1.6**	--	0.1 U
Percent retained 12500 micron sieve	--	**2.1**	--	0.1 U	--	0.1 U
Percent retained 19000 micron sieve	--	0.1 U	--	0.1 U	--	0.1 U
Percent retained 25K micron sieve	--	0.1 U	--	0.1 U	--	0.1 U
Percent retained 37.5K micron sieve	--	0.1 U	--	0.1 U	--	0.1 U
Percent retained 50K micron sieve	--	0.1 U	--	0.1 U	--	0.1 U
Percent retained 75K micron sieve	--	0.1 U	--	0.1 U	--	0.1 U
Gravel	--	**4.3 T**	--	**2.4 T**	--	**1.1 T**
Gravel, Coarse	--	0.1 UT	--	0.1 UT	--	0.1 UT
Sand, Coarse	--	**3.5 T**	--	**1.2 T**	--	**2 T**
Sand, Fine	--	**40 T**	--	**46 T**	--	**39 T**
Sand, Medium	--	**48 T**	--	**26 T**	--	**22 T**
Silt, Coarse	--	**0.4 T**	--	**1.9 T**	--	**3.6 T**
Silt, Fine	--	**1.7 T**	--	**4.3 T**	--	**6.3 T**
Silt, Medium	--	0.1 UT	--	**2.4 T**	--	**2.7 T**
Silt, Very Coarse	--	**0.5 T**	--	**3.3 T**	--	**4.7 T**
Silt, Very Fine	--	**0.9 T**	--	**1.9 T**	--	**3.6 T**
Clay	--	**0.9 T**	--	**9.6 T**	--	**15 T**

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-09	GST-11	GST-11	GST-11	GST-11	GST-11
Sample ID	GST-09SO-23-28-101008	GST-11SO-0-5-101011	GST-11SO-5-10-101011	GST-11SO-10-15-101011	GST-11SO-15-20-101011	GST-11SO-20-25-101011
Sample Date	10/8/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth	23 - 28 feet	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	20 - 25 feet
Sample Type	N	N	N	N	N	N
Total Gravel	--	**4.3 T**	--	**2.4 T**	--	**1.1 T**
Total Sand	--	**91 T**	--	**74 T**	--	**63 T**
Total Silt	--	**3.5 T**	--	**14 T**	--	**21 T**
Total Clay	--	**0.9 T**	--	**9.6 T**	--	**15 T**
Total Fines (silt + clay)	--	**4.4 T**	--	**23 T**	--	**35 T**
Total Grain Size	--	**100 T**	--	**99.9 T**	--	**99.7 T**
Metals (mg/kg)						
Arsenic	7 U	5 U	--	--	--	--
Cadmium	**0.3**	**0.2**	--	--	--	--
Chromium	**34.8**	**13.4**	--	--	--	--
Copper	**30.1 J**	**14.9**	--	--	--	--
Lead	**4**	**2**	--	--	--	--
Mercury	0.03 U	0.02 U	--	--	--	--
Nickel	**32**	**16**	--	--	--	--
Silver	0.4 U	0.3 U	--	--	--	--
Zinc	**70**	**51**	--	--	--	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.4 U	--	--	--	--	--
1,2-Dichloroethene, cis-	1.4 U	0.9 U	--	--	--	--
1,2-Dichloroethene, trans-	1.4 U	0.9 U	--	--	--	--
Benzene	**100**	0.9 U	--	--	--	--
Ethylbenzene	**73**	0.9 U	--	--	--	--
m,p-Xylene	**84**	0.9 U	--	--	--	--
o-Xylene	**40**	0.9 U	--	--	--	--
Toluene	**50**	0.9 U	--	--	--	--
Trichloroethene (TCE)	1.4 U	0.9 U	--	--	--	--
Vinyl chloride	1.4 U	0.9 U	--	--	--	--
LWG RA Total BTEX[6] (Calculated U = 1/2)	**350 T**	0.9 UT	--	--	--	--
LWG RA Total Xylene[9] (Calculated U = 1/2)	**120 T**	0.9 UT	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	**1300**	59 U	--	--	--	--
2-Methylnaphthalene	**2500**	59 U	--	--	--	--
Acenaphthene	**3500**	59 U	--	--	--	--
Acenaphthylene	**540**	59 U	--	--	--	--
Anthracene	**2000**	59 U	--	--	--	--
Benzo(a)anthracene	**1400**	59 U	--	--	--	--
Benzo(b,j,k)fluoranthenes	**1800**	**77**	--	--	--	--
Benzo(a)pyrene	**1900**	**66**	--	--	--	--
Benzo(g,h,i)perylene	**1800**	**94**	--	--	--	--
Chrysene	**1900**	59 U	--	--	--	--
Dibenzo(a,h)anthracene	**270**	59 U	--	--	--	--
Fluoranthene	**5600**	59 U	--	--	--	--
Fluorene	**1800**	59 U	--	--	--	--
Indeno(1,2,3-c,d)pyrene	**1200**	59 U	--	--	--	--
Naphthalene	**9500**	59 U	--	--	--	--
Perylene	**500**	59 U	--	--	--	--
Phenanthrene	**12000**	59 U	--	--	--	--
Pyrene	**7700**	**63 J**	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-09	GST-11	GST-11	GST-11	GST-11	GST-11
Sample ID	GST-09SO-23-28-101008	GST-11SO-0-5-101011	GST-11SO-5-10-101011	GST-11SO-10-15-101011	GST-11SO-15-20-101011	GST-11SO-20-25-101011
Sample Date	10/8/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth	23 - 28 feet	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	20 - 25 feet
Sample Type	N	N	N	N	N	N
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	**32000 T**	59 UT	--	--	--	--
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	**24000 T**	**450 JT**	--	--	--	--
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	**55000 T**	**650 JT**	--	--	--	--
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	**2600 T**	**110 T**	--	--	--	--
Semivolatile Organics (µg/kg)						
Carbazole	**560**	59 U	--	--	--	--
Dibenzofuran	**240**	59 U	--	--	--	--
PCB Aroclors (µg/kg)						
Aroclor 1016	32 U	31 U	--	--	--	--
Aroclor 1221	32 U	31 U	--	--	--	--
Aroclor 1232	32 U	31 U	--	--	--	--
Aroclor 1242	32 U	31 U	--	--	--	--
Aroclor 1248	32 U	31 U	--	--	--	--
Aroclor 1254	32 U	31 U	--	--	--	--
Aroclor 1260	32 U	31 U	--	--	--	--
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	32 UT	31 UT	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.1 U	3 U	--	--	--	--
2,4'-DDE (o,p'-DDE)	3.1 U	3 U	--	--	--	--
2,4'-DDT (o,p'-DDT)	3.1 U	3 U	--	--	--	--
4,4'-DDD (p,p'-DDD)	3.1 U	3 U	--	--	--	--
4,4'-DDE (p,p'-DDE)	3.1 U	3 U	--	--	--	--
4,4'-DDT (p,p'-DDT)	3.1 U	**7.8**	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.5 U	--	--	--	--
alpha-Chlordane (cis-Chlordane)	1.6 U	1.5 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.5 U	--	--	--	--
gamma-Chlordane (trans-Chlordane)	1.6 U	1.5 U	--	--	--	--
cis-Nonachlor	3.1 U	3 U	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	1.6 U	1.5 U	--	--	--	--
Dieldrin	3.1 U	3 U	--	--	--	--
Endrin	3.1 U	3 U	--	--	--	--
Endrin ketone	3.1 U	3 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.5 U	--	--	--	--
Heptachlor epoxide	1.6 U	1.5 U	--	--	--	--
Oxychlordane	3.1 U	3 U	--	--	--	--
trans-Nonachlor	3.1 U	3 U	--	--	--	--
Hexachlorobenzene	1.6 U	1.5 U	--	--	--	--
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3.1 UT	3 UT	--	--	--	--
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3.1 UT	**11 T**	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	3.1 UT	3 UT	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	3.1 UT	3 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	3.1 UT	**9.3 T**	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	3.1 UT	**15 T**	--	--	--	--
LWG RA Total Chlordane[2] (Calculated U = 1/2)	3.1 UT	3 UT	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**96**	5.3 U	--	--	--	--
Motor Oil Range	**99**	11 U	--	--	--	--
LWG RA TPH[5] (Calculated U = 1/2)	**190 T**	11 UT	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-09	GST-11	GST-11	GST-11	GST-11	GST-11
Sample ID	GST-09SO-23-28-101008	GST-11SO-0-5-101011	GST-11SO-5-10-101011	GST-11SO-10-15-101011	GST-11SO-15-20-101011	GST-11SO-20-25-101011
Sample Date	10/8/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth	23 - 28 feet	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	20 - 25 feet
Sample Type	N	N	N	N	N	N
Volatile Petroleum Hydrocarbons (µg/kg)						
Benzene	1000 U	530 U	--	--	--	--
C5-C6 Aliphatic	10000 UJ	5300 UJ	--	--	--	--
C6-C8 Aliphatic	10000 U	5300 U	--	--	--	--
C8-C10 Aliphatic	10000 U	5300 U	--	--	--	--
C10-C12 Aliphatic	10000 U	5300 U	--	--	--	--
C8-C10 Aromatic	10000 U	5300 U	--	--	--	--
C10-C12 Aromatic	10000 U	5300 U	--	--	--	--
C12-C13 Aromatic	10000 U	5300 U	--	--	--	--
Ethylbenzene	1000 U	530 U	--	--	--	--
m,p-Xylene	2100 U	1100 U	--	--	--	--
Methyl tert-butyl ether (MTBE)	1000 U	530 U	--	--	--	--
n-Decane (C10)	1000 U	530 U	--	--	--	--
n-Dodecane (C12)	1000 U	530 U	--	--	--	--
n-Hexane	1000 U	530 U	--	--	--	--
n-Octane (C8)	1000 U	530 U	--	--	--	--
n-Pentane (C5)	1000 UJ	530 UJ	--	--	--	--
o-Xylene	1000 U	530 U	--	--	--	--
Toluene	1000 U	530 U	--	--	--	--
Extractable Petroleum Hydrocarbons (µg/kg)						
C10-C12 Aliphatics	2800 U	2200 U	--	--	--	--
C10-C12 Aromatics	**4400**	2200 U	--	--	--	--
C12-C16 Aliphatics	2800 U	2200 U	--	--	--	--
C12-C16 Aromatics	**12000**	2200 U	--	--	--	--
C16-C21 Aliphatics	**5800**	2200 U	--	--	--	--
C16-C21 Aromatics	**51000**	2200 U	--	--	--	--
C21-C34 Aliphatics	**26000**	2200 U	--	--	--	--
C21-C34 Aromatics	**48000**	**4500**	--	--	--	--
C8-C10 Aliphatics	2800 U	2200 U	--	--	--	--
C8-C10 Aromatics	2800 U	2200 U	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-11	GST-11	GST-11	GST-11	GST-11	GST-11
Sample ID	GST-11SO-25-30-101011	GST-11SO-30-32-101011	GST-11SO-32-34.5-101011	GST-11SO-35-39-101011	GST-11SO-39-44-101011	GST-61SO-39-44-101011
Sample Date	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth	25 - 30 feet	30 - 32 feet	32 - 34.5 feet	35 - 39 feet	39 - 44 feet	39 - 44 feet
Sample Type	N	N	N	N	N	FD
Conventional Parameters (mg/kg)						
Cyanide, total	--	--	--	--	**0.415**	**0.385**
Conventional Parameters (None)						
Atterberg Classification	--	**Non-Plastic**	**CL-ML**	--	--	--
Ignitability	--	--	--	--	--	--
Conventional Parameters (percent)						
Liquid limit	--	--	**26.6**	--	--	--
Plastic limit	--	--	**20.8**	--	--	--
Plasticity index	--	--	**5.8**	--	--	--
Moisture (water) content	**11.2**	**19.03**	**20.77**	**49.01**	**47.81**	**43.67**
Total organic carbon	--	--	--	--	**0.53**	**0.77**
Total solids[1]	--	--	--	--	**68.9**	**68.2**
Conventional Parameters (standard unit)						
pH	--	--	--	--	--	--
Specific gravity	--	--	--	--	--	--
Grain Size (percent)						
Percent passing < 1.3 micron sieve	**10.9**	--	--	**9.9**	--	--
Percent retained 1.3 micron sieve	**3.6**	--	--	**2.3**	--	--
Percent retained 3.2 micron sieve	**2.7**	--	--	**1.5**	--	--
Percent retained 7 micron sieve	**3.2**	--	--	**3**	--	--
Percent retained 9 micron sieve	**2.3**	--	--	**3**	--	--
Percent retained 13 micron sieve	**1.8**	--	--	**4.6**	--	--
Percent retained 22 micron sieve	**2.7**	--	--	**3.8**	--	--
Percent retained 32 micron sieve	**1.9**	--	--	**15.7**	--	--
Percent retained 75 micron sieve (#200)	**4**	--	--	**32.2**	--	--
Percent retained 150 micron sieve (#100)	**7.6**	--	--	**18.9**	--	--
Percent retained 250 micron sieve (#60)	**24.3**	--	--	**4.5**	--	--
Percent retained 425 micron sieve (#40)	**24.3**	--	--	**0.4**	--	--
Percent retained 850 micron sieve (#20)	**6.5**	--	--	**0.1**	--	--
Percent retained 2000 micron sieve (#10)	**2.6**	--	--	**0.1**	--	--
Percent retained 4750 micron sieve (#4)	**1.6**	--	--	0.1 U	--	--
Percent retained 9500 micron sieve	0.1 U	--	--	0.1 U	--	--
Percent retained 12500 micron sieve	0.1 U	--	--	0.1 U	--	--
Percent retained 19000 micron sieve	0.1 U	--	--	0.1 U	--	--
Percent retained 25K micron sieve	0.1 U	--	--	0.1 U	--	--
Percent retained 37.5K micron sieve	0.1 U	--	--	0.1 U	--	--
Percent retained 50K micron sieve	0.1 U	--	--	0.1 U	--	--
Percent retained 75K micron sieve	0.1 U	--	--	0.1 U	--	--
Gravel	**1.6 T**	--	--	0.1 UT	--	--
Gravel, Coarse	0.1 UT	--	--	0.1 UT	--	--
Sand, Coarse	**2.6 T**	--	--	**0.1 T**	--	--
Sand, Fine	**36 T**	--	--	**56 T**	--	--
Sand, Medium	**31 T**	--	--	**0.5 T**	--	--
Silt, Coarse	**2.7 T**	--	--	**3.8 T**	--	--
Silt, Fine	**5.5 T**	--	--	**6 T**	--	--
Silt, Medium	**1.8 T**	--	--	**4.6 T**	--	--
Silt, Very Coarse	**1.9 T**	--	--	**15.7 T**	--	--
Silt, Very Fine	**2.7 T**	--	--	**1.5 T**	--	--
Clay	**15 T**	--	--	**12 T**	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-11	GST-11	GST-11	GST-11	GST-11	GST-11
Sample ID	GST-11SO-25-30-101011	GST-11SO-30-32-101011	GST-11SO-32-34.5-101011	GST-11SO-35-39-101011	GST-11SO-39-44-101011	GST-61SO-39-44-101011
Sample Date	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth	25 - 30 feet	30 - 32 feet	32 - 34.5 feet	35 - 39 feet	39 - 44 feet	39 - 44 feet
Sample Type	N	N	N	N	N	FD
Total Gravel	**1.6 T**	--	--	0.1 UT	--	--
Total Sand	**69 T**	--	--	**56 T**	--	--
Total Silt	**15 T**	--	--	**32 T**	--	--
Total Clay	**15 T**	--	--	**12 T**	--	--
Total Fines (silt + clay)	**29 T**	--	--	**44 T**	--	--
Total Grain Size	**100 T**	--	--	**100 T**	--	--
Metals (mg/kg)						
Arsenic	--	--	--	--	7 U	7 U
Cadmium	--	--	--	--	**0.3**	**0.3**
Chromium	--	--	--	--	**26.3**	**26.8**
Copper	--	--	--	--	**26.8**	**26.1**
Lead	--	--	--	--	**4**	**4**
Mercury	--	--	--	--	**0.02**	**0.1**
Nickel	--	--	--	--	**27**	**27**
Silver	--	--	--	--	0.4 U	0.4 U
Zinc	--	--	--	--	**59**	**61**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	--	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	**1.7**	**2.4**
1,2-Dichloroethene, trans-	--	--	--	--	1.3 U	1.3 U
Benzene	--	--	--	--	1.3 U	1.3 U
Ethylbenzene	--	--	--	--	1.3 U	1.3 U
m,p-Xylene	--	--	--	--	1.3 U	1.3 U
o-Xylene	--	--	--	--	1.3 U	1.3 U
Toluene	--	--	--	--	1.3 U	1.3 U
Trichloroethene (TCE)	--	--	--	--	1.3 U	1.3 U
Vinyl chloride	--	--	--	--	**2.2**	**1.3**
LWG RA Total BTEX[6] (Calculated U = 1/2)	--	--	--	--	1.3 UT	1.3 UT
LWG RA Total Xylene[9] (Calculated U = 1/2)	--	--	--	--	1.3 UT	1.3 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	--	--	--	--	64 U	65 U
2-Methylnaphthalene	--	--	--	--	64 U	65 U
Acenaphthene	--	--	--	--	64 U	65 U
Acenaphthylene	--	--	--	--	64 U	65 U
Anthracene	--	--	--	--	64 U	65 U
Benzo(a)anthracene	--	--	--	--	64 U	65 U
Benzo(b,j,k)fluoranthenes	--	--	--	--	64 U	65 U
Benzo(a)pyrene	--	--	--	--	64 U	65 U
Benzo(g,h,i)perylene	--	--	--	--	64 U	65 U
Chrysene	--	--	--	--	64 U	65 U
Dibenzo(a,h)anthracene	--	--	--	--	64 U	65 U
Fluoranthene	--	--	--	--	64 U	65 U
Fluorene	--	--	--	--	64 U	65 U
Indeno(1,2,3-c,d)pyrene	--	--	--	--	64 U	65 U
Naphthalene	--	--	--	--	64 U	65 U
Perylene	--	--	--	--	64 U	65 U
Phenanthrene	--	--	--	--	64 U	65 U
Pyrene	--	--	--	--	64 UJ	65 UJ

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-11	GST-11	GST-11	GST-11	GST-11	GST-11
Sample ID	GST-11SO-25-30-101011	GST-11SO-30-32-101011	GST-11SO-32-34.5-101011	GST-11SO-35-39-101011	GST-11SO-39-44-101011	GST-61SO-39-44-101011
Sample Date	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth	25 - 30 feet	30 - 32 feet	32 - 34.5 feet	35 - 39 feet	39 - 44 feet	39 - 44 feet
Sample Type	N	N	N	N	N	FD
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	--	--	--	--	64 UT	65 UT
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	--	--	--	--	64 UJT	65 UJT
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	--	--	--	--	64 UJT	65 UJT
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	--	--	--	--	64 UT	65 UT
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	64 U	65 U
Dibenzofuran	--	--	--	--	64 U	65 U
PCB Aroclors (µg/kg)						
Aroclor 1016	--	--	--	--	31 U	32 U
Aroclor 1221	--	--	--	--	31 U	32 U
Aroclor 1232	--	--	--	--	31 U	32 U
Aroclor 1242	--	--	--	--	31 U	32 U
Aroclor 1248	--	--	--	--	31 U	32 U
Aroclor 1254	--	--	--	--	31 U	32 U
Aroclor 1260	--	--	--	--	31 U	32 U
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	--	--	--	--	31 UT	32 UT
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	3.2 U	3.2 U
2,4'-DDE (o,p'-DDE)	--	--	--	--	3.2 U	3.2 U
2,4'-DDT (o,p'-DDT)	--	--	--	--	3.2 U	3.2 U
4,4'-DDD (p,p'-DDD)	--	--	--	--	3.2 U	3.2 U
4,4'-DDE (p,p'-DDE)	--	--	--	--	3.2 U	3.2 U
4,4'-DDT (p,p'-DDT)	--	--	--	--	3.2 U	3.2 U
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	1.6 U	1.6 U
alpha-Chlordane (cis-Chlordane)	--	--	--	--	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	1.6 U	1.6 U
gamma-Chlordane (trans-Chlordane)	--	--	--	--	1.6 U	1.6 U
cis-Nonachlor	--	--	--	--	3.2 U	3.2 U
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	1.6 U	1.6 U
Dieldrin	--	--	--	--	3.2 U	3.2 U
Endrin	--	--	--	--	3.2 U	3.2 U
Endrin ketone	--	--	--	--	3.2 U	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	1.6 U	1.6 U
Heptachlor epoxide	--	--	--	--	1.6 U	1.6 U
Oxychlordane	--	--	--	--	3.2 U	3.2 U
trans-Nonachlor	--	--	--	--	3.2 U	3.2 U
Hexachlorobenzene	--	--	--	--	1.6 U	1.6 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	--	--	--	--	3.2 UT	3.2 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	--	--	--	--	3.2 UT	3.2 UT
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	3.2 UT	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	3.2 UT	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	3.2 UT	3.2 UT
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	3.2 UT	3.2 UT
LWG RA Total Chlordane[2] (Calculated U = 1/2)	--	--	--	--	3.2 UT	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	7 U	7.1 U
Motor Oil Range	--	--	--	--	**23**	**24**
LWG RA TPH[5] (Calculated U = 1/2)	--	--	--	--	**26 T**	**28 T**

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-11	GST-11	GST-11	GST-11	GST-11	GST-11
Sample ID	GST-11SO-25-30-101011	GST-11SO-30-32-101011	GST-11SO-32-34.5-101011	GST-11SO-35-39-101011	GST-11SO-39-44-101011	GST-61SO-39-44-101011
Sample Date	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth	25 - 30 feet	30 - 32 feet	32 - 34.5 feet	35 - 39 feet	39 - 44 feet	39 - 44 feet
Sample Type	N	N	N	N	N	FD
Volatile Petroleum Hydrocarbons (µg/kg)						
Benzene	--	--	--	--	960 U	1000 U
C5-C6 Aliphatic	--	--	--	--	9600 UJ	10000 UJ
C6-C8 Aliphatic	--	--	--	--	9600 U	10000 U
C8-C10 Aliphatic	--	--	--	--	9600 U	10000 U
C10-C12 Aliphatic	--	--	--	--	9600 U	10000 U
C8-C10 Aromatic	--	--	--	--	9600 U	10000 U
C10-C12 Aromatic	--	--	--	--	9600 U	10000 U
C12-C13 Aromatic	--	--	--	--	9600 U	10000 U
Ethylbenzene	--	--	--	--	960 U	1000 U
m,p-Xylene	--	--	--	--	1900 U	2000 U
Methyl tert-butyl ether (MTBE)	--	--	--	--	960 U	1000 U
n-Decane (C10)	--	--	--	--	960 U	1000 U
n-Dodecane (C12)	--	--	--	--	960 U	1000 U
n-Hexane	--	--	--	--	960 U	1000 U
n-Octane (C8)	--	--	--	--	960 U	1000 U
n-Pentane (C5)	--	--	--	--	960 UJ	1000 UJ
o-Xylene	--	--	--	--	960 U	1000 U
Toluene	--	--	--	--	960 U	1000 U
Extractable Petroleum Hydrocarbons (µg/kg)						
C10-C12 Aliphatics	--	--	--	--	2800 U	2800 U
C10-C12 Aromatics	--	--	--	--	2800 U	2800 U
C12-C16 Aliphatics	--	--	--	--	2800 U	2800 U
C12-C16 Aromatics	--	--	--	--	2800 U	2800 U
C16-C21 Aliphatics	--	--	--	--	2800 U	2800 U
C16-C21 Aromatics	--	--	--	--	2800 U	2800 U
C21-C34 Aliphatics	--	--	--	--	2800 U	**4000**
C21-C34 Aromatics	--	--	--	--	2800 U	2800 U
C8-C10 Aliphatics	--	--	--	--	2800 U	2800 U
C8-C10 Aromatics	--	--	--	--	2800 U	2800 U

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-13	GST-13	GST-13	GST-13	GST-13	GST-13
Sample ID	GST-13SO-0-5-101012	GST-13SO-5-10-101012	GST-13SO-10-15-101012	GST-13SO-15-20-101012	GST-13SO-20-25-101012	GST-13SO-25-30-101012
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	20 - 25 feet	25 - 30 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	**2.31**	--	--	--	--	--
Conventional Parameters (None)						
Atterberg Classification	--	--	--	--	--	--
Ignitability	--	--	--	--	--	--
Conventional Parameters (percent)						
Liquid limit	--	--	--	--	--	--
Plastic limit	--	--	--	--	--	--
Plasticity index	--	--	--	--	--	--
Moisture (water) content	**10.53**	**10.63**	**10.85**	**10.25**	**10.81**	**13.66**
Total organic carbon	**0.9**	--	--	--	--	--
Total solids[1]	**89**	--	--	--	--	--
Conventional Parameters (standard unit)						
pH	--	--	--	--	--	--
Specific gravity	--	--	--	--	--	--
Grain Size (percent)						
Percent passing < 1.3 micron sieve	--	**3.9**	--	**11.3**	--	**9.2**
Percent retained 1.3 micron sieve	--	**1**	--	**3.8**	--	**2.5**
Percent retained 3.2 micron sieve	--	0.1 U	--	**2.8**	--	**2.5**
Percent retained 7 micron sieve	--	**1**	--	**2.8**	--	**2.5**
Percent retained 9 micron sieve	--	**1**	--	**1.9**	--	**1.7**
Percent retained 13 micron sieve	--	**1**	--	**4.7**	--	**2.5**
Percent retained 22 micron sieve	--	0.1 U	--	**2.8**	--	**2.1**
Percent retained 32 micron sieve	--	**1.1**	--	**3.7**	--	**1.6**
Percent retained 75 micron sieve (#200)	--	**2.6**	--	**4.5**	--	**3.5**
Percent retained 150 micron sieve (#100)	--	**8.3**	--	**6.7**	--	**6.2**
Percent retained 250 micron sieve (#60)	--	**43.4**	--	**21.8**	--	**22.3**
Percent retained 425 micron sieve (#40)	--	**30.1**	--	**23.8**	--	**28.2**
Percent retained 850 micron sieve (#20)	--	**4.3**	--	**6.4**	--	**7.8**
Percent retained 2000 micron sieve (#10)	--	**1.9**	--	**2.1**	--	**2.8**
Percent retained 4750 micron sieve (#4)	--	0.1 U	--	**1**	--	**1.1**
Percent retained 9500 micron sieve	--	**0.6**	--	0.1 U	--	0.1 U
Percent retained 12500 micron sieve	--	0.1 U	--	0.1 U	--	**3.4**
Percent retained 19000 micron sieve	--	0.1 U	--	0.1 U	--	0.1 U
Percent retained 25K micron sieve	--	0.1 U	--	0.1 U	--	0.1 U
Percent retained 37.5K micron sieve	--	0.1 U	--	0.1 U	--	0.1 U
Percent retained 50K micron sieve	--	0.1 U	--	0.1 U	--	0.1 U
Percent retained 75K micron sieve	--	0.1 U	--	0.1 U	--	0.1 U
Gravel	--	**0.6 T**	--	**1 T**	--	**4.5 T**
Gravel, Coarse	--	0.1 UT	--	0.1 UT	--	0.1 UT
Sand, Coarse	--	**1.9 T**	--	**2.1 T**	--	**2.8 T**
Sand, Fine	--	**54 T**	--	**33 T**	--	**32 T**
Sand, Medium	--	**34 T**	--	**30 T**	--	**36 T**
Silt, Coarse	--	0.1 UT	--	**2.8 T**	--	**2.1 T**
Silt, Fine	--	**2 T**	--	**4.7 T**	--	**4.2 T**
Silt, Medium	--	**1 T**	--	**4.7 T**	--	**2.5 T**
Silt, Very Coarse	--	**1.1 T**	--	**3.7 T**	--	**1.6 T**
Silt, Very Fine	--	0.1 UT	--	**2.8 T**	--	**2.5 T**
Clay	--	**4.9 T**	--	**15 T**	--	**12 T**

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-13	GST-13	GST-13	GST-13	GST-13	GST-13
Sample ID	GST-13SO-0-5-101012	GST-13SO-5-10-101012	GST-13SO-10-15-101012	GST-13SO-15-20-101012	GST-13SO-20-25-101012	GST-13SO-25-30-101012
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	20 - 25 feet	25 - 30 feet
Sample Type	N	N	N	N	N	N
Total Gravel	--	**0.6 T**	--	**1 T**	--	**4.5 T**
Total Sand	--	**91 T**	--	**65 T**	--	**71 T**
Total Silt	--	**4.1 T**	--	**19 T**	--	**13 T**
Total Clay	--	**4.9 T**	--	**15 T**	--	**12 T**
Total Fines (silt + clay)	--	**9 T**	--	**34 T**	--	**25 T**
Total Grain Size	--	**100 T**	--	**100 T**	--	**99.9 T**
Metals (mg/kg)						
Arsenic	5 U	--	--	--	--	--
Cadmium	**0.3**	--	--	--	--	--
Chromium	**16.7**	--	--	--	--	--
Copper	**19.3**	--	--	--	--	--
Lead	**10**	--	--	--	--	--
Mercury	**0.04**	--	--	--	--	--
Nickel	**19**	--	--	--	--	--
Silver	0.3 U	--	--	--	--	--
Zinc	**75**	--	--	--	--	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	--	--	--	--	--	--
1,2-Dichloroethene, cis-	1 U	--	--	--	--	--
1,2-Dichloroethene, trans-	1 U	--	--	--	--	--
Benzene	1 U	--	--	--	--	--
Ethylbenzene	1 U	--	--	--	--	--
m,p-Xylene	1 U	--	--	--	--	--
o-Xylene	1 U	--	--	--	--	--
Toluene	1 U	--	--	--	--	--
Trichloroethene (TCE)	1 U	--	--	--	--	--
Vinyl chloride	1 U	--	--	--	--	--
LWG RA Total BTEX[6] (Calculated U = 1/2)	1 UT	--	--	--	--	--
LWG RA Total Xylene[9] (Calculated U = 1/2)	1 UT	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	63 U	--	--	--	--	--
2-Methylnaphthalene	**70**	--	--	--	--	--
Acenaphthene	63 U	--	--	--	--	--
Acenaphthylene	**190**	--	--	--	--	--
Anthracene	**160**	--	--	--	--	--
Benzo(a)anthracene	**820**	--	--	--	--	--
Benzo(b,j,k)fluoranthenes	**2400**	--	--	--	--	--
Benzo(a)pyrene	**2200**	--	--	--	--	--
Benzo(g,h,i)perylene	**2100**	--	--	--	--	--
Chrysene	**1300**	--	--	--	--	--
Dibenzo(a,h)anthracene	**390**	--	--	--	--	--
Fluoranthene	**1000**	--	--	--	--	--
Fluorene	63 U	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	**1400**	--	--	--	--	--
Naphthalene	**180**	--	--	--	--	--
Perylene	**480**	--	--	--	--	--
Phenanthrene	**370**	--	--	--	--	--
Pyrene	**1600**	--	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-13	GST-13	GST-13	GST-13	GST-13	GST-13
Sample ID	GST-13SO-0-5-101012	GST-13SO-5-10-101012	GST-13SO-10-15-101012	GST-13SO-15-20-101012	GST-13SO-20-25-101012	GST-13SO-25-30-101012
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	20 - 25 feet	25 - 30 feet
Sample Type	N	N	N	N	N	N
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	**1000 T**	--	--	--	--	--
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	**13000 T**	--	--	--	--	--
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	**14000 T**	--	--	--	--	--
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	**3100 T**	--	--	--	--	--
Semivolatile Organics (µg/kg)						
Carbazole	63 U	--	--	--	--	--
Dibenzofuran	63 U	--	--	--	--	--
PCB Aroclors (µg/kg)						
Aroclor 1016	32 U	--	--	--	--	--
Aroclor 1221	32 U	--	--	--	--	--
Aroclor 1232	32 U	--	--	--	--	--
Aroclor 1242	32 U	--	--	--	--	--
Aroclor 1248	32 U	--	--	--	--	--
Aroclor 1254	32 U	--	--	--	--	--
Aroclor 1260	32 U	--	--	--	--	--
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	32 UT	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	**36**	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	16 U	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	16 U	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	**100**	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	16 U	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	**16 J**	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	8 U	--	--	--	--	--
alpha-Chlordane (cis-Chlordane)	8 U	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	8 U	--	--	--	--	--
gamma-Chlordane (trans-Chlordane)	8 U	--	--	--	--	--
cis-Nonachlor	16 U	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	8 U	--	--	--	--	--
Dieldrin	16 U	--	--	--	--	--
Endrin	16 U	--	--	--	--	--
Endrin ketone	16 U	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8 U	--	--	--	--	--
Heptachlor epoxide	8 U	--	--	--	--	--
Oxychlordane	16 U	--	--	--	--	--
trans-Nonachlor	32 U	--	--	--	--	--
Hexachlorobenzene	8 U	--	--	--	--	--
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	**52 T**	--	--	--	--	--
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	**120 JT**	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**140 T**	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**24 JT**	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**180 JT**	--	--	--	--	--
LWG RA Total Chlordane[2] (Calculated U = 1/2)	32 UT	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**42**	--	--	--	--	--
Motor Oil Range	**150**	--	--	--	--	--
LWG RA TPH[5] (Calculated U = 1/2)	**190 T**	--	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-13	GST-13	GST-13	GST-13	GST-13	GST-13
Sample ID	GST-13SO-0-5-101012	GST-13SO-5-10-101012	GST-13SO-10-15-101012	GST-13SO-15-20-101012	GST-13SO-20-25-101012	GST-13SO-25-30-101012
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010
Depth	0 - 5 feet	5 - 10 feet	10 - 15 feet	15 - 20 feet	20 - 25 feet	25 - 30 feet
Sample Type	N	N	N	N	N	N
Volatile Petroleum Hydrocarbons (µg/kg)						
Benzene	610 U	--	--	--	--	--
C5-C6 Aliphatic	6100 UJ	--	--	--	--	--
C6-C8 Aliphatic	6100 U	--	--	--	--	--
C8-C10 Aliphatic	6100 U	--	--	--	--	--
C10-C12 Aliphatic	6100 U	--	--	--	--	--
C8-C10 Aromatic	6100 U	--	--	--	--	--
C10-C12 Aromatic	6100 U	--	--	--	--	--
C12-C13 Aromatic	6100 U	--	--	--	--	--
Ethylbenzene	610 U	--	--	--	--	--
m,p-Xylene	1200 U	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	610 U	--	--	--	--	--
n-Decane (C10)	610 U	--	--	--	--	--
n-Dodecane (C12)	610 U	--	--	--	--	--
n-Hexane	610 U	--	--	--	--	--
n-Octane (C8)	610 U	--	--	--	--	--
n-Pentane (C5)	610 UJ	--	--	--	--	--
o-Xylene	610 U	--	--	--	--	--
Toluene	610 U	--	--	--	--	--
Extractable Petroleum Hydrocarbons (µg/kg)						
C10-C12 Aliphatics	2200 U	--	--	--	--	--
C10-C12 Aromatics	2200 U	--	--	--	--	--
C12-C16 Aliphatics	2200 U	--	--	--	--	--
C12-C16 Aromatics	2200 U	--	--	--	--	--
C16-C21 Aliphatics	2200 U	--	--	--	--	--
C16-C21 Aromatics	**11000**	--	--	--	--	--
C21-C34 Aliphatics	2200 U	--	--	--	--	--
C21-C34 Aromatics	**48000**	--	--	--	--	--
C8-C10 Aliphatics	2200 U	--	--	--	--	--
C8-C10 Aromatics	2200 U	--	--	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-13	GST-13	GST-13	GST-13	GSM-07	GSM-07
Sample ID	GST-13SO-30-32.5-101012	GST-13SO-32.5-35-101012	GST-13SO-35-38-101012	GST-13SO-38-43-101012	GSM-07SO-0-5-100927	GSM-07SO-5-7.5-100927
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	9/27/2010	9/27/2010
Depth	30 - 32.5 feet	32.5 - 35 feet	35 - 38 feet	38 - 43 feet	0 - 5 feet	5 - 7.5 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	--	--	--	0.14 U	**0.274**	--
Conventional Parameters (None)						
Atterberg Classification	**CL**	**CL**	**ML**	**Non-Plastic**	--	**CL**
Ignitability	--	--	--	--	--	--
Conventional Parameters (percent)						
Liquid limit	**43.3**	**27.1**	**43.2**	--	--	**31**
Plastic limit	**25.6**	**19.4**	**31.2**	--	--	**20.2**
Plasticity index	**17.7**	**7.7**	**12**	--	--	**10.8**
Moisture (water) content	**37.84**	**24.99**	**43.85**	**43.37**	**21.36**	**27.79**
Total organic carbon	--	--	--	**1.45**	**0.889**	--
Total solids[1]	--	--	--	**68.8**	**81.7**	--
Conventional Parameters (standard unit)						
pH	--	--	--	--	--	--
Specific gravity	**2.77**	--	--	--	--	--
Grain Size (percent)						
Percent passing < 1.3 micron sieve	--	--	--	--	**13.4**	--
Percent retained 1.3 micron sieve	--	--	--	--	**3.2**	--
Percent retained 3.2 micron sieve	--	--	--	--	**2.4**	--
Percent retained 7 micron sieve	--	--	--	--	**3.2**	--
Percent retained 9 micron sieve	--	--	--	--	**3.2**	--
Percent retained 13 micron sieve	--	--	--	--	**4.7**	--
Percent retained 22 micron sieve	--	--	--	--	**6.3**	--
Percent retained 32 micron sieve	--	--	--	--	**11.4**	--
Percent retained 75 micron sieve (#200)	--	--	--	--	**6**	--
Percent retained 150 micron sieve (#100)	--	--	--	--	**4.8**	--
Percent retained 250 micron sieve (#60)	--	--	--	--	**6.5**	--
Percent retained 425 micron sieve (#40)	--	--	--	--	**6**	--
Percent retained 850 micron sieve (#20)	--	--	--	--	**6.7**	--
Percent retained 2000 micron sieve (#10)	--	--	--	--	**5.8**	--
Percent retained 4750 micron sieve (#4)	--	--	--	--	**7.3**	--
Percent retained 9500 micron sieve	--	--	--	--	**1.6**	--
Percent retained 12500 micron sieve	--	--	--	--	**7.6**	--
Percent retained 19000 micron sieve	--	--	--	--	0.1 U	--
Percent retained 25K micron sieve	--	--	--	--	0.1 U	--
Percent retained 37.5K micron sieve	--	--	--	--	0.1 U	--
Percent retained 50K micron sieve	--	--	--	--	0.1 U	--
Percent retained 75K micron sieve	--	--	--	--	0.1 U	--
Gravel	--	--	--	--	**16 T**	--
Gravel, Coarse	--	--	--	--	0.1 UT	--
Sand, Coarse	--	--	--	--	**5.8 T**	--
Sand, Fine	--	--	--	--	**17 T**	--
Sand, Medium	--	--	--	--	**13 T**	--
Silt, Coarse	--	--	--	--	**6.3 T**	--
Silt, Fine	--	--	--	--	**6.4 T**	--
Silt, Medium	--	--	--	--	**4.7 T**	--
Silt, Very Coarse	--	--	--	--	**11.4 T**	--
Silt, Very Fine	--	--	--	--	**2.4 T**	--
Clay	--	--	--	--	**17 T**	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-13	GST-13	GST-13	GST-13	GSM-07	GSM-07
Sample ID	GST-13SO-30-32.5-101012	GST-13SO-32.5-35-101012	GST-13SO-35-38-101012	GST-13SO-38-43-101012	GSM-07SO-0-5-100927	GSM-07SO-5-7.5-100927
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	9/27/2010	9/27/2010
Depth	30 - 32.5 feet	32.5 - 35 feet	35 - 38 feet	38 - 43 feet	0 - 5 feet	5 - 7.5 feet
Sample Type	N	N	N	N	N	N
Total Gravel	--	--	--	--	**16 T**	--
Total Sand	--	--	--	--	**36 T**	--
Total Silt	--	--	--	--	**31 T**	--
Total Clay	--	--	--	--	**17 T**	--
Total Fines (silt + clay)	--	--	--	--	**48 T**	--
Total Grain Size	--	--	--	--	**100 T**	--
Metals (mg/kg)						
Arsenic	--	--	--	7 U	10 U	--
Cadmium	--	--	--	**0.3**	0.6 U	--
Chromium	--	--	--	**30**	**24**	--
Copper	--	--	--	**31.5**	**61.1 J**	--
Lead	--	--	--	**4**	**119**	--
Mercury	--	--	--	0.03 U	**0.13**	--
Nickel	--	--	--	**29**	**21**	--
Silver	--	--	--	0.4 U	0.9 U	--
Zinc	--	--	--	**65**	**158 J**	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	--	--	--	--	1.2 U	--
1,2-Dichloroethene, cis-	--	--	--	1.4 U	1.2 U	--
1,2-Dichloroethene, trans-	--	--	--	1.4 U	1.2 U	--
Benzene	--	--	--	1.4 U	1.2 U	--
Ethylbenzene	--	--	--	1.4 U	1.2 U	--
m,p-Xylene	--	--	--	1.4 U	1.2 U	--
o-Xylene	--	--	--	1.4 U	1.2 U	--
Toluene	--	--	--	1.4 U	1.2 U	--
Trichloroethene (TCE)	--	--	--	1.4 U	1.2 U	--
Vinyl chloride	--	--	--	1.4 U	1.2 U	--
LWG RA Total BTEX[6] (Calculated U = 1/2)	--	--	--	1.4 UT	1.2 UT	--
LWG RA Total Xylene[9] (Calculated U = 1/2)	--	--	--	1.4 UT	1.2 UT	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	--	--	--	66 U	62 U	--
2-Methylnaphthalene	--	--	--	66 U	62 U	--
Acenaphthene	--	--	--	66 U	62 U	--
Acenaphthylene	--	--	--	66 U	62 U	--
Anthracene	--	--	--	66 U	62 U	--
Benzo(a)anthracene	--	--	--	66 U	**190**	--
Benzo(b,j,k)fluoranthenes	--	--	--	66 U	**400**	--
Benzo(a)pyrene	--	--	--	66 U	**350**	--
Benzo(g,h,i)perylene	--	--	--	66 U	**460**	--
Chrysene	--	--	--	66 U	**300**	--
Dibenzo(a,h)anthracene	--	--	--	66 U	62 U	--
Fluoranthene	--	--	--	66 U	**290**	--
Fluorene	--	--	--	66 U	62 U	--
Indeno(1,2,3-c,d)pyrene	--	--	--	66 U	**290**	--
Naphthalene	--	--	--	66 U	**160**	--
Perylene	--	--	--	**66**	**110**	--
Phenanthrene	--	--	--	66 U	**200**	--
Pyrene	--	--	--	66 UJ	**490**	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-13	GST-13	GST-13	GST-13	GSM-07	GSM-07
Sample ID	GST-13SO-30-32.5-101012	GST-13SO-32.5-35-101012	GST-13SO-35-38-101012	GST-13SO-38-43-101012	GSM-07SO-0-5-100927	GSM-07SO-5-7.5-100927
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	9/27/2010	9/27/2010
Depth	30 - 32.5 feet	32.5 - 35 feet	35 - 38 feet	38 - 43 feet	0 - 5 feet	5 - 7.5 feet
Sample Type	N	N	N	N	N	N
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	--	--	--	66 UT	**510 T**	--
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	--	--	--	66 UJT	**2800 T**	--
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	--	--	--	66 UJT	**3300 T**	--
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	--	--	--	66 UT	**470 T**	--
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	66 U	62 U	--
Dibenzofuran	--	--	--	66 U	62 U	--
PCB Aroclors (µg/kg)						
Aroclor 1016	--	--	--	32 U	33 U	--
Aroclor 1221	--	--	--	32 U	33 U	--
Aroclor 1232	--	--	--	32 U	33 U	--
Aroclor 1242	--	--	--	32 U	33 U	--
Aroclor 1248	--	--	--	32 U	33 U	--
Aroclor 1254	--	--	--	32 U	33 U	--
Aroclor 1260	--	--	--	32 U	33 U	--
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	--	--	--	32 UT	33 UT	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	3.2 U	3.3 UJ	--
2,4'-DDE (o,p'-DDE)	--	--	--	3.2 U	3.3 U	--
2,4'-DDT (o,p'-DDT)	--	--	--	3.2 U	3.3 UJ	--
4,4'-DDD (p,p'-DDD)	--	--	--	3.2 U	3.3 UJ	--
4,4'-DDE (p,p'-DDE)	--	--	--	3.2 U	3.3 U	--
4,4'-DDT (p,p'-DDT)	--	--	--	3.2 U	**5.6 J**	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	1.6 U	1.6 U	--
alpha-Chlordane (cis-Chlordane)	--	--	--	1.6 U	1.6 U	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	1.6 U	1.6 U	--
gamma-Chlordane (trans-Chlordane)	--	--	--	1.6 U	1.6 U	--
cis-Nonachlor	--	--	--	3.2 U	3.3 UJ	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	1.6 U	1.6 U	--
Dieldrin	--	--	--	3.2 U	3.3 U	--
Endrin	--	--	--	3.2 U	3.3 UJ	--
Endrin ketone	--	--	--	3.2 U	3.3 UJ	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	1.6 U	1.6 UJ	--
Heptachlor epoxide	--	--	--	1.6 U	1.6 UJ	--
Oxychlordane	--	--	--	3.2 U	3.3 UJ	--
trans-Nonachlor	--	--	--	3.2 U	3.3 UJ	--
Hexachlorobenzene	--	--	--	1.6 U	1.6 U	--
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	--	--	--	3.2 UT	3.3 UJT	--
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	--	--	--	3.2 UT	**8.9 JT**	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	3.2 UT	3.3 UJT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	3.2 UT	3.3 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	3.2 UT	**7.3 JT**	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	3.2 UT	**14 JT**	--
LWG RA Total Chlordane[2] (Calculated U = 1/2)	--	--	--	3.2 UT	3.3 UJT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	7.3 U	**42**	--
Motor Oil Range	--	--	--	**44**	**250**	--
LWG RA TPH[5] (Calculated U = 1/2)	--	--	--	**48 T**	**290 T**	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GST-13	GST-13	GST-13	GST-13	GSM-07	GSM-07
Sample ID	GST-13SO-30-32.5-101012	GST-13SO-32.5-35-101012	GST-13SO-35-38-101012	GST-13SO-38-43-101012	GSM-07SO-0-5-100927	GSM-07SO-5-7.5-100927
Sample Date	10/12/2010	10/12/2010	10/12/2010	10/12/2010	9/27/2010	9/27/2010
Depth	30 - 32.5 feet	32.5 - 35 feet	35 - 38 feet	38 - 43 feet	0 - 5 feet	5 - 7.5 feet
Sample Type	N	N	N	N	N	N
Volatile Petroleum Hydrocarbons (µg/kg)						
Benzene	--	--	--	1000 U	770 U	--
C5-C6 Aliphatic	--	--	--	10000 UJ	7700 U	--
C6-C8 Aliphatic	--	--	--	10000 U	7700 U	--
C8-C10 Aliphatic	--	--	--	10000 U	7700 U	--
C10-C12 Aliphatic	--	--	--	10000 U	7700 U	--
C8-C10 Aromatic	--	--	--	10000 U	7700 U	--
C10-C12 Aromatic	--	--	--	10000 U	7700 U	--
C12-C13 Aromatic	--	--	--	10000 U	7700 U	--
Ethylbenzene	--	--	--	1000 U	770 U	--
m,p-Xylene	--	--	--	2100 U	1500 U	--
Methyl tert-butyl ether (MTBE)	--	--	--	1000 U	770 U	--
n-Decane (C10)	--	--	--	1000 U	770 U	--
n-Dodecane (C12)	--	--	--	1000 U	770 U	--
n-Hexane	--	--	--	1000 U	770 U	--
n-Octane (C8)	--	--	--	1000 U	770 U	--
n-Pentane (C5)	--	--	--	1000 UJ	770 U	--
o-Xylene	--	--	--	1000 U	770 U	--
Toluene	--	--	--	1000 U	770 U	--
Extractable Petroleum Hydrocarbons (µg/kg)						
C10-C12 Aliphatics	--	--	--	2900 U	2500 U	--
C10-C12 Aromatics	--	--	--	2900 U	2500 U	--
C12-C16 Aliphatics	--	--	--	2900 U	2500 U	--
C12-C16 Aromatics	--	--	--	2900 U	2500 U	--
C16-C21 Aliphatics	--	--	--	2900 U	2500 U	--
C16-C21 Aromatics	--	--	--	2900 U	**6000**	--
C21-C34 Aliphatics	--	--	--	2900 U	**8200**	--
C21-C34 Aromatics	--	--	--	2900 U	**38000**	--
C8-C10 Aliphatics	--	--	--	2900 U	2500 U	--
C8-C10 Aromatics	--	--	--	2900 U	2500 U	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GSM-07	GSM-07	GSM-07	GSM-08	GSM-08	GSM-08
Sample ID	GSM-07SO-7.5-10-100927	GSM-07SO-10-15-100927	GSM-07SO-15-20-100927	GSM-08SO-0-5-100928	GSM-08SO-5-7.5-100928	GSM-08SO-7.5-10-100928
Sample Date	9/27/2010	9/27/2010	9/27/2010	9/28/2010	9/28/2010	9/28/2010
Depth	7.5 - 10 feet	10 - 15 feet	15 - 20 feet	0 - 5 feet	5 - 7.5 feet	7.5 - 10 feet
Sample Type	N	N	N	N	N	N
Conventional Parameters (mg/kg)						
Cyanide, total	--	--	3.47	0.124 U	--	--
Conventional Parameters (None)						
Atterberg Classification	--	--	-- ML	--	--	CL
Ignitability	--	--	NF	--	--	--
Conventional Parameters (percent)						
Liquid limit	--	--	41.4	--	--	33.6
Plastic limit	--	--	34.1	--	--	22.9
Plasticity index	--	--	7.3	--	--	10.7
Moisture (water) content	41.98	48.14	47.4	20.53	21.34	21.74
Total organic carbon	--	--	7.9	0.178	--	--
Total solids[1]	--	--	68.3	78.6	--	--
Conventional Parameters (standard unit)						
pH	--	--	6.62	--	--	--
Specific gravity	--	2.59	--	--	--	--
Grain Size (percent)						
Percent passing < 1.3 micron sieve	8.4	6.8	--	9.6	9.8	--
Percent retained 1.3 micron sieve	3.6	4.1	--	2	2	--
Percent retained 3.2 micron sieve	2.4	4.1	--	2.6	2.6	--
Percent retained 7 micron sieve	3.6	4.1	--	1.7	2	--
Percent retained 9 micron sieve	3.6	4.1	--	2.6	2.3	--
Percent retained 13 micron sieve	6.6	8.2	--	4.1	3.9	--
Percent retained 22 micron sieve	9	4.1	--	2	4.3	--
Percent retained 32 micron sieve	4.9	35.4	--	5.5	4.2	--
Percent retained 75 micron sieve (#200)	9.7	17.6	--	4.1	4.8	--
Percent retained 150 micron sieve (#100)	8.4	6.7	--	2.6	3.3	--
Percent retained 250 micron sieve (#60)	7.2	2.4	--	3.1	4.1	--
Percent retained 425 micron sieve (#40)	6.3	1.3	--	4.6	6.2	--
Percent retained 850 micron sieve (#20)	12.4	0.9	--	10.5	12.4	--
Percent retained 2000 micron sieve (#10)	8.1	0.1	--	8.2	12.1	--
Percent retained 4750 micron sieve (#4)	4.8	0.1 U	--	10	10.5	--
Percent retained 9500 micron sieve	1.2	0.1 U	--	3	4.5	--
Percent retained 12500 micron sieve	0.1 U	0.1 U	--	13.2	9.6	--
Percent retained 19000 micron sieve	0.1 U	0.1 U	--	6.7	1.4	--
Percent retained 25K micron sieve	0.1 U	0.1 U	--	3.8	0.1 U	--
Percent retained 37.5K micron sieve	0.1 U	0.1 U	--	0.1 U	0.1 U	--
Percent retained 50K micron sieve	0.1 U	0.1 U	--	0.1 U	0.1 U	--
Percent retained 75K micron sieve	0.1 U	0.1 U	--	0.1 U	0.1 U	--
Gravel	6 T	0.1 UT	--	33 T	26 T	--
Gravel, Coarse	0.1 UT	0.1 UT	--	3.8 T	0.1 UT	--
Sand, Coarse	8.1 T	0.1 T	--	8.2 T	12.1 T	--
Sand, Fine	25 T	27 T	--	9.8 T	12 T	--
Sand, Medium	19 T	2.2 T	--	15 T	19 T	--
Silt, Coarse	9 T	4.1 T	--	2 T	4.3 T	--
Silt, Fine	7.2 T	8.2 T	--	4.3 T	4.3 T	--
Silt, Medium	6.6 T	8.2 T	--	4.1 T	3.9 T	--
Silt, Very Coarse	4.9 T	35.4 T	--	5.5 T	4.2 T	--
Silt, Very Fine	2.4 T	4.1 T	--	2.6 T	2.6 T	--
Clay	12 T	11 T	--	12 T	12 T	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GSM-07	GSM-07	GSM-07	GSM-08	GSM-08	GSM-08
Sample ID	GSM-07SO-7.5-10-100927	GSM-07SO-10-15-100927	GSM-07SO-15-20-100927	GSM-08SO-0-5-100928	GSM-08SO-5-7.5-100928	GSM-08SO-7.5-10-100928
Sample Date	9/27/2010	9/27/2010	9/27/2010	9/28/2010	9/28/2010	9/28/2010
Depth	7.5 - 10 feet	10 - 15 feet	15 - 20 feet	0 - 5 feet	5 - 7.5 feet	7.5 - 10 feet
Sample Type	N	N	N	N	N	N
Total Gravel	**6 T**	0.1 UT	--	**37 T**	**26 T**	--
Total Sand	**52 T**	**29 T**	--	**33 T**	**43 T**	--
Total Silt	**30 T**	**60 T**	--	**19 T**	**19 T**	--
Total Clay	**12 T**	**11 T**	--	**12 T**	**12 T**	--
Total Fines (silt + clay)	**42 T**	**71 T**	--	**30 T**	**31 T**	--
Total Grain Size	**100 T**	**99.9 T**	--	**99.9 T**	**100 T**	--
Metals (mg/kg)						
Arsenic	--	--	20 U	20 U	--	--
Cadmium	--	--	0.7 U	**0.7**	--	--
Chromium	--	--	**29**	**18**	--	--
Copper	--	--	**37.7 J**	**21.2 J**	--	--
Lead	--	--	**25**	**9**	--	--
Mercury	--	--	**0.13**	0.02 U	--	--
Nickel	--	--	**36**	**12**	--	--
Silver	--	--	1 U	0.9 U	--	--
Zinc	--	--	**131 J**	**85 J**	--	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	--	--	790 U	1.5 U	--	--
1,2-Dichloroethene, cis-	--	--	790 U	1.5 U	--	--
1,2-Dichloroethene, trans-	--	--	790 U	1.5 U	--	--
Benzene	--	--	**530 J**	1.5 U	--	--
Ethylbenzene	--	--	**4200**	1.5 U	--	--
m,p-Xylene	--	--	**2600**	1.5 U	--	--
o-Xylene	--	--	**2400**	1.5 U	--	--
Toluene	--	--	790 U	1.5 U	--	--
Trichloroethene (TCE)	--	--	790 U	1.5 U	--	--
Vinyl chloride	--	--	790 U	1.5 U	--	--
LWG RA Total BTEX[6] (Calculated U = 1/2)	--	--	**10000 JT**	1.5 UT	--	--
LWG RA Total Xylene[9] (Calculated U = 1/2)	--	--	**5000 T**	1.5 UT	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	--	--	**640000**	**76**	--	--
2-Methylnaphthalene	--	--	**1200000**	**140**	--	--
Acenaphthene	--	--	**710000**	**100**	--	--
Acenaphthylene	--	--	**28000**	63 U	--	--
Anthracene	--	--	**480000**	**82**	--	--
Benzo(a)anthracene	--	--	**300000**	**89**	--	--
Benzo(b,j,k)fluoranthenes	--	--	**380000**	**130**	--	--
Benzo(a)pyrene	--	--	**370000**	**100**	--	--
Benzo(g,h,i)perylene	--	--	**240000**	**87**	--	--
Chrysene	--	--	**380000**	**110**	--	--
Dibenzo(a,h)anthracene	--	--	**58000**	63 U	--	--
Fluoranthene	--	--	**1100000**	**170**	--	--
Fluorene	--	--	**450000**	**67**	--	--
Indeno(1,2,3-c,d)pyrene	--	--	**170000**	63 U	--	--
Naphthalene	--	--	**2300000**	**220**	--	--
Perylene	--	--	**87000**	63 U	--	--
Phenanthrene	--	--	**2500000**	**410**	--	--
Pyrene	--	--	**1300000**	**260**	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GSM-07	GSM-07	GSM-07	GSM-08	GSM-08	GSM-08
Sample ID	GSM-07SO-7.5-10-100927	GSM-07SO-10-15-100927	GSM-07SO-15-20-100927	GSM-08SO-0-5-100928	GSM-08SO-5-7.5-100928	GSM-08SO-7.5-10-100928
Sample Date	9/27/2010	9/27/2010	9/27/2010	9/28/2010	9/28/2010	9/28/2010
Depth	7.5 - 10 feet	10 - 15 feet	15 - 20 feet	0 - 5 feet	5 - 7.5 feet	7.5 - 10 feet
Sample Type	N	N	N	N	N	N
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	--	--	**7700000 T**	**1100 T**	--	--
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	--	--	**4300000 T**	**1000 T**	--	--
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	--	--	**12000000 T**	**2100 T**	--	--
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	--	--	**510000 T**	**160 T**	--	--
Semivolatile Organics (µg/kg)						
Carbazole	--	--	**63000**	63 U	--	--
Dibenzofuran	--	--	**58000**	63 U	--	--
PCB Aroclors (µg/kg)						
Aroclor 1016	--	--	32 U	30 U	--	--
Aroclor 1221	--	--	32 U	30 U	--	--
Aroclor 1232	--	--	32 U	30 U	--	--
Aroclor 1242	--	--	32 U	30 U	--	--
Aroclor 1248	--	--	48 U	30 U	--	--
Aroclor 1254	--	--	32 U	30 U	--	--
Aroclor 1260	--	--	32 U	30 U	--	--
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	--	--	48 UT	30 UT	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	56 UJ	3.1 UJ	--	--
2,4'-DDE (o,p'-DDE)	--	--	32 U	3.1 U	--	--
2,4'-DDT (o,p'-DDT)	--	--	32 UJ	3.1 UJ	--	--
4,4'-DDD (p,p'-DDD)	--	--	**150 J**	3.1 UJ	--	--
4,4'-DDE (p,p'-DDE)	--	--	32 U	3.1 U	--	--
4,4'-DDT (p,p'-DDT)	--	--	32 UJ	3.1 UJ	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	16 U	1.6 U	--	--
alpha-Chlordane (cis-Chlordane)	--	--	16 U	1.6 U	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	43 U	1.6 U	--	--
gamma-Chlordane (trans-Chlordane)	--	--	55 U	1.6 U	--	--
cis-Nonachlor	--	--	32 UJ	3.1 UJ	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	16 U	1.6 U	--	--
Dieldrin	--	--	32 U	3.1 U	--	--
Endrin	--	--	32 UJ	3.1 UJ	--	--
Endrin ketone	--	--	32 UJ	3.1 UJ	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	16 U	1.6 U	--	--
Heptachlor epoxide	--	--	16 U	1.6 U	--	--
Oxychlordane	--	--	32 U	3.1 U	--	--
trans-Nonachlor	--	--	32 UJ	3.1 UJ	--	--
Hexachlorobenzene	--	--	16 U	1.6 U	--	--
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	--	--	56 UJT	3.1 UJT	--	--
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	--	--	**180 JT**	3.1 UJT	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	**180 JT**	3.1 UJT	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	32 UT	3.1 UT	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	32 UJT	3.1 UJT	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	**240 JT**	3.1 UJT	--	--
LWG RA Total Chlordane[2] (Calculated U = 1/2)	--	--	55 UJT	3.1 UJT	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	**16000**	6.3 U	--	--
Motor Oil Range	--	--	**7800**	**29**	--	--
LWG RA TPH[5] (Calculated U = 1/2)	--	--	**24000 T**	**32 T**	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GSM-07	GSM-07	GSM-07	GSM-08	GSM-08	GSM-08
Sample ID	GSM-07SO-7.5-10-100927	GSM-07SO-10-15-100927	GSM-07SO-15-20-100927	GSM-08SO-0-5-100928	GSM-08SO-5-7.5-100928	GSM-08SO-7.5-10-100928
Sample Date	9/27/2010	9/27/2010	9/27/2010	9/28/2010	9/28/2010	9/28/2010
Depth	7.5 - 10 feet	10 - 15 feet	15 - 20 feet	0 - 5 feet	5 - 7.5 feet	7.5 - 10 feet
Sample Type	N	N	N	N	N	N
Volatile Petroleum Hydrocarbons (µg/kg)						
Benzene	--	--	8100 U	1200 U	--	--
C5-C6 Aliphatic	--	--	81000 U	12000 U	--	--
C6-C8 Aliphatic	--	--	81000 U	12000 U	--	--
C8-C10 Aliphatic	--	--	81000 U	12000 U	--	--
C10-C12 Aliphatic	--	--	81000 U	12000 U	--	--
C8-C10 Aromatic	--	--	**140000**	12000 U	--	--
C10-C12 Aromatic	--	--	**880000**	12000 U	--	--
C12-C13 Aromatic	--	--	**660000**	12000 U	--	--
Ethylbenzene	--	--	8100 U	1200 U	--	--
m,p-Xylene	--	--	16000 U	2400 U	--	--
Methyl tert-butyl ether (MTBE)	--	--	8100 U	1200 U	--	--
n-Decane (C10)	--	--	8100 U	1200 U	--	--
n-Dodecane (C12)	--	--	**12000**	1200 U	--	--
n-Hexane	--	--	8100 U	1200 U	--	--
n-Octane (C8)	--	--	8100 U	1200 U	--	--
n-Pentane (C5)	--	--	8100 U	1200 U	--	--
o-Xylene	--	--	8100 U	1200 U	--	--
Toluene	--	--	8100 U	1200 U	--	--
Extractable Petroleum Hydrocarbons (µg/kg)						
C10-C12 Aliphatics	--	--	**290000**	2600 U	--	--
C10-C12 Aromatics	--	--	**1600000**	2600 U	--	--
C12-C16 Aliphatics	--	--	**970000**	2600 U	--	--
C12-C16 Aromatics	--	--	**4100000**	2600 U	--	--
C16-C21 Aliphatics	--	--	**820000**	2600 U	--	--
C16-C21 Aromatics	--	--	**8000000**	2600 U	--	--
C21-C34 Aliphatics	--	--	**920000**	2600 U	--	--
C21-C34 Aromatics	--	--	**5300000**	2600 U	--	--
C8-C10 Aliphatics	--	--	**40000**	2600 U	--	--
C8-C10 Aromatics	--	--	**99000**	2600 U	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GSM-08	GSM-14	GSM-14	GSM-14	GSM-14
Sample ID	GSM-08SO-10-15-100928	GSM-14SO-0-5-101015	GSM-14SO-5-10-101015	GSM-14SO-10-12.5-101015	GSM-14SO-12.5-17.5-101015
Sample Date	9/28/2010	10/15/2010	10/15/2010	10/15/2010	10/15/2010
Depth	10 - 15 feet	0 - 5 feet	5 - 10 feet	10 - 12.5 feet	12.5 - 17.5 feet
Sample Type	N	N	N	N	N
Conventional Parameters (mg/kg)					
Cyanide, total	**1.11**	**0.286**	--	--	0.143 U
Conventional Parameters (None)					
Atterberg Classification	--	--	**ML**	**Non-Plastic**	**ML**
Ignitability	**NF**	--	--	--	--
Conventional Parameters (percent)					
Liquid limit	--	--	**34.6**	--	**32.6**
Plastic limit	--	--	**29.6**	--	**27.7**
Plasticity index	--	--	**5**	--	**4.9**
Moisture (water) content	**43.37**	**13.5**	**38.74**	**45.15**	**45.33**
Total organic carbon	**1.58**	**0.411**	--	--	**0.817**
Total solids[1]	**68**	**84.8**	--	--	**69**
Conventional Parameters (standard unit)					
pH	**6.43**	--	--	--	--
Specific gravity	--	--	--	--	--
Grain Size (percent)					
Percent passing < 1.3 micron sieve	**7.9**	**2.6**	--	--	--
Percent retained 1.3 micron sieve	**3.2**	**0.8**	--	--	--
Percent retained 3.2 micron sieve	**4.7**	**1.2**	--	--	--
Percent retained 7 micron sieve	**3.2**	**0.6**	--	--	--
Percent retained 9 micron sieve	**3.2**	**0.8**	--	--	--
Percent retained 13 micron sieve	**11.1**	**1.4**	--	--	--
Percent retained 22 micron sieve	**7.9**	**1.6**	--	--	--
Percent retained 32 micron sieve	**15.2**	**0.9**	--	--	--
Percent retained 75 micron sieve (#200)	**23.1**	**2.5**	--	--	--
Percent retained 150 micron sieve (#100)	**11.8**	**2.8**	--	--	--
Percent retained 250 micron sieve (#60)	**6.1**	**10.6**	--	--	--
Percent retained 425 micron sieve (#40)	**2.2**	**18.8**	--	--	--
Percent retained 850 micron sieve (#20)	**0.4**	**10**	--	--	--
Percent retained 2000 micron sieve (#10)	**0.1**	**8.7**	--	--	--
Percent retained 4750 micron sieve (#4)	0.1 U	**10.1**	--	--	--
Percent retained 9500 micron sieve	0.1 U	**5.9**	--	--	--
Percent retained 12500 micron sieve	0.1 U	**15.5**	--	--	--
Percent retained 19000 micron sieve	0.1 U	**1.9**	--	--	--
Percent retained 25K micron sieve	0.1 U	**3.2**	--	--	--
Percent retained 37.5K micron sieve	0.1 U	0.1 U	--	--	--
Percent retained 50K micron sieve	0.1 U	0.1 U	--	--	--
Percent retained 75K micron sieve	0.1 U	0.1 U	--	--	--
Gravel	0.1 UT	**33 T**	--	--	--
Gravel, Coarse	0.1 UT	**3.2 T**	--	--	--
Sand, Coarse	**0.1 T**	**8.7 T**	--	--	--
Sand, Fine	**41 T**	**16 T**	--	--	--
Sand, Medium	**2.6 T**	**28.8 T**	--	--	--
Silt, Coarse	**7.9 T**	**1.6 T**	--	--	--
Silt, Fine	**6.4 T**	**1.4 T**	--	--	--
Silt, Medium	**11.1 T**	**1.4 T**	--	--	--
Silt, Very Coarse	**15.2 T**	**0.9 T**	--	--	--
Silt, Very Fine	**4.7 T**	**1.2 T**	--	--	--
Clay	**11 T**	**3.4 T**	--	--	--

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GSM-08	GSM-14	GSM-14	GSM-14	GSM-14
Sample ID	GSM-08SO-10-15-100928	GSM-14SO-0-5-101015	GSM-14SO-5-10-101015	GSM-14SO-10-12.5-101015	GSM-14SO-12.5-17.5-101015
Sample Date	9/28/2010	10/15/2010	10/15/2010	10/15/2010	10/15/2010
Depth	10 - 15 feet	0 - 5 feet	5 - 10 feet	10 - 12.5 feet	12.5 - 17.5 feet
Sample Type	N	N	N	N	N
Total Gravel	0.1 UT	**37 T**	--	--	--
Total Sand	**44 T**	**53 T**	--	--	--
Total Silt	**45 T**	**6.5 T**	--	--	--
Total Clay	**11 T**	**3.4 T**	--	--	--
Total Fines (silt + clay)	**56 T**	**9.9 T**	--	--	--
Total Grain Size	**100 T**	**99.9 T**	--	--	--
Metals (mg/kg)					
Arsenic	7 U	10 U	--	--	7 U
Cadmium	0.3 U	0.6 U	--	--	**0.4**
Chromium	**29.6**	**11**	--	--	**28.5**
Copper	**26.4 J**	**17.2**	--	--	**31.4**
Lead	**4**	6 U	--	--	**4**
Mercury	0.03 U	0.02 U	--	--	**0.03**
Nickel	**24**	**13**	--	--	**28**
Silver	0.4 U	0.8 U	--	--	0.4 U
Zinc	**56 J**	**77**	--	--	**66**
Volatile Organics (µg/kg)					
1,1-Dichloroethene	80 U	1 U	--	--	1.4 U
1,2-Dichloroethene, cis-	80 U	1 U	--	--	1.4 U
1,2-Dichloroethene, trans-	80 U	1 U	--	--	1.4 U
Benzene	**160**	1 U	--	--	1.4 U
Ethylbenzene	**180**	1 U	--	--	1.4 U
m,p-Xylene	**84**	1 U	--	--	1.4 U
o-Xylene	80 U	1 U	--	--	1.4 U
Toluene	80 U	1 U	--	--	1.4 U
Trichloroethene (TCE)	80 U	1 U	--	--	1.4 U
Vinyl chloride	80 U	1 U	--	--	1.4 U
LWG RA Total BTEX[6] (Calculated U = 1/2)	**500 T**	1 UT	--	--	1.4 UT
LWG RA Total Xylene[9] (Calculated U = 1/2)	**120 T**	1 UT	--	--	1.4 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)					
1-Methylnaphthalene	**120000**	60 U	--	--	60 U
2-Methylnaphthalene	**240000**	60 U	--	--	60 U
Acenaphthene	**200000**	60 U	--	--	60 U
Acenaphthylene	**26000**	**62**	--	--	60 U
Anthracene	**120000**	60 U	--	--	60 U
Benzo(a)anthracene	**96000**	**100**	--	--	60 U
Benzo(b,j,k)fluoranthenes	**140000**	**330**	--	--	60 U
Benzo(a)pyrene	**140000**	**270**	--	--	60 U
Benzo(g,h,i)perylene	**110000**	**170**	--	--	60 U
Chrysene	**130000**	**150**	--	--	60 U
Dibenzo(a,h)anthracene	**24000**	60 U	--	--	60 U
Fluoranthene	**380000**	**130**	--	--	60 U
Fluorene	**120000**	60 U	--	--	60 U
Indeno(1,2,3-c,d)pyrene	**84000**	**140**	--	--	60 U
Naphthalene	**1300000**	60 U	--	--	60 U
Perylene	**36000**	**75**	--	--	60 U
Phenanthrene	**760000**	60 U	--	--	60 U
Pyrene	**440000**	**190**	--	--	60 U

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GSM-08	GSM-14	GSM-14	GSM-14	GSM-14
Sample ID	GSM-08SO-10-15-100928	GSM-14SO-0-5-101015	GSM-14SO-5-10-101015	GSM-14SO-10-12.5-101015	GSM-14SO-12.5-17.5-101015
Sample Date	9/28/2010	10/15/2010	10/15/2010	10/15/2010	10/15/2010
Depth	10 - 15 feet	0 - 5 feet	5 - 10 feet	10 - 12.5 feet	12.5 - 17.5 feet
Sample Type	N	N	N	N	N
LWG RA Total 7 of 17 LPAH[3] (Calculated U = 1/2)	**2800000 T**	**240 T**	--	--	60 UT
LWG RA Total 10 of 17 HPAH[4] (Calculated U = 1/2)	**1500000 T**	**1500 T**	--	--	60 UT
LWG RA Total 17 PAH[8] (Calculated U = 1/2)	**4300000 T**	**1800 T**	--	--	60 UT
LWG RA Total cPAH TEQ (EPA 1993)[7] (Calculated U = 1/2)	**200000 T**	**360 T**	--	--	60 UT
Semivolatile Organics (µg/kg)					
Carbazole	**22000**	60 U	--	--	60 U
Dibenzofuran	**18000**	60 U	--	--	60 U
PCB Aroclors (µg/kg)					
Aroclor 1016	31 U	31 U	--	--	32 U
Aroclor 1221	31 U	31 UJ	--	--	32 UJ
Aroclor 1232	39 U	31 U	--	--	32 U
Aroclor 1242	31 U	31 U	--	--	32 U
Aroclor 1248	31 U	31 U	--	--	32 U
Aroclor 1254	31 U	31 U	--	--	32 U
Aroclor 1260	31 U	31 U	--	--	32 U
LWG RA Total PCB Aroclors[10] (Calculated U = 1/2)	39 UT	31 UJT	--	--	32 UJT
Pesticides (µg/kg)					
2,4'-DDD (o,p'-DDD)	16 UJ	3.2 U	--	--	3.2 U
2,4'-DDE (o,p'-DDE)	16 U	3.2 U	--	--	3.2 U
2,4'-DDT (o,p'-DDT)	16 UJ	3.2 U	--	--	3.2 U
4,4'-DDD (p,p'-DDD)	16 UJ	3.2 U	--	--	3.2 U
4,4'-DDE (p,p'-DDE)	16 U	3.2 U	--	--	3.2 U
4,4'-DDT (p,p'-DDT)	16 UJ	3.2 U	--	--	3.2 U
alpha-Hexachlorocyclohexane (BHC)	8 U	1.6 U	--	--	1.6 U
alpha-Chlordane (cis-Chlordane)	8 U	1.6 U	--	--	1.6 U
beta-Hexachlorocyclohexane (BHC)	8 U	1.6 U	--	--	1.6 U
gamma-Chlordane (trans-Chlordane)	16 U	1.6 U	--	--	1.6 U
cis-Nonachlor	16 UJ	3.2 U	--	--	3.2 U
delta-Hexachlorocyclohexane (BHC)	8 U	1.6 UJ	--	--	1.6 UJ
Dieldrin	16 U	3.2 U	--	--	3.2 U
Endrin	16 UJ	3.2 U	--	--	3.2 U
Endrin ketone	16 UJ	3.2 U	--	--	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8 U	1.6 U	--	--	1.6 U
Heptachlor epoxide	8 U	1.6 U	--	--	1.6 U
Oxychlordane	16 U	3.2 U	--	--	3.2 U
trans-Nonachlor	16 UJ	3.2 U	--	--	3.2 U
Hexachlorobenzene	8 U	1.6 U	--	--	1.6 U
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UJT	3.2 UT	--	--	3.2 UT
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	16 UJT	3.2 UT	--	--	3.2 UT
LWG RA Sum DDD (Calculated U = 1/2)	16 UJT	3.2 UT	--	--	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	3.2 UT	--	--	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	16 UJT	3.2 UT	--	--	3.2 UT
LWG RA Total DDx (Calculated U = 1/2)	16 UJT	3.2 UT	--	--	3.2 UT
LWG RA Total Chlordane[2] (Calculated U = 1/2)	16 UJT	3.2 UT	--	--	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)					
Diesel Range Hydrocarbons	**1100**	6 U	--	--	7.1 U
Motor Oil Range	720 U	**21**	--	--	**26**
LWG RA TPH[5] (Calculated U = 1/2)	**1500 T**	**24 T**	--	--	**30 T**

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Location ID	GSM-08	GSM-14	GSM-14	GSM-14	GSM-14
Sample ID	GSM-08SO-10-15-100928	GSM-14SO-0-5-101015	GSM-14SO-5-10-101015	GSM-14SO-10-12.5-101015	GSM-14SO-12.5-17.5-101015
Sample Date	9/28/2010	10/15/2010	10/15/2010	10/15/2010	10/15/2010
Depth	10 - 15 feet	0 - 5 feet	5 - 10 feet	10 - 12.5 feet	12.5 - 17.5 feet
Sample Type	N	N	N	N	N
Volatile Petroleum Hydrocarbons (µg/kg)					
Benzene	**1400**	620 U	--	--	1100 U
C5-C6 Aliphatic	**16000 J**	6200 UJ	--	--	11000 UJ
C6-C8 Aliphatic	**63000 J**	6200 U	--	--	11000 U
C8-C10 Aliphatic	**65000 J**	6200 U	--	--	11000 U
C10-C12 Aliphatic	9300 UJ	6200 U	--	--	11000 U
C8-C10 Aromatic	**42000**	6200 U	--	--	11000 U
C10-C12 Aromatic	**640000**	6200 U	--	--	11000 U
C12-C13 Aromatic	**230000**	6200 U	--	--	11000 U
Ethylbenzene	**5100**	620 U	--	--	1100 U
m,p-Xylene	**3200**	1200 U	--	--	2200 U
Methyl tert-butyl ether (MTBE)	930 U	620 U	--	--	1100 U
n-Decane (C10)	**2400 J**	620 U	--	--	1100 U
n-Dodecane (C12)	**7500 J**	620 U	--	--	1100 U
n-Hexane	930 UJ	620 U	--	--	1100 U
n-Octane (C8)	**1500 J**	620 U	--	--	1100 U
n-Pentane (C5)	930 UJ	620 UJ	--	--	1100 UJ
o-Xylene	**2300**	620 U	--	--	1100 U
Toluene	930 U	620 U	--	--	1100 U
Extractable Petroleum Hydrocarbons (µg/kg)					
C10-C12 Aliphatics	15000 U	2300 U	--	--	2800 U
C10-C12 Aromatics	**360000**	2300 U	--	--	2800 U
C12-C16 Aliphatics	**68000**	2300 U	--	--	2800 U
C12-C16 Aromatics	**390000**	2300 U	--	--	**3100**
C16-C21 Aliphatics	**78000**	2300 U	--	--	2800 U
C16-C21 Aromatics	**940000**	2300 U	--	--	**6900**
C21-C34 Aliphatics	**120000**	2300 U	--	--	2800 U
C21-C34 Aromatics	**650000**	**4000**	--	--	**3100**
C8-C10 Aliphatics	15000 U	2300 U	--	--	2800 U
C8-C10 Aromatics	**22000**	2300 U	--	--	2800 U

Table 3-3
Data Gaps Riverbank Soil Sample Physical and Chemical Results

Notes:
Bold = Detected result
CL = Lean clay
CL-ML = Silty clay
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
ML = Silt
NF = Non-flammable
R = Rejected
T = Calculation or summation applied
N = Normal Field Sample
FD = Field Duplicate
-- Results not reported or not applicable
Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.
Significant figures applied to all calculated totals
Table contains validated data

Footnotes
[1] = preserved total solids were analyzed from the sulfide jar containing zinc acetate
[2] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.
[3] = LWG RA Total 7 of 17 LPAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene
[4] = LWG RA Total 10 of 17 HPAH is the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene
[5] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.
[6] = LWG RA Total BTEX is the total of Benzene, Toluene, Ethylbenzene and Xylene.
[7] = LWG RA Total cPAH TEQ (EPA 1993) calculation includes Benzo(a)pyrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene and Indeno(1,2,3-c,d)pyrene.
[8] = LWG RA Total 17 PAH is the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene,
[9] = LWG RA Total Xylene is the total of m,p-Xylene and o-Xylene.
[10] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

Acronyms
cPAH = carcinogenic PAH
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
EPH = extractable petroleum hydrocarbon
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
mg/kg = milligrams per kilograms
PAH = polycyclic aromatic hydrocarbon
PCBs = polychlorinated biphenyls
RA = Risk Assessment
TEQ = toxic equivalents
TPH = Total Petroleum
µg/kg = micrograms per
VPH = volatile petroleum

Table 3-4
Data Gaps Riverbank Soil Waste Characterization and Bench Scale Treatability Test Results

	Location ID	GSM-07	GSM-08	GST-09	GST-09	GST-09	GST-09
	Sample ID	GSM-07SO-15-20-100927	GSM-08SO-10-15-100928	GST-09SO-16.5-18-101008	GST-09SO-16.5-18-101008-PC10	GST-09SO-16.5-18-101008-QL10	GST-09SO-16.5-18-101008-QL5
	Sample Date	9/27/2010	9/28/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010
	Depth	15 - 20 feet	10 - 15 feet	16.5 - 18 feet	16.5 - 18 feet	16.5 - 18 feet	16.5 - 18 feet
	Sample Type	N	N	N	N	N	N
	Subtitle D						
Conventional Parameters (None)							
Ignitability *	140	**NF = not flammable**	**NF = not flammable**	**NF = not flammable**	--	--	--
Conventional Parameters (su)							
pH *	12.5	**6.62**	**6.43**	**5.57**	--	--	--
Metals (µg/l)							
Arsenic	5000	200 U	200 U	200 U	--	--	--
Barium	100000	**560**	**360**	**320**	--	--	--
Cadmium	1000	10 U	10 U	10 U	--	--	--
Chromium	5000	20 U	20 U	20 U	--	--	--
Lead	5000	100 U	100 U	100 U	--	--	--
Mercury	200	0.1 U	0.1 U	0.1 U	--	--	--
Selenium	1000	200 U	200 U	200 U	--	--	--
Silver	5000	20 U	20 U	20 U	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	700	40 U	20 U	50 U	10 U	10 U	10 U
1,2-Dichloroethane	500	40 U	20 U	50 U	10 U	10 U	10 U
1,4-Dichlorobenzene	7500	40 U	20 U	50 U	10 U	10 U	10 U
2-Butanone (MEK)	200000	1000 U	500 U	250 U	50 U	50 U	50 U
Benzene	500	**52**	**21**	**2900**	**270**	**54 J**	**13 J**
Carbon tetrachloride (Tetrachloromethane)		40 U	20 U	50 U	10 U	10 U	10 U
Chlorobenzene	100000	40 U	20 U	50 U	10 U	10 U	10 U
Chloroform	6000	40 U	20 U	50 U	10 U	10 U	10 U
Tetrachloroethene (PCE)	700	40 U	20 U	50 U	10 U	10 U	10 U
Trichloroethene (TCE)	500	40 U	20 U	50 U	10 U	10 U	10 U
Vinyl chloride	200	40 U	20 U	50 U	10 U	10 U	10 U
Semivolatile Organics (µg/l)							
1,4-Dichlorobenzene	7500	10 U	10 U	10 U	--	--	--
2-Methylphenol (o-Cresol)	200000	10 U	10 U	10 U	--	--	--
2,4-Dinitrotoluene	130	50 U	50 U	50 U	--	--	--
2,4,5-Trichlorophenol	400000	50 U	50 U	50 U	--	--	--
2,4,6-Trichlorophenol	2000	50 U	50 U	50 U	--	--	--
3&4-Methylphenol (m, p-Cresol)	200000	10 U	10 U	**17**	--	--	--
Hexachlorobenzene	130	10 U	10 U	10 U	--	--	--
Hexachlorobutadiene	500	10 U	10 U	10 U	--	--	--
Hexachloroethane	3000	10 U	10 U	10 U	--	--	--
Nitrobenzene	2000	10 U	10 U	10 U	--	--	--
Pentachlorophenol	100000	50 U	50 U	50 U	--	--	--
Pyridine	5000	50 U	50 U	50 U	--	--	--
PCB Aroclors (µg/l)							
Aroclor 1016		10 U	10 U	2 U	--	--	--
Aroclor 1221		10 U	10 U	2 U	--	--	--
Aroclor 1232		10 U	10 U	2 U	--	--	--
Aroclor 1242		10 U	10 U	2 U	--	--	--
Aroclor 1248		10 U	10 U	2 U	--	--	--
Aroclor 1254		10 U	10 U	2 U	--	--	--
Aroclor 1260		10 U	10 U	2 U	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	50000	10 UT	10 UT	2 UT	--	--	--
Pesticides (µg/l)							
alpha-Chlordane (cis-Chlordane)		0.5 U	0.5 U	0.5 U	--	--	--
beta-Chlordane (trans-Chlordane)		0.5 U	0.5 U	0.5 U	--	--	--
Endrin	20	1 U	1 U	1 U	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	400	0.5 U	0.5 U	0.5 U	--	--	--

Table 3-4
Data Gaps Riverbank Soil Waste Characterization and Bench Scale Treatability Test Results

	Location ID	GSM-07	GSM-08	GST-09	GST-09	GST-09	GST-09
	Sample ID	GSM-07SO-15-20-100927	GSM-08SO-10-15-100928	GST-09SO-16.5-18-101008	GST-09SO-16.5-18-101008-PC10	GST-09SO-16.5-18-101008-QL10	GST-09SO-16.5-18-101008-QL5
	Sample Date	9/27/2010	9/28/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010
	Depth	15 - 20 feet	10 - 15 feet	16.5 - 18 feet	16.5 - 18 feet	16.5 - 18 feet	16.5 - 18 feet
	Sample Type	N	N	N	N	N	N
	Subtitle D						
Heptachlor	8	0.5 U	0.5 U	0.5 U	--	--	--
Heptachlor epoxide		0.5 U	0.5 U	0.5 U	--	--	--
Methoxychlor	10000	5 U	5 U	5 U	--	--	--
Toxaphene	500	50 UJ	50 UJ	50 U	--	--	--
Total Chlordane (Calculated U = 1/2)		0.5 UJT	0.5 UJT	0.5 UT	--	--	--
Herbicides (µg/l)							
2,4-D (2,4-Dichlorophenoxyacetic acid)	10000	5 U	5 U	5 U	--	--	--
2,4,5-TP (Silvex)	1000	1.2 U	1.2 U	1.2 U	--	--	--
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons		**2.8**	**2.5**	**4.5**	--	--	--
Gasoline Range Hydrocarbons		**18**	**8.4**	**38**	--	--	--
Motor Oil Range		1 U	1 U	1 U	--	--	--
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)		**21 T**	**11 T**	**43 T**	--	--	--

Table 3-4
Data Gaps Riverbank Soil Waste Characterization and Bench Scale Treatability Test Results

Notes:
= Detected concentration is greater than Subtitle D screening level
Bold = Detected result
* = Ignitability and pH results from bulk results
-- = Results not reported or not applicable
J = Estimated Value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
T = Calculation or summation applied
FD = Field Field Duplicate
N = Normal Field Sample
Bench treatment testing was performed on samples with critieria exceedances. PC10= Portland Cement mixture 10%, QL10, QL5= Quick Lime mixture 10% and 5%, respectively

Unless otherwise noted, totals are calculated as the sum of all detected results and 1/2 the undetected reporting limit. If all are undetected results, the highest reporting limit value is reported as the sum.

Significant figures applied to all calculated totals

Table contains validated data

Footnotes

[1] = LWG RA Total Chlordane is the sum of alpha-chlordane, trans-chlordane, oxychlordane, cis-nonachlor and trans-nonachlor, if measured.

[2] = LWG RA Total TPH is the total of diesel, motor and gasoline range hydrocarbons, if measured.

[3] = LWG RA Total PCB Aroclors is the sum of all listed Aroclors.

Acronyms
LWG = Lower Willamette Group
mg/l = milligrams per liter

NF = not flammable
PCBs = polychlorinated biphenyls
RA = Risk Assessment
su = standard unit
TPH = Total Petroleum Hydrocarbons
µg/l = micrograms per liter

Table 3-5
Data Gaps Riverbank Soil Sample CU-Triaxial Testing Interpreted Test Results

Sample ID	In Situ Depth (feet):	Average Initial Moisture Content [1]	Average Initial Unit Weight [2]	Atterberg Limits[3]		CU Trixial(Method A) [4]		CU Trixial(Method B) [4]		Soil Description
		w_0 (%)	(lb/ft^3)	PI (%)	USCS	φ' (degrees)	c' (psf)	φ' (degrees)	c' (psf)	(-)
GST-09SO-20-22.5-101008	20-22.5	42.4	113.1	NA	Non-Plastic	36.9	56	35.5	259	damp, dark olive gray, fine sandy SILT to 11". After 11"- damp, dark gray, fine grained SAND with seams of silt
GST-11SO-32-34.5-101011	32-34.5	24.7	123.6	5.7	CL-ML	27.2	1276	32.4	534	damp, dark grayish brown, slightly silty SAND to very sandy SILT.
GST-13SO-32.5-35-101012	32.5-35	41.5	113.3	7.7	CL	32.9	376	33.4	333	firm, wet, dark gray, sandy SILT with layers of fine-grained,silty SAND.
GSM-14SO-10-12.5-101015	10-12.5	46.5	108.2	NA	Non-Plastic	35.3	209	37.1	165	moist, dark brown to dark gray, silty, fine-grained SAND with layers of sandy SILT.

Notes:

1 = Moisture content determined according to ASTM D-2216.

2 = Density determined according to ASTM D-2937.

3 = Atterberg Limits testing conducted according to ASTM D-4318

4 = Consolidated-Undrained Triaxial testing conducted according to ASTM D-4767. Method A- failure is at max deviator stress/15% strain. Method B- failure is at max effective stress ratio.

CU = Consolidated-Undrained

w0 (%) = Initial moisture content

lb/ft^3 = Pound per cubic foot

PI = Plasticity Index

USCS = Unified Soils Classification System

c' = Effective cohesion

psf = Pound per square foot

φ' = Effective friction angle

CL = Lean clay

CL-ML = Silty clay

Table 3-6
Data Gaps Riverbank Soil Sample Consolidation Testing Interpreted Results

Sample ID	In Situ Depth (feet):	Initial Moisture Content [1]	Initial Unit Weight [2]	Atterberg Limits[3]				Approximate Vertical Effective Stress Range	Preconsolidation Stress	Compression Ratio	Recompression Ratio	Coefficient of Consolidation [4]	Soil Description
		w_0 (%)	(lb/ft^3)	PI (%)	LL (%)	PL (%)	USCS	σ_v' (psf)	σ_p' (psf)	CR (-)	RCR (-)	c_v (ft^2/day)	(-)
GST-13SO-32.5-35-101012	32.5-35	42.7	106.5	7.7	27.1	19.4	CL	1400 to 3800	1700	0.109	0.010	2.12	firm, wet, dark gray, sandy SILT with layers of fine-grained,silty SAND.
GSM-14SO-10-12.5-101015	10-12.5	26.7	113.0	NA	NA	NA	Non-Plastic	500 to 1500	650	0.052	0.007	1.26	moist, dark brown to dark gray, silty, fine-grained SAND with layers of sandy SILT.

Notes:

1 = Moisture content determined according to ASTM International (ASTM) D-2216

2 = Density determined according to ASTM D-2937.

3 = Atterberg Limits testing conducted according to ASTM D-4318

4 = Averaged from reported c_v values within approximate vertical effective stress range

NA = Not applicable. Sample was determined to be Non-plastic and Liquid limits and Plasticity index were unable to be calculated.

CL = Lean clay

w_0 = Initial moisture content

lb/ft^3 = Pound per cubic foot

ft^2/day = square feet per day

PI = Plasticity Index

LL = Liquid Limit

PM = Plastic Limit

USCS = Unified Soils Classification System

Table 4-1
TZW and Groundwater Sample Summary

Station ID	Sample ID	Sample Type	X Coordinates[1]	Y Coordinates[1]	Mudline Elevation (ft) NAVD88	Start Depth (cm)	End Depth (cm)	Sample Date/Time	Analyses
GP-30	GP30-W-25.0	N	7624837.00	705250.90	-31.72	701.0	823.0	9/15/2010 11:40	VOCs[2]
	GP30-W-50.0	N			-31.72	1463.0	1585.0	9/15/2010 15:16	VOCs[2]
GP-32	GP32-W-2.0	N	7624970.00	705255.70	-37.80	0.0	121.9	9/16/2010 13:25	VOCs[2]
	GP32-W-24.0	N			-37.80	670.6	792.5	9/16/2010 15:50	VOCs[2]
GP-38	GP38-W-1.0	N	7624960.00	705313.00	-39.86	0	30.48	9/21/2010 18:00	VOCs[2]
GP-61	GP61-W-5.0	N	7624906.00	705385.00	-39.96	91.4	213.4	9/17/2010 14:36	VOCs[2]
GP-65	GP65-W-1.0	N	7624918.00	705431.00	-40.80	0.0	30.5	9/21/2010 10:30	VOCs[2]
	GP65-W-3.0	N			-40.80	30.5	152.4	9/21/2010 14:15	VOCs[2]
GP-200	GP200-W-1.0	N	7624860.21	705435.01	-40.48	0.0	30.5	9/14/2010 13:50	VOCs[2]
GP-201	GP201-W-1.0	N	7624857.69	705502.17	-41.85	0.0	30.5	9/20/2010 15:20	VOCs[2]
GP-202	GP202-W-1.0	N	7624931.98	705502.90	-42.49	0.0	30.5	9/20/2010 13:20	VOCs[2]
GP-203	GP203-W-1.0	N	7624992.05	705470.29	-42.02	0.0	30.5	9/17/2010 11:50	VOCs[2]
GP-204	GP204-W-1.0	N	7625005.10	705411.97	-41.24	0.0	30.5	9/20/2010 10:40	VOCs[2]
GP-205	GP205-W-1.0	N	7625041.36	705260.41	-39.98	0.0	30.5	9/14/2010 12:00	VOCs[2]
GP-206	GP206-W-1.0	N	7625130.13	705226.36	-40.81	0.0	30.5	9/14/2010 9:30	VOCs[2]
GP-207B	GP207B-W-1.0	N	7625127.20	705128.54	-36.07	0.0	30.5	9/22/2010 10:15	VOCs[2]

Notes:
cm = centimeters
ft =feet
N = normal sample
NAV 88 = North American Vertical Datum 1988
VOCs = Volatile organic compounds
[1] = Coordinates are provided in northing and easting in North American Datum 1983 (NAD83) High Accuracy Reference Network (HARN), Oregon State Plane, North International Feet.
[2] = See FSP Table 1-7 for analyte list.

Table 4-2
Volatile Organic Compounds in Area 1 Delineation

Location ID	Human Health - Fish Consumption Only	AWQC - FAC	AWQC - FCC	GP30	GP30	GP30	GP30	GP32	GP32	GP32	GP32	GP61	GP61	GP38
Sample ID				GP30-W-25	GP30-W-50	GP30-W-25.0	GP30-W-50.0	GP32-W-2	GP32-W-24	GP32-W-2.0	GP32-W-24.0	GP61-W-5	GP61-W-5.0	GP38-W-1
Sample Date				10/25/2004	10/25/2004	9/15/2010	9/15/2010	10/28/2004	10/28/2004	9/16/2010	9/16/2010	5/18/2005	9/17/2010	5/9/2005
Depth				25 feet	50 feet	25 feet	50 feet	2 feet	24 feet	2 feet	24 feet	5 feet	5 feet	1 feet
Sample Type				N	N	N	N	N	N	N	N	N	N	N
Volatile Organics (µg/l)														
1,1,1,2-Tetrachloroethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-trichloroethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane				**1.71**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.31**	0.2 U	0.2 U
1,1-Dichloroethene				**14.3**	**94.2**	0.2 U	0.2 U	**23.6**	**4.8**	0.2 U	0.2 U	**5.49**	0.2 U	**5.67**
1,1-Dichloropropene				0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.2 U
1,2,3-Trichlorobenzene				1 U	1 U	0.2 U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	0.2 U	1 U
1,2,3-Trichloropropane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene				0.3 U	0.3 U	1 U	1 U	0.3 U	0.3 U	1 U	1 U	0.3 U	1 U	0.3 U
1,2,4-Trimethylbenzene				**1.1**	1 U	0.2 U	0.2 U	1 U	**1.69**	0.2 U	0.2 U	1 U	0.2 U	1 U
1,2-Dibromo-3-chloropropane				1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane				0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.2 U	0.3 U
1,2-Dichlorobenzene				0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.2 U	0.3 U
1,2-Dichloroethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane				0.2 U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U	0.2 U	1 U	0.2 U
1,3,5-Trimethylbenzene				**0.32**	0.3 U	0.2 U	0.2 U	0.3 U	**0.33**	0.2 U	0.2 U	0.3 U	0.2 U	0.3 U
1,3-Dichlorobenzene				0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.3 U	**0.21**	0.2 U	0.3 U	0.2 U	0.3 U
1,3-Dichloropropane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene				0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.2 U	0.3 U
2,2-Dichloropropane				--	--	0.2 U	0.2 U	--	--	0.2 U	0.2 U	--	0.2 U	--
2-Chlorotoluene				0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.2 U	0.3 U
2-Hexanone				10 U	10 U	2 U	2 U	10 U	10 U	2 U	2 U	10 U	2 U	10 U
4-Chlorotoluene				0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.2 U	0.3 U
4-Isopropyltoluene				0.3 U	0.3 U	0.2 U	0.2 U	**0.64**	**0.77**	0.2 U	0.2 U	0.3 U	0.2 U	0.3 U
4-Methyl-2-pentanone				20 U	20 U	2 U	2 U	20 U	20 U	2 U	2 U	20 U	2 U	20 U
Acetone				5 U	5 U	10 U	10 U	5 U	5 U	10 U	10 U	10 U	10 U	10 U
Acrylonitrile				1 U	1 U	5 U	5 U	1 U	1 U	5 U	5 U	1 U	5 U	1 U
Benzene				**32.2**	**85.4**	**6.05**	**24.5**	**103**	**12.6**	**26**	**27.7**	**15.5**	**16.3**	**20**
Bromobenzene				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform				1 U	1 U	0.2 U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	0.2 U	1 U
Bromomethane				0.5 U	0.5 U	0.2 U	0.2 U	0.5 U	0.5 U	0.2 U	0.2 U	0.5 U	0.2 U	0.5 U
Carbon disulfide				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1 U	0.2 U	**1.23**
Carbon tetrachloride				0.17 U	0.17 U	0.2 U	0.2 U	0.17 U	0.17 U	0.2 U	0.2 U	0.17 U	0.2 U	0.17 U

Table 4-2
Volatile Organic Compounds in Area 1 Delineation

Location ID	Human Health - Fish Consumption Only	AWQC - FAC	AWQC - FCC	GP30	GP30	GP30	GP30	GP32	GP32	GP32	GP32	GP61	GP61	GP38
Sample ID				GP30-W-25	GP30-W-50	GP30-W-25.0	GP30-W-50.0	GP32-W-2	GP32-W-24	GP32-W-2.0	GP32-W-24.0	GP61-W-5	GP61-W-5.0	GP38-W-1
Sample Date				10/25/2004	10/25/2004	9/15/2010	9/15/2010	10/28/2004	10/28/2004	9/16/2010	9/16/2010	5/18/2005	9/17/2010	5/9/2005
Depth				25 feet	50 feet	25 feet	50 feet	2 feet	24 feet	2 feet	24 feet	5 feet	5 feet	1 feet
Sample Type				N	N	N	N	N	N	N	N	N	N	N
Chlorobenzene				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobromomethane				1 U	1 U	0.2 U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	0.2 U	1 U
Chloroethane				0.2 U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U	0.2 U	1 U	0.2 U
Chloroform				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane				0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
cis-1,2-Dichloroethene		11600	590	**1900**	**16600**	**380**	**103**	**8490**	**1170**	**0.37**	**1.5**	**2960**	**105**	**2740**
cis-1,3-Dichloropropene				0.2 U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	1 U	0.2 U	1 U	0.2 U
Dibromochloromethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane				1 U	1 U	0.2 U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	0.2 U	1 U
Dichlorodifluoromethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene				**1.85**	0.290 UB	**0.22**	0.2 U	**8.65**	**1.43**	**3.68**	**0.2**	**0.91**	**0.3**	0.2 U
Hexachlorobutadiene				1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene				**0.67**	0.3 U	0.2 U	0.2 U	**1.02**	**1.03**	**0.75**	0.2 U	0.3 U	0.2 U	0.3 U
m,p-Xylene				0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Methyl ethyl ketone				10 U	10 U	2 U	2 U	10 U	10 U	2 U	2 U	10 U	2 U	10 U
Methyl tert-butyl ether				0.5 U	0.5 U	0.2 U	0.2 U	0.5 U	0.5 U	0.2 U	0.2 U	0.5 U	0.2 U	0.5 U
Methylene chloride				20 U	20 U	10 U	10 U	20 U	20 U	10 U	10 U	20 U	10 U	20 U
Naphthalene				4.44 UB	1 U	0.2 U	**0.22**	94.9	**115**	**1.33**	0.2 U	**2.44**	0.2 U	1 U
n-Butylbenzene				0.3 U	0.3 U	0.2 U	0.2 U	**0.43**	**0.44**	**1.21**	0.2 U	0.3 U	0.2 U	0.3 U
n-Propylbenzene				0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.2 U	0.3 U
o-Xylene				**0.24**	0.2 U	0.2 U	0.2 U	**2.06**	**1.28**	**2.29**	**1.54**	0.2 U	0.2 U	0.2 U
sec-Butylbenzene				0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.2 U	0.3 U
Styrene				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
tert-Butylbenzene				0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.2 U	0.3 U
Tetrachloroethene				0.5 U	0.5 U	0.2 U	0.2 U	0.5 U	0.5 U	0.2 U	0.2 U	0.5 U	0.2 U	0.5 U
Toluene				1.94 UB	3.88 UB	**0.28**	**0.44**	**4.42**	0.2 U	**3.37**	**0.2**	**1.74**	**0.47**	**0.81**
trans-1,2-dichloroethene	140000	11600		**3.86**	**60.6**	0.2 U	0.2 U	**8.64**	**1.68**	0.2 U	0.2 U	**22.5**	0.2 U	**6.61**
trans-1,3-Dichloropropene				0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.2 U
Trichloroethene	30	45000	21900	**8.94**	**101**	**0.79**	**2**	**1.03**	0.2 U	0.2 U	0.2 U	**1.85**	**0.51**	**0.76**
Trichlorofluoromethane				1 U	1 U	0.2 U	0.2 U	1 U	1 U	0.2 U	0.2 U	1 U	0.2 U	1 U
Vinyl chloride	2.4			**3330**	**2650**	**1880**	**600**	**11900**	**2110**	**0.95**	**7.34**	**863**	**699**	**1090**

Notes:
Detected concentration is greater than screening level
Bold = Detected result
U = Compound analyzed, but not detected above detection limit
UB = Compound analyzed, but not detected above estimated detection limit
N = Normal Field Sample
AWQC - FAC = Ambient Water Quality Criteria Freshwater Acute Criteria
AWQC - FCC = Ambient Water Quality Criteria Freshwater Chronic Criteria
-- Results not reported or not applicable
Table contains validated data

Table 4-2
Volatile Organic Compounds in Area 1 Delineation

Location ID	Human Health - Fish Consumption Only	AWQC - FAC	AWQC - FCC	GP38	GP65	GP65	GP65	GP65	GP200	GP201	GP202	GP203	GP204	GP205	GP206
Sample ID				GP38-W-1.0	GP65-W-1	GP65-W-3	GP65-W-1.0	GP65-W-3.0	GP200-W-1.0	GP201-W-1.0	GP202-W-1.0	GP203-W-1.0	GP204-W-1.0	GP205-W-1.0	GP206-W-1.0
Sample Date				9/21/2010	5/19/2005	5/19/2005	9/21/2010	9/21/2010	9/14/2010	9/20/2010	9/20/2010	9/17/2010	9/20/2010	9/14/2010	9/14/2010
Depth				1 feet	1 feet	3 feet	1 feet	3 feet	1 feet	1 feet	1 feet	1 feet	1 feet	1 feet	1 feet
Sample Type				N	N	N	N	N	N	N	N	N	N	N	N
Volatile Organics (µg/l)															
1,1,1,2-Tetrachloroethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-trichloroethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene				**0.230**	**40.5**	**27.9**	0.2 U	**2.20**	**2.53**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene				0.3 U	0.2 U	0.2 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2,3-Trichlorobenzene				0.2 U	1 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene				1 U	0.3 U	0.3 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene				0.2 U	1 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane				1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane				0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene				0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane				1 U	0.2 U	0.2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene				0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene				0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	**0.26**
1,3-Dichloropropane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene				0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane				0.2 U	--	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Chlorotoluene				0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone				2 U	10 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Chlorotoluene				0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Isopropyltoluene				0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Methyl-2-pentanone				2 U	20 U	20 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Acetone				10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acrylonitrile				5 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene				**1.02**	**39.1**	**35.8**	**10.6**	**11.3**	**18.4**	0.2 U	0.2 U	0.2 U	0.2 U	**28.6**	0.2 U
Bromobenzene				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform				0.2 U	1 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromomethane				0.2 U	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon disulfide				0.2 U	1 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride				0.2 U	0.17 U	0.17 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table 4-2
Volatile Organic Compounds in Area 1 Delineation

Location ID	Human Health - Fish Consumption Only	AWQC - FAC	AWQC - FCC	GP38	GP65	GP65	GP65	GP65	GP200	GP201	GP202	GP203	GP204	GP205	GP206
Sample ID				GP38-W-1.0	GP65-W-1	GP65-W-3	GP65-W-1.0	GP65-W-3.0	GP200-W-1.0	GP201-W-1.0	GP202-W-1.0	GP203-W-1.0	GP204-W-1.0	GP205-W-1.0	GP206-W-1.0
Sample Date				9/21/2010	5/19/2005	5/19/2005	9/21/2010	9/21/2010	9/14/2010	9/20/2010	9/20/2010	9/17/2010	9/20/2010	9/14/2010	9/14/2010
Depth				1 feet	1 feet	3 feet	1 feet	3 feet	1 feet	1 feet	1 feet	1 feet	1 feet	1 feet	1 feet
Sample Type				N	N	N	N	N	N	N	N	N	N	N	N
Chlorobenzene				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**1.18**
Chlorobromomethane				0.2 U	1 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane				1 U	0.2 U	0.2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane				0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
cis-1,2-Dichloroethene		11600	590	**81.9**	**14400**	**19200**	**117**	**526**	**33.5**	**0.73**	0.2 U	**0.26**	**37.1**	**3.88**	0.2 U
cis-1,3-Dichloropropene				1 U	0.2 U	0.2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane				0.2 U	1 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene				1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene				0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
m,p-Xylene				0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Methyl ethyl ketone				2 U	10 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methyl tert-butyl ether				**10.4**	0.5 U	0.5 U	0.2 U	**2.56**	0.2 U	**5.17**	**2.4**	0.2 U	**2.42**	0.2 U	**22.2**
Methylene chloride				10 U	20 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene				0.2 U	**44.9**	**14.8**	0.2 U	0.2 U	**2.32**	0.2 U	0.2 U	0.2 U	0.2 U	**9.1**	0.2 U
n-Butylbenzene				0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
n-Propylbenzene				0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
o-Xylene				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.87**	0.2 U
sec-Butylbenzene				0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Styrene				0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
tert-Butylbenzene				0.2 U	0.3 U	0.3 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene				0.2 U	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene				0.2 U	**2.23**	**3.68**	**0.450**	**0.510**	**0.52**	0.2 U	0.2 U	0.2 U	0.2 U	**0.99**	0.2 U
trans-1,2-dichloroethene	140000	11600		0.2 U	**32.6**	**92**	0.2 U	**1.84**	**1.47**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene				0.3 U	0.2 U	0.2 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Trichloroethene	30	45000	21900	**0.380**	**48.7**	**15.5**	0.2 U	**0.220**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane				0.2 U	1 U	1 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	2.4			**48.4**	**1640**	**650**	**596**	**1840**	**97.3**	**1.46**	0.2 U	0.2 U	**87.6**	**19.9**	0.2 U

Notes:
Detected concentration is greater than screening level
Bold = Detected result
U = Compound analyzed, but not detected above detection limit
UB = Compound analyzed, but not detected above estimated detection limit
N = Normal Field Sample
AWQC - FAC = Ambient Water Quality Criteria Freshwater Acute Criteria
AWQC - FCC = Ambient Water Quality Criteria Freshwater Chronic Criteria
-- Results not reported or not applicable
Table contains validated data

Table 4-2
Volatile Organic Compounds in Area 1 Delineation

Location ID	Human Health - Fish Consumption Only	AWQC - FAC	AWQC - FCC	GP207B	GP207B
Sample ID				GP207B-W-1.0	GP207DUP-W-1.0
Sample Date				9/22/2010	9/22/2010
Depth				1 feet	1 feet
Sample Type				N	N
Volatile Organics (µg/l)					
1,1,1,2-Tetrachloroethane				0.2 U	0.2 U
1,1,1-trichloroethane				0.2 U	0.2 U
1,1,2,2-Tetrachloroethane				0.2 U	0.2 U
1,1,2-Trichloroethane				0.2 U	0.2 U
1,1-Dichloroethane				0.2 U	0.2 U
1,1-Dichloroethene				0.2 U	0.2 U
1,1-Dichloropropene				0.3 U	0.3 U
1,2,3-Trichlorobenzene				0.2 U	0.2 U
1,2,3-Trichloropropane				0.2 U	0.2 U
1,2,4-Trichlorobenzene				1 U	1 U
1,2,4-Trimethylbenzene				0.2 U	0.2 U
1,2-Dibromo-3-chloropropane				1 U	1 U
1,2-Dibromoethane				0.2 U	0.2 U
1,2-Dichlorobenzene				0.2 U	0.2 U
1,2-Dichloroethane				0.2 U	0.2 U
1,2-Dichloropropane				1 U	1 U
1,3,5-Trimethylbenzene				0.2 U	0.2 U
1,3-Dichlorobenzene				0.2 U	0.2 U
1,3-Dichloropropane				0.2 U	0.2 U
1,4-Dichlorobenzene				0.2 U	0.2 U
2,2-Dichloropropane				0.2 U	0.2 U
2-Chlorotoluene				0.2 U	0.2 U
2-Hexanone				2 U	2 U
4-Chlorotoluene				0.2 U	0.2 U
4-Isopropyltoluene				0.2 U	0.2 U
4-Methyl-2-pentanone				2 U	2 U
Acetone				10 U	10 U
Acrylonitrile				5 U	5 U
Benzene				0.2 U	0.2 U
Bromobenzene				0.2 U	0.2 U
Bromodichloromethane				0.2 U	0.2 U
Bromoform				0.2 U	0.2 U
Bromomethane				0.2 U	0.2 U
Carbon disulfide				0.2 U	0.2 U
Carbon tetrachloride				0.2 U	0.2 U

Table 4-2
Volatile Organic Compounds in Area 1 Delineation

Location ID	Human Health - Fish Consumption Only	AWQC - FAC	AWQC - FCC	GP207B	GP207B
Sample ID				GP207B-W-1.0	GP207DUP-W-1.0
Sample Date				9/22/2010	9/22/2010
Depth				1 feet	1 feet
Sample Type				N	N
Chlorobenzene				0.2 U	0.2 U
Chlorobromomethane				0.2 U	0.2 U
Chloroethane				1 U	1 U
Chloroform				0.2 U	0.2 U
Chloromethane				0.3 U	0.3 U
cis-1,2-Dichloroethene		11600	590	0.2 U	0.2 U
cis-1,3-Dichloropropene				1 U	1 U
Dibromochloromethane				0.2 U	0.2 U
Dibromomethane				0.2 U	0.2 U
Dichlorodifluoromethane				0.2 U	0.2 U
Ethylbenzene				0.2 U	0.2 U
Hexachlorobutadiene				1 U	1 U
Isopropylbenzene				0.2 U	0.2 U
m,p-Xylene				0.4 U	0.4 U
Methyl ethyl ketone				2 U	2 U
Methyl tert-butyl ether				0.2 U	0.2 U
Methylene chloride				10 U	10 U
Naphthalene				0.2 U	0.26 U
n-Butylbenzene				0.2 U	0.2 U
n-Propylbenzene				0.2 U	0.2 U
o-Xylene				0.2 U	0.2 U
sec-Butylbenzene				0.2 U	0.2 U
Styrene				0.2 U	0.2 U
tert-Butylbenzene				0.2 U	0.2 U
Tetrachloroethene				0.2 U	0.2 U
Toluene				**0.52**	**0.48**
trans-1,2-dichloroethene	140000	11600		0.2 U	0.2 U
trans-1,3-Dichloropropene				0.3 U	0.3 U
Trichloroethene	30	45000	21900	0.2 U	0.2 U
Trichlorofluoromethane				0.2 U	0.2 U
Vinyl chloride	2.4			**0.29**	0.2 U

Notes:
Detected concentration is greater than screening level
Bold = Detected result
U = Compound analyzed, but not detected above detection limit
UB = Compound analyzed, but not detected above estimated detection limit
N = Normal Field Sample
AWQC - FAC = Ambient Water Quality Criteria Freshwater Acute Criteria
AWQC - FCC = Ambient Water Quality Criteria Freshwater Chronic Criteria
-- Results not reported or not applicable
Table contains validated data

Table 4-3
TCE and Breakdown Products

Location ID	Human Health - Fish Consumption Only	AWQC - FAC	AWQC - FCC	GP30	GP30	GP30	GP30	GP32	GP32	GP32	GP32	GP61	GP61	GP38	GP38
Sample ID				GP30-W-25	GP30-W-50	GP30-W-25.0	GP30-W-50.0	GP32-W-2	GP32-W-24	GP32-W-2.0	GP32-W-24.0	GP61-W-5	GP61-W-5.0	GP38-W-1	GP38-W-1.0
Sample Date				10/25/2004	10/25/2004	9/15/2010	9/15/2010	10/28/2004	10/28/2004	9/16/2010	9/16/2010	5/18/2005	9/17/2010	5/9/2005	9/21/2010
Depth				25 feet	50 feet	25 feet	50 feet	2 feet	24 feet	2 feet	24 feet	5 feet	5 feet	1 feet	1 feet
Sample Type				N	N	N	N	N	N	N	N	N	N	N	N
Volatile Organics (µg/l)															
1,1-Dichloroethene				**14.3**	**94.2**	0.2 U	0.2 U	**23.6**	**4.8**	0.2 U	0.2 U	**5.49**	0.2 U	**5.67**	**0.230**
cis-1,2-Dichloroethene		11600	590	**1900**	**16600**	**380**	**103**	**8490**	**1170**	**0.37**	**1.5**	**2960**	**105**	**2740**	**81.9**
trans-1,2-dichloroethene	140000	11600		**3.86**	**60.6**	0.2 U	0.2 U	**8.64**	**1.68**	0.2 U	0.2 U	**22.5**	0.2 U	**6.61**	0.2 U
Trichloroethene	30	45000	21900	**8.94**	**101**	**0.79**	**2**	**1.03**	0.2 U	0.2 U	0.2 U	**1.85**	0.51	**0.76**	**0.380**
Vinyl chloride	2.4			**3330**	**2650**	**1880**	**600**	**11900**	**2110**	**0.95**	**7.34**	**863**	**699**	**1090**	**48.4**

Notes:

	Detected concentration is greater than screening level
Bold	Detected result
U	Compound analyzed, but not detected above detection limit
N	Normal Field Sample
AWQC - FAC	Ambient Water Quality Criteria Freshwater Acute Criteria
AWQC - FCC	Ambient Water Quality Criteria Freshwater Chronic Criteria
feet	Feet below mudline
--	Results not reported or not applicable

Table contains validated data

Table 4-3
TCE and Breakdown Products

Location ID	Human Health - Fish Consumption Only	AWQC - FAC	AWQC - FCC	GP65	GP65	GP65	GP65	GP200	GP201	GP202	GP203	GP204	GP205	GP206	GP207B	GP207B
Sample ID				GP65-W-1	GP65-W-3	GP65-W-1.0	GP65-W-3.0	GP200-W-1.0	GP201-W-1.0	GP202-W-1.0	GP203-W-1.0	GP204-W-1.0	GP205-W-1.0	GP206-W-1.0	GP207B-W-1.0	GP207DUP-W-1.0
Sample Date				5/19/2005	5/19/2005	9/21/2010	9/21/2010	9/14/2010	9/20/2010	9/20/2010	9/17/2010	9/20/2010	9/14/2010	9/14/2010	9/22/2010	9/22/2010
Depth				1 feet	3 feet	1 feet	3 feet	1 feet	1 feet	1 feet	1 feet	1 feet	1 feet	1 feet	1 feet	1 feet
Sample Type				**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**
Volatile Organics (µg/l)																
1,1-Dichloroethene				**40.5**	**27.9**	0.2 U	**2.20**	**2.53**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene		11600	590	**14400**	**19200**	**117**	**526**	**33.5**	**0.73**	0.2 U	**0.26**	**37.1**	**3.88**	0.2 U	0.2 U	0.2 U
trans-1,2-dichloroethene	140000	11600		**32.6**	**92**	0.2 U	**1.84**	**1.47**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	30	45000	21900	**48.7**	**15.5**	0.2 U	**0.220**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	2.4			**1640**	**650**	**596**	**1840**	**97.3**	**1.46**	0.2 U	0.2 U	**87.6**	**19.9**	0.2 U	**0.29**	0.2 U

Notes:

	Detected concentration is greater than screening level
Bold	Detected result
U	Compound analyzed, but not detected above detection limit
N	Normal Field Sample
AWQC - FAC	Ambient Water Quality Criteria Freshwater Acute Criteria
AWQC - FCC	Ambient Water Quality Criteria Freshwater Chronic Criteria
feet	Feet below mudline
--	Results not reported or not applicable

Table contains validated data

Table 4-4
Field Parameters in Reconnaissance Groundwater Samples

Location ID	GP30	GP30	GP32	GP32	GP61	GP38	GP65	GP65	GP200	GP201	GP202
Sample ID	GP30-W-25.0	GP30-W-50.0	GP32-W-2.0	GP32-W-24.0	GP61-W-5.0	GP38-W-1.0	GP65-W-1.0	GP65-W-3.0	GP200-W-1.0	GP201-W-1.0	GP202-W-1.0
Sample Date	9/15/2010	9/15/2010	9/16/2010	9/16/2010	9/17/2010	9/21/2010	9/21/2010	9/21/2010	9/14/2010	9/20/2010	9/20/2010
Depth	25 feet	50 feet	2 feet	24 feet	5 feet	1 feet	1 feet	3 feet	1 feet	1 feet	1 feet
Sample Type	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**	**N**
Field Parameters											
Easting	7624838.811	7624838.811	7624975.666	7624975.666	7624908.554	7624961.426	7624918.390	7624918.390	7624860.212	7624857.685	7624931.978
Northing	705254.730	705254.730	705261.147	705261.147	705385.235	705314.878	705430.008	705430.008	705435.013	705502.173	705502.900
Time (Hours:Minutes Pacific Daylight Time)	11:40	15:16	13:25	13:25	14:36	13:25	10:30	13:25	13:50	15:20	13:20
Top of Casing (feet)	44.0	44.0	48.0	48.0	52.0	54.0	52.0	52.0	48.0	52.0	48.0
Water Level (feet)	2.69	2.00	3.84	3.84	4.05	4.46	3.81	4.79	3.85	4.10	3.84
Mudline (feet)	41.31	42.00	44.16	44.16	47.95	49.54	48.29	47.23	44.15	47.90	44.16
Water Level After Purging (feet)	2.70	2.10	3.86	3.86	4.06	4.49	3.86	4.21	3.84	4.12	3.84
Ferrous Iron (mg/L)	4.8	3.8	4.8	5.2	5.9	5.0	--	6.0	4.0	6.0	--
pH (standard units)	6.68	6.73	6.45	6.26	6.72	7.02	7.06	7.00	6.78	6.90	6.71
Temperature (°C)	18.64	19.90	19.36	19.11	19.35	18.11	18.34	19.27	19.16	18.59	19.36
Specific Conductivity (µS/cm)	727	741	781	678	685	585	721	675	699	1,157	1,824
Dissolved Oxygen (mg/L)	0.28	0.10	0.18	0.28	0.18	0.17	0.16	0.13	0.20	0.20	0.26
ORP (mV)	-96.7	-119.0	-101.6	-64.3	-100.2	-100.2	-124.3	-119.9	-126.4	-123.2	-104.2
Turbidity (NTUs)	63.24	127.0	65.5	304.8	197.1	5.96	14.41	50.54	13.85	7.56	31.16

Notes:
NA = not available/not applicable
°C = degrees Celsius
mg/L = milligrams per liter (parts per million)
mV = millivolts
NTU = nephelometric turbidity unit
µS/cm = microsiemens per centimeter
N = Normal Field Sample

Table 4-4
Field Parameters in Reconnaissance Groundwater Samples

Location ID	GP203	GP204	GP205	GP206	GP207B
Sample ID	GP203-W-1.0	GP204-W-1.0	GP205-W-1.0	GP206-W-1.0	GP207B-W-1.0
Sample Date	9/17/2010	9/20/2010	9/14/2010	9/14/2010	9/22/2010
Depth	1 feet	1 feet	1 feet	1 feet	1 feet
Sample Type	**N**	**N**	**N**	**N**	**N**
Field Parameters					
Easting	7624992.049	7625005.095	7625041.362	7625130.128	7625127.202
Northing	705470.292	705411.965	705260.411	705226.364	705128.540
Time (Hours:Minutes Pacific Daylight Time)	11:50	10:40	12:00	9:30	10:15
Top of Casing (feet)	52.0	52.0	48.0	52.0	49.1
Water Level (feet)	4.31	3.20	3.85	3.20	3.73
Mudline (feet)	47.39	48.80	44.15	44.80	45.37
Water Level After Purging (feet)	--	3.61	3.85	3.19	3.74
Ferrous Iron (mg/L)	--	6.0	5.5	6.0	--
pH (standard units)	6.96	6.80	6.60	6.94	7.00
Temperature (°C)	19.45	18.40	18.39	18.33	17.77
Specific Conductivity (µS/cm)	2,049	1,744	772	649	667
Dissolved Oxygen (mg/L)	0.18	0.22	0.39	0.40	0.35
ORP (mV)	-139.4	-118.1	-91.8	-140.7	-83.9
Turbidity (NTUs)	15.34	14.59	14.00	83.94	13.03

Notes:
NA = not available/not applicable
°C = degrees Celsius
mg/L = milligrams per liter (parts per million)
mV = millivolts
NTU = nephelometric turbidity unit
µS/cm = microsiemens per centimeter
N = Normal Field Sample

Table 5-1a
Summary of Data Gaps Sediment and Soil Field QA/QC Sample Results

Sample ID	Corresponding Samples	Associated Sample Method	Analyses[1]	Blank Detected Constituents
Rinse Blanks				
DGS-RBSG-101013	All surface sediment grab samples from the initial collection (October 2010)	Van Veen grab	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx	None
DGS-RBSG-110421	All surface sediment grab samples from the re-sampling collection (April 2011)	Van Veen grab	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx	Toluene (0.3 µg/L)
DGS-RB-101011	All sediment core samples	Vibracore	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx	None
GSM-RB-100929	All riverbank boring samples	Rotosonic Drill	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx	None
Field Blanks				
DGS-FBSG-101013	All surface sediment grab samples from the initial collection (October 2010)	Van Veen grab	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx	None
DGS-FBSG-110421	All surface sediment grab samples from the re-sampling collection (April 2011)	Van Veen grab	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx	Toluene (0.3 µg/L)
DGS-FB-101011	All sediment core samples	Vibracore	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx	None
GST-FB-101007	All riverbank boring samples	Rotosonic Drill	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx	None
Trip Blanks				
DGS-TBSG-101012	Surface grab VOC samples collected on 10/12/2010	Van Veen grab	VOCs	None
DGS-TBSG-101013	Surface grab VOC samples collected on 10/13/2010	Van Veen grab	VOCs	None
DGS-TBSG-101014	Surface grab VOC samples collected on 10/14/2010	Van Veen grab	VOCs	None
DGS-TB-110418	Surface grab VOC samples collected on 04/18/2011	Van Veen grab	VOCs	None
DGS-TB-110419	Surface grab VOC samples collected on 04/19/2011	Van Veen grab	VOCs	None
DGS-TBSG-110420	Surface grab VOC samples collected on 04/20/2011	Van Veen grab	VOCs	None
DGS-TBSG-110421	Surface grab VOC samples collected on 04/21/2011	Van Veen grab	VOCs	None
DGS-TB-101005	Sediment VOC samples collected on 10/5/2010	Vibracore	VOCs	None
Trip Blanks	Sediment VOC samples collected on 10/6/2010	Vibracore	VOCs	None
DGS-TB-101007-01	Sediment VOC samples collected on 10/7/2010	Vibracore	VOCs	None
DGS-TB-100810-02	Sediment VOC samples collected on 10/8/2010	Vibracore	VOCs	None
DGS-TB-101011-02	Sediment VOC samples collected on 10/11/2010	Vibracore	VOCs	None
DGS-TB-101012-04	Sediment VOC samples collected on 10/12/2010	Vibracore	VOCs	None
TB1	Soil VOC samples collected on 9/27/2010	Rotosonic Drill	VOCs	None
TB2	Soil VOC samples collected on 9/28/2010	Rotosonic Drill	VOCs	None
TB3	Soil VOC samples collected on 9/29/2010	Rotosonic Drill	VOCs	None
GST-TBSO-101001	Soil VOC samples collected on 10/1/2010	Rotosonic Drill	VOCs	None
GST-TBSO-101004	Soil VOC samples collected on 10/4/2010	Rotosonic Drill	VOCs	None
GST-TBSO-101005	GST-03 VOC samples collected on 10/5/2010	Rotosonic Drill	VOCs	None
GST-TBSO2-101005	GST-05 (0-1 and 5-10) VOC samples collected on 10/5/2010	Rotosonic Drill	VOCs	None
GST-TBSO-101006	Soil VOC samples collected on 10/6/2010	Rotosonic Drill	VOCs	None
GST-TBSO-101007	Soil VOC samples collected on 10/7/2010	Rotosonic Drill	VOCs	None
GST-TBSO-101008	Soil VOC samples collected on 10/8/2010	Rotosonic Drill	VOCs	None
GST-TBSO-101011	Soil VOC samples collected on 10/11/2010	Rotosonic Drill	VOCs	None
GST-TBSO-101012	Soil VOC samples collected on 10/12/2010	Rotosonic Drill	VOCs	None
GSM-TBSO-101015	Soil VOC samples collected on 10/15/2010	Rotosonic Drill	VOCs	None
Field Duplicates				**RPD outside acceptable range[2] for the following analytes/constituents**
DGS-81SG-101012	DGS-31SG-101012	Van Veen grab	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx, TOC, TS, Ammonia, Sulfide, GS	Acenaphthylene
DGS-62SG-110418	DGS-12SG-110418	Van Veen grab	SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx, TOC, TS, TVS, Ammonia, Sulfide, GS	Acenaphthylene
DGS-66SG-110418	DGS-16SG-110418	Van Veen grab	VOCs	None

Table 5-1a
Summary of Data Gaps Sediment and Soil Field QA/QC Sample Results

Sample ID	Corresponding Samples	Associated Sample Method	Analyses[1]	Blank Detected Constituents
DGS-97SG-110420	DGS-47SG-110420	Van Veen grab	VOCs, Cyanide, TS, Ammonia, Sulfide, VPH, EPH	Cyanide
DGS-98SG-110420	DGS-48SG-110420	Van Veen grab	SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx, TOC, TS, TVS	Acenapthylene; Benzo(a)anthracene; Indeno(1,2,3-cd)pyrene; Dibenzo(a,h)anthracene; Acenaphthalene; Phenanthrene; Anthracene; Fluoronathene; Pyrene; Chrysene; Benzo(a)pyrene; Benzo(g,h,i)perylene; Benzo(b,j,k)fluoranthene; Perylene; Fluorene, 1-Methylnaphthalene; 2-Methylnaphthalene; Naphthalene
DGS-53SC-0408-101005	DGS-03SC-0408-101005	Vibracore	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx, TOC, TS, GS	Acenapthylene; Benzo(a)anthracene; Indeno(1,2,3-cd)pyrene; Dibenzo(a,h)anthracene; Acenaphthalene; Phenanthrene; Anthracene; Fluoronathene; Pyrene; Chrysene; Benzo(a)pyrene; Benzo(g,h,i)perylene; Benzo(b,j,k)fluoranthene; Ethylbenzene; 4,4,-DDT
DGS-72SC-0408-101012	DGS-22SC-0408-101012	Vibracore	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx, TOC, TS, GS	None
DGS-75SC-0812-101007	DGS-25SC-0812-101007	Vibracore	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx, TOC, TS, GS	None
DGS-87SC-0104-1010115	DGS-37SC-0104-1010115	Vibracore	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx, TOC, TS, GS	None
GST-52S0-25-30-101004	GST-02S0-25-30-101004	Rotosonic Drill	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx, TOC, TS, MC, VPH, EPH	Naphthalene; 2-Methylnaphthalene; 1-Methylnaphthalene; Benzene; C10-C12 Aromatics; C12-C16 Aromatics; C16-C21 Aromatics; C21-C34 Aromatics
GST-61SO-39-44-101011	GST-11SO-39-44-101011	Rotosonic Drill	VOCs, SVOCs, PCBs, Pesticides, Metals, Cyanide, TPH-Dx, TOC, TS, MC, VPH, EPH	None

Table 5-1a
Summary of Data Gaps Sediment and Soil Field QA/QC Sample Results

Notes:
µg/L = Micrograms per liter
EPH = Extractable petroleum hydrocarbons
GS = Grainsize
MC = Moisture Content
PCB = Polychlorinated biphe
SVOC = Semivolatile organic compound
TOC = Total organic carbon
TS = Total Solids
TPH-Dx = Diesel range total petroleum hydrocarbon
TVS = Total Volatile Solids
VOC = Volatile organic compound
VPH = Volatile petroleum hydrocarbons

Footnotes:
[1] = see FSP Table 1-1 for individual analytes

[2] = A criteria of +/-50% difference was arbitrarily assigned for the purposes of evaluating field duplicates. This criteria was not applied to sample results less than 5 times the reporting limit.

Table 5-1b
Summary of Data Gaps TZW and Groundwater Field QA/QC Sample Results

Sample ID	Corresponding Samples	Associated Sample Method	Analyses[1]	Blank Detected Constituents
Trip Blanks				
Trip Blank 1009081	Transition Zone Water VOC samples collected on 9/14/2010.	Transition Zone Water Sample	VOCs	None
Trip Blank 1009120-07	Transition Zone Water VOC samples collected on 9/15/2010, 9/16/2010, and 9/17/2010.	Transition Zone Water Sample	VOCs	Chloromethane (0.710 ug/L)
Trip Blank 1009173-09	Transition Zone Water VOC samples collected on 9/21/2010, 9/22/2010 and 9/23/2010.	Transition Zone Water Sample	VOCs	None
Field Duplicates				**RPD outside acceptable range[2] for the following analytes/constituents**
GP207DUP-W-1.0	GP207	Transition Zone Water Sample	VOCs	None

Notes:
µg/L = micrograms per liter

RPD = Relative percent deviation
VOC = Volatile organic compound

Footnotes:
[1] = see FSP Table 1-7 for individual analytes

[2] = A criteria of +/-50% difference was arbitrarily assigned for the purposes of evaluating field duplicates. This criteria was not applied to sample results less than 5 times the reporting limit.

Table 5-2
Summary of Data Gaps Rejected and Incomplete Data

Qualified Data

Sample ID	Qualifier	Analyses[1]	Qualifier Reason
DGS-07SC-0113.4-101012	R	Non-detect VOCs[1]	Analyzed past hold time
DGS-13SC-0006-101005	R	Non-detect VOCs[1]	
DGS-18SC-015.5-101008	R	Non-detect VOCs[1]	
DGS-26SC-015.4-101011	R	Non-detect VOCs[1]	
DGS-31SC-011.9-101011	R	Pyridine[1]	Low MS/MSD % Recovery
DGS-17SG-101013	R	Hexachlorobenzene	
DGS-08SG-110418	R	4,4'-DDT	High 4,4'-DDT breakdowns % Recovery
DGS-09SG-110418	R	4,4'-DDT	
DGS-16SG-110418	R	4,4'-DDT	

Notes:

[1] = These results were not part of the primary Data Gaps investigation- the tests were added to provide additional information regarding baseline concentrations.

MS/MSD = Matrix spike/matrix spike duplicate

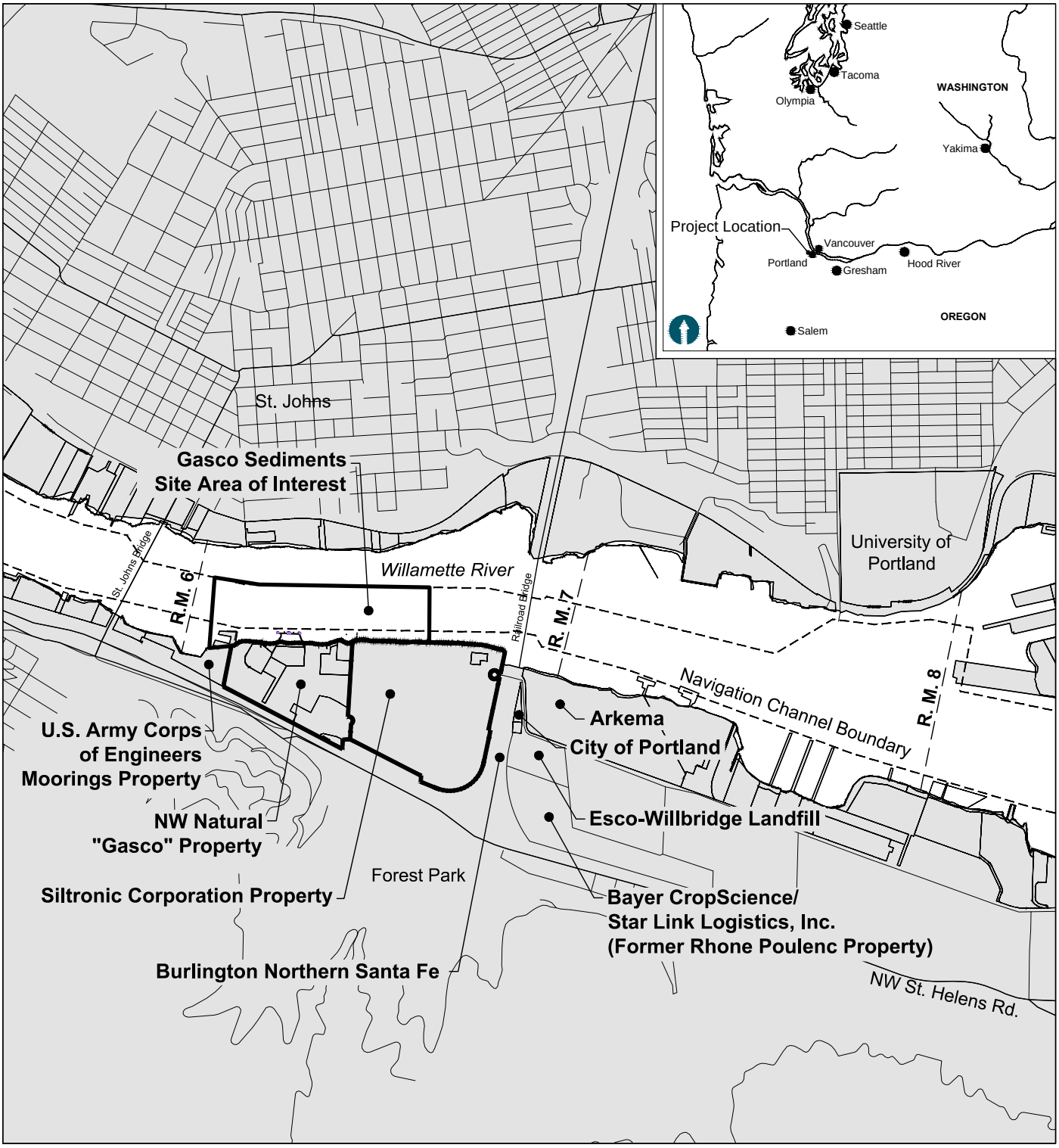
Incomplete Data

Sample ID	Result	Analyses	Reason
GST-02SO-15-20-101004	NA	Grainsize	Matrix issues
GST-02SO-20-25-101004	NA	Grainsize	Matrix issues
GST-03SO-0-5-101005	NA	Grainsize	Matrix issues
GST-03SO-15-20-101005	NA	Grainsize	Matrix issues
GST-04SO-0-5-101006	NA	Grainsize	Matrix issues
GST-04SO-5-10-101006	NA	Grainsize	Matrix issues
DGS-13SC-0001-101005	NA	Grainsize	Insufficient sample volume
DGS-18SC-0001-101008	NA	Grainsize	Insufficient sample volume

Notes:

NA = Not analyzed

FIGURES



K:\Projects\0029-NW Natural Gas Co\Gasco Sediments\EECA and Data Report\0029-RP-002 VMAPS.dwg FIG 1-1 DG

May 07, 2012 12:47pm heriksen

Figure 1-1
Site Vicinity Map
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action

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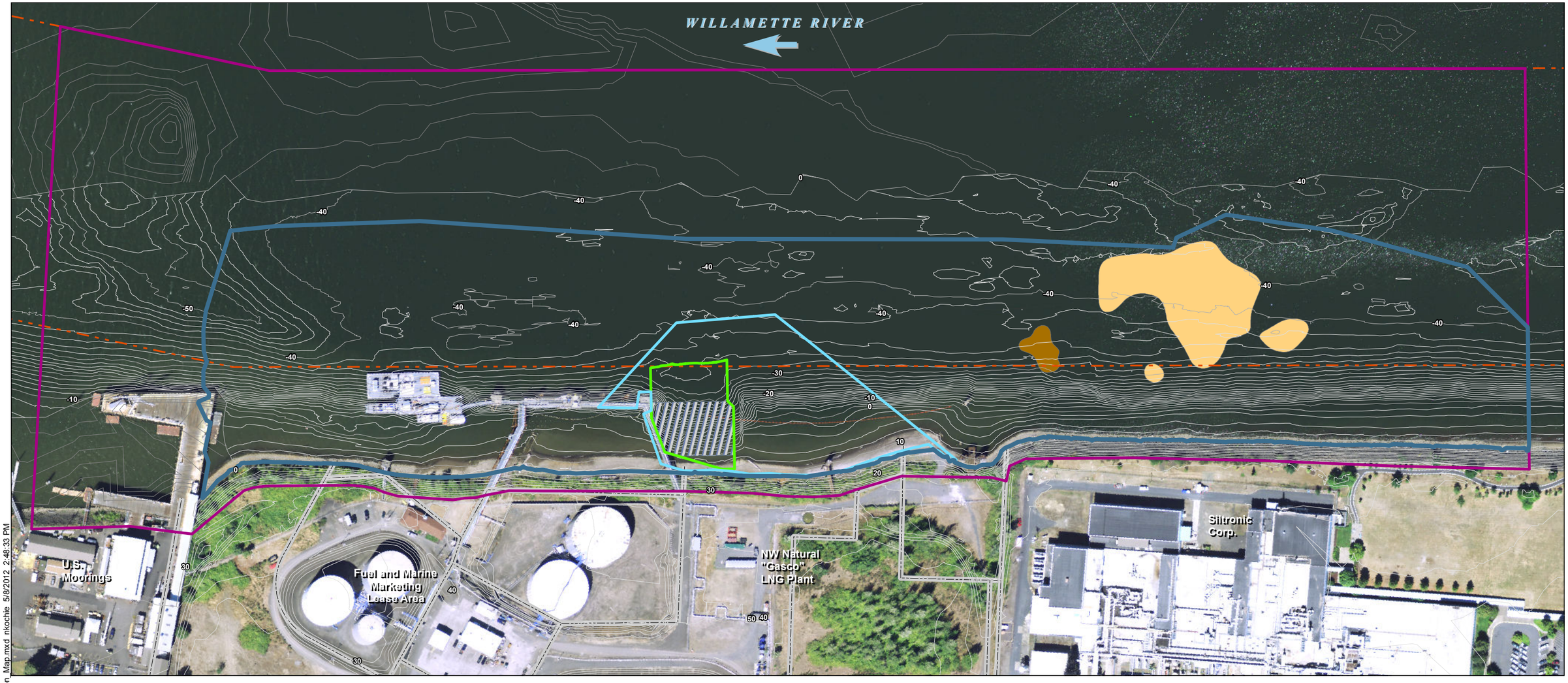

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Initial Project Area

Tar Body Removal Action 6-inch Fringe Cover Placement

Tar Body Removal Action Area (RAPP [Anchor 2005])

Tar Body Removal Action Pilot Cap

Area 1 - Detected CVOC Concentrations in TZW

Area 2 - Detected CVOCs in TZW and 1 Subsurface Sediment Location

Navigation Channel

Lower Willemette Group Bathymetry by David Evans and Associates

NOTES:
1. Area 1 zone of impact provided by MFA via e-mail on October 17, 2011.
2. Area 2 zone of impact is as shown in Figure 1 of the Statement of Work.
3. Arrow indicates direction of flow of river.
4. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
5. Vertical datum is NAVD88.
6. Aerial imagery from July 2007.
7. Source of bathymetry: Blue Water Engineering, Inc. dated April 2011 and David Evan and Associates, Inc. dated 2009.
8. Source of upland topography: Geometrix NW, dated May 2011 and Spencer Gross, Inc. dated December 2006.

Feet
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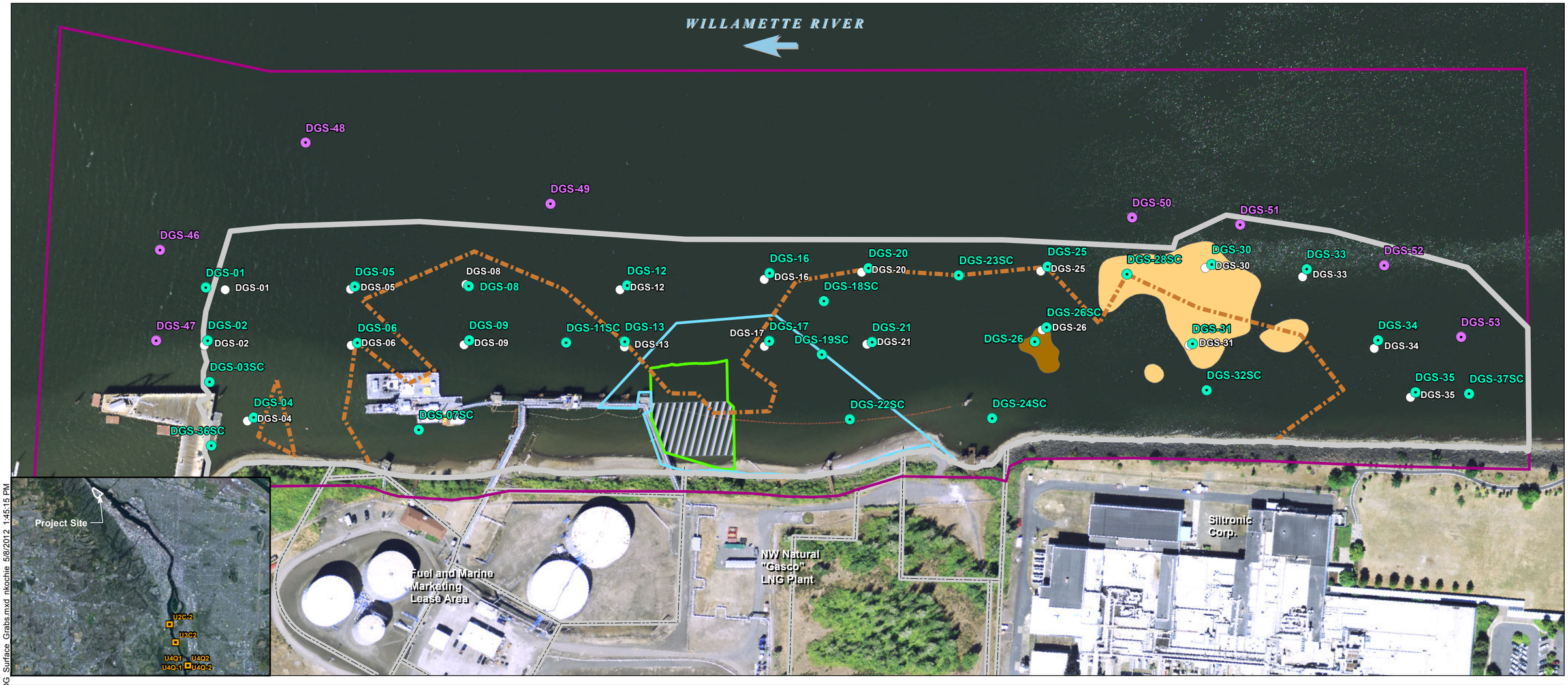
Figure 1-2
Location Map
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action



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- Initial Sample Location (October 2010)
- Retest Surface Sediment Grab Location (April 2011)
- Retest Surface Sediment Grab Contingency Location (April 2011)
- Surface Sediment Reference Location
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Initial Project Area
- Substantial Product Area
- Area 1 - Detected CVOC Concentrations in TZW
- Area 2 - Detected CVOCs in TZW and 1 Subsurface Sediment Location
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action Pilot Cap

NOTES:
1. Area 1 zone of impact provided by Maul Foster & Alongi, Inc. via e-mail on October 17, 2011.
2. Area 2 zone of impact is as shown in Figure 1 of the Statement of Work.
3. CVOC = Chlorinated Volatile Organic Compound.
4. TZW = Transition Zone Water.
5. Horizontal datum is North American Datum of 1983 High Accuracy Reference Network Oregon State Plane North, Intl. Feet.
6. Vertical datum is North American Vertical Datum of 1988.
7. Aerial imagery from July 2007.
8. Arrow indicates direction of flow of river.

Feet
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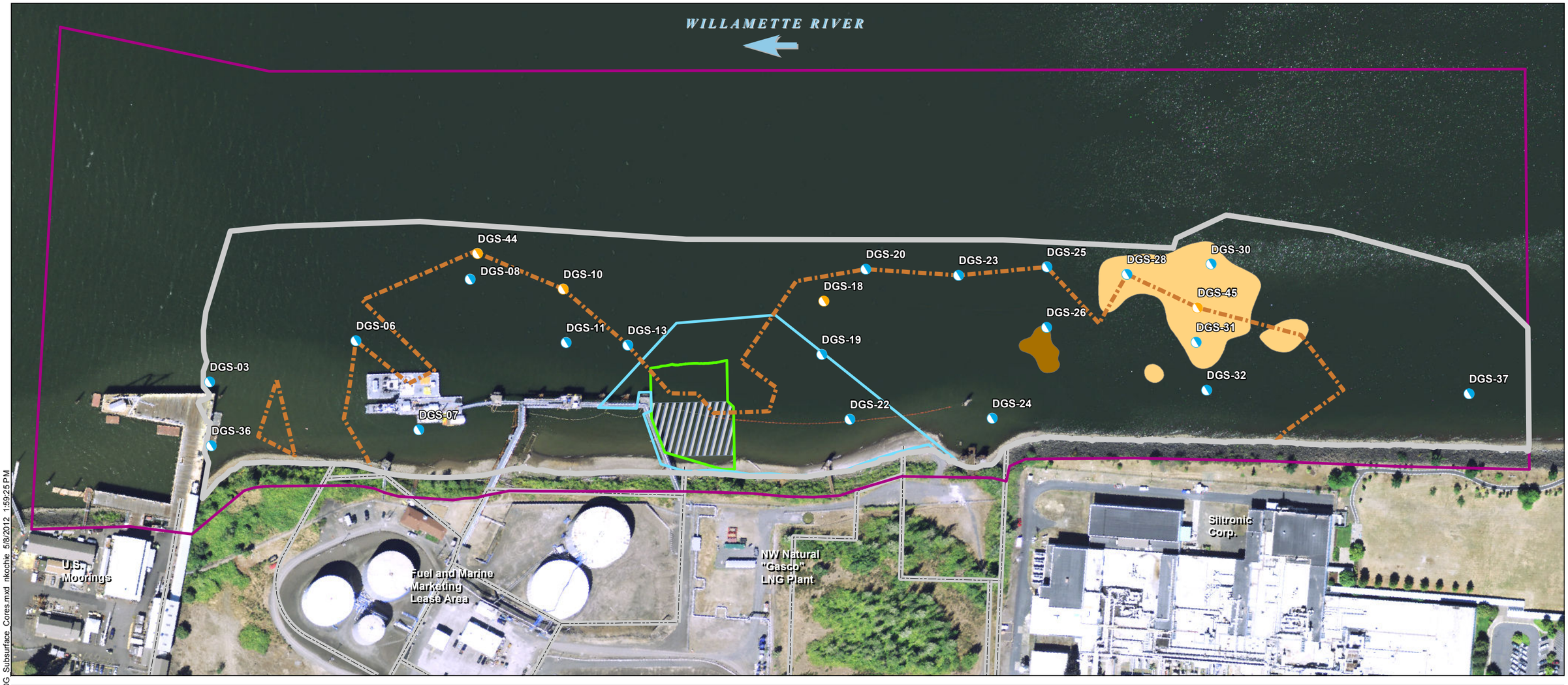
Figure 2-1
Data Gaps Surface Sediment Grab Sample Locations
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action



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- Subsurface Sediment Core Location
- Subsurface Sediment Contingency Core Location
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Initial Project Area
- Substantial Product Area
- Area 1 - Detected CVOC Concentrations in TZW
- Area 2 - Detected CVOCs in TZW and 1 Subsurface Sediment Location
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action Pilot Cap

NOTES:
1. Area 1 zone of impact provided by Maul Foster & Alongi, Inc. via e-mail on October 17, 2011.
2. Area 2 zone of impact is as shown in Figure 1 of the Statement of Work.
3. CVOC = Chlorinated Volatile Organic Compound.
4. TZW = Transition Zone Water.
5. Horizontal datum is North American Datum of 1983 High Accuracy Reference Network Oregon State Plane North, Intl. Feet.
6. Vertical datum is North American Vertical Datum of 1988.
7. Aerial imagery from July 2007.
8. Arrow indicates direction of flow of river.

Feet
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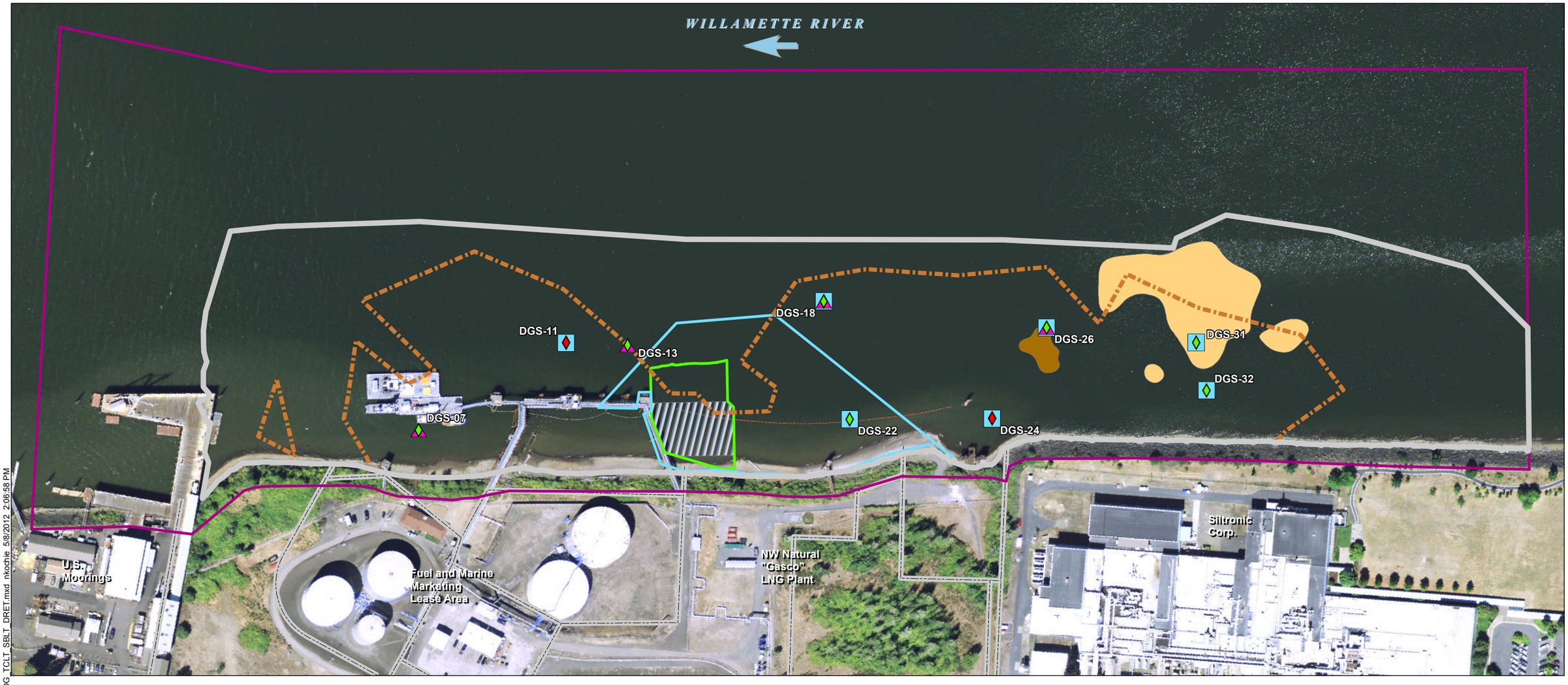
Figure 2-2
Data Gaps Subsurface Sediment Core Locations
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action



TCLP Waste Characterization Sample Location

Waste Characterization Sample Location With TCLP Exceedance

Sequential Batch Leachate Test Sample Location

Dredging Elutriate Test Sample Location

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Initial Project Area

Substantial Product Area

Area 1 - Detected CVOC Concentrations in TZW

Area 2 - Detected CVOCs in TZW and 1 Subsurface Sediment Location

Tar Body Removal Action 6-inch Fringe Cover Placement

Tar Body Removal Action Area (RAPP [Anchor 2005])

Tar Body Removal Action Pilot Cap

NOTES:
1. TCLP = Toxic Characteristic Leaching Procedure.
2. Area 1 zone of impact provided by Maul Foster & Alongi, Inc. via e-mail on October 17, 2011.
3. Area 2 zone of impact is as shown in Figure 1 of the Statement of Work.
4. CVOC = Chlorinated Volatile Organic Compound.
5. TZW = Transition Zone Water.
6. Horizontal datum is North American Datum of 1983 High Accuracy Reference Network Oregon State Plane North, Intl. Feet.
7. Vertical datum is North American Vertical Datum of 1988.
8. Aerial imagery from July 2007.
9. Arrow indicates direction of flow of river.

Feet
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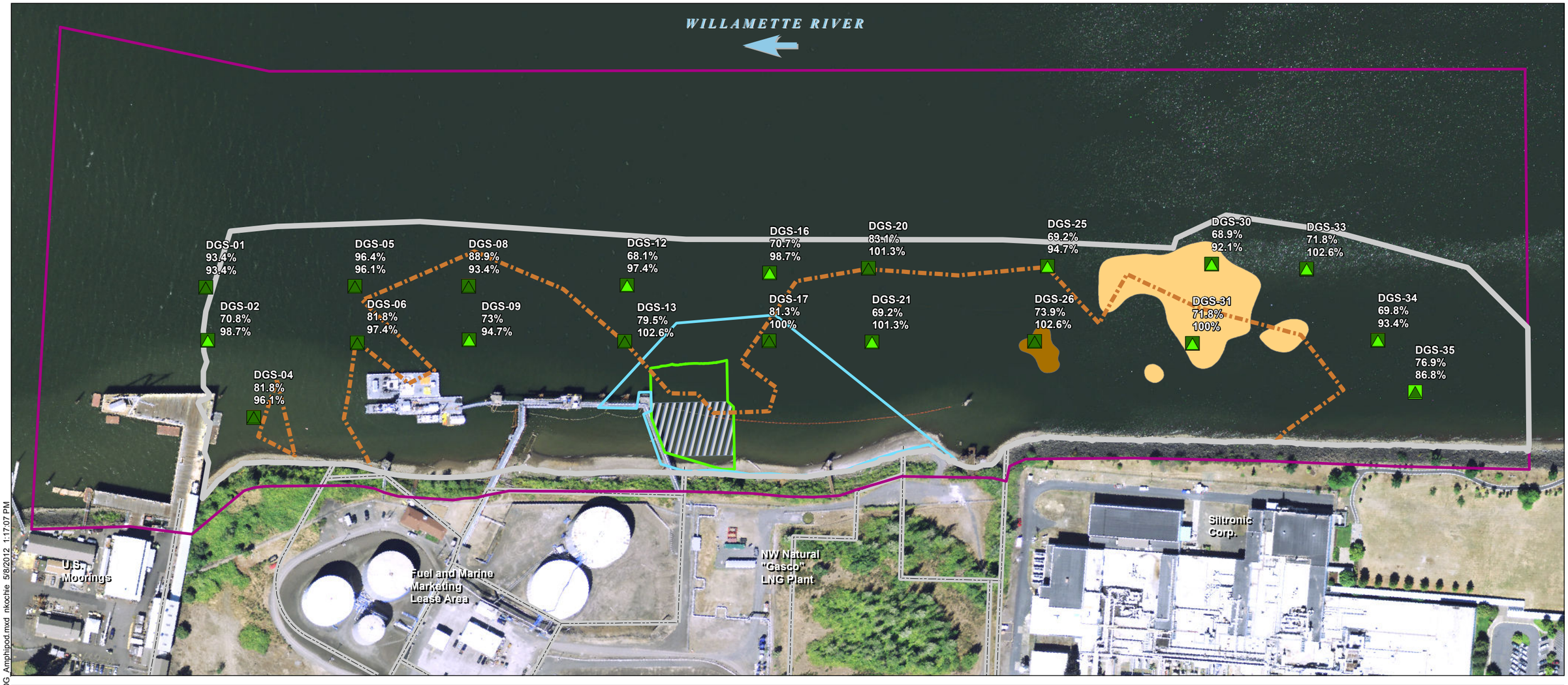
Figure 2-3
Data Gaps TCLP/DRET/SBLT Sample Locations and Results
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action



Control Adjusted Growth
- Level 0 (non-toxic)
- Level 1 (non-toxic)
- Level 2 (uncertain)
- Level 3 (toxic)

Control Adjusted Growth
- Level 0 (non-toxic)
- Level 1 (non-toxic)
- Level 2 (uncertain)
- Level 3 (toxic)

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Initial Project Area
- Substantial Product Area
- Area 1 - Detected CVOC Concentrations in TZW
- Area 2 - Detected CVOCs in TZW and 1 Subsurface Sediment Location
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action Pilot Cap

NOTES:
1. Area 1 zone of impact provided by Maul Foster & Alongi, Inc. via e-mail on October 17, 2011.
2. Area 2 zone of impact is as shown in Figure 1 of the Statement of Work.
3. CVOC = Chlorinated Volatile Organic Compound.
4. TZW = Transition Zone Water.
5. Horizontal datum is North American Datum of 1983 High Accuracy Reference Network Oregon State Plane North, Intl. Feet.
6. Vertical datum is North American Vertical Datum of 1988.
7. Aerial imagery from July 2007.
8. Arrow indicates direction of flow of river.

Feet
0 100 200 300 400

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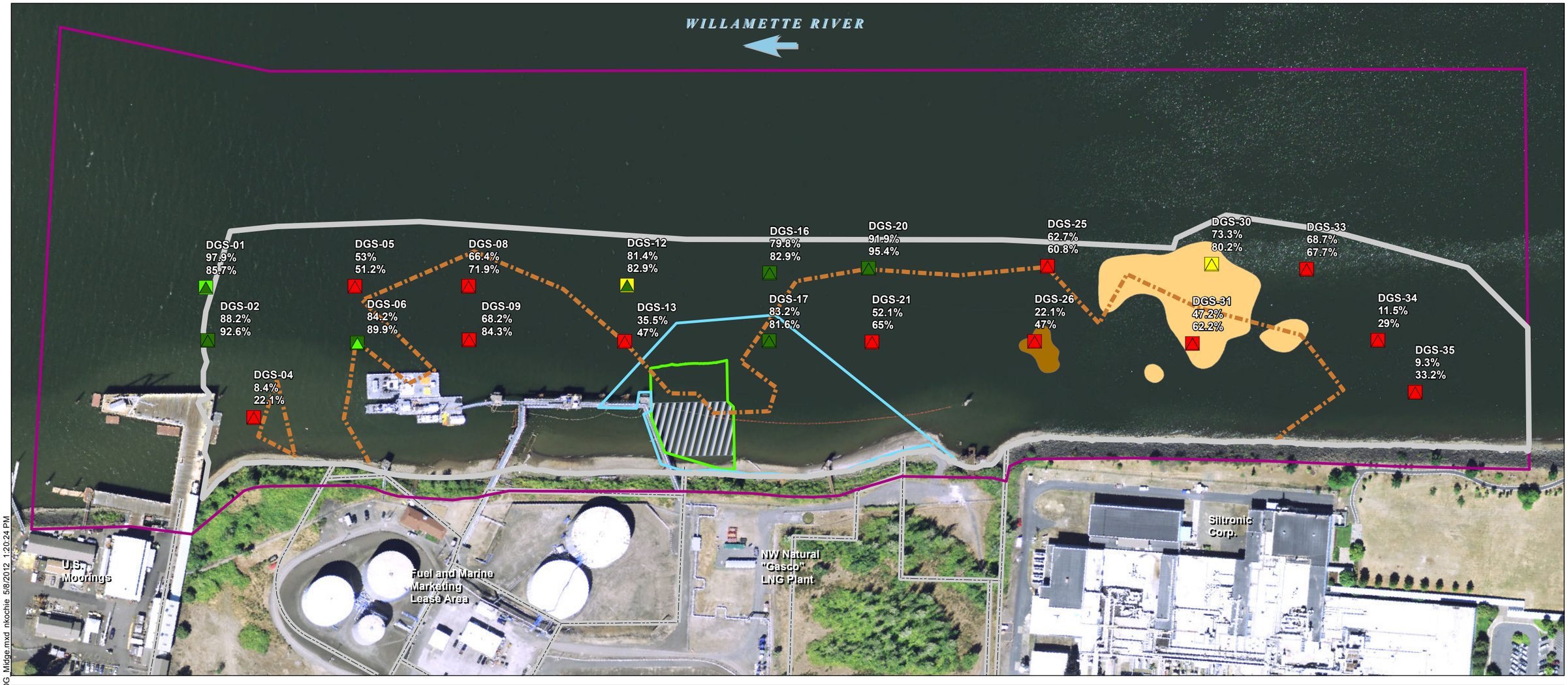
Figure 2-4
Data Gaps Surface Sediment Amphipod Benthic Toxicity Results
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action



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Control Adjusted Growth
- Level 0 (non-toxic)
- Level 1 (non-toxic)
- Level 2 (uncertain)
- Level 3 (toxic)

Control Adjusted Growth
- Level 0 (non-toxic)
- Level 1 (non-toxic)
- Level 2 (uncertain)
- Level 3 (toxic)

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Initial Project Area
- Substantial Product Area
- Area 1 - Detected CVOC Concentrations in TZW
- Area 2 - Detected CVOCs in TZW and 1 Subsurface Sediment Location
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action Pilot Cap

NOTES:
1. Area 1 zone of impact provided by Maul Foster & Alongi, Inc. via e-mail on October 17, 2011.
2. Area 2 zone of impact is as shown in Figure 1 of the Statement of Work.
3. CVOC = Chlorinated Volatile Organic Compound.
4. TZW = Transition Zone Water.
5. Horizontal datum is North American Datum of 1983 High Accuracy Reference Network Oregon State Plane North, Intl. Feet.
6. Vertical datum is North American Vertical Datum of 1988.
7. Aerial imagery from July 2007.
8. Arrow indicates direction of flow of river.

Feet
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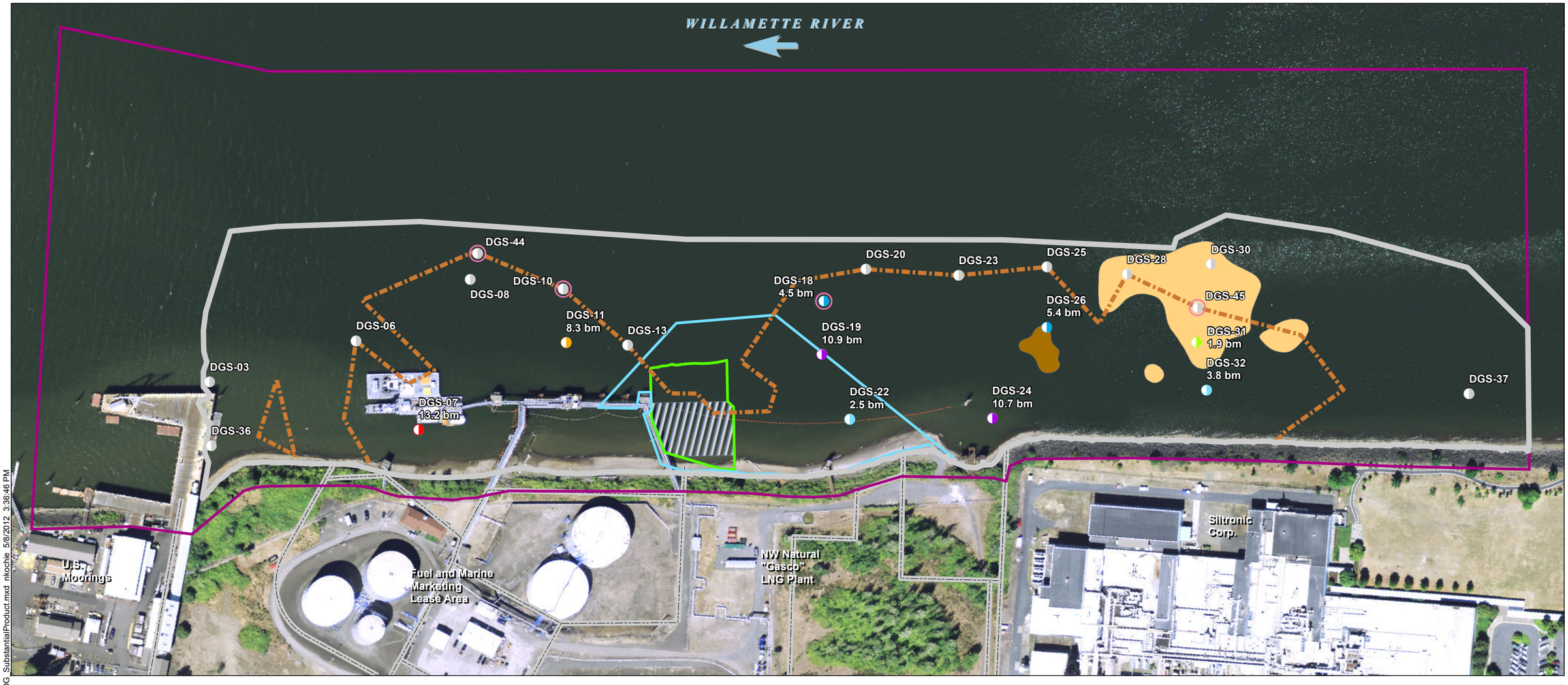
Figure 2-5
Data Gaps Surface Sediment Midge Benthic Toxicity Results
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action



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Subsurface Sediment Core Location

- No Substantial Product
- Substantial Product from 0-2 bm
- Substantial Product from 2-4 bm
- Substantial Product from 4-6 bm
- Substantial Product from 6-8 bm
- Substantial Product from 8-10 bm
- Substantial Product from 10-12 bm
- Substantial Product from 12-14 bm

- Subsurface Sediment Contingency Core Location
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action Pilot Cap
- Area 1 - Detected CVOC Concentrations in TZW
- Area 2 - Detected CVOCs in TZW and 1 Subsurface Sediment Location

- Initial Project Area
- Substantial Product Area

NOTES:
1. bm = Below Mudline.
2. Arrow indicates direction of flow of river.
3. Deepest depth of substantial product is shown in each core location (where applicable) measure from the mud line elevation.
4. Area 1 zone of impact provided by Maul Foster & Alongi, Inc. via e-mail on October 17, 2011.
5. Area 2 zone of impact is as shown in Figure 1 of the Statement of Work.
6. Aerial imagery from July 2007.

Feet
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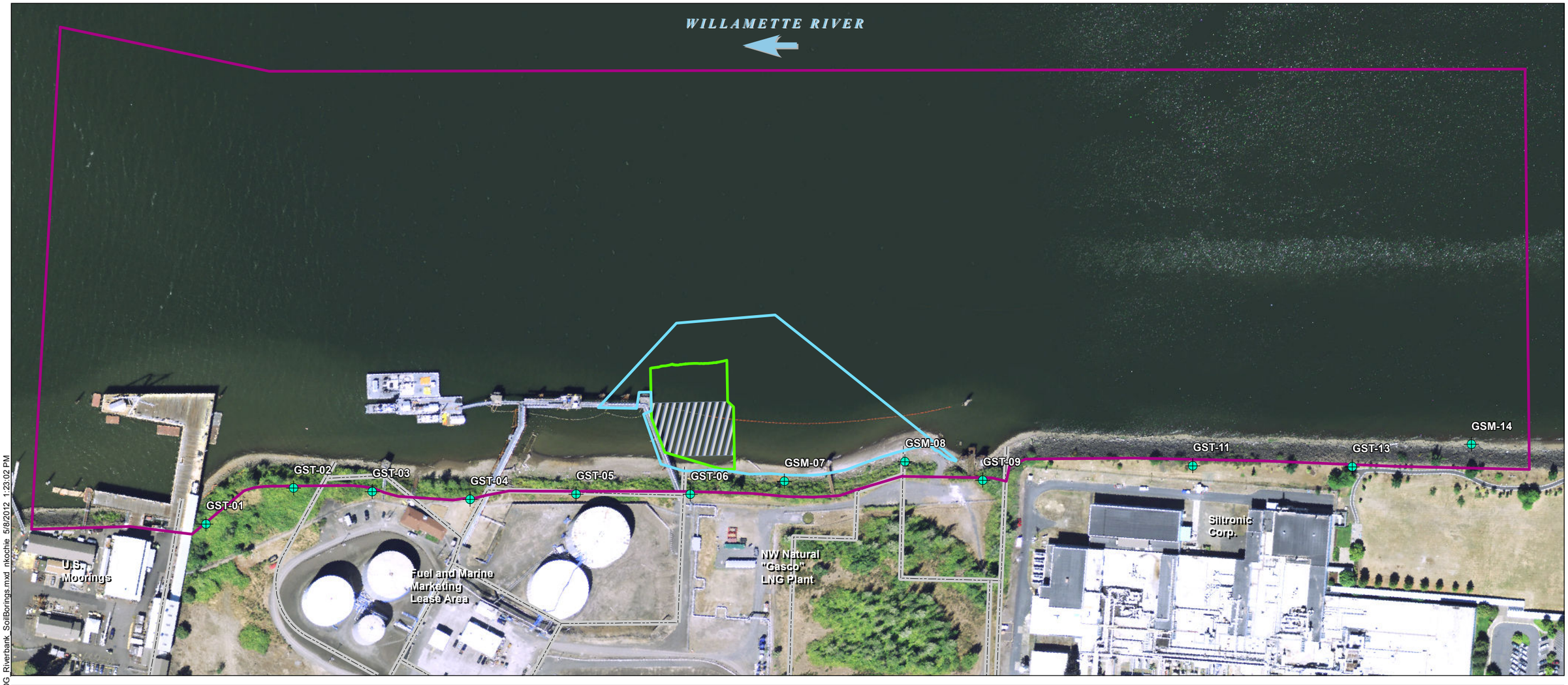
Figure 2-6
Deepest Location of Substantial Presence of Product in Data Gaps Sediment Cores
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action



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- Subsurface Sediment Core Location
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action Pilot Cap

NOTES:
1. TCLP = Toxic Characteristic Leaching Procedure.
2. Horizontal datum is North American Datum of 1983 High Accuracy Reference Network Oregon State Plane North, Intl. Feet.
3. Vertical datum is North American Vertical Datum of 1988.
4. Aerial imagery from July 2007.
5. Arrow indicates direction of flow of river.

Feet
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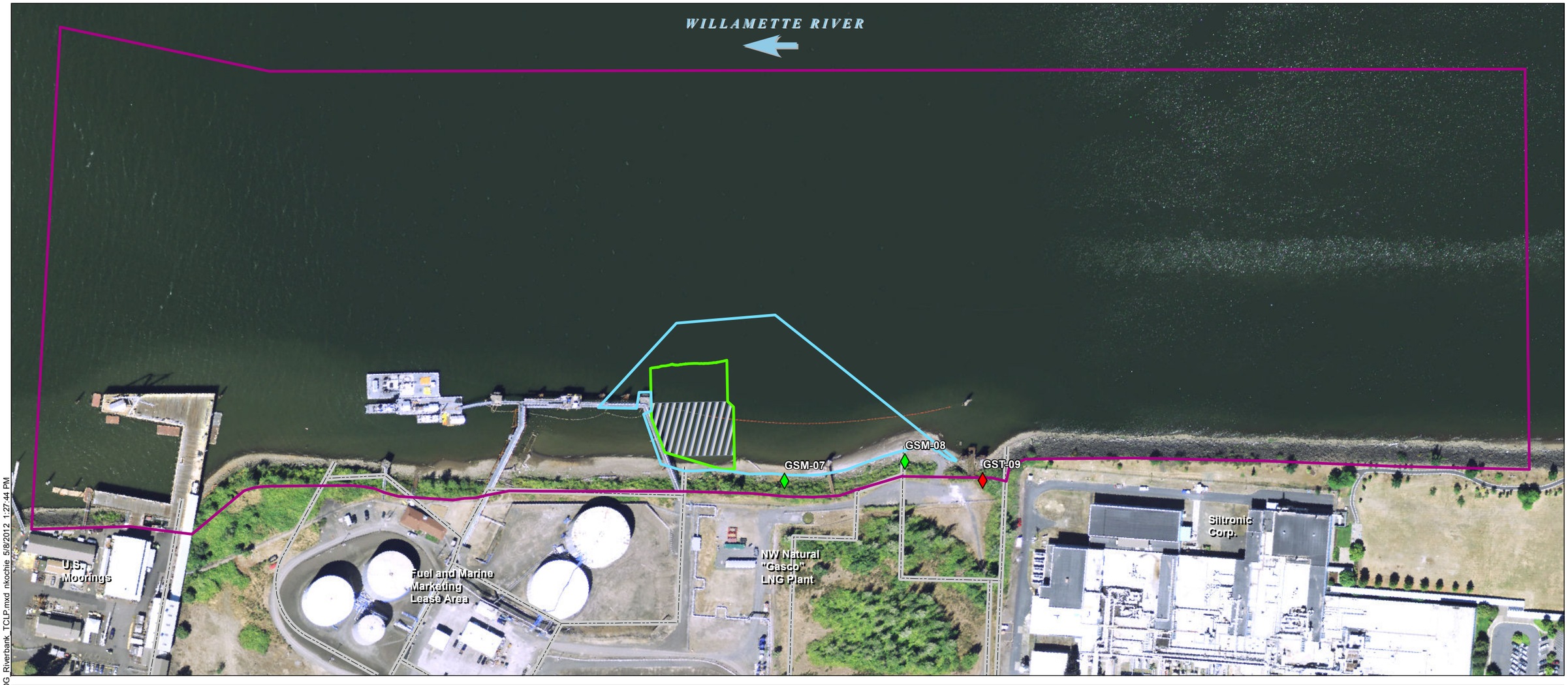
Figure 3-1
Data Gaps Riverbank Soil Boring Locations
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action



Riverbank TCLP Location

Riverbank TCLP Location Exceeds Criteria

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Tar Body Removal Action 6-inch Fringe Cover Placement

Tar Body Removal Action Area (RAPP [Anchor 2005])

Tar Body Removal Action Pilot Cap

NOTES:
1. TCLP = Toxic Characteristic Leaching Procedure.
2. Horizontal datum is North American Datum of 1983 High Accuracy Reference Network Oregon State Plane North, Intl. Feet.
3. Vertical datum is North American Vertical Datum of 1988.
4. Aerial imagery from July 2007.
5. Arrow indicates direction of flow of river.

Feet
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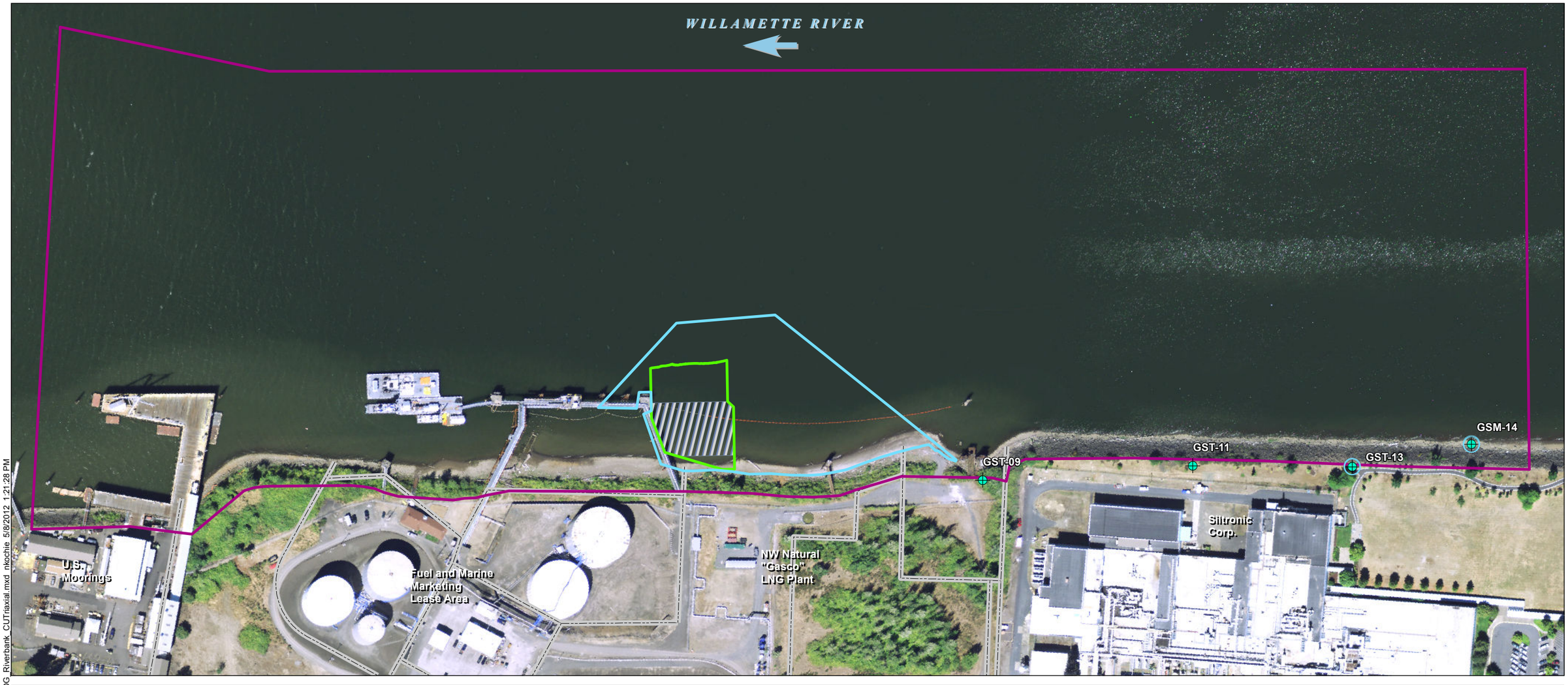
Figure 3-2
Data Gaps Riverbank Waste Characterization Sample Locations and Results
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action



Consolidated Undrained Triaxial Test Sample Locations

Consolidation Test Sample Locations

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Tar Body Removal Action 6-inch Fringe Cover Placement

Tar Body Removal Action Area (RAPP [Anchor 2005])

Tar Body Removal Action Pilot Cap

NOTES:
1. Horizontal datum is North American Datum of 1983 High Accuracy Reference Network Oregon State Plane North, Intl. Feet.
2. Vertical datum is North American Vertical Datum of 1988.
3. Aerial imagery from July 2007.
4. Arrow indicates direction of flow of river.

Feet
0 100 200 300 400

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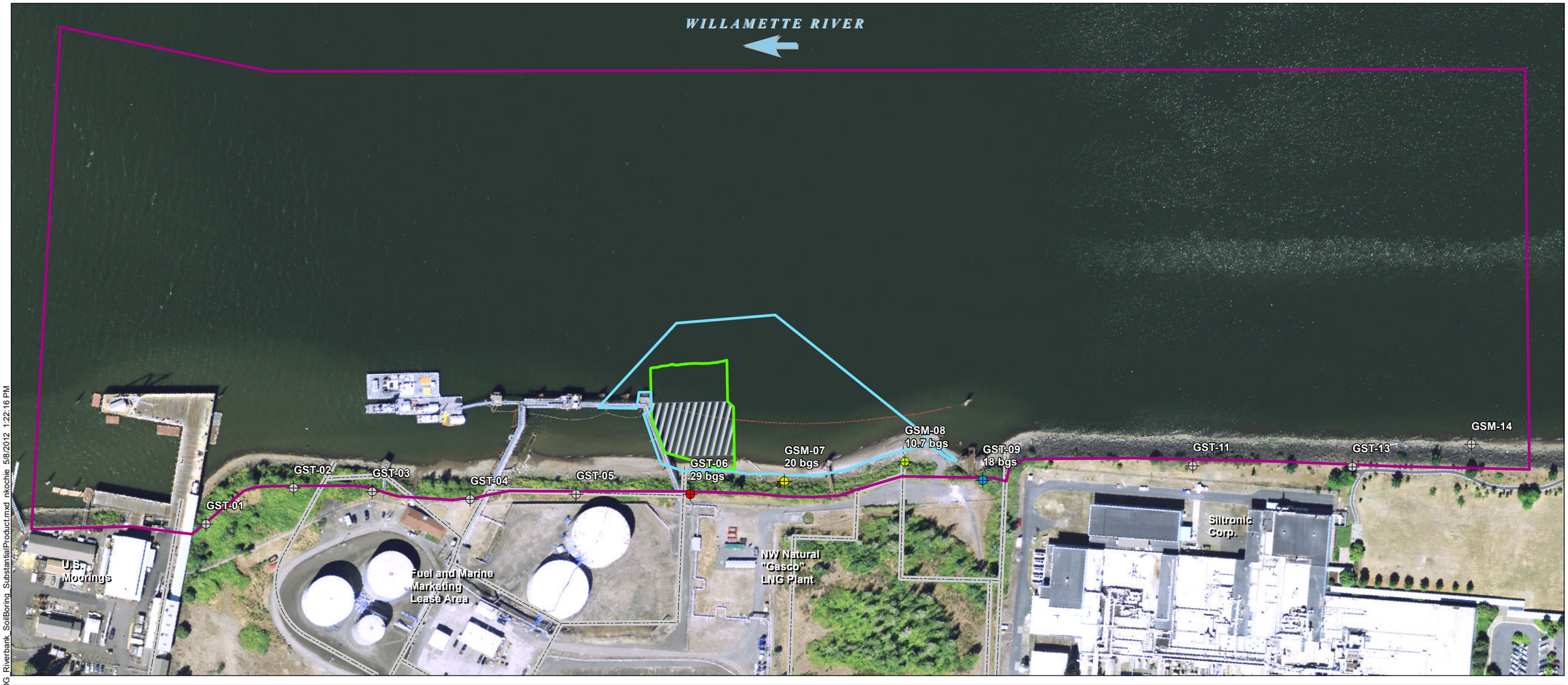
ANCHOR QEA

Figure 3-3
Data Gaps Riverbank CU-Triaxial and Consolidation Sample Locations
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action



Subsurface Sediment Core Location

- No Substantial Product
- 10-13
- 13-16
- 16-19
- 19-21
- 21-24
- 24-27
- 27-30

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action Pilot Cap

NOTES:
1. bgs = Below Ground Surface.
2. Arrow indicates direction of flow of river.
3. Aerial imagery from July 2007.

Feet
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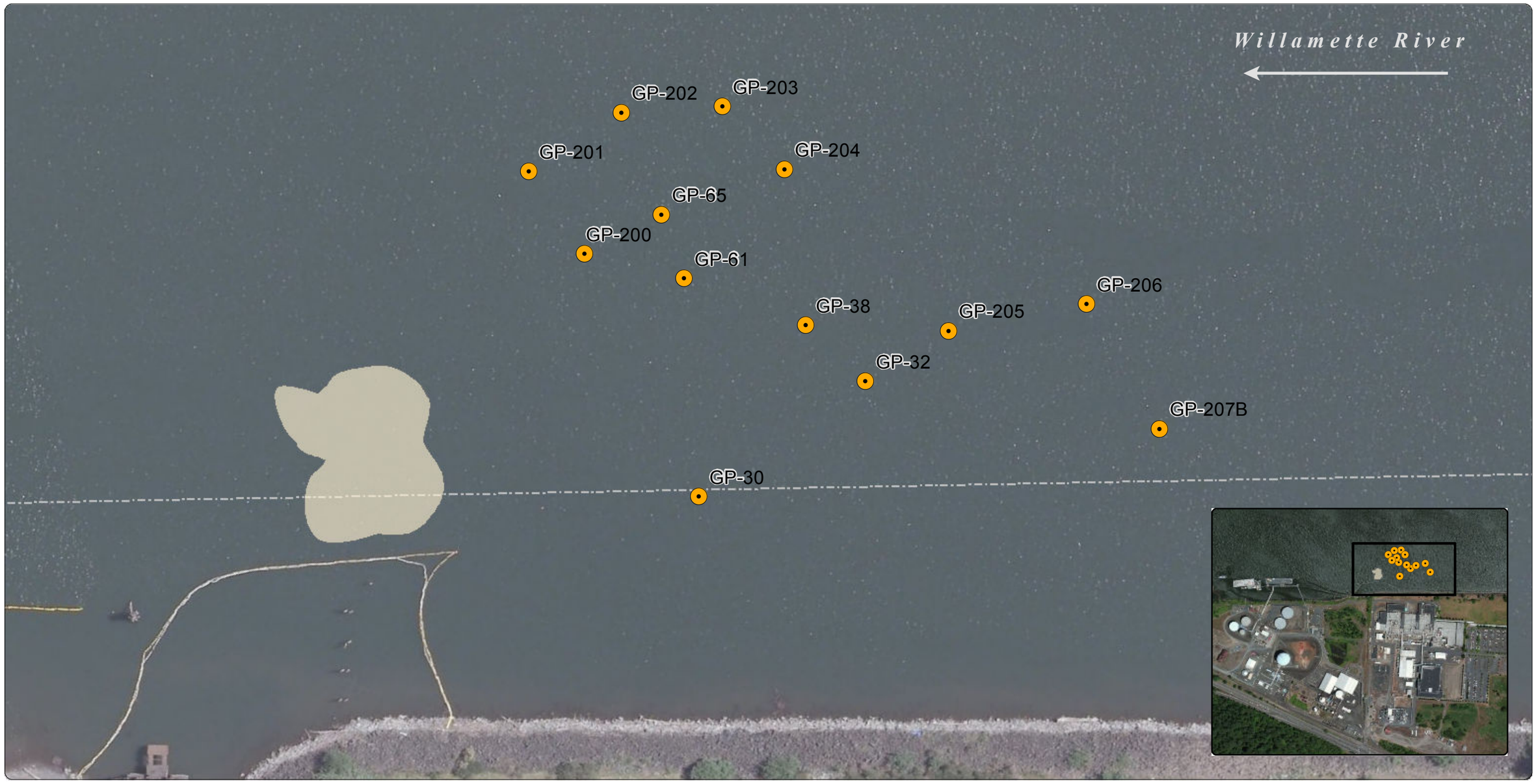
ANCHOR QEA

Figure 3-4
Location of Substantial Presence of Product in Data Gaps Riverbank Soil Borings
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action

File: X:\8128.01 Siltronic Corp\21\Projects\05\Fig4-1_In-Water Boring Locations.mxd
Print Date: 1/11/2012
Approved By: B. Fauth/ M. Murray
Produced By: J. Schane
Project: 8128.01.21.05



Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online/Bing Maps

Legend

- Boring Location Positions (Taken September 13 - 21, 2010)
- Area 2
- Army Corps of Engineers Navigation Channel

Figure 4-1
In-Water Boring Locations
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action
Siltronic Corporation
Portland, Oregon

0 50 100
Feet

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File: X:\8128.01 Siltronic Corp\21\Projects\05\Fig4-2_Sample Locations and Chemical Concentrations in Area 1 2010.mxd
Print Date: 01/10/2012
Approved By: B. Faith/ M. Murray
Produced By: J. Schane
Project: 8128.01.21.05

Willamette River

GP-202	
(2010)	1' (bml)
Vinyl Chloride	0.2 U
Trichloroethene	0.2 U
cis-1,2-DCE	0.2 U

GP-203	
(2010)	1' (bml)
Vinyl Chloride	0.2 U
Trichloroethene	0.2 U
cis-1,2-DCE	0.26

GP-204	
(2010)	1' (bml)
Vinyl Chloride	87.6
Trichloroethene	0.2 U
cis-1,2-DCE	37.1

GP-201	
(2010)	1' (bml)
Vinyl Chloride	1.46
Trichloroethene	0.2 U
cis-1,2-DCE	0.73

GP-65		
(2010)	1' (bml)	3' (bml)
Vinyl Chloride	596	1,840
Trichloroethene	0.2 U	0.22
cis-1,2-DCE	117	526

GP-200	
(2010)	1' (bml)
Vinyl Chloride	97.3
Trichloroethene	0.2 U
cis-1,2-DCE	33.5

GP-206	
(2010)	1' (bml)
Vinyl Chloride	0.2 U
Trichloroethene	0.2 U
cis-1,2-DCE	0.2 U

GP-61	
(2010)	5' (bml)
Vinyl Chloride	699
Trichloroethene	0.51
cis-1,2-DCE	105

GP-205	
(2010)	1' (bml)
Vinyl Chloride	19.9
Trichloroethene	0.2 U
cis-1,2-DCE	3.88

GP-30		
(2010)	25' (bml)	50' (bml)
Vinyl Chloride	1,880	600
Trichloroethene	0.79	2
cis-1,2-DCE	380	103

GP-38	
(2010)	1' (bml)
Vinyl Chloride	48.4
Trichloroethene	0.38
cis-1,2-DCE	81.9

GP-32		
(2010)	2' (bml)	24' (bml)
Vinyl Chloride	0.95	7.34
Trichloroethene	0.2 U	0.2 U
cis-1,2-DCE	0.37	1.5

GP-207B	
(2010)	1' (bml)
Vinyl Chloride	0.29
Trichloroethene	0.2 U
cis-1,2-DCE	0.2 U

Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online/Bing Maps

Notes:
1. Chemical concentrations are measured in micrograms per liter.
2. bml = feet below mudline.
3. U = Not detected at or above the method reporting level.

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Legend

- Boring Location Positions and Chemical Concentration (Taken September 13-21, 2010)
- 2010 Vinyl Chloride Area 1 Boundary
- Army Corps of Engineers Navigation Channel

Siltronic Corporation
Portland, Oregon

Figure 4-2
Sample Locations and Chemical Concentration in Area 1 (2010)
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action

0 50 100
Feet

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Project: 8128.01.21 Produced By: J. Schane Approved By: J. Peale Print Date: 5/8/2012

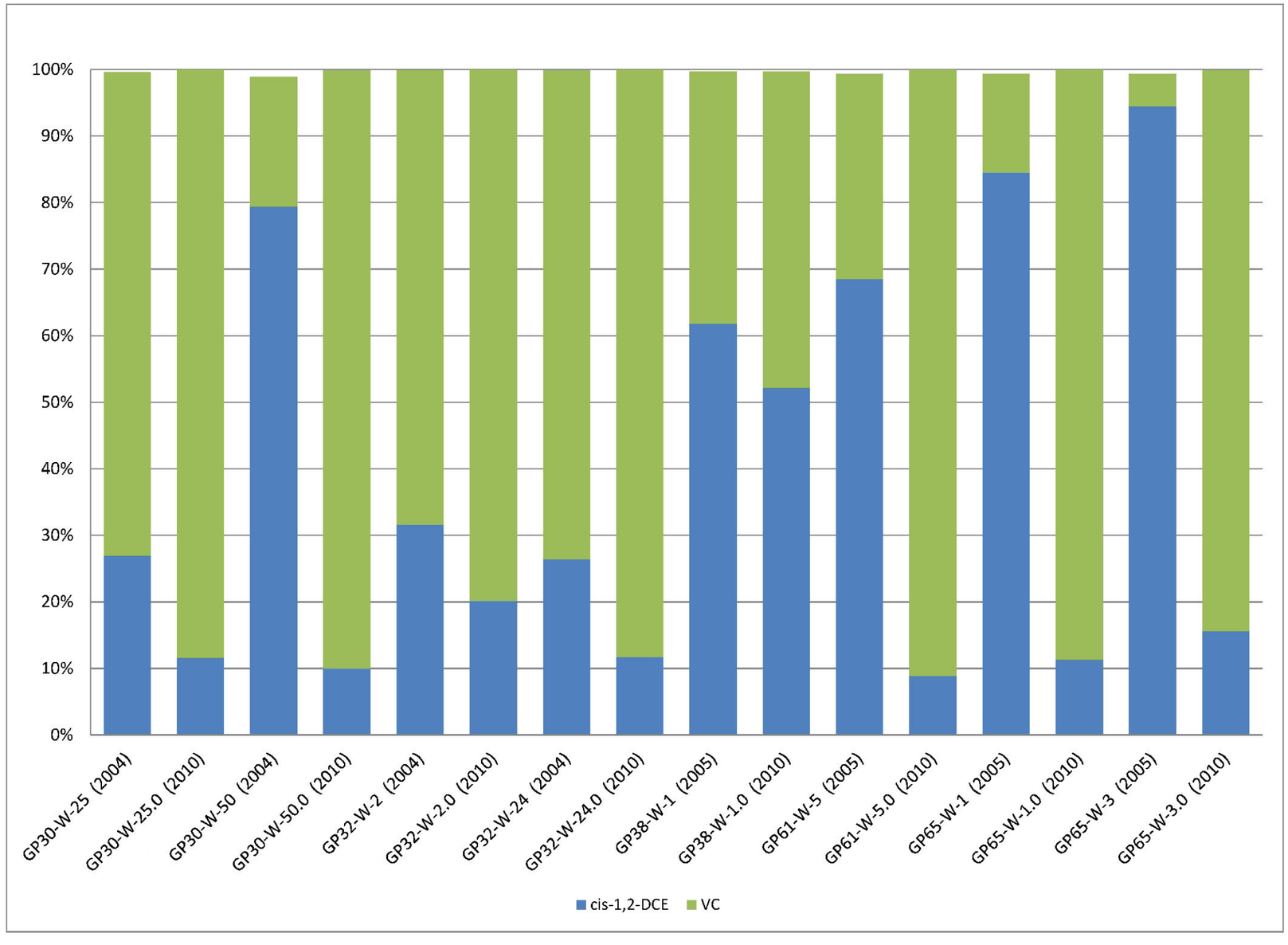

Figure 4-3
TCE Degradation Production Composition
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action
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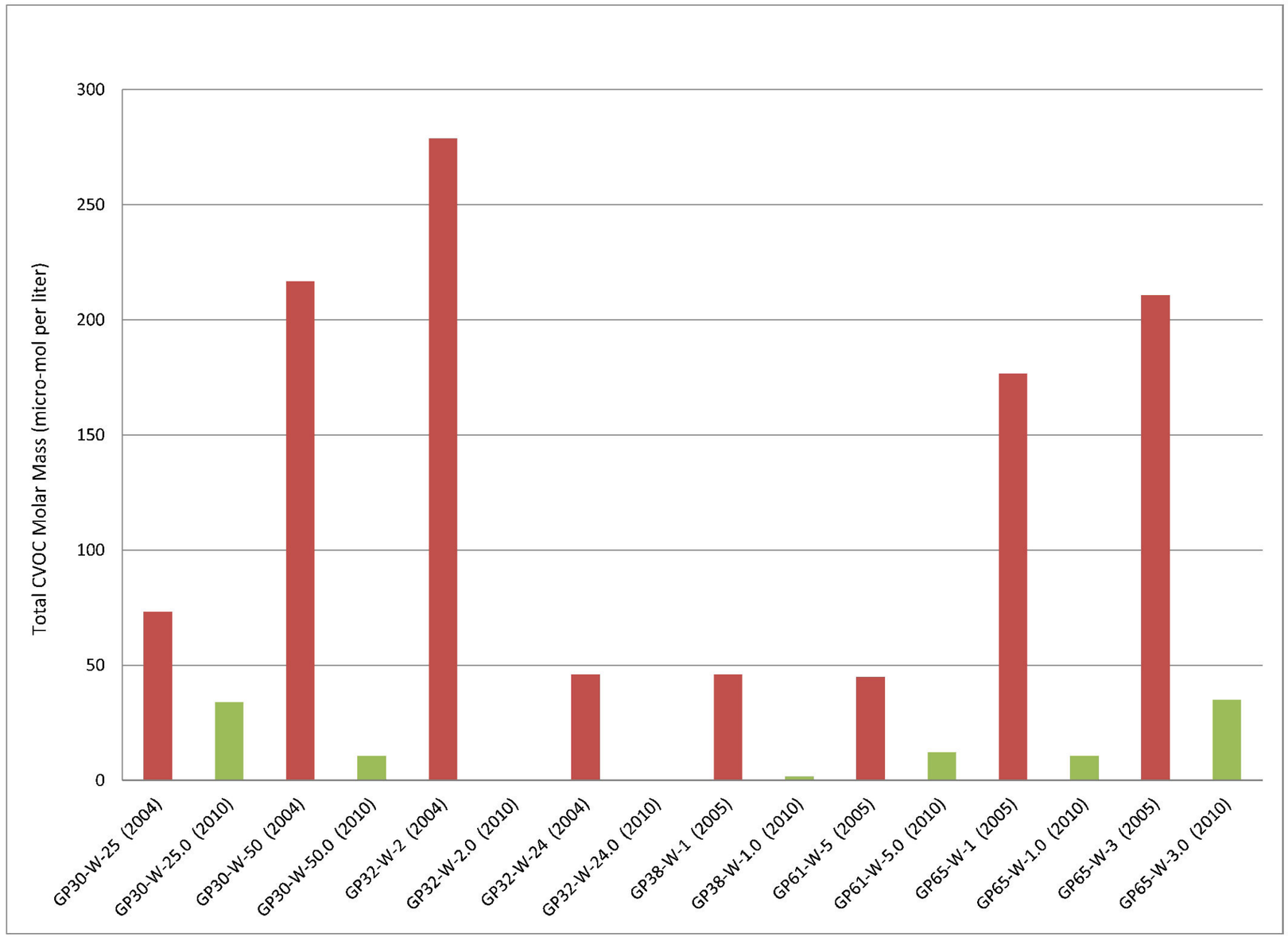

Figure 4-4
Total CVOC
Mass Comparison
Draft Data Gaps
Investigation Report
Gasco Sediments
Cleanup Action

Siltronic Corporation
Portland, Oregon

Project: 8128.01.21 Produced By: J. Schane Approved By: J. Peale Print Date: 5/8/2012

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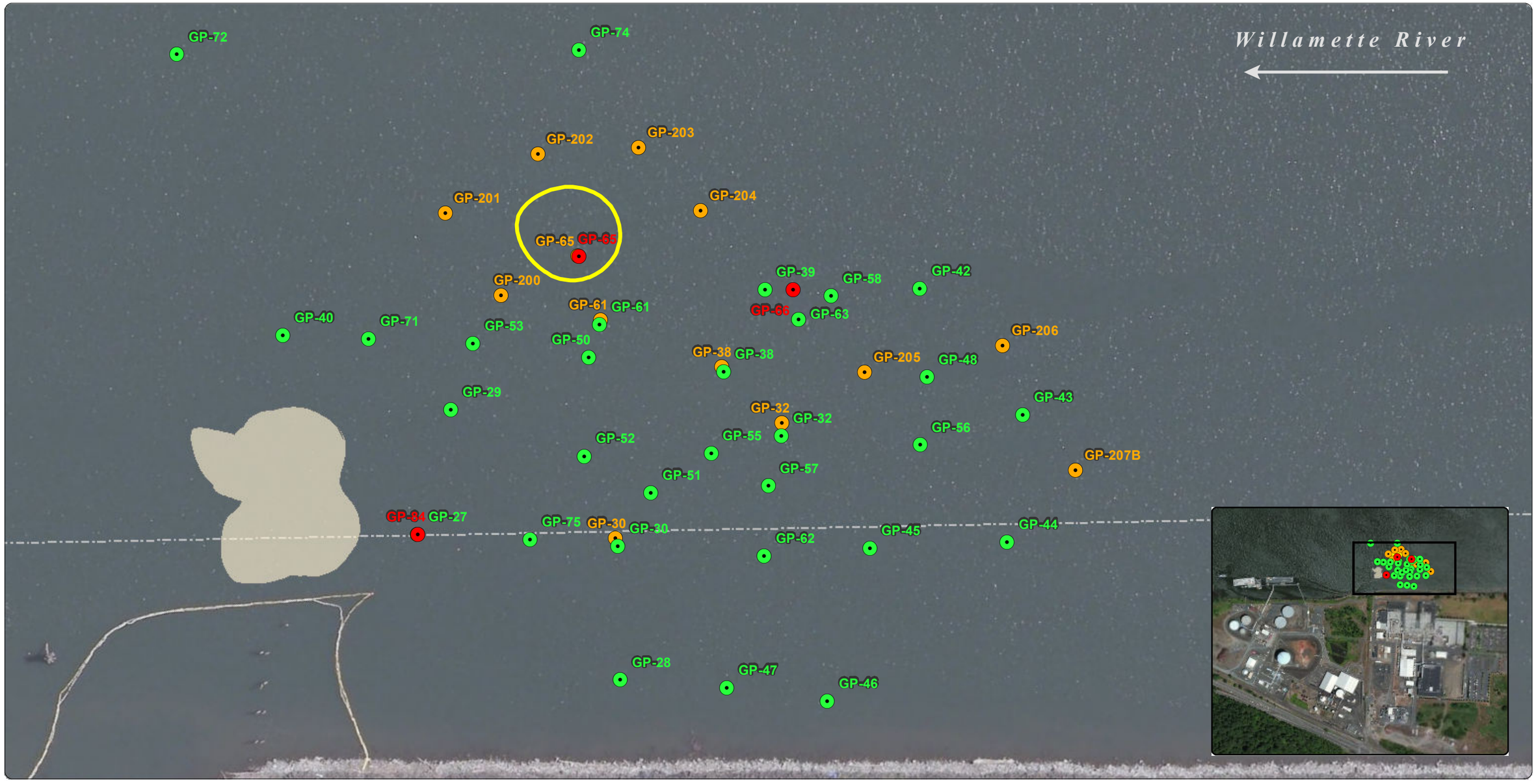
File: X:\8128.01 Siltronic Corp\21\Projects\05\Fig4-5_Trichloroethene in Area 1.mxd
Print Date: 1/11/2012
Approved By: J. Peale
Produced By: J. Schane
Project: 8128.01.21/05



Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online/Bing Maps

Notes:
1. TZW = Transition Zone Water
2. ug/L = micrograms per liter.
3. Except for replicate sample locations, 2004/2005 concentrations were used for mapping both iso-contours, but are not likely representative of current conditions.

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Legend

- TZW Concentration > 4 ug/L in 2004/2005
- TZW Concentration < 4 ug/L in 2004/2005
- Boring Location Taken September 13-21, 2010 (see Figure 4-2 for Results)
- Area 2
- Army Corps of Engineers Navigation Channel
- Trichloroethene 2004-2005

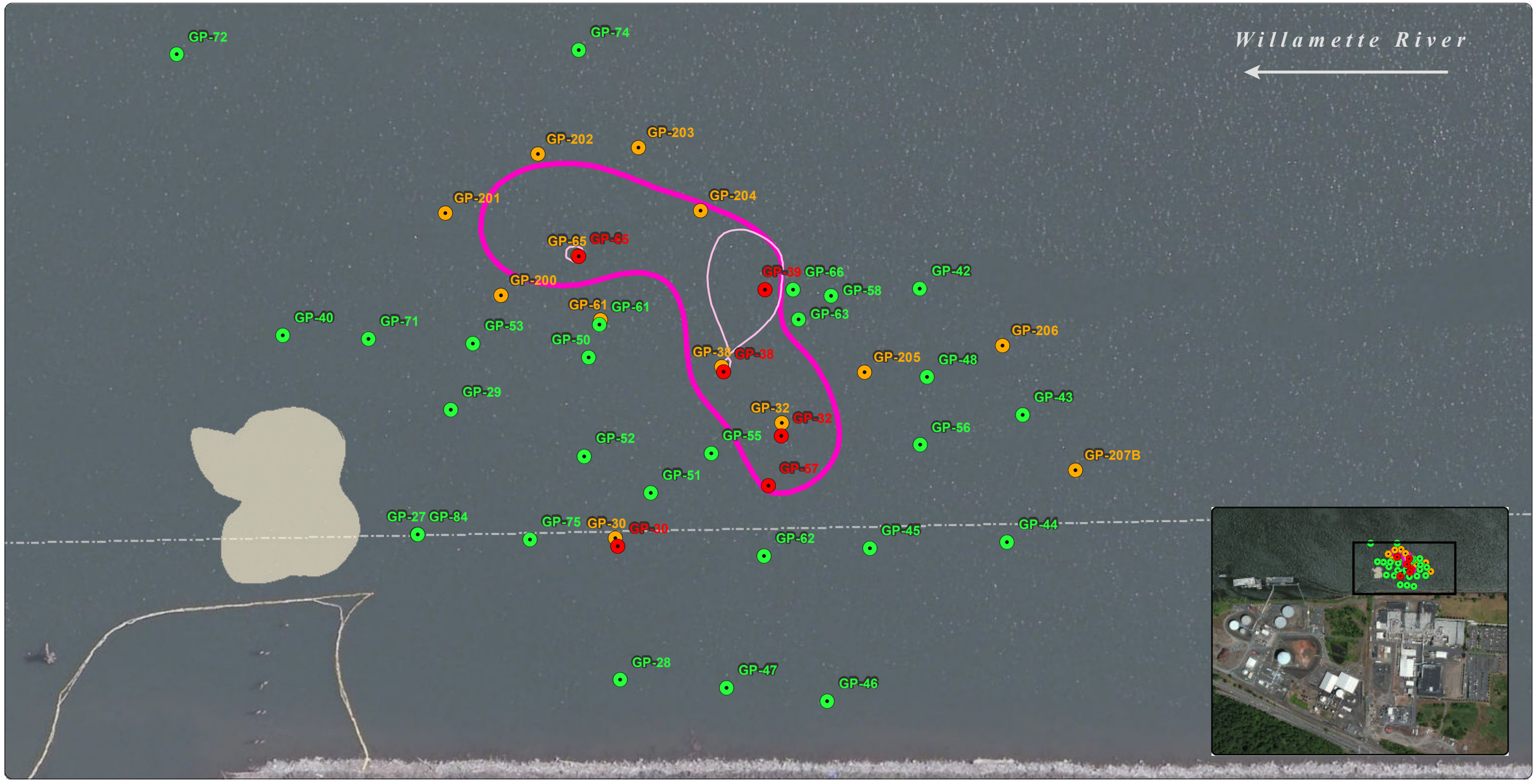
Trichloroethene was not detected at or above the screening level value in 2010.

Figure 4-5
TZW Trichloroethene in Area 1
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action

Siltronic Corporation
Portland, Oregon

0 50 100
Feet

File: X:\8128.01 Siltronic Corp\21\Projects\05\Fig4-6_cis-1,2-Dichloroethene in Area 1.mxd
Print Date: 1/11/2012
Approved By: J. Peale
Produced By: J. Schane
Project: 8128.01.21/05



Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online/Bing Maps

Notes:
1. TZW = Transition Zone Water
2. ug/L = micrograms per liter.
3. Except for replicate sample locations, 2004/2005 concentrations were used for mapping both iso-contours, but are not likely representative of current conditions.

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Legend

- TZW Concentration > 70 ug/L in 2004/2005
- TZW Concentration < 70 ug/L in 2004/2005
- Boring Location Taken September 13-21, 2010 (see Figure 4-2 for Results)
- Area 2
- Army Corps of Engineers Navigation Channel
- cis-1,2-DCE 2010
- cis-1,2-DCE 2004-2005

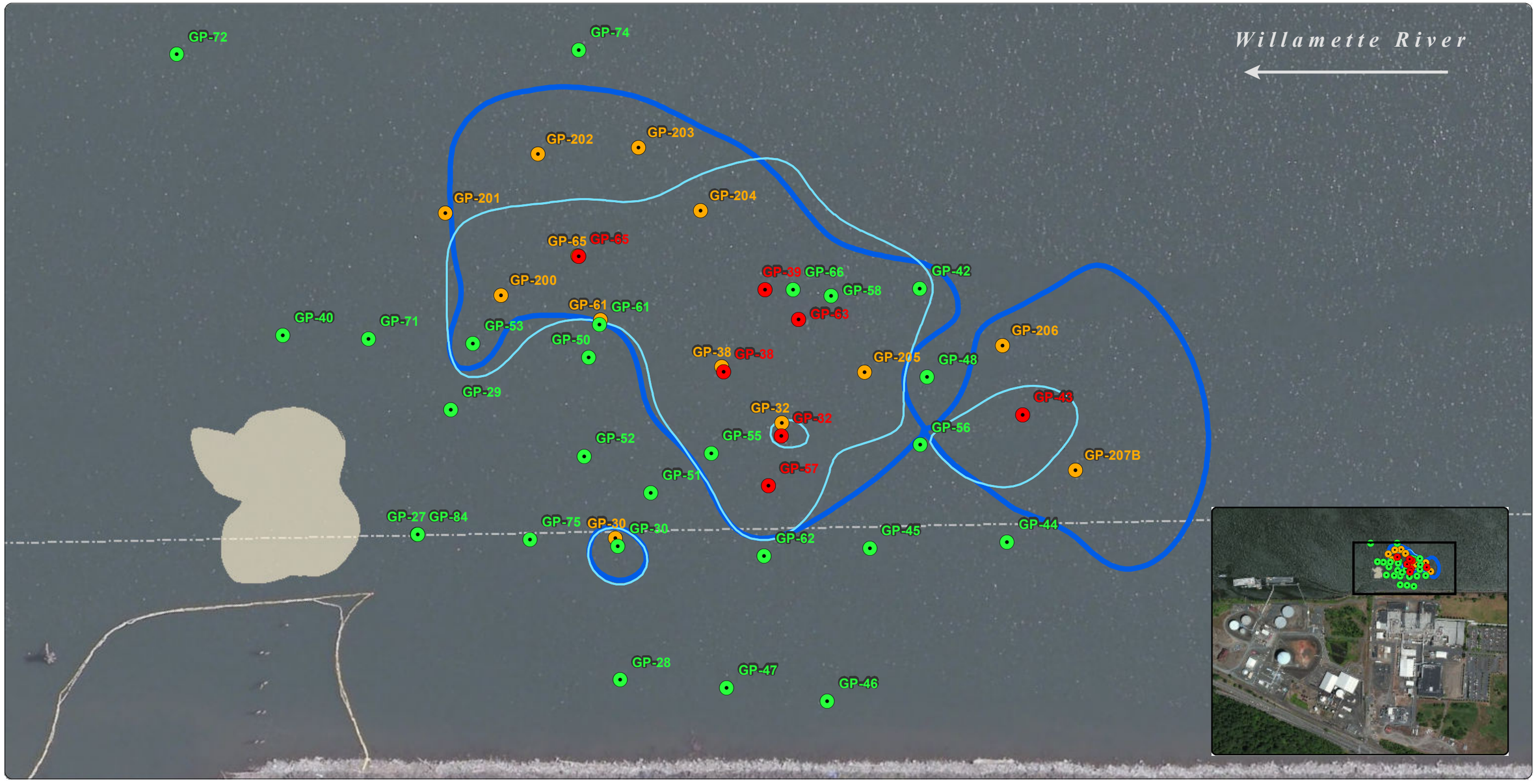
(Percent Change: -70.2%)

Figure 4-6
TZW cis-1,2-Dichloroethene in Area 1
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action

Siltronic Corporation
Portland, Oregon

0 50 100
Feet

File: X:\8128.01 Siltronic Corp\21\Projects\05\Fig4.7_Vinyl Chloride in Area 1.mxd
Print Date: 1/11/2012
Approved By: J. Peale
Produced By: J. Schane
Project: 8128.01.21/05



Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online/Bing Maps

Notes:
1. TZW = Transition Zone Water
2. ug/L = micrograms per liter.
3. Except for replicate sample locations, 2004/2005 concentrations were used for mapping both iso-contours, but are not likely representative of current conditions.

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Legend

- TZW Concentration > 70 ug/L in 2004/2005
- TZW Concentration < 70 ug/L in 2004/2005
- Boring Location Taken September 13-21, 2010 (see Figure 4-2 for Results)
- Area 2
- Army Corps of Engineers Navigation Channel
- Vinyl Chloride 2010
- Vinyl Chloride 2004-2005

(Percent Change: -35.9%)

Figure 4-7
TZW Vinyl Chloride in Area 1
Draft Data Gaps Investigation Report
Gasco Sediments Cleanup Action

Siltronic Corporation
Portland, Oregon

0 50 100
Feet

APPENDIX B
DRAFT CULTURAL RESOURCES PROTECTION PROCEDURES

ANCHOR QEA

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Portland, Oregon 97224
Phone 503.670.1108
Fax 503.670.1128
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MEMORANDUM

To:	Sean Sheldrake, Project Coordinator EPA, Region 10 1200 Sixth Avenue, M/S ECL-111 Seattle, Washington 98101	**Date:**	May 11, 2012
From:	Barbara Bundy, Anchor QEA	**Project:**	000029-02.28
Cc:	Robert Wyatt, NW Natural Patty Dost, Pearl Legal Group PC Tom McCue, Siltronic Corporation Alan Gladstone, Davis Rothwell Earle & Xochihua Ryan Barth, P.E. and Carl Stivers Anchor QEA		
Re:	Draft Cultural Resources Analysis of Remedial Alternatives Developed for the Draft Engineering Evaluation/Cost Analysis for the Gasco Sediments Site		

NW Natural and Siltronic Corporation (Siltronic) entered into an Administrative Settlement Agreement and Order on Consent (Settlement Agreement; Docket No. CERCLA 10-2009-0255) with the U.S. Environmental Protection Agency (EPA) on September 9, 2009. The parties agreed to implement a final sediment remedy investigation, Engineering Evaluation/Cost Analysis (EE/CA), and design for the Gasco Sediments Site within the Portland Harbor Superfund Site. The area that will be subject to remedial actions at the Gasco Sediments Site is referred to as the Project Area in this analysis.

Five remedial action alternatives were developed for the EE/CA. This memorandum analyzes potential impacts on cultural resources from the alternatives to assist in the planning process. Further compliance with cultural resources laws, regulations, and guidelines will occur when a preferred alternative is selected.

REGULATORY CONTEXT

The EPA must comply with Section 106 of the National Historic Preservation Act and its implementing regulations at 36 Code of Federal Regulations (CFR) 800. Section 106 requires that the EPA take into account the effects of the undertaking on historic properties. The steps included in this process are as follows:

1. Consult with the State Historic Preservation Officer (SHPO), interested and affected Indian tribes, and other interested parties.
2. Define the Area of Potential Effects (APE).
3. Inventory potential historic properties in the APE.
4. Evaluate any potential historic properties to determine if they are eligible for inclusion in the National Register of Historic Places (NRHP).
5. Determine if the project will have adverse effects on any NRHP-eligible historic properties.
6. Mitigate adverse effects to NRHP-eligible historic properties.

The Section 106 process will be initiated when a preferred alternative is selected and the APE can be defined. This analysis of alternatives precedes any of the required regulatory steps and is intended to assist with planning and selection of a preferred alternative.

PROJECT LOCATION AND ALTERNATIVES

The current general Project Area for the Gasco Sediments Site is located at about river mile (RM) 6.7 on the Willamette River in Portland, Oregon, as described in Section 1.2.1 and shown on Figure 1-1 of the Work Plan. As part of the Settlement Agreement, the EPA must comply with Section 106 of the National Historic Preservation Act and its implementing regulations at 36 CFR 800. This cultural resources analysis describes how the Section 106 compliance process will be completed. A no action alternative and five remedial alternatives have been developed for the EE/CA. Each includes a plan for contaminated sediments removal or capping in-water in two areas (within the navigation channel and outside navigation channel) and upland along the riverbank. Alternatives developed for the Gasco Sediments Site are as follows:

- Alternative 1 (No Action)
- Alternative 2a (See EE/CA Figure 6.1-1)
  - Navigation channel: no action
  - Outside channel: capping everywhere except in future maintenance dredge area
  - Riverbank: Surface "grubbing" as necessary along Gasco property to facilitate placement of geomembrane and overlying cap
- Alternative 2b (See EE/CA Figure 6.1-2)
  - Navigation channel: removal and cover

  - Outside channel: capping everywhere except removal and cover in future maintenance dredge area
  - Riverbank: Surface "grubbing" as necessary along Gasco property to facilitate placement of geomembrane and overlying cap

- Alternative 3 (See EE/CA Figure 6.1-3)
  - Navigation channel: removal and cover
  - Outside channel: capping everywhere except removal and capping or removal and cover
  - Riverbank: sediment removal in an approximate area of less than 0.10 acres (0.04 hectares), to a depth no greater than 20 feet below the existing ground surface
- Alternative 4 (See EE/CA Figure 6.1-4)
  - Navigation channel: removal and cover in select locations
  - Outside channel: capping everywhere except removal and capping or removal and cover
  - Riverbank: sediment removal in an approximate area of less than a 0.50 acres (0.20 hectares), to a depth no greater than 20 feet below the existing ground surface

- Alternative 5 (See EE/CA Figure 6.1-5)
  - Navigation channel: removal and cover and everywhere inside "Project Remediation Boundary"
  - Outside channel: removal and cover and everywhere inside Project Remediation Boundary except areas with depths of contamination to deep to feasibly remove (these areas are removal and capping)
  - Riverbank: sediment removal in an approximate area of less than a 2.0 acres (.80 hectares), to a depth no greater than 20 feet below the existing ground surface

CULTURAL RESOURCES POTENTIAL

Structures will be removed and replaced in Alternative 5, and thus, the potential to affect NRHP-eligible historic properties is a potential.

A cultural resources study of the entire Gasco Sediment Site was conducted in 2004 (Ellis and Baker 2004). The study included:

- Records searches and background research at the Oregon State Historic Preservation Office, local libraries, the Bureau of Land Management, the U.S. Army Corps of Engineers Portland District, the Oregon Historical Society, and NW Natural's internal records
- An assessment of archaeological potential based on historical maps, surveyor's records, photographs, geological and geomorphological information, and other relevant sources
- A field visit to examine the site, particularly beach exposures
- Monitoring of 10 sediment borings

The report concluded that the archaeological potential of the area was low and that the planned work would exclude the possibility of archaeological monitoring. Specifically, it stated:

> "It is our professional opinion that the proposed removal area has a low potential for archaeological resources. The maximum depth of the planned excavations is unlikely to encounter sediments that are more than a few hundred years ago, a period during which the area is very likely to have a nearshore and offshore area, as it is currently. We cannot exclude entirely the possibility of the presence of individual artifacts in this area, deposited through discard or loss or redeposited through erosion from other locations. From an archaeological perspective, such items are highly unlikely to be significant. Some individual artifacts, however, may be sacred objects or objects of cultural patrimony as defined in both state and federal law. These items are culturally important to Tribes. Recognizing or identifying such artifacts in the removal process would be extremely difficult, if not impossible, given that the tar and visibly contaminated sediments will be removed with a clamshell dredge and placed in a barge for transport. We therefore believe monitoring by an archaeologist during the removal action would not be productive given both the low probability that archaeological deposits or materials would be encountered and the low probability that any deposits or artifacts that might be present would be observed by the monitor." (Ellis and Baker 2004:25)

Nevertheless, an archaeologist monitored removal of nearshore portions of the "tar body," an area of approximately 2,000 square meters along the northwestern boundary of the Gasco Sediment Site (Ogle and Ellis 2005). No archaeological deposits were observed during the

monitoring, though opportunities for examining sediments were limited. Archaeologists concluded that no archaeological resources had been affected by the project.

CULTURAL RESOURCES ANALYSIS OF ALTERNATIVES

The No Action Alternative has no potential to disturb archaeological materials. All five remedial alternatives take place within the same footprint, and the potential to disturb archaeological materials varies only slightly with the amount of ground disturbance.

Alternatives 2a, 2b, and 3 include the least amount of ground disturbance. Alternative 5 includes the most ground disturbance, and Alternative 4 is in between. Therefore, the alternatives can be ranked by potential to affect archaeological materials, from lowest to highest, as follows:

- Alternative 1 (No Action)
- Alternative 2a, 2b
- Alternative 3
- Alternative 4
- Alternative 5

Given the results of the archaeological assessment (Ellis and Baker 2004), it is unlikely that any archaeological materials would be part of a significant, NRHP-eligible historic property. Therefore, the potential to affect an NRHP-eligible historic property is low under any of the alternatives.

REFERENCES

Ellis, David V. and R. Todd Baker. 2004. An Assessment of the Potential for Archaeological and Historical Resources at the GASCO Removal Action Location, Portland, Oregon. Archaeological Investigations Northwest, Inc. Report No. 1373. On file at Anchor QEA, LLC office in Seattle, Washington.

Ogle, Todd and David V. Ellis. 2005. Letter Report regarding: Archaeological Monitoring, Gasco Removal Action. Archaeological Investigations Northwest, Inc. Report No. 1588. December 16, 2005. On file at Anchor QEA, LLC office in Seattle, Washington.

APPENDIX C
DRAFT PRELIMINARY BIOLOGICAL ASSESSMENT

DRAFT PRELIMINARY APPENDIX C BIOLOGICAL ASSESSMENT

DRAFT ENGINEERING EVALUATION/COST ANALYSIS GASCO SEDIMENTS CLEANUP ACTION

Prepared for

U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue
Seattle, Washington 98101

Prepared by

Anchor QEA, LLC
6650 SW Redwood Lane
Portland, Oregon 97224

On behalf of

NW Natural
220 NW Second Avenue
Portland, Oregon 97209

May 2012

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Figure 2-4 Alternative 4 Remedial Footprint and Technology Assignments

Figure 2-5 Alternative 5 Remedial Footprint and Technology Assignments

List of Attachments

Attachment 1 Lower Willamette Group Preliminary Draft Site-Wide Biological Assessment

LIST OF ACRONYMS AND ABBREVIATIONS

Abbreviation	Definition
ACM	active channel margin
AOC	Agreement and Order on Consent
ARAR	Applicable and Relevant or Appropriate Requirements
BA	Biological Assessment
CAD	Confined Aquatic Disposal
CDF	Confined Disposal Facility
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COP	City of Portland
CWA	Clean Water Act
DEQ	Oregon Department of Environmental Quality
DPS	Distinct Population Segment
EE/CA	Engineering Evaluation/Cost Analysis
EFH	Essential Fish Habitat
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESU	Evolutionarily Significant Units
FS	Feasibility Study
HUC	Hydrologic Unit Code
LAA	Likely to Adversely Affect
LCR	Lower Columbia River
LWR	Lower Willamette River
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MNR	Monitored Natural Recovery
NAM	No Adverse Modification
NAVD88	North American Vertical Datum of 1988
NLAA	Not Likely to Adversely Affect
NMFS	National Marine Fisheries Service

NPL	National Priorities List
PGE	Portland General Electric
Portland Harbor Site	Portland Harbor Superfund Site
RHV	Relative Habitat Value
RI	Remedial Investigation
RM	river mile
ROD	Record of Decision
The Services	NMFS and USFWS
Siltronic	Siltronic Corporation
SMA	sediment management area
SOW	Statement of Work
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

1 INTRODUCTION AND OVERVIEW

This document presents a preliminary draft Biological Assessment (preliminary draft BA) for the Gasco Sediment Site Project Area (Gasco Sediments Site) submitted to the U.S. Environmental Protection Agency (EPA) in support of the *Draft Engineering Estimate and Cost Analysis* (EE/CA). The EE/CA has been prepared under the Administrative Settlement Agreement and Order on Consent (AOC; Docket No. CERCLA 10-2009-0255) and attached Statement of Work (SOW) to conduct an EE/CA and to design a final remedy for the Gasco Sediments Site within the Portland Harbor Superfund Site (Portland Harbor Site).

In 2000, EPA added the Portland Harbor Site to the National Priorities List (NPL) pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, 42 U.S.C. § 9601, et seq. The Portland Harbor Site Study Area currently encompasses approximately 10 miles (river mile [RM] 1.9 to 11.8) of the Lower Willamette River (LWR) in Portland, Oregon, and includes the offshore areas adjacent to the NW Natural Gasco and Siltronic Corporation (Siltronic) properties (Figure 1-1). In fall 2001, EPA and ten parties, including NW Natural, entered into an Administrative Settlement AOC for Remedial Investigation/Feasibility Study (RI/FS; CERCLA-10-2001-0240) for the Portland Harbor Site. The RI/FS characterizes the nature and extent of contamination, assesses the ecological and human health risks at the Portland Harbor Site, and evaluates feasibility alternatives for cleanup. The revised draft final RI was submitted to EPA in 2011 (Integral et al. 2011) and the *Draft Feasibility Study for the Portland Harbor Superfund Site* (Portland Harbor draft FS) was submitted to EPA in 2012 (Anchor QEA 2012).

The EE/CA to which this document is an appendix has been prepared by Anchor QEA on behalf of NW Natural in coordination with Siltronic for the implementation of remedial activities at the Gasco Sediments Site, located on the Willamette River adjacent to the NW Natural Gasco and Siltronic properties located within the Portland Harbor Site (Figure 1-1). The AOC was entered between NW Natural, Siltronic, and EPA on September 9, 2009. The EE/CA fulfills the requirements of Sections 3.5 and 3.6 of the SOW, which also require preparation of a preliminary draft BA and Clean Water Act (CWA) Section 404(b)(1) evaluation to document compliance with these regulations, which were identified by EPA as potentially Applicable and Relevant or Appropriate Requirements (ARARs) for the Portland Harbor Site as well as the Gasco Sediments Site. Although the BA is being provided with the EE/CA, it is assumed that the overall Portland Harbor preliminary draft Site-wide BA and subsequent Biological Opinion would apply to remedial activities at the Gasco Sediments Site.

The Gasco Sediments Site AOC contemplates that construction of the remedy would occur under a Consent Decree with EPA after the issuance of the Portland Harbor Site Record of Decision (ROD).

The Gasco Sediments Site Area of Interest (Figure 1-1) includes a segment of the Willamette River, the shoreline area in front of the NW Natural Gasco property, a portion of the upstream adjacent property currently owned by Siltronic, and a small area of shoreline in front of the U.S. Moorings property (although no action is proposed for this shoreline area). In this document, the term Portland Harbor Site refers to the Portland Harbor Superfund Site (RM 1.9 – 11.8) as described in the Portland Harbor draft FS (Anchor QEA 2012). The term "Gasco Project Area" (sometimes used for clarity) will refer to the sediment remediation area within the Area of Interest being proposed by NW Natural. The initial Project Area was defined before the EE/CA and the EE/CA provides refinements that present the interim Project Area.

This preliminary draft BA is based on the Portland Harbor preliminary draft Site-wide BA (Attachment 1). This preliminary draft BA is intended to document whether the proposed action, made up of sediment remedial activities evaluated in the draft EE/CA, is consistent with the proposed action provided in the Portland Harbor preliminary draft Site-wide BA. Consistency is determined by whether the analysis provided in the Portland Harbor preliminary draft Site-wide BA and resulting impact avoidance, minimization, and conservation measures would also apply to the proposed action for the Gasco Project Area. The Portland Harbor preliminary draft Site-wide BA evaluated whether the implementation of the proposed action consisting of sediment remedial activities as proposed in the Portland Harbor draft FS jeopardizes the continued existence of ESA-listed species or adversely modifies critical habitat; and provides EPA with information to support its consultation on the biological opinion for the preferred remedy with the Services (National Marine Fisheries Service [NMFS] and U.S. Fish and Wildlife Service [USFWS]). The Portland Harbor preliminary draft Site-wide BA was written based on the information known at the time of the Portland Harbor draft FS (Anchor QEA 2012).

The intent is that EPA will review this document including the references to the Portland Harbor preliminary draft Site-wide BA to support the selection of the sediment remedy for the Gasco Project Area that will be incorporated into the Portland Harbor Site-wide Proposed Plan and ROD. It is anticipated that EPA will take the Portland Harbor preliminary draft Site-wide

BA forward,revise it as more specific information is known, and ultimately consult with the Services to obtain a Portland Harbor Site-wide biological opinion for the preferred remedy at the time of the issuance of the ROD or shortly thereafter. During the design phase, the preliminary draft BA for the Gasco Project Area will be updated with more site-specific information and compared to the Portland Harbor preliminary draft Site-wide BA BA to determine if the resulting Portland Harbor Site-wide biological opinion would cover the proposed action consisting of the implementation of the preferred sediment remedy for the Gasco Project Area. If the Portland Harbor preliminary draft Site-wide BA and biological opinion are found to cover the proposed action for the Gasco Project Area, then a separate formal consultation process may not be necessary.

Therefore, this preliminary draft BA follows the framework set forth in the Portland Harbor preliminary draft Site-wide BA (Attachment 1) such that the Gasco Sediments Site remediation may proceed as efficiently as possible to construction shortly after the Portland Harbor Site-wide ROD is issued. This type of an approach is similar to NMFS authority under a 4(d) rule. Section 4(d) of the Endangered Species Act (ESA) authorizes the Services to issue special regulations with respect to the conservation of threatened species. A Section 4(d) rule is designed to relieve or reduce the blanket prohibition against incidental take and describes how to avoid take of a particular species and provides an express safe harbor provision.

1.1 Overview

This preliminary draft BA compares the impacts of remedial technologies evaluated in the draft EE/CA with the range of potential effects to ESA-listed species that may be caused by the sediment remedial activities assessed in the Portland Harbor preliminary draft Site-wide BA. The final Portland Harbor Site-wide BA will be prepared by EPA to initiate consultation with the Services pursuant to Section 7(a)(2) of the ESA, and will serve as a resource document for concurrent Essential Fish Habitat (EFH) consultation with NMFS in compliance with the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), under which EFH consultations are required for federally managed fishery species that may occur in the Gasco Project Area vicinity. This document is intended to reflect how the proposed action at the Gasco Project Area is or is not consistent with the action considered for the Portland Harbor Site.

Although the specific remedial activities for the Gasco Project Area will not be determined until EPA approves a design, there is sufficient information in the EE/CA and Portland Harbor

preliminary draft Site-wide BA regarding each of the remedial components to evaluate the potential impacts of the proposed action for the Gasco Project Area. The proposed action identified for the Gasco Project Area is likely to include one or more of the following components:

- Monitored Natural Recovery (MNR)
- In-place Technologies
  - In situ Capping (i.e., engineered and active capping)
  - In situ Treatment
- Dredging
- Transport and Disposal of Dredged Material (Upland, Confined Disposal Facility [CDF], and Confined Aquatic Disposal [CAD])
- Removal and Installation of Pilings and Structures
- Construction of Compensatory Mitigation under CWA Section 404(b)(1)

Thus, the proposed action that is the subject of this preliminary draft BA for the Gasco Project Area consists of the listed remedial technologies. The proposed action also includes any impact avoidance or minimization measures under CWA Section 404(b)(1), and includes any compensatory mitigation that may be required under that section for aquatic functions unavoidably lost as a result of the proposed action (with the understanding that compensatory mitigation is not considered until after all appropriate and practicable steps have been taken to first avoid and then minimize adverse impacts to the aquatic ecosystem). The compensatory mitigation would be performed under CWA Section 404(b)(1), but would also provide conservation benefits under the ESA to listed species and critical habitat. As such, for this preliminary draft BA, the mitigation activities that are anticipated to be required under CWA Section 404(b)(1) are included as part of the proposed action. Consistent with the regulation, the ESA review will be conducted and conclusions made based on the entire proposed action, which includes mitigation.

Table 1-1 summarizes species that are listed under the ESA and that may occur in the proposed action area for the Portland Harbor Site, of which the Gasco sediment remedy will be a component. The information given in this table was obtained from the USFWS' and NMFS' most current species lists and online materials, including listed species under NMFS jurisdiction (marine/anadromous species) at http://www.nmfs.noaa.gov/pr/species/esa/ and listed species

under USFWS jurisdiction (freshwater and land species) at http://www.fws.gov/endangered/wildlife.html#Species.

Species in Table 1-1 are identified based on the geographic boundaries of Distinct Population Segments (DPSs) and Evolutionarily Significant Units (ESUs) [1]. The table also identifies whether critical habitat has been designated by NMFS for those species within the proposed Site-wide action area.

[1] The ESA defines a "species" to include any DPS of any species of vertebrate fish or wildlife. For Pacific salmon, NMFS considers an ESU a "species" under the ESA. For steelhead, NMFS has delineated DPSs for consideration as "species" under the ESA.

2 PROPOSED ACTION

This section provides a description of the proposed action and additional considerations important to the proposed action such as the project setting, construction methods, impact avoidance and minimization measures, and project timing (e.g., construction sequencing and recommended work windows).

The proposed action consists of the remedial activities or technologies that could occur as part of the alternatives described in the EE/CA for the Gasco Project Area for the purpose of remediating contaminated sediments to reduce potentially unacceptable risks to human health and the environment to acceptable levels. Specifically, the elements of the proposed action for the Gasco Project Area may include some or all of the following:

- MNR
- In-place Technologies
  - In situ Cover and Capping (i.e., engineered and active capping)
  - In situ Treatment
- Dredging
- Transport and Disposal of Dredged Material (Upland, CDF, and CAD)
- Removal and Installation of Pilings and Structures
- Construction of compensatory mitigation

The compensatory mitigation would be performed under Section 404(b)(1) of the CWA but would also provide conservation benefits under ESA to listed species and critical habitat. As such, mitigation activities are included as part of the proposed action and ESA review will be completed and will reach conclusions based on the entire proposed action, which includes mitigation.

2.1 Project Setting

The Gasco Sediments Site Area of Interest is located between RM 6 and RM 7 on the west bank of the Lower Willamette River in Portland Harbor (Figure 1-1). The City of Portland (COP) has zoned the property within this area "heavy industrial." It is bounded by the top of bank to the south and west, the eastern boundary of the federal navigation channel in the Willamette River to the north and east, and industrial properties to the southeast and northwest. The Gasco Sediments Site Area of Interest is adjacent to property owned by NW Natural and a portion of

the adjacent property owned by Siltronic, as well as a small portion of the waterfront directly fronting property owned by the U.S. Army Corps of Engineers (USACE; U.S. Moorings). The Gasco Sediments Site Area of Interest was evaluated to determine the specific area of in-water remediation (i.e., Gasco Project Area).

A NW Natural predecessor, the Portland Gas and Coke Company conducted oil gasification operations on the NW Natural Gasco property from approximately 1913 until 1956, and also engaged in by-product manufacturing during that time. Prior to construction of on-site settling ponds in 1941, effluent from manufactured gas plant operations at the Gasco property discharged to a former channel to the Willamette River sediments (Anchor 2004). After gas manufacturing ended, NW Natural leased portions of the property to other companies for coal-tar distillation, bulk transfer of creosote oil and coal tar pitch, and fuel storage and distribution.

NW Natural currently uses the property for liquefied natural gas storage and distribution, and continues to lease portions of the property for bulk petroleum storage and distribution, and for coal tar pitch distribution (Anchor 2004).

2.2 Proposed Alternatives

Although this preliminary draft BA does not evaluate each alternative specifically, it is important to provide an overview of each alternative described in the EE/CA to show that each alternative consists of similar remedial technologies.

2.3 Potential Sediment Remedial Technologies

The proposed alternatives 2a, 2b, 3, and 4 evaluated in the EE/CA are summarized in Table 2-1 and shown in plan view on Figures 2-1 through 2-5 and are anticipated to consist of remedial technologies summarized above evaluated in the Portland Harbor preliminary draft Site-wide BA and to be constructed using similar methods. In Section 2.2 of the Portland Harbor preliminary draft Site-wide BA (Attachment 1), these remedial technologies are all discussed generally to include a range of methods that can be refined by EPA in its final BA as more information is known about the proposed action for the Site-wide remediation.

The EE/CA also considers proposed Alternative 5 (see Table 2-1 and Figure 2-5), which includes implementation of similar remedial technologies, but with the installation of a sheetpile wall as a potential water quality barrier. As discussed in the EE/CA, note that there is likely little benefit from deploying barrier controls for the purposes of controlling turbidity, relative to their

disproportionate impacts on implementability, schedule, and cost. Installation of a sheetpile wall is an activity that was not considered in the Portland Harbor preliminary draft Site-wide BA; therefore, if this option or another option including this activity is selected as the preferred alternative for the Gasco Project Area, the construction methods and potential impacts to ESA-listed species will be specifically addressed in a future update of this document.

Finally, EE/CA Alternatives 2a, 2b, 3, 4, and 5 involve work in the riverbank to address potential chemicals that exist between the regulatory EPA site boundary of +13 North American Vertical Datum of 1988 (NAVD88) and the Oregon Department of Environmental Quality (DEQ) upland source control action. The area between +13 NAVD88 and the top of bank (defined as the riverbank sub-sediment area [Sub-SMA] in the EE/CA) was not assessed in the LWG Portland Harbor draft FS or in the Portland Harbor preliminary draft Site-wide BA. In Alternative 2a, 2b,and 3, the work in the riverbank consists primarily of removal of vegetation and debris along the shoreline to facilitate the placement of a geotextile barrier, which would be covered with armor rock. Overall, it is anticipated that there would be minimal change in the shoreline slope for Alternatives 2a, 2b, and 3. For Alternative 4, there may be a requirement for additional shoreline reconfiguration to ensure that the dredge cuts proposed for areas below +13 NAVD88 are integrated into the shoreline. Elsewhere, the shoreline would be treated similarly to Alternatives 2a, 2b, and 3, with vegetation and debris removal followed by placement of the geotextile barrier and an armor layer. For Alternative 5, the proposed dredge area and depth of removal may require significant reconfiguration of the riverbank to integrate the shoreline with the dredge cuts. The specific evaluation of the potential impacts of the riverbank work, including development of potential compensatory mitigation requirements, will be conducted in a future update of this document during the design phase for the selected alternative.

2.4 Construction of CWA 404(b)(1) Mitigation

The proposed removal action will provide long-term benefits for listed species by removing contaminated sediments from the Gasco Project Area and significantly improving conditions for benthic prey organisms. In addition, the proposed action includes construction of CWA Section 404(b)(1) mitigation. The CWA Section 404(b)(1) requires compensatory mitigation (or compensation) to replace aquatic resource functions that are lost or impaired by a discharge of fill into the aquatic environment. Compensatory mitigation is considered only after other options have been considered to avoid, minimize, or otherwise rectify the potential impacts. Compensatory mitigation addresses significant resource losses that are specifically identifiable, reasonably likely to occur, and of importance to the human or aquatic environment.

As part of the Portland Harbor draft FS (Anchor QEA 2012), the preliminary draft CWA Section 404(b)(1) Evaluation estimated potential mitigation requirements for the alternatives using the mitigation framework described in Appendix A of the Portland Harbor preliminary draft Site-wide BA (Appendix 1). Results of the Portland Harbor draft FS potential mitigation determination for SMA 9U, which most closely approximates the Gasco Project Area, indicate a range of mitigation debits of between 0.48 and 1.81 acres of high functioning habitat (i.e., active channel margin [ACM] with a slope shallower than 5:1 and vegetation or shallow water areas with sand/gravel substrate) based on the potential impacts of the proposed alternatives evaluated in the Portland Harbor draft FS (see Table 2-2). This potential mitigation requirement resulting from the Portland Harbor draft FS is incorporated into the proposed action in this document for planning purposes. A specific mitigation requirement for the selected alternative and specific compensatory mitigation activities will be determined during the design phase. It is anticipated that mitigation projects completed to address unavoidable impacts from the Gasco Sediments Site remedy would be identified during the remedial design phase, and constructed consistent with the construction methods outlined in Section 2.2.6 of the Portland Harbor preliminary draft Site-wide BA (Attachment 1).

2.5 Impact Avoidance and Minimization Measures and Conservation Measures

It is anticipated that all of the impact avoidance and minimization measures proposed in the Portland Harbor preliminary draft Site-wide BA for dredging, capping, piling and structure removal and installation, and construction of compensatory mitigation would be considered during construction of the proposed action at the Gasco Project Area (see Attachment 1, Section 2.4). Although these measures will all be considered, the exact measures will be determined during remedial design after the preferred alternative is selected for the Gasco Project Area.

Conservation measures are measures taken to directly contribute to the recovery of a listed species. Consistent with the Portland Harbor preliminary draft Site-wide BA, it is anticipated that compensatory mitigation implemented as part of the proposed action may also provide ESA conservation benefits. Potential conservation measures for the proposed action and the discussion of cross-over between CWA Section 404(b)(1) mitigation and ESA conservation measures is found in Section 2.3.2 of the Portland Harbor preliminary draft Site-wide BA (Attachment 1).

2.6 Project Timing

Consistent with Section 2.3 of the Portland Harbor preliminary draft Site-wide BA (Attachment 1), in-water work for this project will comply with the timing restrictions associated with an approved in-water work window to correspond to times when salmonids are expected to be either not present or present only in very low numbers. The project will also be conducted within a timeframe that is consistent with the project sequencing proposed for the overall Portland Harbor Site-wide remedy. Construction is anticipated to span one in-water work season for Alternative 2a, three in-water work seasons for Alternative 2b, four in-water work seasons for Alternative 3, five in-water work seasons for Alternative 4, and ten in-water work seasons to complete Alternative 5. As such, the alternatives that have longer durations (i.e., 10 years for Alternative 5) will have more short-term impacts compared to much shorter duration alternatives (i.e., 1 to 3 years for Alternatives 2a and 2b). The short-term impacts are discussed in more detail in Section 6.0.

3 PROPOSED ACTION AREA

The proposed Portland Harbor Site-wide action area described in Section 3 of the Portland Harbor preliminary draft Site-wide BA is also the proposed action area for the proposed action within the Gasco Project Area (see Figure 3 of Attachment 1). This is appropriate because the proposed action area considers the area where the impacts of the proposed action are assumed to occur within the Gasco Project Area as well as the area where compensatory mitigation could occur. All of the potential direct, indirect, interrelated, interdependent, and cumulative effects of the Gasco Sediments Site remedy, including implementation of compensatory mitigation, would occur within this proposed Portland Harbor Site-wide action area. A project-specific action area may be defined in future drafts of this document if it is determined that the proposed action area for the Gasco Project Area is actually smaller or larger than the proposed Portland Harbor Site-wide action area.

4 STATUS OF SPECIES AND CRITICAL HABITAT

The Portland Harbor preliminary draft Site-wide BA evaluated impacts to species that could occur within the lower Willamette River as well as those on the Columbia River that could be affected by the proposed transportation of dredged material to upland disposal facilities, or the construction of compensatory mitigation within the fourth-level Hydrologic Unit Code (HUC) watershed boundaries.

The status, life history, habitat requirements, and critical habitat information for each ESA-listed species found within the Portland Harbor Site-wide proposed action area is presented in Section 4 of the Portland Harbor preliminary draft Site-wide BA (Attachment 1). Implementation of the proposed action within the Gasco Project Area will primarily impact the species found within the mainstem lower Willamette River. These species are included in Table 1-1. Other species that are present in the Lower Columbia River may be affected by the transportation of dredged material to an upland disposal facility or through the construction of compensatory mitigation are also identified in Table 1-1.

5 ENVIRONMENTAL BASELINE

The environmental baseline for the Portland Harbor Site-wide proposed action area is described in Section 5 of Attachment 1 as well is in Appendix A of that document. The conditions within the Gasco Project Area are generally consistent with those described within the Portland Harbor Site-wide action area. This section provides a general overview of specific existing conditions within the Gasco Project Area where available. More detailed habitat conditions within the Gasco Project Area, using the indicators presented in the Portland Harbor preliminary draft Site-wide BA, will be provided in a future version of this document during the design phase.

Currently, the Gasco property ranges from mostly paved or gravel-covered in the southwestern, western, and central portions of the property, to mixed grass and trees in the northern and southeastern portions of the property. The far southeastern portion of the property (a former effluent pond area) consists of approximately ten undeveloped acres of grasses, trees, and a small seasonal ponded wetland area. The majority of the shoreline along the Gasco property is sparsely vegetated or riprapped, with some areas of exposed soil, and does not provide high quality riparian habitat (Photo 1 below). Vegetation along the shoreline riparian area is predominated by Himalayan blackberry (*Rubus discolor*), scot's broom (*Cytisus scoparius*), small brush, and grasses.

Photo 1

The ground surface at the Gasco property slopes gradually northeastward towards the Willamette River. Surface elevations range from approximately +40 feet NAVD88 at the southwestern portion of the property, to approximately +25 to 32 feet NAVD88 at the top of the riverbank. The bank slopes steeply to an elevation of approximately 7 to 10 feet CNAVD88 below which exists the shoreline with a more gradual slope.

The river narrows in the vicinity of RM 7 and is relatively high-energy; sediments are coarse-grained in this portion of the navigation channel, but are dominantly fine-grained in nearshore areas (Integral et al. 2011). The navigation channel boundary is approximately 150 feet offshore from the Gasco property, and generally within the Gasco Project Area, the riverbed slopes steeply from the shoreline to the bottom of the channel.

The bathymetry adjacent to the Gasco Project Area has been fairly stable, reflecting human intervention (e.g., maintenance dredging) more than significant erosion or deposition. The bathymetric and other information presented in Section 5.1 of the EE/CA support the conclusion that the shoreline adjacent to the Gasco Project Area is mostly either depositional or in dynamic equilibrium. In addition, 5 years of long-term monitoring performed as part of the 2005 Removal Action consistently identified a layer of deposited fine grained sediments throughout the monitoring area within the Project Area providing additional evidence that this area is depositional.

The Siltronic property is adjacent to the Gasco property on the upstream side. The Siltronic property is 50 to 60 percent developed. Siltronic site-wide industrial operations include two fabrication buildings and the associated wastewater treatment plant, an administration building, equipment used in industrial processes currently ongoing at the site (silicon wafer fabrication), additional storage buildings, a Portland General Electric (PGE) substation, and paved parking areas. A narrow greenbelt runs the full length of the site along the riverfront, and the shoreline is steeply sloped and heavily armored with riprap with no significant vegetation existing below the top of the bank. A COP utility easement, approximately 100 feet wide, divides the Siltronic site from the northwest to the southeast and contains underground utilities for natural gas, fuel, water and sewer pipelines, and cables for electrical and telephone service. West of the utility easement, the Siltronic site from southwest to southeast remains undeveloped, consisting of trees, mixed grasses, open space, and the northwest area contains a small drainage pond.

6 SPECIES EFFECTS ANALYSIS AND EFFECTS DETERMINATION

The proposed action considered in this preliminary draft BA consists of remedial technologies and construction methods substantively consistent with the technologies and methods considered in the proposed action of the Portland Harbor preliminary draft Site-wide BA (Attachment 1). While the proposed action is likely to include riverbank work not considered in the Portland Harbor preliminary draft Site-wide BA, this work is anticipated to be constructed substantively consistent with the technologies and methods already considered. Further, the existing conditions of the riverbank area are degraded as described in Section 5, and it is anticipated that any loss of habitat function would be off-set with compensatory mitigation. Therefore, for the species identified in Section 4, the effects of the proposed action within the Gasco Project Area, as outlined in Section 2 of this document and based on information in the EE/CA, would result in species and critical habitat effects and determinations consistent with the findings of the Portland Harbor preliminary draft Site-wide BA as detailed in Section 6.0 and summarized in Table 6-1.

In general, the potential effects associated with the removal action are discussed in the Portland Harbor preliminary draft Site-wide BA (see Section 6.0 of Attachment 1) relative to the general baseline conditions found within the proposed action area. The specific effects of the proposed action for the Gasco Project Area are included and analyzed in the Portland Harbor preliminary draft Site-wide BA. The proposed action will have short-term adverse effects due to construction and long-term neutral or positive effects due to the combination of Site remediation, design criteria that avoids or minimizes impacts, inclusion of impact avoidance and minimization measures, and CWA Section 404(b)(1) compensatory mitigation when impacts cannot be avoided or minimized. The alternatives with shorter durations (i.e., Alternatives 2a and 2b) will cause fewer construction-related impacts due to the shorter construction duration compared to impacts that could occur over much longer timeframes up to 10 years (i.e., Alternative 5).

If the preferred alternative for the Gasco Project Area consists of technologies and/or activities not considered in the Portland Harbor preliminary draft Site-wide BA (such as installation of a sheetpile wall), re-evaluation of the effects determination would be conducted for appropriate species in a future revision of this document.

7 ESSENTIAL FISH HABITAT ASSESSMENT

The proposed action considered for the Gasco Project Area is consistent with the action considered in the Portland Harbor preliminary draft Site-wide BA, and therefore, the EFH analysis and determinations contained in Section 8 of Attachment 1 are applicable to the Gasco Project Area proposed action.

8 REFERENCES

Anchor (Anchor Environmental). 2004. Revised Baseline Level III Ecological and Human Health Risk Assessment Report, Northwest Natural "Gasco" Site, December 2004.

Anchor QEA (Anchor QEA LLC). 2012. Draft Feasibility Study for the Portland Harbor Superfund Site. Prepared for the Lower Willamette Group. March 2012.

Integral et al. (Integral Consulting, Inc., Anchor QEA LLC, Kennedy Jenks, Windward Environmental), 2011. Revised Draft Remedial Investigation Report. Prepared for The Lower Willamette Group. August 2011.

TABLES

Table 1-1
Threatened and Endangered Species and Critical Habitat that May Occur within the Proposed Action Area

Species	Status	Agency[1]	Critical Habitat Status	Critical Habitat Designated?		Presence[5,6]
				Proposed Action Area	Portland Harbor Site	
Chinook salmon (*Oncorhynchus tshawytscha*)						
Upper Willamette River ESU[3]	Threatened	NMFS	Designated	Yes	Yes	LCR, LWR
LCR ESU	Threatened	NMFS	Designated	Yes	Yes	LCR, LWR
Upper Columbia River spring ESU	Endangered	NMFS	Designated	Yes	No	LCR
Snake River spring/summer ESU	Threatened	NMFS	Designated	Yes	No	LCR
Snake River fall ESU	Threatened	NMFS	Designated	Yes	No	LCR
Chum salmon (*Oncorhynchus keta*)						
Columbia River ESU	Threatened	NMFS	Designated	Yes	- No	- LCR
Coho salmon (*Oncorhynchus kisutch*)						
LCR ESU	Threatened	NMFS	None Designated	No	No	LCR, LWR
Sockeye salmon (*Oncorhynchus nerka*)						
Snake River Basin ESU	Endangered	NMFS	Designated	Yes	No	LCR
Steelhead trout (*Oncorhynchus mykiss*)						
Upper Willamette River DPS[4]	Threatened	NMFS	Designated	Yes	Yes	LCR, LWR
LCR DPS	Threatened	NMFS	Designated	Yes	Yes	LCR, LWR
Upper Columbia River DPS	Endangered	NMFS	Designated	Yes	No	LCR
Middle Columbia River DPS	Threatened	NMFS	Designated	Yes	No	LCR
Snake River Basin DPS	Threatened	NMFS		Designated	Yes	No
Bull trout (Salvelinus confluentus) Columbia River DPS	Threatened	USFWS	Designated	Yes	No	LCR
Eulachon (Thaelichthys pacificus), Southern DPS	Threatened	NMFS	Designated	Yes	No	LCR

Table 1-1
Threatened and Endangered Species and Critical Habitat that May Occur within the Proposed Action Area

Species	Status	Agency[1]	Critical Habitat Status	Critical Habitat Designated?		Presence[5,6]
				Proposed Action Area	Portland Harbor Site	
North American Green sturgeon (Acipenser medirostris), Southern DPS	Threatened	NMFS	Designated, not in proposed action area	No	No	LCR, LWR[7]
Steller sea lion (Eumetopias jubatus), Eastern DPS	Threatened	NMFS	Designated, not in proposed action area	No	No	LCR, LWR[7]

Notes:

[1] NMFS = National Marine Fisheries Service; USFWS = U.S. Fish and Wildlife Service

[2] LAA = Likely to Adversely Affect; NLAA = Not Likely to Adversely Affect; NAM = No Adverse Modification

[3] ESU = Evolutionarily Significant Unit

[4] DPS = Distinct Population Segment

[5] LCR = Lower Columbia River

[6] LWR = Lower Willamette River

[7] Presence in the LWR unlikely

Table 2-1
Summary Description of Gasco Sediment Site Remedial Alternatives

No.	Description	BaPEq RAL (µg/kg)[1]	Benthic Toxicity	Active Remediation Areas Defined By	Active Remediation Area Additions for Subsurface Contamination in NC and FMD Areas Outside Active Cleanup Boundary	Preference for Removal of Substantial Product[2]	In-water Technology Options[4]	
							MNR	In Place[3]
1	No further action	None selected	No CBRA duration selected	No active remediation areas proposed	No active remediation area additions for subsurface contamination	No preference for removal	No MNR proposed	No in place technologies proposed
2a	IN PLACE Focused	20,000	CBRAs achieved at Year 10 (estimated)	- Nearshore: Areas where >RAL and/or MQ currently >0.7* - NC: no active remediation areas proposed	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7 - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7	In place technologies proposed over removal throughout active remediation boundary	- Outside Alternative 2 active remediation boundary but within interim Project Area Boundary	- Nearshore: Everywhere inside active remediation boundary except FMD area - NC: not proposed
2b	COMBINED In Place and Removal 1	20,000	CBRAs achieved at Year 10 (estimated)	- Nearshore: Areas where >RAL and/or MQ currently >0.7* - NC: Areas where MQ currently >0.7*	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7 - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7	In place technologies proposed over removal throughout active remediation boundary	- Outside Alternative 2 active remediation boundary but within interim Project Area Boundary	- Nearshore: Everywhere inside active remediation boundary except FMD area - NC: not proposed
3	COMBINED In Place and Removal 2	20,000	CBRAs achieved at Year 10 (estimated)	- Nearshore: Areas where >RAL and/or MQ currently >0.7* - NC: Areas where MQ currently >0.7* - Both: Where potentially mobile substantial product present in surface	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7. - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7 - Both: Where liquid product present in subsurface	Preference for removal for observances of liquid substantial product**	- Outside Alternative 3 active remediation boundary but within interim Project Area Boundary	- Nearshore: Everywhere inside active remediation boundary except FMD areas and liquid substantial product areas. Also, cap back followingliquid substantial product removal. Also, cap under docks and unstable slopes where liquid substantial product present and/or RAL exceedances identified. - NC: not proposed
4	COMBINED In Place and Removal 3	1,500	CBRAs achieved at Year 0 (estimated)	- Nearshore: Areas where >RAL and within CBRA - NC: Areas within CBRA - Both: Where substantial product present in surface	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7 - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7 - Both: Where substantial product present in subsurface	Observances of substantial product (as defined in SOW)	- Areas on periphery of Alternative 4 active remediation boundary that only show surface sediment toxicity based on one LOE	- Nearshore: Everywhere inside active remediation boundary except FMD area and substantial product areas. Also, cap back after substantial product removal. Also, cap under docks and unstable slopes where substantial product present and/or RAL exceedances identified. - NC: not proposed
5	REMOVAL Focused	1,500	CBRAs achieved at Year 0 (estimated)	- Nearshore: Areas where >RAL and within CBRA - NC: Areas within CBRA - Both: Where substantial product present in surface	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7 - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7 - Both: Where substantial product present in subsurface	Observances of substantial product (as defined in SOW)	No MNR proposed	Where removal infeasible (e.g., causes unstable slopes, impacts upland structures) in both nearshore and NC

Table 2-1
Summary Description of Gasco Sediment Site Remedial Alternatives

No.	Description	In-water Technology Options[4]			Riverbank Technology Options[4]			Disposal (Riverbank and Sediments)
		Removal	Dock Considerations	Rigid Containment[5]	MNR****	In Place (e.g., water infiltration barrier with erosion control on top)	Removal	
1	No further action	No removal proposed	No dock removal/ replacement	No rigid containment	No MNR proposed	No in place technologies proposed	No removal proposed	No disposal proposed
2a	IN PLACE Focused	No removal proposed	No dock removal/ replacement	No rigid containment	Areas with minimal screening level exceedances in soils, no "substantial"*** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soils.	None (assumes no need for removal to create stable slopes following in-water remediation)	No disposal proposed
2b	COMBINED In Place and Removal 1	- Nearshore: In FMD area inside active remediation boundary - NC: Everywhere inside Alternative 2 active remediation boundary	No dock removal/ replacement	No rigid containment	Areas with minimal screening level exceedances in soils, no "substantial"*** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soils.	None (assumes no need for removal to create stable slopes following in-water remediation)	100% CDF/CAD disposal (low cost) to 100% unspecified upland Subtitle D (high cost). 100% SubSMA C299 Subtitle C.
3	COMBINED In Place and Removal 2	- Nearshore: In FMD area inside active remediation boundary and liquid substantial product areas (except under docks and unstable slopes) - NC: Everywhere inside Alternative 3 active remediation boundary	No dock removal/ replacement	No rigid containment	Areas with minimal screening level exceedances in soils, no "substantial"*** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soils (and as needed where these conditions persist following removal--see removal).	As necessary to support stable slopes following in-water removal and in areas with liquid substantial product.	For materials without liquid substantial product in NC and FMD areas, use Alternative 2b assumptions. For materials with liquid substantial product, assume 100% unspecified upland Subtitle D (low cost range) or 50% Subtitle C (high cost range). 100% SubSMA C299 Subtitle C.
4	COMBINED In Place and Removal 3	- Nearshore: In FMD area inside active remediation boundary and substantial product areas (except under docks and unstable slopes) - NC: Everywhere inside Alternative 4 active remediation boundary	No dock removal/ replacement	No rigid containment	Areas with minimal screening level exceedances in soils, no "substantial"*** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soil that are not removed or are remaining following removal.	As necessary to support stable slopes following in-water removal and in areas with substantial product.	For non-substantial product materials, use Alternative 2b assumptions. For materials with substantial product, 10% Subtitle C (low cost range) to 35% Subtitle C (high cost range); remainder to unspecified Subtitle D. 100% SubSMA C299 Subtitle C.
5	REMOVAL Focused	Where removal feasible in both nearshore and NC	Remove/replace dock	Sheetpile wall proposed where feasible (e.g., water depths)	Areas with minimal screening level exceedances in soils, no "substantial"*** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soil that are remaining following removal.	As necessary to support stable slopes following in-water removal, in areas with substantial product, and in areas with substantial screening level exceedances in soils.	For non-substantial product materials, use Alternative 2b assumptions. For materials with substantial product, 20% Subtitle C (low cost range) to 40% Subtitle C (high cost range); remainder to unspecified upland Subtitle D. 100% SubSMA C299 Subtitle C.

Table 2-1
Summary Description of Gasco Sediment Site Remedial Alternatives

Notes:

[1] = Consistent with Portland Harbor draft Feasibility Study (FS; Anchor QEA 2012a), prospective RAL point of compliance is the maximum layer-weighted-average up to 30 centimeters below mudline applied outside the navigation channel.

[2] = The Statement of Work (SOW) includes the preference for removal of substantial product (as defined in the SOW) as a remedial action objective.

[3] = In Place remedial technologies include a range of process options with similar effectiveness, implementability, and cost, including armored caps, sand caps, enhanced monitored natural recovery (EMNR), or in-situ treatment (e.g., activated carbon placement), depending on sediment management area (SMA)-specific characteristics.

[4] = For all proposed alternatives, upland source controls are assumed to be in place and functioning to minimize (in most areas eliminate) groundwater flux to the riverbank and in-water areas.

[5] = The Portland Harbor draft FS determined that due to the documented issues with effectiveness and implementability of rigid containment, and the limited documented benefit associated with such controls, consideration of rigid containment (e.g., sheet pile walls) as a Removal Best Management Practice (BMP) is generally not warranted for remedial design.

Avg = Average

CAD = Confined aquatic disposal facility

CBRA = Comprehensive Benthic Risk Area (defined using the procedures established for use in the Portland Harbor FS)

EMNR = Enhanced Monitored Natural Recovery

FMD = Potential Future Maintenance Dredge Area

LOE = Line of Evidence

MNR = Monitored Natural Recovery

NC = Navigation Channel

RAL = Remedial Action Level

SMA = Sediment Management Area

SL = screening level

µg/kg = micrograms per kilogram

* Consistent with Portland Harbor draft FS Alternative B, mean quotient (MQ)<0.7 takes precedence over bioassay hits, but TZW and bioaccumulation benthic endpoints take precedence over MQ<0.7.

** Observations of substantial product noted in core and boring logs that indicate potential for increased mobility (e.g., liquid nonaqueous phase liquid [NAPL], oily product, saturated with NAPL product) originating within 0 to 3 feet below mudline.

*** Defined using the SOW sediments definition, but technically such product in riverbank is not defined as "substantial product" because it is outside the sediments project area boundary.

**** The assumption here is that if there are not substantial chemical screening level exceedances and no "substantial product", then the stormwater "percolation" pathway would not transport substantial contaminant load to the river by itself.

Table 2-2
Summary of Compensatory Mitigation for SMA 9U by Portland Harbor draft FS Alternative

Integrated (i) Alternatives					Removal (r) Focused Alternatives				
		LWG RHV Determination					LWG RHV Determination		
SMA	NMFS RHV Determination	Rearing Function Total	Migration Function Total	Total	SMA	NMFS RHV Determination	Rearing Function Total	Migration Function Total	Total
Alternative B-i					Alternative B-r				
SMA 9U	-1.57	-0.36	-0.11	-0.48	SMA 9U	-1.26	-0.51	-0.28	-0.79
Alternative C-i					Alternative C-r				
SMA 9U	-1.84	-0.42	-0.13	-0.55	SMA 9U	-1.32	-0.53	-0.3	-0.83
Alternative D-i					Alternative D-r				
SMA 9U	-1.84	-0.42	-0.13	-0.55	SMA 9U	-1.32	-0.53	-0.3	-0.83
Alternative E-i					Alternative E-r				
SMA 9U	-1.8	-0.4	-0.12	-0.52	SMA 9U	-1.28	-0.5	-0.29	-0.8
Alternative F-i					Alternative F-r				
SMA 9U	-1.81	-0.4	-0.12	-0.52	SMA 9U	-1.81	-0.68	-0.35	-1.03

Notes:

RHV = Relative Habitat Value

Results represent acres of high quality habitat required for compensatory mitigation

Negative Acreages indicate mitigation debits (costs)

Table 6-1
Preliminary Effects Determinations

Species	Status	Agency[1]	Preliminary Effects Determination[2]	Critical Habitat Status	Critical Habitat Designated?		Preliminary Critical Habitat Effects Determination[2]	Presence[5,6]
					Proposed Action Area	Site		
Chinook salmon (*Oncorhynchus tshawytscha*)								
Upper Willamette River ESU[3]	Threatened	NMFS	LAA	Designated	Yes	Yes	NLAA	LCR, LWR
LCR ESU	Threatened	NMFS	LAA	Designated	Yes	Yes	NLAA	LCR, LWR
Upper Columbia River spring ESU	Endangered	NMFS	NLAA	Designated	Yes	No	NLAA	LCR
Snake River spring/summer ESU	Threatened	NMFS	NLAA	Designated	Yes	No	NLAA	LCR
Snake River fall ESU	Threatened	NMFS	NLAA	Designated	Yes	No	NLAA	LCR
Chum salmon (*Oncorhynchus keta*)								
Columbia River ESU	Threatened	NMFS	NLAA	Designated	Yes	No	NLAA	LCR
Coho salmon (*Oncorhynchus kisutch*)								
LCR ESU	Threatened	NMFS	NLAA	None Designated	No	No		LCR, LWR
Sockeye salmon (Oncorhynchus nerka)								
Snake River Basin ESU	Endangered	NMFS	NLAA	Designated	Yes	No	NLAA	LCR
Steelhead trout (*Oncorhynchus mykiss*)								
Upper Willamette River DPS[4]	Threatened	NMFS	NLAA	Designated	Yes	Yes	NLAA	LCR, LWR
LCR DPS	Threatened	NMFS	NLAA	Designated	Yes	Yes	NLAA	LCR, LWR
Upper Columbia River DPS	Endangered	NMFS	NLAA	Designated	Yes	No	NLAA	LCR
Middle Columbia River DPS	Threatened	NMFS	NLAA	Designated	Yes	No	NLAA	LCR

Table 6-1
Preliminary Effects Determinations

Species	Status	Agency[1]	Preliminary Effects Determination[2]	Critical Habitat Status	Critical Habitat Designated?		Preliminary Critical Habitat Effects Determination[2]	Presence[5,6]
					Proposed Action Area	Site		
Snake River Basin DPS	Threatened	NMFS	NLAA	Designated	Yes	No	NLAA	LCR
Bull trout (Salvelinus confluentus) Columbia River DPS	Threatened	USFWS	NLAA	Designated	Yes	No	NLAA	LCR
Eulachon (Thaelichthys pacificus), Southern DPS	Threatened	NMFS	NLAA	Designated	Yes	No	NLAA	LCR
North American Green sturgeon (Acipenser medirostris), Southern DPS	Threatened	NMFS	NLAA	Designated, not in proposed action area	No	No		LCR, LWR[7]
Steller sea lion (Eumetopias jubatus), Eastern DPS	Threatened	NMFS	NLAA	Designated, not in proposed action area	No	No		LCR, LWR[7]

Notes:

[1] NMFS = National Marine Fisheries Service;

[2] LAA = Likely to Adversely Affect; NLAA = Not Likely to Adversely Affect; NAM = No Adverse Modification

3 ESU = Evolutionarily Significant Unit

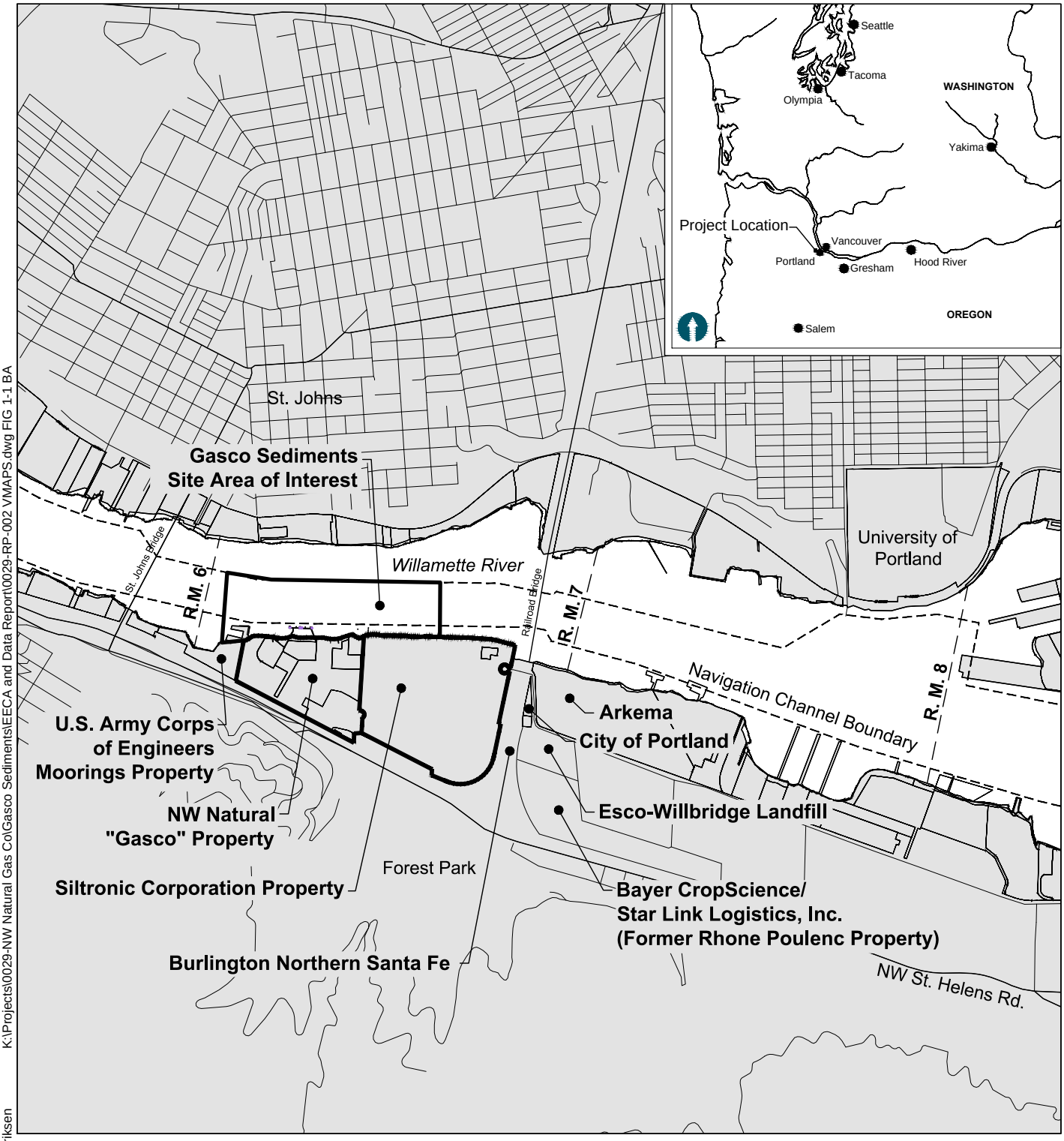
[4] DPS = Distinct Population Segment

[5] Lower Columbia River

[6] LWR = Lower Willamette River

[7] Presence in the LWR unlikely.

FIGURES



NOTE: All locations are approximate.

K:\Projects\0029-NW Natural Gas Co\Gasco Sediments\EECA and Data Report\0029-RP-002 VMAPS.dwg FIG 1-1 BA

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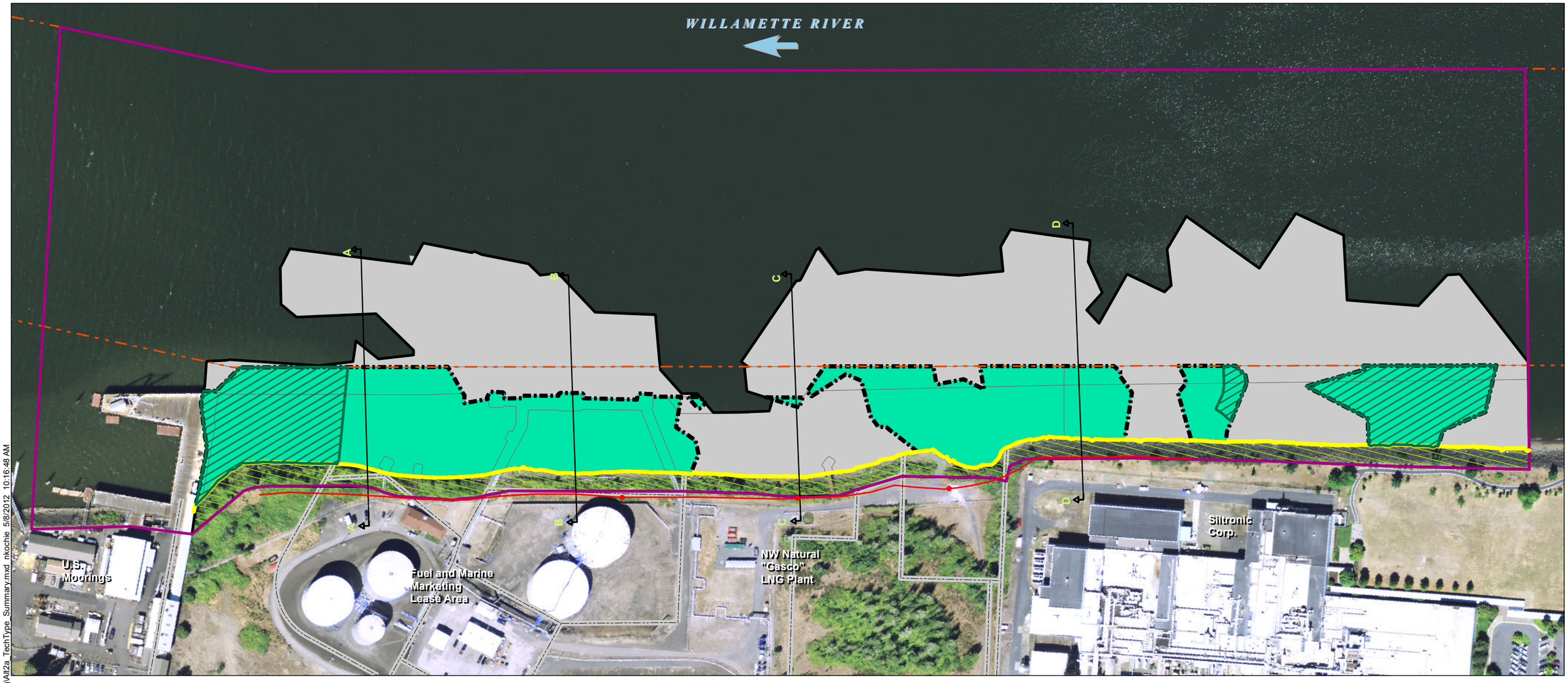
ANCHOR QEA

Figure 1-1
Site Vicinity Map
Draft Preliminary Biological Assessment
Gasco Sediments Cleanup Action



Capping
MNR
Infiltration Barrier with Overlying Erosion Control
Alternative 2a Active Remediation Boundary
Interim Project Area Boundary
Modeled Groundwater Discharge Area (Caps Include Organoclay Amendment)

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
Federal Navigation Channel
Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
Cross Section
Fill WBZ Trench Alignment with Sump

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

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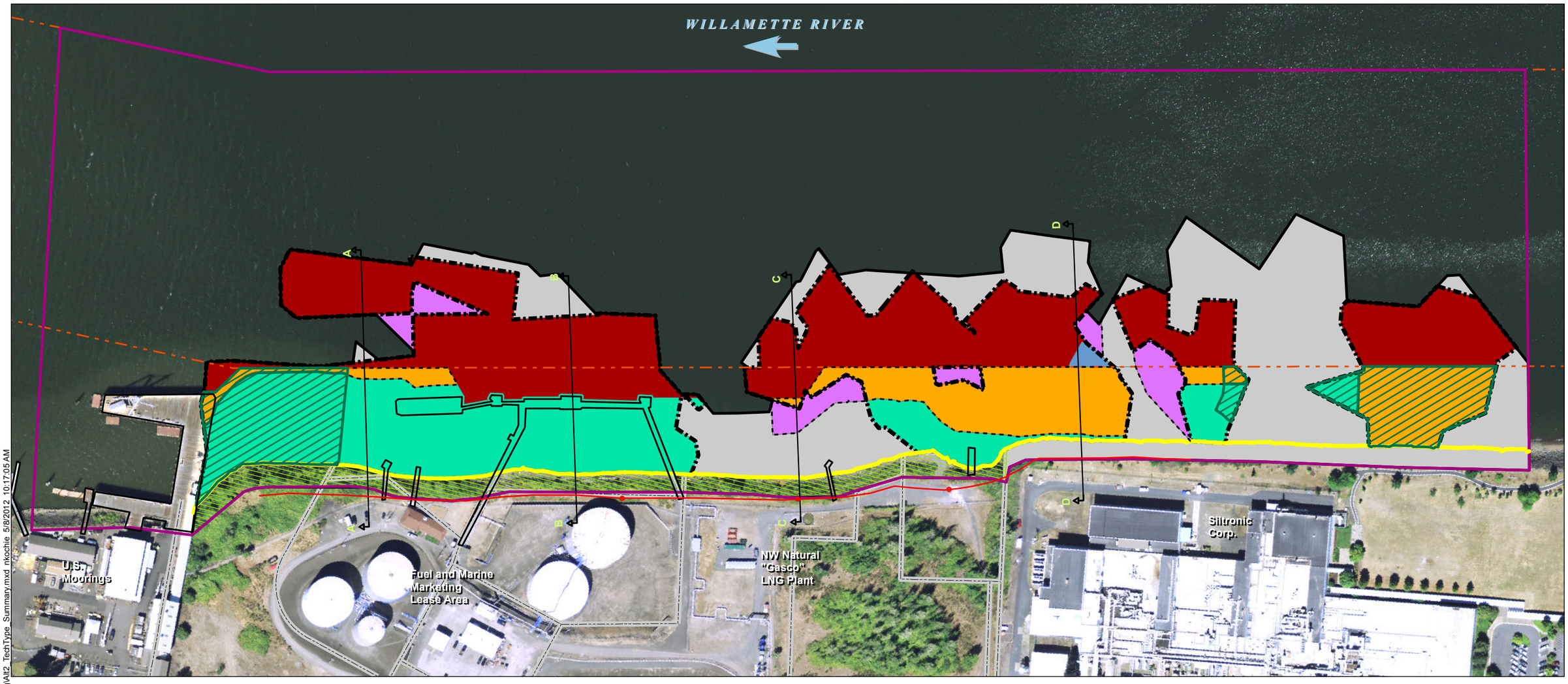
Figure 2-1
Alternative 2a Remedial Footprint and Technology Assignments
Draft Preliminary Biological Assessment
Gasco Sediments Cleanup Action



Removal and Cover
Removal and Capping
Capping
Side Slope Removal and Cover[5]
Side Slope Removal and Capping[5]
MNR
Infiltration Barrier with Overlying Erosion Control
Alternative 2 Active Remediation Boundary
Interim Project Area Boundary

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
Federal Navigation Channel
Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
Cross Section
Proposed Fill WBZ Trench Alignment with Sump
Modeled Groundwater Discharge Area (Caps Include Organoclay Amendment)
Structures

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.
5. Shown extents of side slope removal and cover/capping are estimated based on extension of stable slope angles from adjacent areas with removal. Actual extents to be evaluated during design.

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Figure 2-2
Alternative 2b Remedial Footprint and Technology Assignments
Draft Preliminary Biological Assessment
Gasco Sediments Cleanup Action

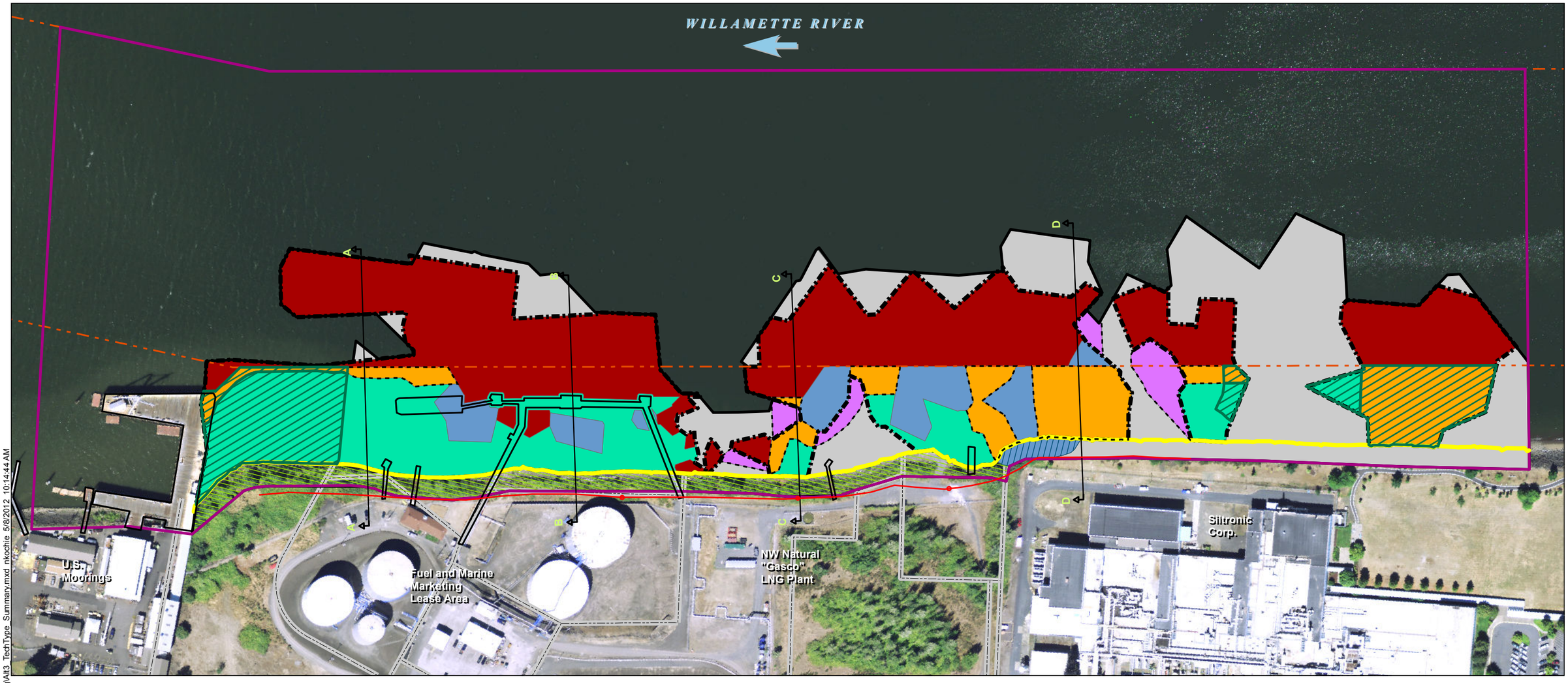

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Figure 2-3
Alternative 3 Remedial Footprint and Technology Assignments
Draft Preliminary Biological Assessment
Gasco Sediments Cleanup Action

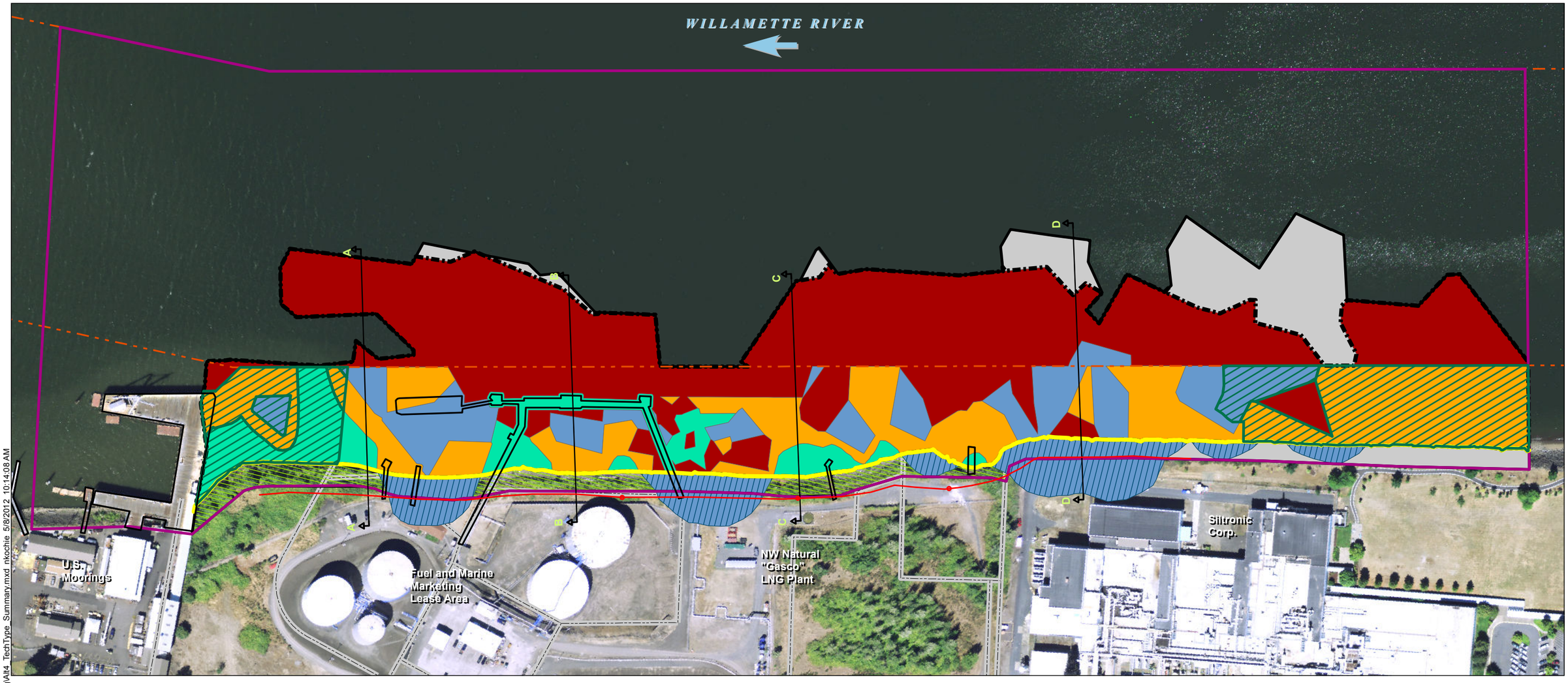

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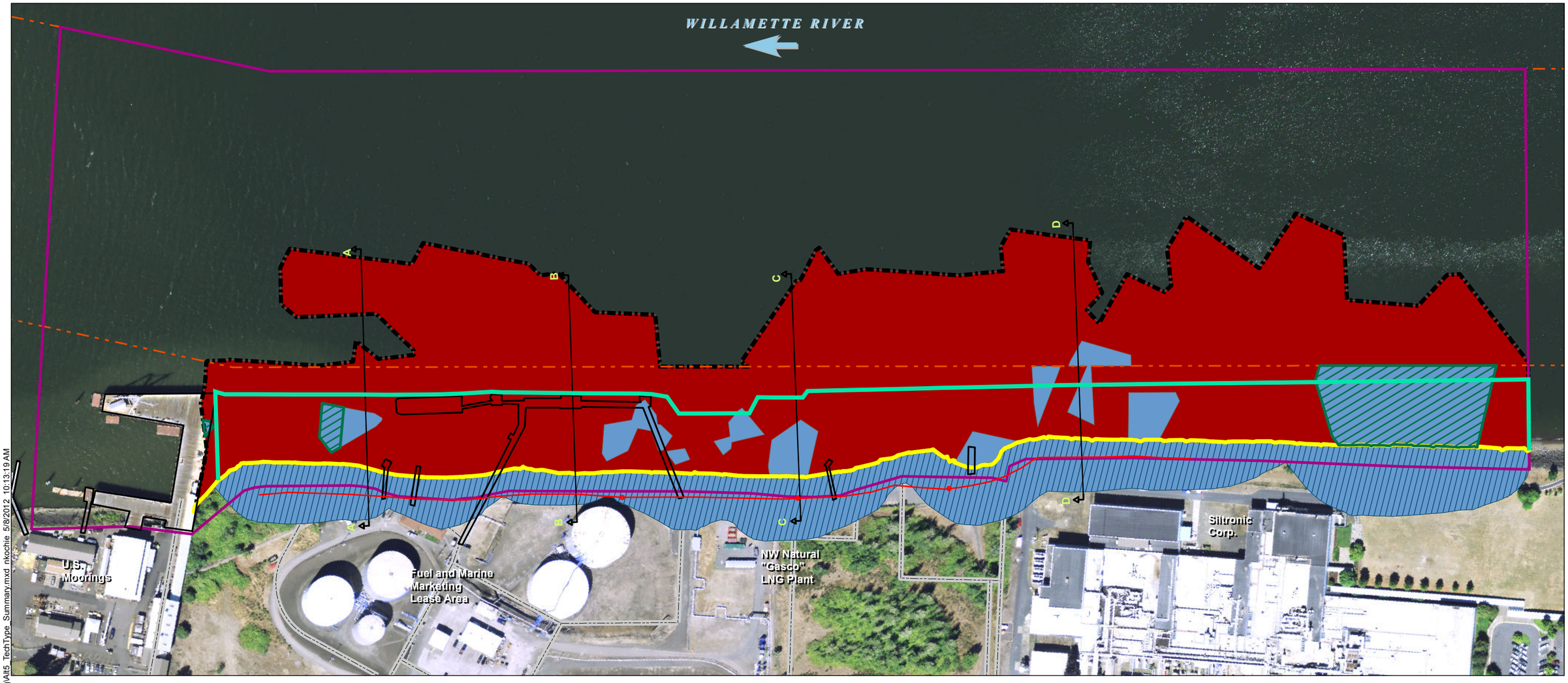
Figure 2-4
Alternative 4 Remedial Footprint and Technology Assignments
Draft Preliminary Biological Assessment
Gasco Sediments Cleanup Action



Removal and Cover
Removal and Capping
Riverbank Cutback Associated with Removal[5]
Interim Project Area Boundary
Proposed Fill WBZ Trench Alignment with Sump
Sheetpile Wall Alignment
Structures

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
Federal Navigation Channel
Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
Cross Section
Modeled Groundwater Discharge Area (Caps Include Organoclay Amendment)

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.
5. Shown extents of side slope removal and cover/capping are estimated based on extension of stable slope angles from adjacent areas with removal. Actual extents to be evaluated during design.
6. Alternative 5 includes removal and replacement of the oil pipeline dock structure, and includes installation of a sheetpile wall along the deepest channel ward location (assumed alignment shown on figure) that would remain structurally stable.

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Figure 2-5
Alternative 5 Remedial Footprint and Technology Assignments
Draft Preliminary Biological Assessment
Gasco Sediments Cleanup Action

ATTACHMENT 1
LOWER WILLAMETTE GROUP
PRELIMINARY DRAFT SITE-WIDE BIOLOGICAL ASSESSMENT (CD)

APPENDIX D
DRAFT PRELIMINARY CLEAN WATER ACT SECTION 404(B)(1) EVALUATION

DRAFT
APPENDIX D
CLEAN WATER ACT SECTION 404(b)(1)
DRAFT ENGINEERING EVALUATION/COST ANALYSIS
GASCO SEDIMENTS CLEANUP ACTION

Prepared for

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May 2012

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List of Attachments

Attachment 1 Portland Harbor Superfund Site Feasibility Study Preliminary Draft Clean Water Act Section 404(b)(1) Evaluation (Provided on CD)

LIST OF ACRONYMS AND ABBREVIATIONS

ACM	Active Channel Margin
AOC	Administrative Settlement Agreement and Order on Consent
ARAR	Applicable and Relevant or Appropriate Requirements
BA	Biological Assessment
BMP	best management practice
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COI	chemical of interest
COP	City of Portland
CWA	Clean Water Act
DEQ	Department of Environmental Quality
DPS	Distinct Population Segment
EE/CA	Engineering Estimate and Cost Analysis
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FEMA	Federal Emergency Management Agency
FS	feasibility study
LWG	Lower Willamette Group
MNR	Monitored Natural Recovery
NAVD88	North American Vertical Datum 1988
NMFS	National Marine Fisheries Service
NPL	National Priorities List
ODFW	Oregon Department of Fish and Wildlife
PGE	Portland General Electric
POD	point of diversion
Portland Harbor Site	Portland Harbor Superfund Site
interim Project Area	Gasco Sediments Site interim Project Area
RAL	Removal Action Levels
RAO	remedial action objective
RI	remedial investigation

RM	river mile
ROD	Record of Decision
Settlement Agreement	Administrative Settlement Agreement and Order on Consent
Siltronic	Siltronic Corporation
SMA	Sediment Management Area
SOW	Scope of Work
USACE	U.S. Army Corps of Engineers
USC	United States Code

1 INTRODUCTION

This document presents a Preliminary Draft Clean Water Act (CWA) Section 404(b)(1) evaluation for the Gasco Sediments Site Project Area (Gasco Project Area) in support of the Draft Engineering Estimate and Cost Analysis (EE/CA). The EE/CA has been prepared under an Administrative Settlement Agreement and Order on Consent (AOC; Docket No. CERCLA 10-2009-0255) and the Statement of Work (SOW) to conduct an EE/CA and to design a final remedy for the Gasco Sediments Site Project Area within the Portland Harbor Superfund Site (Portland Harbor Site).

In 2000, the U.S. Environmental Protection Agency (EPA) added the Portland Harbor Site to the National Priorities List (NPL) pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, 42 United States Code (USC) Section 9601, et seq. The Portland Harbor Site Study Area currently encompasses approximately 10 miles (river mile [RM] 1.9 to 11.8) of the Lower Willamette River in Portland, Oregon, and the offshore areas adjacent to the NW Natural Gasco and Siltronic Corporation (Siltronic) properties (Figure 1-1). In fall 2001, EPA and 10 parties, including NW Natural, entered into an Administrative Settlement Agreement and Order on Consent for Remedial Investigation/Feasibility Study (RI/FS; CERCLA-10-2001-0240) for the Portland Harbor Site. The RI/FS characterizes the nature and extent of contamination, assesses the ecological and human health risks at the Portland Harbor Site, and evaluates feasibility alternatives for cleanup. The revised draft final RI was submitted to EPA in August 2011 (Integral et al. 2011), and the Portland Harbor draft FS was submitted to EPA in March 2012 (Anchor QEA 2012a).

The EE/CA to which this document is an appendix has been prepared by Anchor QEA, LLC on behalf of NW Natural in coordination with Siltronic for the implementation of remedial activities for the Gasco Sediments Site Area of Interest, located on the Willamette River adjacent to the NW Natural and Siltronic properties located within the Portland Harbor Site between RM 6 and 7 (Figure 1-1). The EE/CA fulfills the requirements of Sections 3.5 and 3.6 of the SOW, which also requires preparation of a Biological Assessment (BA) and CWA Section 404(b)(1) evaluation to document compliance with these regulations, which were identified by EPA as potentially Applicable and Relevant or Appropriate Requirements (ARARs) for the Portland Harbor Site and specifically the Gasco Project Area, which was determined through evaluation of data obtained within the Gasco Sediments Site Area of Interest.

The sediment remedy for the Gasco Sediments Site is anticipated to be incorporated as part of the overall remedy selected by EPA for the Portland Harbor Site, as part of the Proposed Plan or Record of Decision (ROD). The Gasco Sediments Site Area of Interest AOC contemplates that construction of the remedy would occur under a Consent Decree with EPA after the issuance of the Portland Harbor Site ROD. Therefore, the Gasco Sediments Site remedy is to be conducted under CERCLA, as part of the Portland Harbor Site remedy. CERCLA exempts cleanup actions from the process of obtaining permits but requires that cleanup actions comply with ARARs established by EPA. For CERCLA actions where CWA Section 404 is an ARAR, Section 404 establishes protocols for evaluating alternatives and demonstrating substantive compliance (EPA 1994). These protocols are referred to as "equivalency analyses."

As part of the Portland Harbor draft FS (Anchor QEA 2012a), the Lower Willamette Group (LWG) prepared a Preliminary Draft CWA Section 404(b)(1) Evaluation (site-wide draft 4049(b)(1) evaluation; Attachment 1) as part of the equivalency analysis. This site-wide draft 404(b)(1) evaluation provided an FS-level estimate of potential compensatory mitigation required to be completed in order to substantively comply with CWA Section 404. The LWG evaluation determined that all of the proposed alternatives evaluated in the Portland Harbor draft FS would comply with CWA Section 404(b)(1). In addition, some of the Portland Harbor draft FS alternatives may require compensatory mitigation to achieve substantive compliance with CWA Section 404(b)(1).

Because the Gasco Sediments Site remedy is anticipated to be incorporated into the overall remedy for the Portland Harbor Site, this preliminary draft CWA Section 404(b)(1) evaluation considers the five alternatives evaluated in the draft EE/CA as they relate to the alternatives evaluated for the Portland Harbor Site to determine whether the findings of the site-wide 404(b)(1) evaluation are applicable to the EE/CA alternatives.

The Gasco Sediments Site Area of Interest has been refined into a smaller initial Project Area, which is the subject of this evaluation. The initial Project Area was defined before the EE/CA, and the EE/CA refines this further into an interim Project Area. For the remainder of this document, this area is referred to as the interim Project Area. The interim Project Area evaluation assumes that some compensatory mitigation would likely be required, unless site-specific avoidance and minimization measures can be identified and applied to the selected remedy that would avoid the aquatic habitat impacts described in Attachment 1. Based on the habitat area occupied by the Interim Project Area, the LWG Sediment Management Area (SMA)

9U is anticipated to be the most representative of the interim Project Area. Therefore, it is anticipated that the preferred alternative for the interim Project Area could require compensatory mitigation ranging from 0.48 and 1.8 acres as determined for SMA 9U in the Portland Harbor draft FS, although the final determination will be made based on the design of the preferred alternative.

Based on information presented in the EE/CA, EPA will identify one of the alternatives or another alternative as the preferred alternative or proposed action for the interim Project Area. NW Natural anticipates that a revised CWA Section 404(b)(1) evaluation would be conducted on the selected alternative to estimate site-specific compensatory mitigation requirements and confirm that the selected alternative remains consistent with the Portland Harbor site-wide draft 404(b)(1) evaluation findings.

2 PURPOSE AND NEED FOR THE PROPOSED ACTION

The need for the proposed action within the interim Project Area is based upon the findings of the Portland Harbor site-wide draft final RI (Integral et al. 2011) and information presented in the *Gasco Sediments Site Data Gaps Report* (Anchor QEA 2012).

The purpose of the proposed action within the interim Project Area is to remediate contaminated sediments to reduce potentially unacceptable risks to acceptable levels consistent with remedial action objectives (RAOs) for the interim Project Area and Portland Harbor Site. The exact proposed action for the interim Project Area will be identified through selection of a preferred alternative by EPA from the various alternatives developed and assessed in the draft EE/CA, to which this document is an appendix. The remedial alternatives evaluated in the draft EE/CA address nearshore and offshore sediment contamination that is located within potentially jurisdictional waters, and therefore, the sediment remediation of the interim Project Area is a water-dependent activity (40 Code of Federal Regulations [CFR] 230.10).

The interim Project Area is within a working harbor with ongoing industrial activities and overlaps with the federally maintained navigation channel. The shoreline contains a dock structure, and riprap armoring covers approximately half of the shoreline, which is integral to the operation of industrial activities that occur here. Thus, the proposed action must achieve the project purpose (i.e., sediment remediation) in a manner that is consistent with the current and future maritime uses of the river and interim Project Area and must minimize temporary disruptions of these activities.

3 DESCRIPTION OF THE PROPOSED ACTION

3.1 Location

The Gasco Sediments Site Area of Interest is located between RM 6 and 7 on the west bank of the Lower Willamette River in the Portland Harbor. The City of Portland has zoned the property within this area as "heavy industrial," and the Gasco Sediments Site Area of Interest extends vertically to the top of bank to the west, the eastern boundary of the federal navigation channel in the Willamette River to the east, and industrial properties to the southeast and northwest. The Gasco Sediments Site Area of Interest is adjacent to property owned by NW Natural and a portion of the adjacent property owned by Siltronic as well as a small portion of the waterfront directly fronting property owned by U.S. Army Corps of Engineers (USACE; US Moorings). The Gasco Sediments Site Area of Interest was evaluated to determine the specific in-water remediation for the smaller interim Project Area.

3.2 Description of Discharge and Fill Sites

The interim Project Area is adjacent to industrial property in use since the early 1900s. A NW Natural predecessor, The Portland Gas and Coke Company, conducted oil gasification operations on the NW Natural Gasco property from approximately 1913 until 1956, and also engaged in by-products manufacturing during that time. Prior to construction of on-site settling ponds in 1941, effluent from manufactured gas plant operations at the Gasco site discharged to a former channel to the Willamette River sediments (Anchor 2004). After gas manufacturing ended, NW Natural leased portions of the property to other companies for coal-tar distillation, bulk transfer of creosote oil and coal tar pitch, and fuel storage and distribution.

NW Natural currently uses the property for liquefied natural gas storage and distribution, and continues to lease portions of the Site for bulk petroleum storage and distribution, and for coal tar pitch distribution (Anchor 2004).

Currently, the Gasco property ranges from mostly paved or gravel-covered in the southwestern, western, and central portions of the property to mixed grass and trees in the northern and southeastern portions of the property. The far southeastern portion of the property (former tar pond area) consists of approximately 10 undeveloped acres of grasses, trees, and a small seasonal ponded wetland area. The majority of the shoreline along the property is sparsely vegetated or contains riprap, with some areas of exposed soil. Vegetation along the shoreline is

dominated by Himalayan blackberry (*Rubus discolor*), scot's broom (*Cytisus scoparius*), small brush, and grasses.

The ground surface at the property slopes gradually northeastward towards the Willamette River. Surface elevations range from approximately +40 feet North American Vertical Datum 1988 (NAVD88) at the southwestern portion of the property to approximately +25 to 32 feet NAVD88 at the top of the riverbank. The bank slopes steeply to an elevation of approximately 7 to 10 feet NAVD88P, below which exists the shoreline with a more gradual slope.

Siltronic property industrial operations include two fabrication buildings and the associated wastewater treatment plant, an administration building, equipment used in industrial processes currently ongoing at the site (silicon wafer fabrication), additional storage buildings, a Portland General Electric (PGE) substation, and paved parking areas. A narrow greenbelt runs the full length of the property along the riverfront, and the shoreline is steeply sloped and heavily armored with riprap with no significant vegetation existing below the top of the bank. A City of Portland utility easement, approximately 100 feet wide, divides the Siltronic property from the northwest to the southeast and contains underground utilities for natural gas, fuel, water and sewer pipelines, and cables for electrical and telephone service. West of the utility easement, the property from southwest to southeast remains undeveloped, consisting of trees, mixed grasses, and open space; the northwest area contains a small drainage pond.

The river narrows in the vicinity of the interim Project Area and is relatively high-energy; sediments are coarse grained in this portion of the navigation channel but are dominantly fine grained in nearshore areas (Integral et al. 2011). The navigation channel boundary is approximately 150 feet offshore, and the riverbed slopes steeply from the shoreline to the bottom of the channel. The bathymetry adjacent to the interim Project Area has been fairly stable, reflecting human intervention (e.g., maintenance dredging) more than significant erosion or deposition. The bathymetric and other information presented in Section 5.1 of the EE/CA support the conclusion that the shoreline adjacent to the interim Project Area is mostly either depositional or in dynamic equilibrium.

The existing conditions and aquatic resource functions provided within the vicinity of the interim Project Area below +13 feet NAVD88 are consistent with the existing conditions identified for SMA 9U in the mitigation framework process described in the Portland Harbor site-wide draft 404(b)(1) evaluation (Attachment 1). Habitat within the interim Project Area

consists of Active Channel Margin (ACM; +20.1 to +5.1 feet NAVD88), Nearshore Shallow Water (+5.1 to -4.9 feet NAVD88), Shallow Water Main Channel (-4.9 to -14.9 feet NAVD88) and Deep Water (deeper than -14.9 feet NAVD88). It is anticipated that existing conditions will be further characterized based on the final footprint of the selected alternative and will include the riverbank area above the elevation of +13 feet NAVD88, which was the limit of characterization for the draft FS (Anchor QEA 2012a).

3.3 Summary of Alternatives

The draft EE/CA considers five alternatives, including the No Action Alternative and four action alternatives. These action alternatives are based on Removal Action Levels (RALs) similar to those identified in the draft FS (Anchor QEA 2012a). Table 3-1 summarizes the five action alternatives, and Figures 3-1, 3-2, 3-3, 3-4, and 3-5 depict a plan view showing proposed technologies and their application within the interim Project Area for each action alternative.

Alternatives 2a, 2b, 3, 4, and 5 in the draft EE/CA also involve work in the riverbank to address potential contaminants that exist between the regulatory EPA site boundary of +13 feet NAVD88 and the Department of Environmental Quality (DEQ) upland source control action. The area between +13 NAVD88 and the top of bank (defined as the riverbank sub-sediment area [Sub-SMA] in the EE/CA) was not assessed in the Portland Harbor draft FS (Anchor QEA 2012a) or in the Portland Harbor site-wide draft 404(b)(1) evaluation. In Alternatives 2a, 2b, and 3, the work in the riverbank primarily consists of vegetation and debris removal along the shoreline to facilitate the placement of a geotextile barrier. This barrier would be covered with armor rock. Overall, it is anticipated that there would be minimal change in the shoreline slope for Alternatives 2a, 2b, and 3. For Alternative 4, there may be a requirement for additional shoreline reconfiguration to ensure that the dredge cuts proposed for areas below +13 feet NAVD88 are integrated into the shoreline. Elsewhere, the shoreline would be treated similarly to Alternatives 2a, 2b, and 3, with vegetation and debris removal followed by placement of the geotextile barrier and armor layer. For Alternative 5, the proposed dredge area and depth of removal may require significant reconfiguration to integrate the shoreline with the dredge cuts. The specific evaluation of the potential impacts of the riverbank work, including development of potential compensatory mitigation requirements, will be conducted in a future update of this document. Table 3-2 provides an overview of the proposed volumes of fill material and square footage proposed to be addressed through application of the geotextile barrier and active capping layer.

3.4 Remedial Action Technologies and Methods

The four action alternatives include some combination of sediment removal and disposal, capping, and Monitored Natural Recovery (MNR) within the interim Project Area. The EE/CA defines technologies for each of the alternatives at a conceptual level, including standard designs and general implementation methods. See Section 5 of the EE/CA and Section 3.4 of Attachment 1 for the discussion of the various technologies and methods anticipated to be used for the proposed alternatives.

Alternative 5 also includes the potential installation of a sheetpile wall and the removal and reinstallation of pile and dock structures, which is not considered to be placement of fill as defined in 40 CFR 232.2. The Portland Harbor Site-wide draft 404(b)(1) evaluation similarly did not consider installation of sheetpile walls or pile removal and replacement as part of impacts on the aquatic environment resulting from the proposed alternatives evaluated in the Portland Harbor draft FS (Anchor QEA 2012a) because they do not constitute a discharge of dredged or fill material.

3.5 Timing of Discharge and Fill

The construction schedule for implementation of the removal action will be developed during the remedial design and will take into account considerations of site operations as well as the implementation timing for the overall Portland Harbor site-wide remedy. It is anticipated that the construction of the remedial action would occur during the approved in-water work window for the Willamette River. Timing for completion of any compensatory mitigation that may be required to offset potential adverse impacts of the sediment remedy will be determined during remedial design.

3.6 Sources and General Characteristics of Dredged and Fill Material

Characteristics of dredged and fill material will be determined at the time of remedial design and will be consistent with the details provided in Section 3.6 of Attachment 1.

3.7 Quantity of Material

See Table 3-1 for the proposed quantity of material to be discharged and removed under each proposed alternative.

3.8 Projected Life

The remedial alternatives represent actions that would reduce or isolate in perpetuity potential risks posed by contaminated sediments. The minimum estimated life of the cap material proposed for use in the action alternatives is at least 100 years. Long-term monitoring requirements are included in the Portland Harbor draft FS (Anchor QEA 2012a) to ensure that caps are stable and maintain performance standards and will be included for the interim Project Area remedy. Long-term monitoring will commence once RAOs for the interim Project Area have been achieved and will be designed to determine effectiveness of the remedial actions (see Portland Harbor draft FS Appendix T for long-term monitoring requirements).

4 EVALUATION CRITERIA

The regulations under 40 CFR 230, "Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged and Fill Material" (or CWA Section 404(b)(1) regulations), were used to support the development of the site-wide draft 404(b)(1) evaluation and also apply to the evaluation of alternatives for the interim Project Area.

CWA Section 404(b)(1) regulations require evaluation of the aquatic impacts associated with the discharge of dredged or fill material. The purpose of CWA Section 404(b)(1) as described in 40 CFR 230.1(a) "is to restore and maintain the chemical, physical, and biological integrity of waters of the United States through the control of discharges of dredged or fill material." Specifically, 40 CFR 230.1(c) states that "dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact…" CFR 230.10 of Subpart B of the CWA Section 404(b)(1) regulations provides four conditions that must be satisfied in order to make a finding that a proposed discharge complies with the requirements described in 40 CFR 230. These four conditions include:

1. No discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge that would have a less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental impacts (see Sections 5 and 6). An alternative is considered practicable if it is "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes" (40 CFR 230.10(a)).
2. No discharge of dredged or fill material shall be permitted if it violates any water quality standards, jeopardizes any endangered or threatened species, destroys or adversely modifies critical habitat, or disturbs any marine sanctuaries (40 CFR 230.10(b); see Sections 5, 6, and 7).
3. No discharge of dredged or fill material shall be permitted that will result in significant degradation of any waters of the United States, including adverse effects on human health or welfare, effects on municipal water supplies, aquatic organisms, wildlife, or special aquatic sites (40 CFR 230.10(c); see Section 8).
4. No discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken that will minimize potential adverse impacts (40 CFR 230.10(d); see Sections 10 and 13).

Due to the nature of the EE/CA process, specific detailed design information is not available for the remedial actions considered in this evaluation. The potential impacts on aquatic and other resources discussed in this evaluation are therefore estimated extents of effects based upon the EE/CA information and determination of effects in the Portland Harbor site-wide draft 404(b)(1) evaluation (Attachment 1).

Specific conservation measures to avoid and minimize construction impacts will be developed as a component of the remedial design prior to determining any required compensatory mitigation, consistent with CWA Section 404(b)(1). Potentially relevant impact avoidance and minimization measures and compensatory mitigation measures are discussed in Section 13 of Attachment 1. During remedial design for the interim Project Area, it is anticipated that this preliminary draft CWA Section 404(b)(1) will be refined to determine whether the design generates conditions that exceed the adverse impacts of the EPA-selected site-wide remedy in the ROD and determine an adequate amount of compensatory mitigation. Should the final remedial design for the interim Project Area include these measures where appropriate, or include actions that are otherwise compliant with these measures, it should be considered consistent with the findings of the Portland Harbor site-wide draft 404(b)(1) evaluation.

The potential impacts of the six EE/CA alternatives are evaluated based on conditions and factors set forth in 40 CFR 230.11, and the factual determination and discussion of conditions for compliance are provided in Section 12 and discussed in more detail in Attachment 1.

In Attachment 1, potential impacts resulting from implementation of the various alternatives and technologies are characterized by their relative magnitude. For the purposes of the Portland Harbor Site-wide draft 404(b)(1) evaluation, the following definitions are used:

- Short-term impacts are localized and temporal in nature and occur for less than several weeks. Short-term impacts are characterized as having a lesser magnitude than that of long-term impacts, which can have more substantial effects to the surrounding environment. Short-term impacts will often be avoided or minimized (mitigated) through use of certain construction methods and/or best management practices (BMPs) selected during the design phase.
- Long-term impacts include actions that result in a permanent change in the condition or use of the surrounding environment or impacts that are measurable years after completion of the action. Six terms were used to describe the magnitude of impact, compared to the existing environmental baseline. These terms, in order from least to

highest impact are: 1) No Impact; 2) Beneficial Impact; 3) Negligible Impact; 4) Minor Adverse Impact; 5) Moderate Adverse Impact; and 6) Significant Adverse Impact. Table 4-1 describes the hierarchy of impacts and terminology that will be used throughout the document.

The Portland Harbor Site-wide draft 404(b)(1) evaluation identified the potential impacts to the components of the aquatic environment based on the distinction between removal focused alternatives (those distinguished with -r) and integrated alternatives (those distinguished with -i). The five action alternatives considered in the EE/CA include combinations of removal and in-place technology applied to certain SMAs within the interim Project Area, and vice versa, so some mix of potential impacts will be present in each EE/CA alternative.

5 POTENTIAL IMPACTS ON PHYSICAL AND CHEMICAL CHARACTERISTICS OF THE AQUATIC ECOSYSTEM

The Portland Harbor site-wide draft 404(b)(1) evaluation indicated that each of the proposed alternatives evaluated in the Portland Harbor draft FS (Anchor QEA 2012a) could be designed to be substantively compliant with the regulations. However, the evaluation also indicated that potential impacts on physical and chemical characteristics of the aquatic ecosystem were likely to become increasingly adverse on a site-wide basis for the larger footprint alternatives that required 10 or more years to implement due to the cumulative effect of the disturbances on the aquatic ecosystem.

It is anticipated that the potential impacts resulting from implementation of the draft EE/CA proposed Alternatives 1 through 5 would be consistent with the determinations set forth in Section 5 of Attachment 1.

5.1 Substrate

Existing physical and chemical substrate conditions in the interim Project Area are described in detail in the EE/CA.

For the purposes of the assessment of the impacts to the physical condition of substrate in the Portland Harbor Site-wide draft 404(b)(1) evaluation, several classes of substrate were identified based on their importance to aquatic species in the lower Willamette River. These classes are applicable to the interim Project Area (see Attachment 1 for additional detail on habitat indicators):

- Sand
- Silt/sand (less than 40 percent silty material)
- Silt (greater than 40 percent)
- Cobble (e.g., 3 to 6 inches rounded rock)
- Angular rock (e.g., 3 to 6-inch quarry spall or mechanically processed rock)
- Large rock (greater than 6 inches in diameter)
- Anthropogenic debris

Additional interim Project Area-specific information will be provided in an updated version of this document during remedial design. Findings for the EE/CA level analysis are deferred to the findings of the site-wide evaluation, because the remedial technologies and methods are

similar and the sediments within the interim Project Area were included in the site-wide evaluation conducted for the Portland Harbor draft FS (Anchor QEA 2012a).

The chemical conditions of the substrate within the interim Project Area are degraded in some areas through contamination with certain chemicals of interest (COIs) that pose potentially unacceptable risks to human health and ecological receptors (as described in the Portland Harbor draft FS [Anchor QEA 2012a] and EE/CA). Remedial action conducted at the interim Project Area is intended to reduce these potentially unacceptable risks.

The potential impacts to physical and chemical conditions of the substrate in the interim Project Area are expected to be consistent with the potential impact findings of the Portland Harbor Site-wide draft 404(b)(1) evaluation presented in Section 5.1.2 in Attachment 1 due to the similarity between the remedial technologies considered for both the site-wide and interim Project Area remedy.

Alternative 1 (No Action) would have no impact on the physical or chemical condition of the substrate. As the alternative active area increases from Alternative 2 to Alternative 5, there would be increased potential for adverse impacts to the physical conditions of the substrate. Alternatives 2 through 5 involve placement of large armor rock over geotextile membrane in the ACM, which would have a moderate adverse effect on the physical condition of the substrate that may require implementation of avoidance and minimization measures and/or compensatory mitigation. Alternative 5 would involve significant removal of sediment from within the nearshore and ACM and the slope of the shoreline would be substantially reconfigured. In addition, Alternative 5 would take 10 years to construct and represents the longest duration of short-term impacts. It is anticipated that proposed Alternatives 2 through 5 would have a beneficial long-term impact on the chemical conditions of the substrate.

5.2 Suspended Particulates/Turbidity

Existing turbidity conditions for surface water within the interim Project Area are based on processes that occur at or within the larger watershed. Additional interim Project Area-specific information regarding existing conditions will be provided in an updated version of this document during remedial design.

For the EE/CA analysis, conditions and impacts related to turbidity are assumed to be similar to the findings of the Portland Harbor Site-wide draft 404(b)(1) evaluation (Attachment 1). The

remedial technologies and methods for implementing Alternatives 2 through 5 are similar to the methods evaluated in Attachment 1 and the surface water within the interim Project Area is included in the site-wide evaluation conducted for the Portland Harbor draft FS (Anchor QEA 2012a). Therefore, consistent with the findings in Section 5.2 of Attachment 1, larger footprint alternatives, which involve more removal of sediments, are more likely to lead to minor adverse impacts on turbidity. The potential impacts of implementation of remedial alternatives on turbidity within the interim Project Area are expected to be negligible to minor adverse, depending on the extent of dredging involved. As discussed in the EE/CA, there is likely little benefit from deploying barrier controls for the purposes of controlling turbidity, relative to their disproportionate impacts on implementability, schedule, and cost.

5.3 Water Quality

Existing water quality within the interim Project Area is generally based on processes that occur at or within the larger watershed, although some localized areas are impacted by transition zone water. Additional interim Project Area-specific information regarding existing water quality conditions will be provided in an updated version of this document during remedial design.

For the EE/CA analysis, conditions and impacts related to water quality are assumed to be similar to the findings of the site-wide draft 404(b)(1) evaluation (Attachment 1). The remedial technologies and methods for implementing Alternatives 2 through 5 are similar to the methods evaluated in Attachment 1, and the surface water within the interim Project Area is included in the site-wide evaluation conducted for the Portland Harbor draft FS (Anchor QEA 2012a). Therefore, consistent with the findings in Section 5.3 of Attachment 1, larger footprint alternatives that take longer to construct and involve more removal of sediments, are more likely to lead to minor adverse impacts on water quality. The Portland Harbor draft FS indicates that all of the alternatives are predicted to result in similar long-term surface water COI concentrations, which included remediation of the sediments within the interim Project Area.

Alternative 1 (No Action) would not result in any active remediation, and therefore, no impact on surface water quality. For Alternatives 2 through 5, the potential impacts of implementation of active remedial alternatives on water quality within the interim Project Area are expected to be negligible (Alternatives 2a, 2b, 3, and 4) to minor adverse (Alternative 5), based on the extent of dredging involved and duration of construction. Per Section 5.6.3 of the EE/CA, the use of

sheetpile barriers considered during removal as part of Alternative 5 is not expected to appreciably decrease the surface water impacts due to releases that will occur during sheetpile placement and removal, losses through sheetpile interlocks and equalization ports, and loss of retained water once the sheetpile system is removed.

5.4 Current Patterns and Water Circulation and Normal Water Fluctuations

Existing conditions for water flow and circulation within the interim Project Area are a function of processes in the Lower Willamette River watershed. Section 5.4 of Attachment 1, indicates that implementation of the Portland Harbor draft FS alternatives would have negligible impact on current patterns, water circulation and water fluctuations. Similarly, it is anticipated that implementation of EE/CA Alternatives 2 through 5 would also have negligible impacts on these characteristics of the aquatic environment through discharge of dredged or fill material.

5.5 Salinity Gradients

The Willamette River is a freshwater system with no significant salinity factors; therefore, this criterion does not apply.

6 POTENTIAL IMPACTS ON BIOLOGICAL CHARACTERISTICS OF THE AQUATIC ECOSYSTEM

The Portland Harbor Site-wide draft 404(b)(1) evaluation indicated that each of the proposed alternatives evaluated in the Portland Harbor draft FS (Anchor QEA 2012a) could be designed to be substantively compliant with the regulations. However, the Portland Harbor Site-wide evaluation also indicated that potential impacts on the biological characteristics of the aquatic ecosystem were likely to become increasingly adverse on a site-wide basis for the larger footprint alternatives that required 10 or more years to implement due to the cumulative effect of the disturbances on the aquatic ecosystem. The implementation of the remedial action is anticipated to require one in-water work season for Alternative 2a, three work seasons for Alternative 2b, four seasons for Alternative 3, five work seasons for Alternative 4, and ten work seasons to complete Alternative 5.

It is anticipated that the impacts resulting from implementation of Alternatives 1 through 5 would be consistent with the determinations set forth in Section 6 of Attachment 1.

6.1 Threatened and Endangered Species

To demonstrate compliance with Section 7(a) of the Endangered Species Act (ESA; Section 7), which was identified by EPA as an ARAR for the Portland Harbor Site and interim Project Area, the LWG prepared a preliminary draft site-wide BA (Anchor QEA 2012b) that considers the potential impacts of the proposed action, including potential remedial technologies and construction of compensatory mitigation that may be conducted. The Portland Harbor preliminary draft Site-wide BA covers the entire Portland Harbor Site but does not evaluate the potential impact of the various alternatives; rather, it considers the likely construction methods to be used and considers the potential impacts to listed species from an action using those methods. The Portland Harbor preliminary draft Site-wide BA includes an overall action area for the project that is significantly larger than the Portland Harbor Site to accommodate a range of areas where compensatory mitigation might occur. An interim Project Area Preliminary Draft BA was prepared in support of the EE/CA (see Appendix C to the EE/CA), which relies upon the findings of the Portland Harbor preliminary draft Site-wide BA.

The species that may be present within the interim Project Area are discussed in more detail in Section 6.1 of Attachment 1 and presented in Table 6-1.

Because the implementation of remediation within the interim Project Area was considered as part of the proposed action evaluated in the Preliminary Draft Site-wide BA (Anchor QEA 2012b), the conclusions of that document apply to the implementation of the proposed alternatives evaluated in the draft EE/CA.

Based on the guidance and definitions provided in the Preliminary Draft Site-wide BA (Anchor QEA 2012b), and the previously discussed project effects relative to baseline conditions, it was determined that the remedial actions may affect and are likely to adversely affect Lower Columbia River Chinook, and Upper Willamette River Chinook salmon. Additionally, it is concluded that the proposed action may affect and is not likely to adversely affect Lower Columbia River steelhead, Upper Willamette River steelhead, and Lower Columbia coho. Justification for these determinations is provided in the Preliminary Draft Site-wide BA, as well as determinations for the species that are found in the broader action area considered in the Preliminary Draft Site-wide BA, but are not common within the Willamette River or the interim Project Area.

Although some individual organisms may experience short-term adverse effects; overall, the proposed removal action will provide long-term benefits for listed species by removing contaminated sediments from the interim Project Area and larger Portland Harbor Site. BMPs, avoidance and minimization measures, and compensatory mitigation are anticipated to be components of the selected remedy to meet mitigation requirements under the CWA. The CWA mitigation may be applicable conservation measures for ESA species. Therefore, the overall impact of the site-wide project, which includes completion of remediation within the interim Project Area, on ESA-listed species is anticipated to result in a net benefit in the long term to threatened and endangered species.

For the purposes of assessing impact for this evaluation of the proposed Alternatives 2 through 5, alternatives with larger active remediation footprint and/or remediation requiring ten or morel in-water work seasons to complete (Alternative 5) are more likely to have an adverse effect on listed fish than alternatives which have a smaller active remediation footprint and require fewer in-water work seasons to complete (Alternatives 2a, 2b, 3, and 4). Specific potential adverse impacts are consistent with those described in Section 6.2 of Attachment 1. Alternative 1 (No Action) would have no impact on listed species. In the long term, the removal of contaminated sediments from the interim Project Area would be anticipated to have a beneficial impact on listed species for all alternatives.

6.2 Fish, Crustaceans, Mollusks, and Other Aquatic Organisms in the Food Web

Contaminant concentrations within the interim Project Area may affect aquatic organisms in the food web. Further, the highly modified nature of the interim Project Area and adjacent uplands (as previously described in Section 2) limits the availability of suitable habitat for many species.

Physical impacts to fish and invertebrates in the food web may occur as a result of potential short-term water quality impacts related to turbidity or other water quality issues identified in the draft EE/CA Section 7, discussed in detail in Section 5 of Attachment 1, and summarized in Section 5 of this document. Initially, the dredging and placement of material for in-place treatment or the dredge residuals cover layer will remove or smother the existing non-mobile benthic species in the area of active remediation. Food web impacts may also occur due to changes in substrate type and water depth habitats.

The removal activities are conducted in order to remove contaminants from the interim Project Area and may also provide some beneficial long-term impacts to benthic habitat from some of the substrate changes. In the long term, removal of the contamination may improve benthic forage conditions nearby and aid in the recovery of the ecosystem. Specific assessment of existing habitat conditions will occur as part of the remedial design process based on the footprint of the preferred alternative.

The Alternative 1 (No Action) would have no direct impact on the food web. Implementation of Alternatives 2a, 2b, 3, and 4 would be anticipated to have short-term adverse impacts on the food web, with Alternative 5 resulting in short-term impacts over many more years (as many as ten). It is anticipated that the implementation of the remedial action along with compensatory mitigation would result in a net benefit to chemical conditions of the substrate and the overall aquatic environment by removing contaminated material from the interim Project Area and replacing potentially lost habitat functions. The local food web would be negligibly impacted in the short-term through implementation of Alternatives 2a, 2b, 3, and 4, increasing to minor adverse impacts for Alternative 5 due to the longer duration of construction required for completing these alternatives.

6.3 Impacts on Other Wildlife

As indicated in Section 6.3 of Attachment 1, a diverse group of birds and a small number of aquatic or aquatic-dependent mammals are known to occupy habitat areas in the Lower Willamette River. As indicated in Section 2, there is limited suitable habitat within the interim Project Area. Table 6-2 lists the Oregon Department of Fish and Wildlife (ODFW) state-listed sensitive species that may occur within the Action Area defined in the Portland Harbor preliminary draft Site-wide BA (Anchor QEA 2012b) and the interim Project Area Preliminary Draft BA (EE/CA Appendix C).

Consistent with the findings of the Portland Harbor Site-wide draft 404(b)(1) evaluation (Attachment 1), the in-water work for either in-place treatment or removal proposed for Alternatives 2 through 5 may disrupt other wildlife through noise and additional construction activity in the interim Project Area. Although the active remediation area affected increases by each Alternative 2 through 5, it is anticipated that the remedial action alternatives will result in a net benefit to fish and wildlife and the overall aquatic environment by removing contaminated material from the interim Project Area. The project-related activities are anticipated to be conducted only within the approved in-water work window; therefore, construction activities will not occur year-round. Alternative 5 would require approximately 10 in-water work seasons to complete construction, therefore would have additional short-term disruptions to wildlife over a longer timeframe than the alternatives that can be completed in fewer work seasons . The No Action alternative (Alternative 1) will have no impact on other wildlife.

7 POTENTIAL IMPACTS ON SPECIAL AQUATIC SITES

The Portland Harbor Site-wide draft 404(b)(1) evaluation indicated that each of the proposed alternatives evaluated in the Portland Harbor draft FS (Anchor QEA 2012a) could be designed to be substantively compliant with the regulations. However, the Portland Harbor Site-wide evaluation also indicated that potential impacts on special aquatic sites were likely to become increasingly adverse on a site-wide basis for the larger footprint alternatives that required 10 or more years to implement due to the cumulative effect of the disturbances on the aquatic ecosystem.

It is anticipated that the impacts resulting from implementation of Alternatives 1 through 5 would be consistent with the determinations set forth in Section 7 of Attachment 1.

7.1 Sanctuaries and Refuges

No sanctuaries and refuges exist within the interim Project Area; therefore, Alternatives 1 through 5 would have no impact on sanctuaries and refuges.

7.2 Wetlands

Based on the wetlands identification process conducted for the Portland Harbor Site, as detailed in Section 7.2 of Attachment 1, no wetlands occur within the interim Project Area. Therefore, Alternatives 1 through 5 would have no impact on wetlands.

7.3 Mudflats

Based on the mudflat identification process conducted for the Portland Harbor Site, as detailed in Section 7.3 of Attachment 1, no mudflats occur within the interim Project Area. Therefore, Alternatives 1 through 5 would have no impact on mudflats.

7.4 Vegetated Shallows

Based on the vegetated shallows identification process conducted for the Portland Harbor Site, as detailed in Section 7.4 of Attachment 1, no vegetated shallows occur within the interim Project Area. Therefore, Alternatives 1 through 5 would have no impact on vegetated shallows.

7.5 Coral Reefs

Because the Willamette River is a temperate inland freshwater system, no coral reefs occur within the interim Project Area. Therefore, Alternatives 1 through 5 would have no impact on coral reefs.

7.6 Riffle and Pool Complexes

Based on the riffle and pool identification process conducted for the Portland Harbor Site, as detailed in Section 7.3 of Attachment 1, no riffle and pool complexes occur in the interim Project Area. Therefore, Alternatives 1 through 5 would have no impact on riffle and pool complexes.

8 POTENTIAL EFFECTS ON HUMAN USE CHARACTERISTICS

The Portland Harbor Site-wide draft 404(b)(1) evaluation indicated that each of the proposed alternatives evaluated in the Portland Harbor draft FS (Anchor QEA 2012a) could be designed to be substantively compliant with the regulations. However, the site-wide evaluation also indicated that potential impacts on human use characteristics were likely to become increasingly adverse on a site-wide basis for the larger footprint alternatives that required 10 or more years to implement due to the cumulative effect of the disturbances on the aquatic ecosystem.

It is anticipated that the impacts resulting from implementation of Alternatives 1 through 5 would be consistent with the determinations set forth in Section 8 of Appendix 2.

8.1 Municipal and Private Water Supplies

Based on the municipal and private water supplies identification process conducted for the Portland Harbor Site, as detailed in Section 8.1 of Attachment 1, one point of diversion (POD) occurs in the interim Project Area (Port of Portland POD S72998), and there are no plans for use of Willamette River water for drinking water. Consistent with the findings of the Portland Harbor Site-wide draft 404(b)(1) evaluation, implementation of remedial alternatives are not anticipated to impact industrial/manufacturing water uses and the implementation of Alternatives 1 through 5 would have no impact on the identified water rights within the vicinity of the interim Project Area.

8.2 Recreational and Commercial Fisheries

It was determined that implementation of the Portland Harbor draft FS alternatives would have negligible impacts on recreational and commercial fisheries (see Section 8.2 of Attachment 1). During construction of EE/CA Alternatives 2 through 5, recreational fishing activities would be excluded from the interim Project Area. It is possible that the implementation of the interim Project Area remedy, regardless of alternative selected would require the establishment of institutional controls that may limit the recreational fishing activities within the interim Project Area. Assessment of the impact to recreational fishing in the interim Project Area will be revised during remedial design for the preferred alternative, when the specific details of institutional controls are identified. Alternative 1 would have no impact on recreational and commercial fisheries.

8.3 Water-Related Recreation

Water-related recreation is common throughout the Willamette River and includes recreational boating, personal motorized recreational watercraft use (e.g., jet skis), and wakeboarding, primarily during the summer months. Due to the extensive commercial and industrial use of the interim Project Area and site-specific security controls, water-related recreational activities previously listed as well as activities such as swimming, SCUBA diving, and windsurfing, are not common in the interim Project Area. It is possible that the implementation of the remedy in the interim Project Area, regardless of alternative selected would require the establishment of institutional controls that may limit the water-related recreation and recreational fishing activities within the interim Project Area. Assessment of the impact to water-related recreation in the interim Project Area will be revised during remedial design for the preferred alternative, when the specific details of construction sequencing and institutional controls are identified. Alternative 1 would have no impact on water-related recreational activities.

8.4 Aesthetics

The interim Project Area is located within the Portland metropolitan area, and the properties within the Gasco Project Area and adjacent properties are primarily zoned as heavy industrial and river industrial and are located within the River Industrial Greenway Overlay Zone (COP 2011). According to Portland City Code 33.440.030(A)(4), the River Industrial Greenway Overlay Zone "encourages and promotes the development of river-dependent and river-related industries which strengthen the economic viability of Portland as a marine shipping and industrial harbor, while preserving and enhancing the riparian habitat and providing public access where practical." The aesthetic nature of the interim Project Area is characterized by its urban setting and includes a variety of recreational, commercial, and industrial uses.

Much of the work involved in remedial activities proposed for Alternatives 2 through 5 involves large vessels and machinery that would be relatively consistent with the types of vessels and equipment typically in interim Project Area. Any impacts from the action alternatives to the aesthetic character of Portland Harbor would be temporary (primarily during the in-water work window) and localized to the area where remedial activities are being conducted. Assessment of the impact to aesthetics in the interim Project Area will be revised during remedial design for the preferred alternative, when the specific details of the remedy, construction sequencing, and institutional controls are identified. Alternative 1 would have no impact on aesthetics.

8.5 Parks, Natural and Historic Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves

No parks, natural and historic monuments, national seashores, wilderness areas research sites, or similar preserves exist within the interim Project Area; therefore, Alternatives 1 through 5 would have no impact on these areas.

8.6 Other Factors in the Public Interest

8.6.1 Cultural Resources

The cultural resources analysis for the Portland Harbor Site-wide draft 404(b)(1) evaluation indicates that the potential of any alternative, including any proposed alternative to be conducted for the interim Project Area, to affect historic or cultural properties depends on the amount of associated upland ground disturbance. Interim Project Area Alternative 1 involves no action, and would have no impact on cultural resources. No structures will be removed or modified in any alternative, and thus, the potential to affect National Register of Historic Places (NRHP)-eligible historic properties is limited to archaeological materials. Given the results of the archaeological assessment as reviewed in Appendix B of the EE/CA, it is determined that it is unlikely that any archaeological materials would be encountered within the interim Project Area proposed for Alternatives 2 through 5. Therefore, the potential to affect an NRHP-eligible historic property is low under any of the alternatives.

8.6.2 Activities Affecting Coastal Zones

The Oregon Coastal Zone extends inland along the Columbia River to the downstream end of Puget Island at approximately RM 39 (OAR 660-035-0010(7)(c)). Therefore, the interim Project Area is not within a Coastal Zone as defined by the State of Oregon and this section is not applicable.

8.6.3 Navigation

Much of the work involved in remedial activities proposed for Alternatives 2 through 5 involves large vessels and machinery that would be relatively consistent with the types of vessels and equipment typically in interim Project Area. Navigation impacts resulting from the implementation of Alternatives 2 through 5 may temporarily restrict navigation due to implementation of temporary and long-term institutional controls, such as temporary closure of

the area within the federal navigation channel, or longer-term restrictions to navigation to protect integrity of capping areas. The EE/CA evaluated the site use requirements within the interim Project Area to determine the application of remedial technologies such that future maintenance dredge depths in and near the federal navigation channel would not be adversely affected through implementation of the remedy in those areas. Short-term impacts to navigation would occur primarily during the in-water work window and would be localized to the area where remedial activities are being conducted. Assessment of the impact to navigation in the interim Project Area will be revised during remedial design for the preferred alternative, when the specific details of the remedy, construction sequencing, and institutional controls are identified. Alternative 1 would have no impact on navigation.

9 EVALUATION AND TESTING OF DISCHARGE OR FILL MATERIAL

The evaluation procedures and testing sequences outlined in 40 CFR Subpart G are intended to support the determinations concerning the suitability of the material proposed for discharge into waters of the United States.

It is anticipated that all in-place remediation materials discharged as fill, including the residuals cover layer, will be obtained from a source that meets the standards for suitability of material according to specifications established at the time of the removal action design. Therefore, any materials imported to the interim Project Area will have low or non-detectable levels of contaminants that are not expected to have significant adverse impacts on water quality or biota in the short or long term.

Additional testing may be necessary at the design level to determine characteristics of sediments to be removed within the interim Project Area to inform the proposed plans for disposal of those sediments in other facilities as discussed in Section 5.8 of the EE/CA and Section 6 of the Portland Harbor draft FS (Anchor QEA 2012a).

10 ACTIONS TO MINIMIZE POTENTIAL ADVERSE EFFECTS AND PRACTICABLE STEPS TO MINIMIZE POTENTIAL ADVERSE IMPACTS (SUBPART H)

10.1 Actions Concerning the Location of the Discharge (230.70)

Under each alternative, the specific remedial action location was determined through a specific assessment of the bounding COIs in the sediment. More information is provided in Section 4 of the EE/CA. The locations of active remediation under all the alternatives are therefore based on the project purpose and need to reduce risk.

The development of the remedial alternatives also considered the following criteria:

- Vertical extent of sediment contamination within the interim Project Area, focusing on the depth of sediment exceeding RALs maintenance dredging depths needed for current and expected future navigation
- Vertical offsets below maintenance dredging depths, such that in situ technologies (e.g., caps or in situ treatment layers) placed in these areas would maintain their integrity under future maintenance dredging events.

10.2 Actions Concerning the Material to be Discharged, the Material After Discharge, the Method of Dispersion and Technology

Section 13 of Attachment 1 provides a detailed overview of the potential avoidance and minimization measures, BMPs, and compensatory mitigation estimates related to the implementation of the proposed alternatives evaluated in the EE/CA. It is anticipated that EPA, consistent with CWA Section 404(b)(1) regulations to first avoid and then minimize impacts to the aquatic environment, will select specific avoidance and minimization measures appropriate to the remedy during development of the remedial design. Because Alternative 1 involves no action, no minimization actions will be required. The following sections focus on Alternatives 2 through 5.

10.3 Actions Affecting Plant and Animal Populations

The implementation of Alternatives 2 through 5 would be conducted in such a way as to minimize potential impact to plant and animal populations through avoidance and minimization measures and implementation of compensatory mitigation.

10.4 Actions Affecting Human Use

The remedial alternatives are proposed for implementation in order to improve human health and the environment through remediation of contaminated sediments that potentially impacts biota; therefore, the overall effect on human use as a result of implementation of Alternatives 2 through 5 is assumed to be beneficial in the long term for recreational fishing and other recreation. Some short-term impacts that occur may be avoided or minimized through application of the avoidance and minimization measures discussed in Section 13. However, water-based recreation and recreational fishing does not commonly occur within the interim Project Area, especially in the nearshore area due to security-based access restrictions, although some recreational use occurs closer to the federal navigation channel.

11 ANALYSIS OF PRACTICAL ALTERNATIVES PURSUANT TO SITE CRITERIA

Section 7.3 of the EE/CA provides the analysis of practical alternatives pursuant to CERCLA criteria. As previously stated, the purpose of the proposed action is to remediate the contaminated sediments at the interim Project Area to reduce potentially unacceptable risks to acceptable levels consistent with the RAOs for the interim Project Area and Portland Harbor Site. The EE/CA evaluates the available alternatives, including discharge locations, capable of achieving the project purpose consistent with 40 CFR 230.10(a). It is anticipated that the remedial alternative selected by EPA in the proposed plan and ROD will be the alternative (consistent with CERCLA criteria) most available and capable of achieving the project purpose in a manner that is designed to avoid unacceptable adverse impacts to the aquatic ecosystem.

The subsections below summarize the findings of the EE/CA relative to the CWA Section 404(b)(1) alternatives analysis criteria.

11.1 Site Availability

Pursuant to the CWA Section 404(b)(1) regulations, an alternative is practicable if it is available to meet and is capable of meeting the project purpose, among other considerations. The regulations at 40 CFR 230.1(a)(2) state "an area not presently owned by the applicant, which could be reasonably obtained, utilized, expanded, or managed in order to fulfill the basic purpose of the proposed activity may be considered." For the Portland Harbor draft FS (Anchor QEA 2012a), which includes the interim Project Area, EPA has determined that an alternative would be available if it is owned or could be reasonably obtained, used, expanded, or managed by the individual responsible parties. For the purposes of the draft EE/CA, it is assumed that neither site ownership nor access to the remedial action area at the interim Project Area will be an impediment to the implementation of the proposed alternatives.

Within the Portland Harbor draft FS (Anchor QEA 2012a), it is assumed that proposed CAD and CDF disposal sites are examples of the types of sites that may be used in combination to address disposal requirements. This does not preclude the consideration of other sites owned by others for use in removal action design as necessary. Therefore, availability of a specific disposal site is not assessed in the EE/CA or this document.

11.2 Cost Effectiveness

Pursuant to the CWA Section 404(b)(1) regulations, a determination of practicability must consider if fill or disposal can be accomplished at a reasonable cost (40 CFR 230.10[a][2]). To determine cost effectiveness, the costs of the alternatives and their protectiveness were compared to other alternatives and considered in light of the project purpose. Costs for each alternative are evaluated in section 7.3 of the EE/CA and compared among the alternatives in Section 8.7. It is anticipated that the removal action alternative for the interim Project Area selected by EPA in the proposed plan and ROD, as further developed during remedial design, will be the alternative (consistent with CERCLA's cost effectiveness criteria) most available and capable of achieving the project purpose in a manner that is designed to avoid unacceptable adverse impacts to the aquatic ecosystem.

11.3 Feasibility

It is anticipated that the remedial alternative for the interim Project Area selected by EPA in the proposed plan and ROD, as further developed during removal action design, will be the alternative (considering technical and administrative feasibility) most available and capable of achieving the project purpose in a manner that is designed to avoid unacceptable adverse impacts to the aquatic ecosystem.

11.4 Aquatic Impacts from Disposal

Potential aquatic impacts from the removal action are discussed in Sections 5 and 6.

11.5 Conservation and Recovery

Section 13 of Attachment 1 provides a detailed set of potential avoidance and minimization measures that may be applied in the development of the removal action design. Implementation of specific avoidance and minimization measures, such as the decision to backfill a dredged area up to the pre-existing grade, are decisions requiring more information than is available at the EE/CA level of detail. Section 13 also describes the process for determining compensatory mitigation to account for the unavoidable losses to aquatic functions. Finally, conservation measures that may account for impacts to any ESA-listed species and their critical habitat are described in the Portland Harbor preliminary draft Site-wide BA (Anchor QEA 2012b).

11.6 Limit Number of Sites

The sizes and locations of the removal action areas were determined through application of risk-based screening. This process is described in detail in Section 4 of the EE/CA. The process for identification of the disposal sites considered in the EE/CA is described in detail in Section 6 of the Portland Harbor draft FS (Anchor QEA 2012a).

12 FACTUAL DETERMINATIONS ON SIGNIFICANT DEGRADATION, EITHER INDIVIDUALLY OR CUMULATIVELY, OF THE AQUATIC ECOSYSTEM

Because Alternatives 2a, 2b, 3, 4, and 5 are substantively similar in type and application of technology to the remedial alternatives considered in the Portland Harbor draft FS (Anchor QEA 2012a), the factual determinations set forth in Section 12 of Attachment 1 apply to the EE/CA alternatives, and it is determined that based on available information, each of the alternatives could be designed to be in compliance with CWA Section 404(b)(1) (Table 12-1).

13 DETERMINATION ON INCLUSION OF ALL APPROPRIATE AND PRACTICABLE MEASURES TO MINIMIZE POTENTIAL HARM ON THE AQUATIC ECOSYSTEM

In evaluating a specific discharge, EPA is required to examine other practicable alternatives to the proposed discharge, which may include not discharging or discharging at a different aquatic site (40 CFR 230.5[c]). The guidelines state that discharge of dredged or fill material is not permitted "if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences" (40 CFR 230.10[a]). An alternative is considered practicable "if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." That is, if there are locations or suitable methods that meet the overall project purpose and do not have other significant adverse environmental consequences, then the least environmentally damaging option will be the highest priority for selection of these alternatives. Thus, EPA may find under its regulatory criteria that capping and MNR-based alternatives (i.e., Alternatives 2a or 2b) are practicable alternative(s) to the proposed discharge from dredging, which would have less adverse impact on the aquatic ecosystem and which "do not have other significant adverse environmental consequences" (40 CFR § 230.10[a]).

Because detailed design work is not yet available for areas considered under this evaluation, the short-term and long-term aquatic impacts expected for the EE/CA are representative examples using the preliminary engineering design information. These expected impacts are also consistent with the impacts expected for the alternatives described in the Portland Harbor draft FS (Anchor QEA 2012a) and Portland Harbor Site-wide draft 404(b)(1) evaluation. Specific conservation measures to avoid and minimize short-term construction impacts will be developed during the removal action design phase.

Preliminary conservation measures that should be considered in developing the final plan to minimize construction impacts are presented in Section 13 of Attachment 1. To the extent that the removal action ultimately selected results in an unavoidable net loss in terms of the relative function and value of habitat, the loss will be evaluated and mitigated, as appropriate, in accordance with applicable federal and state ARARs, as described in Section 13.4 of Attachment 1. The Portland Harbor draft FS (Anchor QEA 2012a) provided preliminary evaluations of potential compensatory mitigation estimates for each SMA under each proposed Portland Harbor draft FS alternative. The results for SMA 9U, which most closely approximates the interim Project Area depending on the Portland Harbor draft FS alternative evaluated

ranged from mitigation debits of 0.48 to 1.81, which corresponds to the area in acres of high-quality ACM or off-channel, shallow water habitat with gently sloped shorelines and natural substrates that need to be created or restored to offset adverse impacts. For the purpose of the EE/CA, it is assumed that this range of compensatory mitigation will represent a likely range of the amount of compensatory mitigation that could be required based on the implementation of Alternatives 2 through 5; Alternative 1 (No Action) would have no impact on the aquatic environment and would not require any compensatory mitigation.

14 OTHER FACTORS IN THE PUBLIC INTEREST

14.1 Need

The interim Project Area was included in the NPL in 2000 as part of Portland Harbor, due to presence of contaminated sediments, which if left untreated pose potentially unacceptable risks to human health and the environment. The remedial alternatives assessed in the EE/CA represent the set of alternatives that passed through an initial screening for feasibility and cost effectiveness. The cleanup or remediation should address the contaminated sediments in a way that is consistent with the maritime uses of the interim Project Area and Portland Harbor Site.

Potential impacts from the sediment remedy will be avoided and minimized to the extent practicable, and unavoidable losses of aquatic functions resulting from the sediment remedy will be addressed through compensatory mitigation.

The project purpose is to achieve remediation in a manner that is consistent with other maritime uses of the interim Project Area and minimization of disruptions of these activities. The longer timeframes and construction requirements (up to ten in-water work seasons) for Alternative 5 would involve more disruption of existing maritime uses and have a potential economic impact on associated businesses at the interim Project Area, and therefore, such an alternative is less able to demonstrate consistency with the stated purpose and need for the removal action. EPA may determine that the other alternatives are more practicable with less adverse impact on the aquatic ecosystem and do not have "other significant adverse environmental consequences" (40 CFR 230.10[a]).

Other factors in the public interest for remediation of the interim Project Area include:

- Fish and wildlife impacts (see Section 6)
- Water quality (see Section 5)
- Historic and cultural resources (see Section 8)
- Activities affecting coastal zones (not applicable)
- Environmental benefits (see Portland Harbor draft FS [Anchor QEA 2012a] for discussion of overall green remediation and potential impacts on habitat in Section 14.6 of Attachment 1)
- Navigation (see Section 8)

15 REVIEW OF CONDITIONS FOR COMPLIANCE

The potential for significant adverse impacts on the aquatic ecosystems resulting from implementation of the removal action alternatives are mitigated to the extent possible through the application of avoidance and minimization measures and compensatory mitigation described in Section 13 of Attachment 1. According to the guidance, "…no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences" (40 CFR 230.10 [a]).

The alternatives with the most potential for adverse impacts on the aquatic environment are Alternatives 4 and 5 because of their larger active remediation footprint and greater amount of material discharged as fill, as well as the extended timeframe required for implementation. However, the proposed Alternatives 2 through 5 are anticipated to result in a net benefit in the long-term due to removal of a source of contamination to the aquatic environment.

15.1 Availability of Practicable Alternatives

CFR 230.10 of Subpart B of the CWA Section 404(b)(1) regulations further specifies four general conditions which must be met for compliance (see Section 4). These include consideration of practicability, compliance with the ESA, protections for water quality and human uses, and compliance with the avoidance, minimization, and compensatory mitigation requirements. Activities that do not involve a discharge of material into waters of the United States (e.g., the Willamette River) include Alternative 1 (No Action). However, according to the proposed RAOs and purpose and need of the remedial action, this alternative is not considered to be available per 40 CFR 230.10. Alternatives that result in fewer impacts to the aquatic environment due to the duration of implementation (i.e., Alternatives 2a and 2b) and that meet the purpose and need of the remedial action may be considered available. The results of the analyses for the alternatives evaluated in the Portland Harbor draft FS (Anchor QEA 2012a) are applicable to the EE/CA alternatives and are summarized in Section 15.1 of Attachment 1.

15.2 Compliance with Pertinent Legislation

All alternatives are expected to comply with the Oregon Environmental Cleanup Law, ESA, CWA Section 404(b)(1), and Federal Emergency Management Agency (FEMA) requirements. As noted in Section 8.2.3 of the Portland Harbor draft FS (Anchor QEA 2012a), although all

alternatives result in reductions in levels of contamination in the Site surface water, remediation of the Site alone is not sufficient for the site surface water to achieve certain chemical-specific Water Quality Standards or National Recommended Water Quality Criteria due to background concentrations in upstream surface water.

16 FINDINGS

Based on the results of the evaluation of the Portland Harbor draft FS alternatives and the demonstrated consistency between those Portland Harbor draft FS alternatives and the proposed remedial alternatives for the interim Project Area evaluated in the EE/CA, it is determined that each of the proposed action alternatives 2 through 5 evaluated in the draft EE/CA would comply with the CWA Section 404(b)(1) regulations; however, the implementation of Alternative 5 would result in continued short-term minor adverse impacts over many more years than Alternatives 2a and 2b.

Specific findings are reserved for EPA in a future draft of this document.

17 REFERENCES

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TABLES

Table 3-1
Summary Description of Gasco Sediment Site Remedial Alternatives

No.	Description	BaPEq RAL (µg/kg)[1]	Benthic Toxicity	Active Remediation Areas Defined By	Active Remediation Area Additions for Subsurface Contamination in NC and FMD Areas Outside Active Cleanup Boundary	Preference for Removal of Substantial Product[2]	In-water Technology Options[4]	
							MNR	In Place[3]
1	No further action	None selected	No CBRA duration selected	No active remediation areas proposed	No active remediation area additions for subsurface contamination	No preference for removal	No MNR proposed	No in place technologies proposed
2a	IN PLACE Focused	20,000	CBRAs achieved at Year 10 (estimated)	- Nearshore: Areas where >RAL and/or MQ currently >0.7* - NC: no active remediation areas proposed	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7 - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7	In place technologies proposed over removal throughout active remediation boundary	- Outside Alternative 2 active remediation boundary but within interim Project Area Boundary	- Nearshore: Everywhere inside active remediation boundary except FMD area - NC: not proposed
2b	COMBINED In Place and Removal 1	20,000	CBRAs achieved at Year 10 (estimated)	- Nearshore: Areas where >RAL and/or MQ currently >0.7* - NC: Areas where MQ currently >0.7*	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7 - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7	In place technologies proposed over removal throughout active remediation boundary	- Outside Alternative 2 active remediation boundary but within interim Project Area Boundary	- Nearshore: Everywhere inside active remediation boundary except FMD area - NC: not proposed
3	COMBINED In Place and Removal 2	20,000	CBRAs achieved at Year 10 (estimated)	- Nearshore: Areas where >RAL and/or MQ currently >0.7* - NC: Areas where MQ currently >0.7* - Both: Where potentially mobile substantial product present in surface	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7. - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7 - Both: Where liquid product present in subsurface	Preference for removal for observances of liquid substantial product**	- Outside Alternative 3 active remediation boundary but within interim Project Area Boundary	- Nearshore: Everywhere inside active remediation boundary except FMD areas and liquid substantial product areas. Also, cap back followingliquid substantial product removal. Also, cap under docks and unstable slopes where liquid substantial product present and/or RAL exceedances identified. - NC: not proposed
4	COMBINED In Place and Removal 3	1,500	CBRAs achieved at Year 0 (estimated)	- Nearshore: Areas where >RAL and within CBRA - NC: Areas within CBRA - Both: Where substantial product present in surface	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7 - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7 - Both: Where substantial product present in subsurface	Observances of substantial product (as defined in SOW)	- Areas on periphery of Alternative 4 active remediation boundary that only show surface sediment toxicity based on one LOE	- Nearshore: Everywhere inside active remediation boundary except FMD area and substantial product areas. Also, cap back after substantial product removal. Also, cap under docks and unstable slopes where substantial product present and/or RAL exceedances identified. - NC: not proposed
5	REMOVAL Focused	1,500	CBRAs achieved at Year 0 (estimated)	- Nearshore: Areas where >RAL and within CBRA - NC: Areas within CBRA - Both: Where substantial product present in surface	- Nearshore: Where maintenance dredging in FMD reveals/removes sediments >2x RAL Avg or 5x RAL Max or MQ>0.7 - NC: Where maintenance dredging reveals/removes sediments >2x MQ=0.7 Avg or 5x MQ=0.7 - Both: Where substantial product present in subsurface	Observances of substantial product (as defined in SOW)	No MNR proposed	Where removal infeasible (e.g., causes unstable slopes, impacts upland structures) in both nearshore and NC

Table 3-1
Summary Description of Gasco Sediment Site Remedial Alternatives

No.	Description	In-water Technology Options[4]			Riverbank Technology Options[4]			Disposal (Riverbank and Sediments)
		Removal	Dock Considerations	Rigid Containment[5]	MNR****	In Place (e.g., water infiltration barrier with erosion control on top)	Removal	
1	No further action	No removal proposed	No dock removal/ replacement	No rigid containment	No MNR proposed	No in place technologies proposed	No removal proposed	No disposal proposed
2a	IN PLACE Focused	No removal proposed	No dock removal/ replacement	No rigid containment	Areas with minimal screening level exceedances in soils, no "substantial"**** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soils.	None (assumes no need for removal to create stable slopes following in-water remediation)	No disposal proposed
2b	COMBINED In Place and Removal 1	- Nearshore: In FMD area inside active remediation boundary - NC: Everywhere inside Alternative 2 active remediation boundary	No dock removal/ replacement	No rigid containment	Areas with minimal screening level exceedances in soils, no "substantial"**** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soils.	None (assumes no need for removal to create stable slopes following in-water remediation)	100% CDF/CAD disposal (low cost) to 100% unspecified upland Subtitle D (high cost). 100% SubSMA C299 Subtitle C.
3	COMBINED In Place and Removal 2	- Nearshore: In FMD area inside active remediation boundary and liquid substantial product areas (except under docks and unstable slopes) - NC: Everywhere inside Alternative 3 active remediation boundary	No dock removal/ replacement	No rigid containment	Areas with minimal screening level exceedances in soils, no "substantial"**** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soils (and as needed where these conditions persist following removal--see removal).	As necessary to support stable slopes following in-water removal and in areas with liquid substantial product.	For materials without liquid substantial product in NC and FMD areas, use Alternative 2b assumptions. For materials with liquid substantial product, assume 100% unspecified upland Subtitle D (low cost range) or 50% Subtitle C (high cost range). 100% SubSMA C299 Subtitle C.
4	COMBINED In Place and Removal 3	- Nearshore: In FMD area inside active remediation boundary and substantial product areas (except under docks and unstable slopes) - NC: Everywhere inside Alternative 4 active remediation boundary	No dock removal/ replacement	No rigid containment	Areas with minimal screening level exceedances in soils, no "substantial"**** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soil that are not removed or are remaining following removal.	As necessary to support stable slopes following in-water removal and in areas with substantial product.	For non-substantial product materials, use Alternative 2b assumptions. For materials with substantial product, 10% Subtitle C (low cost range) to 35% Subtitle C (high cost range); remainder to unspecified Subtitle D. 100% SubSMA C299 Subtitle C.
5	REMOVAL Focused	Where removal feasible in both nearshore and NC	Remove/replace dock	Sheetpile wall proposed where feasible (e.g., water depths)	Areas with minimal screening level exceedances in soils, no "substantial"**** product, and that have currently effective erosion control that is protective of riverbank erosion (e.g., south end of Siltronic shoreline).	Areas with substantial product and/or substantial screening level exceedances in soil that are remaining following removal.	As necessary to support stable slopes following in-water removal, in areas with substantial product, and in areas with substantial screening level exceedances in soils.	For non-substantial product materials, use Alternative 2b assumptions. For materials with substantial product, 20% Subtitle C (low cost range) to 40% Subtitle C (high cost range); remainder to unspecified upland Subtitle D. 100% SubSMA C299 Subtitle C.

Table 3-1
Summary Description of Gasco Sediment Site Remedial Alternatives

Notes:

[1] = Consistent with Portland Harbor draft Feasibility Study (FS; Anchor QEA 2012a), prospective RAL point of compliance is the maximum layer-weighted-average up to 30 centimeters below mudline applied outside the navigation channel.

[2] = The Statement of Work (SOW) includes the preference for removal of substantial product (as defined in the SOW) as a remedial action objective.

[3] = In Place remedial technologies include a range of process options with similar effectiveness, implementability, and cost, including armored caps, sand caps, enhanced monitored natural recovery (EMNR), or in-situ treatment (e.g., activated carbon placement), depending on sediment management area (SMA)-specific characteristics.

[4] = For all proposed alternatives, upland source controls are assumed to be in place and functioning to minimize (in most areas eliminate) groundwater flux to the riverbank and in-water areas.

[5] = The Portland Harbor draft FS determined that due to the documented issues with effectiveness and implementability of rigid containment, and the limited documented benefit associated with such controls, consideration of rigid containment (e.g., sheet pile walls) as a Removal Best Management Practice (BMP) is generally not warranted for remedial design.

Avg = Average

CAD = Confined aquatic disposal facility

CBRA = Comprehensive Benthic Risk Area (defined using the procedures established for use in the Portland Harbor FS)

EMNR = Enhanced Monitored Natural Recovery

FMD = Potential Future Maintenance Dredge Area

LOE = Line of Evidence

MNR = Monitored Natural Recovery

NC = Navigation Channel

RAL = Remedial Action Level

SMA = Sediment Management Area

SL = screening level

µg/kg = micrograms per kilogram

* Consistent with Portland Harbor draft FS Alternative B, mean quotient (MQ)<0.7 takes precedence over bioassay hits, but TZW and bioaccumulation benthic endpoints take precedence over MQ<0.7.

** Observations of substantial product noted in core and boring logs that indicate potential for increased mobility (e.g., liquid nonaqueous phase liquid [NAPL], oily product, saturated with NAPL product) originating within 0 to 3 feet below mudline.

*** Defined using the SOW sediments definition, but technically such product in riverbank is not defined as "substantial product" because it is outside the sediments project area boundary.

**** The assumption here is that if there are not substantial chemical screening level exceedances and no "substantial product", then the stormwater "percolation" pathway would not transport substantial contaminant load to the river by itself.

Table 3-2
Proposed Volumes of Dredge and Fill Material for Remedial Alternatives

	Summary of Dredge and Fill Quantities													
	Removal Quantities						In Situ Remediation Area[4]		Engineered Cap Purchase and Delivery Quantities					
	Dredge Area (acres)		Dredge Volume Excluding Residuals (cy)[1]						Base Sand (tons)		Armor B (tons)		ODOT Armor 200 (tons)	
Alternative	Area Above Elevation 13 NAVD88 (acres)	Area Below Elevation 13 NAVD88 (acres)	Volume Above Elevation 13 NAVD88 (acres)	Volume Below Elevation 13 NAVD88 (acres)	Residuals Dredge Volume (cy)[1,2]	Residuals Cap Volume (cy)[1,3]	Above Elevation 13 NAVD88 (acres)	Below Elevation 13 NAVD88 (acres)	Quantity Above Elevation 13 NAVD88 (tons)	Quantity Below Elevation 13 NAVD88 (tons)	Quantity Above Elevation 13 NAVD88 (tons)	Quantity Below Elevation 13 NAVD88 (tons)	Quantity Above Elevation 13 NAVD88 (tons)	Quantity Below Elevation 13 NAVD88 (tons)
2a	0.0	0.0	0	0	0	0	0.0	7.4	23,000	0	16,000	9,000	26,000	-
2b	0.0	7.7	0	220,000	13,000	7,000	0.0	7.4	23,000	0	16,000	9,000	26,000	-
3	0.0	7.9	0	259,000	13,000	7,000	0.0	7.6	24,000	0	16,000	9,000	27,000	-
4	1.9	9.9	15,000	350,000	16,000	8,000	0.5	9.2	28,000	2,000	20,000	11,000	34,000	4,000
5	6.6	19.0	69,000	542,000	31,000	16,000	2.3	2.5	8,000	6,000	6,000	3,000	9,000	17,000
					Tons per cy	Tons per cy			Tons per cy	Tons per cy	Tons per cy	Tons per cy	Tons per cy	Tons per cy
					1.5	1.5			1.5	1.5	1.8	1.8	1.8	1.8

General

	Indicates an estimated quantitywhere the boundary between elevation 13 is difficult to establish. If necessary, these quantities will be refined for remedial design.
	Indicates a quantity estimated for the area above elevation 13 NAVD88. In general the top elevation in this area is +30 NAVD88. The Bottom elevation is +13 NAVD88.
	Indicates a quantity estimated for the area below elevation 13 NAVD88. This area extends from the shoreline to the edge of the active remediation area in the river.

Notes:

1 = Dredge volumes and cap quantities shown are from the "High Scenario" meaning worst case scenario. Dredge volumes are calculated using the LWG's Preferred Method.
2 = Residuals dredge assumes 6-inch dredge plus 6-inch overdredge.
3 = Residuals cap assumes 6-inches.
4 = This is the total area associated with engineered cap and engineered active cap.
5 = Engineered Active Caps are placed in the area below elevation 13 NAVD88.
6 = The total backfill quantities shown are estimated assuming a 3H:1V slope for long term stabilty.
7 = Membrane Material quantities are placed in the area above elevation 13 NAVD88, typically from elevation +30 NAVD88 to elevation +13 NAVD88. This work includes removing the existing Rip-rap debris and vegetation to a shallow depth (a few feet) and placing the HDPE membrane, 1 foot of bedding sand, 1-foot of filter sand (gravelly sand), and placing the re-used rip-rap on top.

Dredge and Cap quantities are rounded up to the nearest 1,000 cy or 1,000 tons.

Acronyms:
cy = cubic yards
ft = feet
NAVD88 = North American Vertical Datum 1988
ODOT = Oregon Department of Transportation
SF = square feet

Table 3-2
Proposed Volumes of Dredge and Fill Material for Remedial Alternatives

	Summary of Dredge and Fill Quantities						
	Active Cap[5]			Membrane Material Quantities[7]			
Alternative	Bulk Organoclay (tons)	Organoclay Mat Area (SF)[5]	Backfill for 3H:1V Shoreline Slopes (tons)[6]	Work Area of Rip-Rap and Debris / Vegetation Removal (acres)	Area of membrane placement (SF)	Bedding Sand - 1-ft thick (tons)	Filter Sand 1-ft thick (tons)
2a	54	50,000	-	-	90,800	6,000	6,000
2b	54	50,000	-	2	90,800	6,000	6,000
3	54	1,300	8,000	2	91,300	6,000	6,000
4	62	1,300	41,000	3	110,200	7,000	7,000
5	29	-	254,000	3	142,700	8,000	8,000

Tons per cy	Tons per cy
1.5	1.5

Table 4-1
LWG Section 404(b)(1)
Impact Terminology and Scale

Terminology		Description
No Impact		Impact of the remedial action has no measurable impact.
Beneficial Impact		Impact of the remedial action is an overall benefit with no adverse impacts.
Impact increasing ↓	Negligible Impact	Impact of the remedial action is insignificant and discountable but more adverse than beneficial. Short-term impacts can be mostly avoided or minimized through BMPs or other measures.
	Minor Adverse Impact	Impact of the remedial action is not discountable but is relatively minor and can generally be mitigated through BMPs or compensatory mitigation. Some impacts may be short-term (e.g., acute water quality impacts), while others may be short-term impacts experienced over a long-term timeframe.
	Moderate Adverse Impact	Impact of the action is more substantial but may be reduced by BMPs or other avoidance and minimization measures and may require compensatory mitigation to address. Impacts are typically experienced over long term rather than short term.
	Significant Adverse Impact	Impact is substantial, long term, and cannot be avoided or minimized and would require compensatory mitigation to replace lost function.

Table 6-1
Listed Species That May Be Present and Their Critical Habitat

Species	Status/Agency	Critical Habitat Status in the Project Area	Notes
Lower Columbia River ESU Chinook (*Oncorhynchus tshawytscha)*	Threatened; NMFS	Designated	
Upper Willamette River ESU Chinook (*Oncorhynchus tshawytscha)*	Threatened; NMFS	Designated	
Columbia River ESU Chum (*Oncorhynchus keta)*	Threatened; NMFS	Designated, but not in the Project Area	
Lower Columbia River ESU Coho (*Oncorhynchus kisutch)*	Threatened; NMFS	None	Critical habitat proposal under development.
Lower Columbia River DPS Steelhead (*Oncorhynchus mykiss)*	Threatened; NMFS	Designated	
Upper Willamette River DPS Steelhead (*Oncorhynchus mykiss)*	Threatened; NMFS	Designated	
Columbia River DPS Bull Trout	Threatened; USFWS	Designated, but not in the Project Area	Experimental population in the Upper Clackamas River but is not expected to be present at the Project Area.
Salvelinus confluentus			
Southern DPS Eulachon	Threatened, NMFS	Designated, but not in the Project Area	Low potential to occur in the Project Area
Thaelichthys pacificus			
Southern DPS North American Green Sturgeon	Threatened, NMFS	Designated, but not in the Project Area	Low potential to occur in the Project Area
Acipenser medirostris			
Eastern DPS Steller sea lion	Threatened, NMFS	Designated, but not in the Project Area	Low potential to occur in the Project Area
Eumetopias jubatus			

Note:
ESA = Endangered Species Act
ESU = Evolutionarily Significant Unit
DPS = Distinct Population Segment
NMFS = National Marin Fisheries Service
Based on NMFS ESA species and critical habitat information as of February 10, 2012 (NMFS 2012).

Table 6-2
ODFW State-Listed
Sensitive Species That May Occur
in the Vicinity of the Proposed Action Area

Common Name	Scientific Name
Critical	
Burrowing Owl	*Athene cunicularia*
Common Nighthawk	*Chordeiles minor*
Foothill Yellow-legged Frog	*Rana boylii*
Gray wolf	*Canis lupus*
Lewis's woodpecker	*Melanerpes lewis*
Oregon Spotted Frog	*Rana pretiosa*
Oregon Vesper Sparrow	*Pooecetes gramineus affinis*
Pacific pond turtle	*Actinemys marmorata*
Painted turtle (only C. p. bellii SC)	*Chrysemys picta*
Purple martin	*Progne subis*
Streaked Horned Lark	*Eremophila alpestris strigata*
Townsend's big-eared bat	*Corynorhinus townsendii*
Western Meadowlark	*Sturnella neglecta*
Western Rattlesnake	*Crotalus oreganus*
Yellow-billed cuckoo	*Coccyzus americanus*
Yellow-breasted Chat	*Icteria virens*
Vulnerable	
Acorn Woodpecker	*Melanerpes formicivorus*
American peregrine falcon	*Falco peregrinus anatum*
Bald eagle	*Haliaeetus leucocephalus*
Black-tailed jack rabbit	*Lepus californicus*
Clouded salamander	*Aneides ferreus*
Hoary bat	*Lasiurus cinereus*
Little Willow Flycatcher	*Empidonax traillii brewsteri*
Long-legged myotis	*Myotis volans*
Lower Columbia River/Columbia River Coastal Cutthroat	*Oncorhynchus clarkia clarkii*
Northern goshawk	*Accipiter gentilis*
Northern Red-legged Frog	*Rana aurora*
Northern spotted owl	*Strix occidentalis caurina*
Olive-sided flycatcher	*Contopus cooperi*
Oregon slender salamander	*Batrachoseps wrighti*
Pacific lamprey	*Lampetra tridentata*
Pallid bat	*Antrozous pallidus*
Silver-haired bat	*Lasionycteris noctivagans*
Western Bluebird	*Sialia Mexicana*
Western brook lamprey	*Lampetra richardsoni*
Western Gray Squirrel	*Sciurus griseus*
Western toad	*Anaxyrus boreas*
White-breasted Nuthatch	*Sitta carolinensis aculeate*

Table 12-1
Substantive Compliance with CWA Section 404(b)(1)

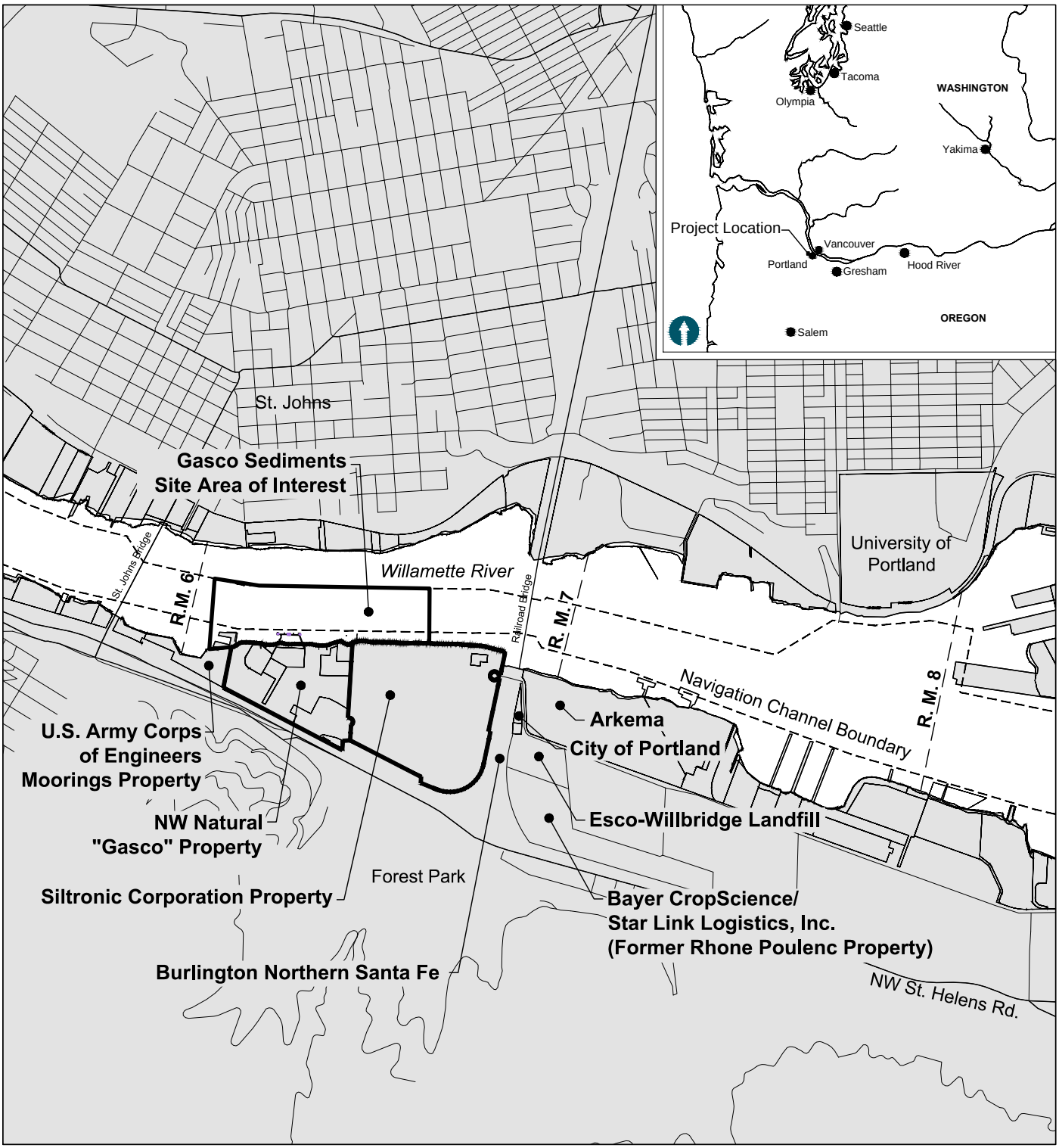
Alternative	Substantive Compliance with Section 404(b)(1)	Compensatory Mitigation Estimated to be Required?[1]
1 (No Action)	N/A	N/A
2	Yes	Yes
3	Yes	Yes
4	Yes	Yes
5	Yes	Yes

Notes:

N/A = not applicable

Based on net result for each alternative (i.e., sum of all credits and debits generated for each SMA) as in Section 13.

FIGURES



K:\Projects\0029-NW Natural Gas Co\Gasco Sediments\EECA and Data Report\0029-RP-002 VMAPS.dwg FIG 1-1 CWA

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Figure 1-1
Site Vicinity Map
Draft Preliminary Clean Water Act Section 404(b)(1) Evaluation
Gasco Sediments Cleanup Action

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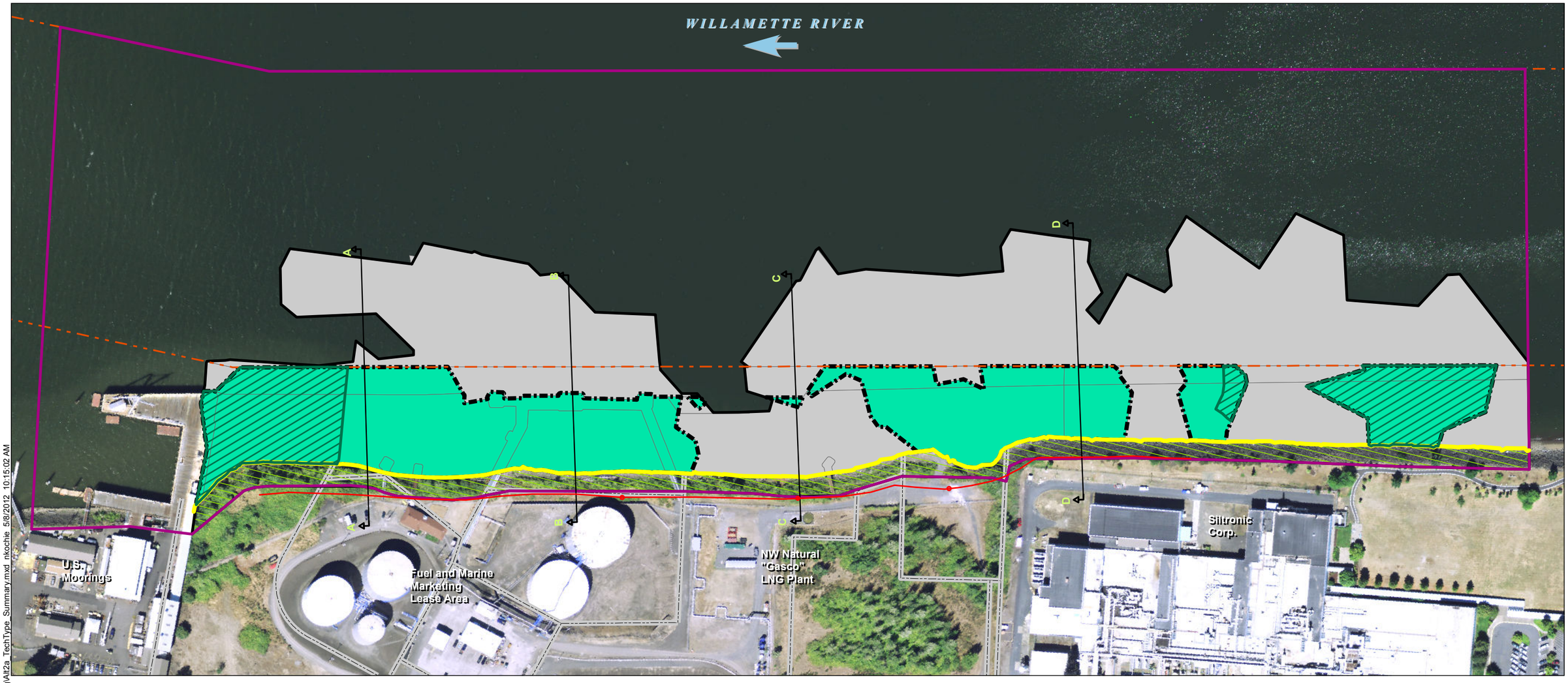

Capping
MNR
Infiltration Barrier with Overlying Erosion Control
Alternative 2a Active Remediation Boundary
Interim Project Area Boundary
Modeled Groundwater Discharge Area (Caps Include Organoclay Amendment)

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
Federal Navigation Channel
Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
Cross Section
Fill WBZ Trench Alignment with Sump

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
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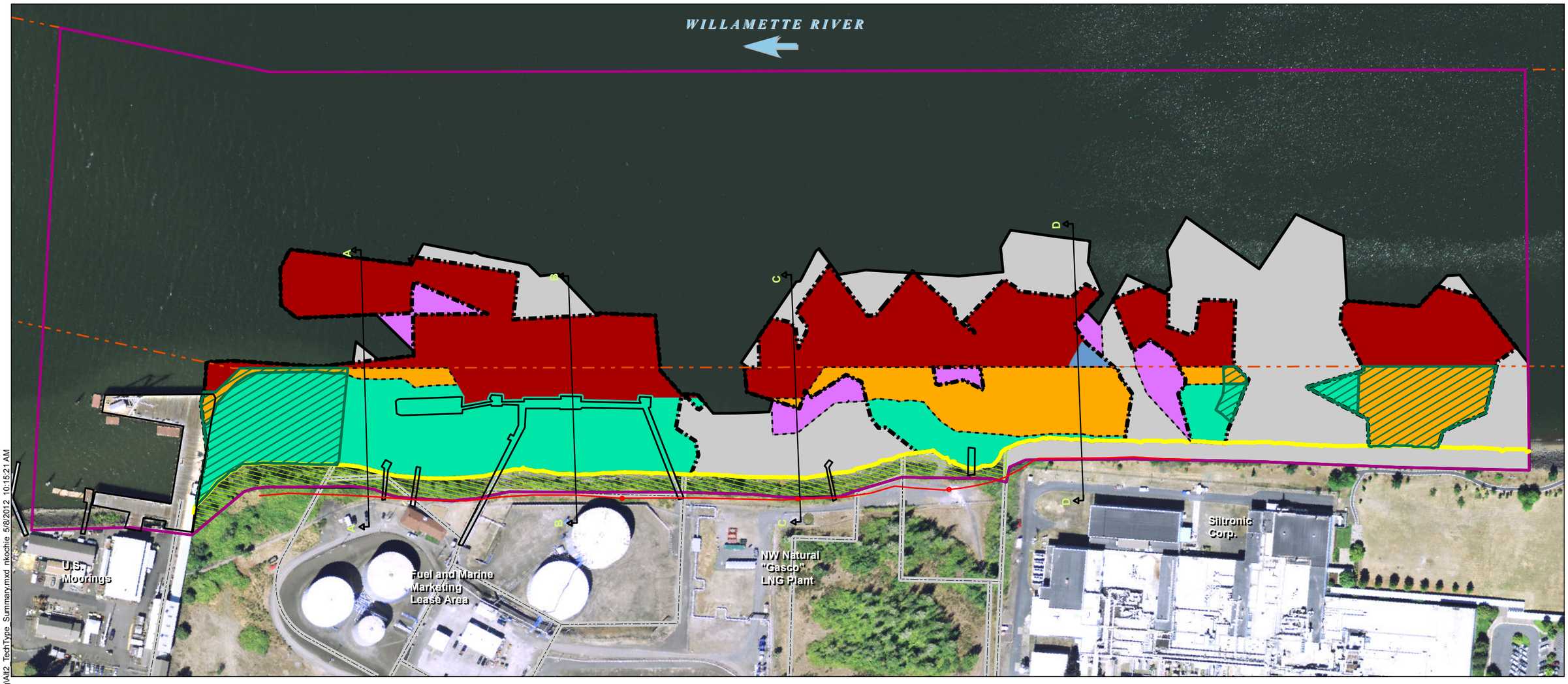
Figure 3-1
Alternative 2a Remedial Footprint and Technology Assignments
Draft Preliminary Clean Water Act Section 404(b)(1)
Gasco Sediments Cleanup Action



Removal and Cover
Removal and Capping
Capping
Side Slope Removal and Cover[5]
Side Slope Removal and Capping[5]
MNR
Infiltration Barrier with Overlying Erosion Control
Alternative 2 Active Remediation Boundary
Interim Project Area Boundary

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
Federal Navigation Channel
Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
Cross Section
Proposed Fill WBZ Trench Alignment with Sump
Modeled Groundwater Discharge Area (Caps Include Organoclay Amendment)
Structures

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.
5. Shown extents of side slope removal and cover/capping are estimated based on extension of stable slope angles from adjacent areas with removal. Actual extents to be evaluated during design.

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Figure 3-2
Alternative 2b Remedial Footprint and Technology Assignments
Draft Preliminary Clean Water Act Section 404(b)(1)
Gasco Sediments Cleanup Action

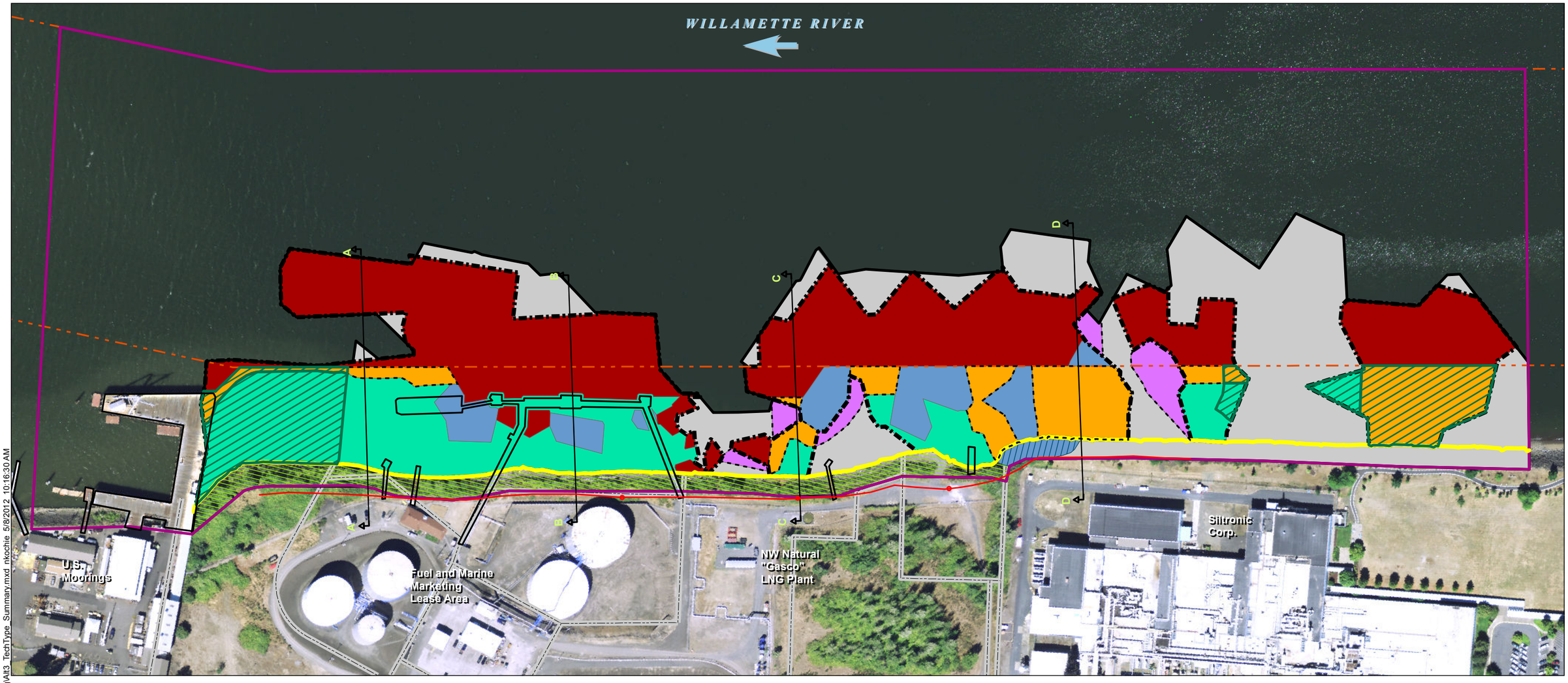

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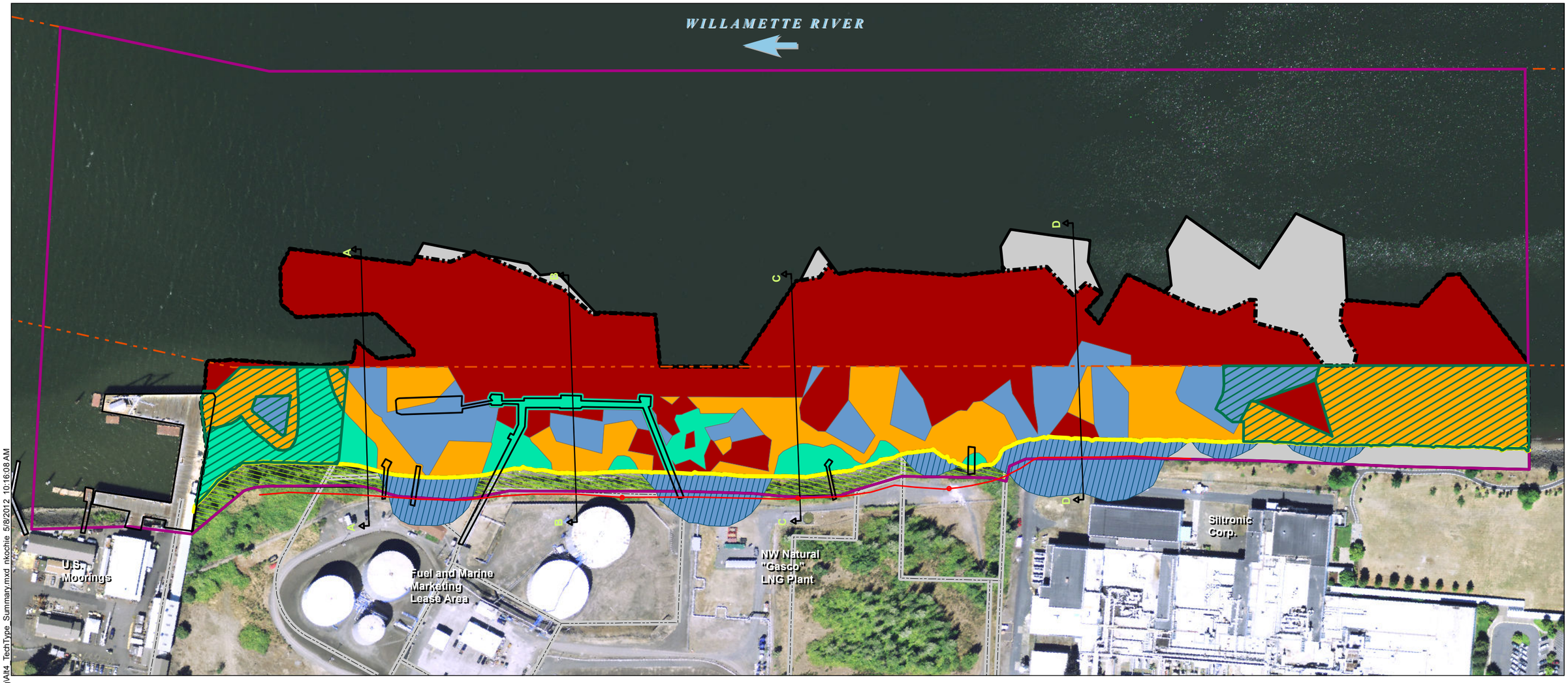
Figure 3-3
Alternative 3 Remedial Footprint and Technology Assignments
Draft Preliminary Clean Water Act Section 404(b)(1)
Gasco Sediments Cleanup Action



Removal and Cover
Removal and Capping
Capping
Side Slope Removal and Capping[5]
MNR
Infiltration Barrier with Overlying Erosion Control
Riverbank Cutback Associated with Removal[5]
Alternative 4 Active Remediation Boundary
Interim Project Area Boundary

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
Substantial Product Area
Federal Navigation Channel
Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
Cross Section
Proposed Fill WBZ Trench Alignment with Sump
Modeled Groundwater Discharge Area (Caps Include Organoclay Amendment)

Structures

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.
5. Shown extents of side slope removal and cover/capping are estimated based on extension of stable slope angles from adjacent areas with removal. Actual extents to be evaluated during design.

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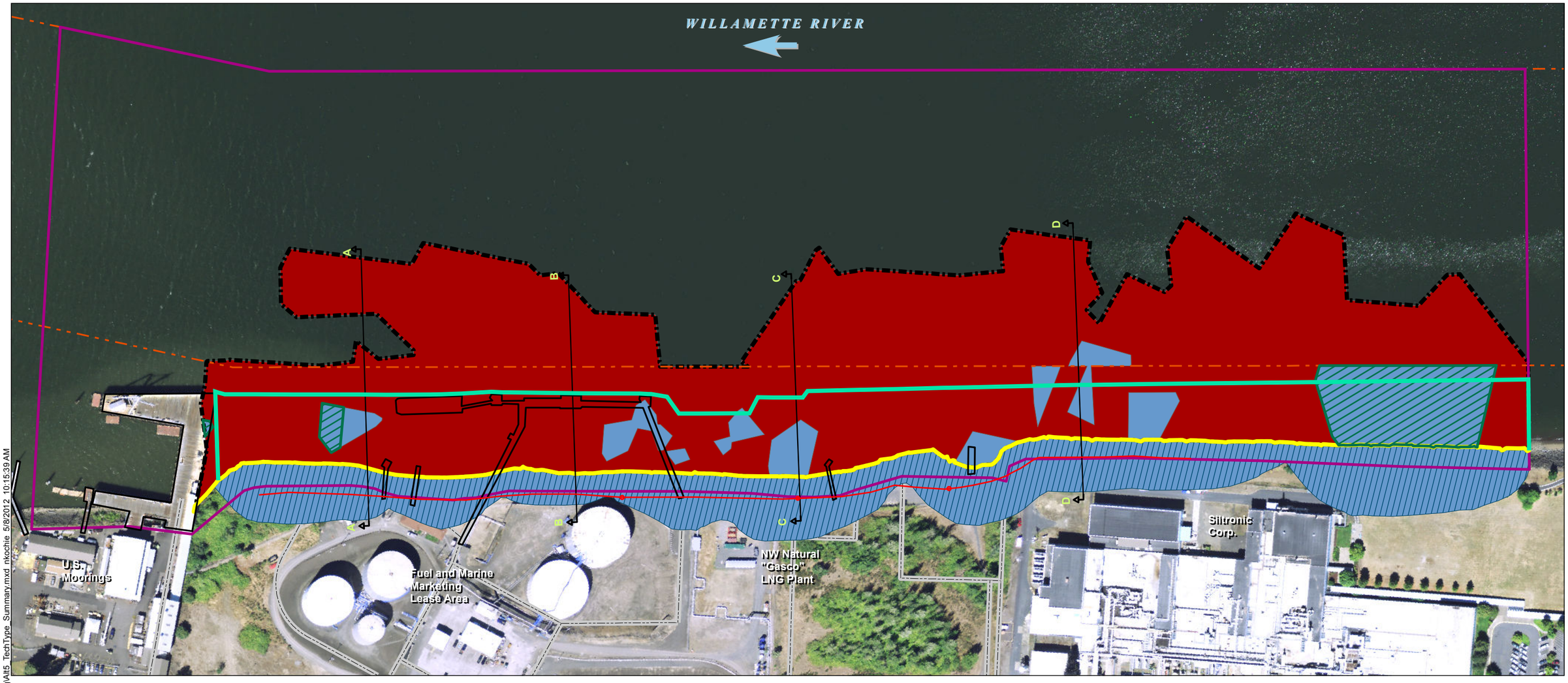
Figure 3-4
Alternative 4 Remedial Footprint and Technology Assignments
Draft Preliminary Clean Water Act Section 404(b)(1)
Gasco Sediments Cleanup Action



Removal and Cover
Removal and Capping
Riverbank Cutback Associated with Removal[5]
Interim Project Area Boundary
Proposed Fill WBZ Trench Alignment with Sump
Sheetpile Wall Alignment
Structures

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
Federal Navigation Channel
Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
Cross Section
Modeled Groundwater Discharge Area (Caps Include Organoclay Amendment)

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.
5. Shown extents of side slope removal and cover/capping are estimated based on extension of stable slope angles from adjacent areas with removal. Actual extents to be evaluated during design.
6. Alternative 5 includes removal and replacement of the oil pipeline dock structure, and includes installation of a sheetpile wall along the deepest channel ward location (assumed alignment shown on figure) that would remain structurally stable.

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Figure 3-5
Alternative 5 Remedial Footprint and Technology Assignments
Draft Preliminary Clean Water Act Section 404(b)(1)
Gasco Sediments Cleanup Action

ATTACHMENT 1
PORTLAND HARBOR SUPERFUND SITE FEASIBILITY STUDY PRELIMINARY DRAFT CLEAN WATER ACT SECTION 404(b)(1) EVALUATION (PROVIDED ON CD)

APPENDIX E
DRAFT FATE AND TRANSPORT MODELING

DRAFT
APPENDIX E
FATE AND TRANSPORT MODELING
DRAFT ENGINEERING EVALUATION/COST ANALYSIS
GASCO SEDIMENTS CLEANUP ACTION

Prepared for

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May 2012

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List of Acronyms and Abbreviations

μm	micron
BaP	benzo(a)pyrene
CFR	Code of Federal Regulations
cfs	cubic feet per second
EE/CA	Engineering Evaluation/Cost Analysis
f_{oc}	organic carbon fraction
FS	Feasibility Study
GSD	grain size distribution
HC&C	hydraulic control and containment
HST	hydrodynamic and sediment transport
MT/yr	metric ton per year
NPDES	National Pollutant Discharge Elimination System
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
RI	Remedial Investigation
RM	river mile
TOC	total organic carbon
USGS	U.S. Geological Survey

1 INTRODUCTION

Contaminant fate and transport models are useful tools in evaluating remedial options at contaminated sediment sites (EPA 2005). This appendix describes the development, calibration, and application of a fate and transport model that was used to support the Engineering Evaluation/Cost Analysis (EE/CA) for the Gasco Sediments Site (sometimes referred to hereafter as "Site" in this appendix).

1.1 Objectives

The specific objective of the fate and transport model, as it applies to this draft EE/CA, is to develop and apply a model that can be used as a management tool to evaluate the effectiveness of various remedial alternatives. The model is used to:

- Estimate rates of natural recovery at the Gasco Sediments Site under current conditions and following implementation of active remediation in the Project Area
- Provide quantitative estimates of the system's response to remedial actions, including the impacts of dredge residuals and sediment resuspension during dredging
- Evaluate recontamination potential in remediated areas through calculation of post-remedy equilibrium sediment concentrations

1.2 Model Development Background

The Gasco Sediments Site model builds on site-wide hydrodynamic and sediment transport (HST) and contaminant fate and transport models that were developed for the Portland Harbor Site. These models were used to support the alternatives analysis conducted for the Portland Harbor draft Feasibility Study (FS) and are documented in Appendices La and Ha of the draft FS, respectively (Anchor QEA 2012). However, a number of refinements were made to the portions of the models representing areas within and adjacent to the Gasco Sediments Site to support this draft EE/CA. Specifically, the computational grid resolution was increased in this area to allow for simulation of remedial alternatives at a smaller scale than was completed in the Portland Harbor draft FS. Also, the Gasco modeling effort incorporated additional site-specific datasets collected from within the Gasco Sediments Site Area of Interest, including sediment contaminant and bed property data from cores collected in 2010 and 2011 and near-bottom water column samples collected between 2006 and 2009. After updating the models to include such additional datasets, the existing model calibration was reviewed with a focus on improving model-data comparisons (to the extent practicable) in the vicinity of the Site.

1.3 Appendix Organization

As noted, Appendices La and Ha of the Portland Harbor draft FS provide detailed descriptions of the development and calibration of the Portland Harbor HST and contaminant fate and transport models, respectively. As such, the remainder of this appendix documents only the changes made to those models for the purposes of evaluating remedial alternatives at the Gasco Sediments Site. Specifically, Section 2 presents changes made to the HST model, while Section 3 describes the changes made to the contaminant fate and transport model. The application of these models to simulate the Project Area remedial alternatives evaluated in this draft EE/CA is presented in Section 4. As with the rest of this appendix, a discussion of the methods used to simulate the remedial alternatives is provided in Section 4 only to the extent that they differ from those used in the Portland Harbor draft FS. Section 4 also documents the results from the long-term future simulations that were conducted for the draft EE/CA.

2 HYDRODYNAMIC AND SEDIMENT TRANSPORT MODEL DEVELOPMENT AND CALIBRATION

As previously described, the model used for the draft EE/CA was based on the modeling framework developed for the Portland Harbor draft FS. The Portland Harbor HST model is described in Appendix La of the Portland Harbor draft FS (Anchor QEA 2012). This section describes the modifications made to the Portland Harbor HST model in order to develop a model that provides better representation of hydrodynamic and sediment transport processes within the vicinity of the Gasco Sediments Site.

2.1 Hydrodynamic Model

The main modification to the Portland Harbor hydrodynamic model was to increase the resolution of the numerical grid in the vicinity of the Gasco Sediments Site. The grid resolution was increased between river miles (RM) 6 and 7 of the Willamette River, as shown on Figure 2-1. The cross-channel (lateral) resolution used in the Portland Harbor model was determined to be adequate for the purposes of this study and was not modified. However, the along-channel (longitudinal) resolution was increased by approximately a factor of six (i.e., the eight longitudinal grid cells in the original Portland Harbor model were expanded to 51 longitudinal grid cells in the Gasco model) to provide for finer resolution in the area of the Site. Typical dimensions of a grid cell within this region of the Gasco Sediments Site are 75 feet long and 55 feet wide, which corresponds to an area of approximately 0.1 acre.

Multi-beam bathymetry data collected in January 2002 were used to specify bathymetry inputs for the Portland Harbor model. These same bathymetry data were used to specify inputs to the Gasco model to maintain consistency. However, the finer grid spacing of the Gasco model allows for a more detailed representation of bathymetric changes in the area of the Gasco Sediments Site than does the Portland Harbor model grid. A comparison of the bathymetry inputs for the Portland Harbor and Gasco models between RMs 6 and 7 is shown on Figure 2-2.

The predictive capability of the Gasco hydrodynamic model was evaluated using current velocity data collected during 2002, 2003, and 2004; Table 2-1 contains a summary of these field surveys.

Table 2-1
Summary of Current Velocity Data Used for Evaluating Model Performance

Field Survey Date	Lower Willamette River Flow Rate (cfs)	Field Survey Region	Number of Cross-Channel Transects
April 19, 2002	66,000	RMs 1 – 11	16
May 13, 2003	26,000	RMs 2.5 – 4	4
January 31, 2004	139,000	RMs 1 – 11	16

Note:
cfs = cubic feet per second

During each field survey, current velocity data were collected along various transects across the river channel. Similar to the calibration process for the Portland Harbor hydrodynamic model, current velocities predicted by the Gasco hydrodynamic model were compared to those measured along the cross-channel transects during the three field surveys, as shown on Figures 2-3 through 2-8. These results indicate that the predictive capability of the Gasco model is similar to that of the Portland Harbor model in that the model results match the measured current velocity data reasonably well and particularly for the two transects measured in the area of the Gasco Sediments Site at RM 6.3 (Figures 2.5 and 2.6). Thus, the Gasco hydrodynamic model is adequate for the purposes of the draft EE/CA.

2.2 Sediment Transport Model

2.2.1 Modifications to Portland Harbor Sediment Transport Model

The primary differences between the Gasco and Portland Harbor sediment transport models are the resolution of the computational grid (described in Section 2.1) and the specification of the spatial distribution of bed properties within the vicinity of the Gasco Sediments Site. Additional grain size distribution (GSD) data collected within the Gasco Sediment Site Area of Interest (associated with sediment cores collected in 2010 and 2011) were combined with the GSD data used for the Portland Harbor model. Using this combined GSD dataset, the following inputs to the Gasco sediment transport model were developed:

1. The bed map, delineating cohesive (muddy) and non-cohesive (sandy) sediment bed areas
2. Spatial distributions of the following bed properties: median particle diameter (D50), 90th percentile particle diameter (D90), and bed composition (i.e., percent clay/silt, sand, and gravel)

The bed map for the Gasco model in the vicinity of the Gasco Sediments Site is shown on Figure 2-9. Approximately 51 percent of the bed area within the Project Area in the Gasco model is specified as cohesive, which is consistent with the Portland Harbor model. Spatial distributions of D50 and D90 values in the Site area are shown on Figures 2-10 and 2-11, respectively. Overall, these figures illustrate that the sediment bed within the Site area is composed of finer sediments closer to the shoreline and coarser sediments in the center of the river within the navigation channel. In addition, spatial distributions of the initial composition of the sediment bed (i.e., relative amounts of clay/silt, sand, and gravel) within the Site area were generated based on the combined GSD dataset. The sediment transport model uses this information as a starting point, but predicts temporal and spatial changes in bed composition due to erosion and deposition processes.

2.2.2 Model Calibration

The Portland Harbor sediment transport model calibration period was the 68-month period between May 2003 and January 2009. The predictive capability of the Gasco model was evaluated by simulating sediment transport in the Willamette River (which includes the Gasco Sediments Site) for that same period. Other than the finer computational grid in the area of the Gasco Sediments Site and the incorporation of additional data in the bed property inputs within the Site area, no adjustments were made to the model parameters and inputs used in the Portland Harbor sediment transport model calibration. These inputs and parameters are described in detail in Sections 2.3.4 and 2.3.5 of Appendix La of the Portland Harbor draft FS (Anchor QEA 2012).

As a means of assessing model performance, a sediment mass balance analysis was conducted for the area between RMs 1.9 and 11.8 of the Willamette River. Sediment loads entering and leaving this area were calculated for the 68-month calibration period based on empirical data and model results. The incoming sediment load was calculated using the rating curve developed for the upstream boundary of the Portland Harbor HST model (Appendix La of Anchor QEA 2012). Erosion, deposition, and outgoing sediment loads were extracted from the model calibration results. Figure 2-12 presents the results of this mass balance compared to the measured net deposition over the entire area, which was calculated using differential bathymetry data for the calibration period. The model predicts a net deposition rate of 191,000 metric tons per year (MT/yr) for the entire area, which is within 1 percent of the data-based estimate of 192,000 MT/yr. If regions where capping and dredging activities occurred during the calibration period are excluded from the comparison, then the difference between predicted

and measured net deposition rates is approximately 4 percent (Figure 2-12). The data-based and model-predicted trapping efficiencies (i.e., portion of the upstream load that is deposited) during the calibration period are both 22 percent. These results indicate that the model accurately predicts net deposition mass and trapping efficiency for the largest spatial scale evaluated (RMs 1.9 to 11.8).

On a smaller spatial scale, the distribution of laterally averaged (i.e., cross-channel average) bed elevation change predicted by the model during the 68-month calibration period was compared to measured values (based on differential bathymetry data) averaged over segments approximately 0.13 mile in length (i.e., about 22 acres), as shown on Figure 2-13. The model-data comparison on this figure demonstrates that the Gasco sediment transport model adequately simulates longitudinal variations in laterally averaged bed elevation change within Portland Harbor, including the area of the Gasco Sediments Site at RM 6 to 7.

At an even smaller spatial scale, the distribution of measured and predicted bed elevation change within the Gasco Sediments Site Area of Interest during the 68-month period is shown on Figure 2-14. Overall, the bed elevation data indicate that this area was net depositional during this 68-month period, with net deposition of 3,400 MT/yr over this entire area. The model also predicts net deposition for this area, although at a significantly lower magnitude (i.e., 180 MT/yr) than was observed during the 68-month calibration period. Within erosional portions of the Gasco Sediments Site Area of Interest, the predicted rate of erosion (620 MT/yr) is within 30 percent of the observed value (480 MT/yr). For the depositional portions of the area, the predicted rate of deposition (790 MT/yr) is much lower than then observed value (3,800 MT/yr). Sensitivity analyses were conducted to investigate potential improvements to model predictions within the area of the Site. These analyses considered modifying only calibration parameters and not data based inputs (e.g., bed properties and incoming load) and therefore focused on parameters related to cohesive and non-cohesive deposition and erosion properties. The sensitivity analyses indicated that it is possible to increase the net deposition within the area of the Site to be closer to the data-based estimate by modifying the calibration parameters, but this change would also result in a significant reduction in the amount of predicted erosion within this area, such that the model would not match the observed areal extent and total flux of erosion. Based on the sensitivity simulation results, it was judged that the base calibration is the best simulation to use for the fate and transport model, because it best matches the spatial patterns of erosion and deposition observed within the Gasco Sediments Site area and is in good agreement with the observe erosion flux. In addition, the under-

prediction of net deposition within the Site area will result in rates of natural recovery that are conservatively low when the model is used to predict future concentrations of contaminants in sediment.

3 CONTAMINANT FATE AND TRANSPORT MODEL DEVELOPMENT AND CALIBRATION

As described in Section 1.2, most inputs/parameters used in the Gasco fate and transport model were unchanged from those used in the Portland Harbor fate and transport model. The only inputs specific to the Gasco fate model that were modified from the original Portland Harbor fate model were the sediment contaminant initial conditions and sediment fraction organic carbon. These inputs were updated to include site-specific sediment data collected within the Gasco Sediments Site Area of Interest during 2010 and 2011. Other spatially variable inputs, such as groundwater flow rates, did not change but were simply mapped onto the finer-resolution grid in the vicinity of the Site (see Section 2.1 for description of modifications to the computational grid). After updating the model inputs, the existing model calibration was reviewed, with a focus on model-data comparisons in the vicinity of the Gasco Sediments Site.

3.1 Contaminants Simulated

As described in Section 3.1.3.2 of the Portland Harbor draft FS, polycyclic aromatic hydrocarbons (PAHs) were one of several classes of contaminants (which also included polychlorinated biphenyls [PCBs], pesticides, metals, and phthalates) selected as FS indicator chemicals for the harbor-wide assessment (Anchor QEA 2012) and included in the Portland Harbor fate model. Because PAHs are the primary risk driver at the Gasco Sediments Site, this class of chemicals was the only one carried forward for the fate modeling included in the draft EE/CA. Therefore, the two PAHs simulated in the Portland Harbor fate model, benzo(a)pyrene (BaP) and naphthalene, were also used to represent PAHs for the simulation of remedial alternatives in the draft EE/CA.

3.2 Modifications to Portland Harbor Chemical Fate Model

As previously described, the only inputs from the Portland Harbor fate model that were modified for the Gasco fate model were the sediment contaminant initial conditions and sediment fraction organic carbon. The following two subsections describe these modifications. All other model inputs/parameters were unchanged from those specified in the Portland Harbor fate model and are documented in Appendix Ha of the Portland Harbor draft FS.

3.2.1 Sediment Initial Conditions

The dataset used to define the sediment initial conditions in the Portland Harbor model is described in Section 3.2.2.2.1 of the draft FS (Anchor QEA 2012). In summary, the entire

Portland Harbor draft FS sediment dataset (which includes sediment data collected between 1997 and 2010 as described in Section 2 of the draft FS and has been deemed to be representative of current conditions within Portland Harbor) was used to develop sediment initial conditions in the Portland Harbor fate model. This dataset was supplemented with sediment data collected within the Gasco Sediments Site Area of Interest during 2010 and 2011. Figures 3-1 and 3-2 show maps of sampling locations and BaP concentrations in the vicinity of the Site for surface (top 0 to 12 inches) and subsurface sediment, respectively. The supplemental 2010 and 2011 Gasco data are shown on these maps using a different symbol (circles) from the data used for the Portland Harbor model initial conditions (squares).

Based on this combined dataset, the same methodology used to develop surface and subsurface initial conditions for the Portland Harbor fate model was applied to the Gasco fate model. This approach was to generate Thiessen polygons for all sediment sample locations; the polygons were generated separately for nearshore areas (east and west) and the navigational channel. Figures 3-3 and 3-4 depict an example of Thiessen polygons generated in the vicinity of the Site for surface and subsurface BaP concentrations, respectively. The Thiessen polygons were then averaged over the fate model grid, producing the model initial condition, as shown on Figures 3-5 and 3-6 for surface and subsurface sediment BaP concentrations, respectively.

This process was repeated for naphthalene. Figures 3-7 and 3-8 show naphthalene concentrations and data density in the vicinity of the Gasco Sediments Site for surface and subsurface sediment, respectively. Naphthalene surface and subsurface Thiessen polygons are shown on Figures 3-9 and 3-10, and the naphthalene surface and subsurface sediment initial conditions are shown on Figures 3-11 and 3-12, respectively.

3.2.2 Sediment Fraction Organic Carbon

Similar to the sediment initial conditions described in the previous subsection, the dataset used to define sediment organic carbon fraction (f_{oc}) in the draft FS was supplemented with sediment data collected from within the Gasco Sediments Site Area of Interest during 2010 and 2011. Using this combined dataset, the same methodology used to specify sediment f_{oc} in the Portland Harbor model was applied for the Gasco model. As described in Appendix Ha to the draft FS, Portland Harbor sediment data demonstrate that there is a relationship between organic carbon content and sediment grain size, with fine sediments containing higher f_{oc} than coarse sediments. As such, an approach was developed for specifying sediment f_{oc} in the model that, at any point in space, honors both the total organic carbon (TOC) from the sediment sample as

well as the observed difference in f_{oc} among sediment size classes. First, Thiessen polygons of surface sediment TOC data were generated over the entire model grid (using the FS sediment dataset and 2010 and 2011 Gasco sediment data; see Figure 3-13). Second, for every polygon, organic carbon was apportioned among the four sediment size classes represented in the model[1] based on the size class distribution specified in the HST model at that location. Thiessen polygons of organic carbon for all four sediment size classes were then mapped onto the fate model grid.

3.3 Model Calibration

3.3.1 Approach

As described in Appendix Ha of the Portland Harbor draft FS, the fate model calibration period spans the 7-year period from January 1, 2002, through January 1, 2009. The primary datasets used for calibration of the Portland Harbor fate model were water column data collected from 2004 to 2007 throughout the harbor. The water column data were collected as both transects and discrete samples (which were generally focused in nearshore areas), and contaminants were measured in both the dissolved and particulate phases. In addition, data from sediment trap samples collected quarterly during 2007 from several locations across Portland Harbor were used for model calibration. Calibration of the Portland Harbor fate model also included evaluating the model's ability to capture observed changes (or lack thereof) over time in surface sediment (top 12 inch) concentrations. As part of that calibration, numerous graphical model-data comparisons were made using the calibration datasets identified above; these comparisons were made over multiple temporal and spatial scales.

Calibration of the Gasco fate model involved first running the model using the revised inputs previously described, with no adjustment to any other model inputs/parameters from those used in the Portland Harbor fate model. The same model-data comparisons used for the Portland Harbor fate model were then used to assess the calibration of the Gasco fate model, focusing on model predictions in the area of the Gasco Sediments Site. Based on an inspection of the various Gasco model calibration graphics, it was judged that no adjustment of model parameters was needed to improve the calibration in the Site area. A summary of the model calibration results for BaP and naphthalene is provided in the following section.

[1] As described in Appendix La to the Portland Harbor draft FS, the sediment transport model simulates sediment in the following four size classes, which represent silt/clay, fine sand, medium-coarse sand, and gravel. The fate and transport model requires specification of the organic carbon content on each size class (as well as water column suspended solids) to allow calculation of contaminant partitioning.

3.3.2 Calibration Results

3.3.2.1 Benzo(a)pyrene

The following is a summary of the fate model calibration for BaP:

- *Water Column Time Series*: Figure 3-14 shows laterally averaged water column transect data and model-predicted water column concentrations at the four transect monitoring locations in Portland Harbor, which are at RMs 11, 6.3 (which is located within the Gasco Sediments Site area), 4, and 2. These charts generally indicate good agreement between the data and model predictions, including the transect within the Site at RM 6.3 (Figure 3-14b). There is a seasonal pattern in the model-predicted concentrations at RMs 6.3 and 4, which is characterized by higher concentrations during the summer low flow periods; this is a result of porewater exchange. There are also shorter-term fluctuations in predicted water column concentrations, resulting from flow reversals in the Site area during periods of low river flow and high tide in the Columbia River. During annual high flow periods, the model predicts varying concentrations with short-term periods of much higher concentration, which are a result of sediment erosion. There is also a general long-term temporal decline in model-predicted water column concentrations over the calibration period; this is largely due to biodegradation simulated for BaP.

- *Water Column Spatial Patterns*: A spatial profile of laterally averaged water column concentrations is shown for the entire Portland Harbor Site on Figure 3-15. This figure shows that the model captures the general spatial pattern in BaP transport within Portland Harbor, which is characterized by an increase in water column BaP concentration in the vicinity of RM 6; this increase is driven by sediment flux in this portion of the harbor, which includes the Gasco Sediments Site. Similarly, the model also reasonably captures the spatial patterns observed in the discrete water column samples (i.e., differences with river mile and between the navigation channel and the east and west nearshore areas), on both a whole water (Figure 3-16) and particulate phase basis (Figure 3-17), although the particulate data are somewhat limited. The reasonably good fit to both the particulate phase and whole water data indicates that the model is accurately representing partitioning within the water column. In addition to the water column data collected as part of the harbor-wide Remedial Investigation (RI)/FS and used for calibration of the Portland Harbor fate model, which are shown on Figure 3-16 in blue and red symbols, this figure also includes near-bottom water column data collected at the Gasco Sediments Site between 2006 and 2009 (shown in green

symbols). These additional Gasco water column data were not considered a calibration dataset for the Gasco fate model but rather were used as an independent validation of the model's predictions. Concentrations in these near-bottom samples are generally higher than those in discrete samples collected from other nearshore and navigation channel locations, including the nearby vertically averaged water column transect samples at RM 6.3 shown on Figure 3-15. Such differences are expected, given the high concentration of BaP in surface sediments within the Site area. These water column samples show relatively elevated concentrations in this area, which are generally within the range of model predictions in the west nearshore area in the vicinity of the Site (as indicated by this figure). Thus, the flux of BaP from the surface sediments to the water column within the area of the Gasco Sediments Site and the subsequent downstream transport are represented by the fate model.

- *Sediment Trap Spatial Patterns*: Model-predicted water column particulate matter BaP concentrations (on a dry-weight basis) are compared to sediment trap data on Figure 3-18. This figure demonstrates that the model reasonably predicts the spatial patterns (both lateral and longitudinal) in water column particulate-phase BaP concentrations. Most notably, the model is generally capturing the observed spatial increase in the vicinity of RM 6, although the magnitude of this spatial increase is somewhat under-predicted in the west nearshore area near the Gasco Sediments Site. The model does capture the relative differences in concentration between the east and west nearshore areas at RM 6 as well as the concentrations in the west nearshore downstream of this location.

- *Surface Sediment Time Series*: A time series of Portland Harbor Site-wide average surface BaP sediment concentration predicted by the model is shown on Figure 3-19. Averages by river mile and by river mile separated into east nearshore, west nearshore, and navigation channel are shown on Figures 3-20 and 3-21, respectively. Note that these latter two figures include the Gasco Sediments Site data collected in 2010 and 2011 on plot panels showing model predictions and data between RM 7 and 6. These plots show that there is a considerable amount of variability in the BaP sediment data (ranging over several orders of magnitude in some areas); nonetheless, these plots demonstrate that the model is within the range of the sediment data, even at smaller spatial scales. In particular, this is the case in the west nearshore and navigation channel portions of RM 7 to 6 (i.e., the Site area; see Figure 3-21b).

In summary, the model predictions for BaP show good agreement with the calibration datasets. In general, the model reasonably simulates both temporal and spatial patterns observed in the water column. Most notably, the model captures the observed spatial increase in water column and sediment trap data near RM 6 and within the Site area. Also, while there is a large degree of variability in sediment concentrations, particularly in the vicinity of the Site, the model reasonably agrees with the annual averages calculated from these data.

3.3.2.2 *Naphthalene*

The following is a summary of the Gasco fate model calibration for naphthalene:

- *Water Column Time Series*: Figure 3-22 shows laterally averaged water column transect data and model-predicted water column concentrations at the four transect monitoring locations in Portland Harbor. Most of the water column transect data for naphthalene were non-detect (both at the upstream boundary and within the harbor). This paucity of data introduces a fair amount of uncertainty into the upstream boundary condition and precludes a robust calibration of the model based on downstream water column data. However, the model does reasonably reproduce the observed concentrations in the few available detected samples.

- *Water Column Spatial Patterns*: A spatial profile of laterally averaged water column concentrations is shown for the entire Portland Harbor Site on Figure 3-23. The central tendency of the model matches the few detected transect data displayed on this figure. The model results also indicate a large variation in the area of the Gasco Sediments Site at RMs 6.5 to 6, which is indicative of predictions in the nearshore area. The model also reasonably captures the spatial patterns observed in the discrete water column samples shown on Figure 3-24. As with the BaP charts previously described, this figure includes near-bottom water column data collected at the Gasco Sediments Site between 2006 and 2009 (shown in green symbols) in addition to the larger Portland Harbor site-wide dataset (blue and red symbols). The water column samples from the Site area show elevated water column naphthalene levels in the vicinity of RM 6 that are a result of sediment flux and as a result exhibit a large degree of variability, which is likely also due to the fact that they were collected as near-bottom samples. This figure shows that the model captures the overall increase in water column naphthalene concentration in this area (as indicated by the maximum predicted concentration line on this plot, which

corresponds to most of the range of the data).

- *Sediment Trap Spatial Patterns*: Model-predicted water column particulate matter naphthalene concentrations (on a dry weight basis) are compared to sediment trap data on Figure 3-25. The model tends to under-predict concentrations for the sediment trap samples. Sensitivity runs conducted during calibration indicated that alternate parameter values (namely for the partition coefficient) did not appreciably improve this fit, unless a value outside of a reasonable range of values was selected.

- *Surface Sediment Time Series*: A time series of harbor-wide average surface sediment naphthalene concentrations predicted by the model is shown on Figure 3-26; averages by river mile and by river mile separated into east nearshore, west nearshore, and navigation channel are shown on Figures 3-27 and 3-28, respectively. Note that these latter two figures include the Gasco Sediments Site data collected in 2010 and 2011 on plot panels showing model predictions and data between RMs 7 and 6. Similar to BaP, these plots show that there is a considerable amount of variability in the naphthalene sediment data (ranging over several orders of magnitude in some areas). Surface sediment predictions averaged over the entire Portland Harbor Site show somewhat of an increase over time. This result is mainly driven by a considerable increase in the predicted surface sediment concentration within a small portion of the Gasco Sediments Site area, driven by high sediment concentrations at depth and contaminant transport associated with upward groundwater flow in this area. Nonetheless, the model predictions are generally within the range of the data over most areas of the river.

In summary, the model predictions for naphthalene show fair agreement with the calibration datasets. With the exception of water column particulate concentrations, the model reasonably simulates spatial patterns observed in the water column (recognizing the large percentage of non-detect samples in the water column dataset). Most notably, the model captures the observed spatial increase in the water column near RM 6 at the Gasco Sediments Site. The model-predicted sediment concentrations are within the range of the (highly variable) Site data.

3.3.3 Model Mass Balance

Section 3.3.4 of Appendix Ha of the Portland Harbor draft FS presents water column mass balances during the calibration period over the entire Portland Harbor Site as well as for each

RM of the site. These same mass balances were constructed using the Gasco model for BaP and naphthalene (see Figures 3-29 and 3-30, respectively); mass balance results from the two models are relatively similar. A third mass balance was constructed over the reach of river containing the Gasco Sediments Site (i.e., between RM 6.6 and 6.2) for both contaminants (see Figures 3-29c and 3-30c). Most of the mass entering that reach is from upstream (approximately 60 percent for BaP and more the 95 percent for naphthalene); the rest is contributed by flux from sediments via erosion and porewater exchange (and via upward groundwater flow for naphthalene) within the Site.

4 LONG-TERM SIMULATIONS OF EE/CA ALTERNATIVES

This section presents the model projection simulations that were conducted to predict the estimated long-term response of water and sediment contaminant concentrations to implementation of various remedial alternatives, as well as to no further action, at the Project Area. The general approach for simulating the various alternatives consisted of making necessary modifications to the model inputs to represent anticipated future conditions and simulate a particular alternative and then running the model for a 45-year projection period, consistent with the methods used for the Portland Harbor draft FS. A description of the general approach and setup of the model (which is largely unchanged from that described in Section 5.1 of Appendix Ha to the Portland Harbor draft FS), including the assumptions made for specifying model inputs such as flows and external contaminant loads for decades into the future, is provided in Section 4.1. Section 4.2 discusses the results of long-term simulations of the no action alternative (which examines predictions of natural recovery within the Project Area) for both BaP and naphthalene. Section 4.3 then describes the methods used to represent the various aspects of the active remedial alternatives (i.e., EE/CA Alternatives 2 through 5) in the model, including simulation of the various remedial technologies used for each alternative, and the results from these long-term future simulations within the Site area.

4.1 General Approach and Model Setup

As previously described, long-term model projection simulations were conducted using the calibrated Gasco fate and transport model. These simulations predict changes in water column and sediment contaminant concentrations resulting from active remediation (as well as no action) over decadal time scales and for a range of flow conditions. Long-term (multi-decade) projection simulations are commonly conducted using a model such as this to evaluate the potential for long-term natural recovery in the system (under a no action scenario) and to evaluate the long-term response in the system following completion of an active remedy (e.g., ARCADIS et al. 2010; EPA 2000). Such projections are the means by which the primary objectives of the modeling discussed in Section 1 are fulfilled.

As noted, the model setup for the long-term simulations of the draft EE/CA alternatives is largely identical to that from the Portland Harbor model. What follows is a brief summary of the setup of the model; additional details can be found in Section 5.1 of Appendix Ha to the Portland Harbor draft FS.

- *Simulation Length*: A simulation length of 45 years was specified for the Portland Harbor model. This length of simulation was chosen to allow sufficient time for completion of simulated remedial actions, as well as to provide time to assess any additional natural recovery that may occur in the system following remediation. Because the largest EE/CA alternative has a construction duration of approximately 10 years, the Gasco model projections also utilized a 45-year simulation period, which allows for predictions of post-remedy conditions over more than three decades.

- *Hydrologic Conditions*: River flows used for the 45-year contaminant fate model simulations were based on the long-term record at U.S. Geological Survey (USGS) gauge No. 14211720 at Portland, Oregon. The first 30 years of the projections were based on flow data from 1979 to 2008. The flows over this time period provide a good representation of the full range of flows experienced in Portland Harbor; further, this period includes an extreme flow event that occurred during January 1996. This flow event, which has an estimated return period in the range of 100 years or more, is represented in the hydrograph at simulation Year 17. The flows for the last 15 years of the 45-year simulation are a repeat of the first 15 years of the aforementioned time series.

- *Boundary Conditions and External Loads*: Most of the fate model's forcing function inputs specified for the long-term projections were identical to those used in the model calibration[2]; these include: upstream and downstream boundary conditions (which were specified as a function of flow in the Portland Harbor model, based on the 45-year hydrograph previously discussed), and contaminant loads associated with National Pollutant Discharge Elimination System (NPDES) permitted outfalls. The method used to specify stormwater loads in the long-term projections differed from that used for the model calibration period because they are a function of hydrologic conditions; details regarding this method are provided in Section 5.1.3 of Appendix Ha to the Portland Harbor draft FS. This same modified method was used to specify stormwater loads for future projections in the Gasco model.

The one model input that did change for the future projections of the Gasco EE/CA alternatives was the spatial distribution of groundwater flow rates in the vicinity of the Gasco Sediments Site. Groundwater flow inputs to the fate model in this area for the future projection

[2] Model forcing functions are described in detail in Section 3.2 of Appendix Ha to the Portland Harbor draft FS.

simulations were specified based on output from the MODFLOW model developed to evaluate upland source control at the Gasco Sediments Site. That model extends along the U.S. Moorings, Gasco, and Siltronic properties and across the river to the far side of the navigation channel (Anchor QEA 2011). The MODFLOW model was used in the design of a proposed hydraulic control and containment (HC&C) system on the Gasco and Siltronic properties (Anchor QEA et al. 2012). The model computes groundwater fluxes to and from the river under operation of the HC&C system. The operation of the system is expected to cause hydraulic gradient and groundwater flow reversals within the sediments over a large portion of the Project Area. At the request of the Oregon Department of Environmental Quality, a number of conservative assumptions were made during model development and its use during design of the HC&C system, including use of a reasonable worst-case groundwater gradient condition and conservative estimates of hydraulic conductivity. These assumptions likely result in MODFLOW predictions of higher total flow to the river and a smaller area of groundwater flow reversal than that which will be achieved by the HC&C system. The resulting MODFLOW predictions of groundwater flow (expressed in terms of Darcy velocity) are shown on Figure 4-1. These flow rates were used for all Gasco fate model future projections (i.e., for no action and active remediation alternatives).

4.2 "No Action" Simulation

According to the U.S. Environmental Protection Agency (EPA 2005) guidance, federal regulations state that the no action alternative should be considered at every site (40 Code of Federal Regulations [CFR] Section 300.430[e][6]). The objective of the long-term no action simulation is to evaluate no action as compared to other active remediation alternatives. Specifically, the model simulation of the no action alternative can be used to assess the rate and effectiveness of natural recovery in the Site area under a scenario where no active remedies (with the exception of operation of the HC&C system) would be implemented. The results from these simulations (i.e., EE/CA Alternative 1) are discussed for BaP and naphthalene in the following two subsections.

4.2.1 BaP Results

This subsection provides a summary of the contaminant fate model 45-year projection results for the no action scenario for BaP.

- *Water Column Time Series:* Figure 4-2 shows the laterally averaged, model-predicted water column BaP concentrations at the four transect locations described in the

calibration section above (i.e., RMs 11, 6.3, 4, and 2). Note that the RM 6.3 transect is located within the Gasco Sediments Site. As shown on this figure, water column BaP concentrations exhibit a general decline over the 45-year projection period. This decline is predicted for all transects, but is more prominent for those at RMs 6.3 and 4; it is a result of a decline in model predicted surface sediment concentrations and resulting flux to the water column. The processes most responsible for the predicted decline in surface sediment concentrations are biodegradation within the surface sediment and the deposition of lower concentration material from the water column. The model shows a considerable amount of variability in the water column at daily time scales due to flow and tide variations. The BaP results also show short-term spikes in water column concentrations for locations at and downstream of RM 6.3 during high flows that occur in the winter months of most years, the most prominent of which being the Year 17 extreme event. The associated increase in annual average concentration in response to the Year 17 event is a result of model-predicted erosion of sediments in the RM 7 to 6 area that produces an increase in water column concentration within and downstream of that area.

- *Surface Sediment Time Series*: Time series of model-predicted surface sediment concentrations in the Gasco Sediments Site area are shown on Figures 4-3 and 4-4. Specifically, Figure 4-3 shows half-mile averages in the vicinity of the Site (RMs 7 to 6.5 and 6.5 to 6) separated into the west nearshore area and the navigation channel, and Figure 4-4 shows an average over the Gasco Sediments Site Area of Interest (which includes both the west nearshore area and a portion of the navigation channel). As shown on both figures, the model predicts decreases in surface sediment concentration over the simulation. As mentioned above, the mechanisms that produce the model predicted decrease in bed surface concentration are biodegradation in the sediment and the deposition of lower concentration sediment from the water column. The rates of predicted decline differ spatially (e.g., navigation channel versus nearshore areas) as a result of differing rates of deposition (Figure 4-3). The exception to this overall decreasing trend is the Year 17 extreme flow event, which results in temporary increases in bed surface concentration. This increase can be attributed to model predictions of erosion of lower concentration surface sediment that had previously been deposited prior to the extreme flow event; such erosion results in the underlying higher concentration sediments to be closer to the surface or exposed such that the top 12-inch average concentration increases.

- *Spatial Distribution of Surface Sediment Concentrations:* To illustrate model-predicted variations in surface sediment BaP concentration within the Site area over time for the no action alternative, maps showing model-predicted concentrations throughout the model grid in this area at three points in the simulation – Years 10, 30, and 45 – are presented on Figures 4-5a, 4-5b, and 4-5c, respectively. These figures show the regions of relatively high and low concentration within the nearshore and navigation channel areas, and the predicted reductions over time within such areas are evident by comparing the maps among the three different years.

4.2.2 Naphthalene Results

This subsection provides a summary of the contaminant fate model 45-year projection results for the no action scenario for naphthalene.

- *Water Column Time Series:* Figure 4-6 shows the laterally averaged, model-predicted water column naphthalene concentrations at the four transect locations previously described (i.e., RMs 11, 6.3, 4, and 2). This figure demonstrates that there is no apparent long-term change in water column concentration for naphthalene on a harbor-wide laterally averaged basis. The lack of spatial variation among these four (laterally averaged) transects is consistent with the mass balances discussed in Section 3.3.3, in which most of the naphthalene load enters Portland Harbor from upstream and passes through the system, with little net increase in load from the sediments. The model does predict slight increases in water column concentrations that coincide with variations in flow. The model also predicts larger short-term increases in water column concentrations that occur during higher flow events at and downstream of RM 6.3. These increases are a result of increased erosion that is predicted to occur during these larger flow events.

- *Surface Sediment Time Series*: Time series of model-predicted surface sediment naphthalene concentrations in the Site area for the no action simulation are shown on Figures 4-7 and 4-8. Similar to the BaP charts previously described, Figure 4-7 shows half-mile averages of naphthalene in the vicinity of the Site (RMs 7 to 6.5 and 6.5 to 6) separated into the west nearshore area and the navigation channel, and Figure 4-8 shows an average over the Gasco Sediments Site Area of Interest (which includes both the west nearshore area and a portion of the navigation channel). Similar to what was predicted

for BaP, the model predictions for naphthalene show overall decreases in bed surface concentration during the model simulation, at rates that vary spatially due to differences in deposition and erosion patterns. Both biodegradation and deposition of lower concentration sediment on the bed surface are the cause of these predicted decreases; further, the groundwater flow reversals predicted to occur as a result of operation of the HC&C system (described in Section 4.1) also contribute to the relatively rapid predicted rate of decline, primarily within the RM 6.5 to 6 navigation channel. Also, similar to BaP, temporary increases in naphthalene concentration are predicted during the Year 17 extreme flow event, primarily in the west nearshore areas (Figure 4-7); these increases are predicted to occur as a result of erosion of surface sediments having relatively lower concentrations than the underlying layers.

- *Spatial Distribution of Surface Sediment Concentrations:* To illustrate model-predicted variations in surface sediment naphthalene concentration within the Site area over time for the no action alternative, maps showing model-predicted concentrations throughout the model grid in this area at three points in the simulation (Years 10, 30, and 45) are presented on Figures 4-9a, 4-9b, and 4-9c, respectively. These figures also show spatial variations and differences in such variations over time that are generally similar to those described previously for BaP.

4.3 Simulation of Action Alternatives 2 through 5

Model simulations of the active remediation alternatives (Alternatives 2 through 5, as described in Section 6 of the draft EE/CA) were also conducted using the calibrated Gasco fate and transport model. These simulations utilized the same 45-year simulation length, hydrologic conditions, boundary loads, and groundwater flows as described in Section 4.1. Unlike the no action alternative, these simulations account for varying amounts of active sediment remediation that would occur within the Project Area under each alternative. As described in the Portland Harbor draft FS (Appendix Ha, Section 5.3), customized computer code was developed within the fate model to represent the various sediment remediation technologies (i.e., dredging and capping). This code provides the ability to simulate sediment remediation in a realistic manner, including the ability to represent the progress of remediation over a multi-year construction schedule as well as some of the limitations associated with various available remedial technologies (such as dredge residuals). Appendix Ha of the Portland Harbor draft FS provides a detailed discussion of the additional model setup required for the active alternatives; a brief summary is as follows:

- *Mapping of Remedial Footprints to the Fate Model Grid:* In order to simulate each of the active remediation alternatives in the fate model, the footprint of each alternative was mapped onto the fate model grid. Figures 4-10a through 4-10e present this mapping for each of the active remedial alternatives (i.e., Alternatives 2 through 5, respectively). Given the spatial resolution of the model grid, it was not possible to have the fate model grid cells identified for remediation exactly match the remedial footprint boundaries. As such, judgments needed to be made as to which model grid cells to include as part of the remedial footprint in the model.

- *Simulation of Remediation Technologies:* As previously noted, customized code was used to facilitate simulation of the active remediation alternatives. This code allows for flexibility in simulating sediment remediation by representing two general classes of remediation technologies: 1) sediment removal; and 2) capping. Details regarding the methods used to simulate these technologies are provided in Section 5.3.1.2 of Appendix Ha to the Portland Harbor draft FS. One additional technology that was evaluated in portions of the Project Area for certain alternatives (which was not used in Portland Harbor) is removal followed by placement of a cap (i.e., removal and cap). This technology is simulated by the model in nearly the same manner as the "removal and cover" technology (that was applied to all removal areas in Portland Harbor) except that "removal and cap" assumes there would be no sediment residual entrained within the cap.

- *Contaminant Releases during Sediment Dredging*: Releases of contaminant mass to the water column during dredging can be significant, and are therefore simulated by the code as a flux of contaminant to the water column in a remediated grid cell. The magnitude of that release flux is calculated in the model based on the removal depth, the assumed fraction of mass contaminant released, and the dredge production schedule (i.e., time it takes to remediate that grid cell based on its volume of sediment removal and the specified production rate). Consistent with the Portland Harbor modeling, simulation of all active remediation alternatives assumed the fraction of contaminant released during dredging was 3 percent of the mass removed.

- *Timing/Sequencing of Remediation:* As described in Section 4.1, model simulations of active remediation scenarios were conducted over a 45-year projection period. For all of the active remediation alternatives, remediation was specified to begin in the first year

of the projection period. In general, the production rates used to simulate the active remediation alternatives were consistent with the alternative durations summarized in Section 6 of the draft EE/CA. Specifically, the model assumed that the Project Area remediation would be completed within the specified number of years for each alternative, but that work would only be conducted within the 4-month annual construction window from July through October. Also, for the purposes of the fate and transport modeling, construction was assumed to proceed from upstream to downstream within the Project Area. Based on this approach, the model projections represented the progression of construction over a multi-year schedule by sequentially simulating dredging and capping of the appropriate grid cells over time.

4.3.1 BaP Results

This section provides a summary of the results from the contaminant fate model long-term (45-year) simulations of active remediation Alternatives 2 through 5 for BaP. In this section, future predictions of water column and sediment BaP concentrations are presented as overlay plots that compare the full suite of alternatives, including for reference those from the no action simulation (Alternative 1).

- *Water Column Time Series:* Figure 4-11 shows an overlay of annual and laterally averaged, model-predicted water column BaP concentrations at RM 6.3) for all alternatives. This figure shows that annual average water column BaP concentrations are predicted to increase during the first several years of the projection period, as compared to predictions for no action; these increases are in response to releases that occur during dredging and are predicted for all of the active alternatives. The timing of the predicted increases directly correspond to the construction sequence for each alternative, and the durations differ due to the amount of dredging associated with each alternative (with Alternative 2a having the least and Alternative 5 having the greatest). After the simulated remediation is complete, predicted water column concentrations are nearly the same for all alternatives, including no action. As with no action, water column BaP concentrations continue to exhibit a general post-remediation decline over the remainder of the projection period due to a continued decline in surface sediment concentrations, driven largely by biodegradation and deposition processes. A slight increase in annual average concentration is predicted in response to the Year 17 extreme flow event, for all alternatives.

- *Surface Sediment Time Series*: Time series of model-predicted surface sediment concentrations within the Site area are shown on Figures 4-12 and 4-13. Similar to what is shown on the no action graphics previously described, Figure 4-12 shows half-mile averages in the vicinity of the Site (RMs 7 to 6.5 and 6.5 to 6) separated into the west nearshore area and the navigation channel, and Figure 4-13 shows an average over the Gasco Sediments Site Area of Interest (which includes both the west nearshore area and a portion of the navigation channel). The general trends predicted by the model are similar to those described previously for the no action simulation, although predicted concentrations for the active alternatives deviate from, and in most cases are lower than, those predicted for no action. As shown on Figure 4-12, the predicted BaP trends in the two navigational channel half river mile reaches are generally similar among the alternatives, including no action, although in the RM 6.5 to 6 reach, the concentrations of the active alternatives are predicted to be lower than those of no action (with the exception of Alternative 2a, which has no active remediation in the navigation channel). These differences in predicted concentration are up to approximately a factor of two or less, with Alternative 5 predicted to result in the lowest concentration and Alternative 2b the highest. In the west nearshore areas shown on Figure 4-12, the relative impacts of simulated remediation are generally more pronounced, particularly in the RM 6.5 to 6 reach. In both nearshore areas, Alternative 5 is predicted to have the highest concentration at the end of the simulation among the active alternatives, exceeding that of no action in the RM 7 to 6.5 reach. In the RM 6.5 to 6 reach, the model predicts Alternatives 4 and 5 to have higher concentrations at the end of the simulation relative to Alternatives 2a, 2b, and 3, but all the active alternatives are predicted to have concentrations that are lower than those of no action. The relatively higher concentrations of Alternatives 5 and 4 in this area are the result of larger dredge footprints and associated high dredge residual concentrations in certain portions of the area, while lower concentrations are predicted for the larger capping footprints associated with Alternatives 2a, 2b, and 3. When averaged over the Gasco Sediments Site Area of interest, (Figure 4-13), the model results show that Alternative 5 results in the lowest concentrations at and following the Year 17 event, with all the other active alternatives grouped together between the predicted results for no action and Alternative 5. However, these predicted differences among the alternatives differ only by a factor of two at the end of the simulation.

- *Spatial Distribution of Surface Sediment Concentrations:* Similar to those shown for the no

action alternative, maps showing model-predicted BaP concentrations throughout the model grid are presented on Figures 4-14 through 4-18 for Alternatives 2 through 5, respectively. Each figure contains three pages (labeled a, b, and c), which correspond to model results at Years 10, 30, and 45, respectively. By comparing these figures to those for no action (shown on Figure 4-5), the spatial distribution of predicted concentration decreases associated with remediation and natural recovery processes is evident.

4.3.2 Naphthalene Results

This section provides a summary of the results from the contaminant fate model long-term (45-year) simulations of active remediation Alternatives 2 through 5 for naphthalene. As with the BaP results previously described, future predictions of water column and sediment naphthalene concentrations are presented as overlay plots that compare the full suite of alternatives, including for reference those from the no action simulation (Alternative 1).

- *Water Column Time Series:* Figure 4-19 shows an overlay of annual and laterally averaged, model-predicted water column concentrations at RM 6.3 for all alternatives. As with BaP, this figure shows that annual average water column naphthalene concentrations increase in response to dredge releases that occur for all active alternatives, with differences among alternatives being related to the timing and duration of simulated dredging. Also, after remediation is complete, predicted water column concentrations are nearly the same among all alternatives, including no action.

- *Surface Sediment Time Series*: Time series of model-predicted surface sediment naphthalene concentrations in the Site area are shown on Figures 4-20 and 4-21; similar to the BaP charts described above, Figure 4-20 shows half-mile averages in the vicinity of the Site (RMs 7 to 6.5 and 6.5 to 6) separated into the west nearshore area and the navigation channel, and Figure 4-21 shows an average over the Gasco Sediments Site Area of Interest (which includes both the west nearshore area and a portion of the navigation channel). Similar to what was discussed in Section 4.2.2 for BaP, model-predictions of naphthalene surface sediment concentration show a general downward trend for all alternatives, although concentrations of the various alternatives differ due to simulated remedial actions. The navigation channel half river mile reaches shown on Figure 4-20 show very little differentiation among the alternatives after the Year 17 extreme flow event. Prior to the event, in the case of Alternative 5 in the RM 6.5 to 6 reach, there are increases in bed surface concentrations as a result of dredge residuals,

but these differences are absent following the extreme flow event. In the west nearshore RM 7 to 6.5 reach, predicted concentrations are consistent among no action and Alternatives 2 through 4, whereas predictions for Alternative 5, which is the only alternative containing substantial dredging in this area, are much higher due to localized areas of dredge residual concentrations that are substantially higher than the current surface sediment concentrations. In the west nearshore RM 6.5 to 6 reach, naphthalene concentrations for Alternatives 4 and 5 are predicted to increase significantly during dredging as a result of high dredge residuals in portions of this area. Such increases are not predicted for Alternatives 2a, 2b, and 3 because this area is almost entirely capped under these alternatives. Following the Year 17 extreme flow event, predicted concentrations for Alternatives 4 and 5 are similar to no action, while those for Alternatives 2a, 2b, and 3 are well below the other alternatives because the larger extent of capping in these alternatives makes them less susceptible to increases in surface concentration due to erosion. Towards the end of the model simulation, bed surface concentrations are predicted to level off for Alternatives 2a, 2b, and 3 as a result of localized regions of upward groundwater flow and relatively high groundwater source concentrations – it should be noted that such trends would not be predicted to occur if the fate model accounted for the addition of a sorptive amendment to the cap material, which is being considered for these areas.

The average concentrations within the Gasco Sediments Site Area of Interest shown on Figure 4-21 primarily reflect a combination of those predicted in the RM 6.5 to 6 navigation channel and west nearshore area. Overall, the relatively rapid predicted rate of decline in this area is largely the result of the groundwater flow reversals predicted to occur within the RM 6.5 to 6 navigation channel as a result of operation of the HC&C system (described in Section 4.1), and differences among the alternatives reflect the effects of timing of remediation, and changes in surface concentration due to capping, dredging, and dredge residuals.

- *Spatial Distribution of Surface Sediment Concentrations:* Similar to those shown for the no action alternative, maps showing model-predicted naphthalene concentrations throughout the model grid are presented on Figures 4-22 through 4-26 for Alternatives 2 through 5, respectively. Each figure contains three pages (labeled a, b, and c), which correspond to model results at Years 10, 30, and 45, respectively. By comparing these figures to those for no action (shown on Figure 4-9), the spatial distribution of

concentration decreases associated with remediation and natural recovery processes is evident. These maps also illustrate the regions of concentration increase associated with dredge residuals predicted for Alternatives 4 and 5.

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FIGURES

PORTLAND HARBOR MODEL

GASCO MODEL

6

6

7

7

Portland

Feet
0 500 1,000

Legend

- *Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])*
- Population Centers
- River Mile
- Shoreline
- Numerical Grid

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Figure 2-1
Numerical Grids for Portland Harbor and Gasco Models in Vicinity of Gasco
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

PORTLAND HARBOR MODEL

GASCO MODEL

6

7

Portland

Feet
0 500 1,000

Legend

- *Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])*
- Population Centers
- River Mile
- Shoreline

Elevation (ft, NAVD88)

- < -70
- -70 - -60
- -60 - -50
- -50 - -40
- -40 - -30
- -30 - -20
- -20 - -10
- -10 - 0
- > 0

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Figure 2-2
Spatial Distributions of Bathymetry Inputs for Portland Harbor and Gasco Models in Vicinity of Gasco
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

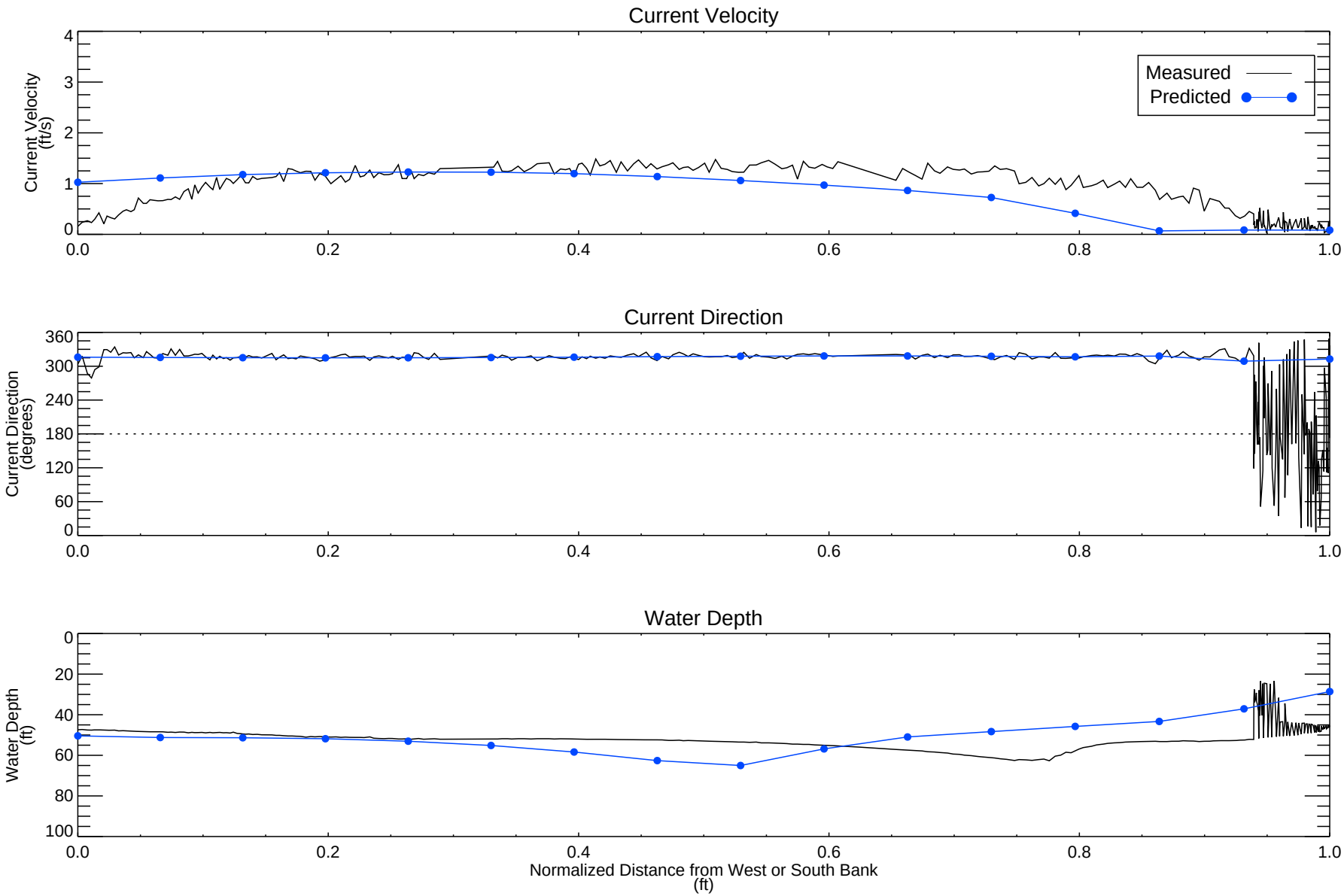

Figure 2-3

Comparison of Predicted and Measured Current Velocity/Direction and Water Depth at RM 10: April 2002 (66,000 cfs Flow Rate)
Gasco Sediments Cleanup Action

Data from ADCP survey. 0 degrees is true North.

HS - \\aries\Montvale\Users\hsamaha\Gasco\Documents\2012_Report\Figures\Fig_2-2,7_ADCP_compare\plot_transect_adcp_120315_rpt.pro Tue Mar 27 17:43:08 2012

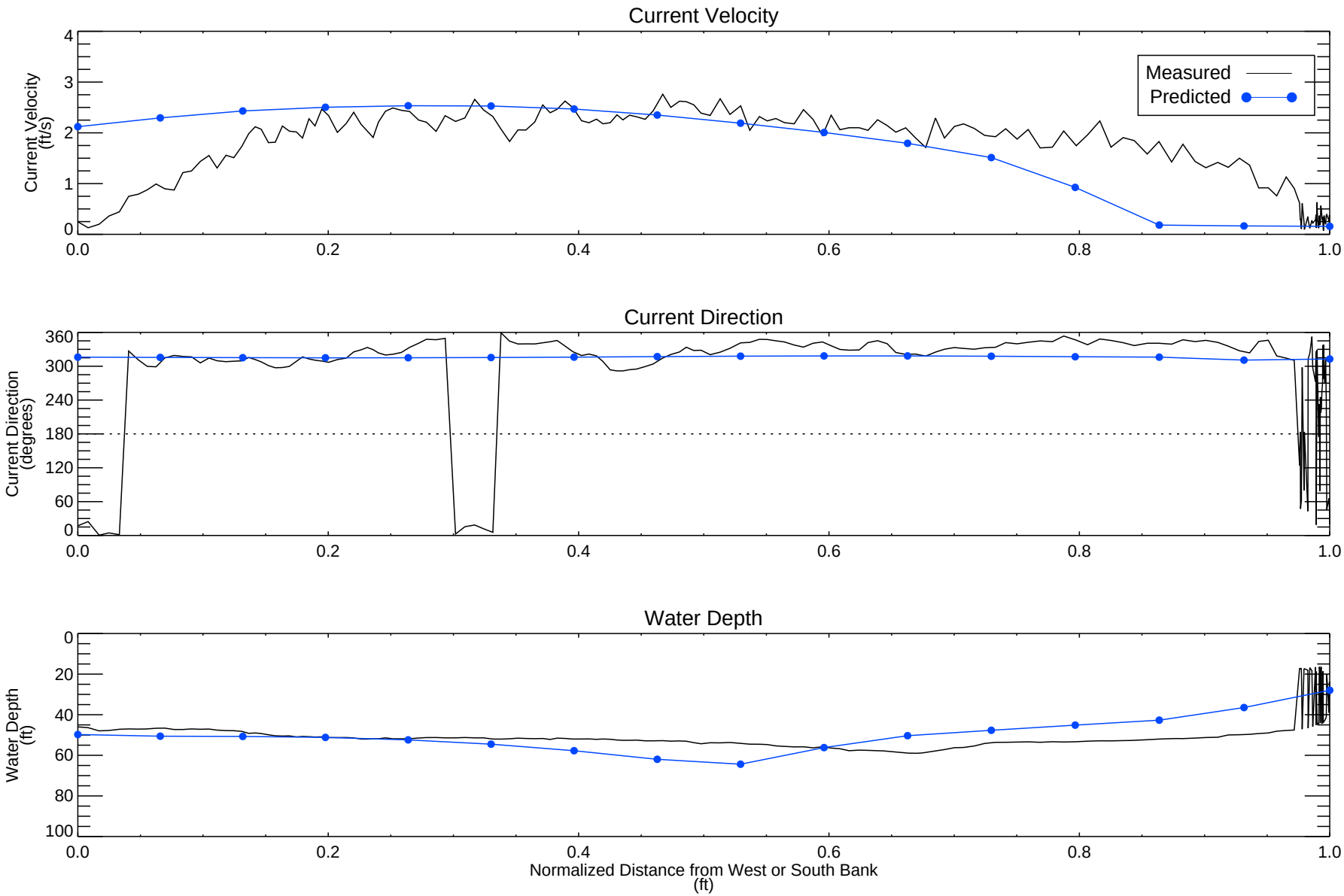

Figure 2-4

Comparison of Predicted and Measured Current Velocity/Direction and Water Depth at RM 10: January 2004 (139,000 cfs Flow Rate)
Gasco Sediments Cleanup Action

Data from ADCP survey. 0 degrees is true North.

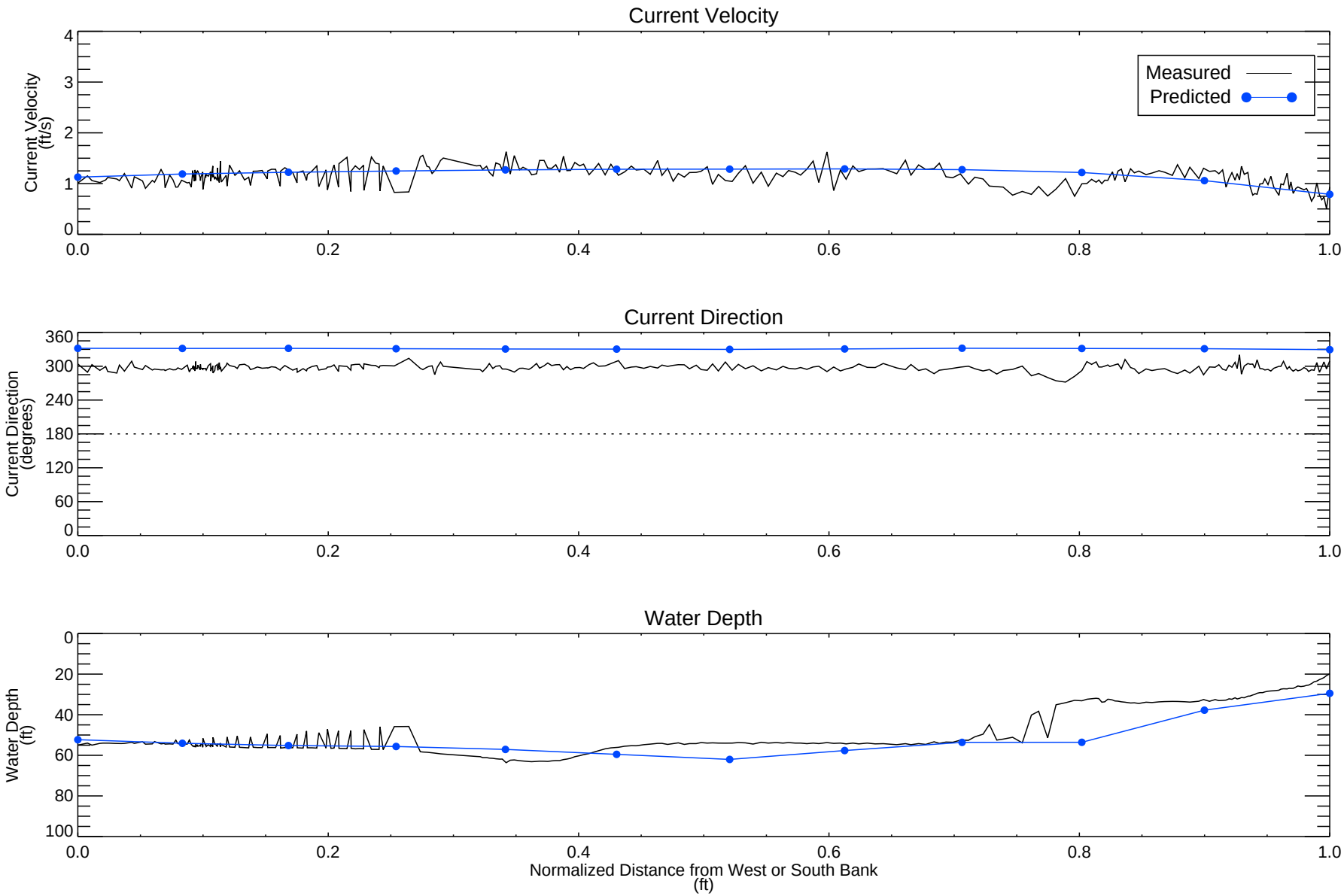

Figure 2-5

Comparison of Predicted and Measured Current Velocity/Direction and Water Depth at RM 6.3: April 2002 (66,000 cfs Flow Rate)
Gasco Sediments Cleanup Action

Data from ADCP survey. 0 degrees is true North.

HS - \\aries\Montvale\Users\hsamaha\Gasco\Documents\2012_Report\Figures\Fig_2-2,7_ADCP_compare\plot_transect_adcp_120315_rpt.pro Tue Mar 27 17:43:10 2012

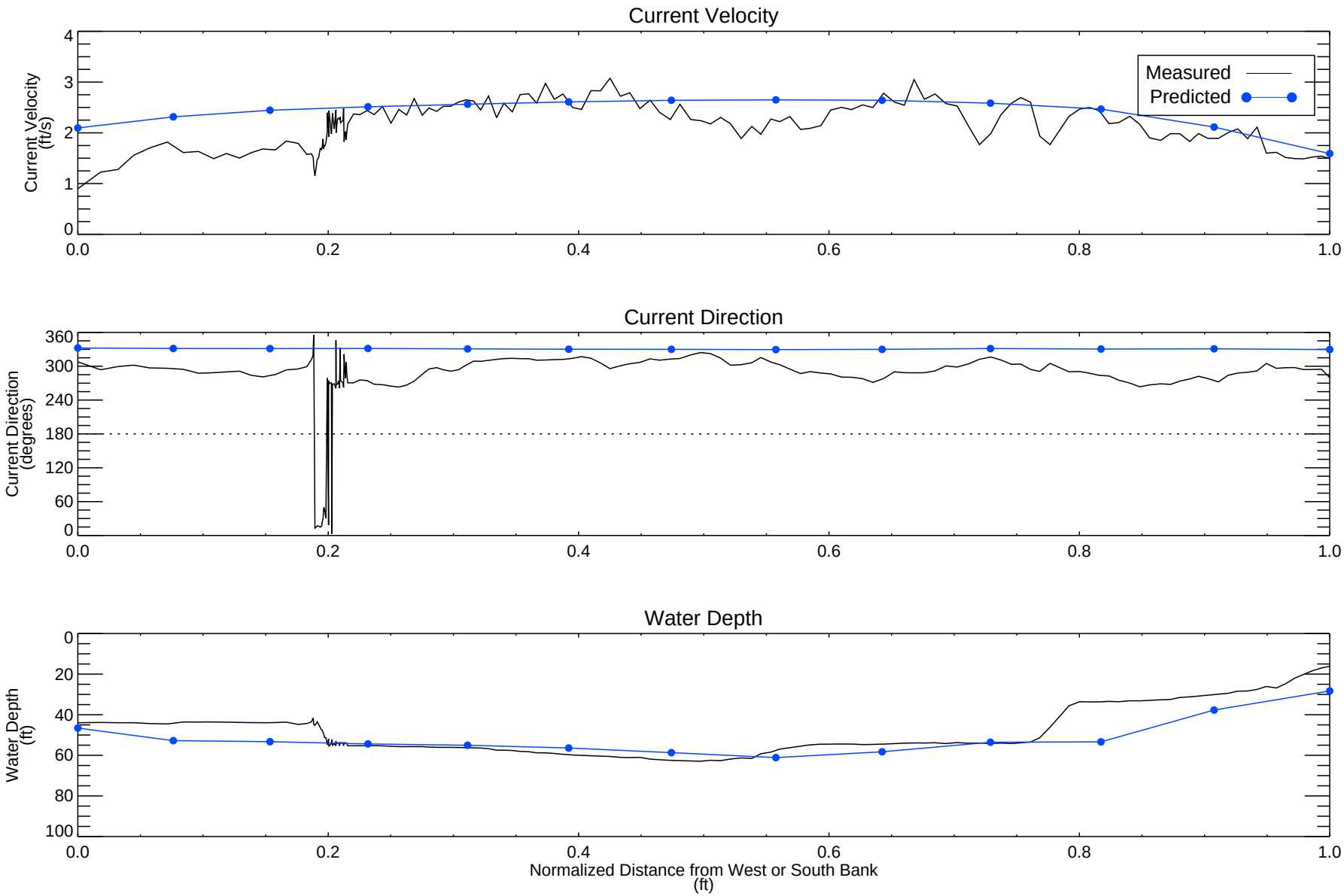

Figure 2-6

Comparison of Predicted and Measured Current Velocity/Direction and Water Depth at RM 6.3: January 2004 (139,000 cfs Flow Rate)
Gasco Sediments Cleanup Action

Data from ADCP survey. 0 degrees is true North.

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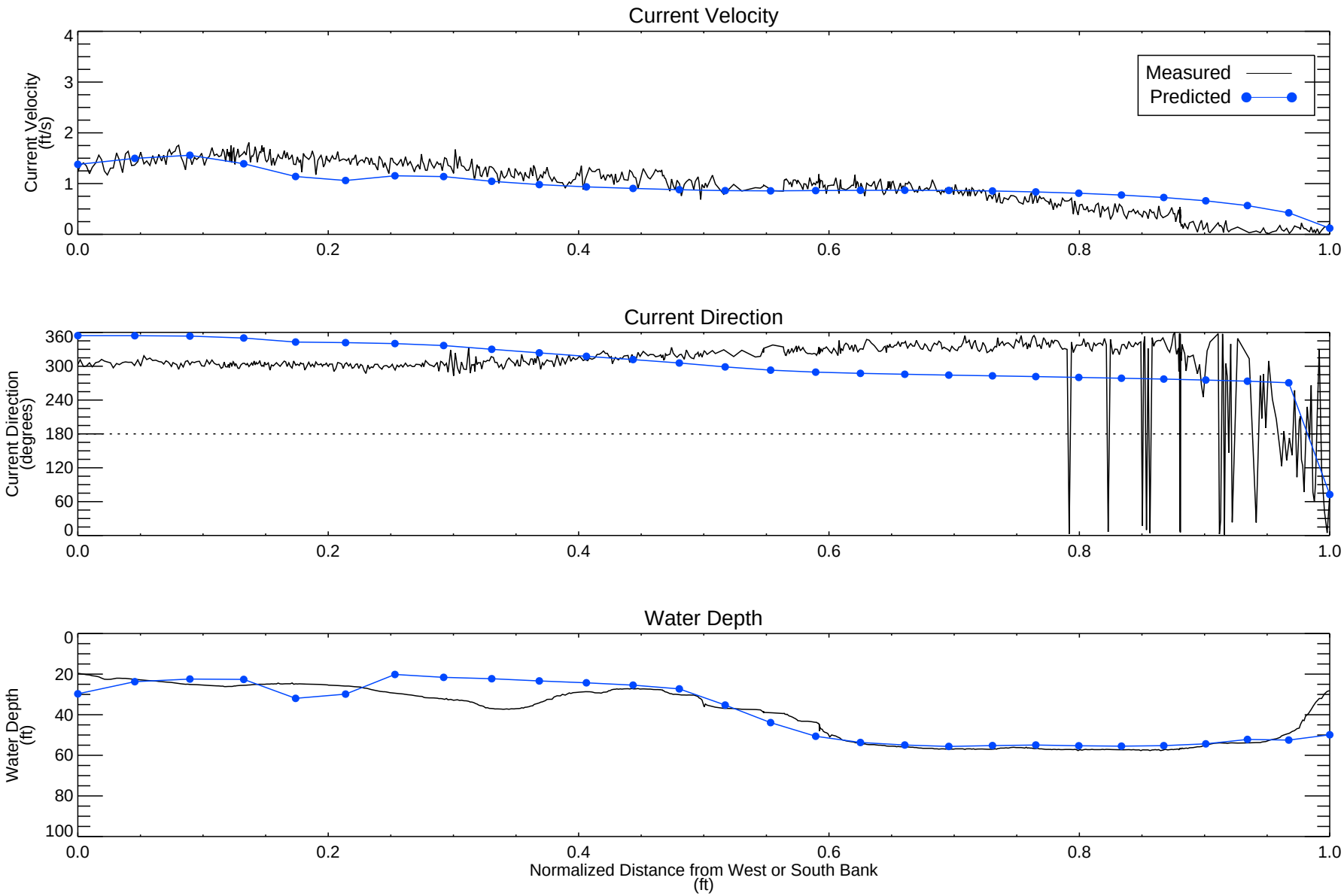


Figure 2-7

Comparison of Predicted and Measured Current Velocity/Direction and Water Depth at RM 3.1: April 2002 (66,000 cfs Flow Rate)
Gasco Sediments Cleanup Action

Data from ADCP survey. 0 degrees is true North.

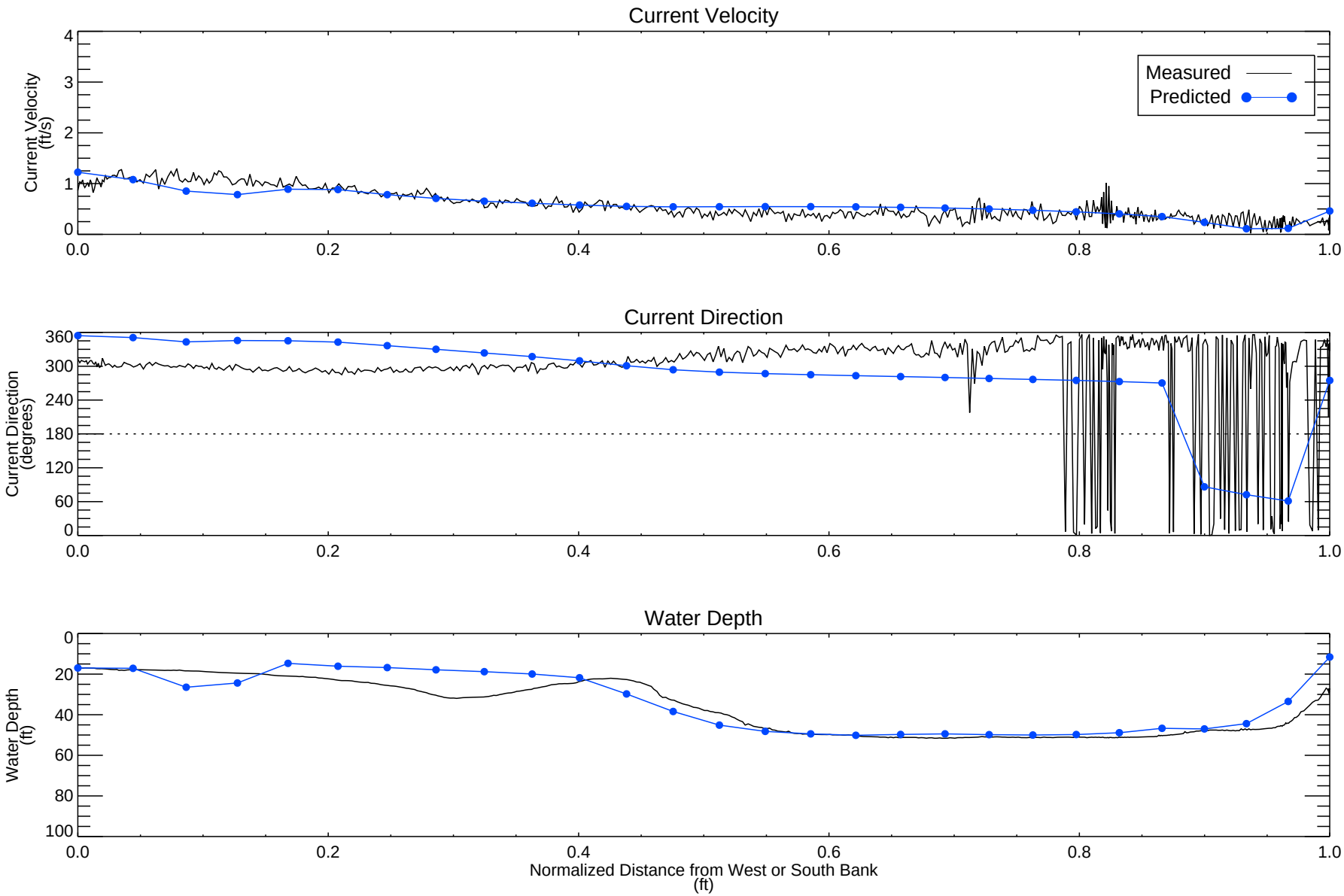
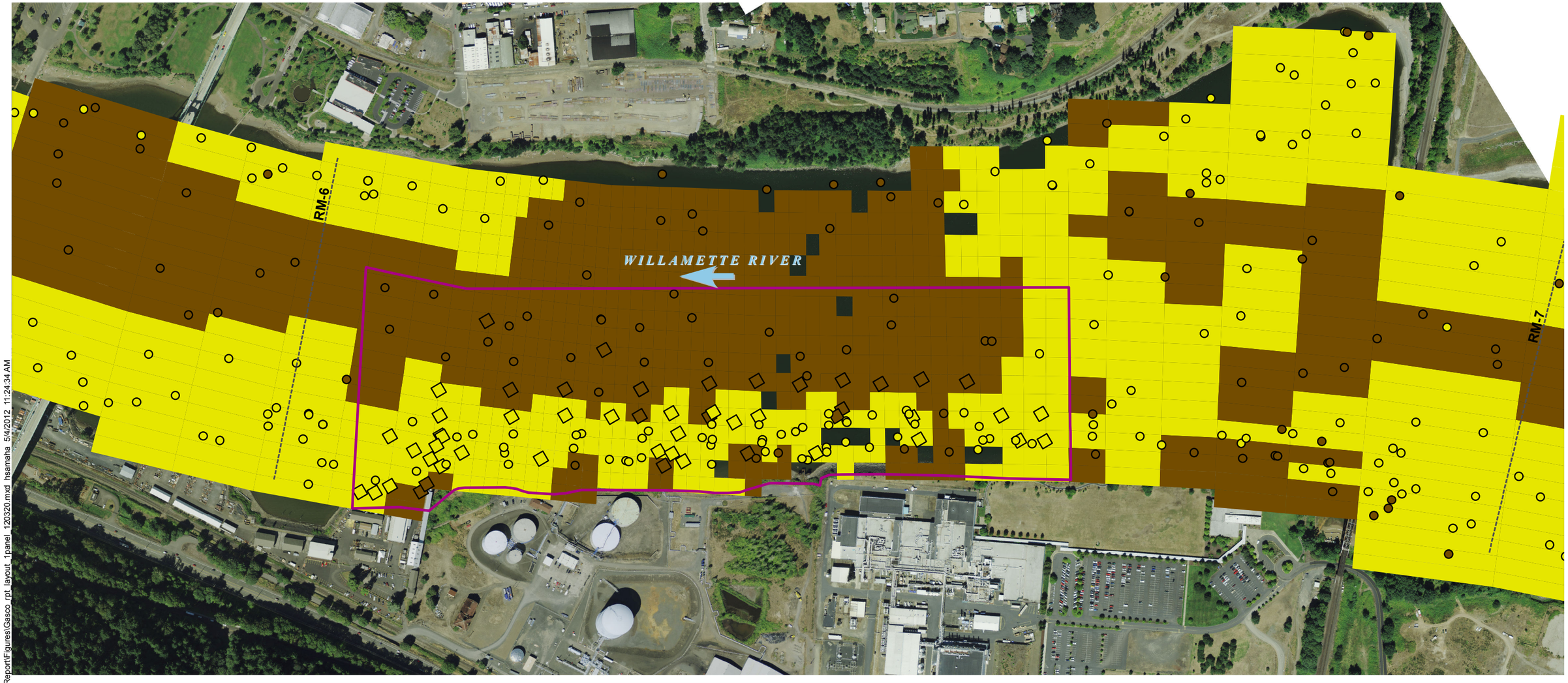


Figure 2-8

Comparison of Predicted and Measured Current Velocity/Direction and Water Depth at RM 3.1: May 2003 (26,000 cfs Flow Rate)
Gasco Sediments Cleanup Action

Data from ADCP survey. 0 degrees is true North.



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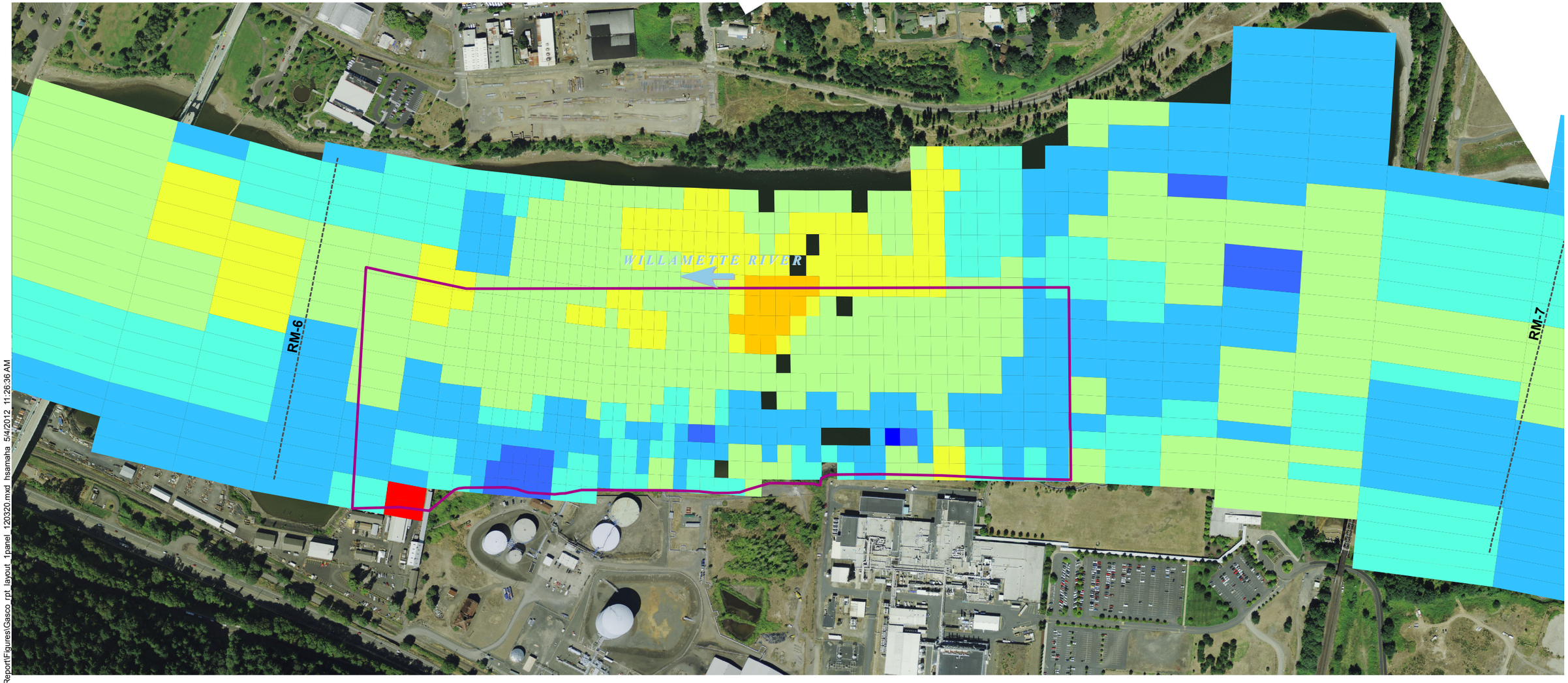
ANCHOR QEA

Figure 2-9
Delineation of Cohesive and Non-Cohesive Bed Areas in Vicinity of Gasco
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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ANCHOR QEA

Figure 2-10
Spatial Distribution of Median Particle Diameter (D_{50}) in Vicinity of Gasco
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

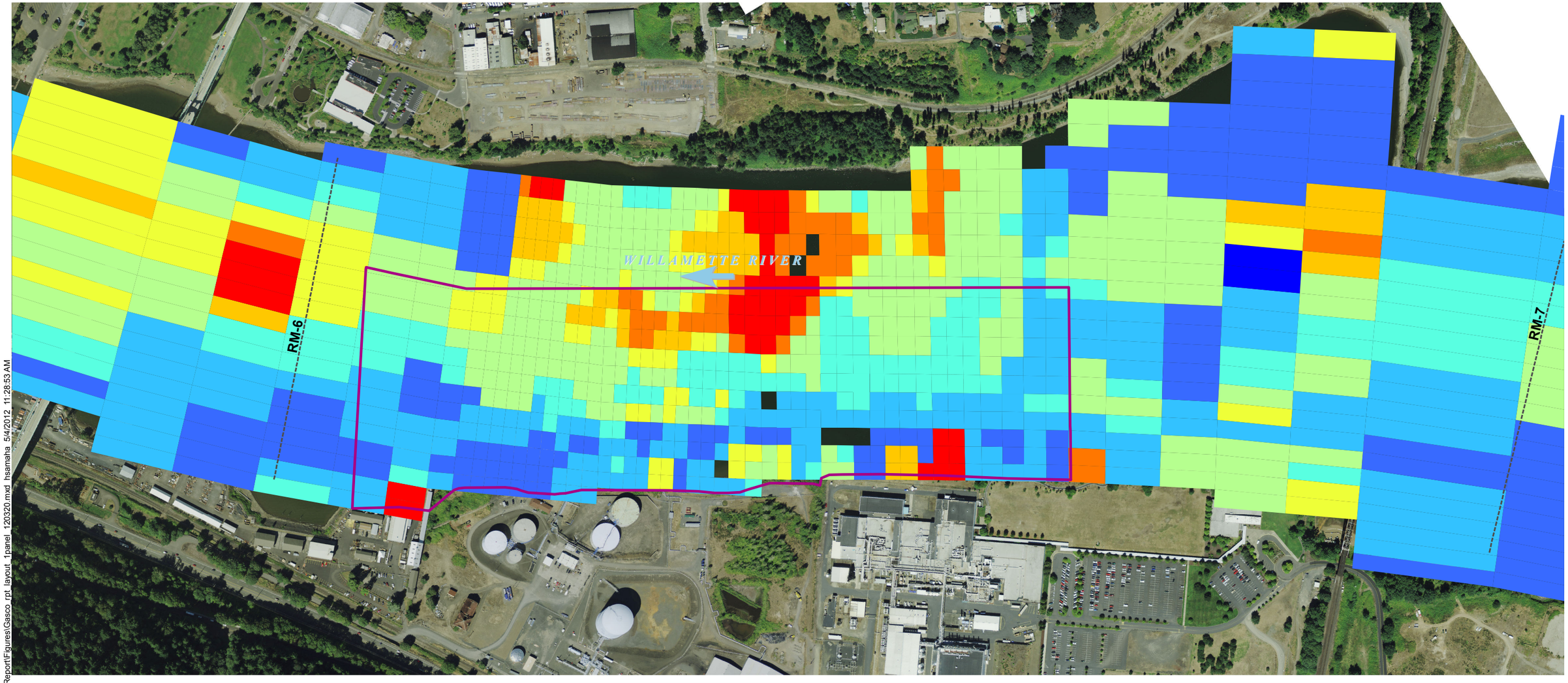

Figure 2-11
Spatial Distribution of 90th Percentile Particle Diameter (D_{90}) in Vicinity of Gasco
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

ANCHOR QEA

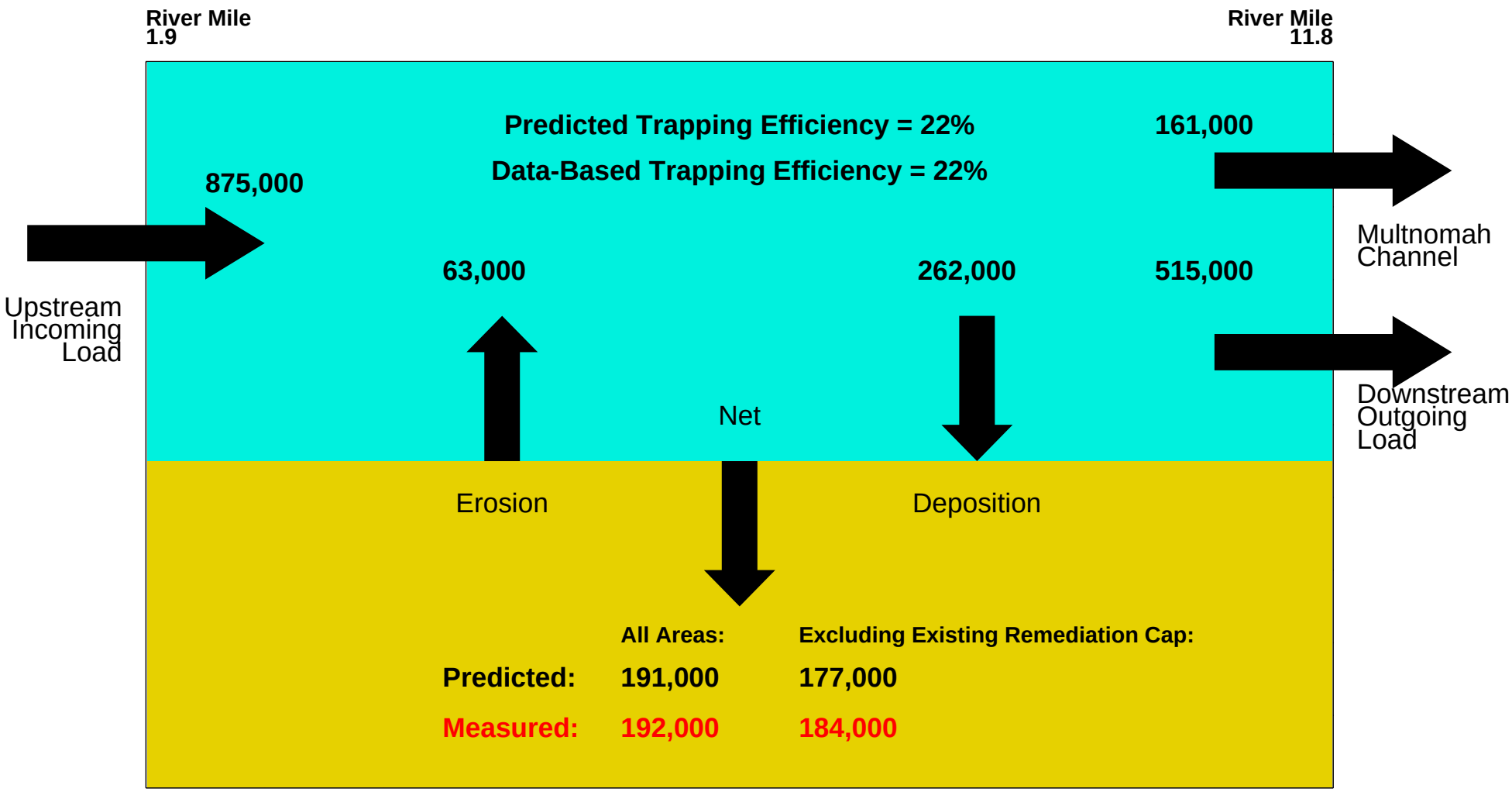

Figure 2-12

Sediment Mass Balance for RM 1.9 and 11.8 During 68-Month Period from May 2003 to January 2009
Gasco Sediments Cleanup Action

Sediment mass units are in metric tons per year (MT/yr).
Data values from difference between January 2009 and May 2003 bathymetry surveys.

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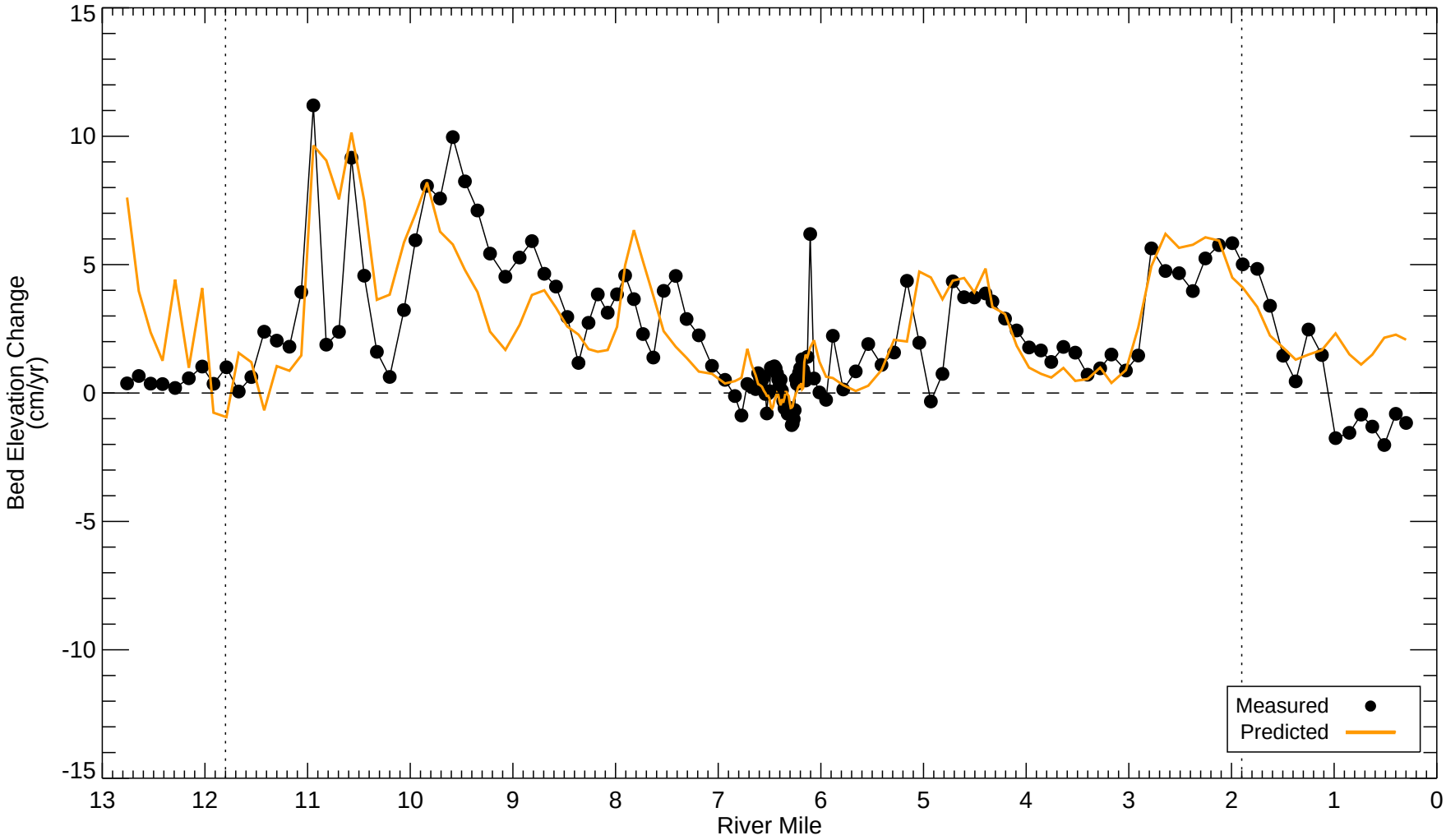

Figure 2-13

Comparison of Predicted and Measured Bed Elevation Change
at 1/8 Mile Scale During May 2003 to January 2009
Gasco Sediments Cleanup Action

Data from multi-beam bathymetry surveys performed in May 2003 and January 2009.
Model results from 5/15/2003 - 1/15/2009.

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MEASURED

PREDICTED

6

7

Portland

Feet
0 500 1,000

Legend

- *Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])*
- Population Centers
- River Mile
- Shoreline
- Cap/Dredge Areas

Bed Elevation Change (cm)

- < -30
- -30 - -20
- -20 - -10
- -10 - -0.5
- -0.5 - 0.5
- 0.5 - 10
- 10 - 20
- 20 - 30
- > 30

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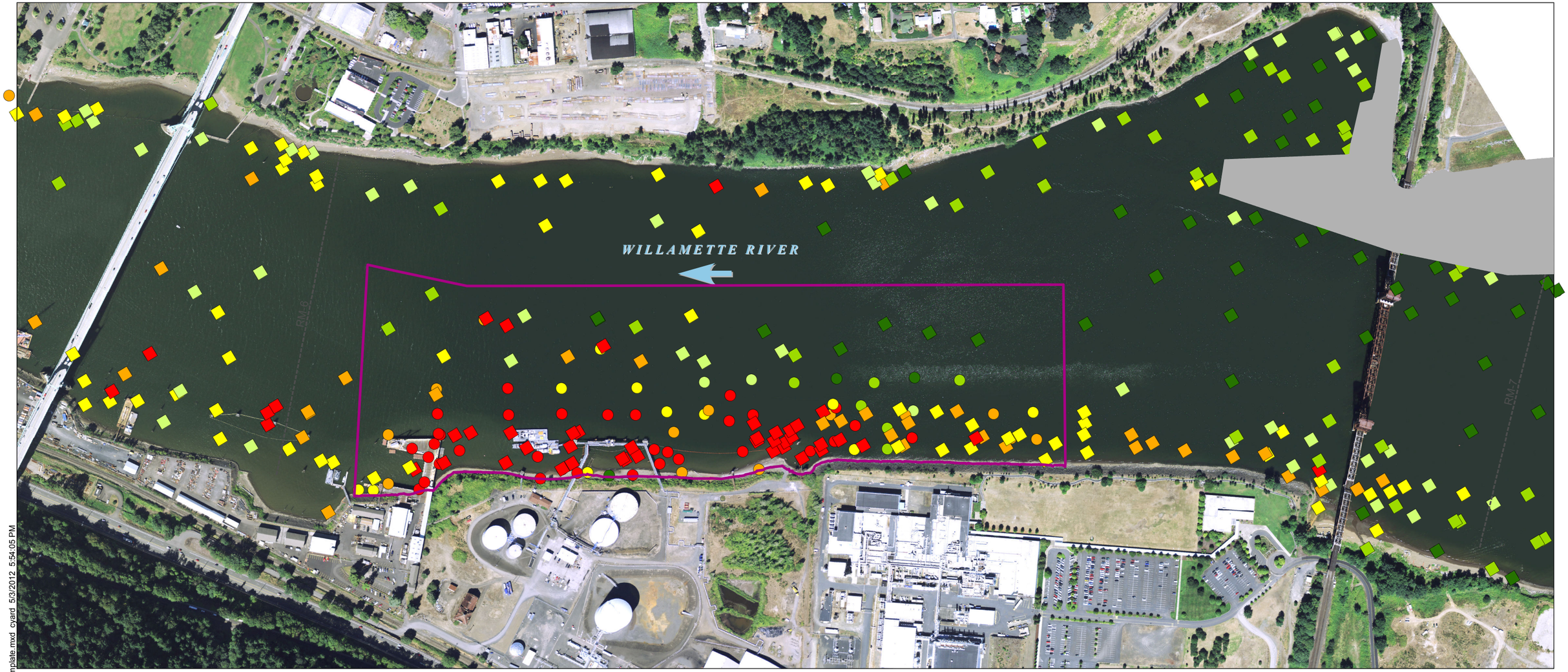
Figure 2-14
Spatial Distributions of Measured and Predicted Bed Elevation Change in Vicinity of Gasco for May 2003 to January 2009
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

ANCHOR QEA



Portland Harbor Model Data Set

BaP Concentration (µg/kg)

- < 30
- 30 - 100
- 100 - 300
- 300 - 1000
- 1000 - 3000
- > 3000

Gasco Supplemental Data Set

BaP Concentration (µg/kg)

- < 30
- 30 - 100
- 100 - 300
- 300 - 1000
- 1000 - 3000
- > 3000

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- McCormick and Baxter Remediation Cap area – no data available

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 250 500 750 1,000

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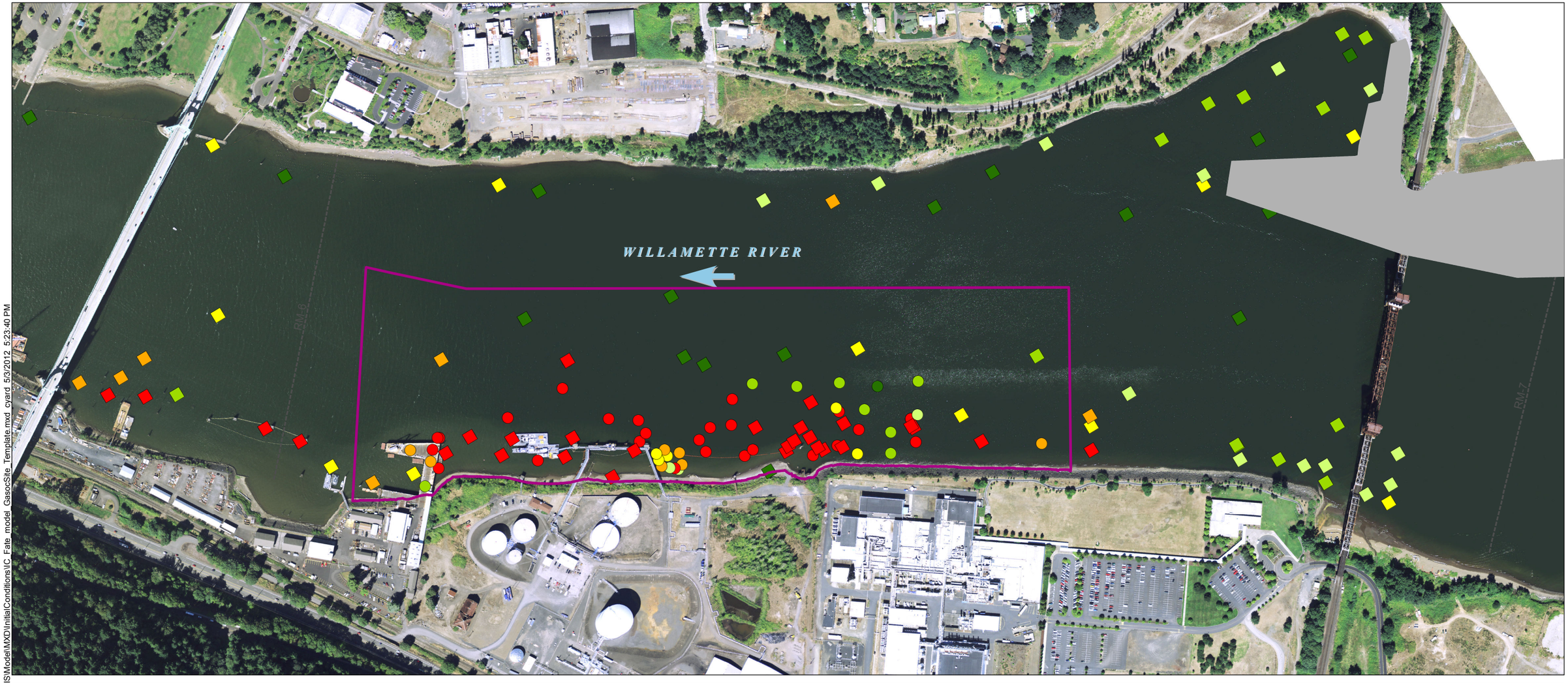
ANCHOR QEA

Figure 3-1
Surface Sediment BaP Data
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Portland Harbor Model Data Set

BaP Concentration (µg/kg)

- < 30
- 30 - 100
- 100 - 300
- 300 - 1000
- 1000 - 3000
- > 3000

Gasco Supplemental Data Set

BaP Concentration (µg/kg)

- < 30
- 30 - 100
- 100 - 300
- 300 - 1000
- 1000 - 3000
- > 3000

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- McCormick and Baxter Remediation Cap area – no data available

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 250 500 750 1,000

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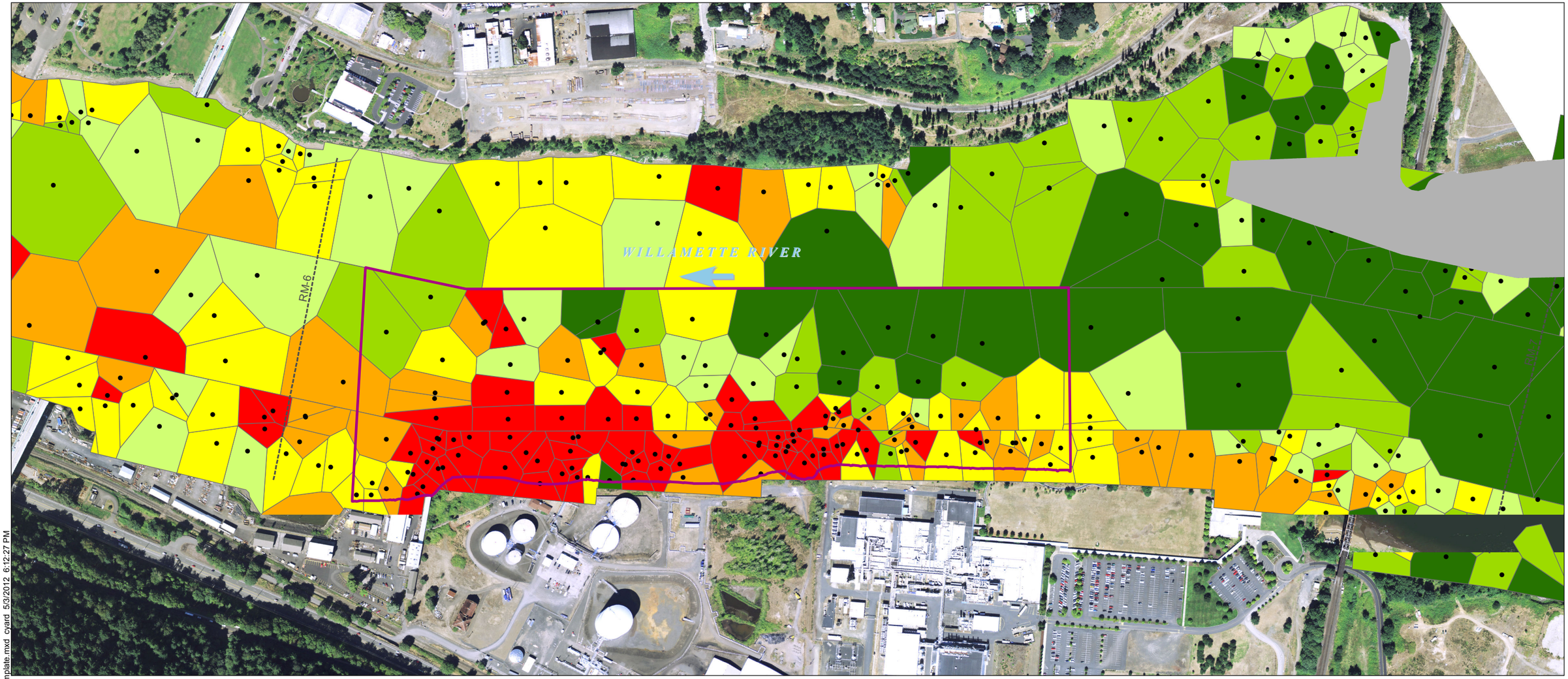
ANCHOR QEA

Figure 3-2
Subsurface Sediment BaP Data
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



- Surface Sediment Location

BaP Concentration (µg/kg)

- < 30
- 30 - 100
- 100 - 300
- 300 - 1000
- 1000 - 3000
- > 3000

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

McCormick and Baxter Remediation Cap area – no data available

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 250 500 750 1,000

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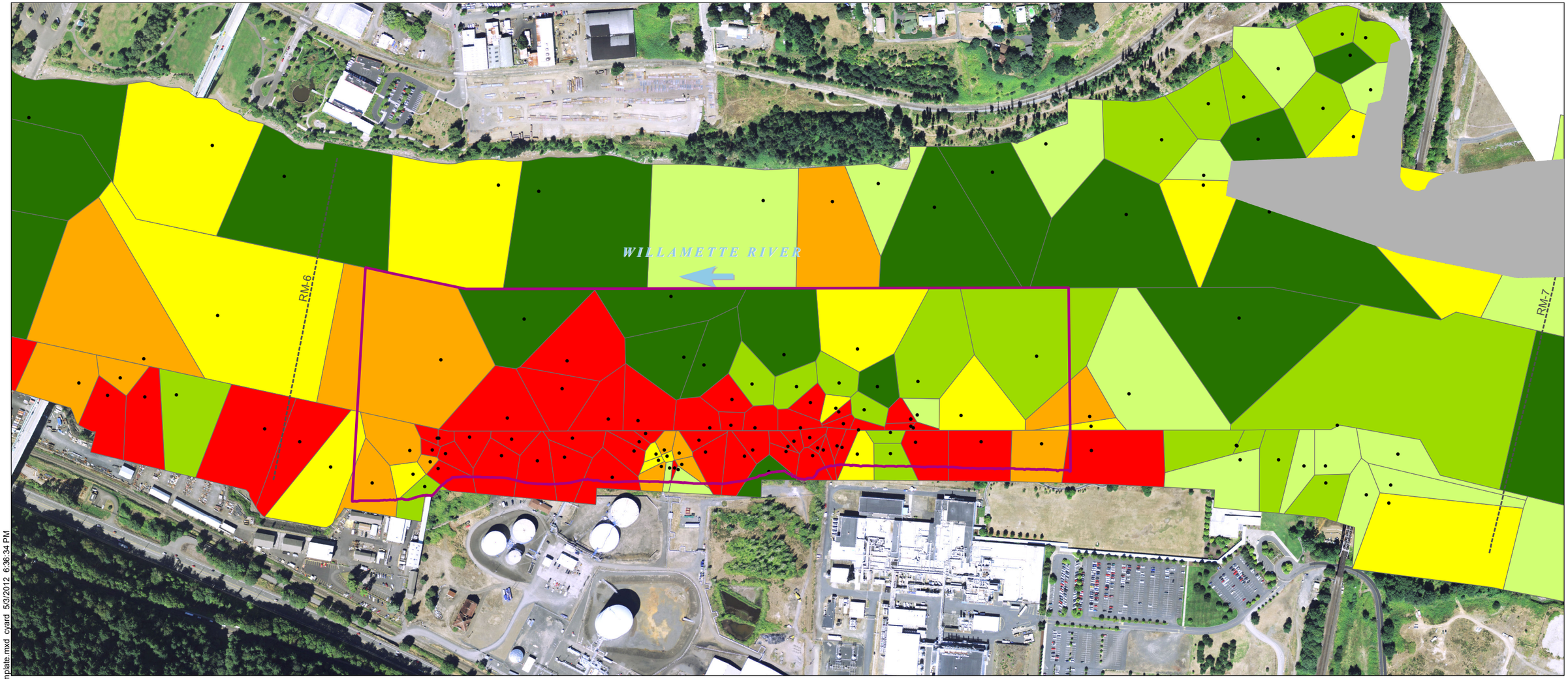
ANCHOR QEA

Figure 3-3
Surface Sediment BaP Thiessen Polygons
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



- Subsurface Sediment Location

BaP Concentration (µg/kg)

- < 30
- 30 - 100
- 100 - 300
- 300 - 1000
- 1000 - 3000
- > 3000

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

McCormick and Baxter Remediation Cap area – no data available

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 250 500 750 1,000

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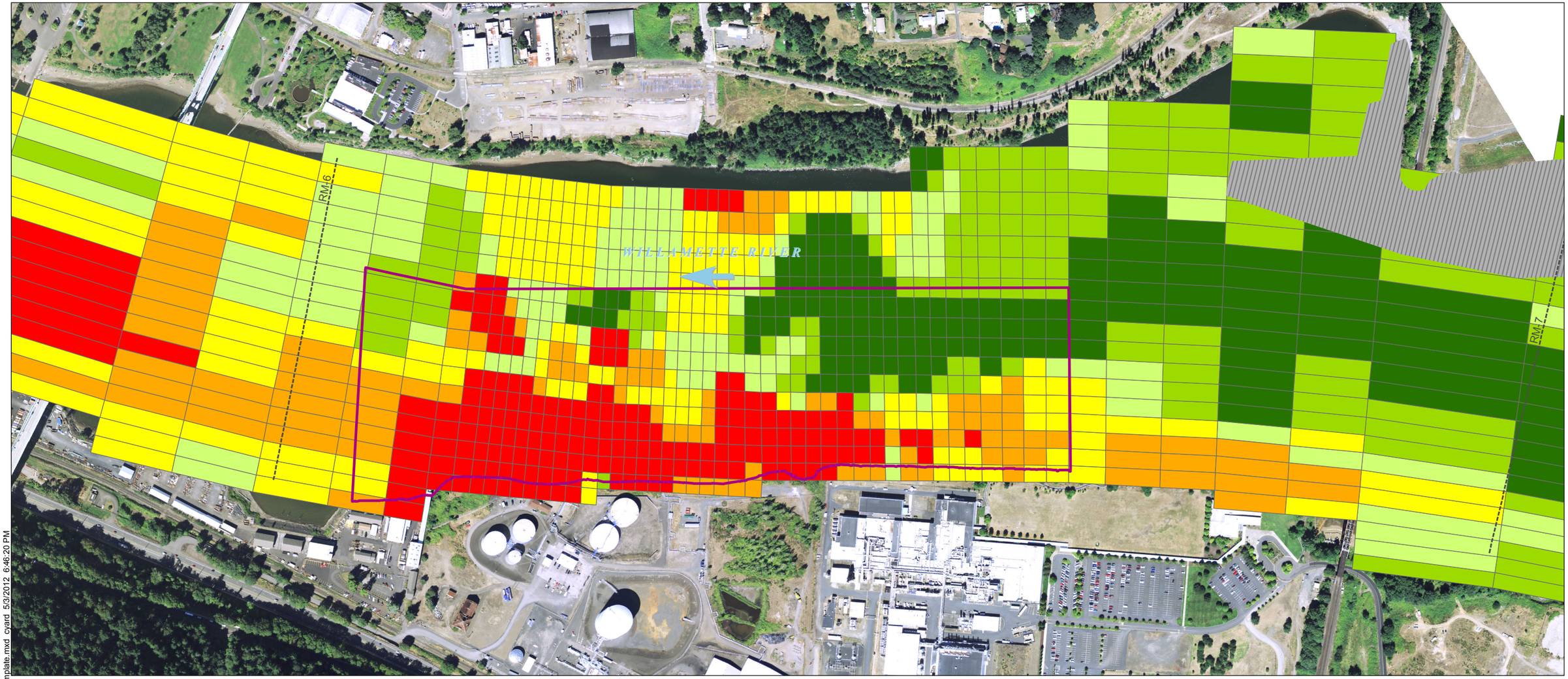
ANCHOR QEA

Figure 3-4
Subsurface Sediment BaP Thiessen Polygons
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



BaP Concentration (µg/kg)

- No data
- < 30
- 30 - 100
- 100 - 300
- 300 - 1000
- 1000 - 3000
- > 3000

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- McCormick and Baxter Remediation Cap area – no data available

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 250 500 750 1,000

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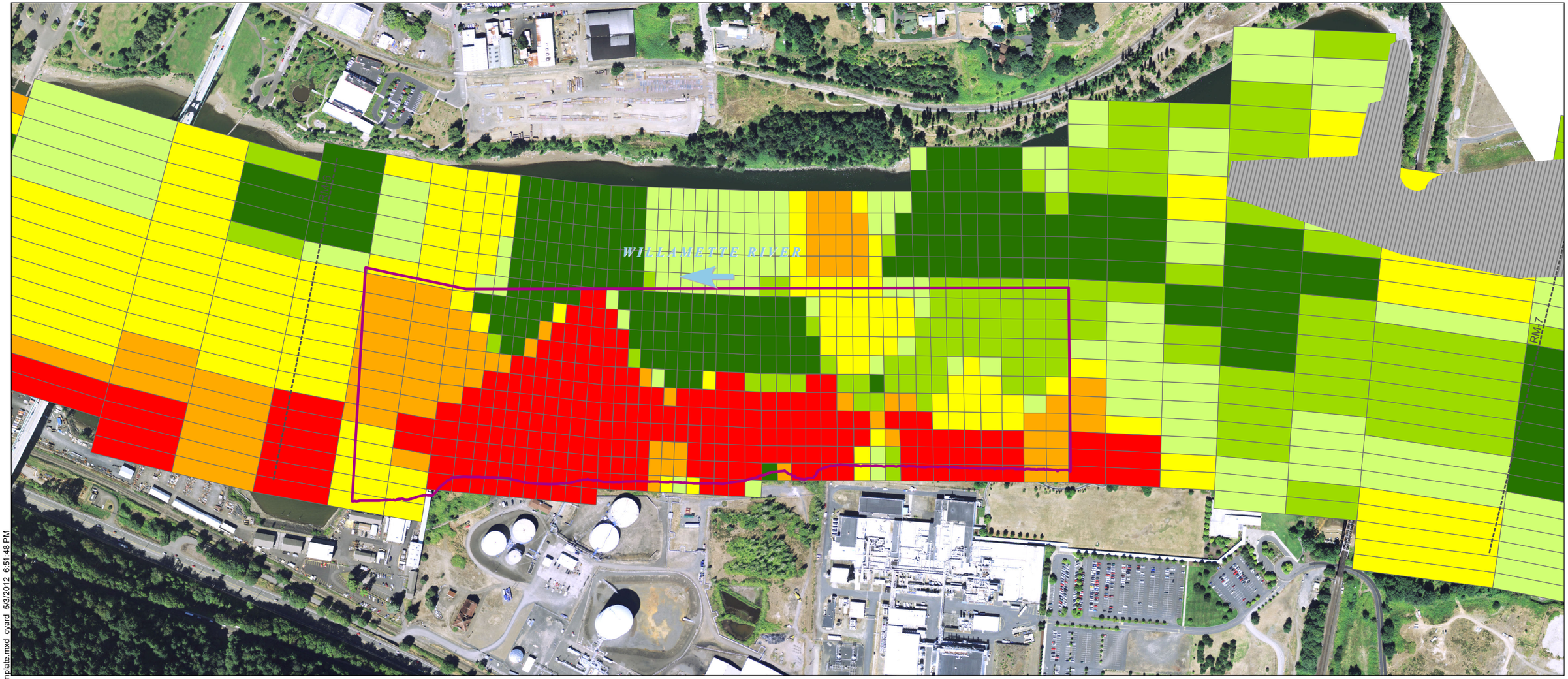
ANCHOR QEA

Figure 3-5
Surface Sediment Initial Condition (BaP)
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



BaP Concentration (µg/kg)

- No data
- < 30
- 30 - 100
- 100 - 300
- 300 - 1000
- 1000 - 3000
- > 3000

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

McCormick and Baxter Remediation Cap area – no data available

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 250 500 750 1,000

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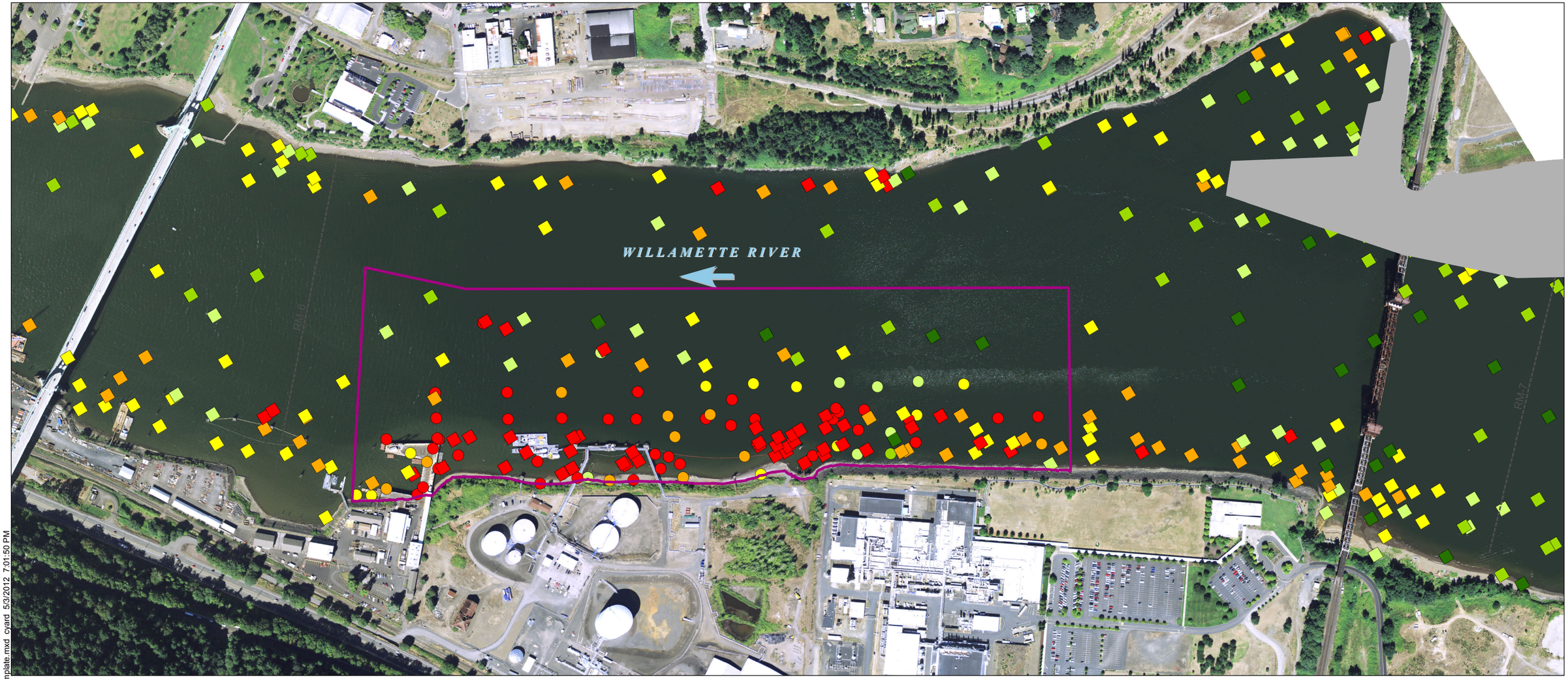
ANCHOR QEA

Figure 3-6
Subsurface Sediment Initial Condition (BaP)
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Portland Harbor Model Data Set

Naphthalene Concentration (µg/kg)

- < 3
- 3 - 10
- 10 - 30
- 30 - 100
- 100 - 300
- > 300

Gasco Supplemental Data Set

Naphthalene Concentration (µg/kg)

- < 3
- 3 - 10
- 10 - 30
- 30 - 100
- 100 - 300
- > 300

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- McCormick and Baxter Remediation Cap area – no data available

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
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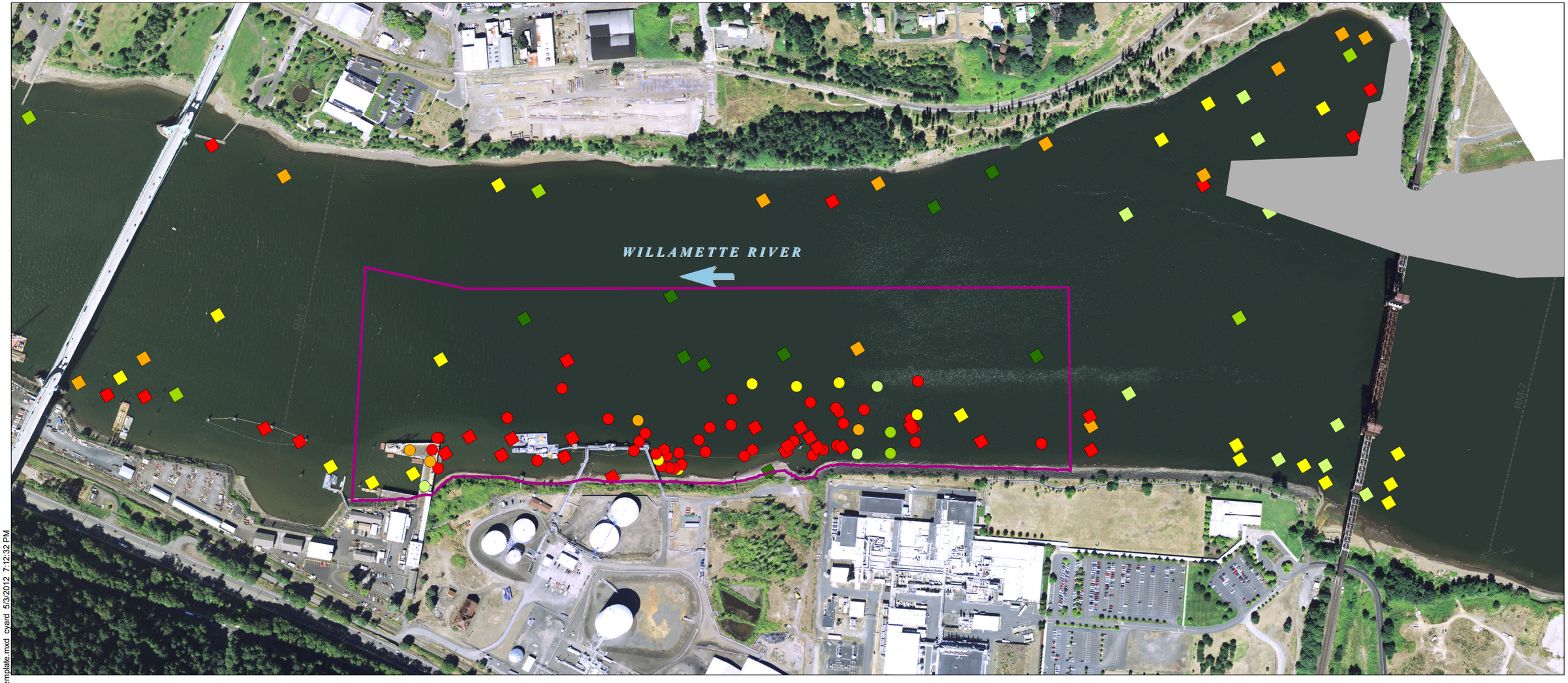
ANCHOR QEA

Figure 3-7
Surface Sediment Naphthalene Data
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Portland Harbor Model Data Set

Naphthalene Concentration (µg/kg)

- < 3
- 3 - 10
- 10 - 30
- 30 - 100
- 100 - 300
- > 300

Gasco Supplemental Data Set

Naphthalene Concentration (µg/kg)

- < 3
- 3 - 10
- 10 - 30
- 30 - 100
- 100 - 300
- > 300

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- McCormick and Baxter Remediation Cap area – no data available

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 250 500 750 1,000

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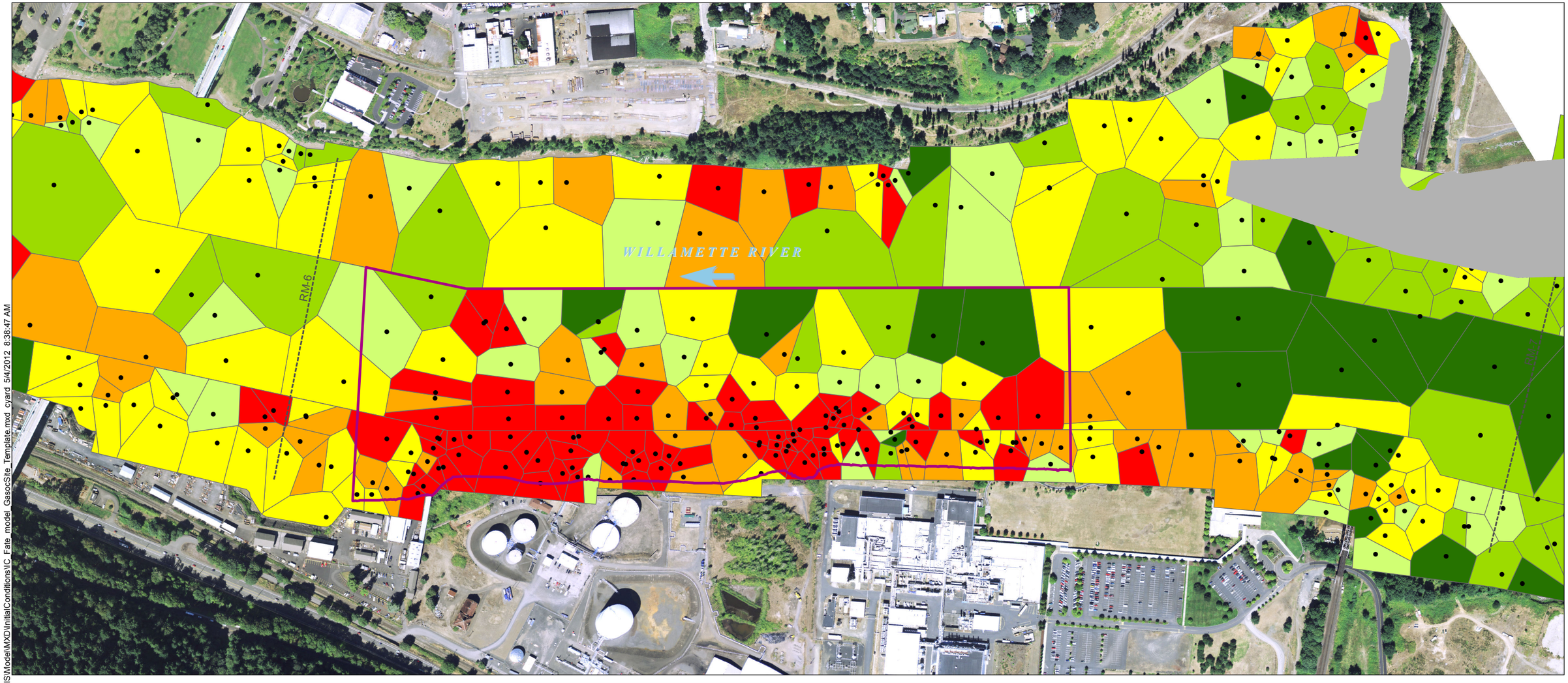
ANCHOR QEA

Figure 3-8
Subsurface Sediment Naphthalene Data
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



- Surface Sediment Location

Naphthalene Concentration (µg/kg)

- < 3
- 3 - 10
- 10 - 30
- 30 - 100
- 100 - 300
- > 300

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

McCormick and Baxter Remediation Cap area – no data available

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 250 500 750 1,000

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Figure 3-9
Surface Sediment Naphthalene Thiessen Polygons
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

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- Subsurface Sediment Location

Naphthalene Concentration (µg/kg)

- < 3
- 3 - 10
- 10 - 30
- 30 - 100
- 100 - 300
- > 300

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

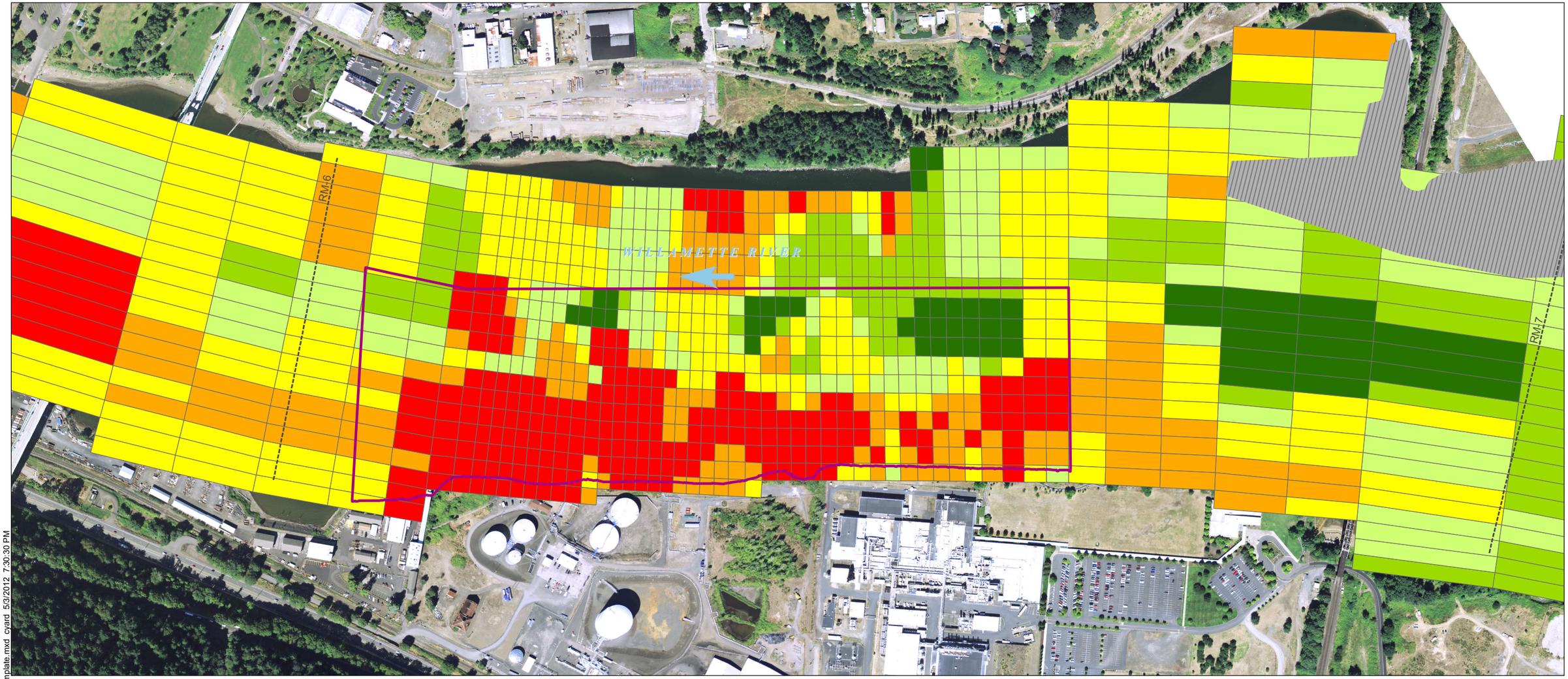
McCormick and Baxter Remediation Cap area – no data available

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 250 500 750 1,000

ANCHOR QEA

Figure 3-10
Subsurface Sediment Naphthalene Thiessen Polygons
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Naphthalene Concentration (µg/kg)

- No data
- < 3
- 3 - 10
- 10 - 30
- 30 - 100
- 100 - 300
- > 300

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

McCormick and Baxter Remediation Cap area – no data available

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 250 500 750 1,000

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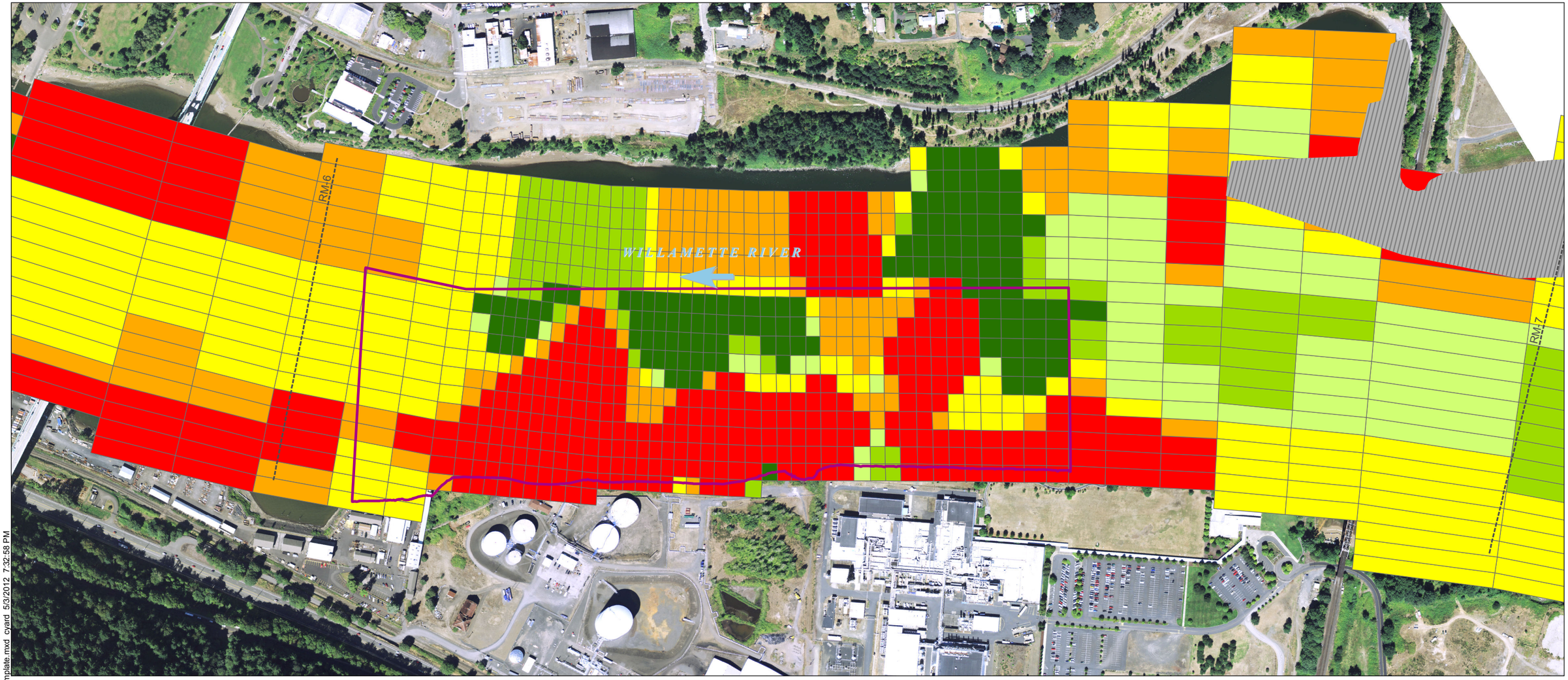
Figure 3-11
Surface Sediment Initial Condition (Naphthalene)
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Naphthalene Concentration (µg/kg)

- No data
- < 3
- 3 - 10
- 10 -30
- 30 - 100
- 100 - 300
- > 300

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- McCormick and Baxter Remediation Cap area – no data available

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 250 500 750 1,000

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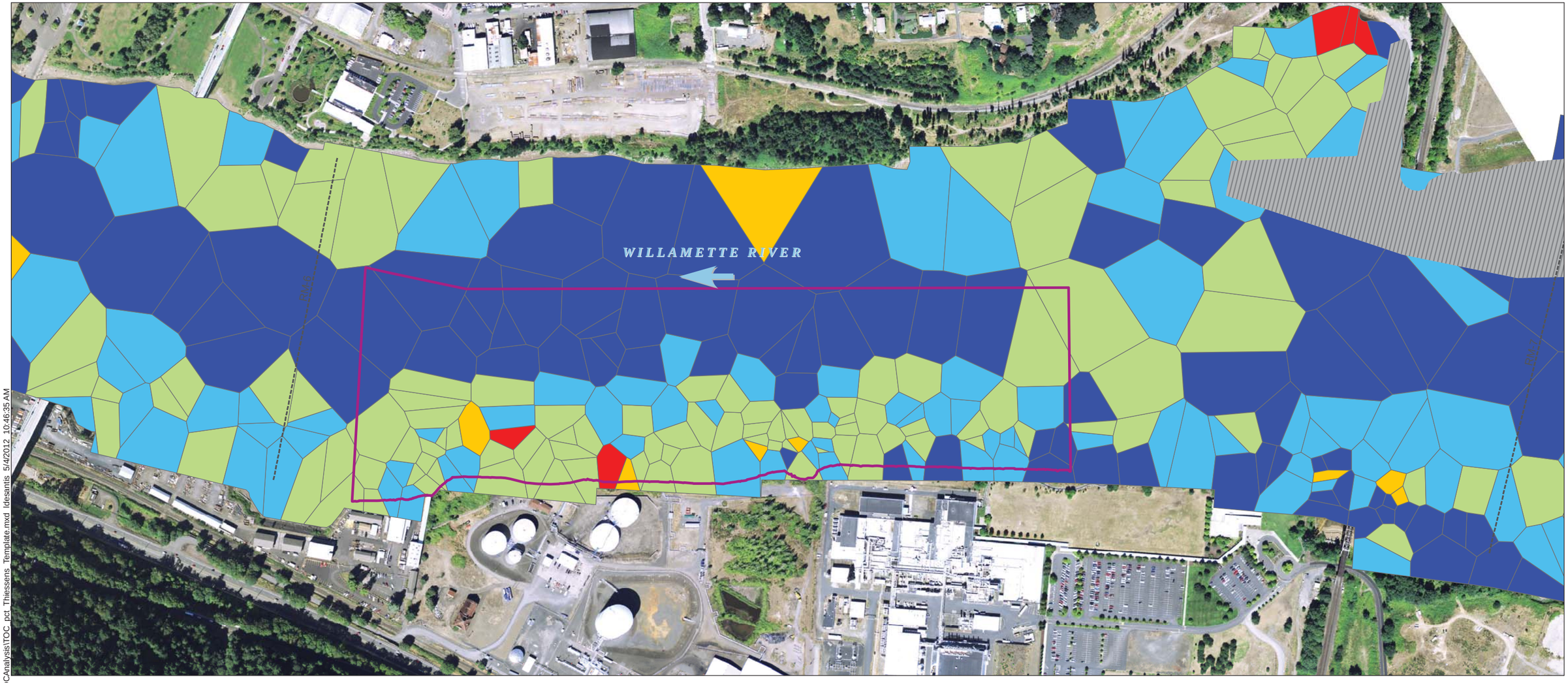
ANCHOR QEA

Figure 3-12
Subsurface Sediment Initial Condition (Naphthalene)
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Surface Sediment Total Organic Carbon (%)

- < 1.0
- 1.0 - 2.0
- 2.0 - 5.0
- 5.0 - 10.0
- > 10.0

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- McCormick and Baxter Remediation Cap area – no data available

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 250 500 750 1,000

ANCHOR QEA

Figure 3-13
Surface Sediment Total Organic Carbon Thiessen Polygons
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

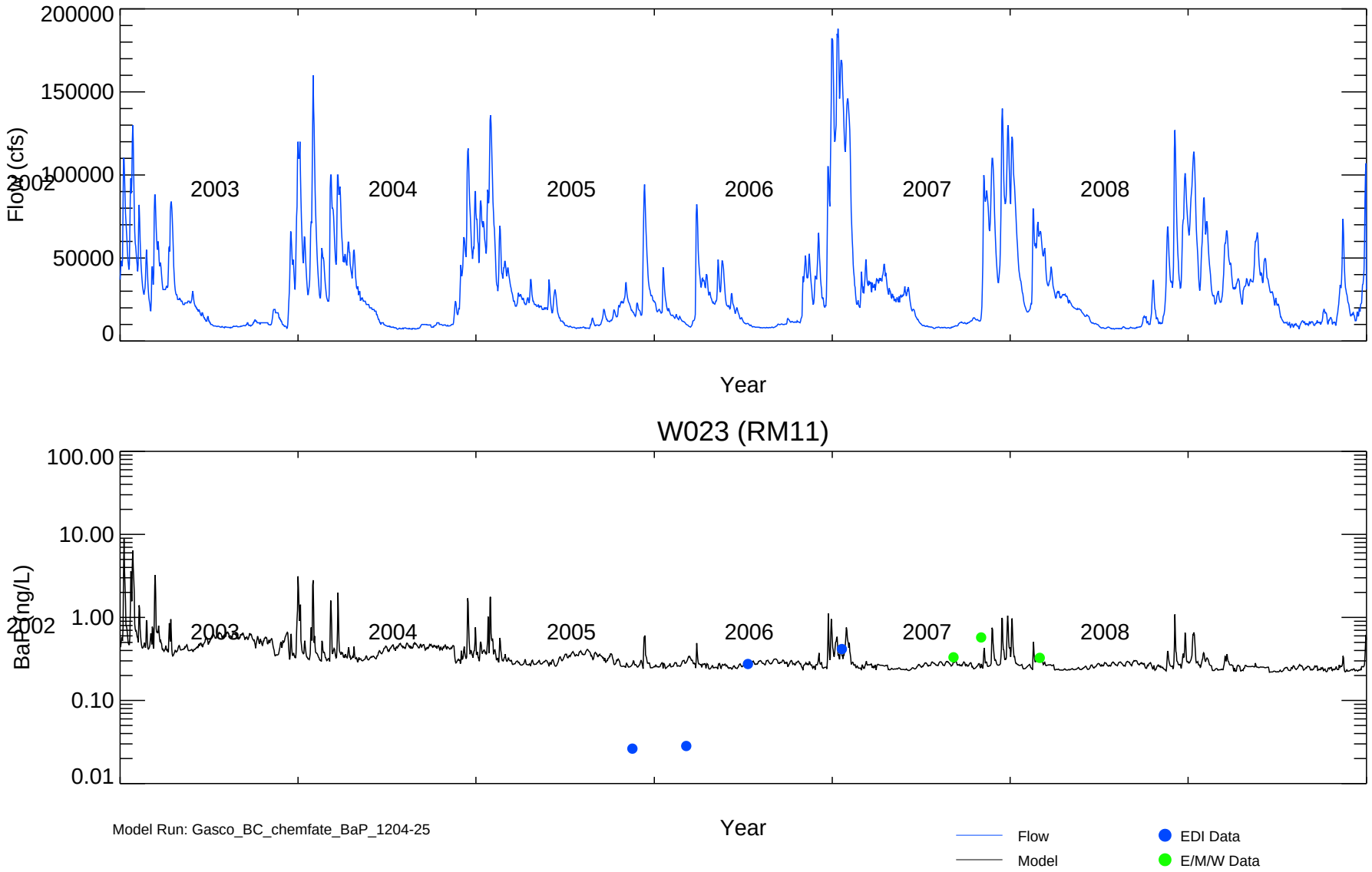


Figure 3-14a

Time Series of Model-Predicted Water Column BaP Concentrations and Data from 2002-2008

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols indicate non-detect values at the detection limit; Model results shown represent laterally averaged results.

MCS/LD - \\helios\D_Drive\Projects\NW_Natural\Gasco(000029-02)\model\EFDC\Post_process\Water_Column\plot\Gasco_WC_Temp_bat_FS.pro Fri May 04 12:29:40 2012

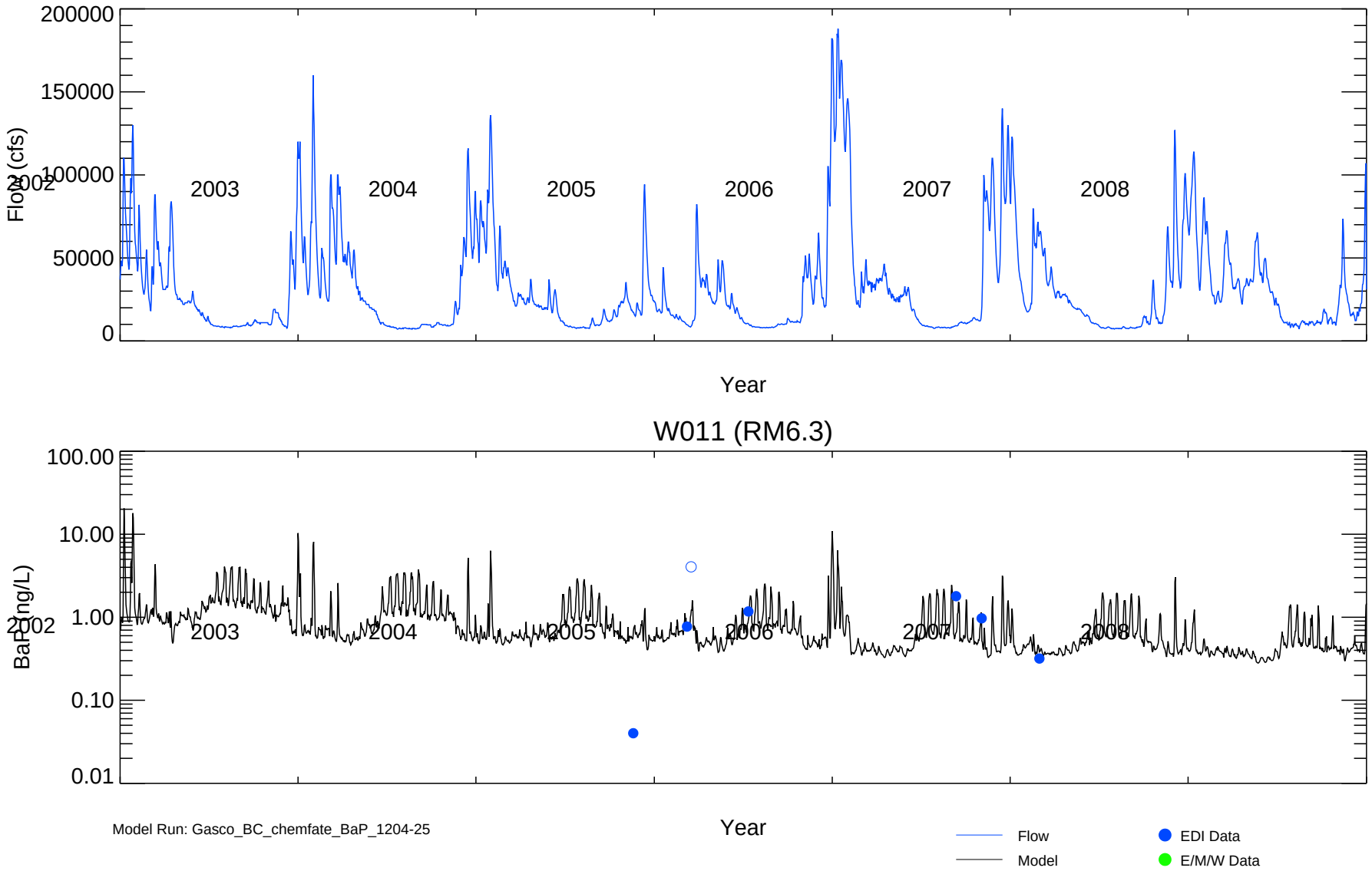


Figure 3-14b

Time Series of Model-Predicted Water Column BaP Concentrations and Data from 2002-2008

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols indicate non-detect values at the detection limit; Model results shown represent laterally averaged results.

MCS/LD - \\helios\D_Drive\Projects\NW_Natural\Gasco(000029-02)\model\EFDC\Post_process\Water_Column\plot\Gasco_WC_Temp_bat_FS.pro Fri May 04 12:29:41 2012

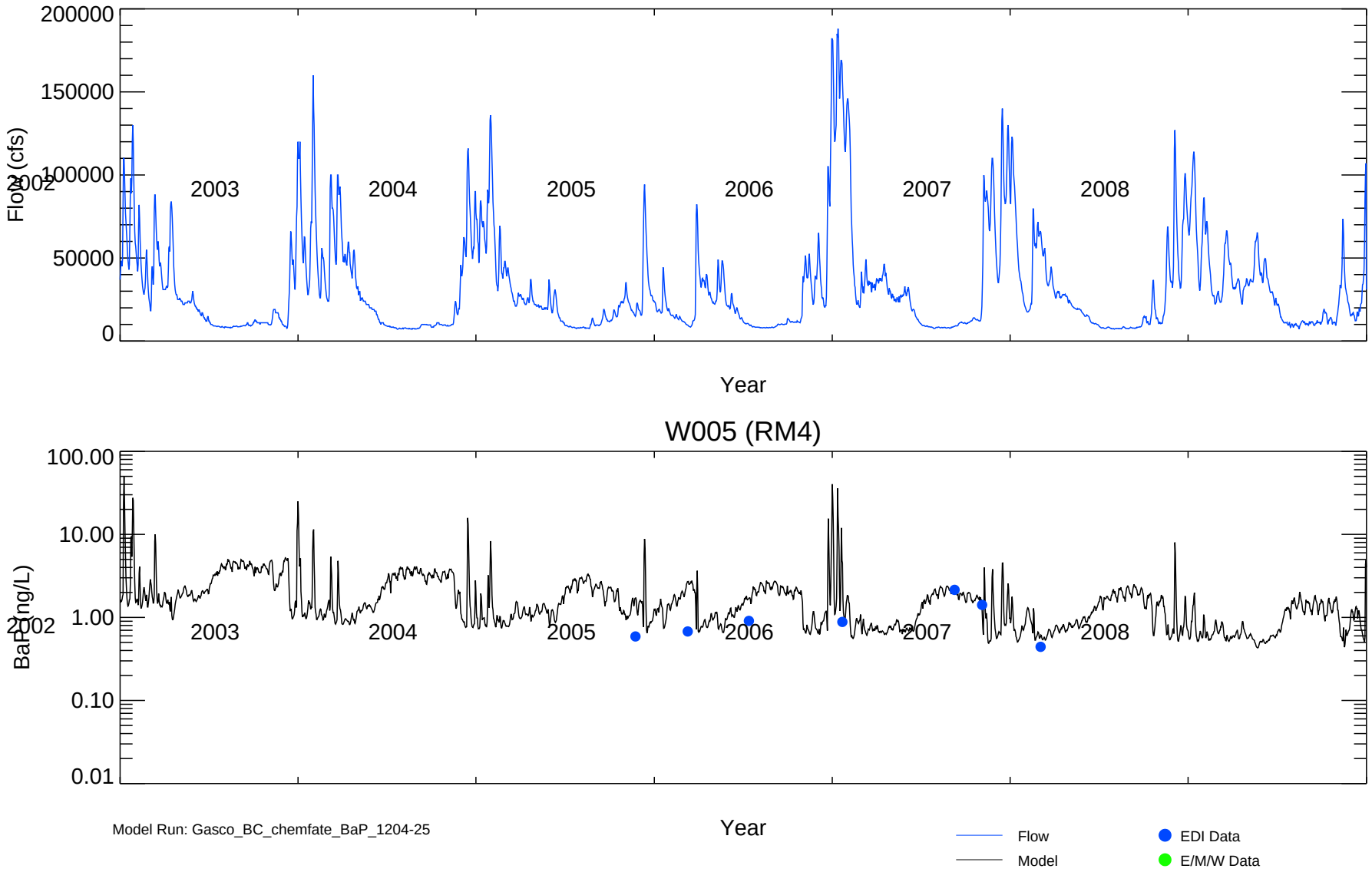


Figure 3-14c

Time Series of Model-Predicted Water Column BaP Concentrations and Data from 2002-2008

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols indicate non-detect values at the detection limit; Model results shown represent laterally averaged results.

MCS/LD - \\helios\D_Drive\Projects\NW_Natural\Gasco(000029-02)\model\EFDC\Post_process\Water_Column\plot\Gasco_WC_Temp_bat_FS.pro Fri May 04 12:29:41 2012

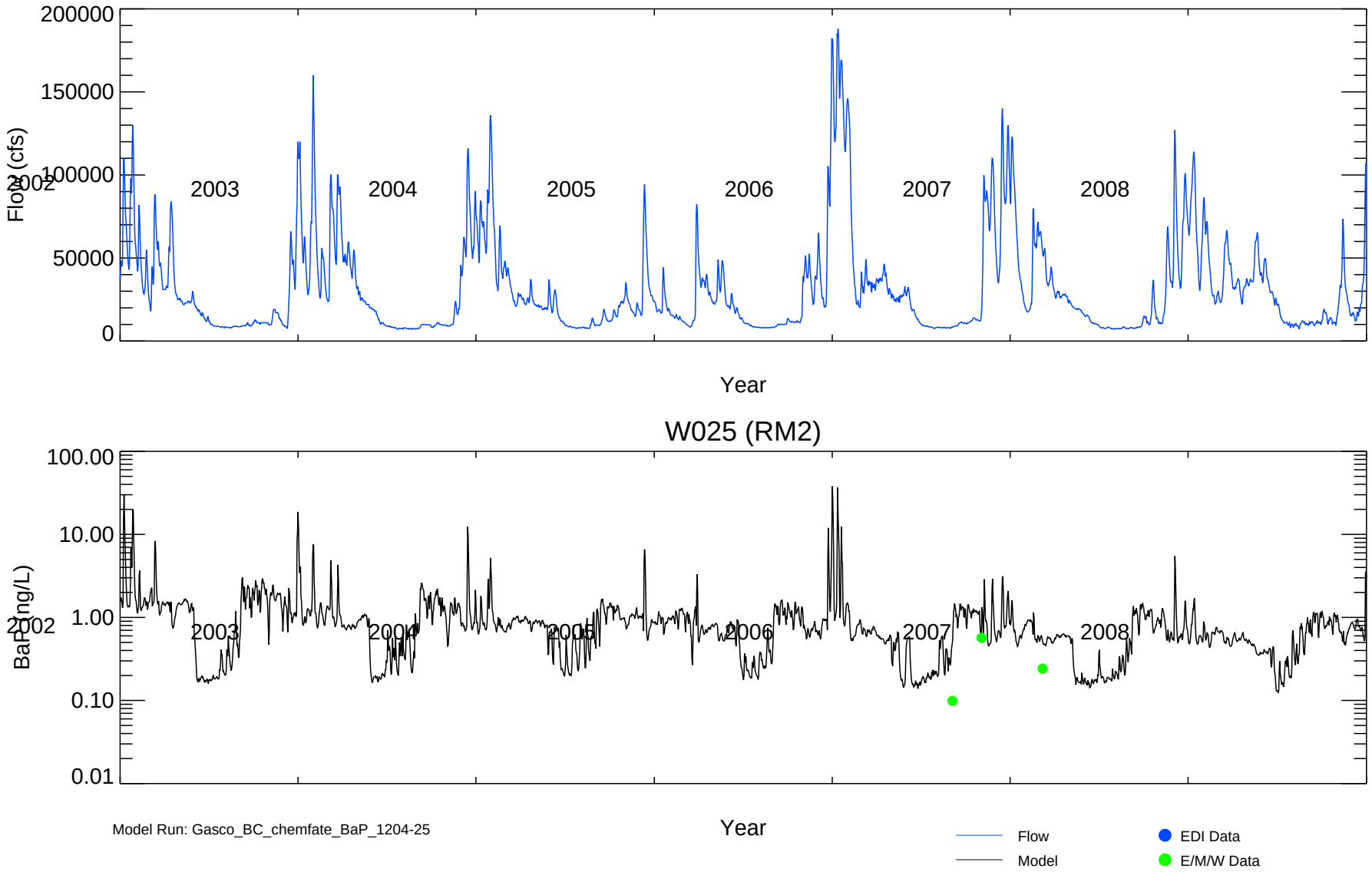


Figure 3-14d

Time Series of Model-Predicted Water Column BaP Concentrations and Data from 2002-2008

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols indicate non-detect values at the detection limit; Model results shown represent laterally averaged results.

MCS/LD - \\helios\D_Drive\Projects\NW_Natural\Gasco(000029-02)\model\EFDC\Post_process\Water_Column\plot\Gasco_WC_Temp_bat_FS.pro Fri May 04 12:29:41 2012

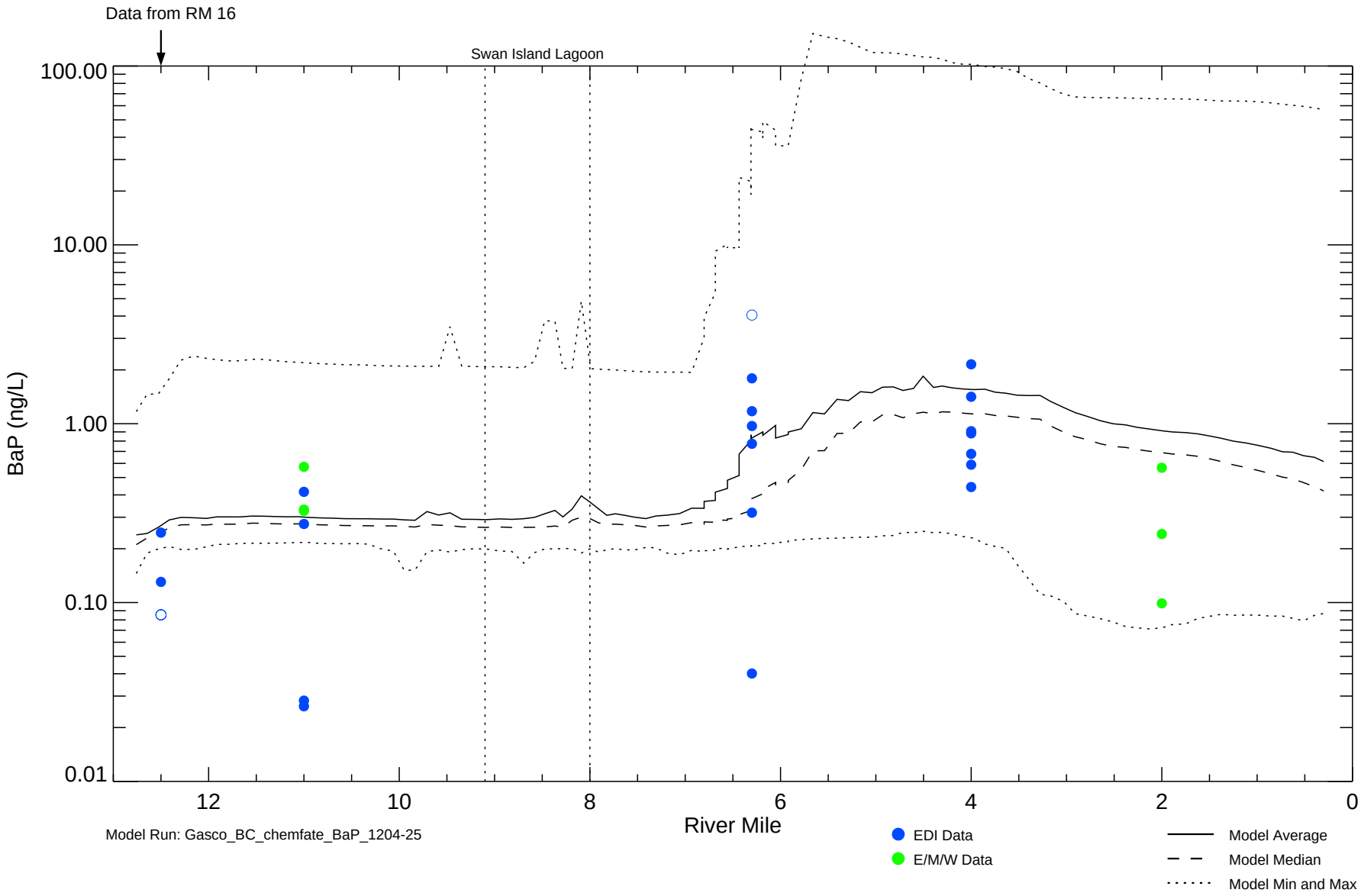


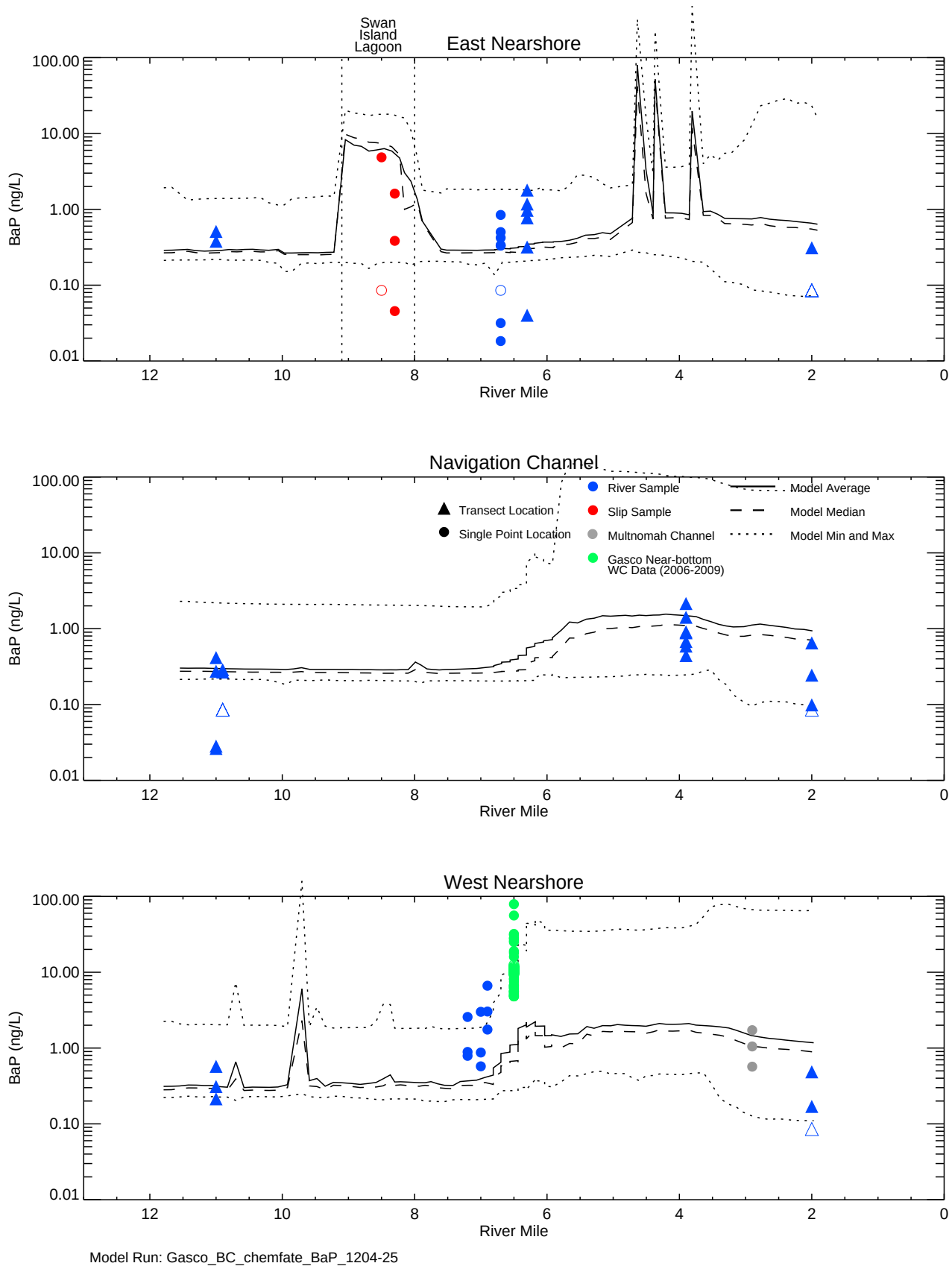
Figure 3-15

Spatial Profile of Model-Predicted Water Column BaP Concentrations and Data from 2004-2007

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols indicate non-detect values plotted at the detection limit; Model results shown represent lateral and time averages.

RRM/LD - \\helios\D_Drive\Projects\NW_Natural\Gasco(000029-02)\model\EFDC\Post_process\Water_Column\plot\Gasco_WC_Spat_bat_FS.pro Fri May 04 12:26:33 2012



Model Run: Gasco_BC_chemfate_BaP_1204-25

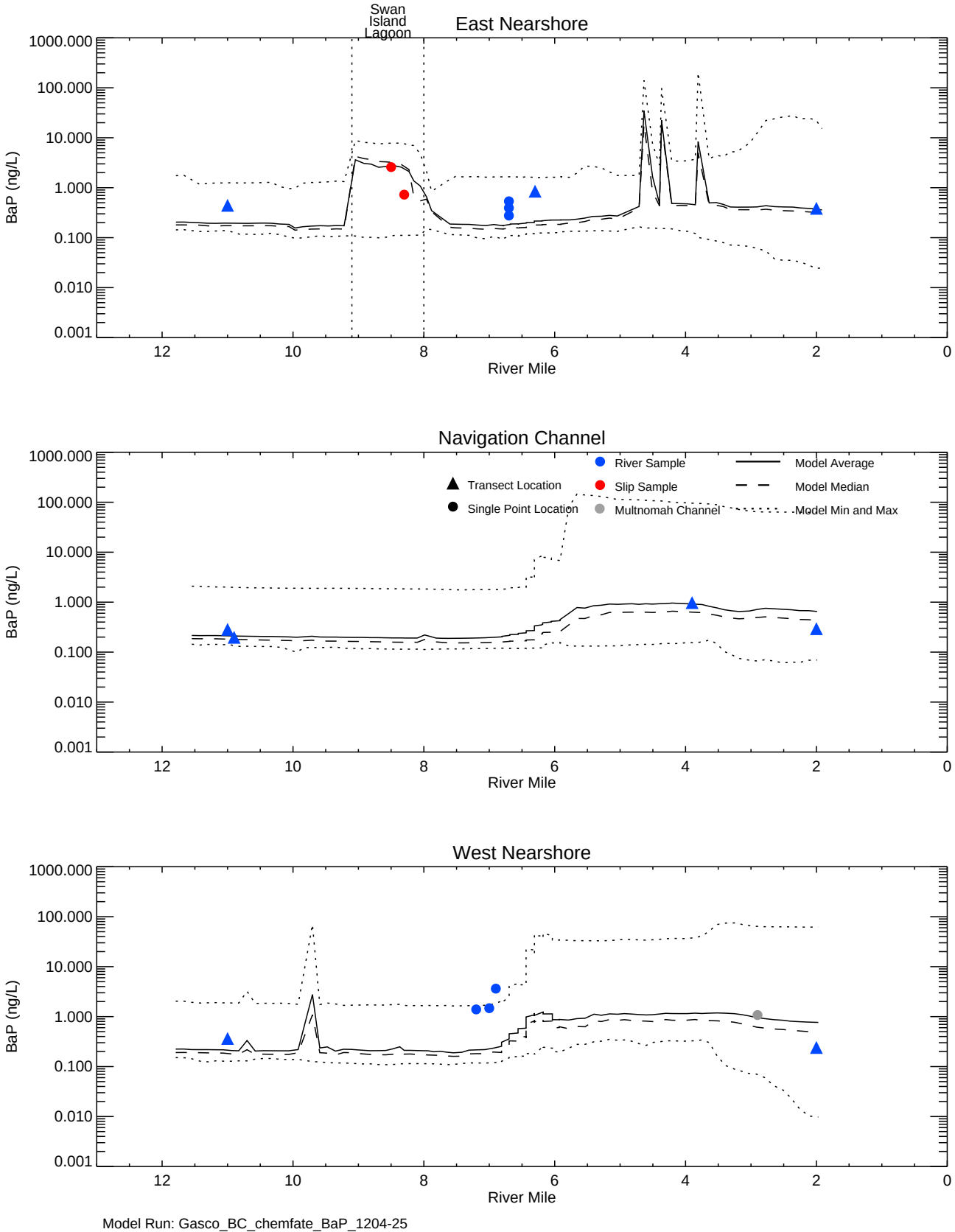
Figure 3-16

Spatial Profile (Separated Laterally) of Model-Predicted Water Column BaP Concentrations and Data from 2004-2007

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Non-detect values (open symbols) are set to the detection limit.

ANCHOR QEA



Model Run: Gasco_BC_chemfate_BaP_1204-25

Figure 3-17

Spatial Profile (Separated Laterally) of Model-Predicted Water Column Particulate Phase BaP Concentrations and Data from 2004-2007

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Non-detect values (open symbols) are set to the detection limit.

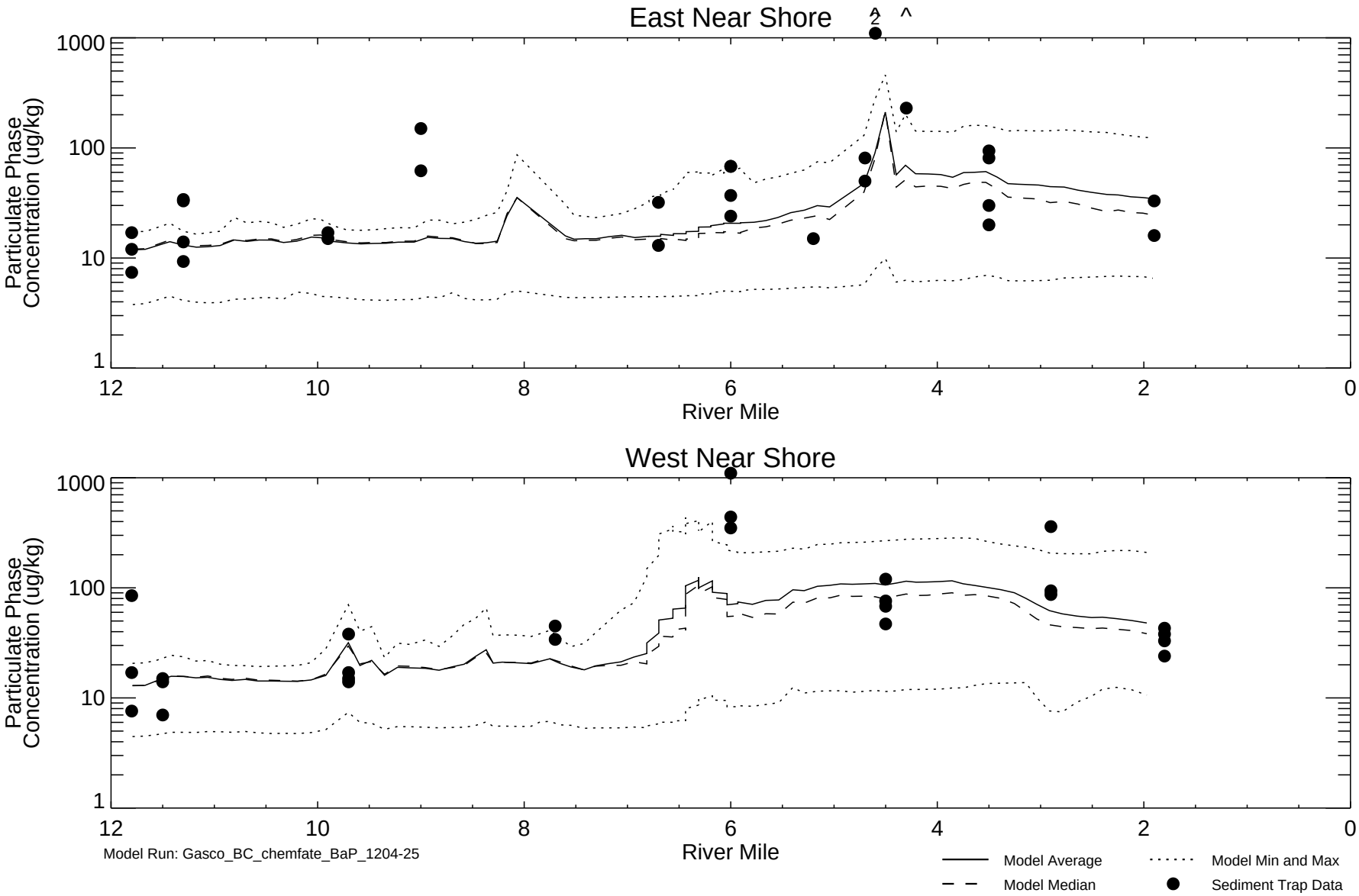


Figure 3-18

Spatial Profiles of Model-predicted Water Column Particulate Phase BaP Concentrations and Sediment Trap Data from 2007
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detects plotted at the method detection limit.

LD/MCS - \\helios\D_Drive\Projects\NW_Natural\Gasco(000029-02)\model\EFDC\Post_process\Water_Column\plot\Gasco_SedTrap_Spat_bat_FS.pro Fri May 04 11:53:19 2012

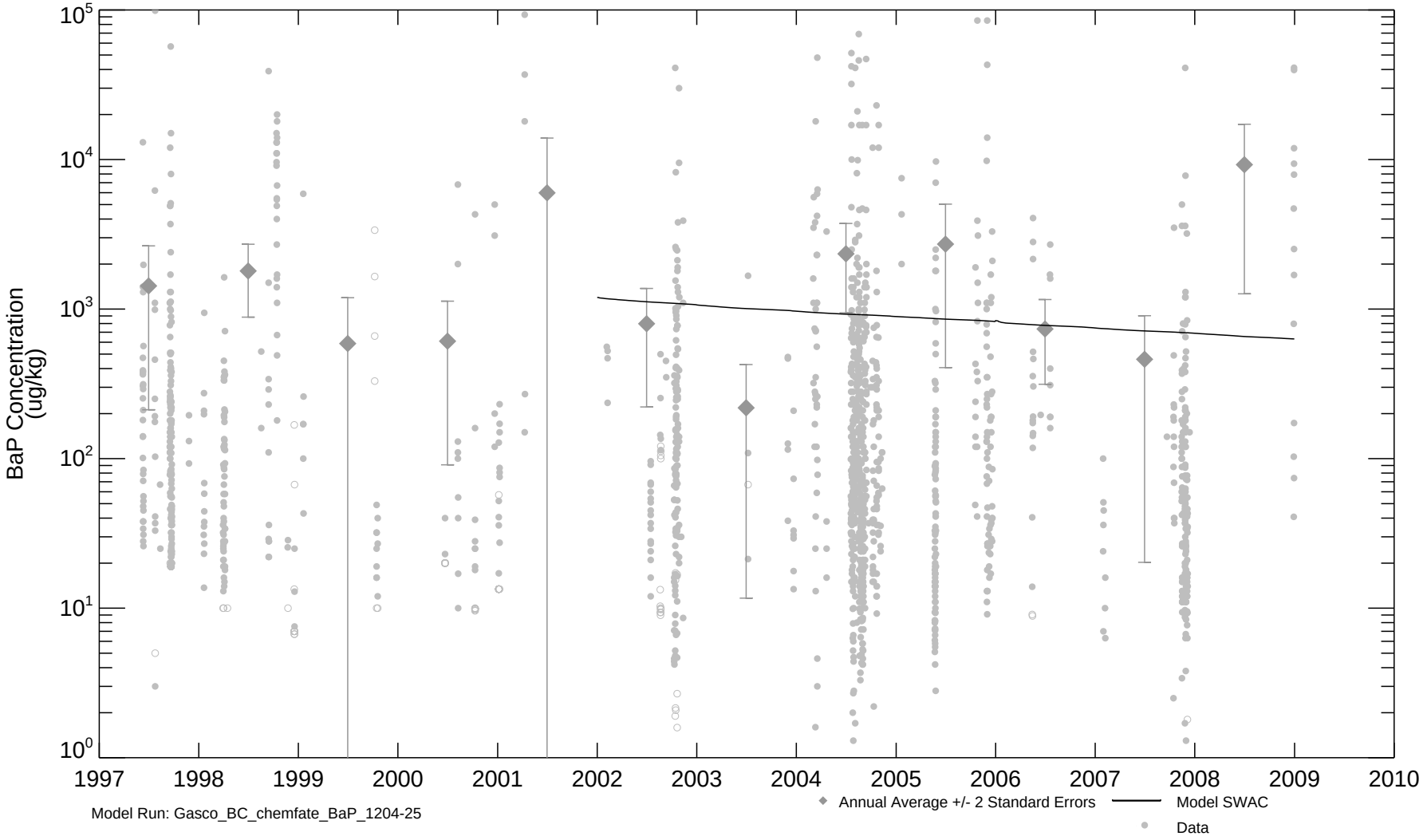


Figure 3-19

Time Series of Surface Sediment (Top 1-ft) BaP Concentrations Site-wide

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

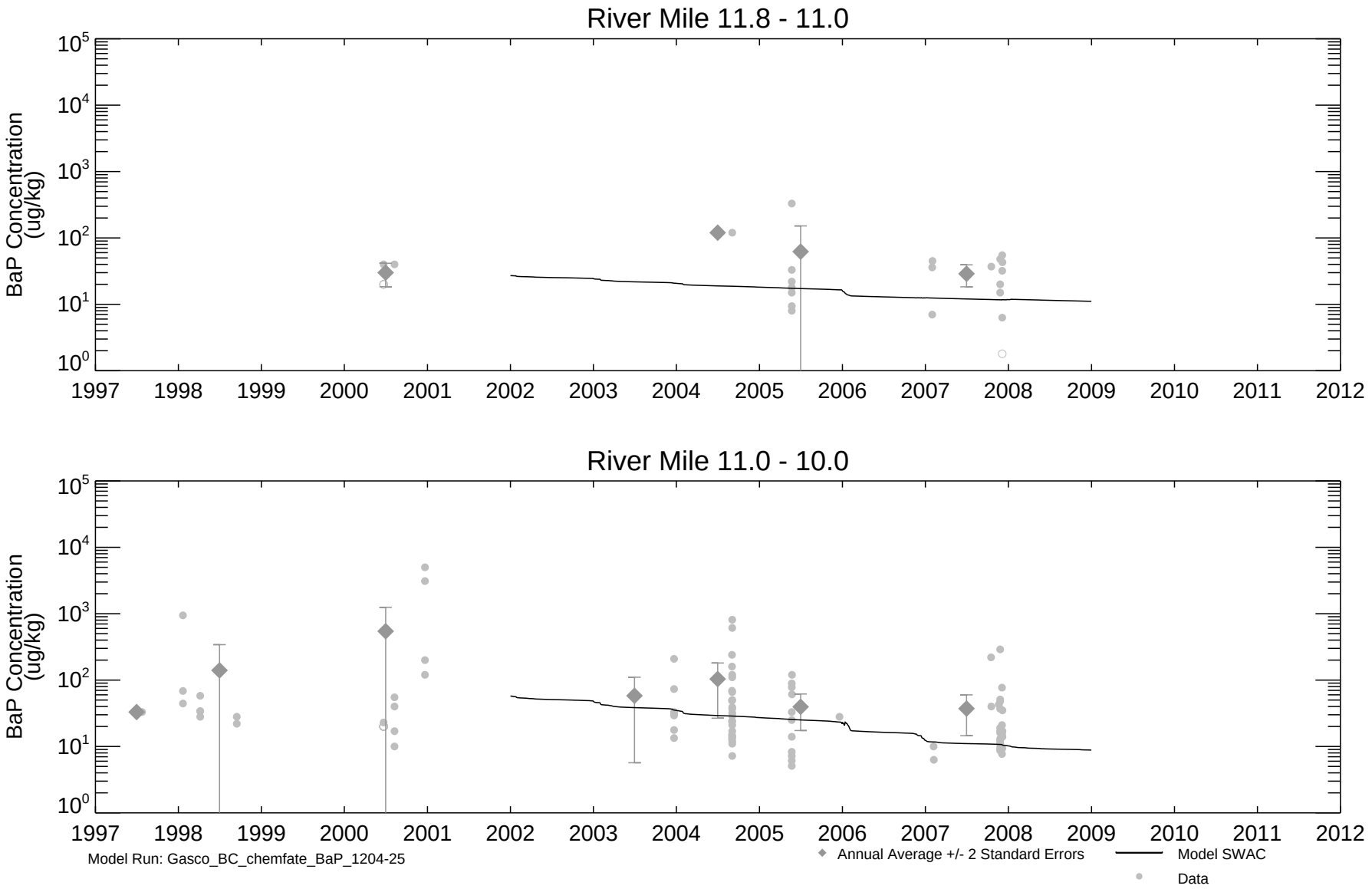


Figure 3-20a

Time Series of Surface Sediment (Top 1-ft) BaP Concentrations by River Mile

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

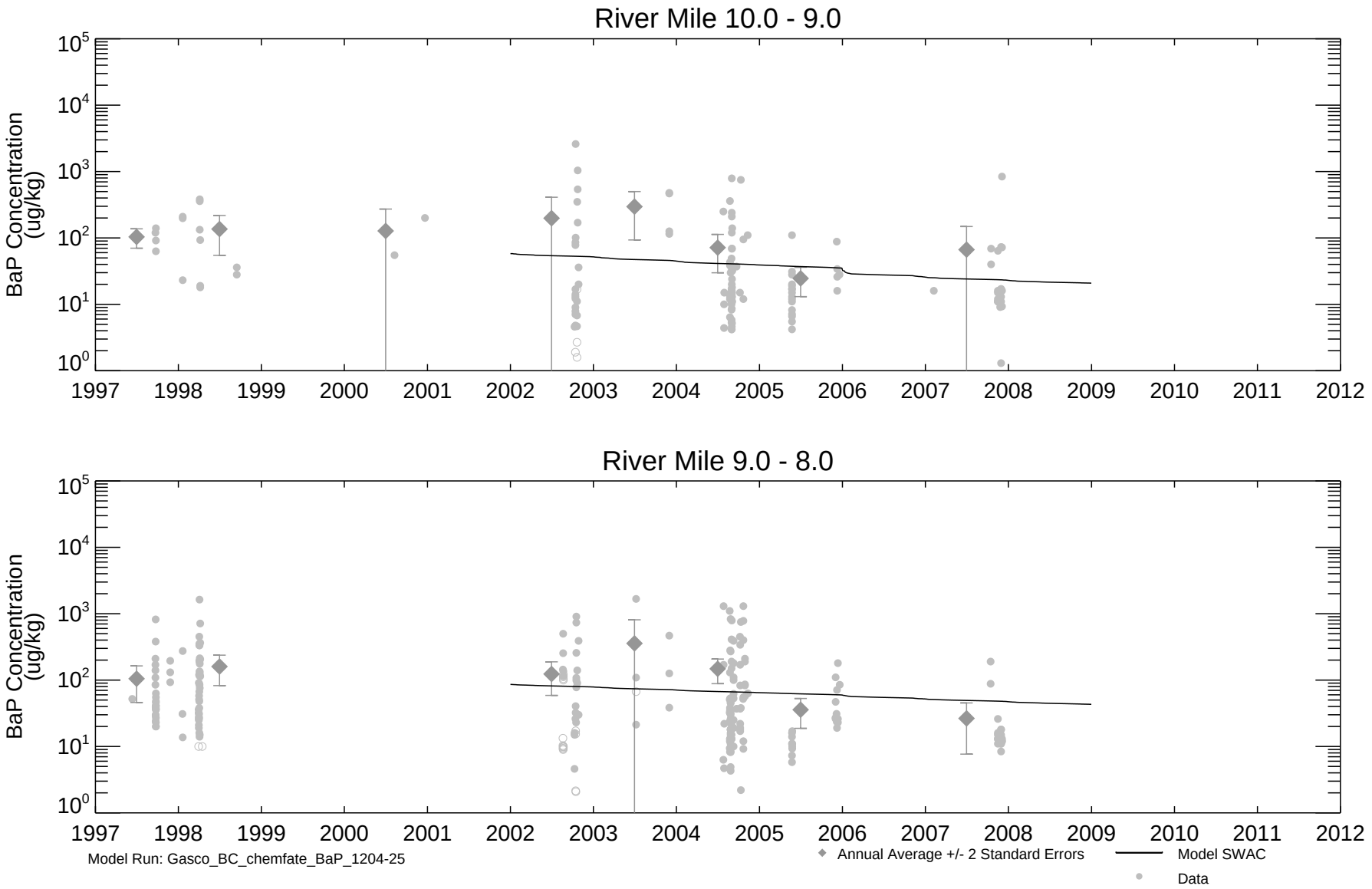


Figure 3-20b

Time Series of Surface Sediment (Top 1-ft) BaP Concentrations by River Mile

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

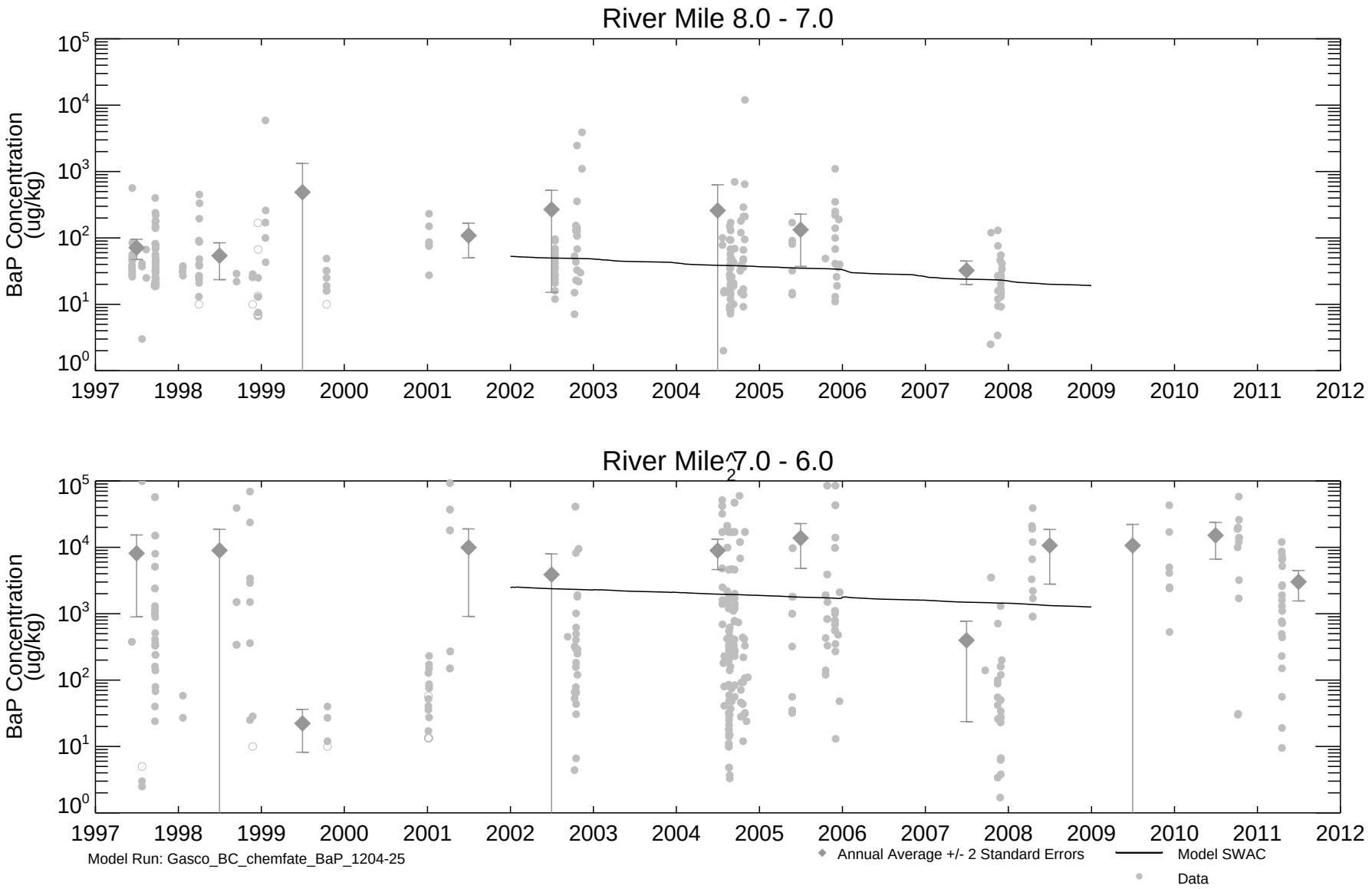


Figure 3-20c

Time Series of Surface Sediment (Top 1-ft) BaP Concentrations by River Mile

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

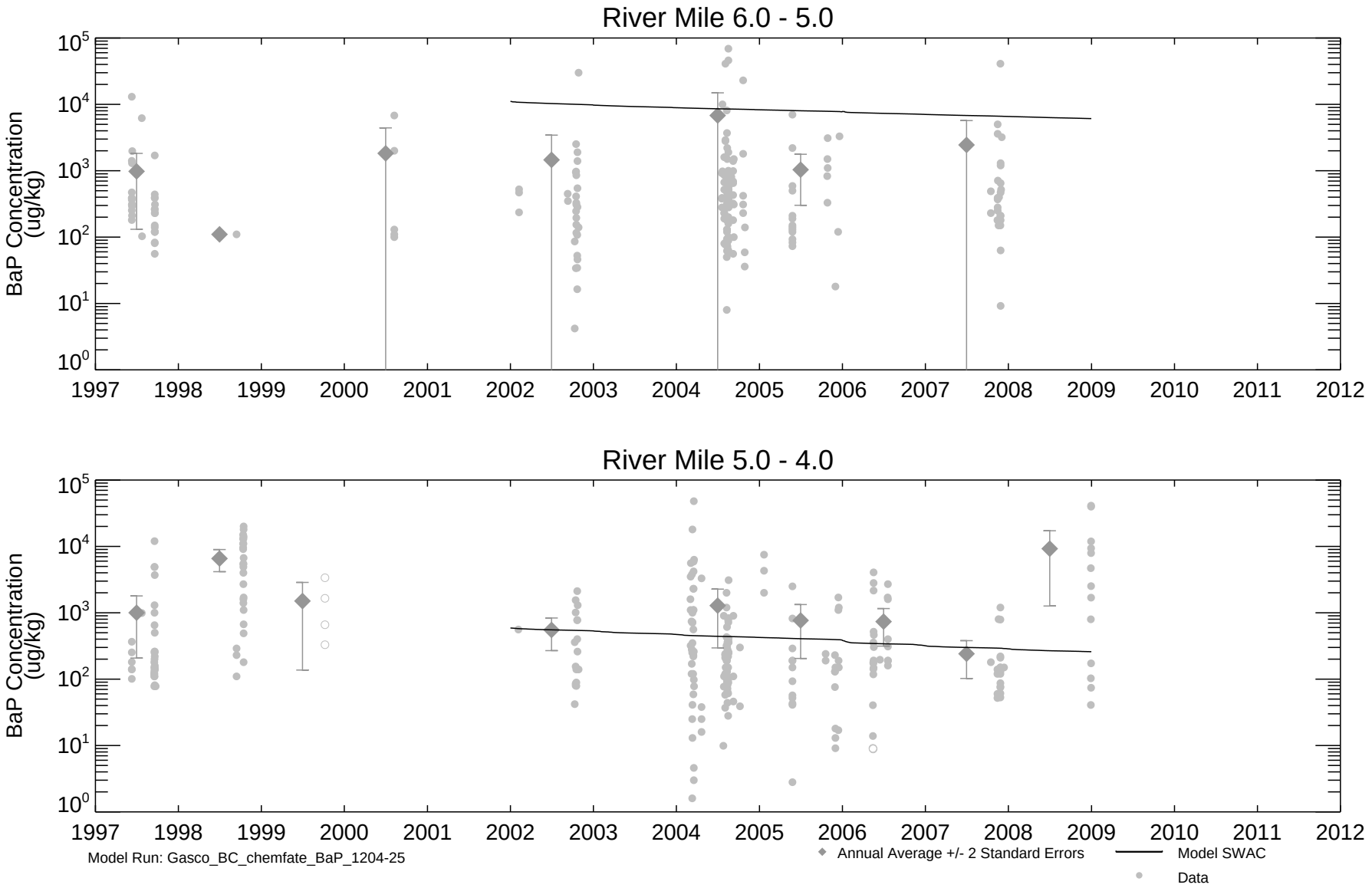


Figure 3-20d

Time Series of Surface Sediment (Top 1-ft) BaP Concentrations by River Mile

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

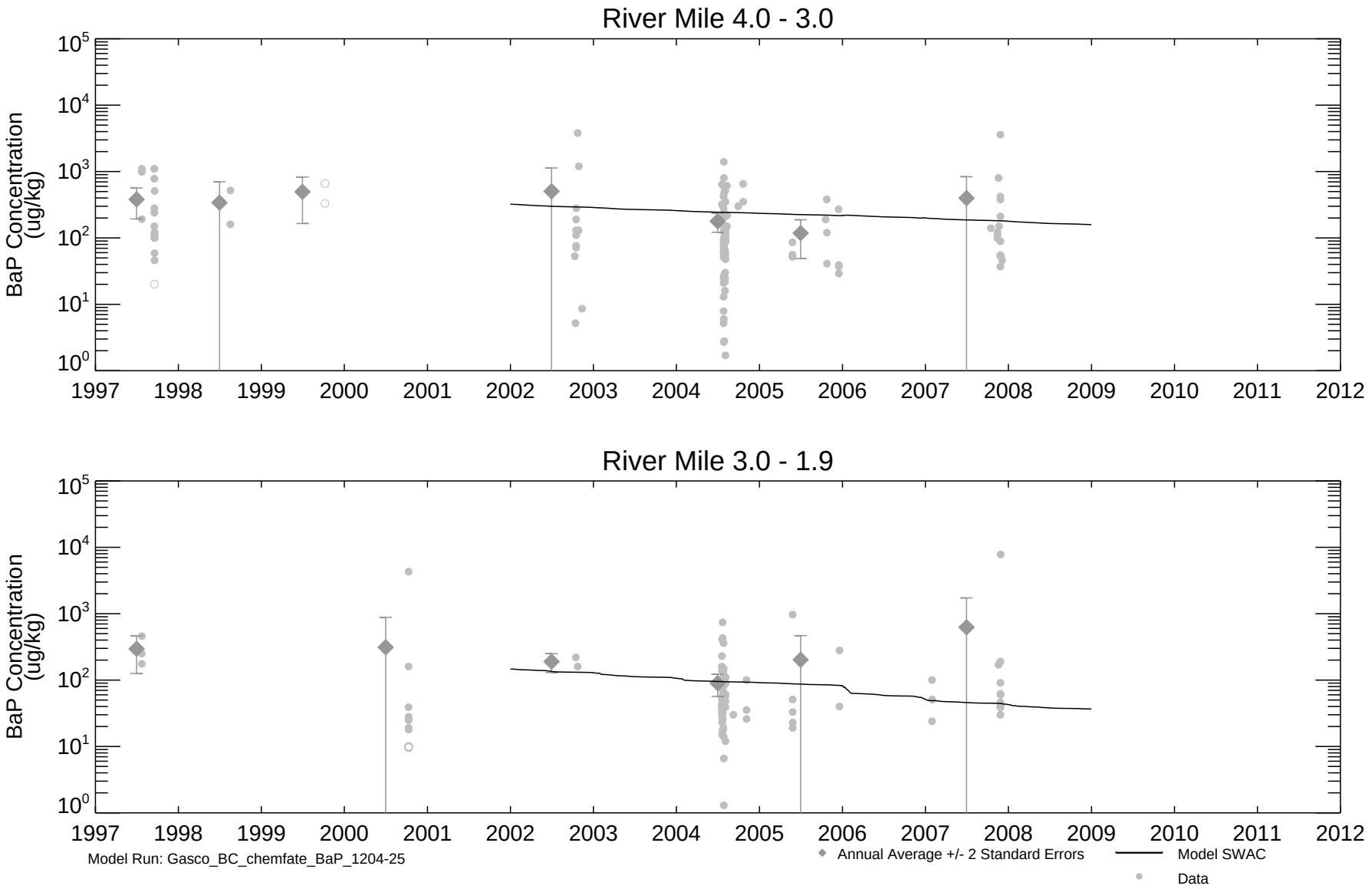


Figure 3-20e

Time Series of Surface Sediment (Top 1-ft) BaP Concentrations by River Mile

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

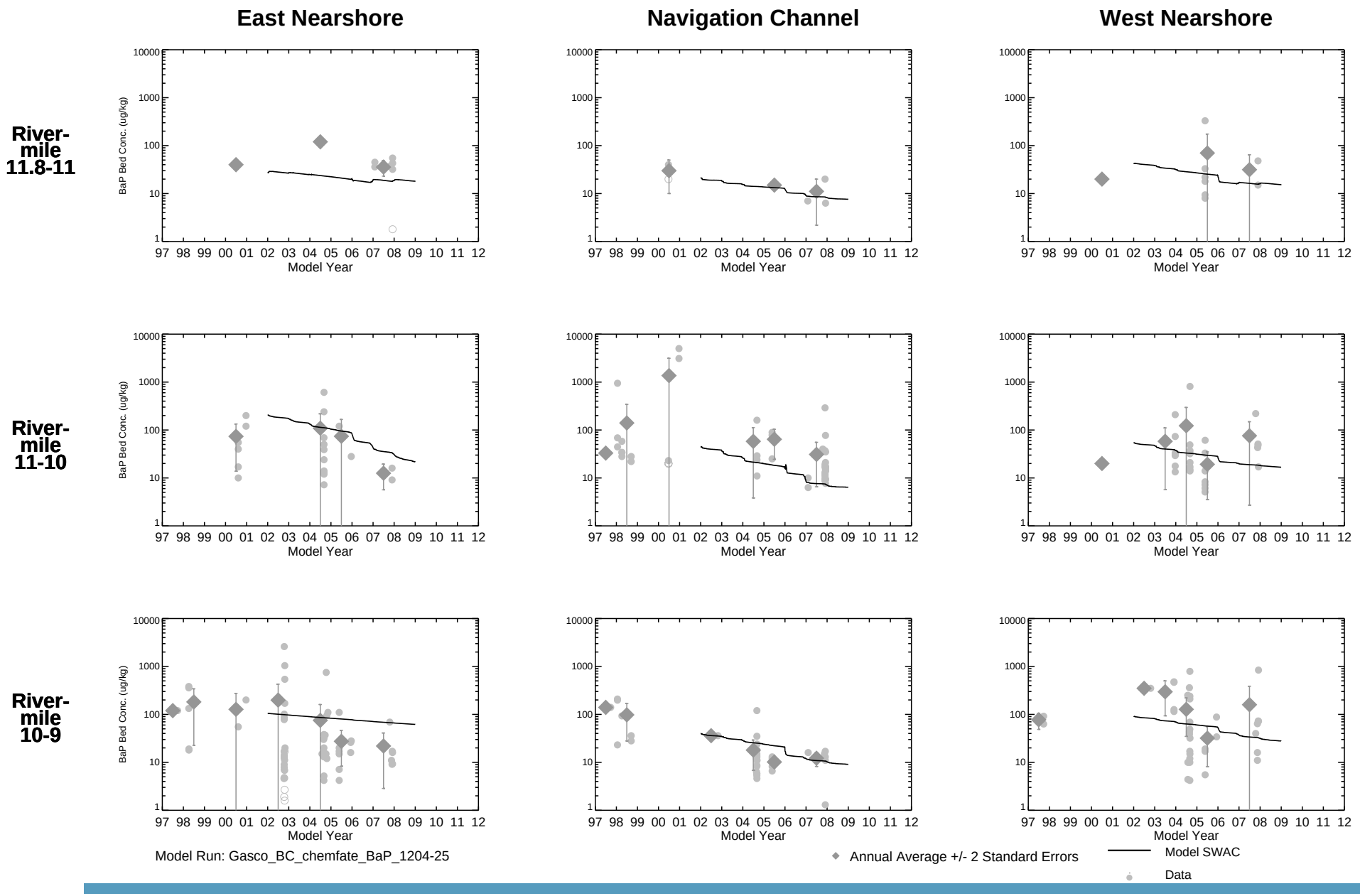


Figure 3-21a

Time Series of Surface Sediment (Top 1-ft) BaP Concentrations by River Mile EMW

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

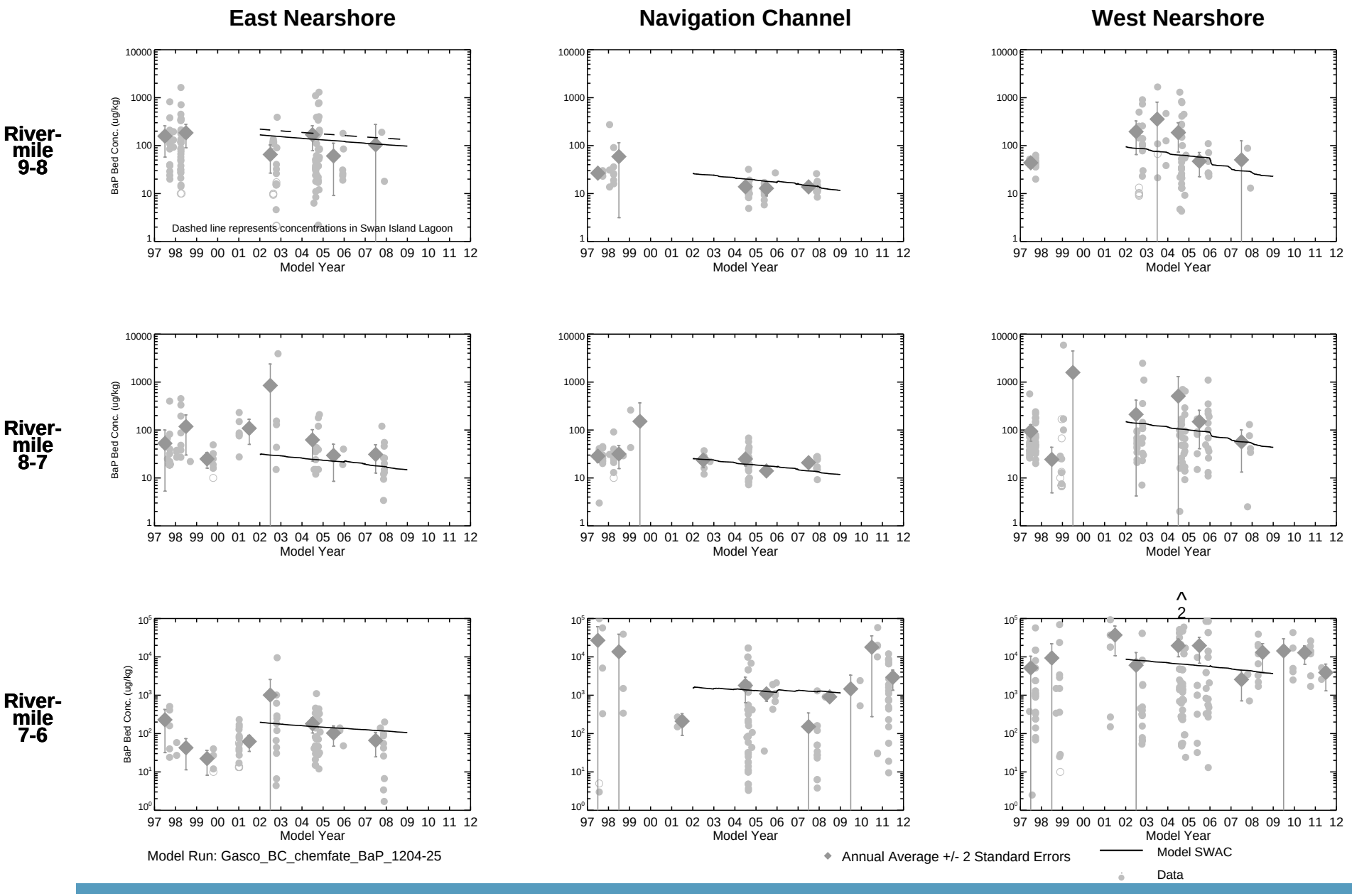


Figure 3-21b

Time Series of Surface Sediment (Top 1-ft) BaP Concentrations by River Mile EMW

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

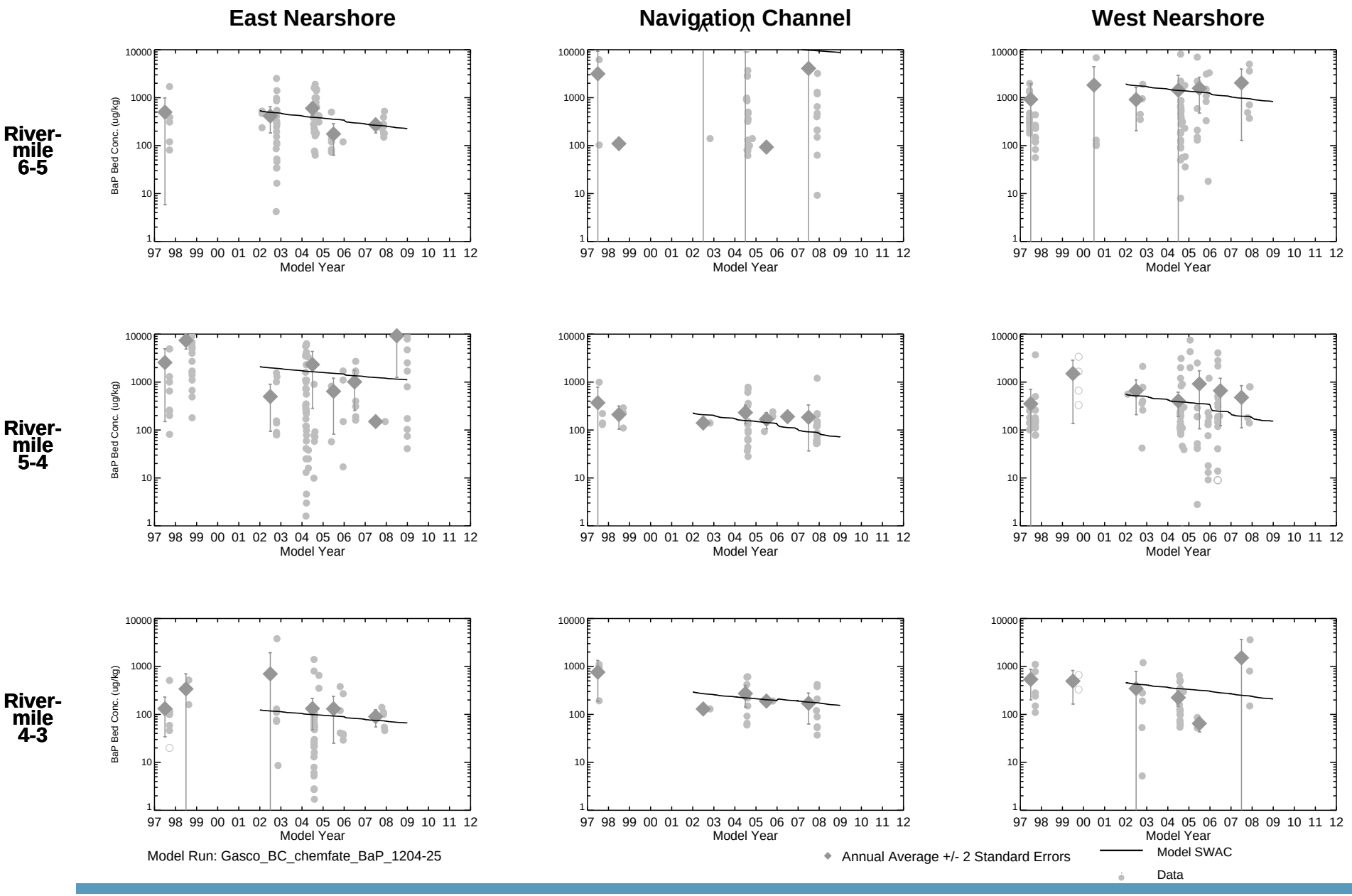


Figure 3-21c

Time Series of Surface Sediment (Top 1-ft) BaP Concentrations by River Mile EMW

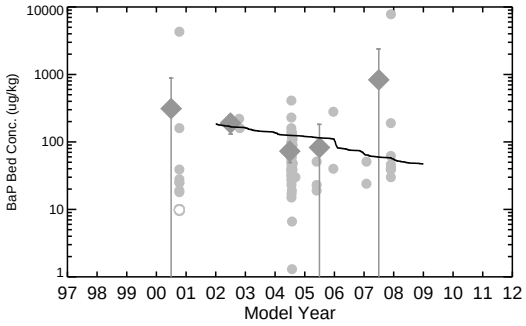
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

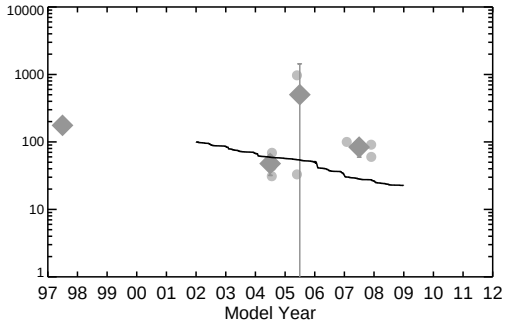
ANCHOR QEA

River-mile 3-1.9

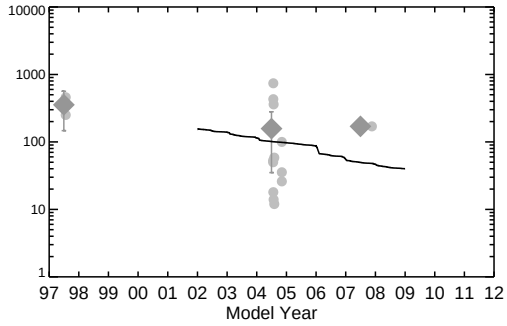
East Nearshore



Navigation Channel



West Nearshore



Model Run: Gasco_BC_chemfate_BaP_1204-25

◆ Annual Average +/- 2 Standard Errors

Model SWAC

Data

Figure 3-21d

Time Series of Surface Sediment (Top 1-ft) BaP Concentrations by River Mile EMW

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

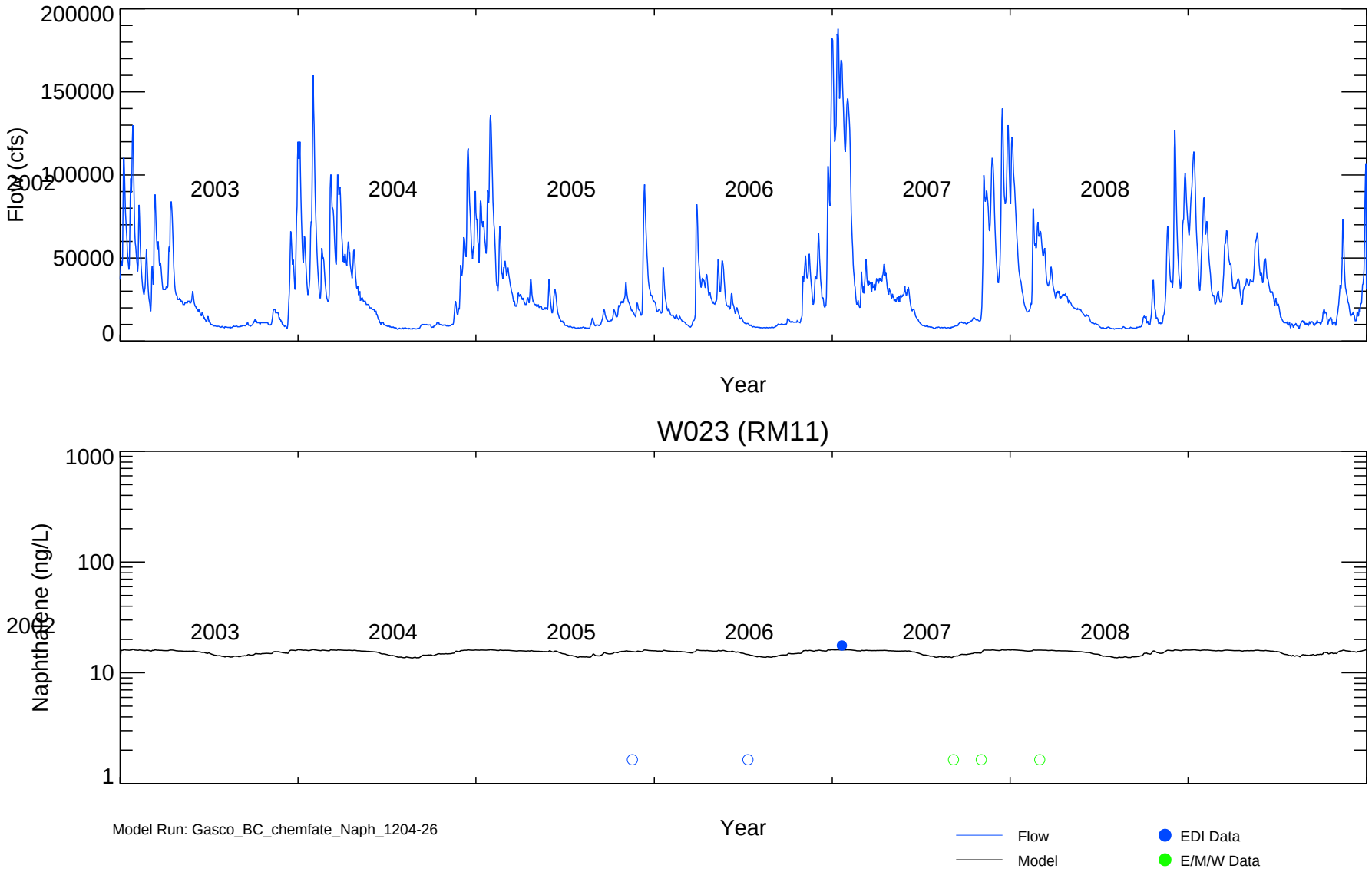


Figure 3-22a

Time Series of Model-Predicted Water Column Naphthalene Concentrations and Data from 2002-2008

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols indicate non-detect values at the detection limit; Model results shown represent laterally averaged results.

MCS/LD - \\helios\D_Drive\Projects\NW_Natural\Gasco(000029-02)\model\EFDC\Post_process\Water_Column\plot\Gasco_WC_Temp_bat_FS.pro Fri May 04 12:29:59 2012

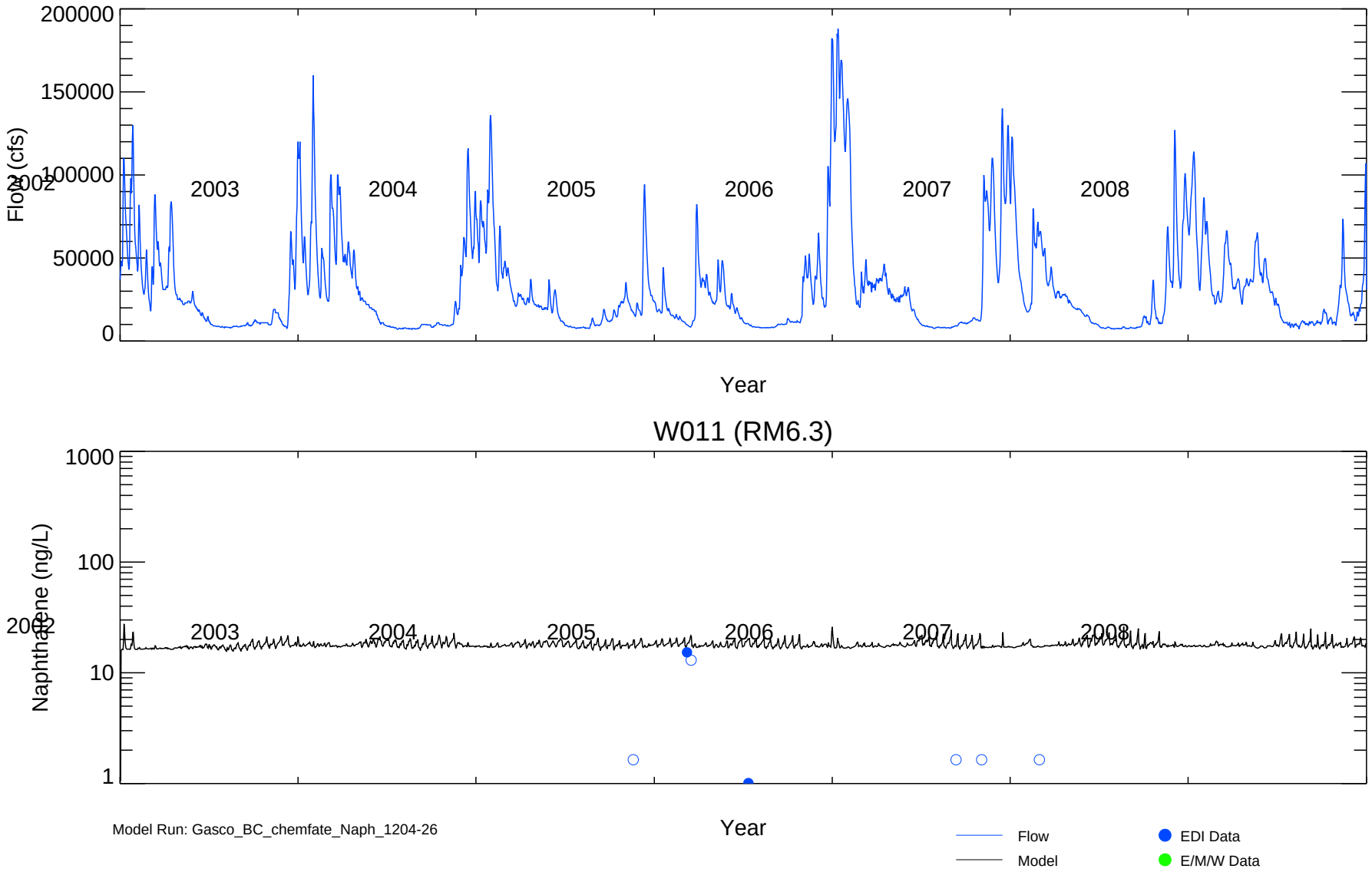


Figure 3-22b

Time Series of Model-Predicted Water Column Naphthalene Concentrations and Data from 2002-2008

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols indicate non-detect values at the detection limit; Model results shown represent laterally averaged results.

MCS/LD - \\helios\D_Drive\Projects\NW_Natural\Gasco(000029-02)\model\EFDC\Post_process\Water_Column\plot\Gasco_WC_Temp_bat_FS.pro Fri May 04 12:29:59 2012

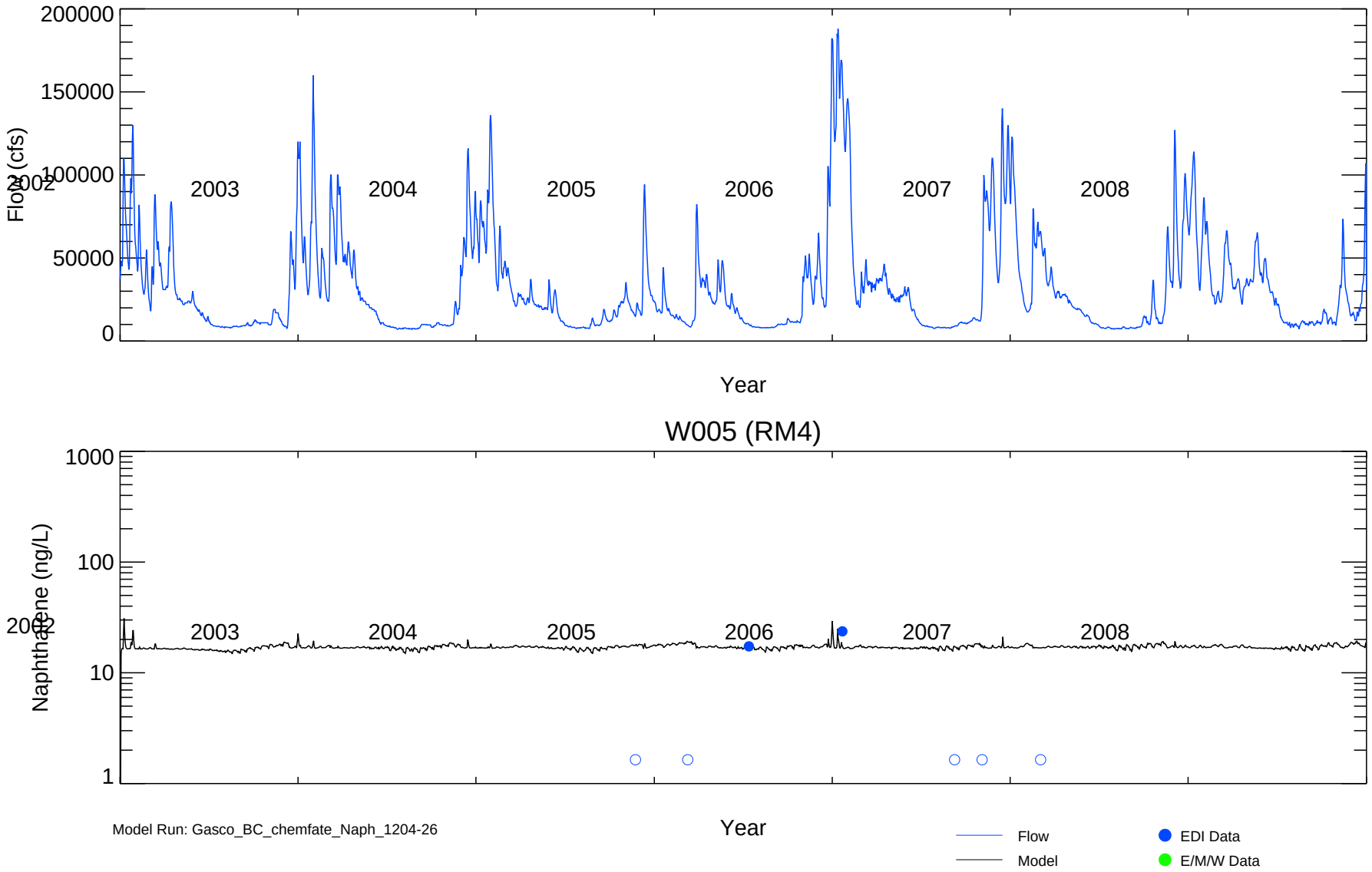


Figure 3-22c

Time Series of Model-Predicted Water Column Naphthalene Concentrations and Data from 2002-2008

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols indicate non-detect values at the detection limit; Model results shown represent laterally averaged results.

MCS/LD - \\helios\D_Drive\Projects\NW_Natural\Gasco(000029-02)\model\EFDC\Post_process\Water_Column\plot\Gasco_WC_Temp_bat_FS.pro Fri May 04 12:30:00 2012

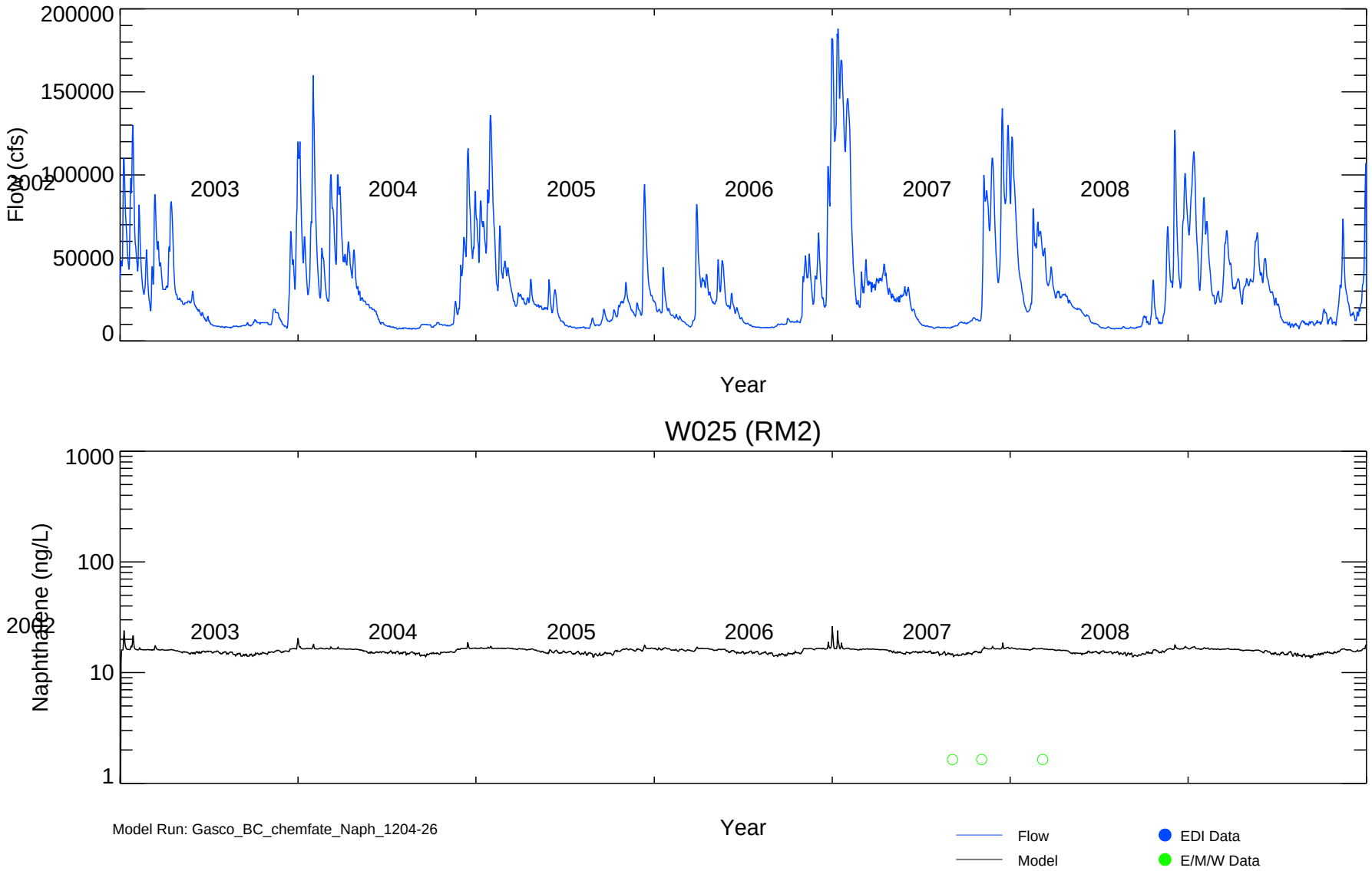


Figure 3-22d

Time Series of Model-Predicted Water Column Naphthalene Concentrations and Data from 2002-2008

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols indicate non-detect values at the detection limit; Model results shown represent laterally averaged results.

MCS/LD - \\helios\D_Drive\Projects\NW_Natural\Gasco(000029-02)\model\EFDC\Post_process\Water_Column\plot\Gasco_WC_Temp_bat_FS.pro Fri May 04 12:30:00 2012

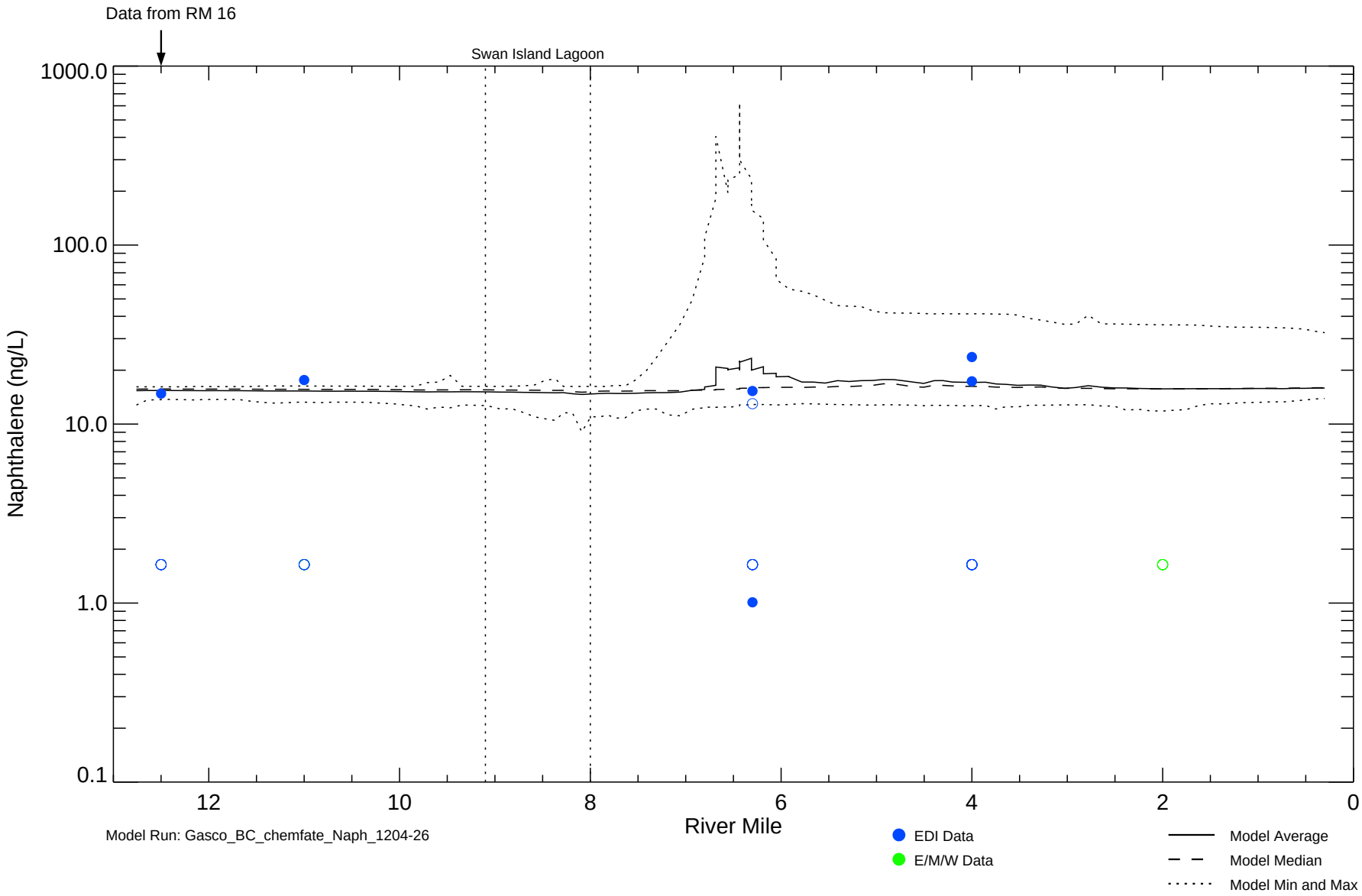


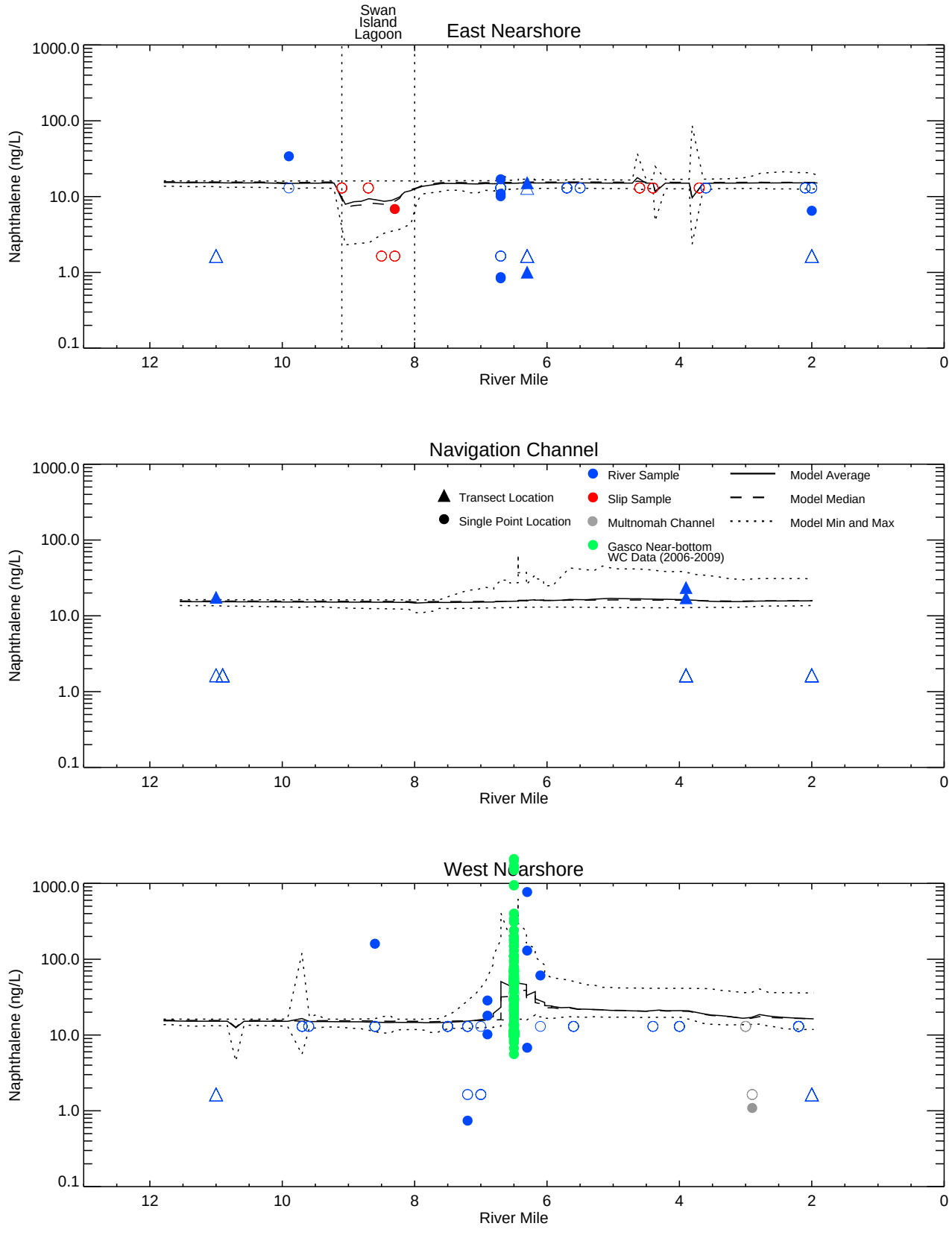
Figure 3-23

Spatial Profile of Model-Predicted Water Column Naphthalene Concentrations and Data from 2004-2007

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols indicate non-detect values plotted at the detection limit; Model results shown represent lateral and time averages.

RRM/LD - \\helios\D_Drive\Projects\NW_Natural\Gasco(000029-02)\model\EFDC\Post_process\Water_Column\plot\Gasco_WC_Spat_bat_FS.pro Fri May 04 12:26:46 2012



Model Run: Gasco_BC_chemfate_Naph_1204-26

Figure 3-24

Spatial Profile (Separated Laterally) of Model-Predicted Water Column Naphthalene Concentrations and Data from 2004-2007

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Non-detect values (open symbols) are set to the detection limit.

ANCHOR QEA

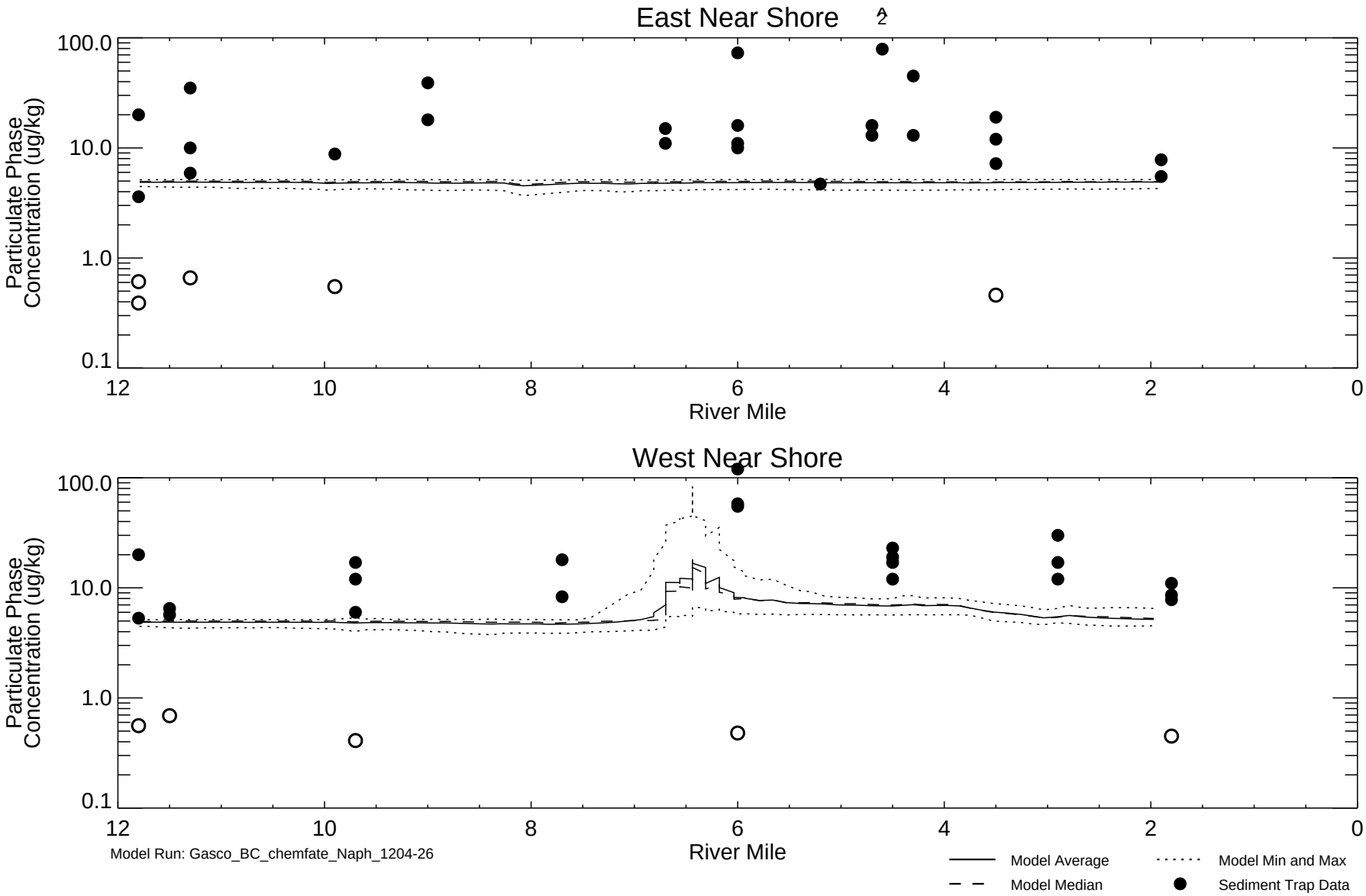


Figure 3-25

Spatial Profiles of Model-predicted Water Column Particulate Phase Naphthalene Concentrations and Sediment Trap Data from 2007

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detects plotted at the method detection limit.

LD/MCS - \\helios\D_Drive\Projects\NW_Natural\Gasco(000029-02)\model\EFDC\Post_process\Water_Column\plot\Gasco_SedTrap_Spat_bat_FS.pro Fri May 04 11:53:44 2012

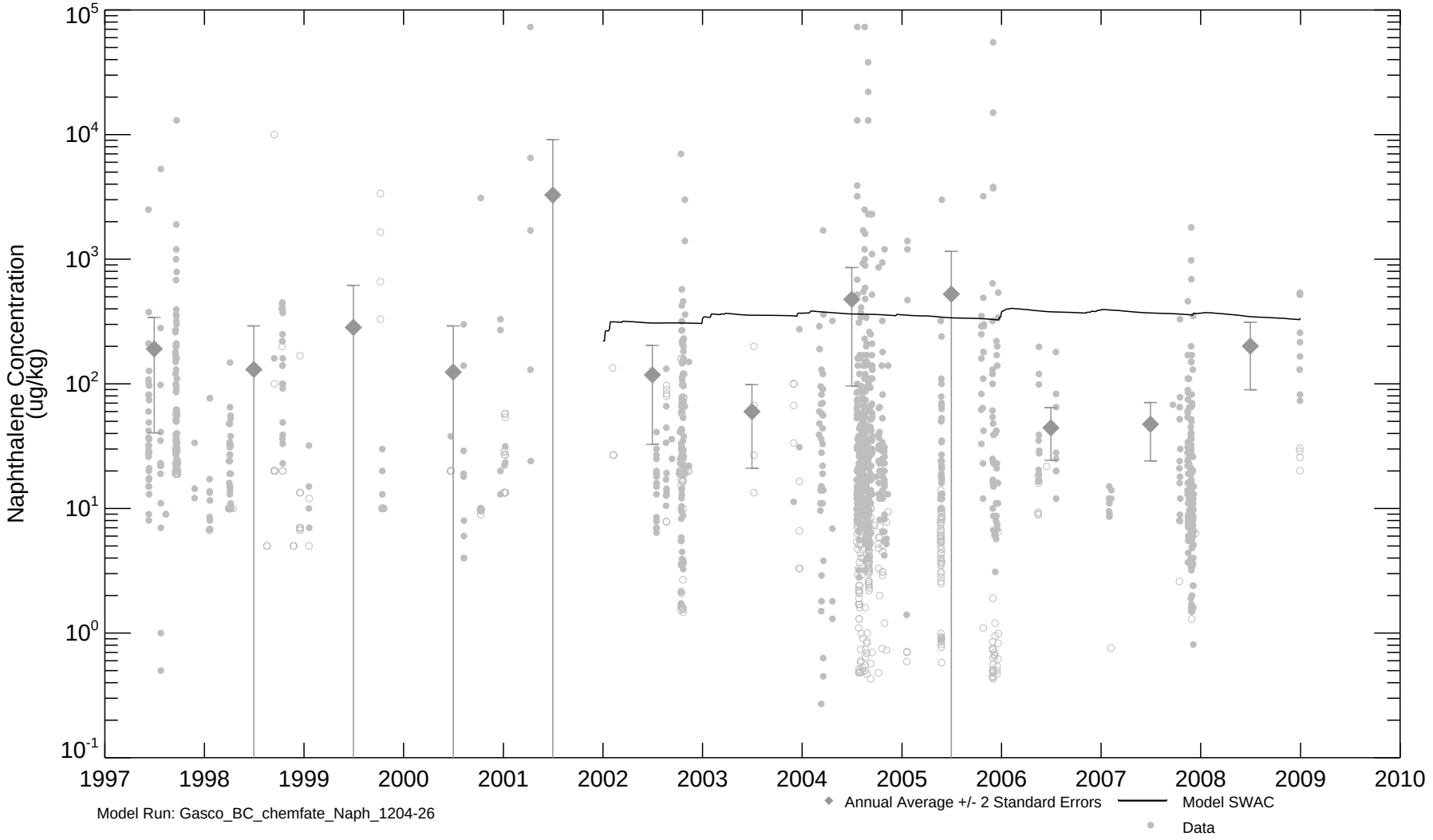


Figure 3-26

Time Series of Surface Sediment (Top 1-ft) Naphthalene Concentrations Site-wide

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

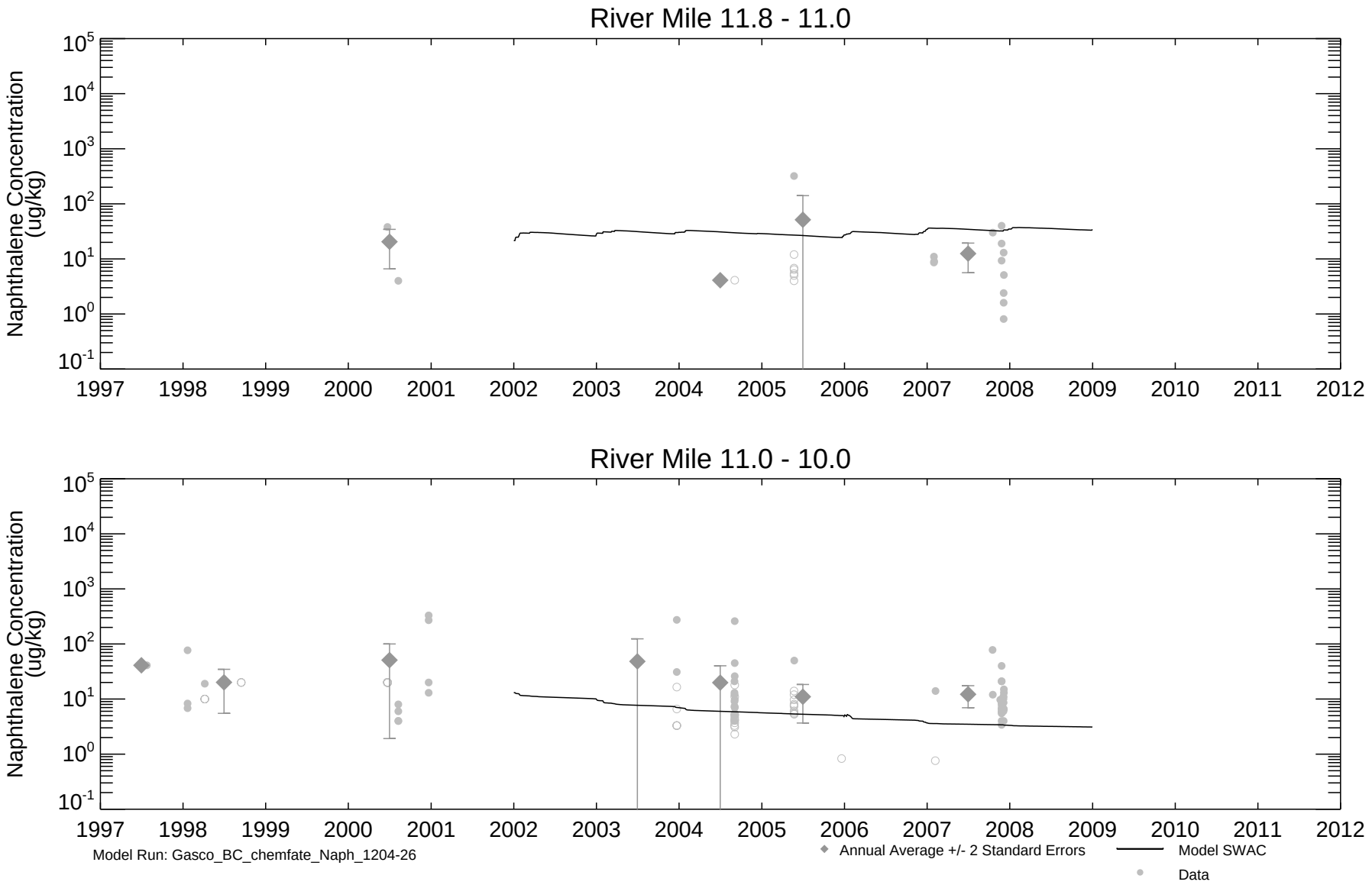


Figure 3-27a

Time Series of Surface Sediment (Top 1-ft) Naphthalene Concentrations by River Mile

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

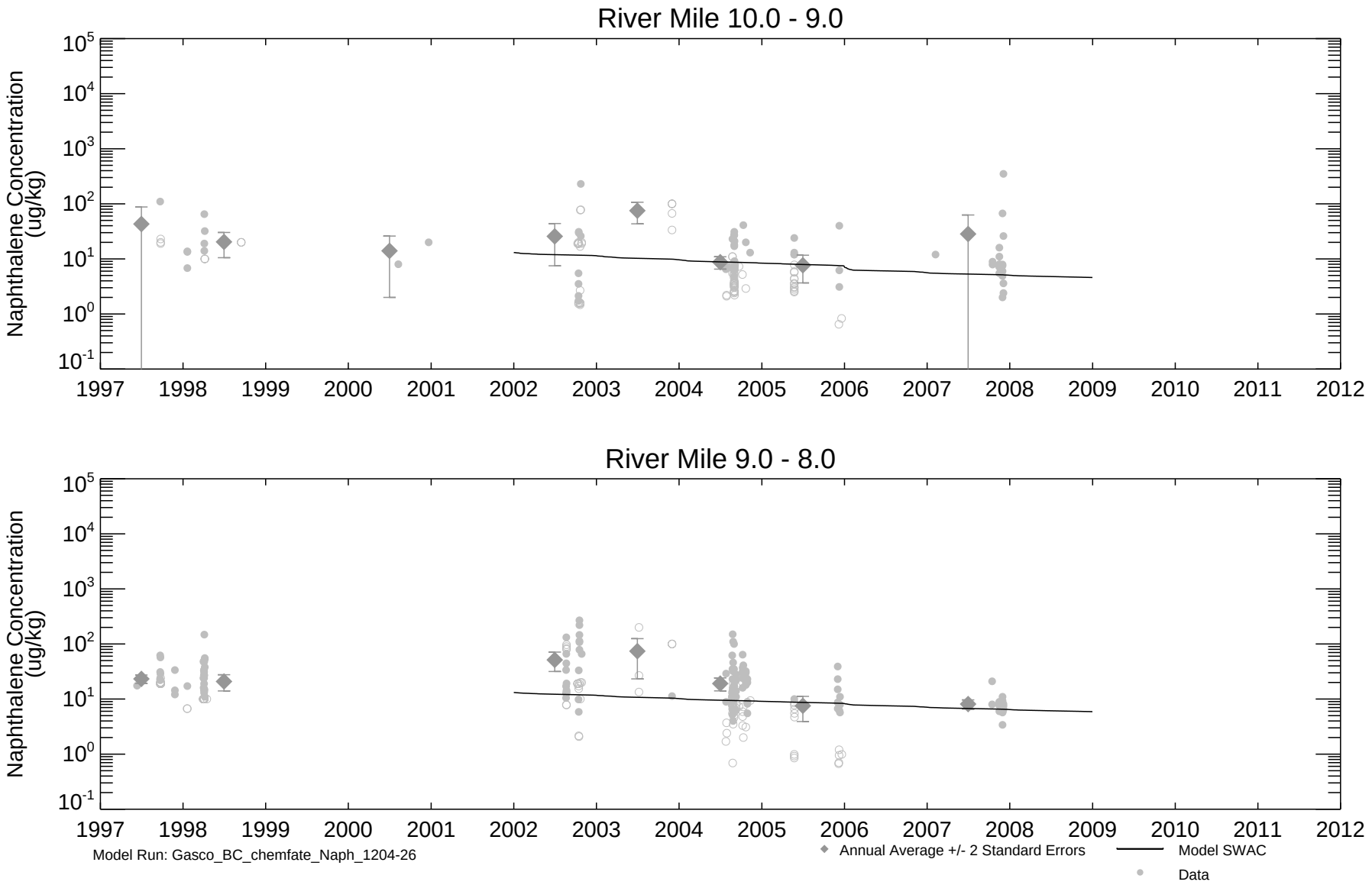


Figure 3-27b

Time Series of Surface Sediment (Top 1-ft) Naphthalene Concentrations by River Mile

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

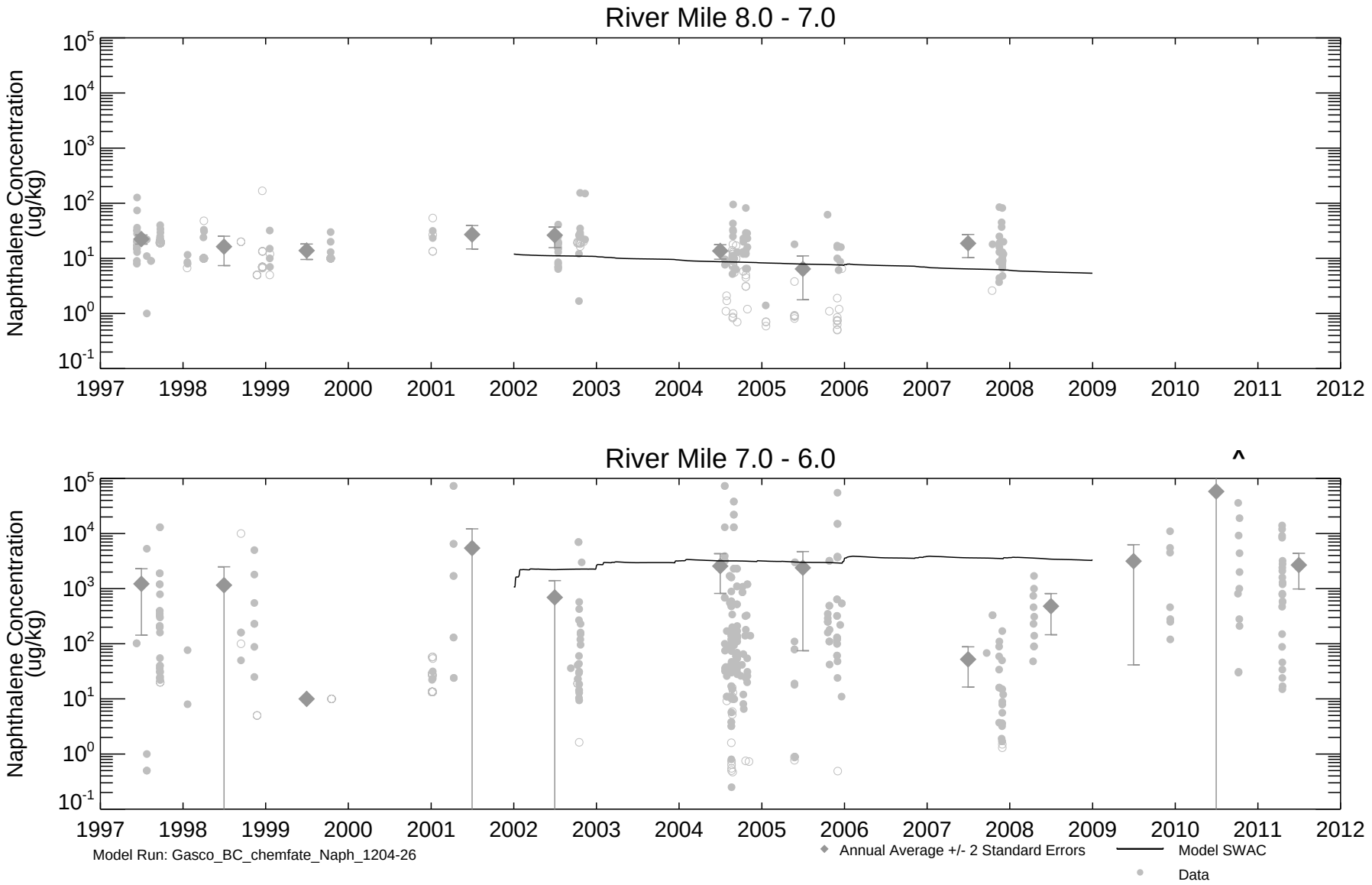


Figure 3-27c

Time Series of Surface Sediment (Top 1-ft) Naphthalene Concentrations by River Mile

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

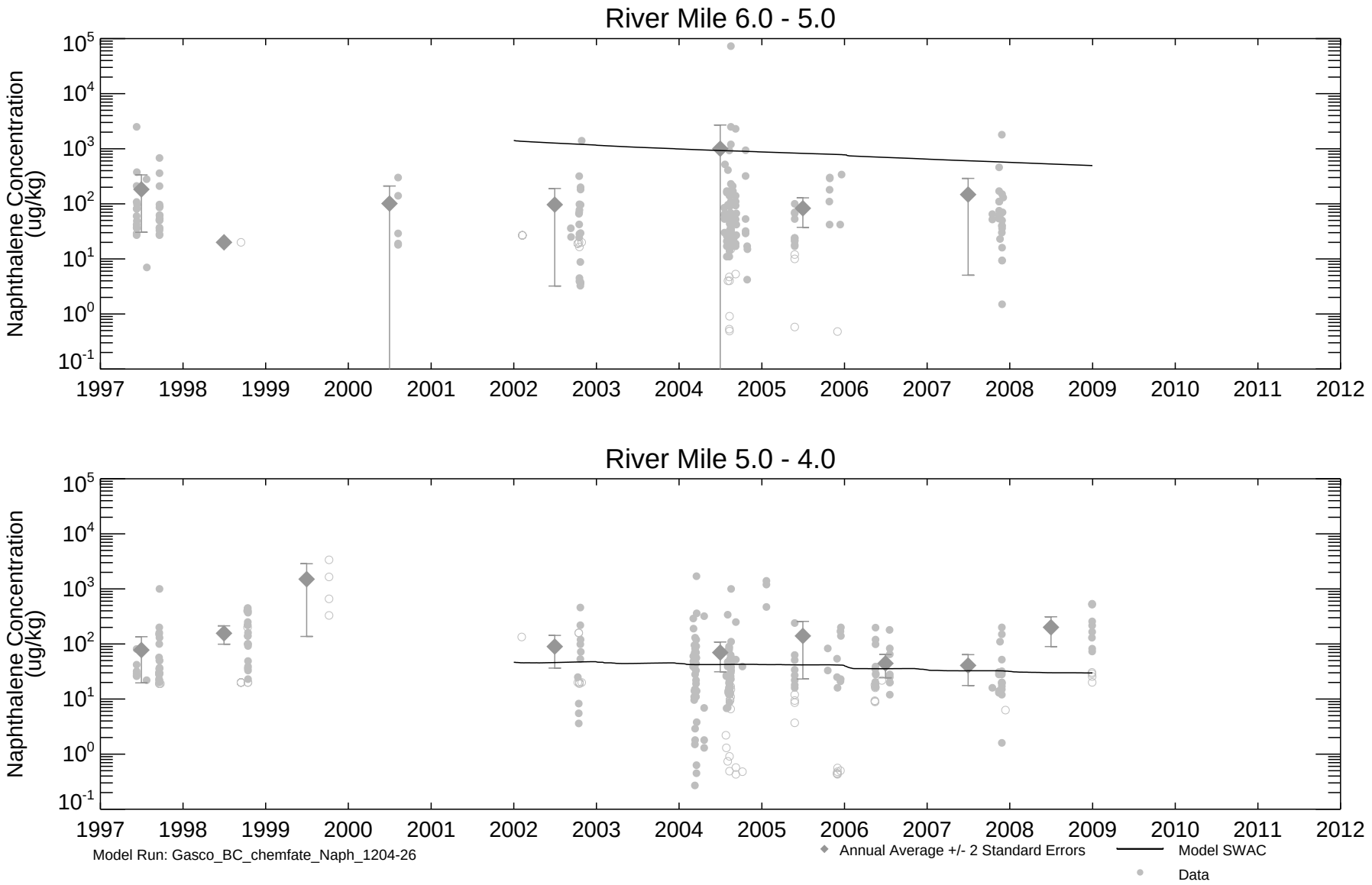


Figure 3-27d

Time Series of Surface Sediment (Top 1-ft) Naphthalene Concentrations by River Mile

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

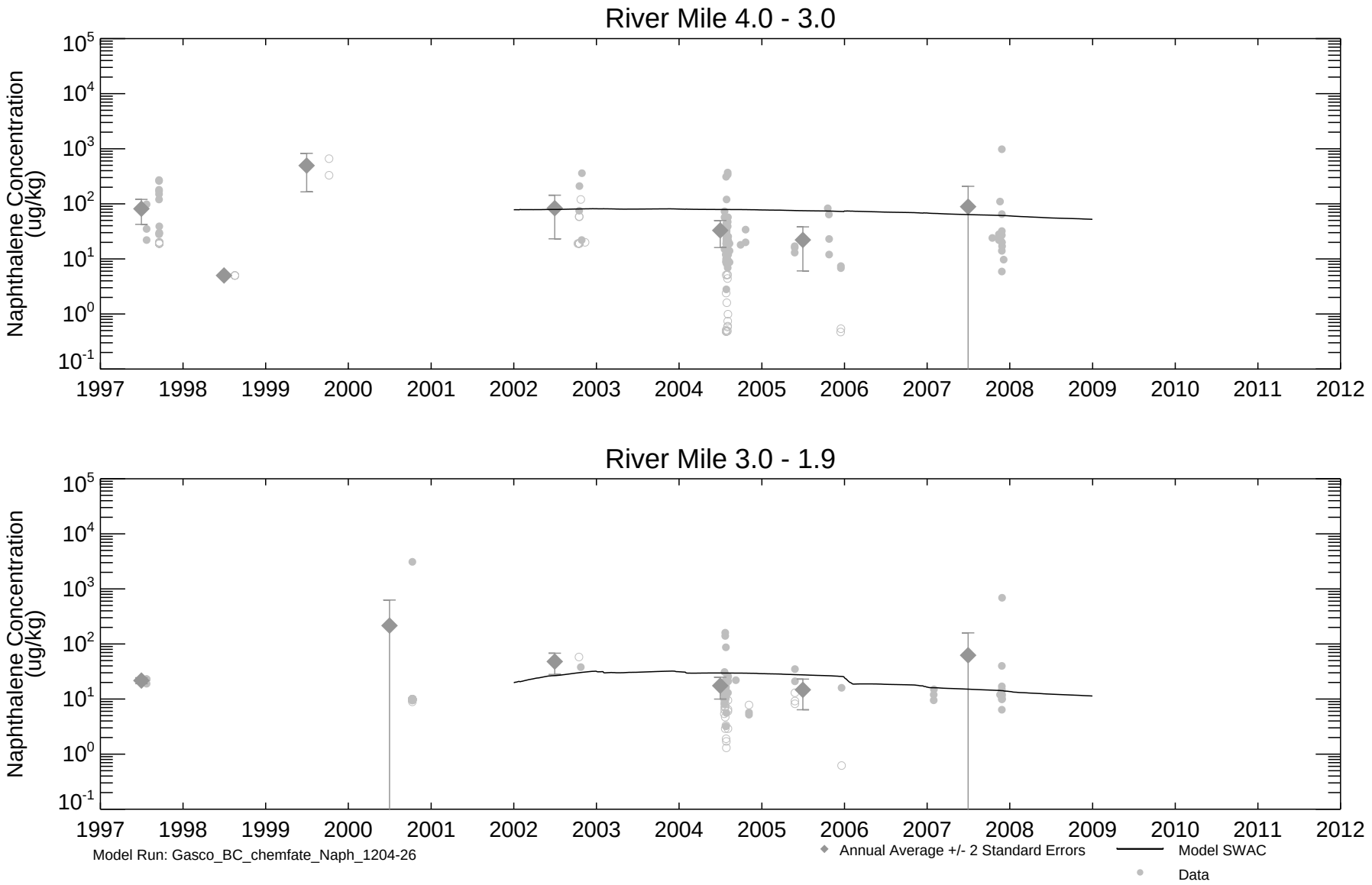


Figure 3-27e

Time Series of Surface Sediment (Top 1-ft) Naphthalene Concentrations by River Mile

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

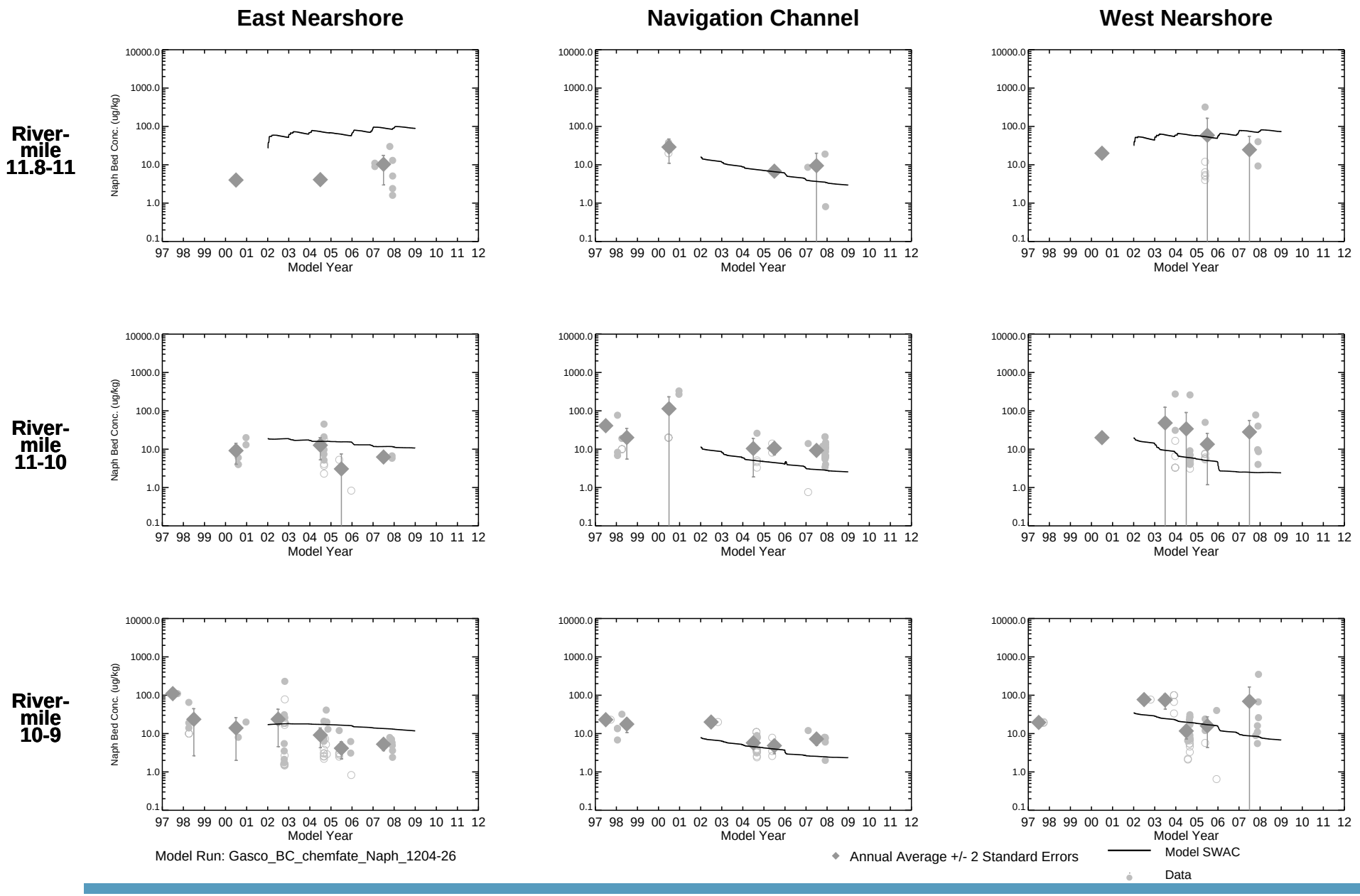


Figure 3-28a

Time Series of Surface Sediment (Top 1-ft) Naphthalene Concentrations by River Mile EMW

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

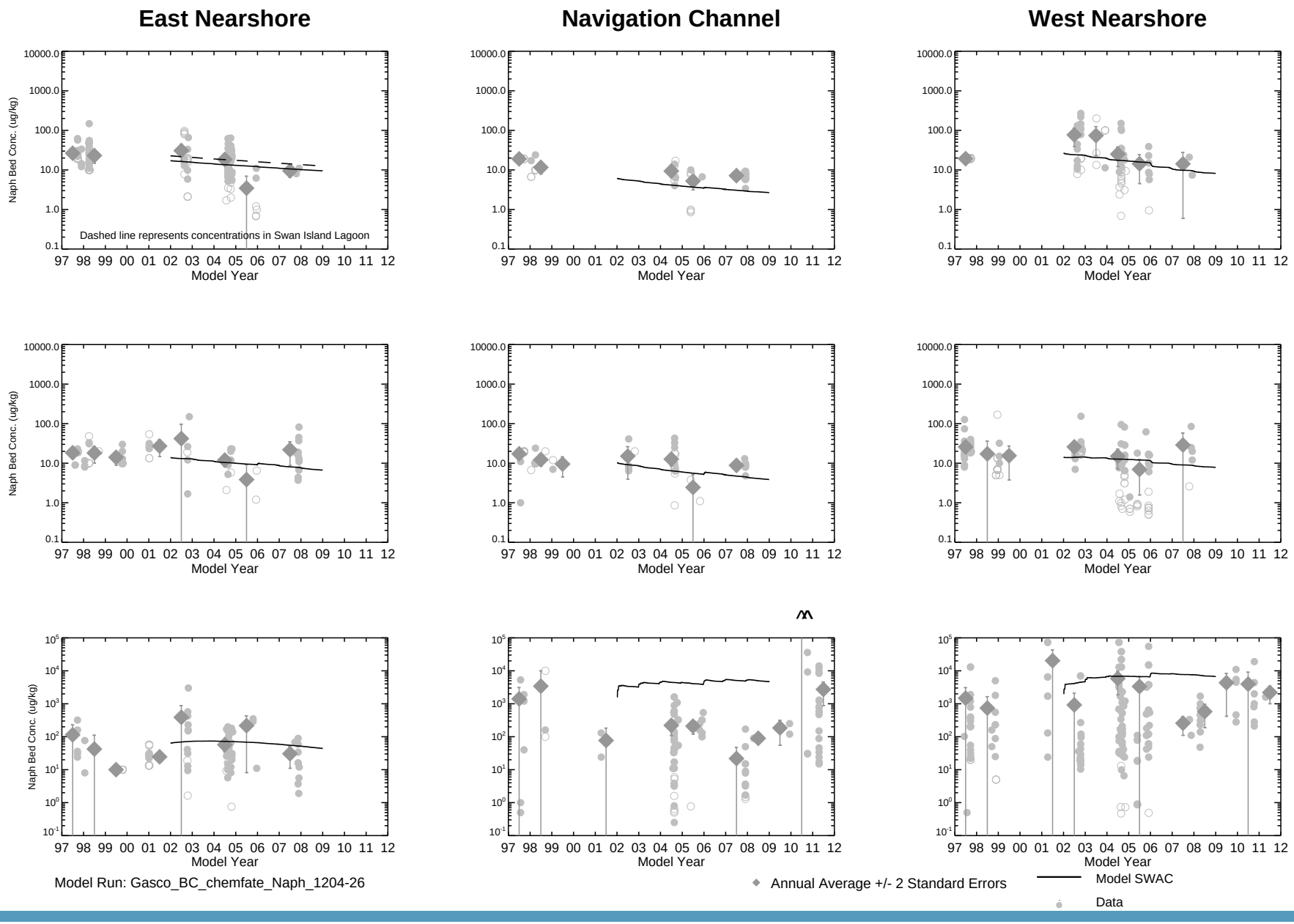


Figure 3-28b

Time Series of Surface Sediment (Top 1-ft) Naphthalene Concentrations by River Mile EMW

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

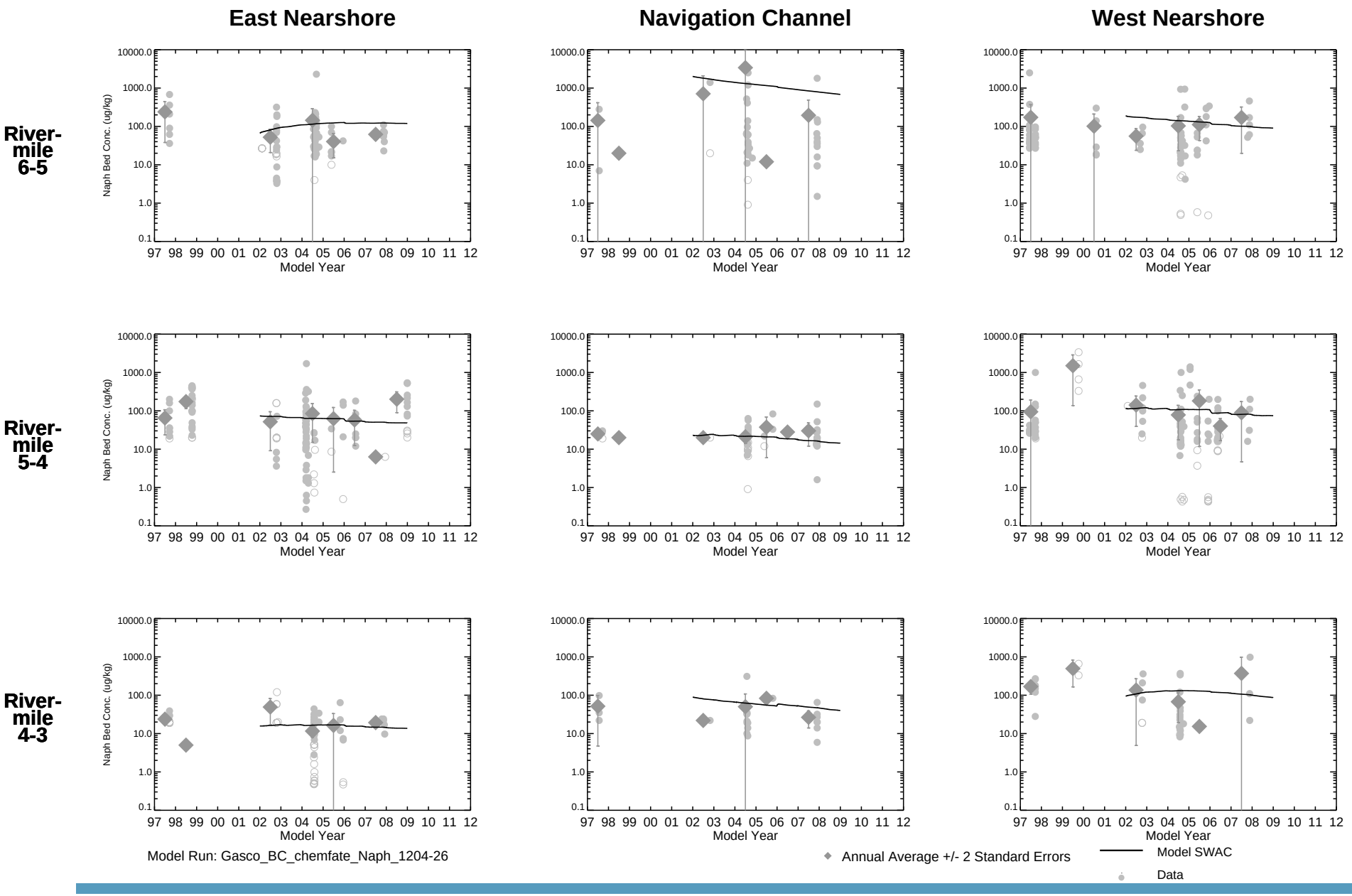


Figure 3-28c

Time Series of Surface Sediment (Top 1-ft) Naphthalene Concentrations by River Mile EMW

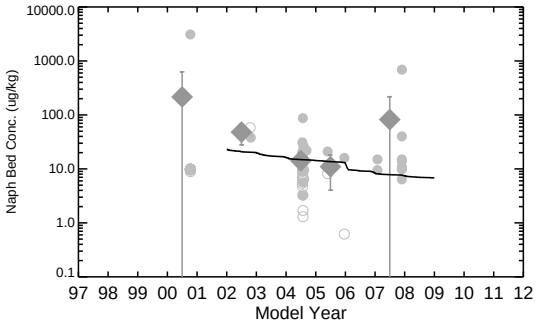
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

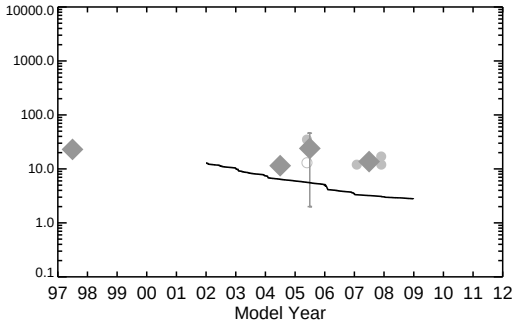
ANCHOR QEA

River-mile 3-1.9

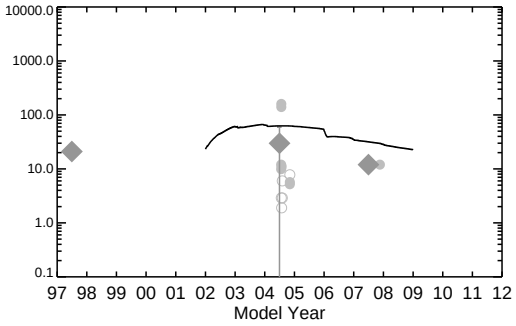
East Nearshore



Navigation Channel



West Nearshore



Model Run: Gasco_BC_chemfate_Naph_1204-26

◆ Annual Average +/- 2 Standard Errors

Model SWAC

Data

Figure 3-28d

Time Series of Surface Sediment (Top 1-ft) Naphthalene Concentrations by River Mile EMW

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Open symbols represent non-detect data plotted at the detection limit.

ANCHOR QEA

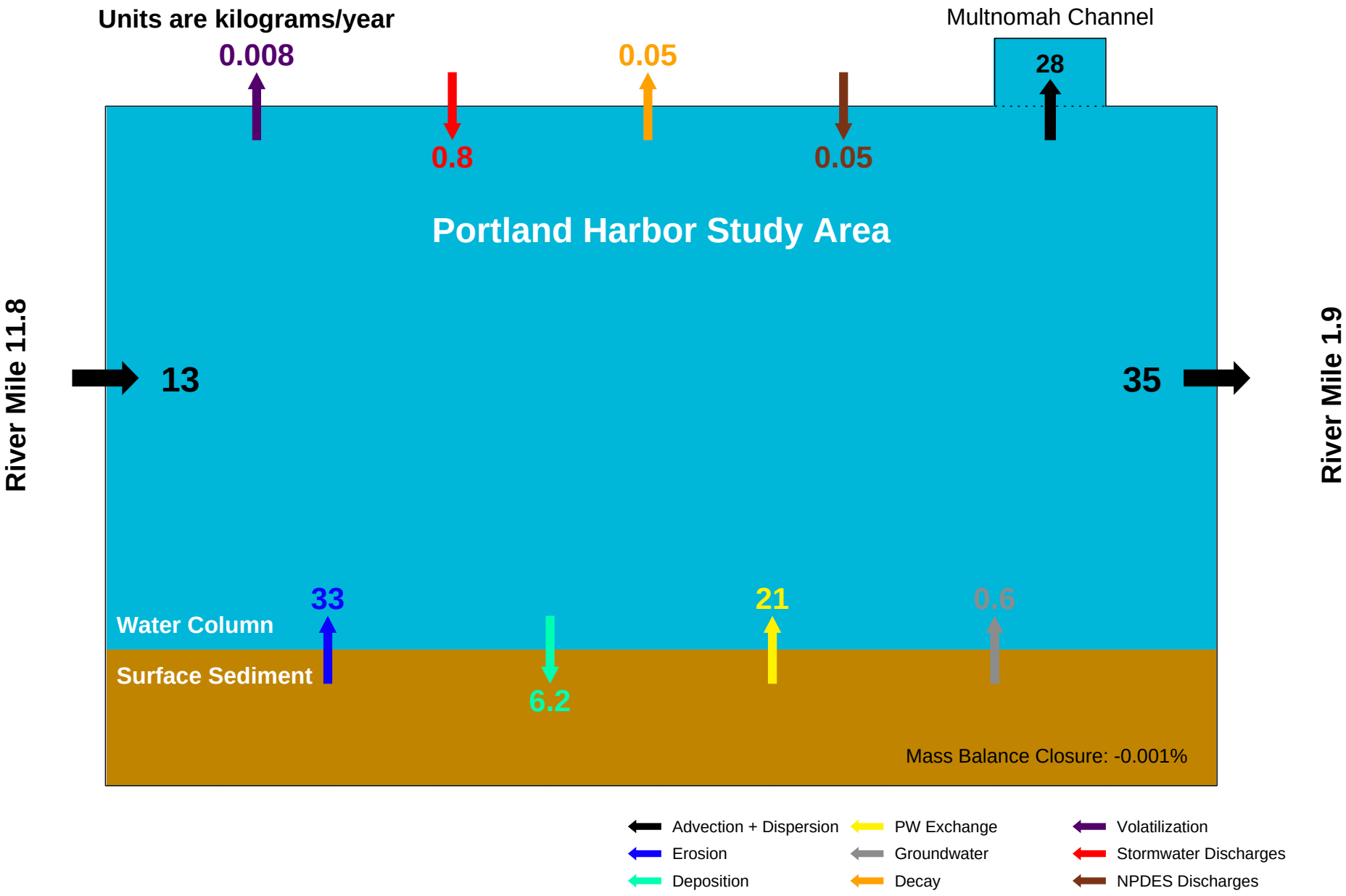


Figure 3-29a

Model Mass Balance for BaP over 2002-2008 (Portland Harbor Study Area)

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Run id: Gasco_BC_chemfate_BaP_1204-25

ANCHOR QEA

Units are kilograms/year

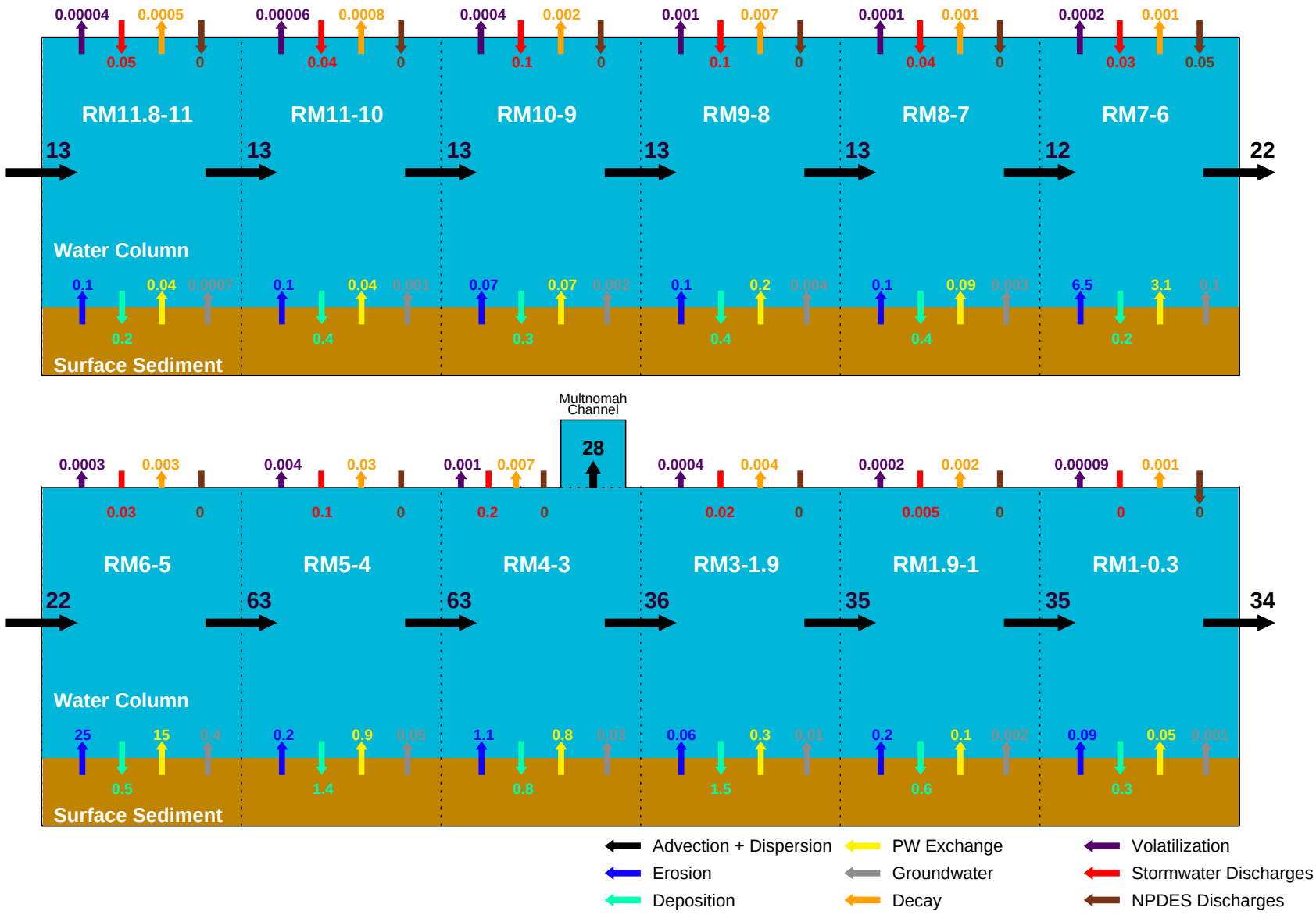


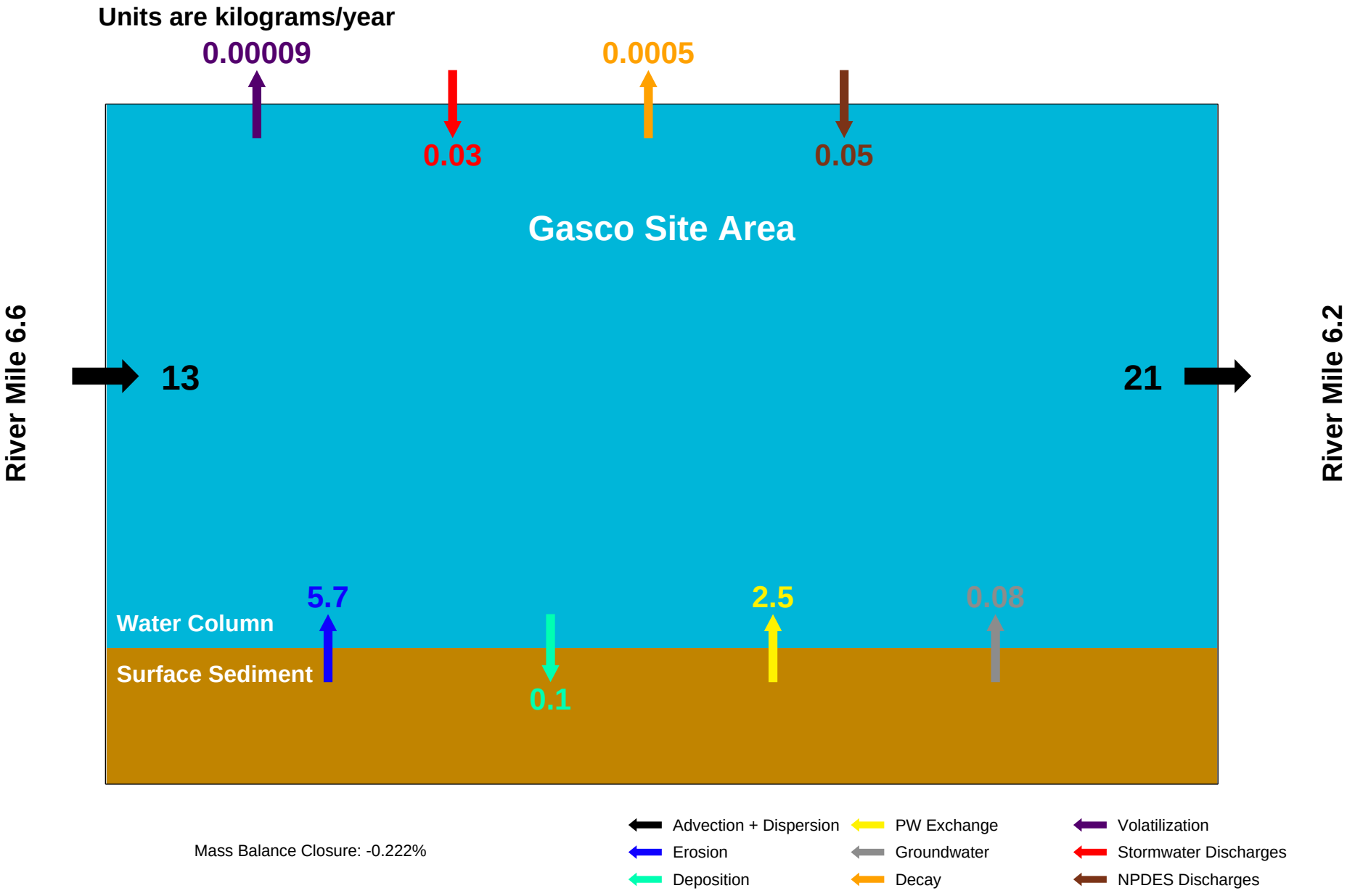
Figure 3-29b

Model Mass Balance for BaP over 2002-2008 (by River Mile)

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Run id: Gasco_BC_chemfate_BaP_1204-25

ANCHOR QEA



Mass Balance Closure: -0.222%

Figure 3-29c

Model Mass Balance for BaP over 2002-2008 (Gasco Site Area)

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Run id: Gasco_BC_chemfate_BaP_1204-25

ANCHOR QEA

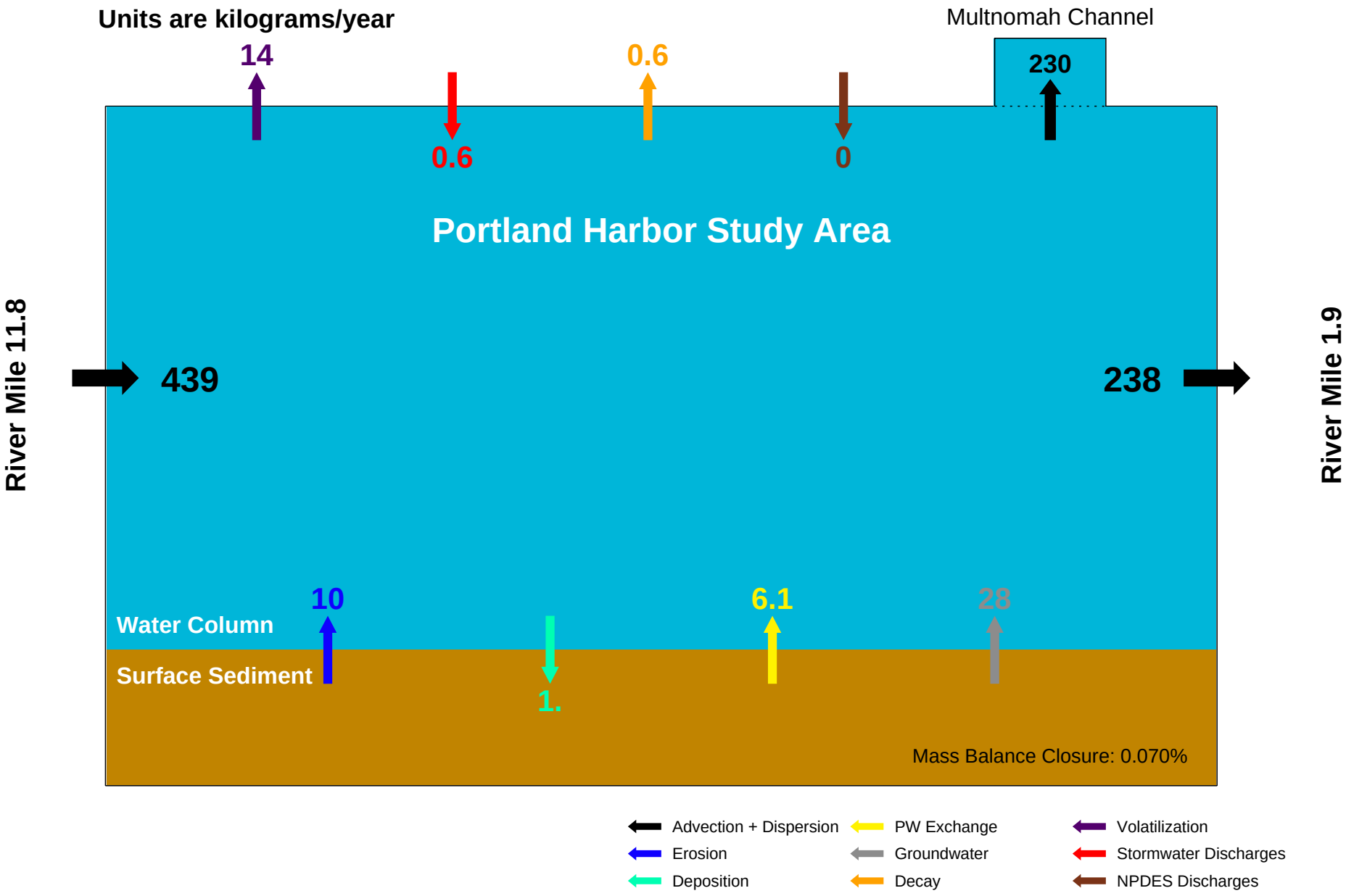


Figure 3-30a

Model Mass Balance for Naphthalene over 2002-2008 (Portland Harbor Study Area)

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Run id: Gasco_BC_chemfate_Naph_1204-26

ANCHOR QEA

Units are kilograms/year

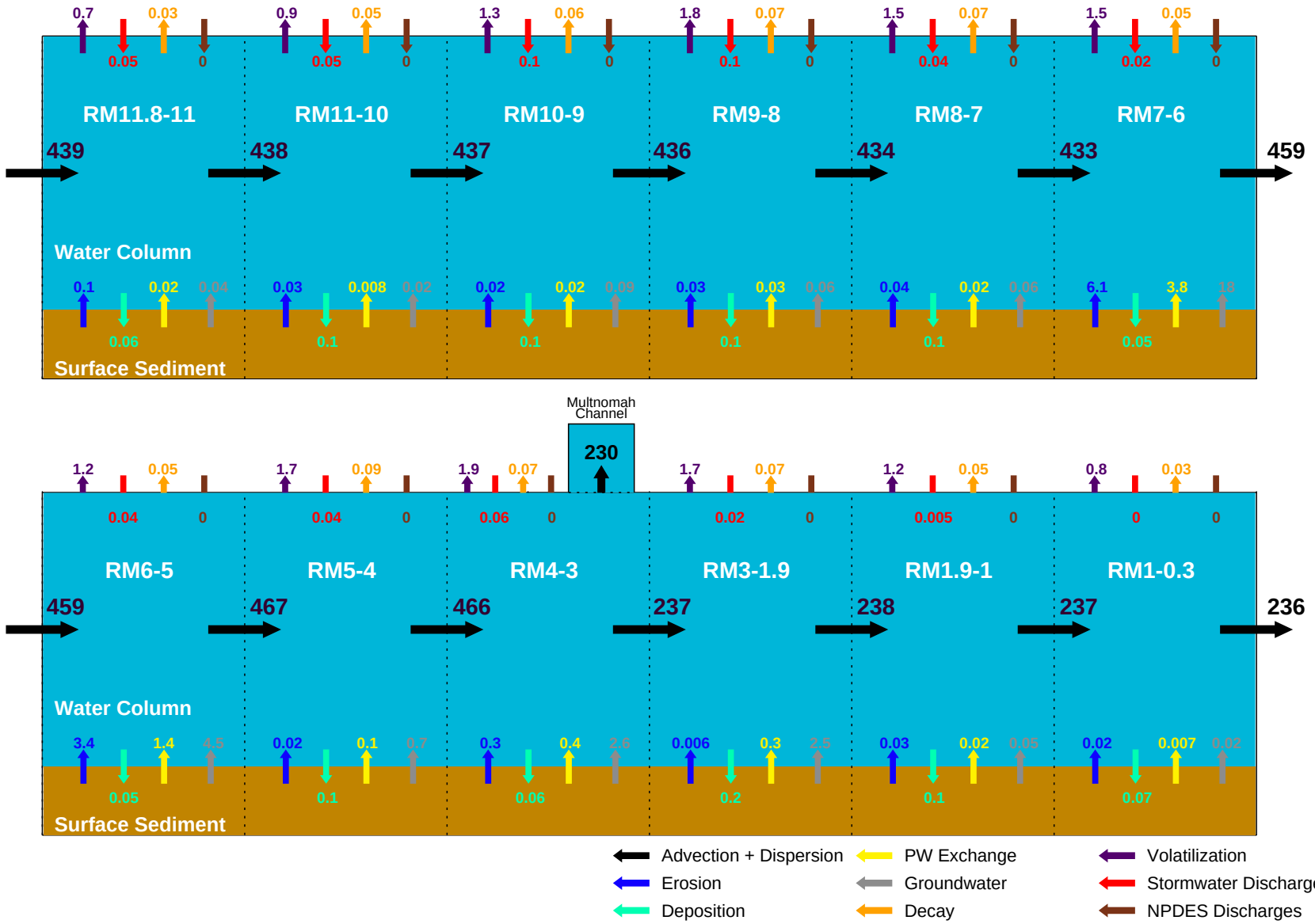


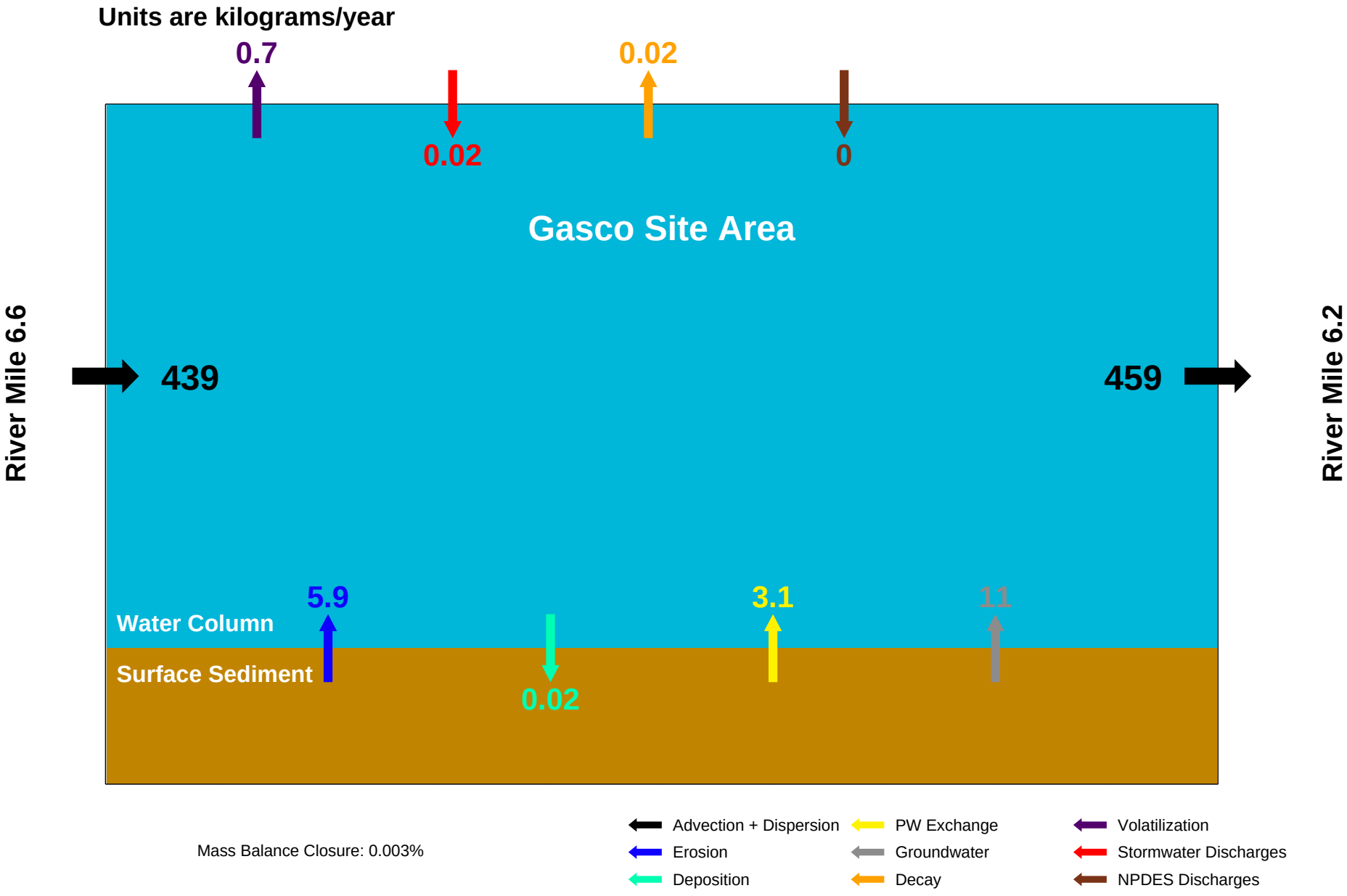
Figure 3-30b

Model Mass Balance for Naphthalene over 2002-2008 (by River Mile)

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Run id: Gasco_BC_chemfate_Naph_1204-26

ANCHOR QEA



Mass Balance Closure: 0.003%

Figure 3-30c

Model Mass Balance for Naphthalene over 2002-2008 (Gasco Site Area)

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Run id: Gasco_BC_chemfate_Naph_1204-26

ANCHOR QEA

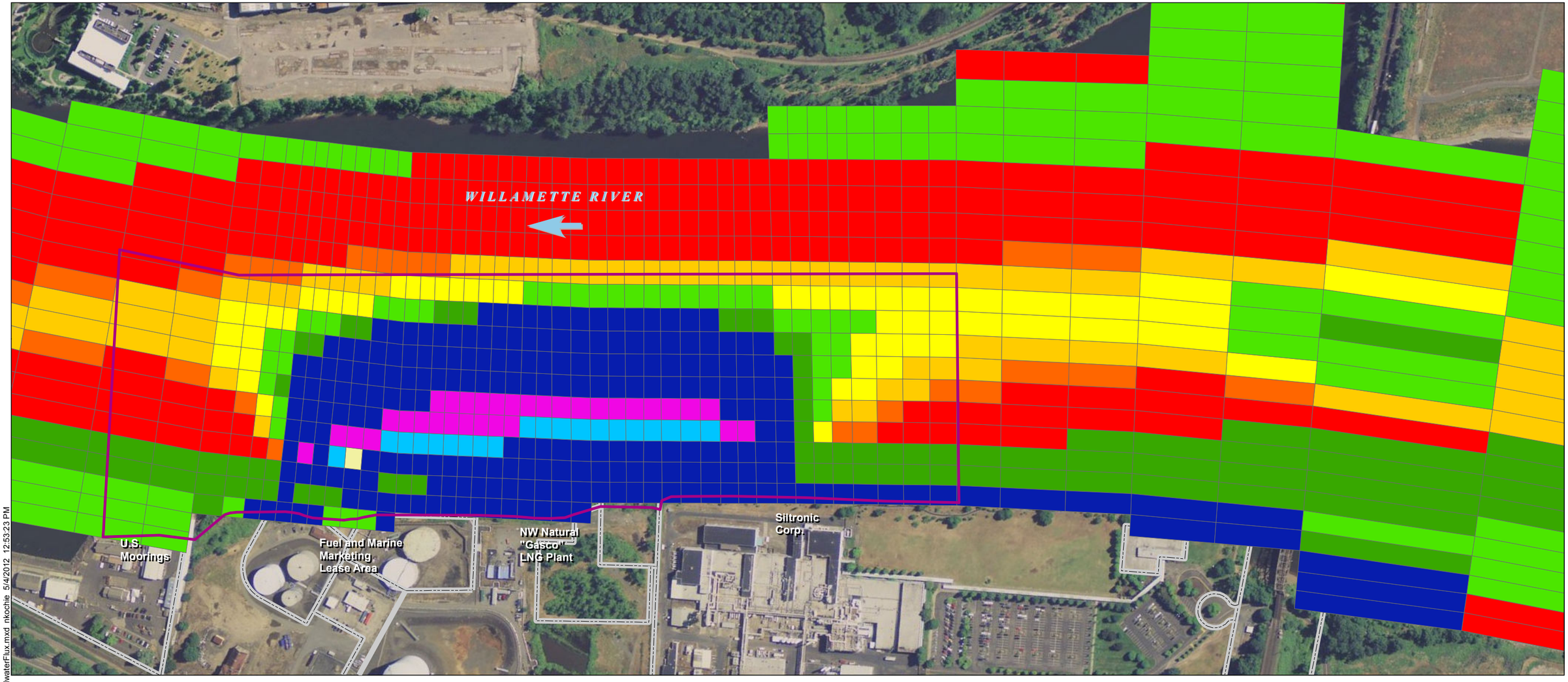


Figure 4-1
Estimated Groundwater Flux to Site for Future Simulations
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

ANCHOR QEA

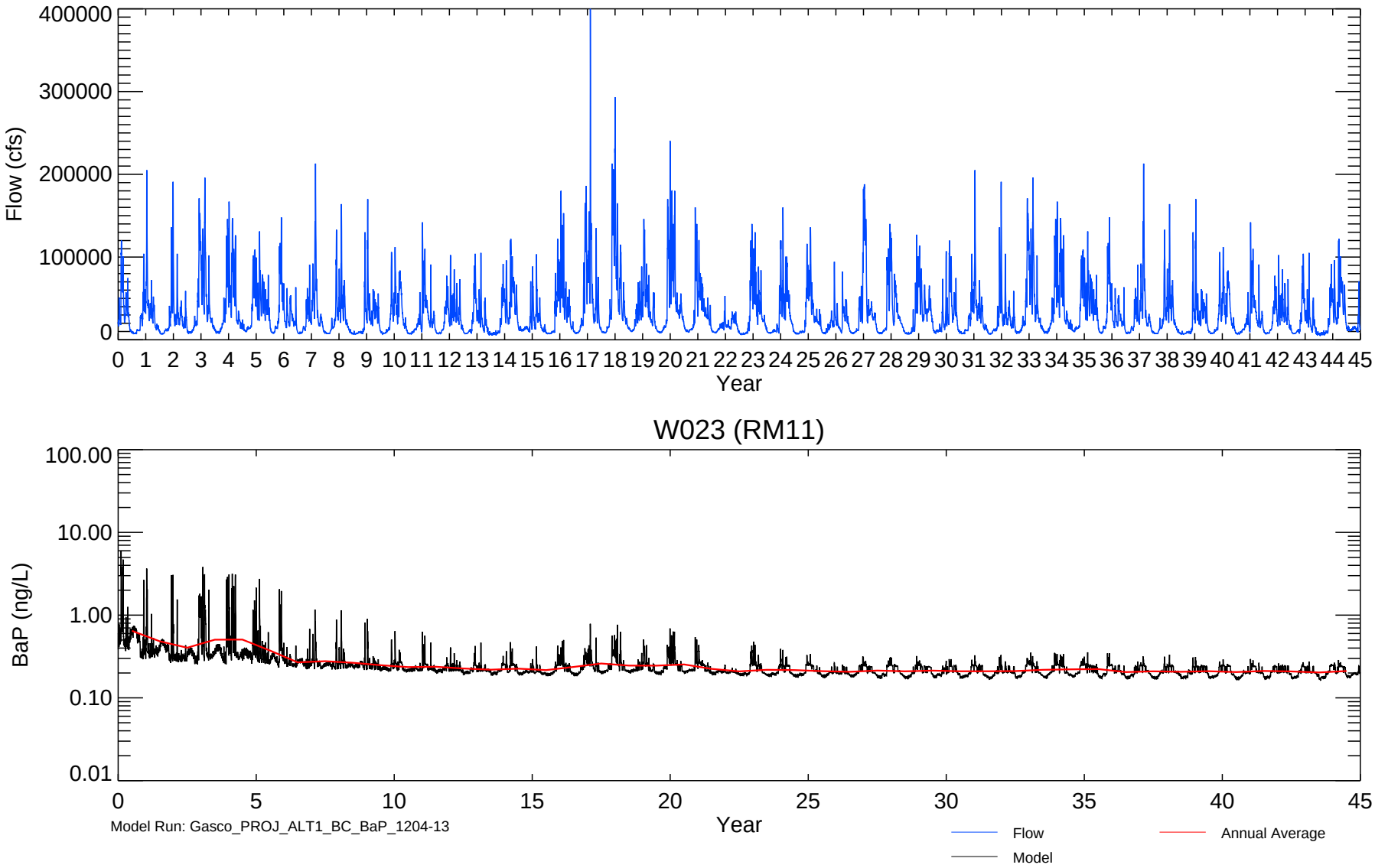


Figure 4-2a

Temporal Profile of Model-predicted Water Column BaP Concentrations

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Model results shown represent laterally averaged results

ANCHOR QEA

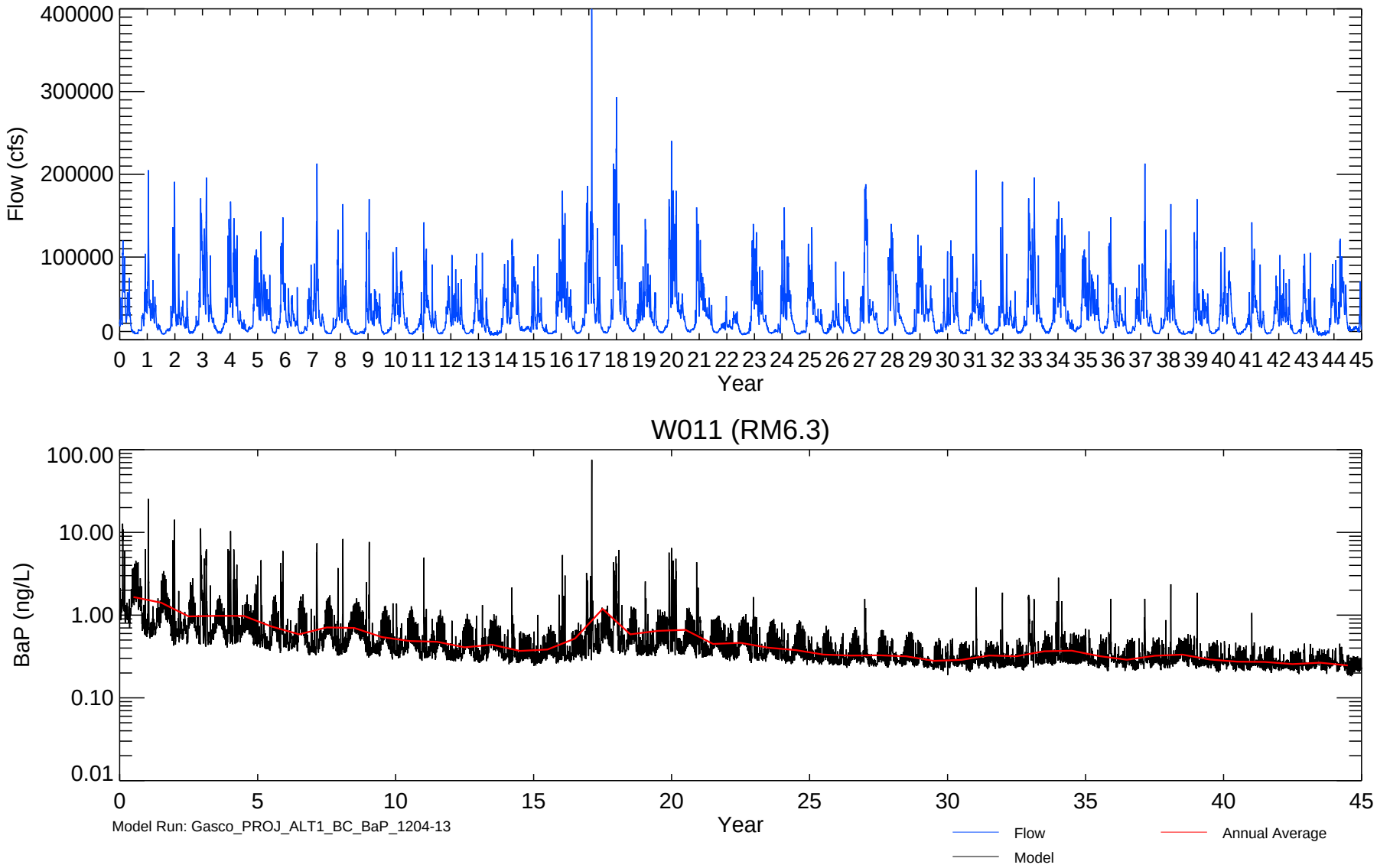


Figure 4-2b

Temporal Profile of Model-predicted Water Column BaP Concentrations

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Model results shown represent laterally averaged results

ANCHOR QEA

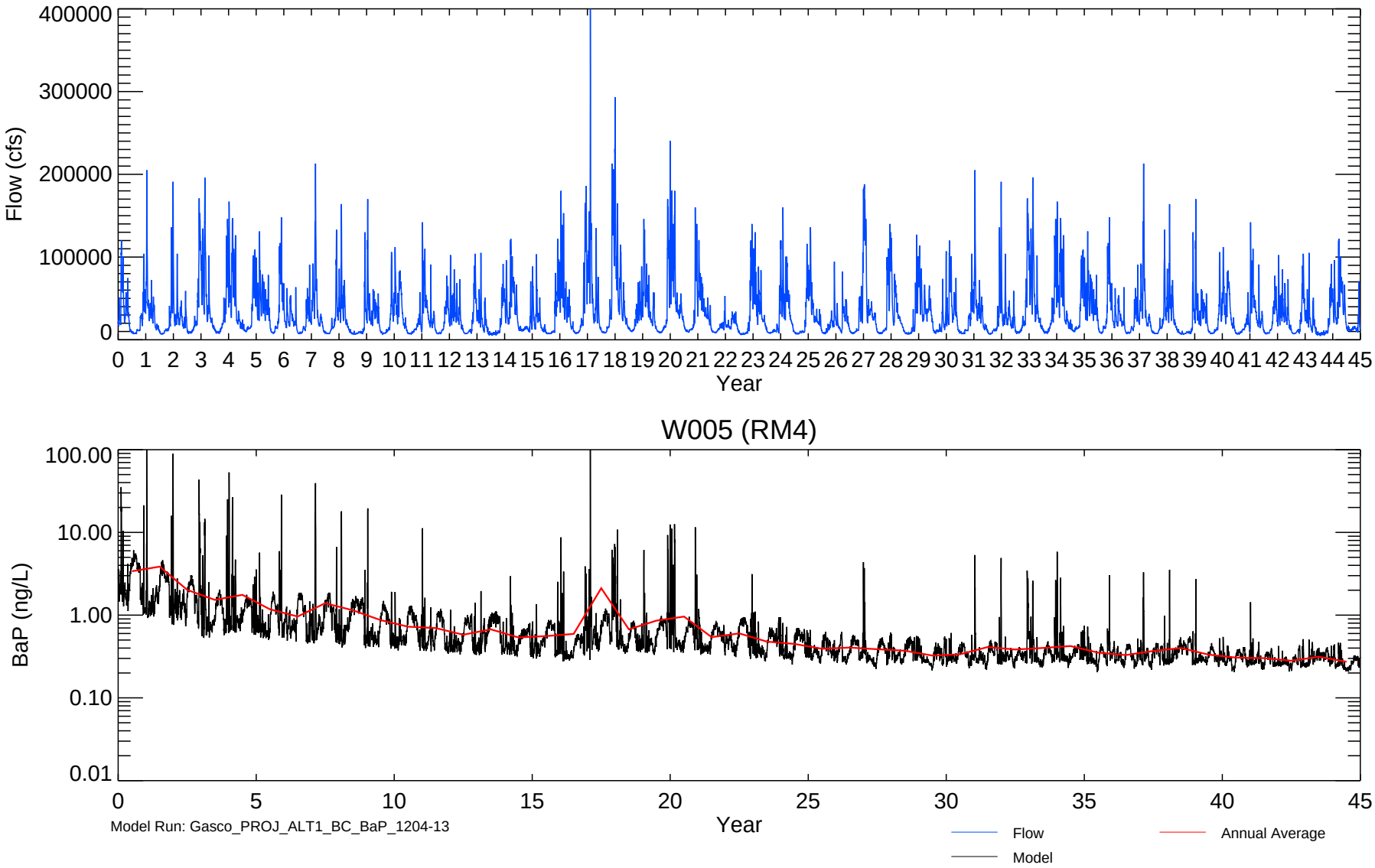


Figure 4-2c

Temporal Profile of Model-predicted Water Column BaP Concentrations
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Model results shown represent laterally averaged results

ANCHOR QEA

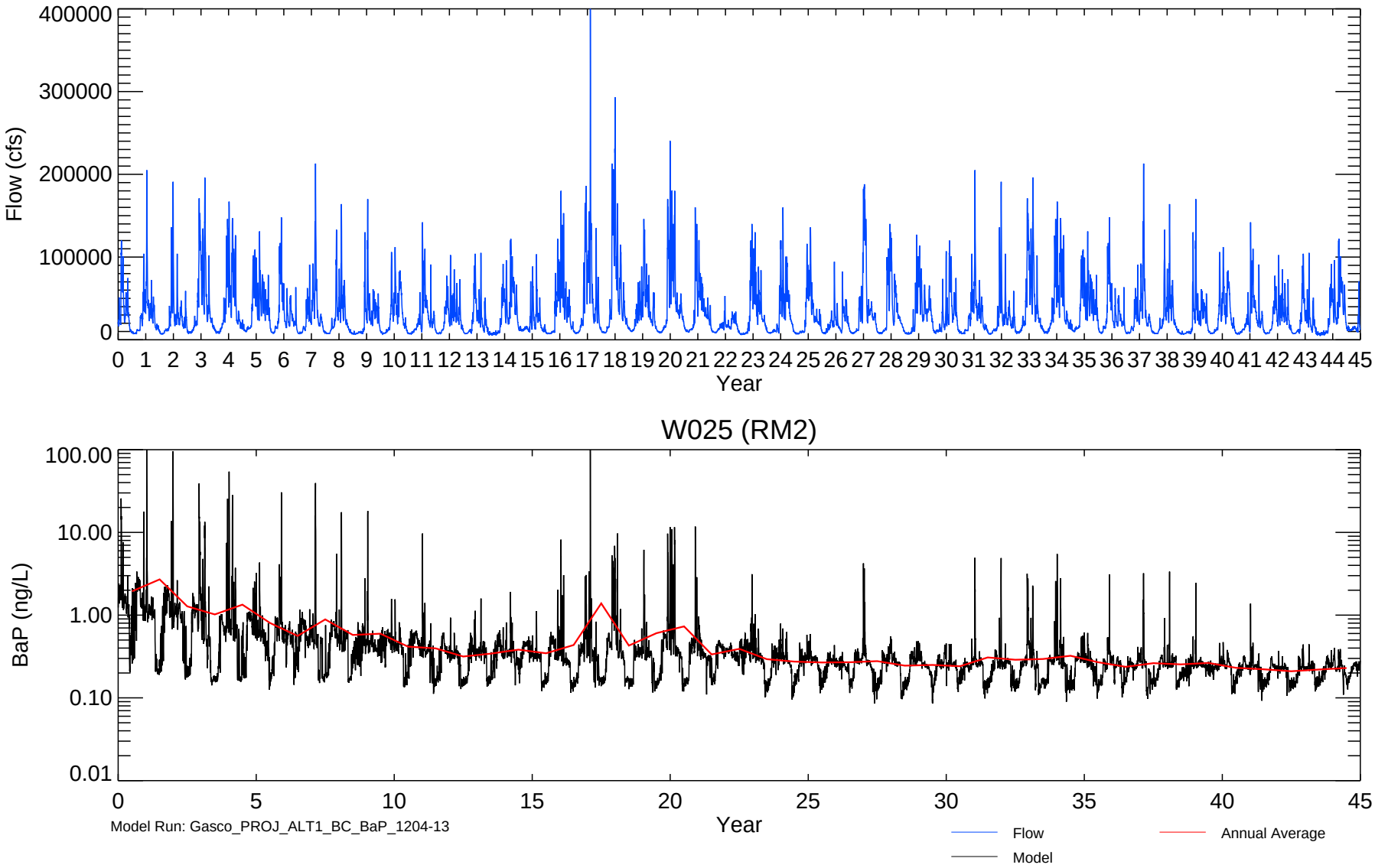


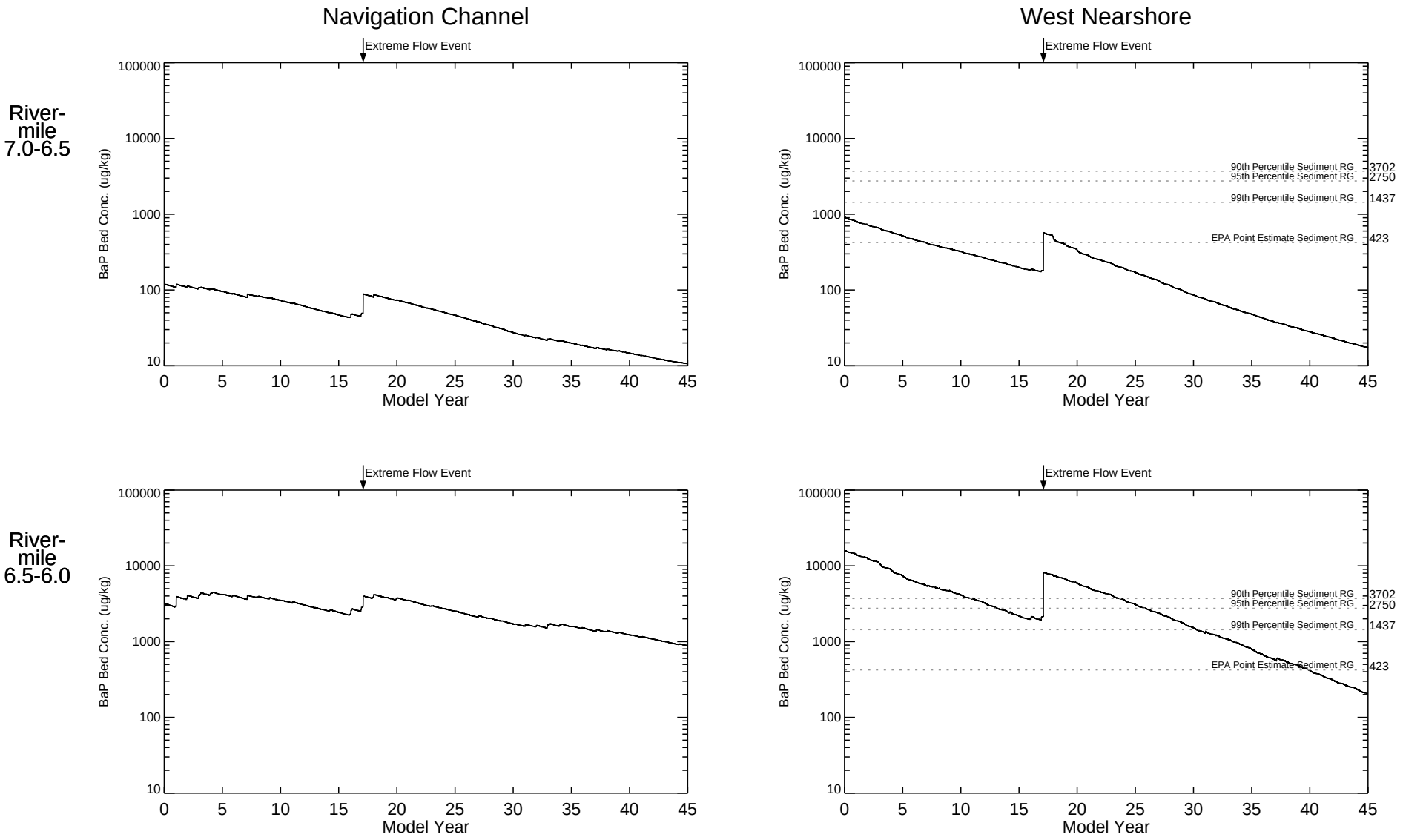
Figure 4-2d

Temporal Profile of Model-predicted Water Column BaP Concentrations

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Model results shown represent laterally averaged results

ANCHOR QEA



Model Run: Gasco_PROJ_ALT1_BC_BaP_1204-13

Figure 4-3

Time Series of Surface Sediment (Top 1-ft) BaP SWACs by 1/2 River Mile Navigation Channel and West Nearshore Areas
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

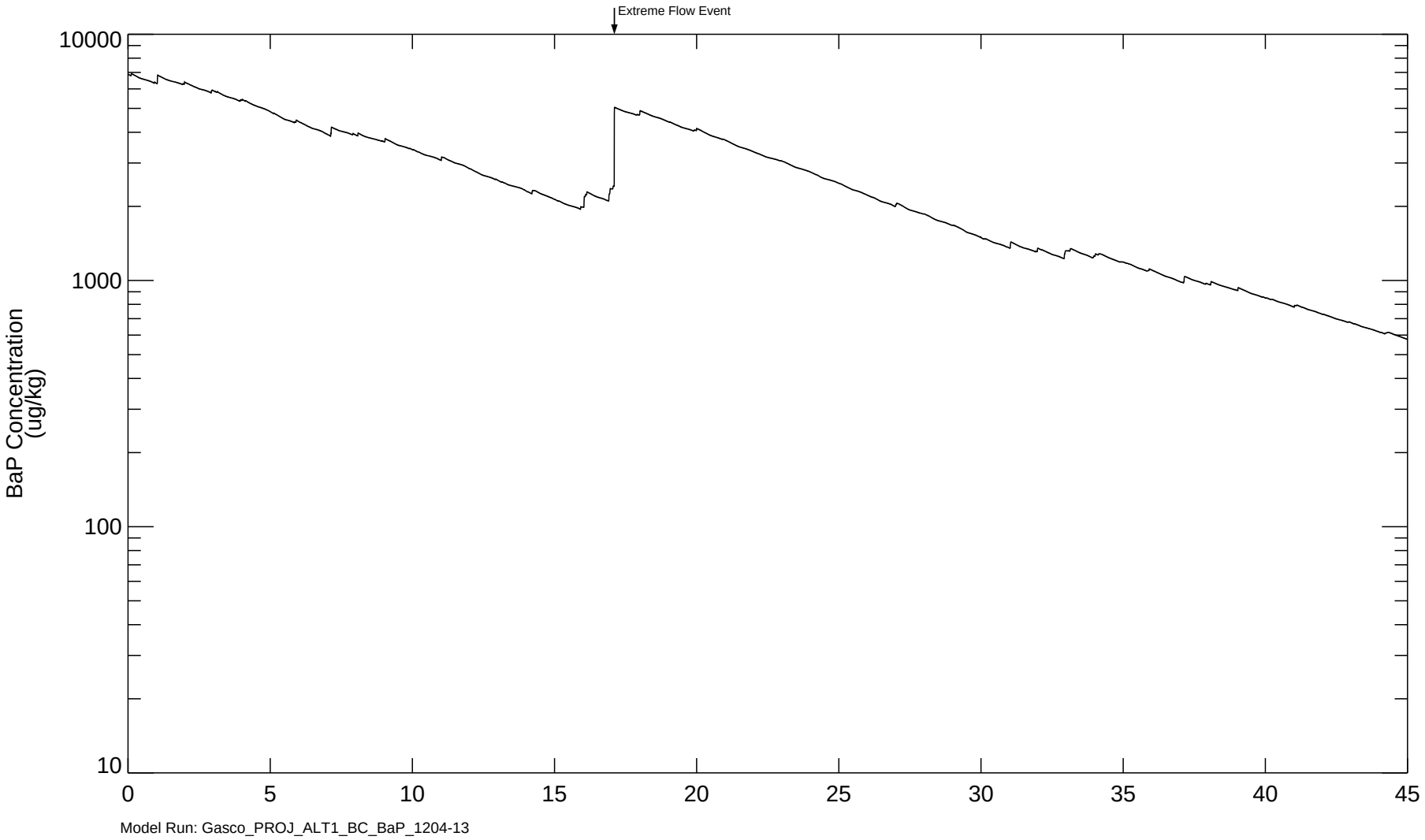


Figure 4-4

Time Series of Surface Sediment (Top 1-ft) BaP SWACs in Gasco Sediments Site Area of Interest

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

ANCHOR QEA

WILLAMETTE RIVER

Gasco Sediment Site Area of Interest
(Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP No Action Year 10 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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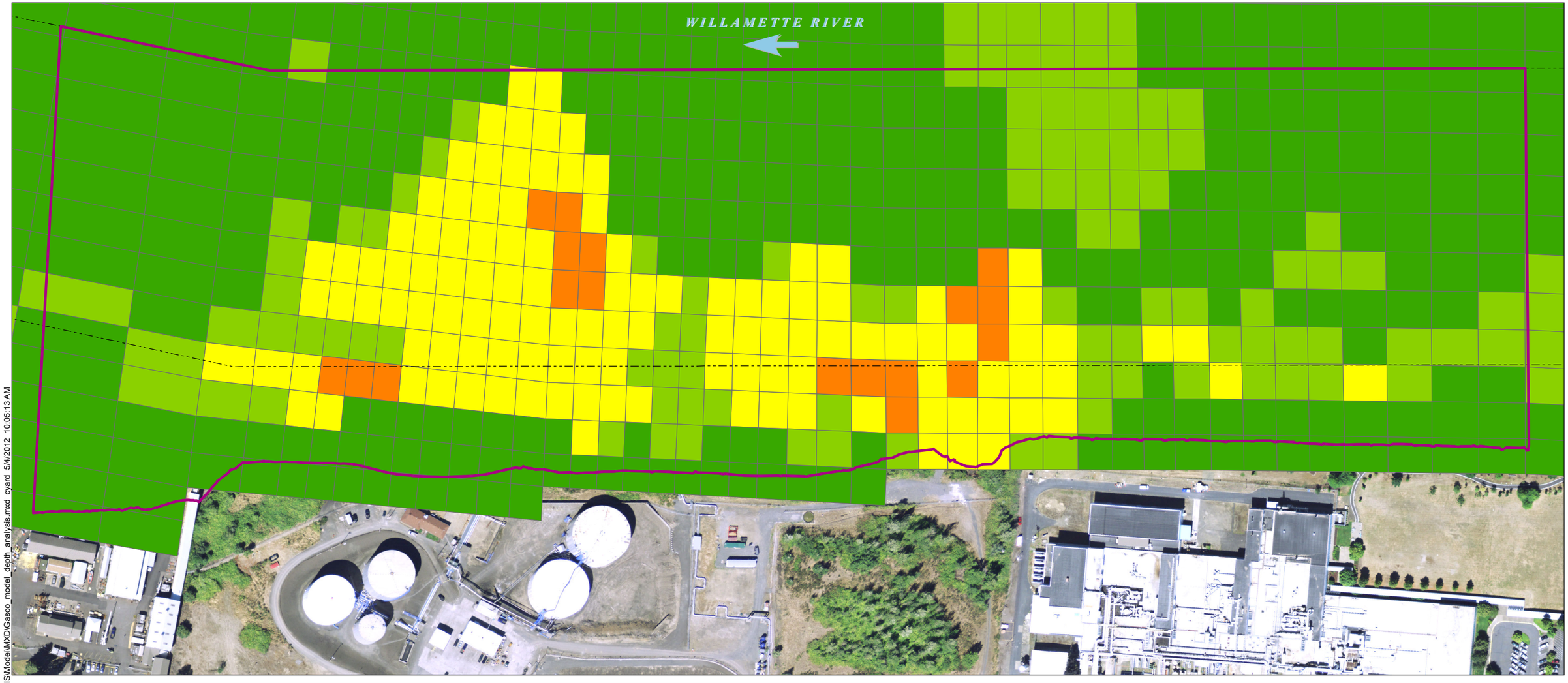
ANCHOR QEA

Figure 4-5a
Model Grid Cell BaP Concentrations at Year 10 for No Action
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest
(Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP No Action Year 30 (ug/kg)

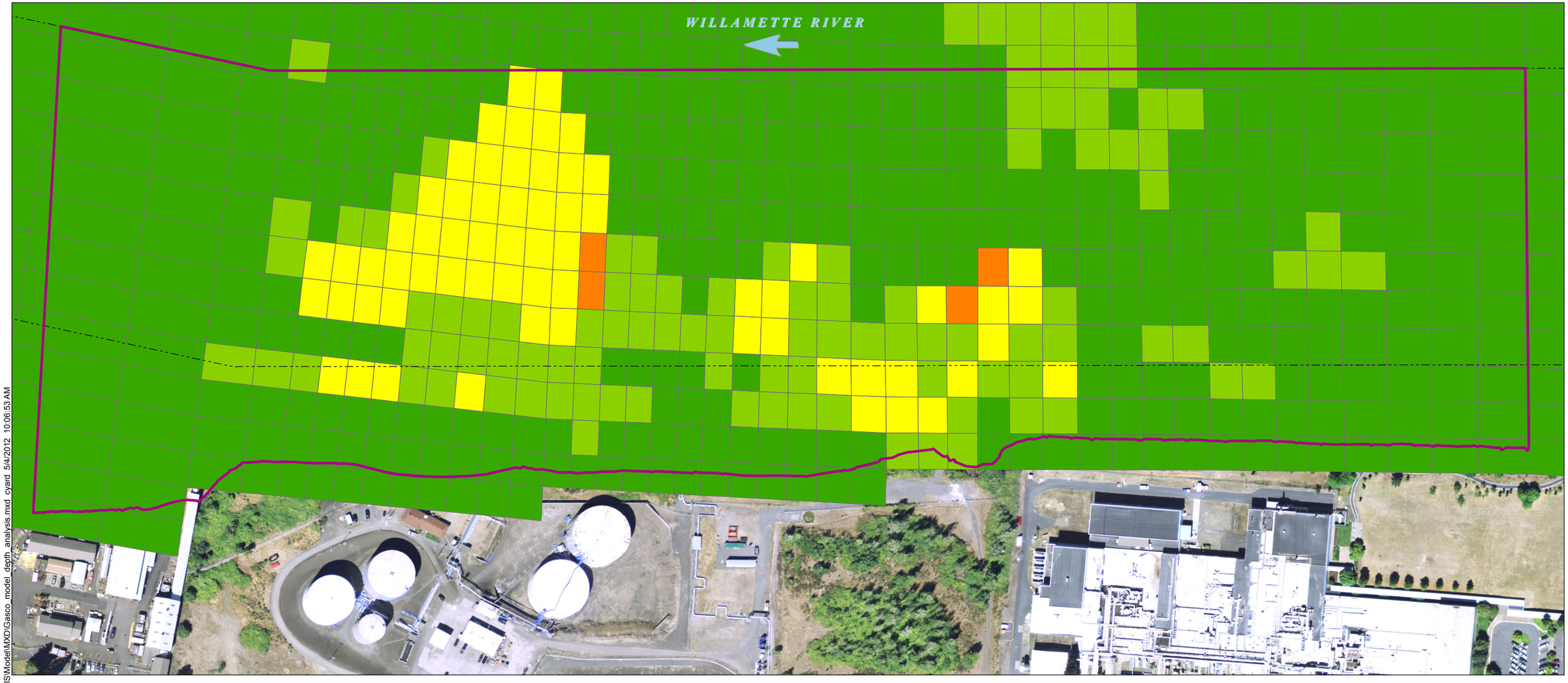
- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-5b
Model Grid Cell BaP Concentrations at Year 30 for No Action
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest
(Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP No Action Year 45 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-5c
Model Grid Cell BaP Concentrations at Year 45 for No Action
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

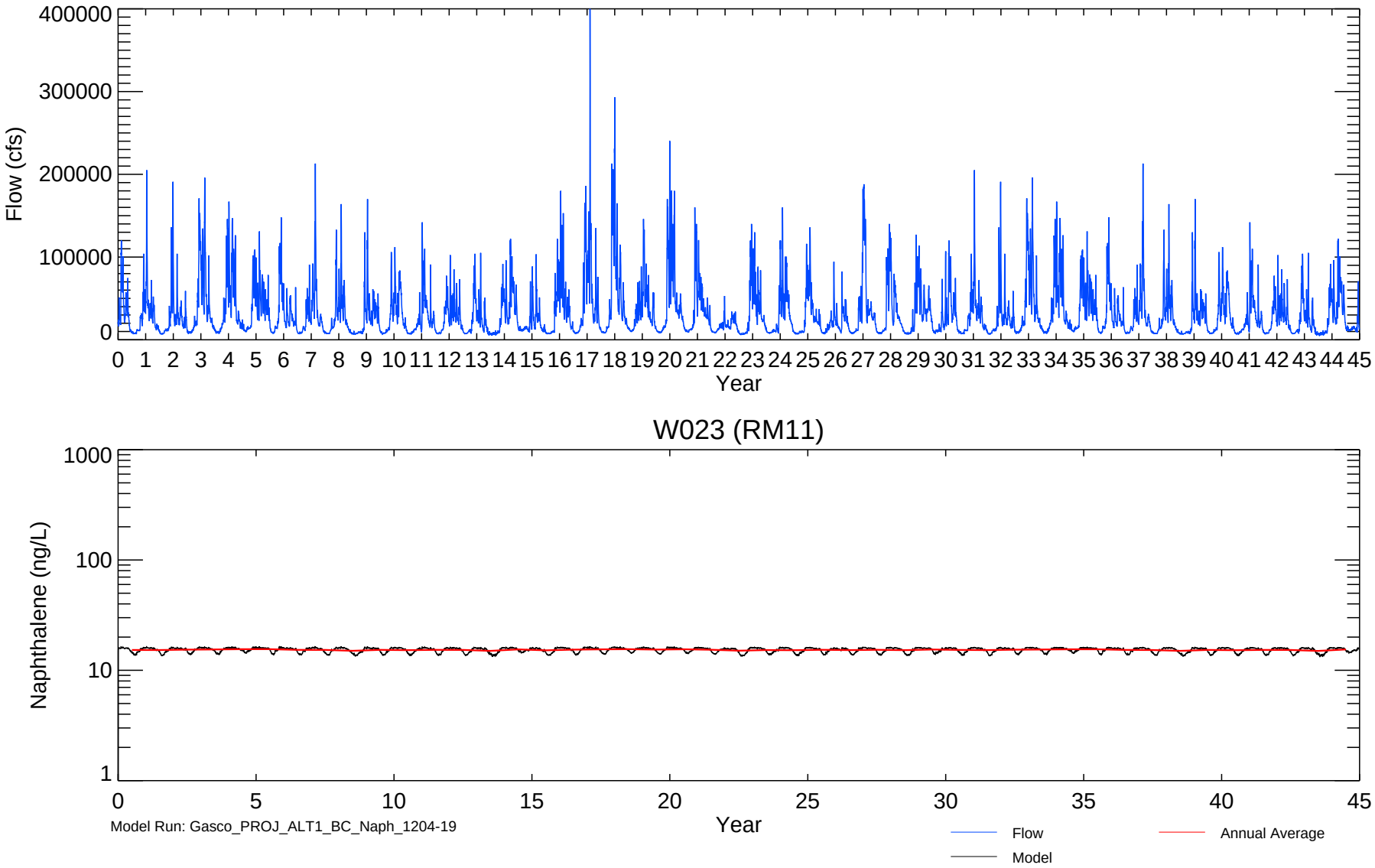


Figure 4-6a

Temporal Profile of Model-predicted Water Column Naphthalene Concentrations

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Model results shown represent laterally averaged results

ANCHOR QEA

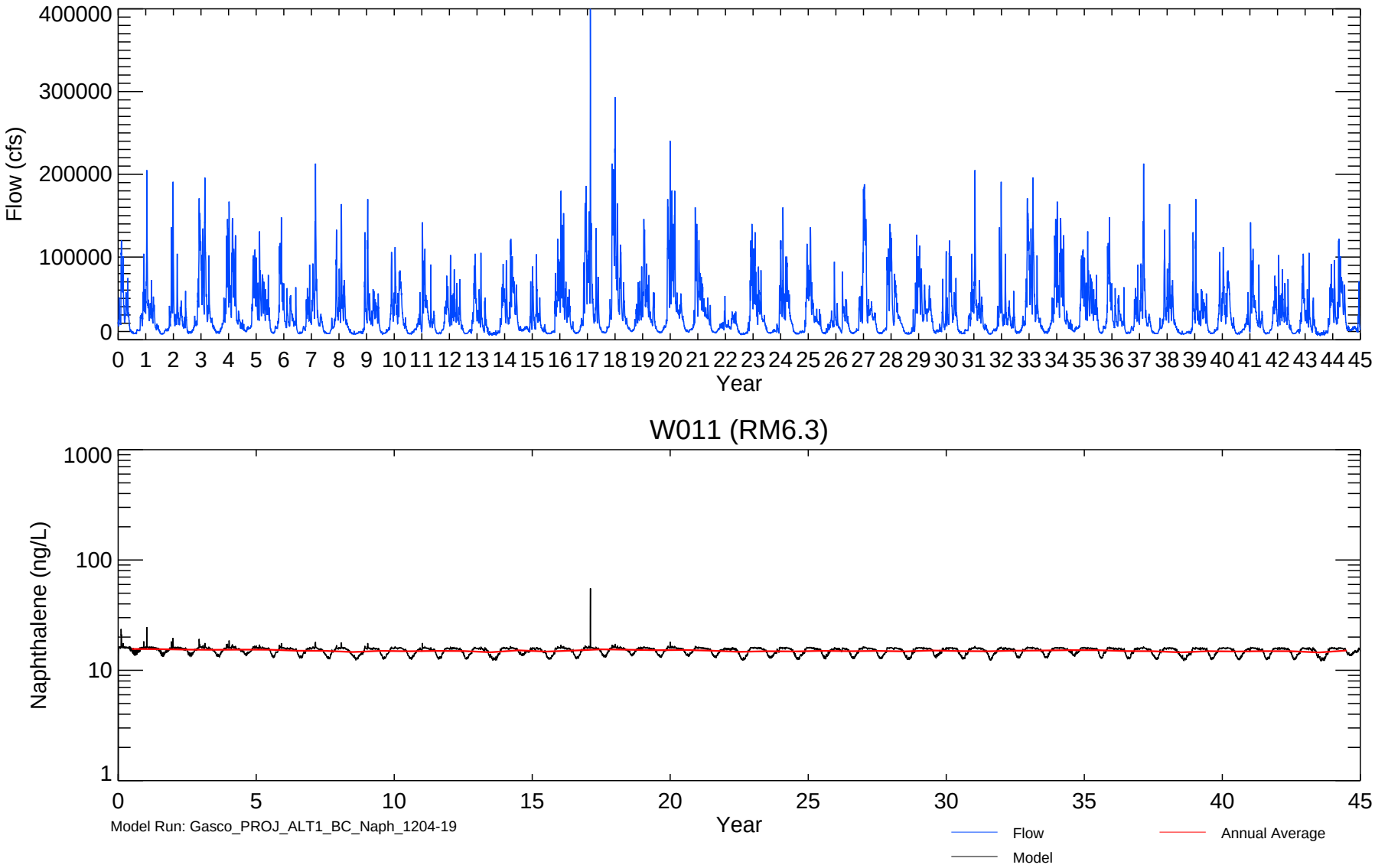


Figure 4-6b

Temporal Profile of Model-predicted Water Column Naphthalene Concentrations

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Model results shown represent laterally averaged results

ANCHOR QEA

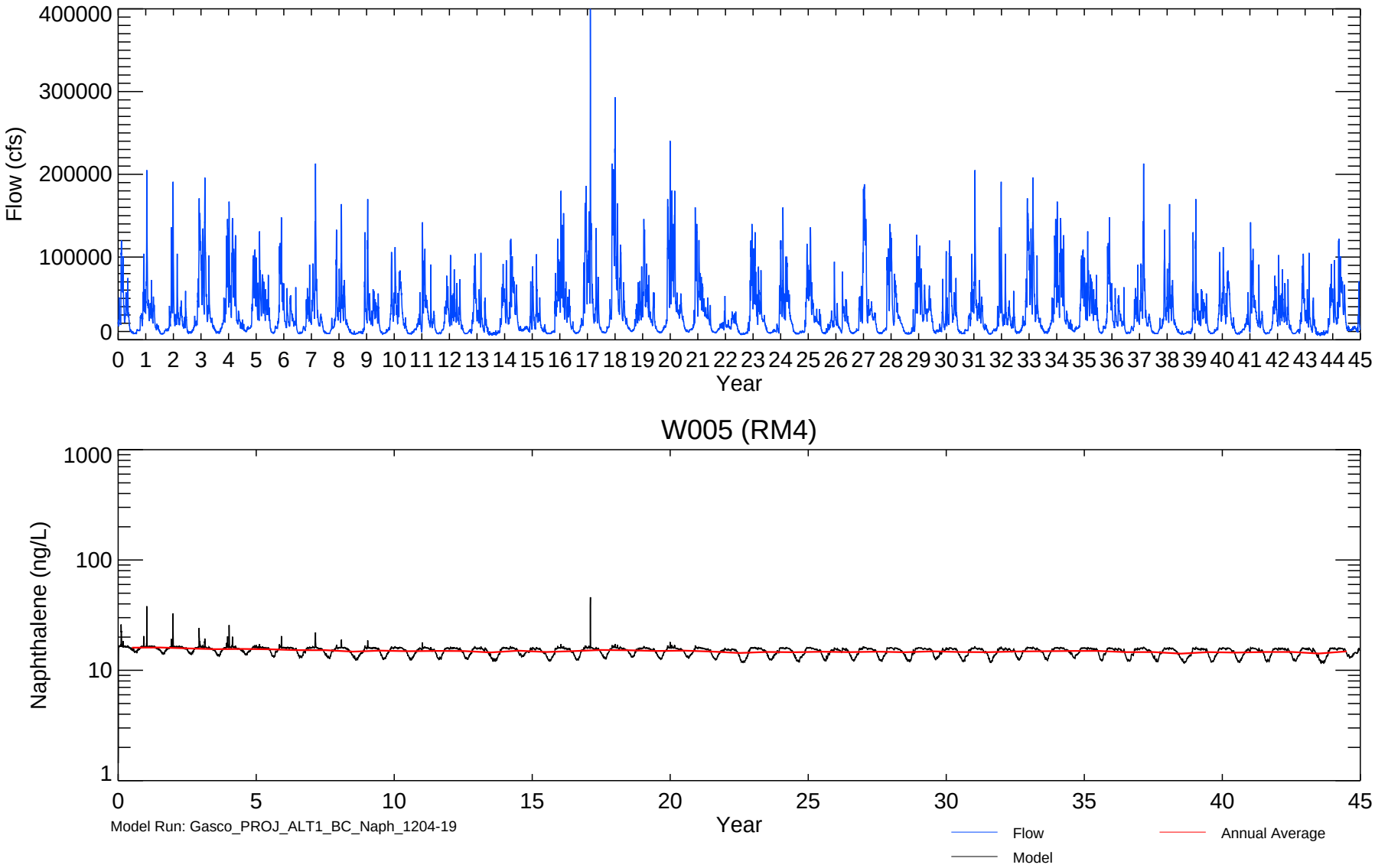


Figure 4-6c

Temporal Profile of Model-predicted Water Column Naphthalene Concentrations

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Model results shown represent laterally averaged results

ANCHOR QEA

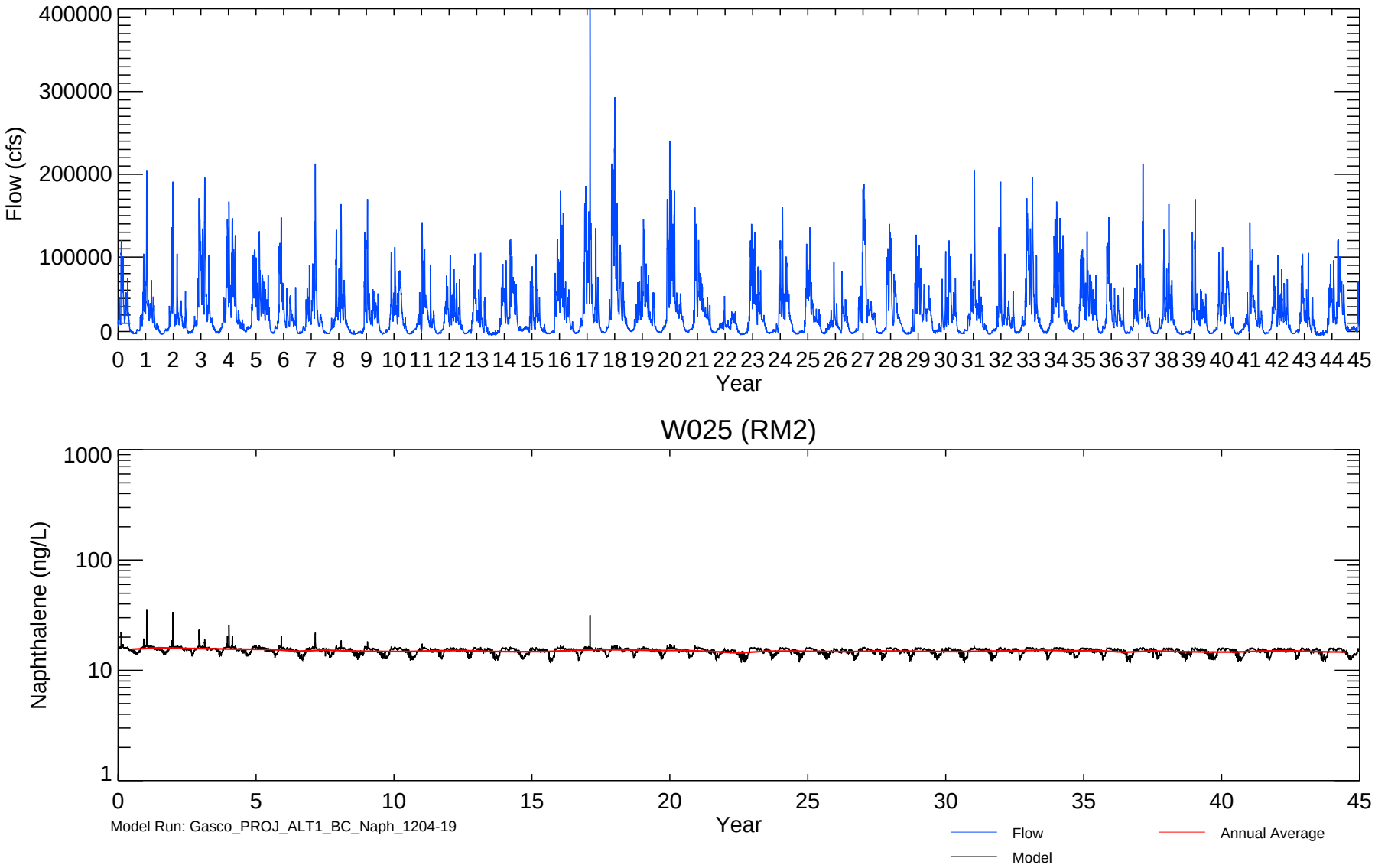


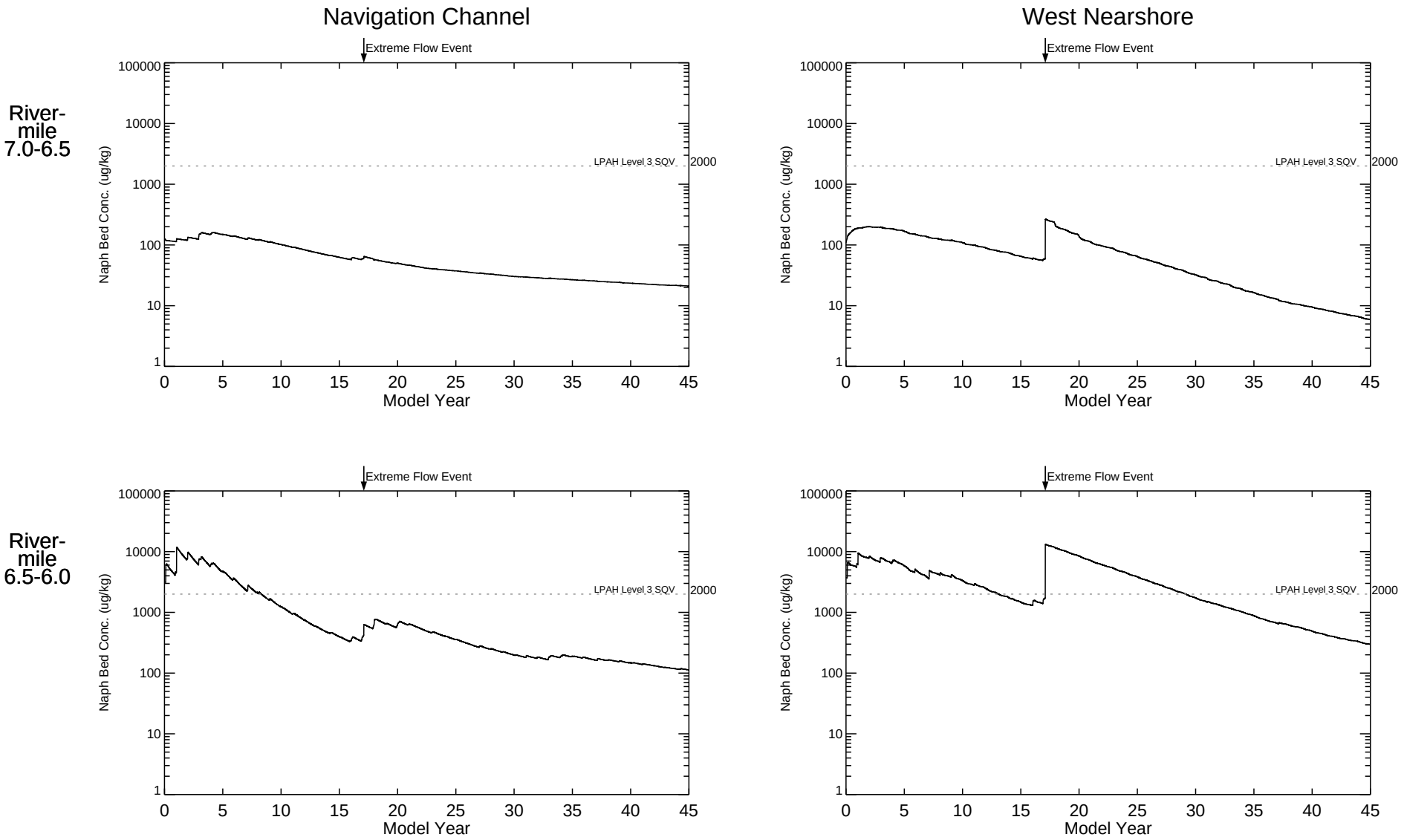
Figure 4-6d

Temporal Profile of Model-predicted Water Column Naphthalene Concentrations

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

Model results shown represent laterally averaged results

ANCHOR QEA



Model Run: Gasco_PROJ_ALT1_BC_Naph_1204-19

Figure 4-7

Time Series of Surface Sediment (Top 1-ft) Naphthalene SWACs by 1/2 River Mile Navigation Channel and West Nearshore Areas
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

ANCHOR QEA

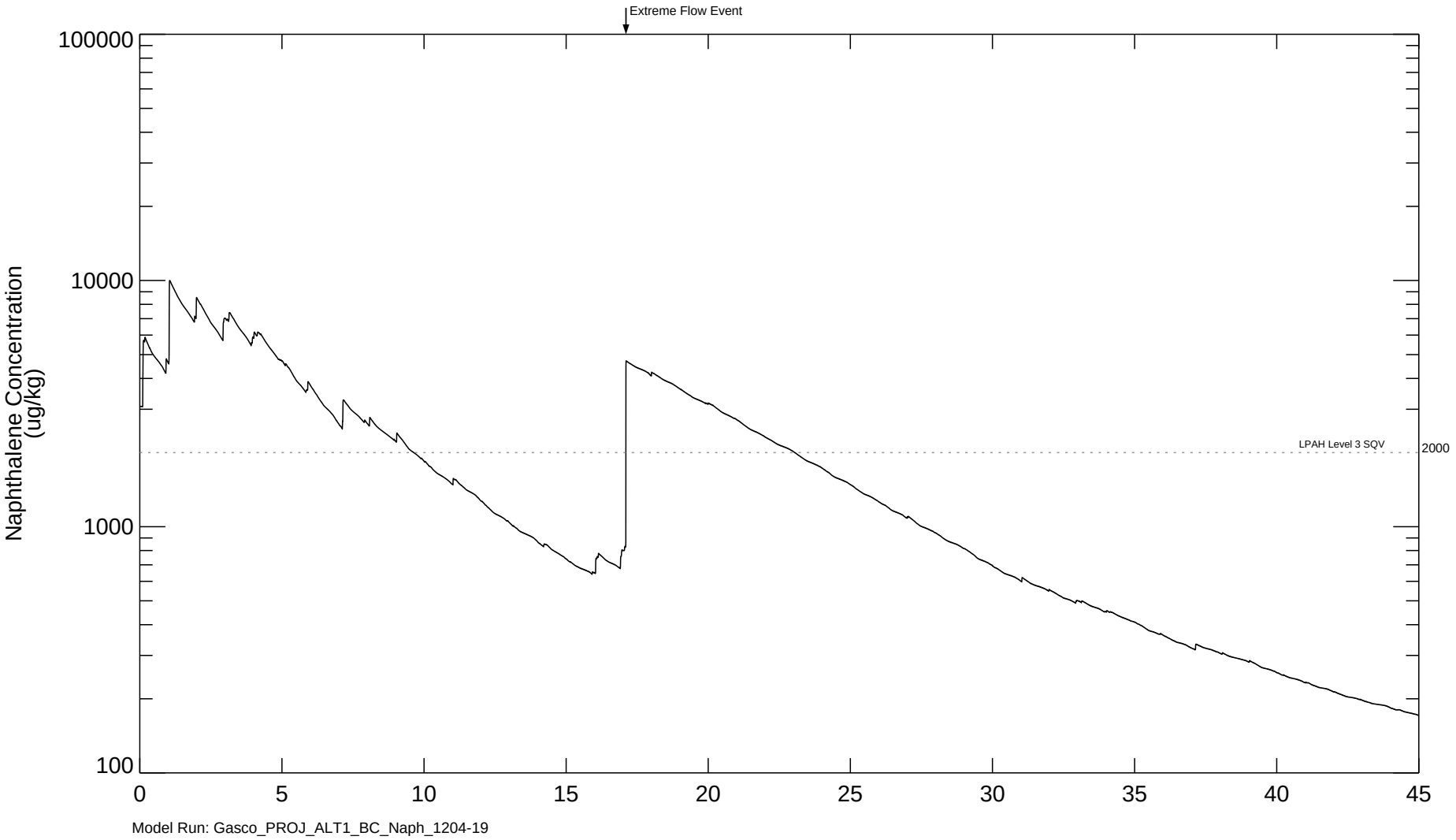
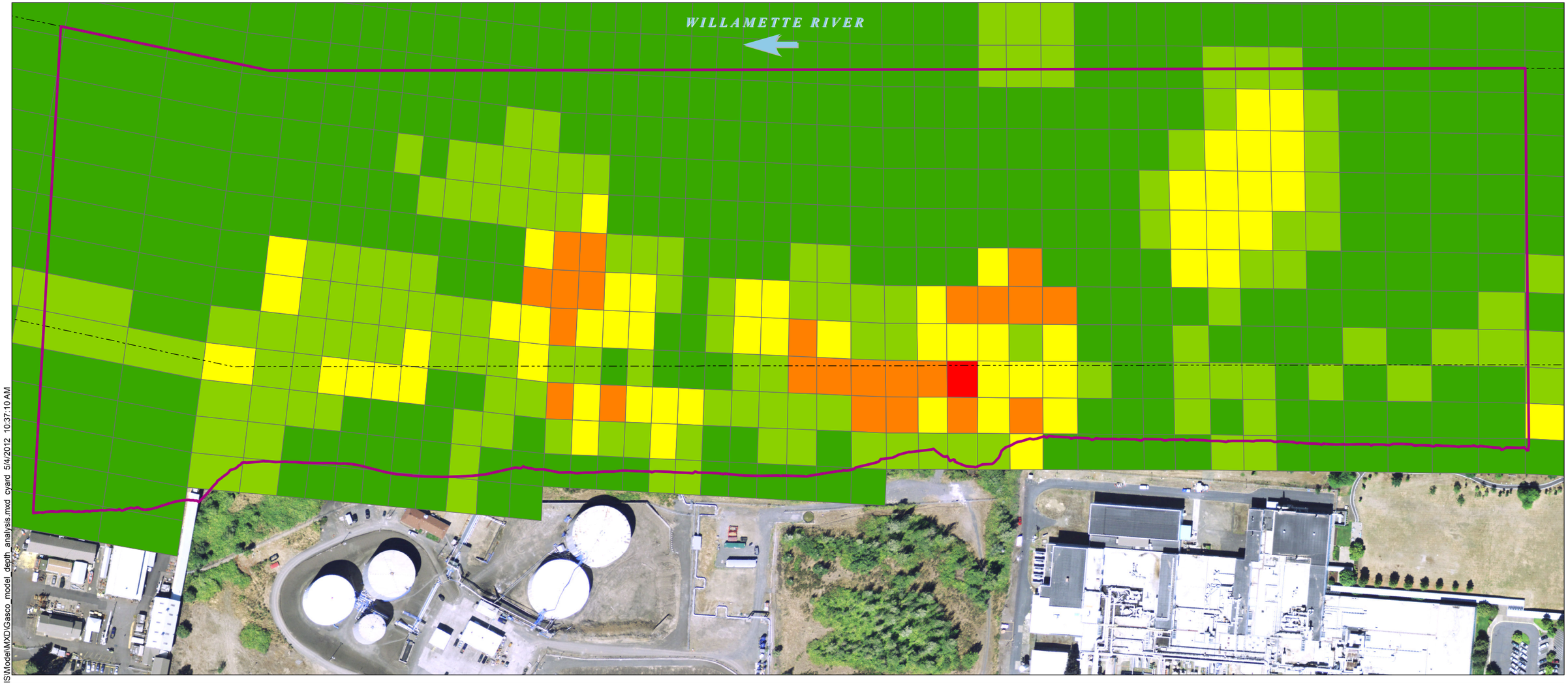


Figure 4-8

Time Series of Surface Sediment (Top 1-ft) Naphthalene SWACs in Gasco Sediments Site Area of Interest

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

ANCHOR QEA



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene No Action Year 10 (ug/kg)

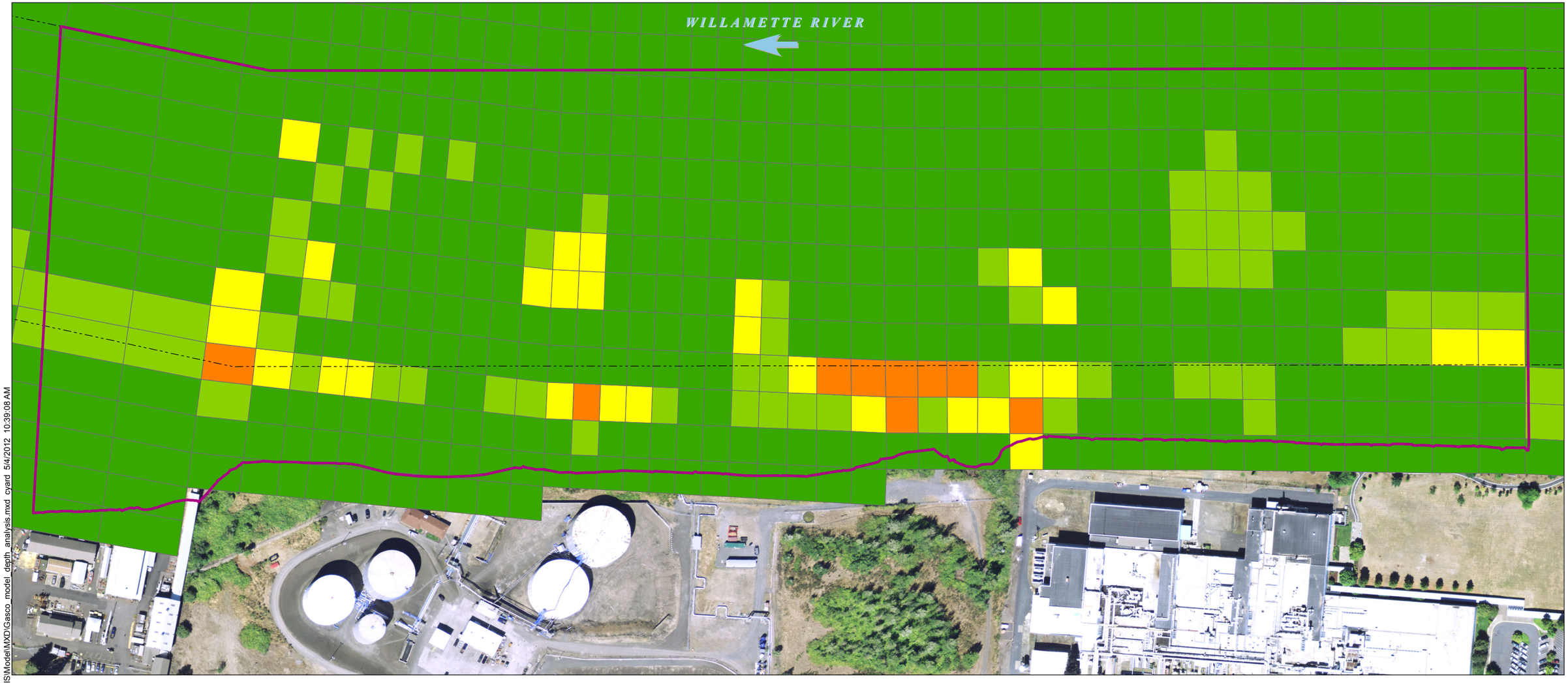
- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-9a
Model Grid Cell Naphthalene Concentrations at Year 10 for No Action
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest
(Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene No Action Year 30 (ug/kg)

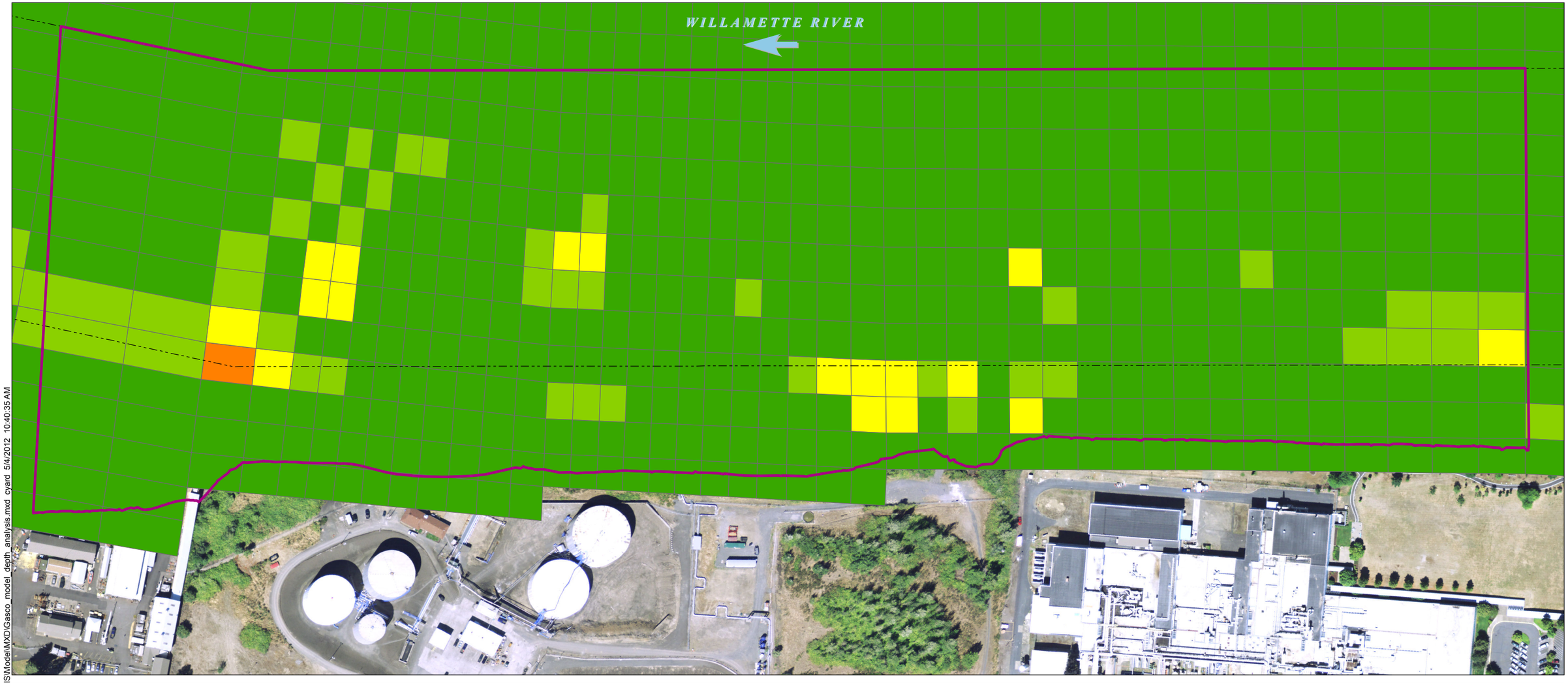
- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-9b
Model Grid Cell Naphthalene Concentrations at Year 30 for No Action
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Gasco Sediment Site Area of Interest
(Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene No Action Year 45 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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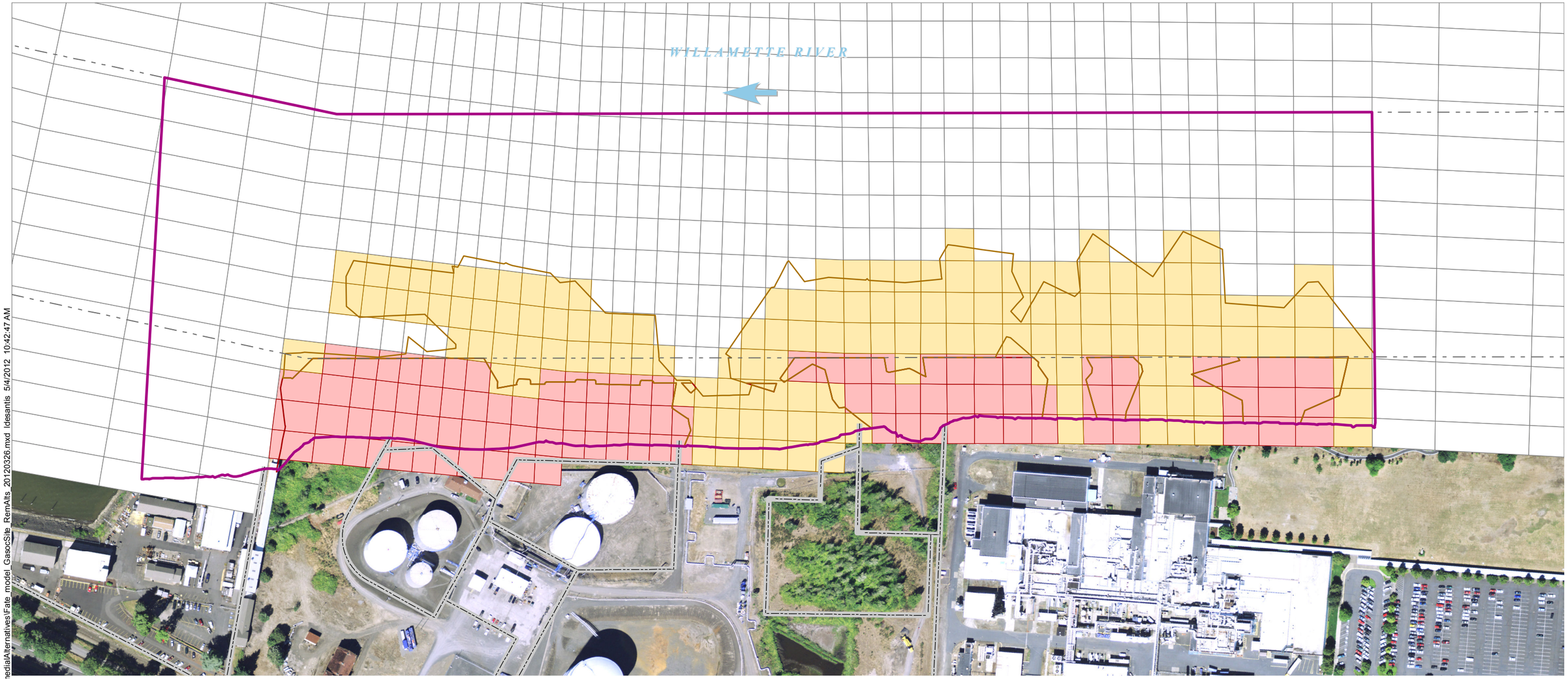
ANCHOR QEA

Figure 4-9c
Model Grid Cell Naphthalene Concentrations at Year 45 for No Action
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Grid Cells Selected for Remedial Alternative 2a

- Model Grid Cell
- Cap
- MNR

Remedial Alternative 2a Footprint

- Cap
- MNR

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Navigation Channel

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 125 250 375 500

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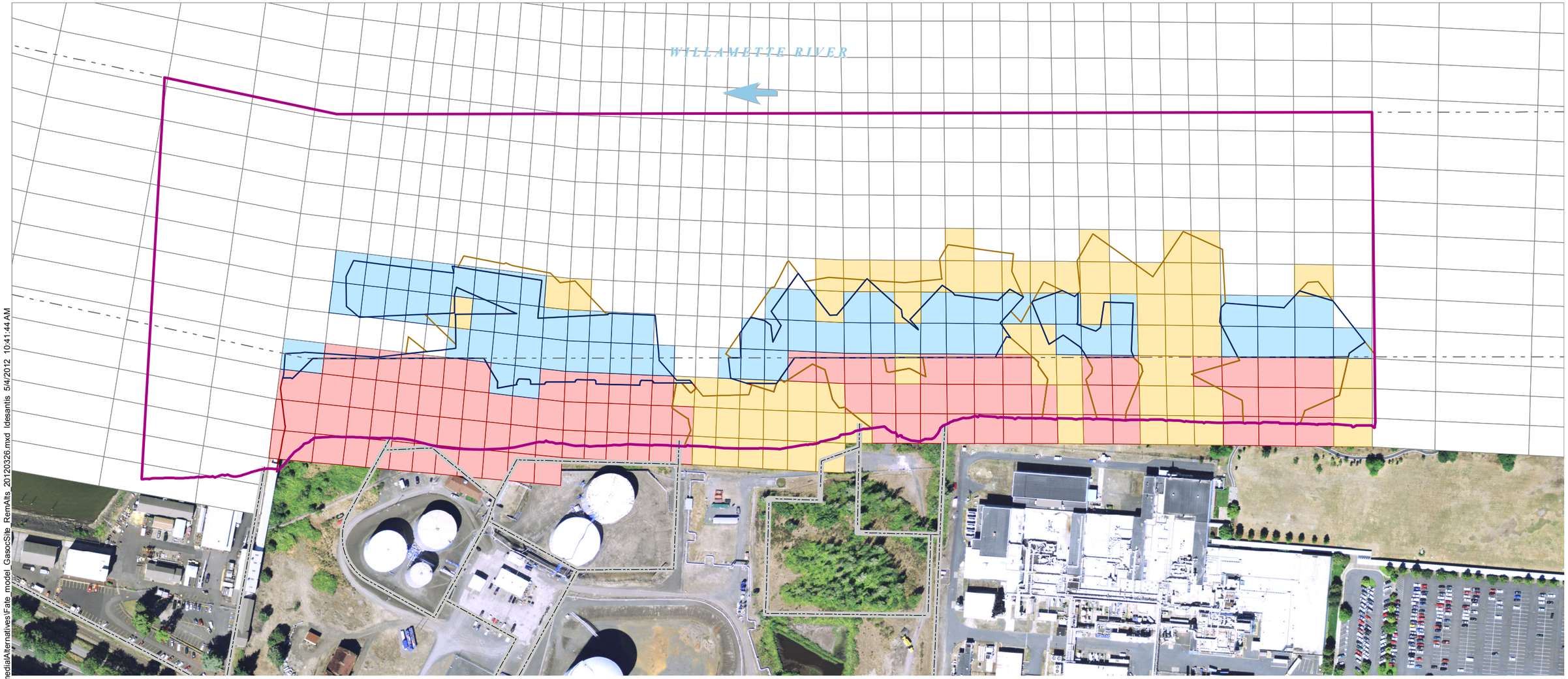
ANCHOR QEA

Figure 4-10a
Remedial Alternative 2a
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Grid Cells Selected for Remedial Alternative 2b

- Model Grid Cell
- Cap
- MNR
- Removal and Cover

Remedial Alternative 2b Footprint

- Cap
- MNR
- Removal and Cover

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Navigation Channel

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 125 250 375 500

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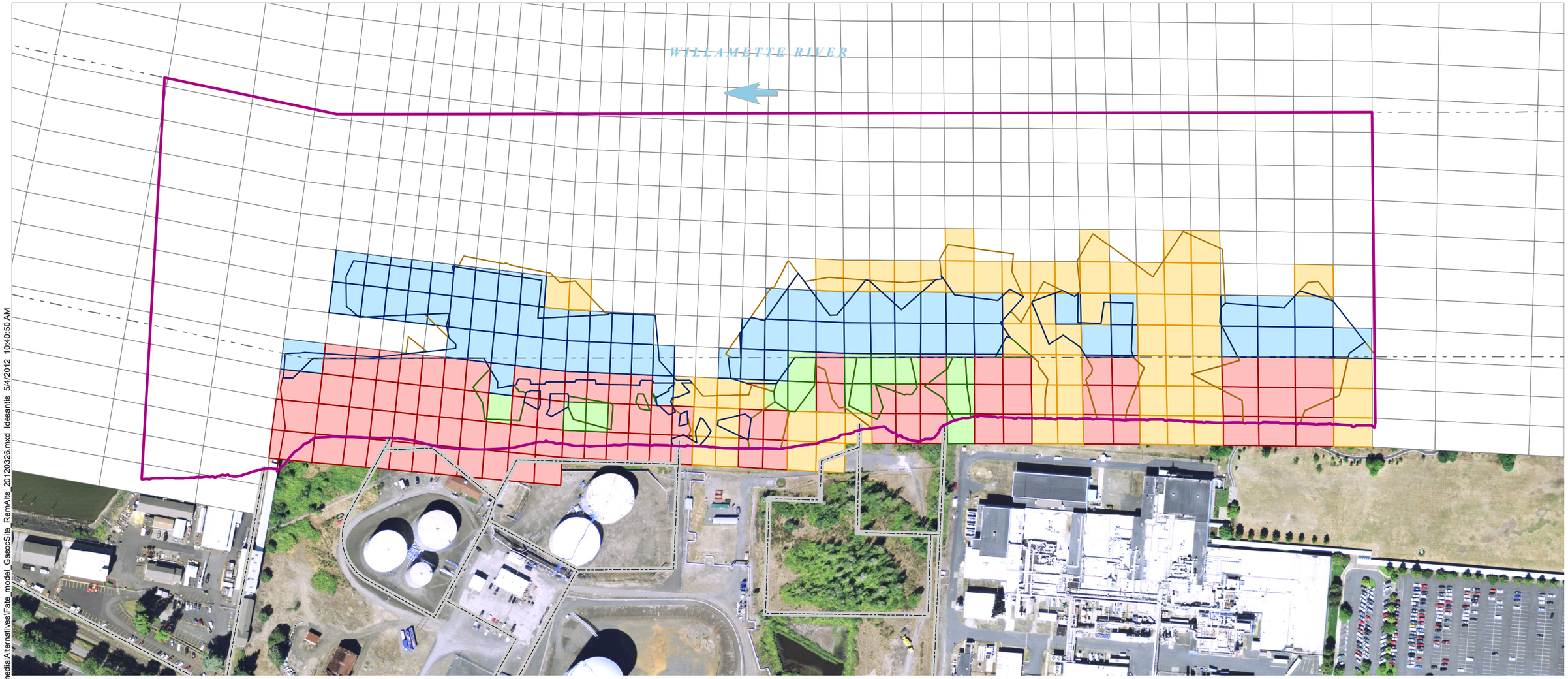
ANCHOR QEA

Figure 4-10b
Remedial Alternative 2b
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Grid Cells Selected for Remedial Alternative 3

- Model Grid Cells
- Cap
- MNR
- Removal and Cap
- Removal and Cover

Remedial Alternative 3 Footprint

- Cap
- MNR
- Removal and Cap
- Removal and Cover

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Navigation Channel

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 125 250 375 500

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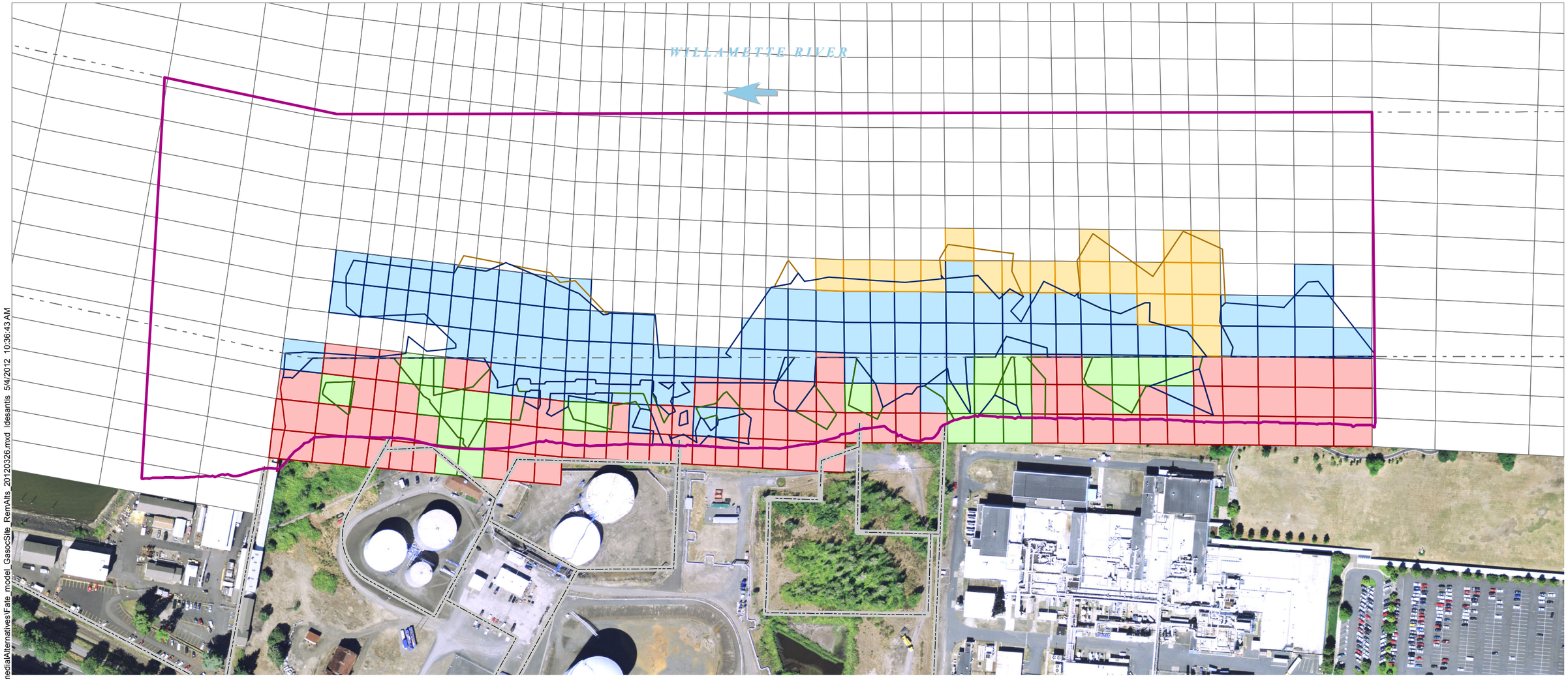
ANCHOR QEA

Figure 4-10c
Remedial Alternative 3
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Grid Cells Selected for Remedial Alternative 4

- Model Grid Cell
- Cap
- MNR
- Removal and Cap
- Removal and Cover

Remedial Alternative 4 Footprint

- Cap
- MNR
- Removal and Cap
- Removal and Cover

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Navigation Channel

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 125 250 375 500

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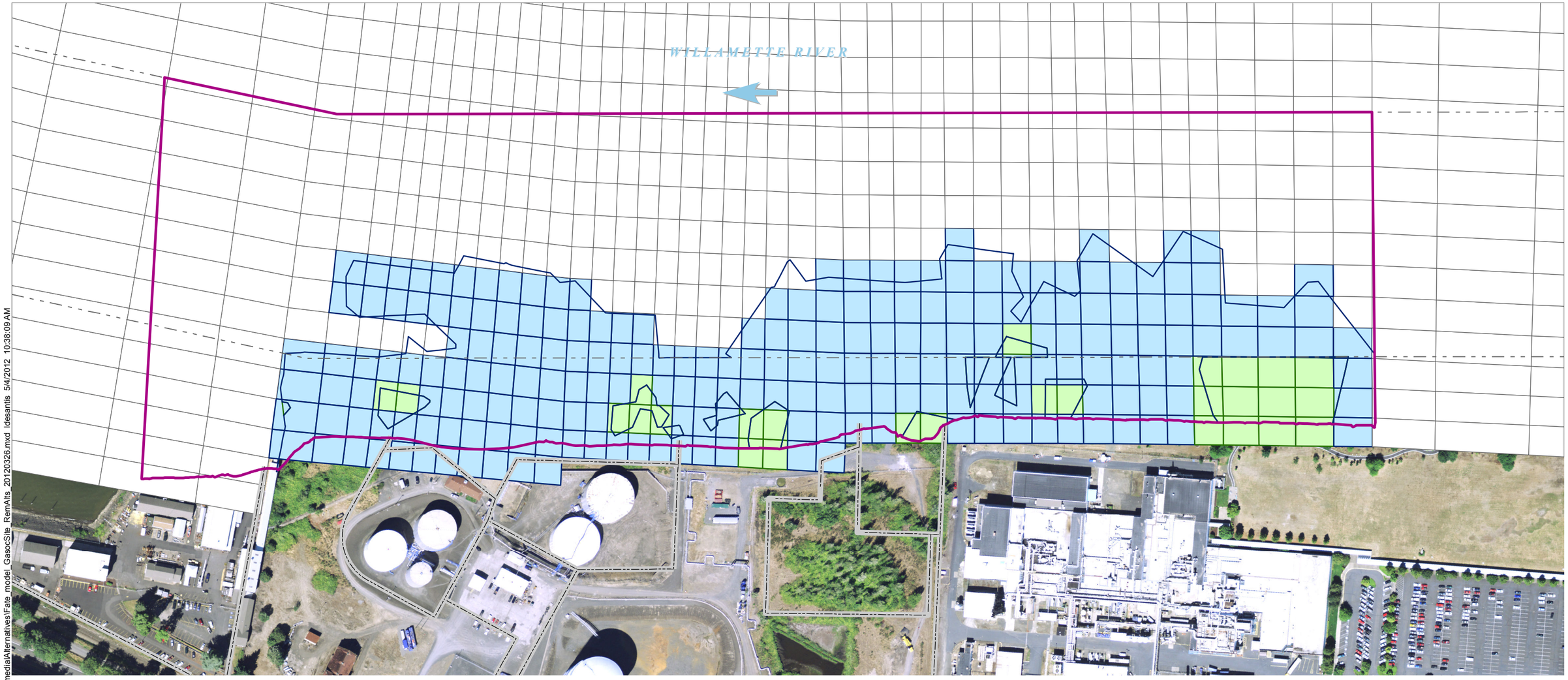
ANCHOR QEA

Figure 4-10d
Remedial Alternative 4
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Grid Cells Selected for Remedial Alternative 5

- Model Grid Cell
- Cap
- MNR
- Removal and Cap
- Removal and Cover

Remedial Alternative 5 Footprint

- Cap
- MNR
- Removal and Cap
- Removal and Cover

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Navigation Channel

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

Feet
0 125 250 375 500

H:\NW_Natural\Gasco\(000029-02)\GIS\Model\MXD\RemedialAlternatives\Fate_model_GascoSite_RemAlts_20120326.mxd ldesantis 5/4/2012 10:36:09 AM

ANCHOR QEA

Figure 4-10e
Remedial Alternative 5
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

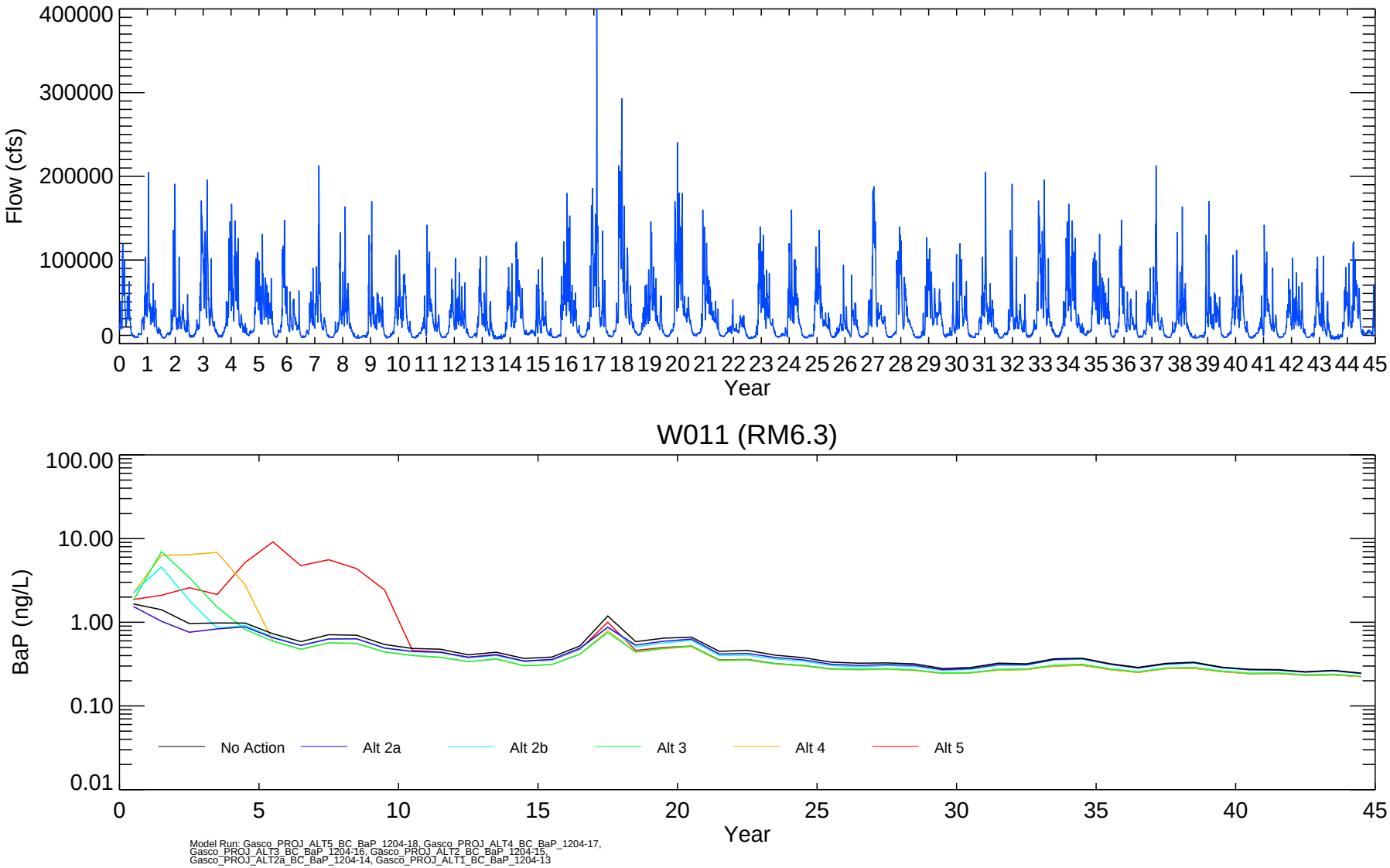


Figure 4-11

Temporal Profiles of Model-predicted Water Column BaP Concentrations

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

ANCHOR QEA

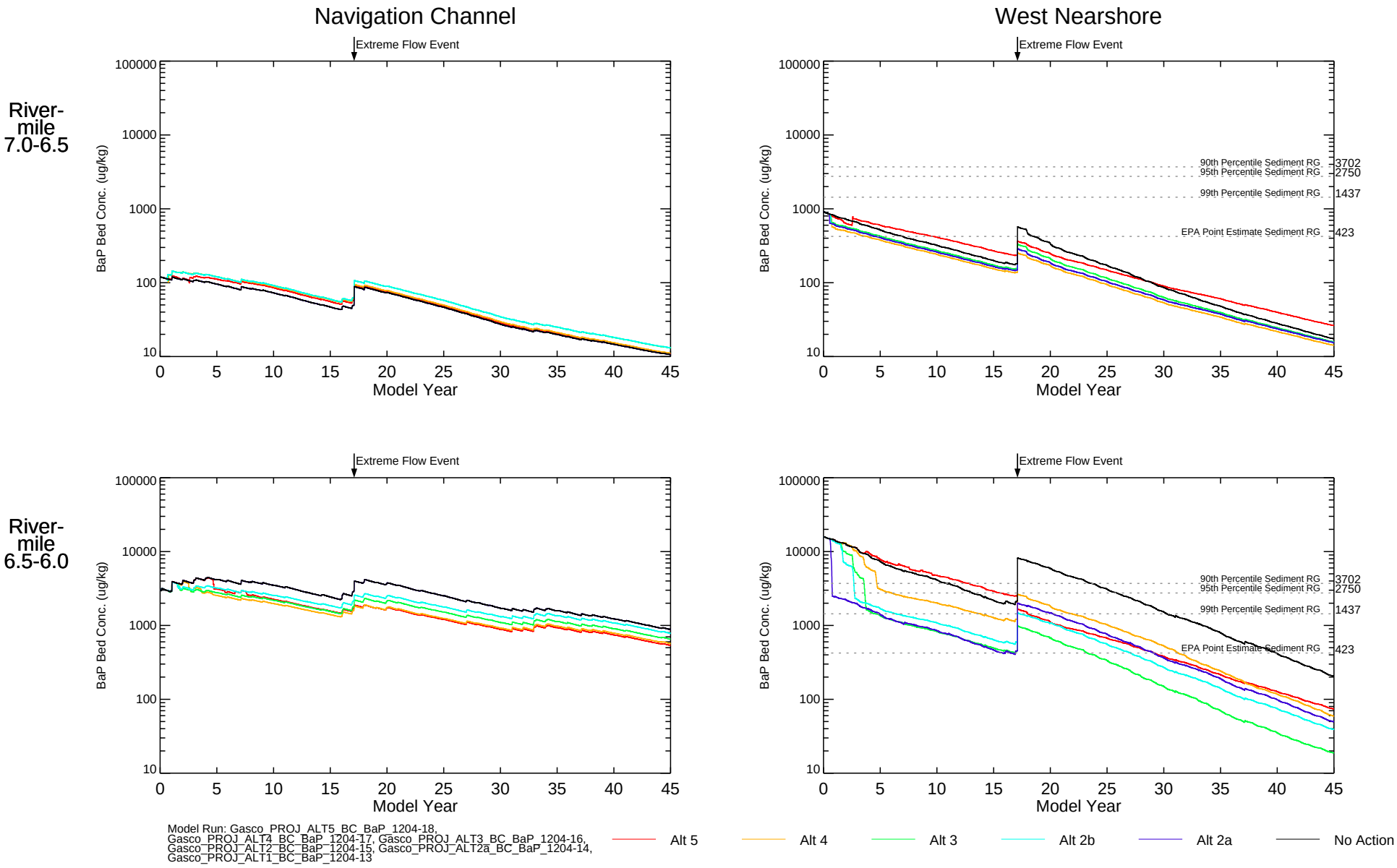
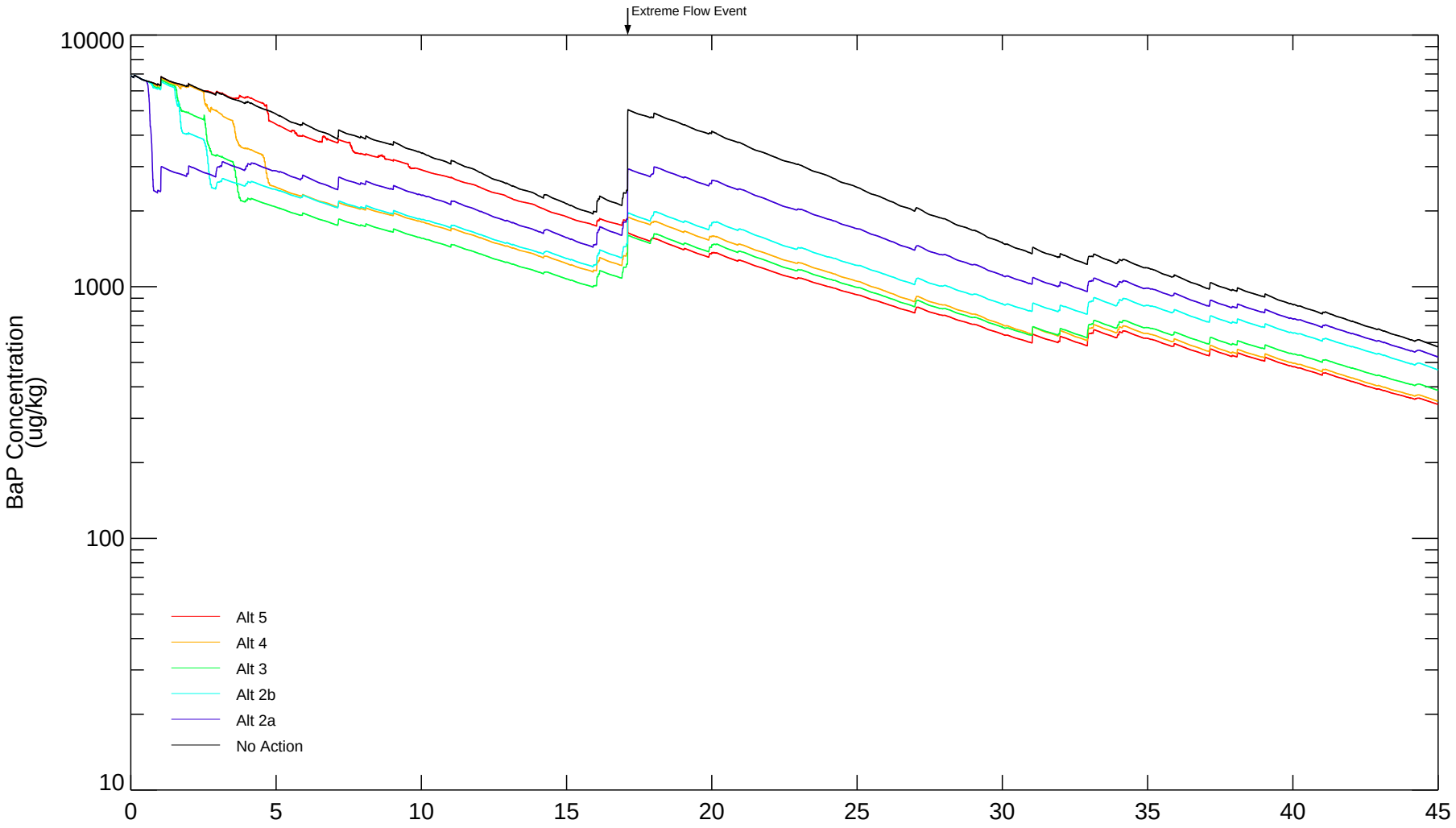


Figure 4-12

Time Series of Surface Sediment (Top 1-ft) BaP SWACs by 1/2 River Mile Navigation Channel and West Nearshore Areas
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

ANCHOR QEA



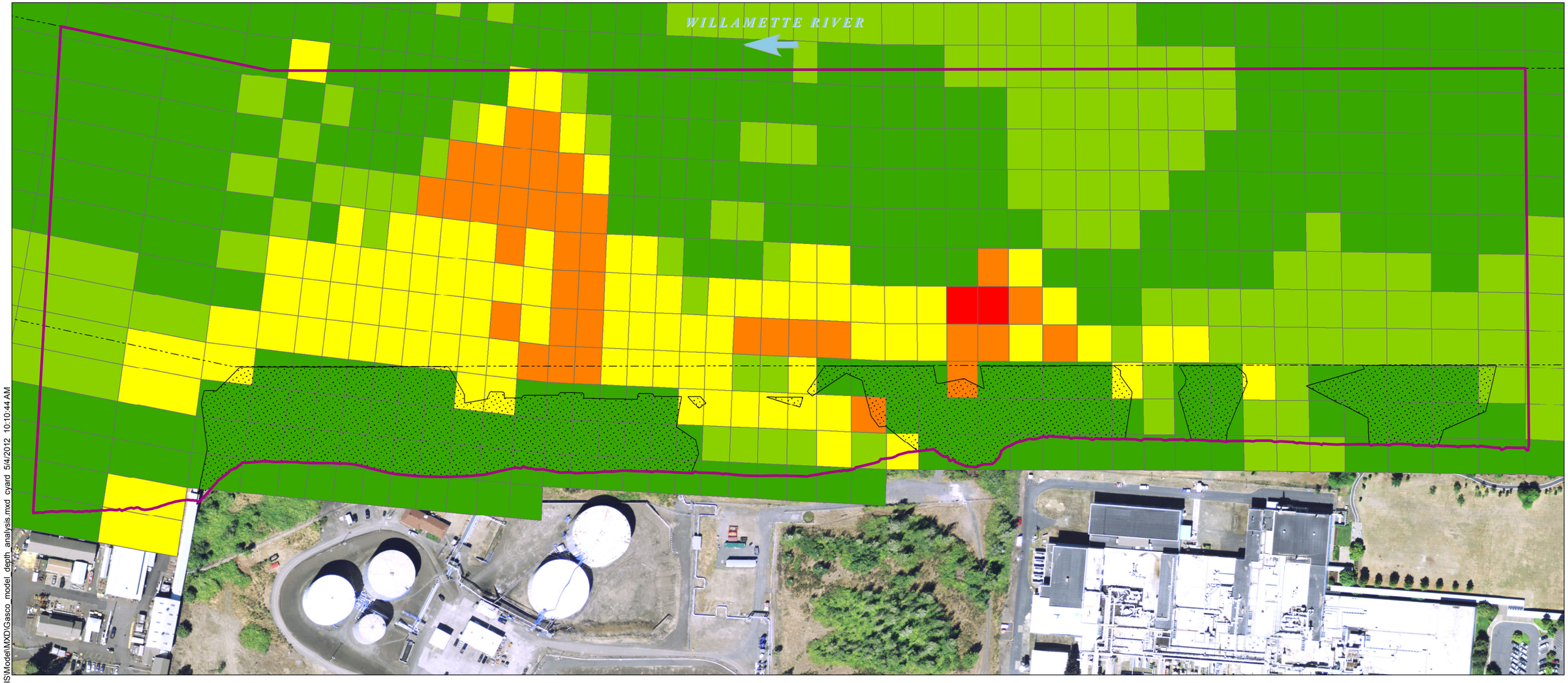
Model Run: Gasco_PROJ_ALT5_BC_BaP_1204-18, Gasco_PROJ_ALT4_BC_BaP_1204-17, Gasco_PROJ_ALT3_BC_BaP_1204-16, Gasco_PROJ_ALT2_BC_BaP_1204-15, Gasco_PROJ_ALT2a_BC_BaP_1204-14, Gasco_PROJ_ALT1_BC_BaP_1204-13

Figure 4-13

Time Series of Surface Sediment (Top 1-ft) BaP SWACs in Gasco Sediments Site Area of Interest

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

ANCHOR QEA



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 2a Year 10 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 2a Footprint

TechType

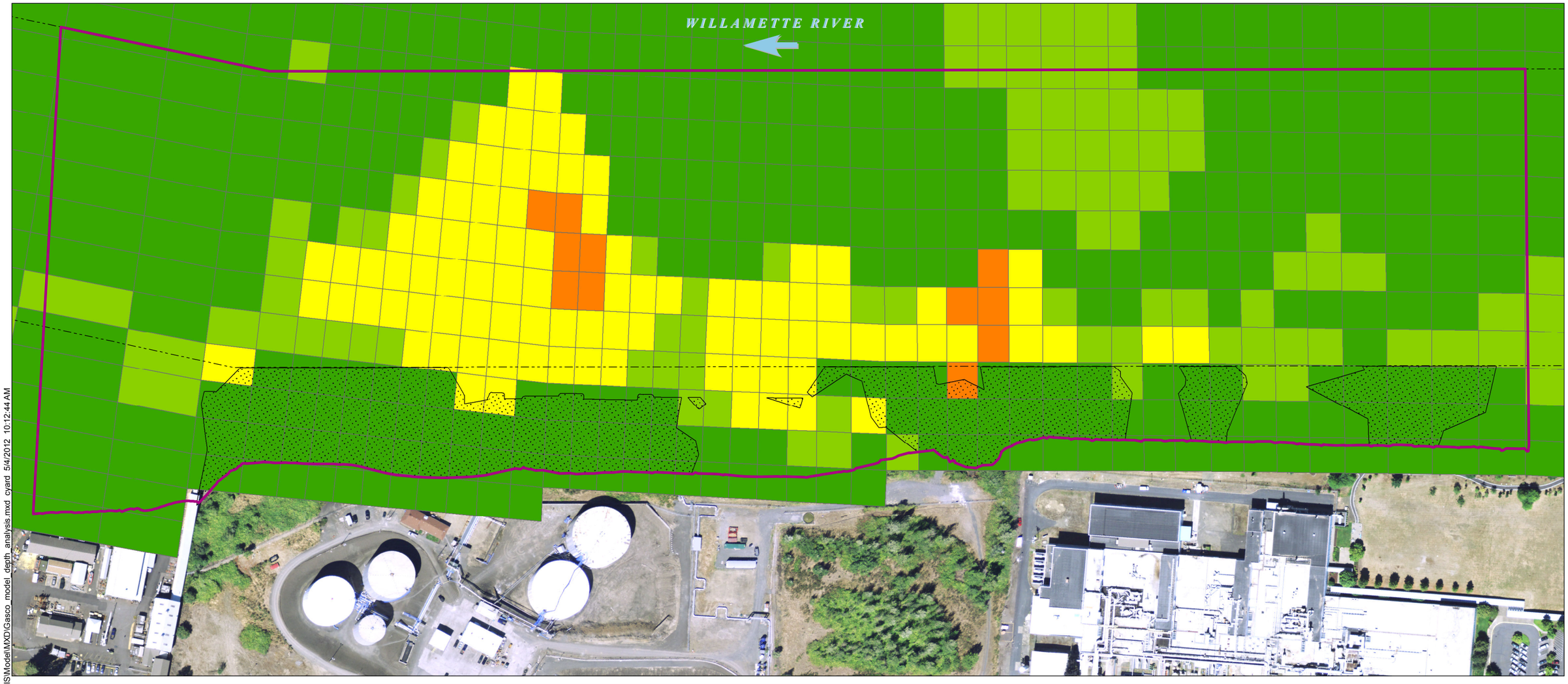
Cap

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-14a
Model Grid Cell BaP Concentrations at Year 10 for Alternative 2a
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 2a Year 30 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 2a Footprint

TechType

Cap

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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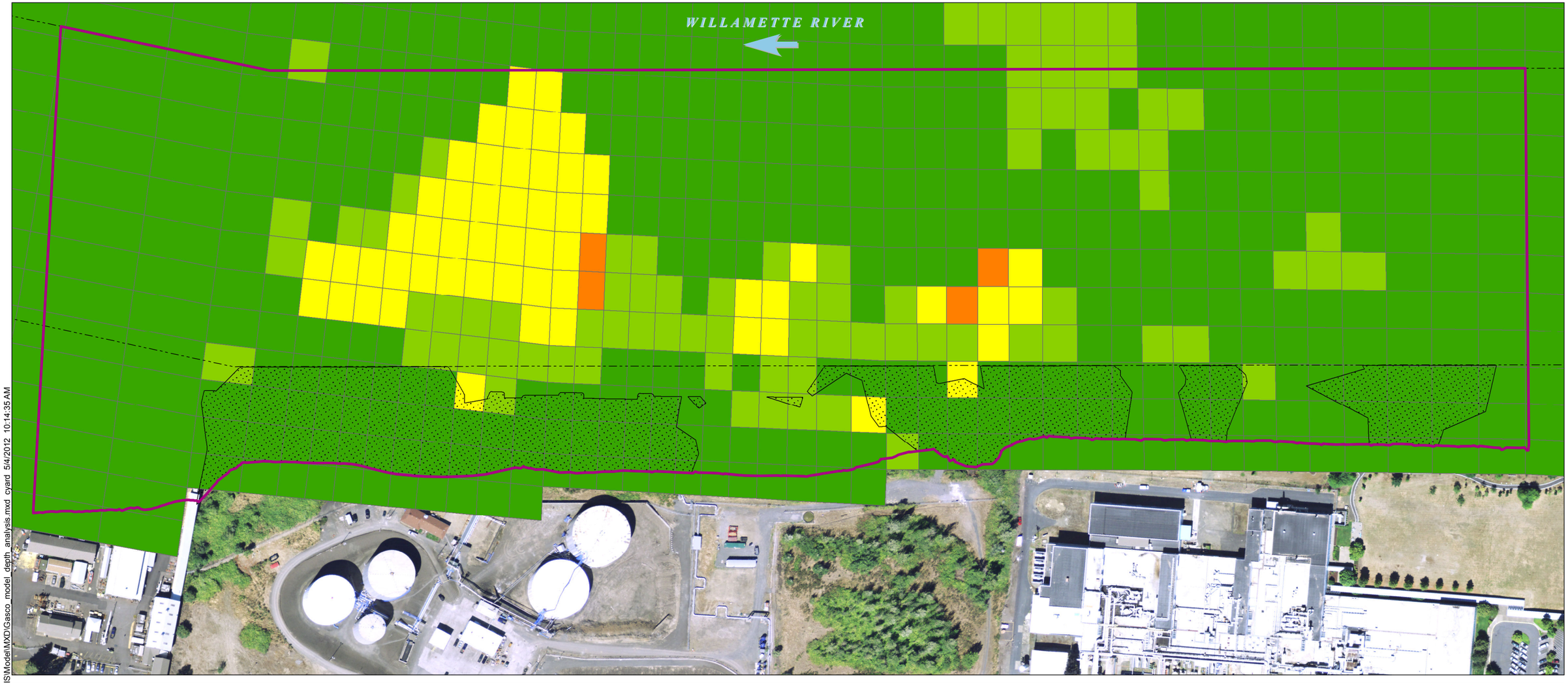
ANCHOR QEA

Figure 4-14b
Model Grid Cell BaP Concentrations at Year 30 for Alternative 2a
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 2a Year 45 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 2a Footprint

TechType

Cap

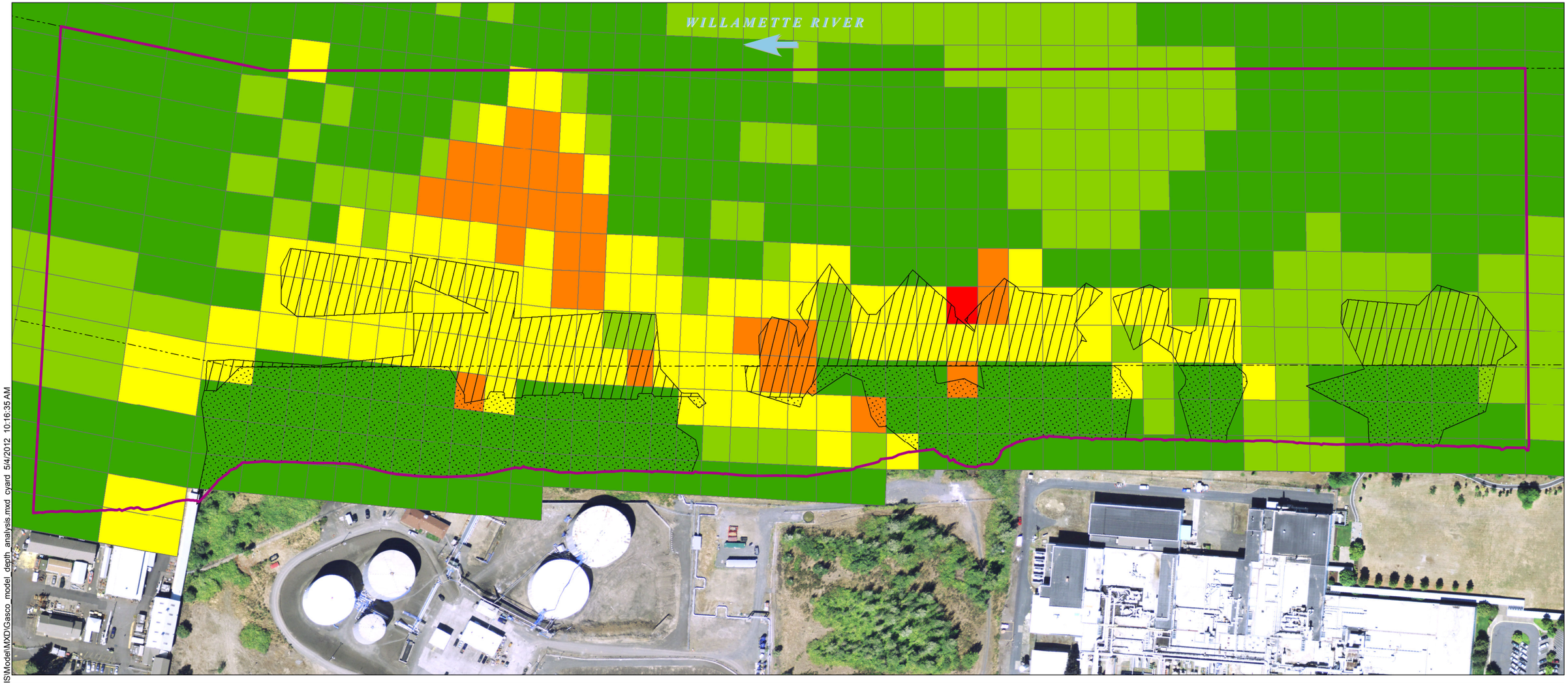
NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

H:\D_Drive\Projects\NW_Natural\Gasco\(000029-02)\GIS\Model\MXD\Gasco_model_depth_analysis.mxd cyard 5/4/2012 10:14:35 AM

ANCHOR QEA

Figure 4-14c
Model Grid Cell BaP Concentrations at Year 45 for Alternative 2a
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 2b Year 10 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 2b Footprint

TechType

- Cap
- Removal and Cover

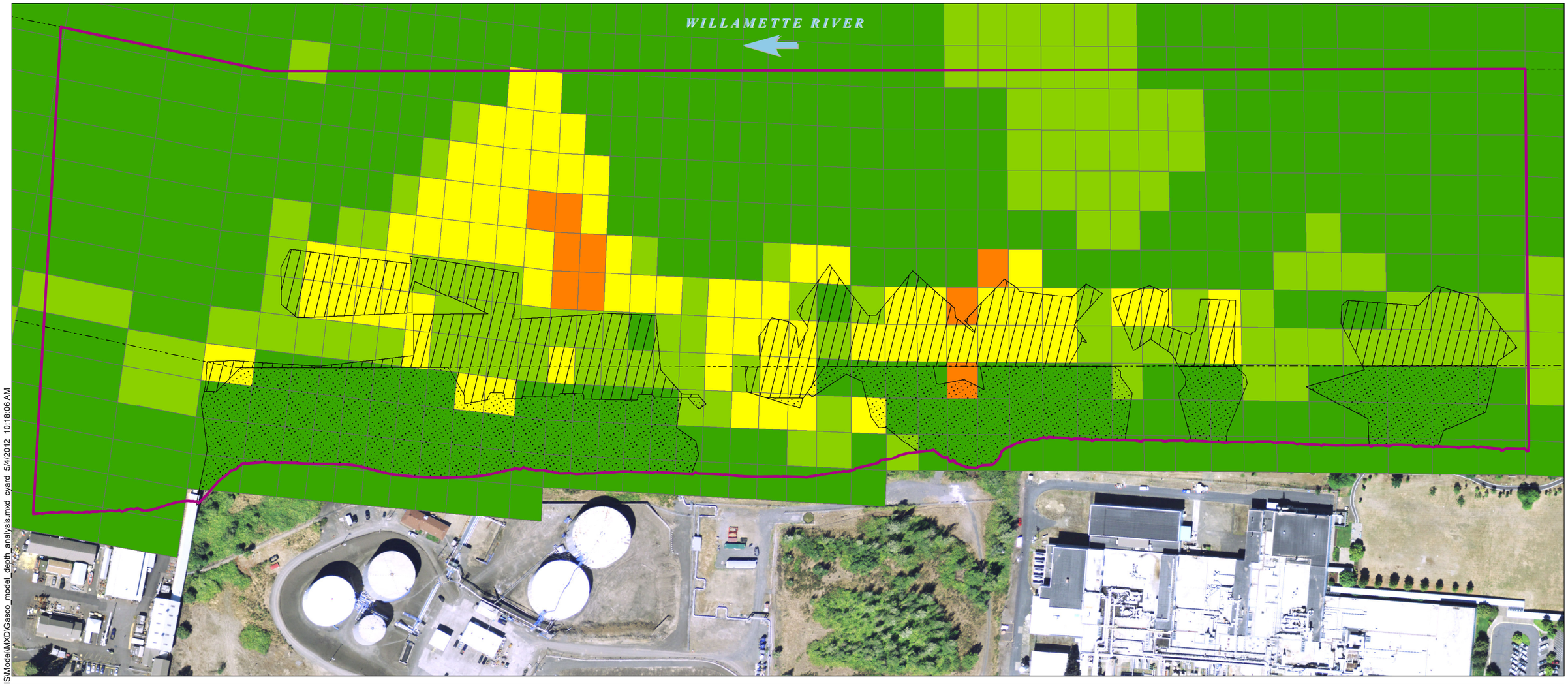
NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

H:\D_Drive\Projects\NW_Natural\Gasco\(000029-02)\GIS\Model\MXD\Gasco_model_depth_analysis.mxd cyard 5/4/2012 10:16:35 AM

ANCHOR QEA

Figure 4-15a
Model Grid Cell BaP Concentrations at Year 10 for Alternative 2b
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 2b Year 30 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 2b Footprint

TechType

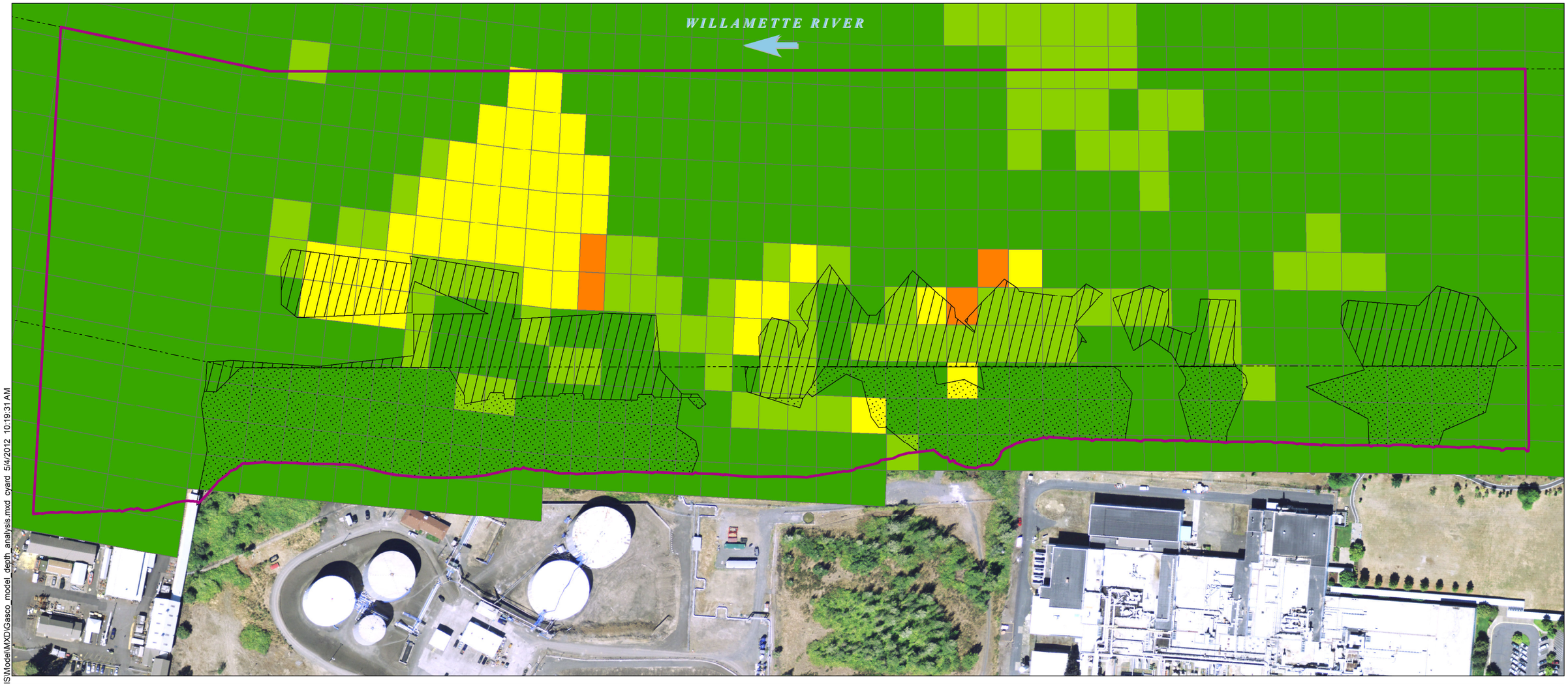
- Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-15b
Model Grid Cell BaP Concentrations at Year 30 for Alternative 2b
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 2b Year 45 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 2b Footprint

TechType

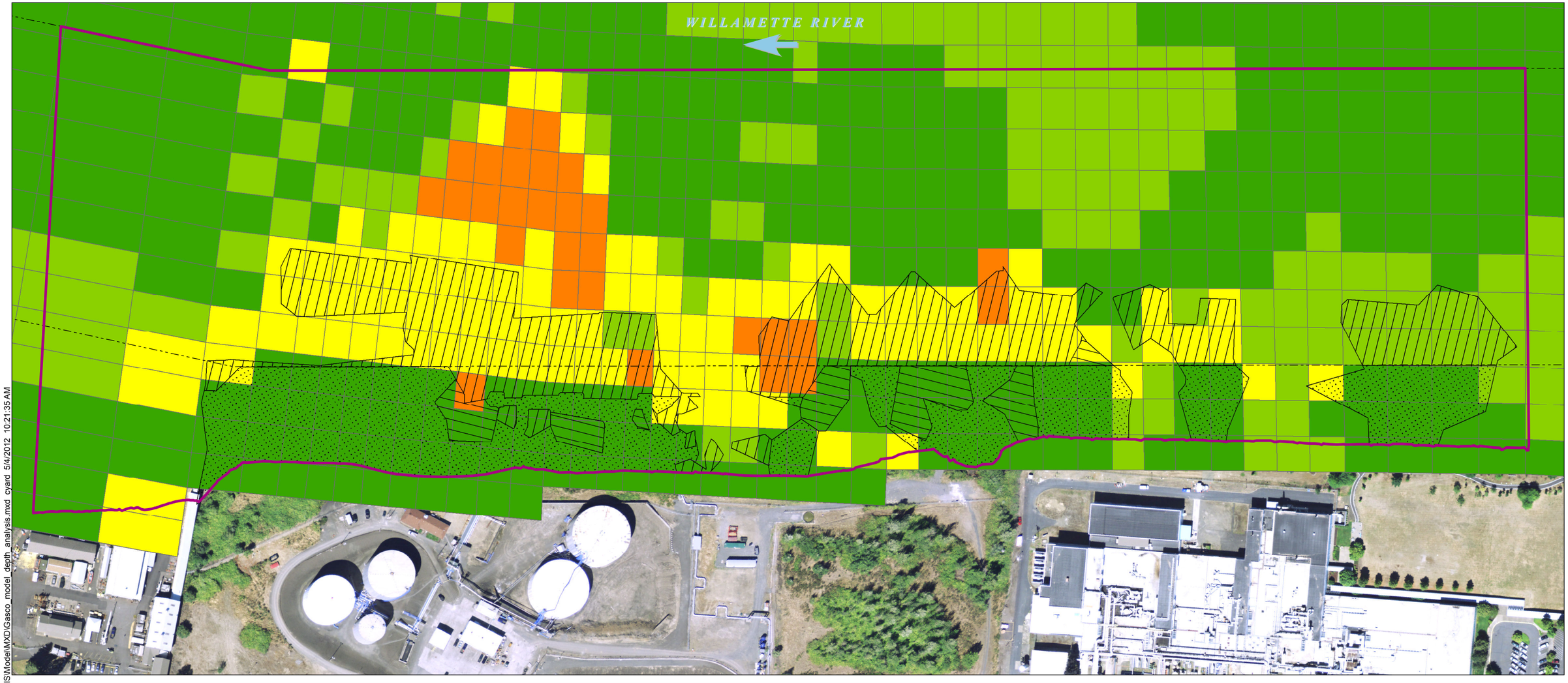
- Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-15c
Model Grid Cell BaP Concentrations at Year 45 for Alternative 2b
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 3 Year 10 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 3 Footprint

TechType

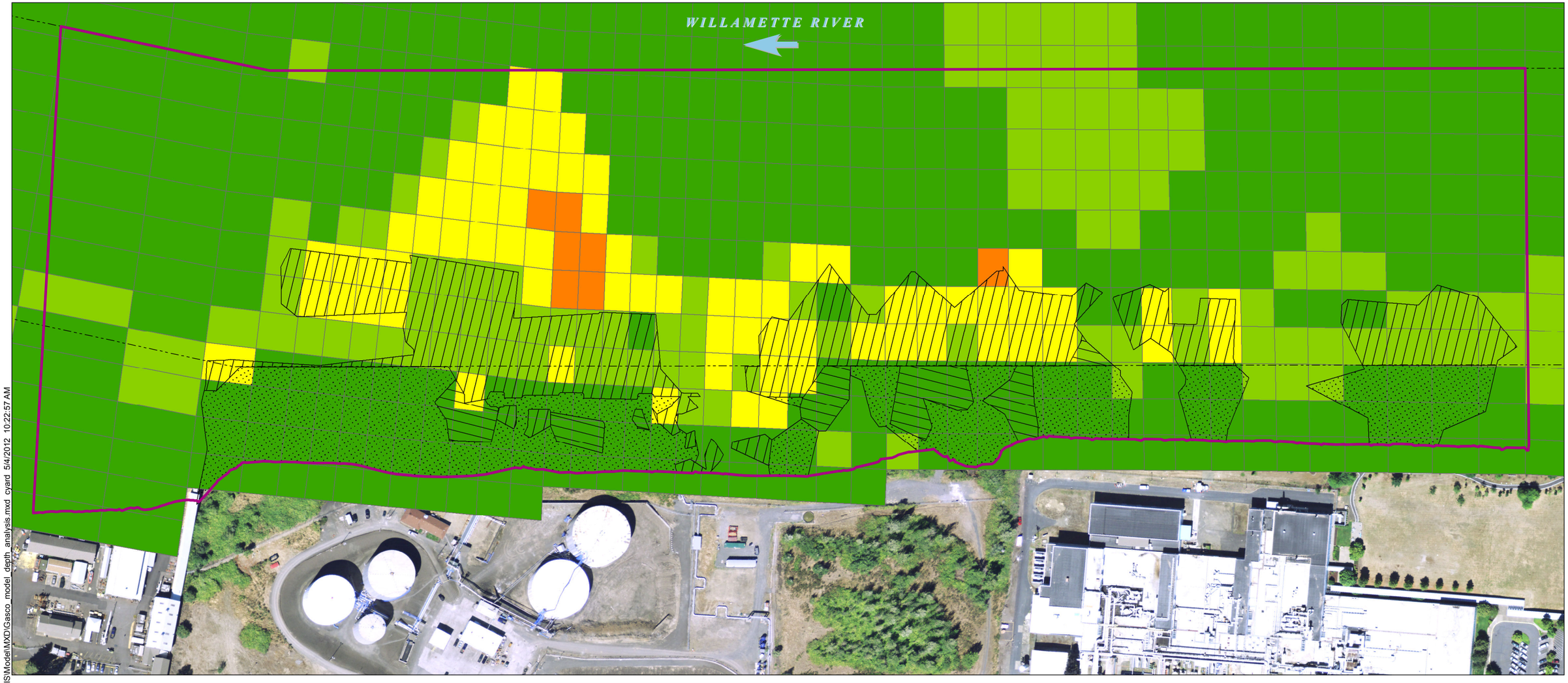
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-16a
Model Grid Cell BaP Concentrations at Year 10 for Alternative 3
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 3 Year 30 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 3 Footprint

TechType

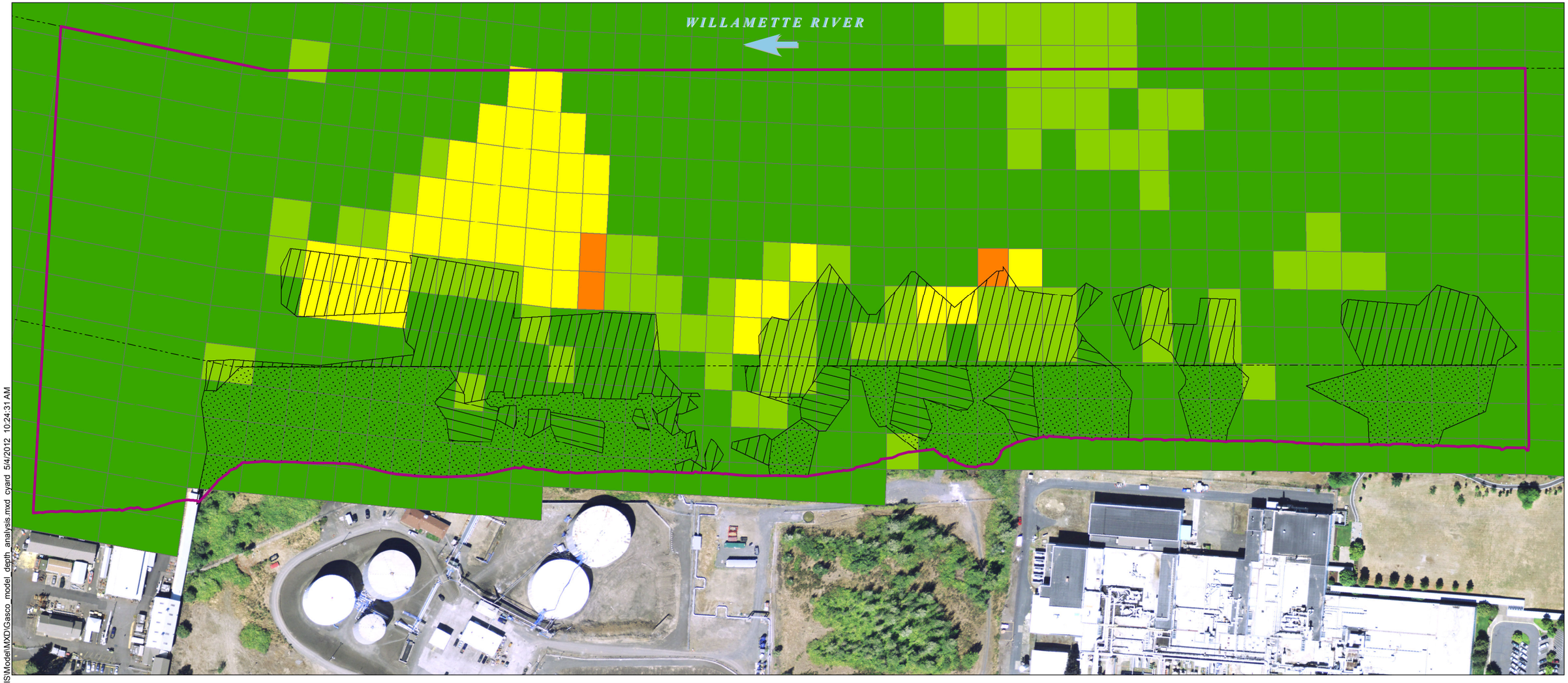
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-16b
Model Grid Cell BaP Concentrations at Year 30 for Alternative 3
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 3 Year 45 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 3 Footprint

TechType

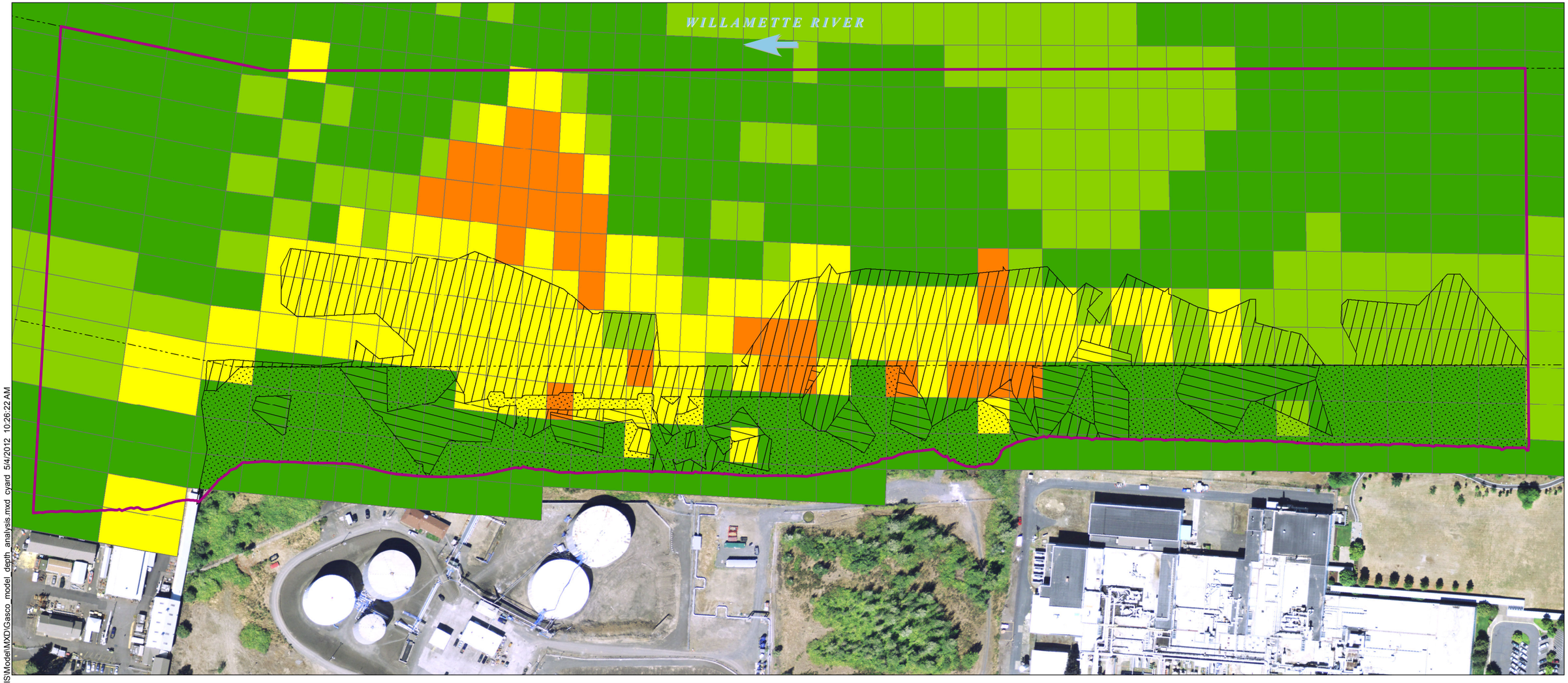
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-16c
Model Grid Cell BaP Concentrations at Year 45 for Alternative 3
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 4 Year 10 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 4 Footprint

TechType

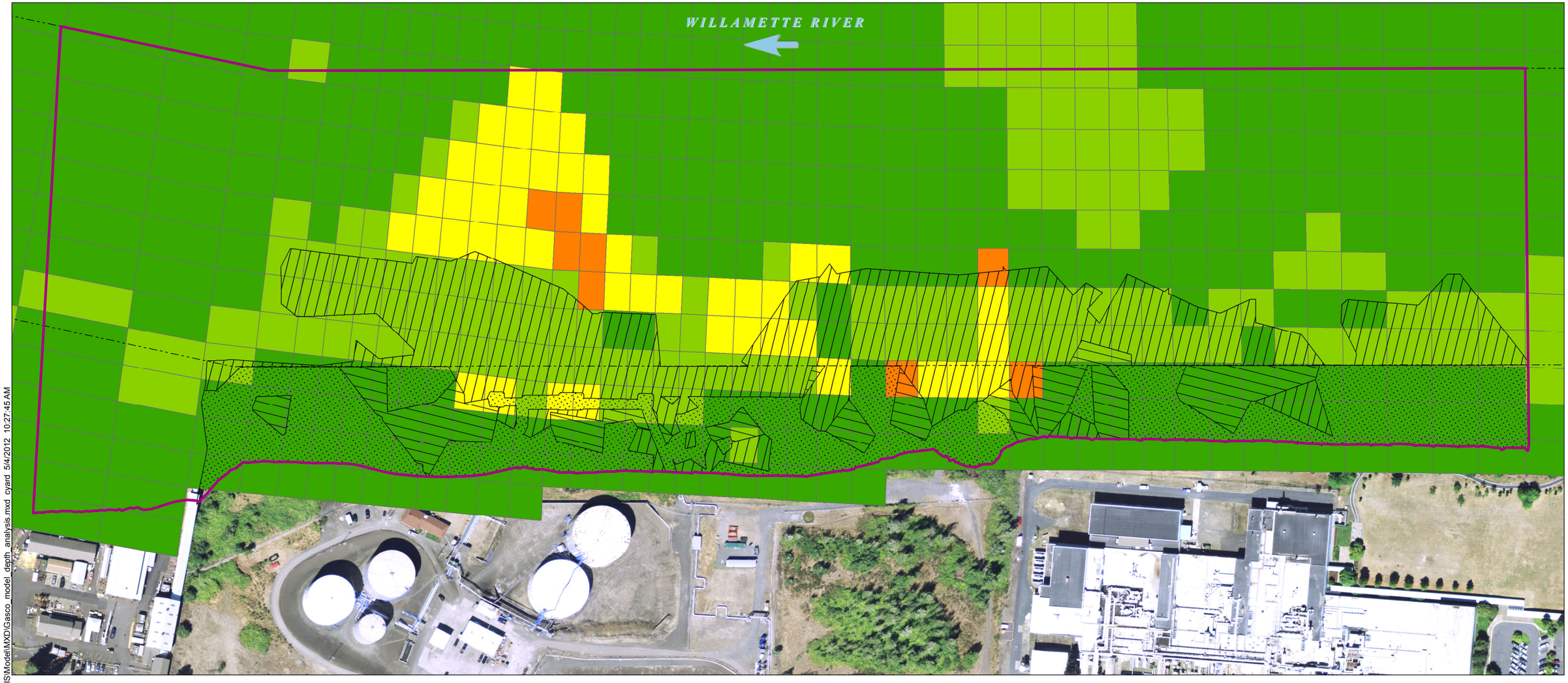
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-17a
Model Grid Cell BaP Concentrations at Year 10 for Alternative 4
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 4 Year 30 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 4 Footprint

TechType

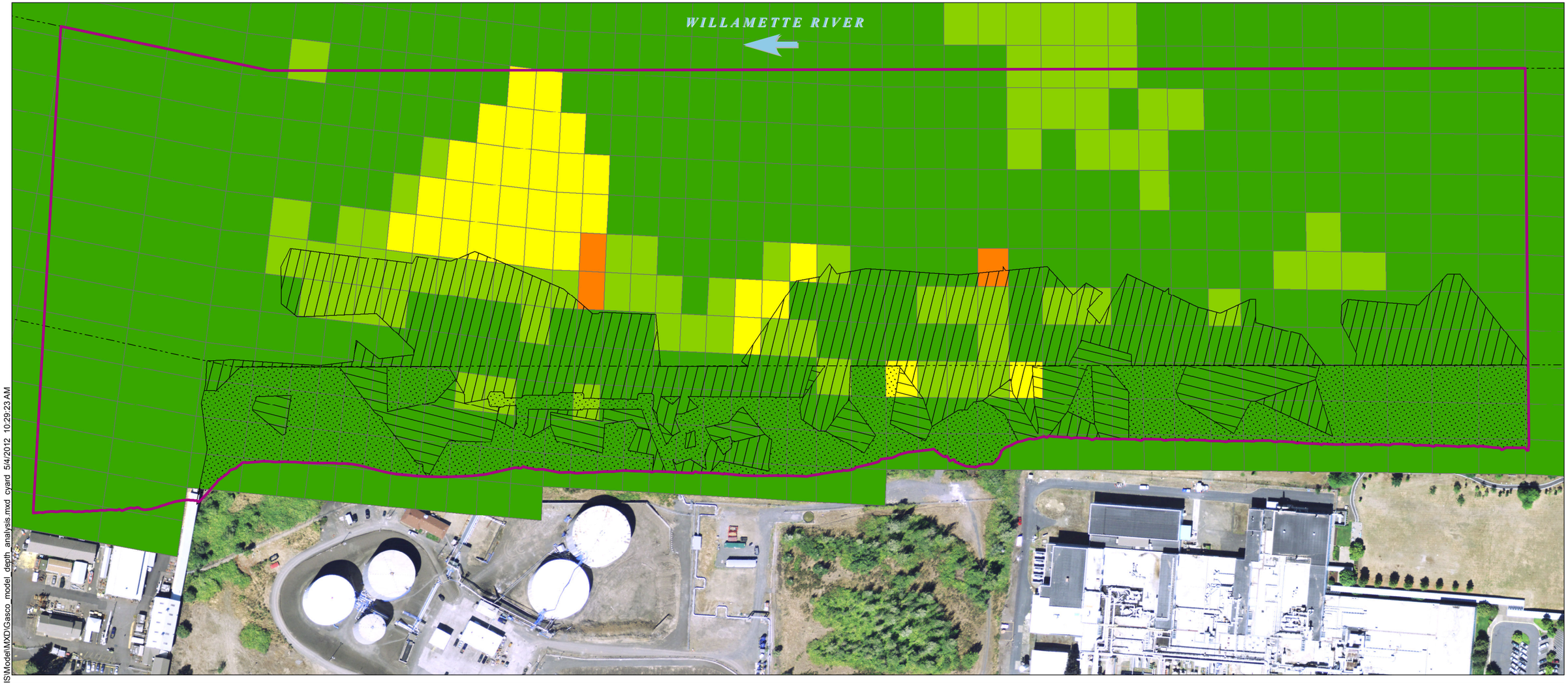
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-17b
Model Grid Cell BaP Concentrations at Year 30 for Alternative 4
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 4 Year 45 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 4 Footprint

TechType

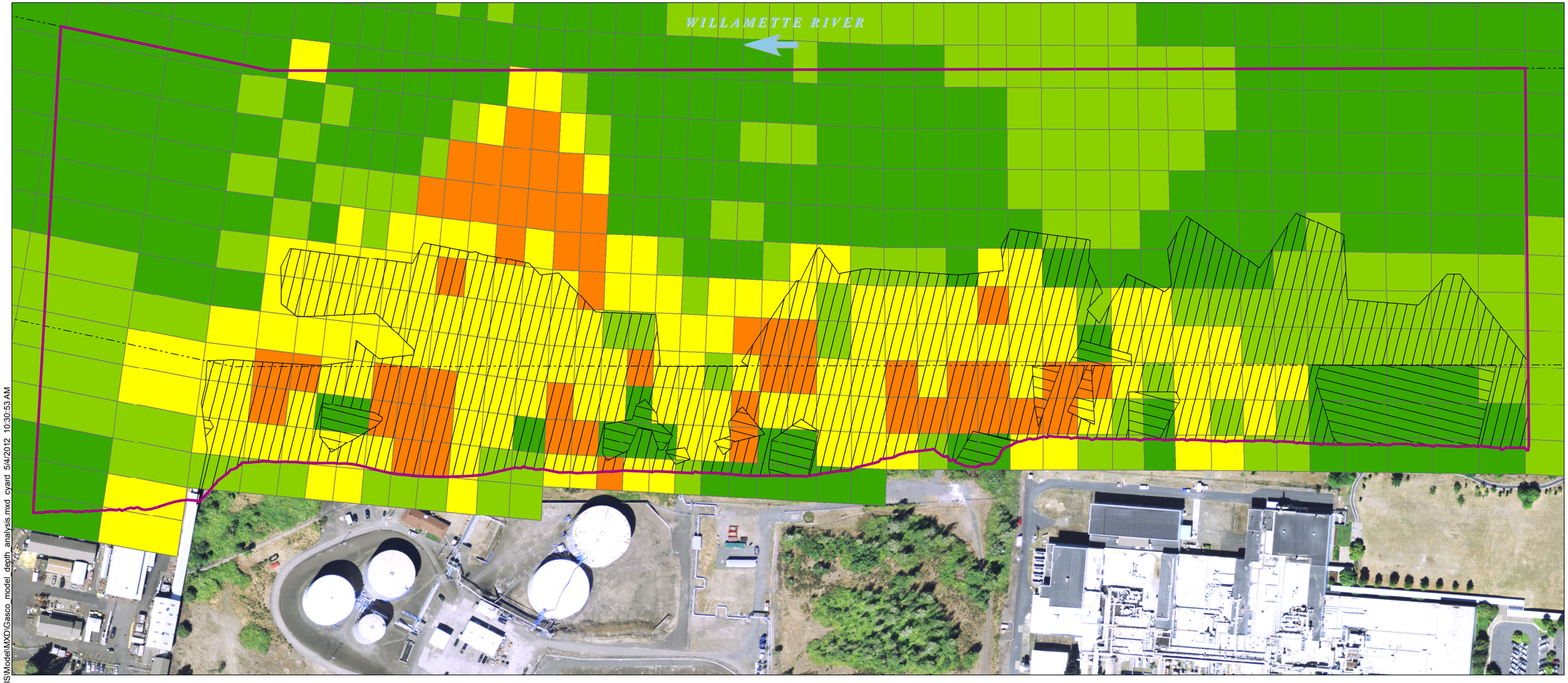
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-17c
Model Grid Cell BaP Concentrations at Year 45 for Alternative 4
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 5 Year 10 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 5 Footprint

TechType

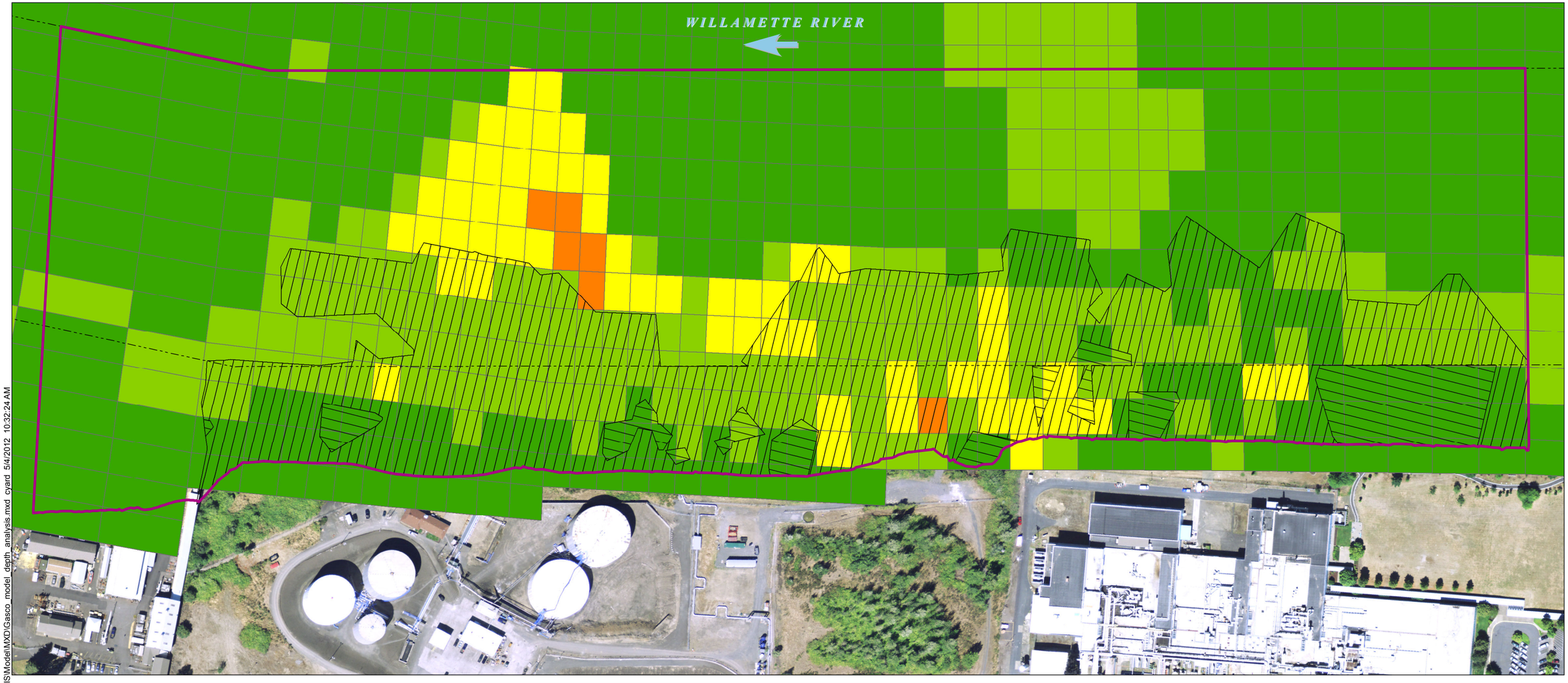
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-18a
Model Grid Cell BaP Concentrations at Year 10 for Alternative 5
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 5 Year 30 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 5 Footprint

TechType

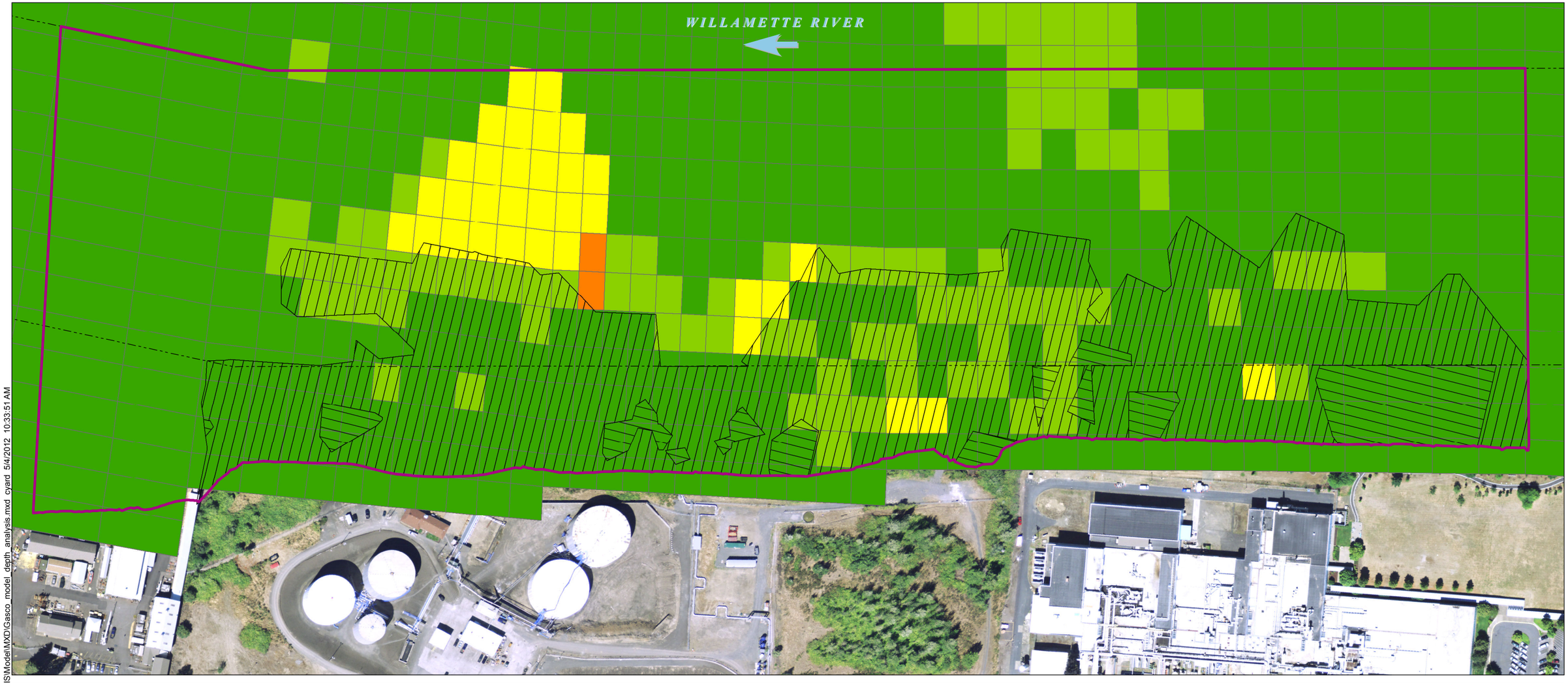
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-18b
Model Grid Cell BaP Concentrations at Year 30 for Alternative 5
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

BaP Alt 5 Year 45 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 5 Footprint

TechType

- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-18c
Model Grid Cell BaP Concentrations at Year 45 for Alternative 5
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

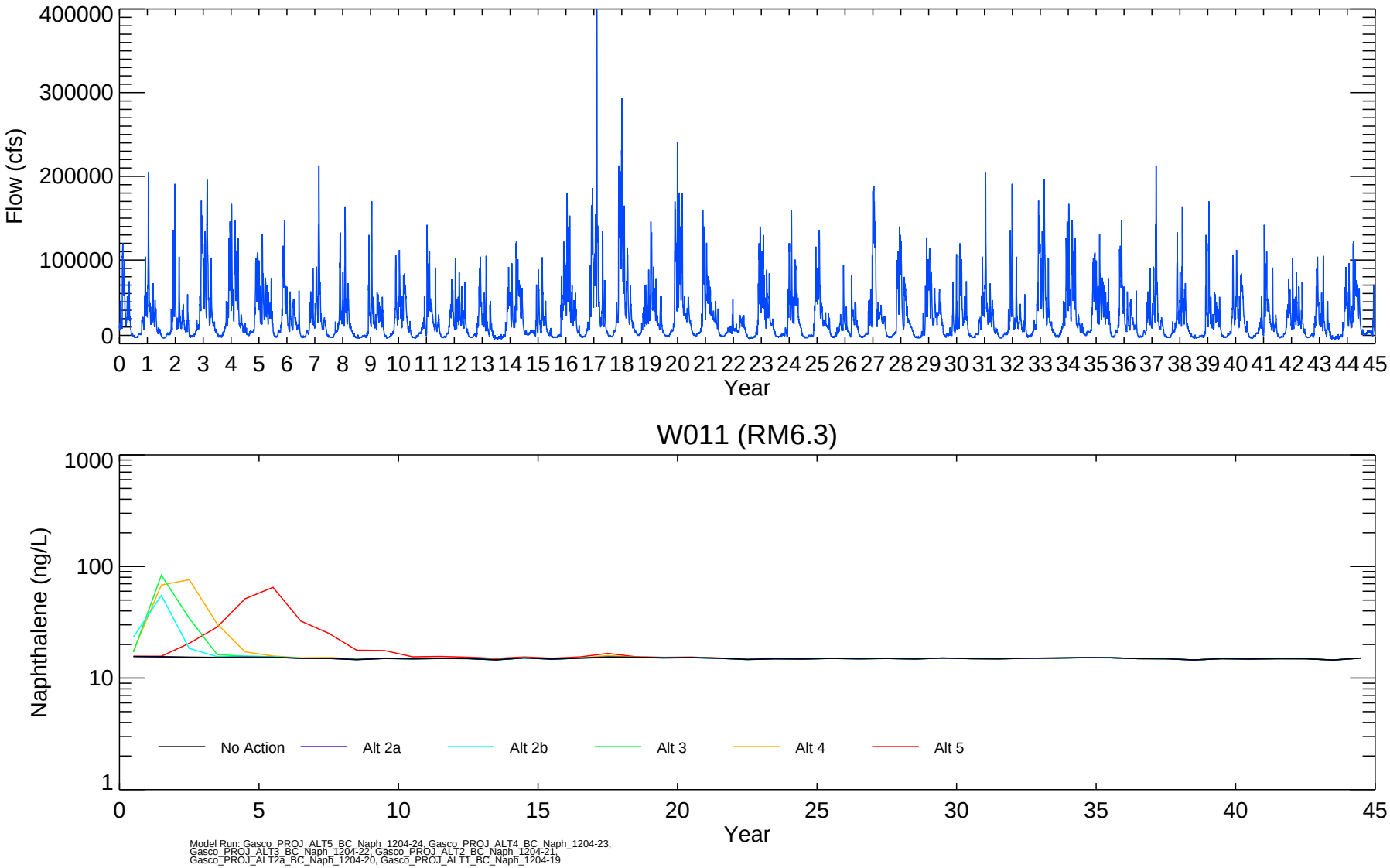


Figure 4-19

Temporal Profiles of Model-predicted Water Column Naphthalene Concentrations

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

ANCHOR QEA

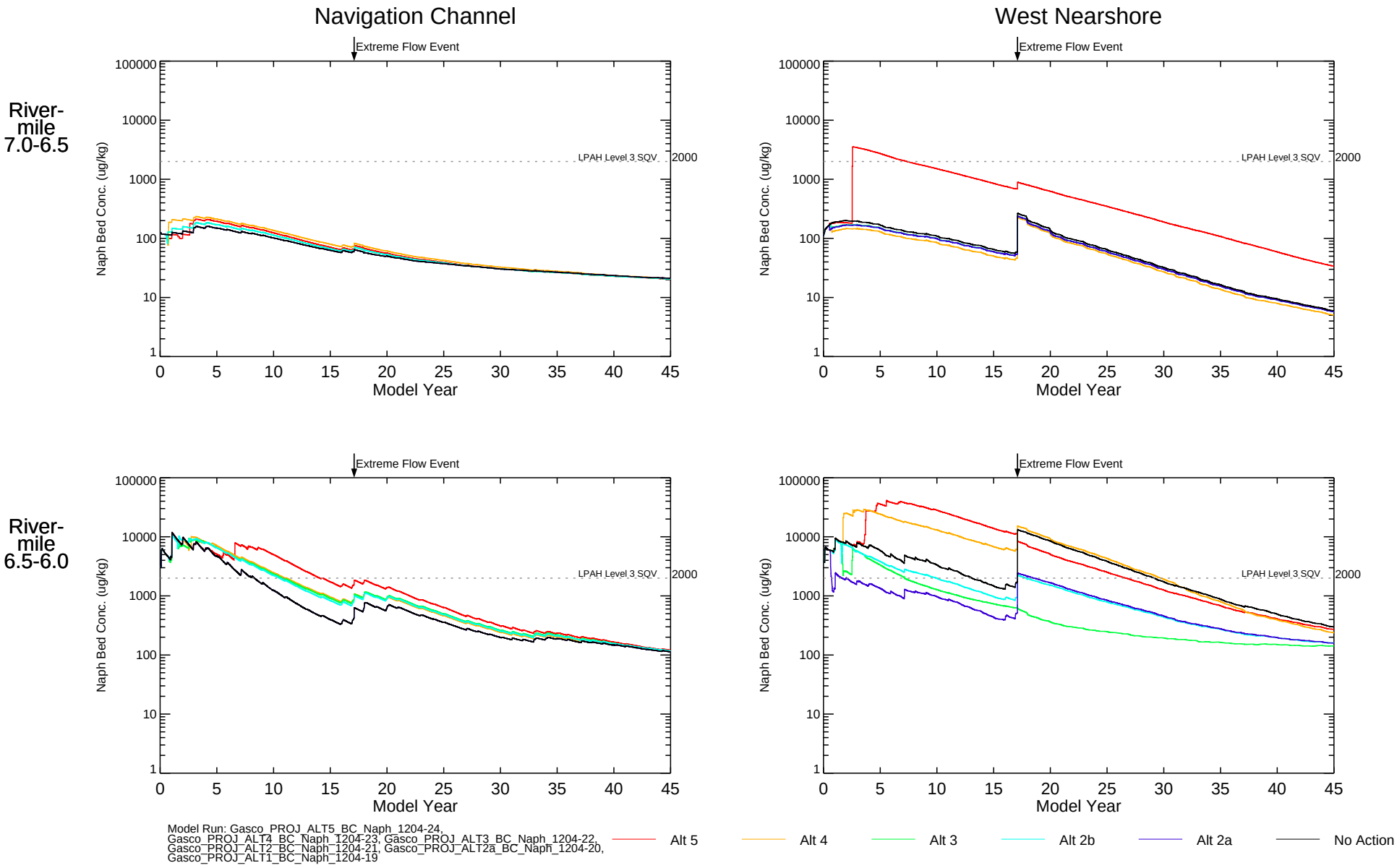
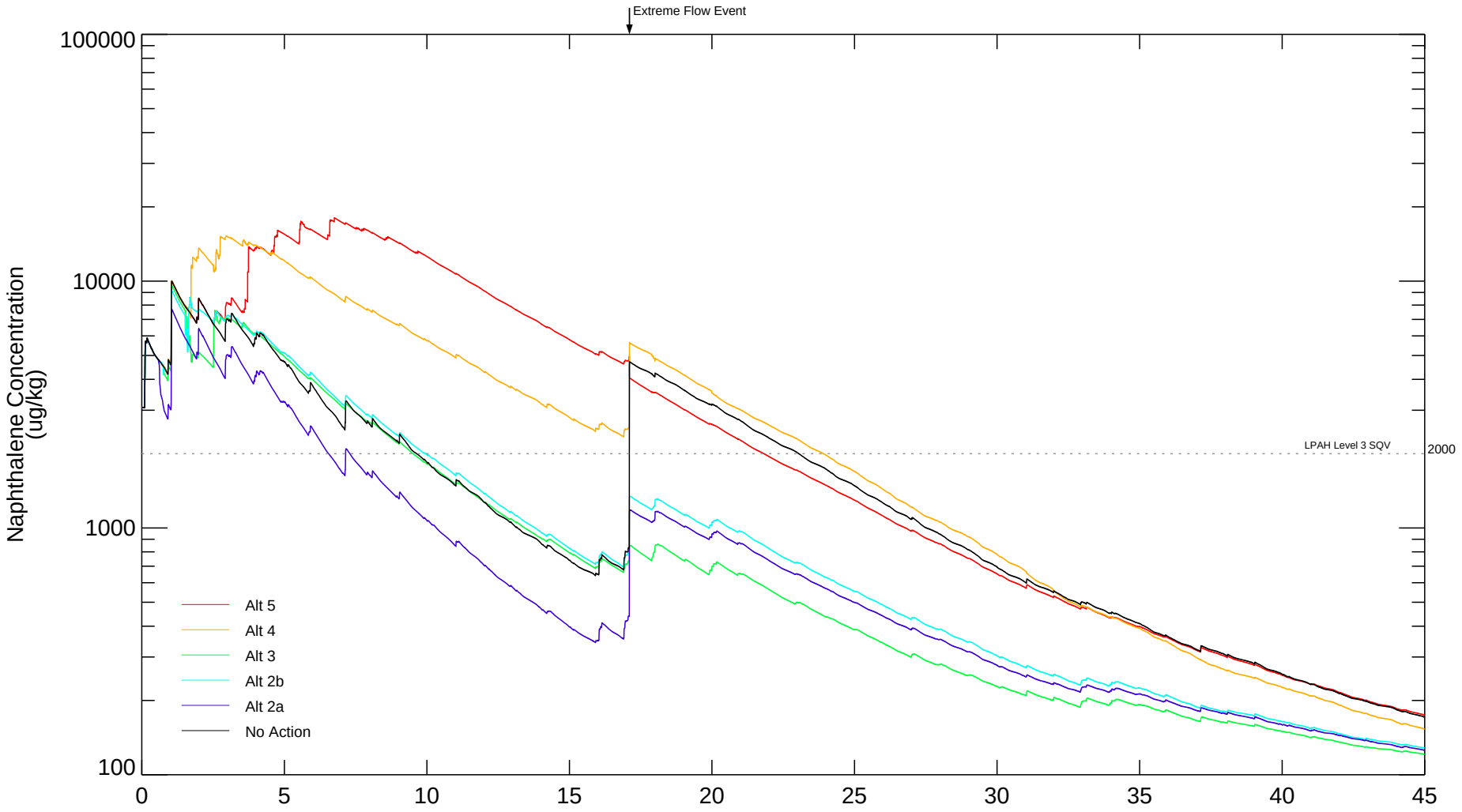


Figure 4-20

Time Series of Surface Sediment (Top 1-ft) Naphthalene SWACs by 1/2 River Mile Navigation Channel and West Nearshore Areas

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



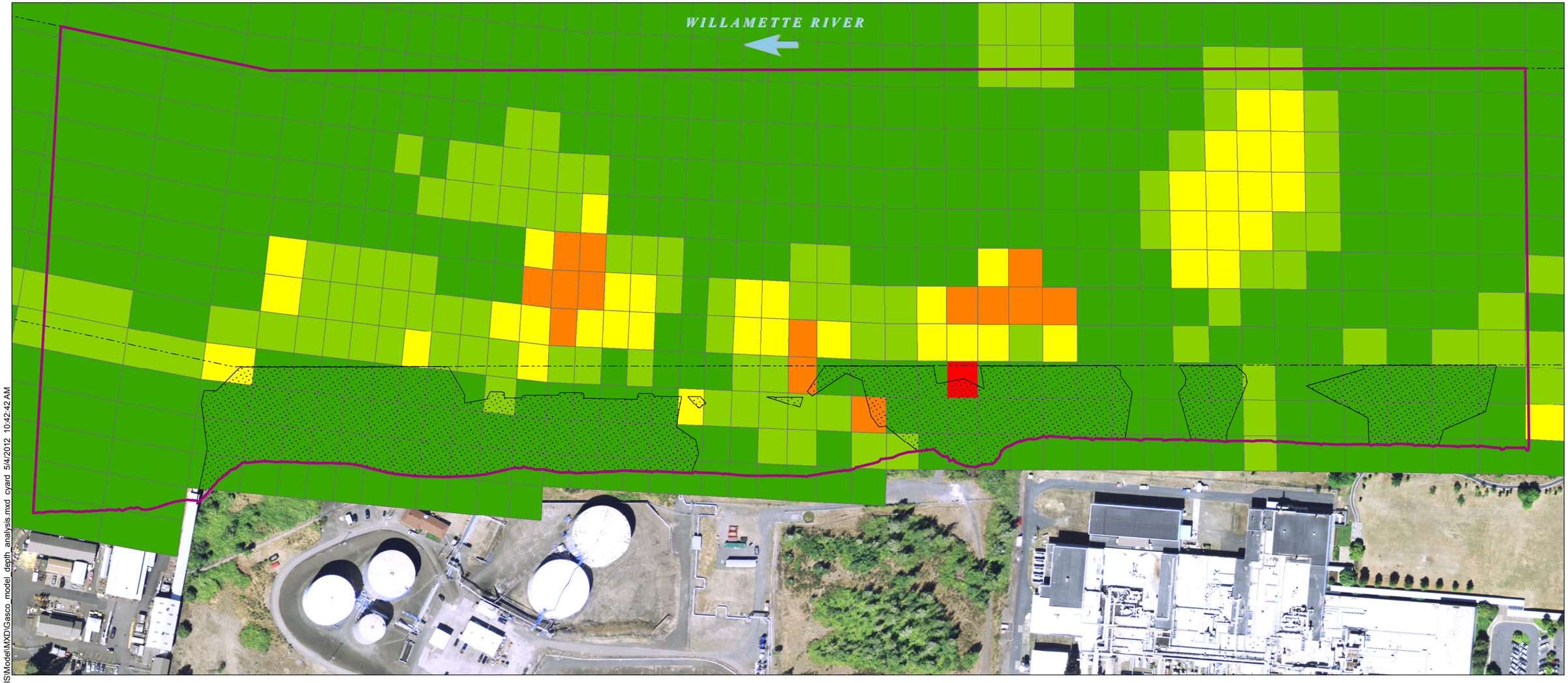
Model Run: Gasco_PROJ_ALT5_BC_Naph_1204-24, Gasco_PROJ_ALT4_BC_Naph_1204-23, Gasco_PROJ_ALT3_BC_Naph_1204-22, Gasco_PROJ_ALT2_BC_Naph_1204-21, Gasco_PROJ_ALT2a_BC_Naph_1204-20, Gasco_PROJ_ALTI_BC_Naph_1204-19

Figure 4-21

Time Series of Surface Sediment (Top 1-ft) Naphthalene SWACs in Gasco Sediments Site Area of Interest

Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

ANCHOR QEA



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 2a Year 10 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 2a Footprint

TechType

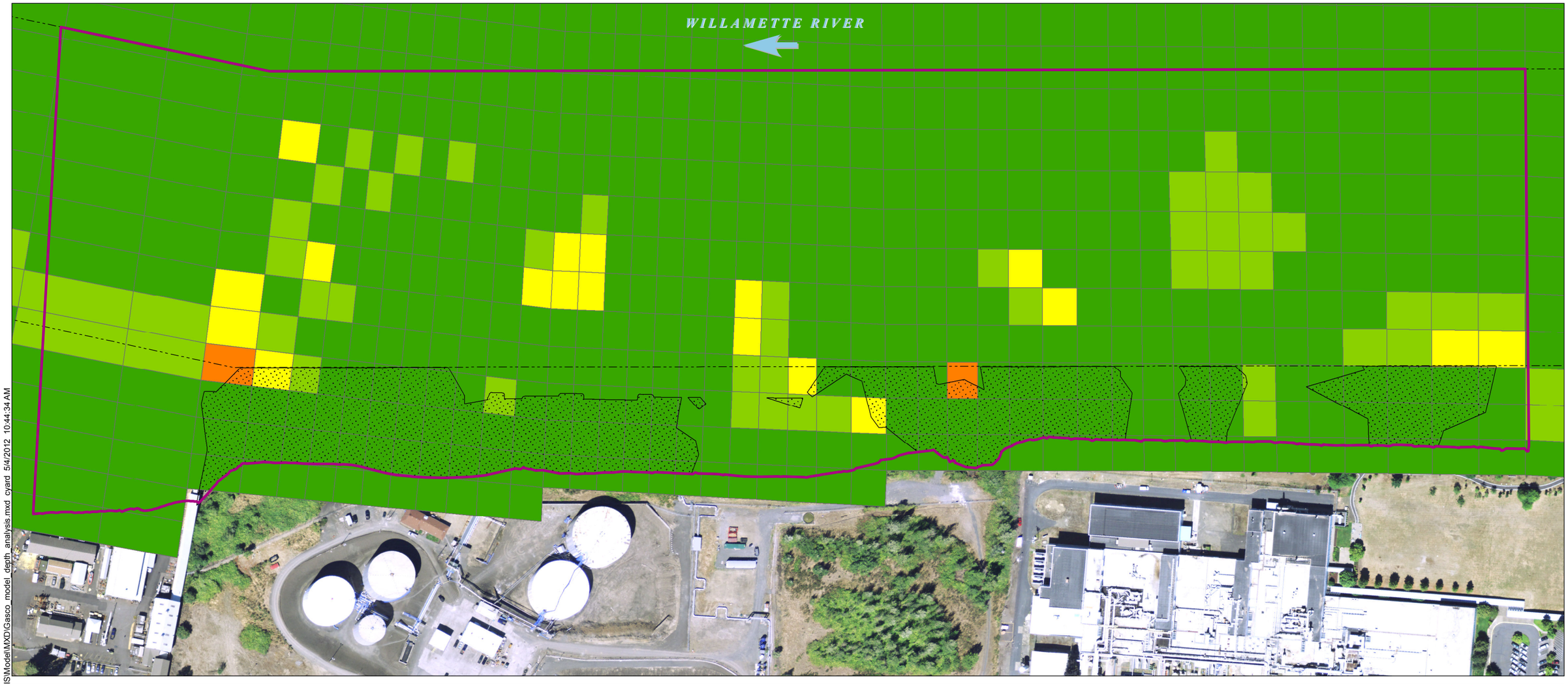
- Cap

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-22a
Model Grid Cell Naphthalene Concentrations at Year 10 for Alternative 2a
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 2a Year 30 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 2a Footprint

TechType

- Cap

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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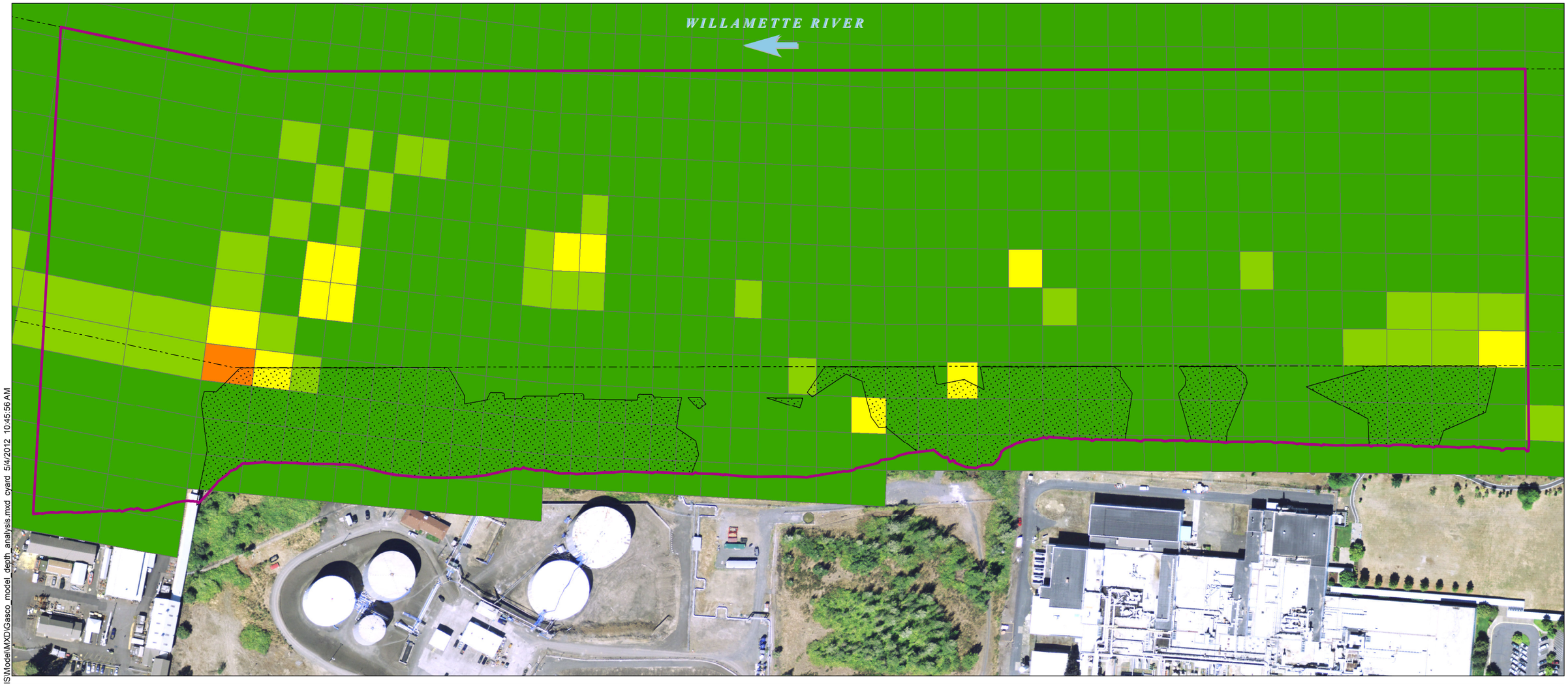
ANCHOR QEA

Figure 4-22b
Model Grid Cell Naphthalene Concentrations at Year 30 for Alternative 2a
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 2a Year 45 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 2a Footprint

TechType

- Cap

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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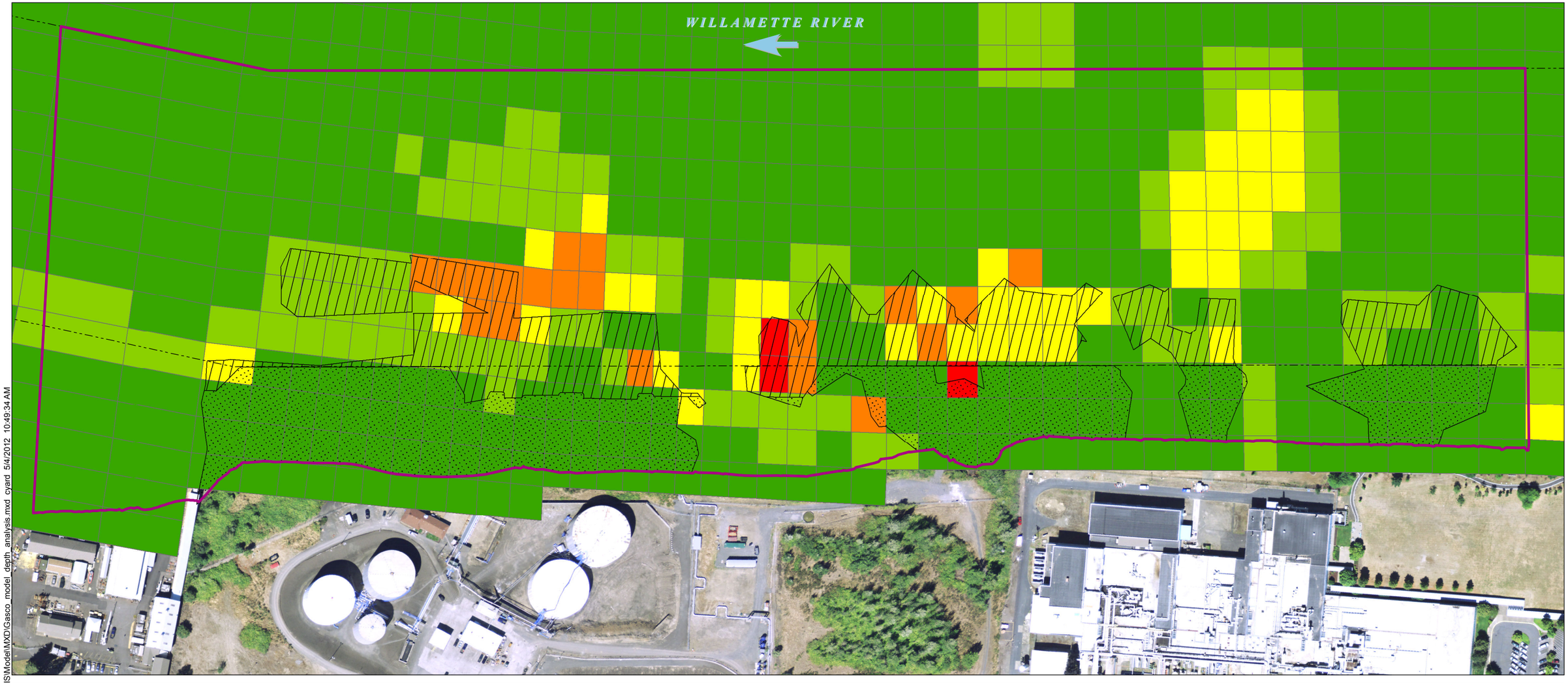
ANCHOR QEA

Figure 4-22c
Model Grid Cell Naphthalene Concentrations at Year 45 for Alternative 2a
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 2b Year 10 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 2b Footprint

TechType

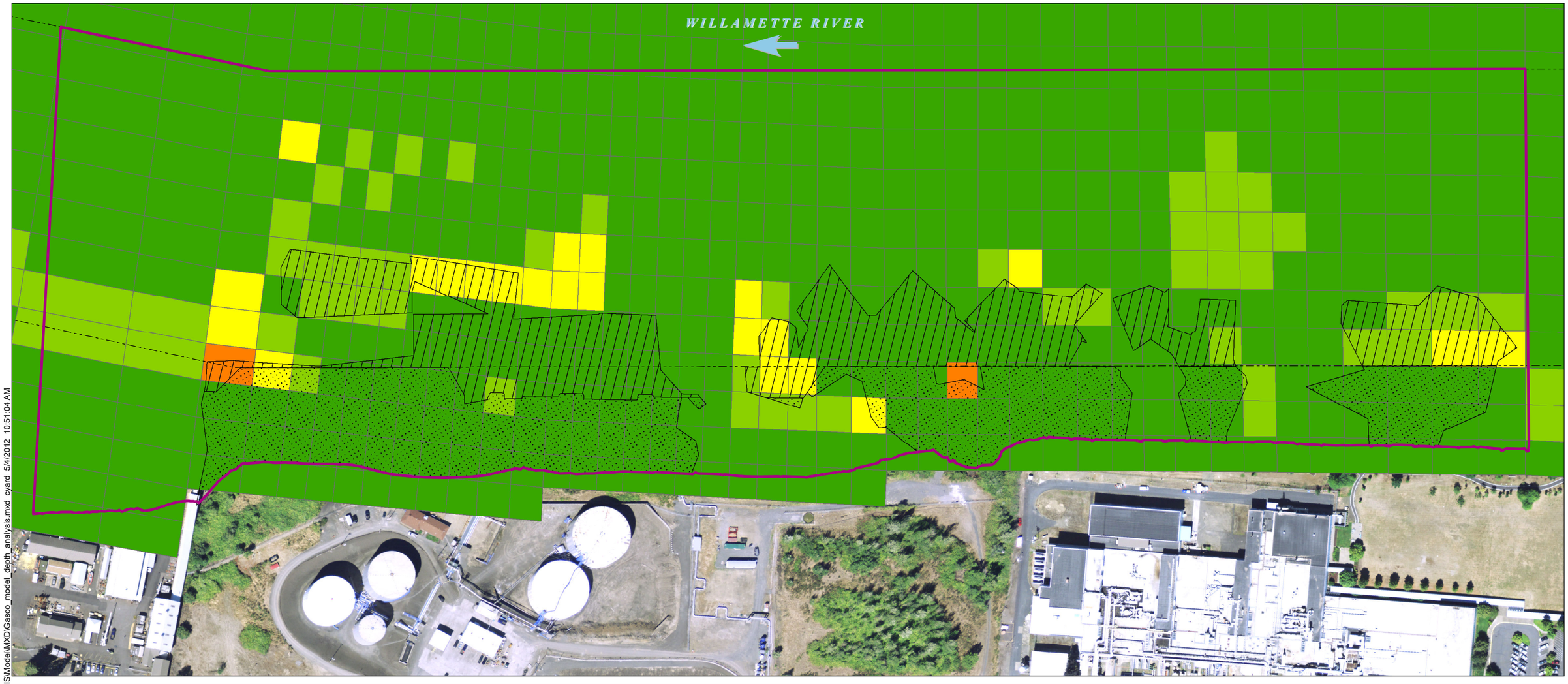
- Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-23a
Model Grid Cell Naphthalene Concentrations at Year 10 for Alternative 2b
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 2b Year 30 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 2b Footprint

TechType

- Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
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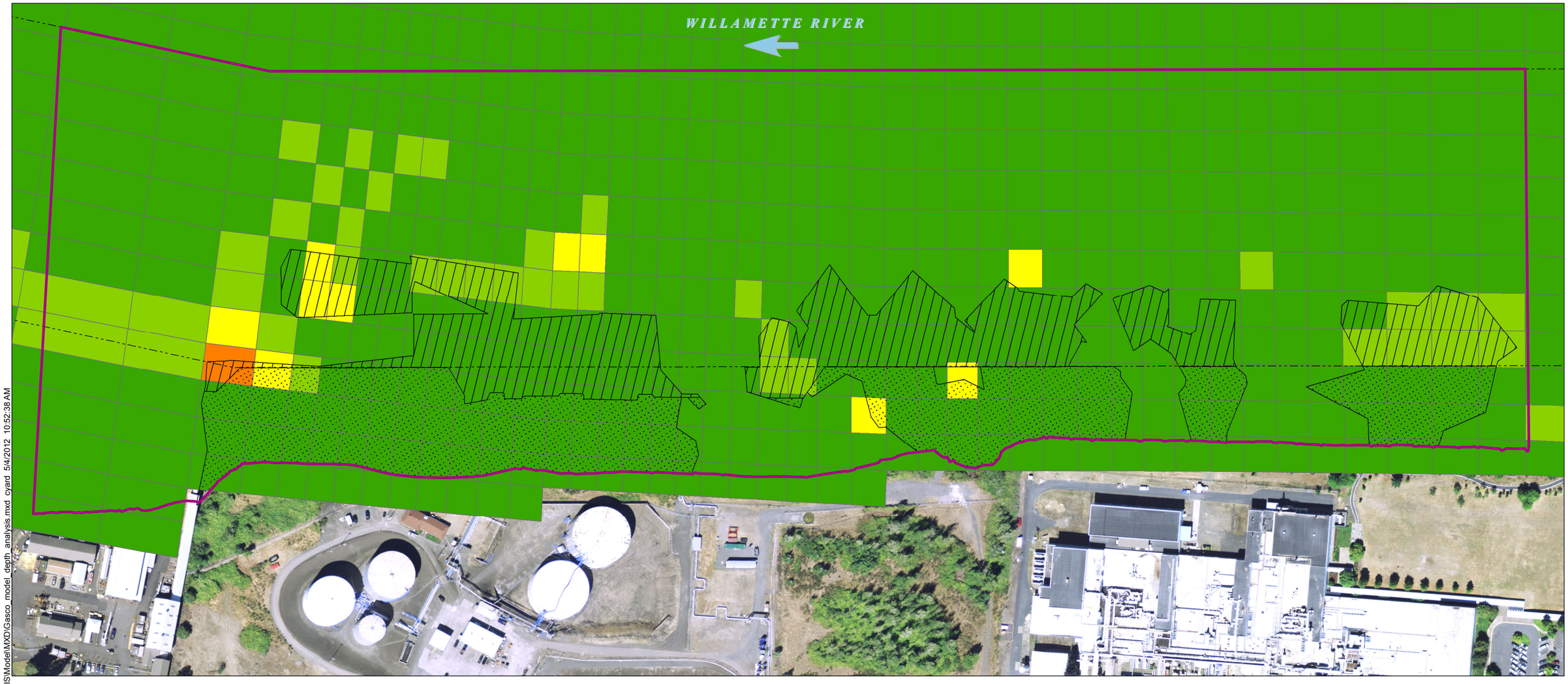
ANCHOR QEA

Figure 4-23b
Model Grid Cell Naphthalene Concentrations at Year 30 for Alternative 2b
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 2b Year 45 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 2b Footprint

TechType

- Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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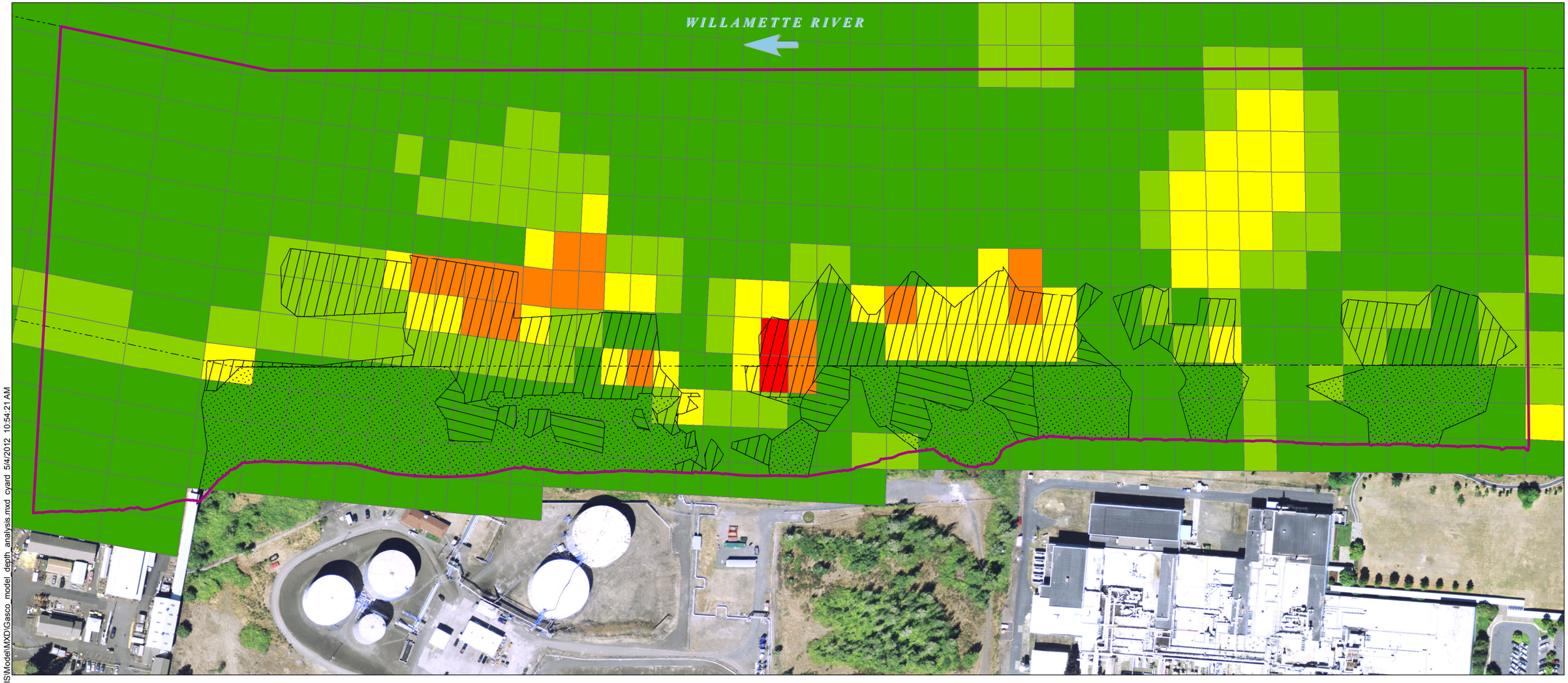
ANCHOR QEA

Figure 4-23c
Model Grid Cell Naphthalene Concentrations at Year 45 for Alternative 2b
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 3 Year 10 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 3 Footprint

TechType

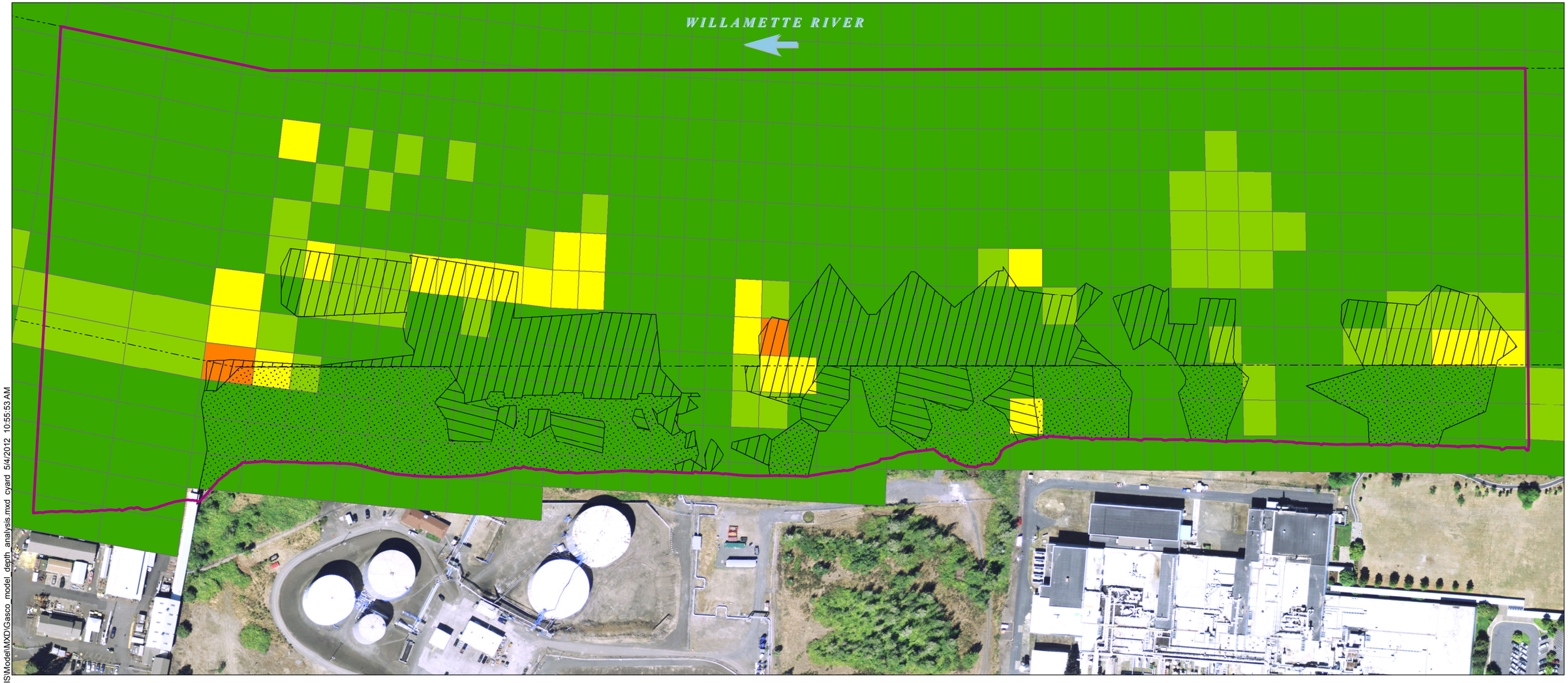
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-24a
Model Grid Cell Naphthalene Concentrations at Year 10 for Alternative 3
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 3 Year 30 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 3 Footprint

TechType

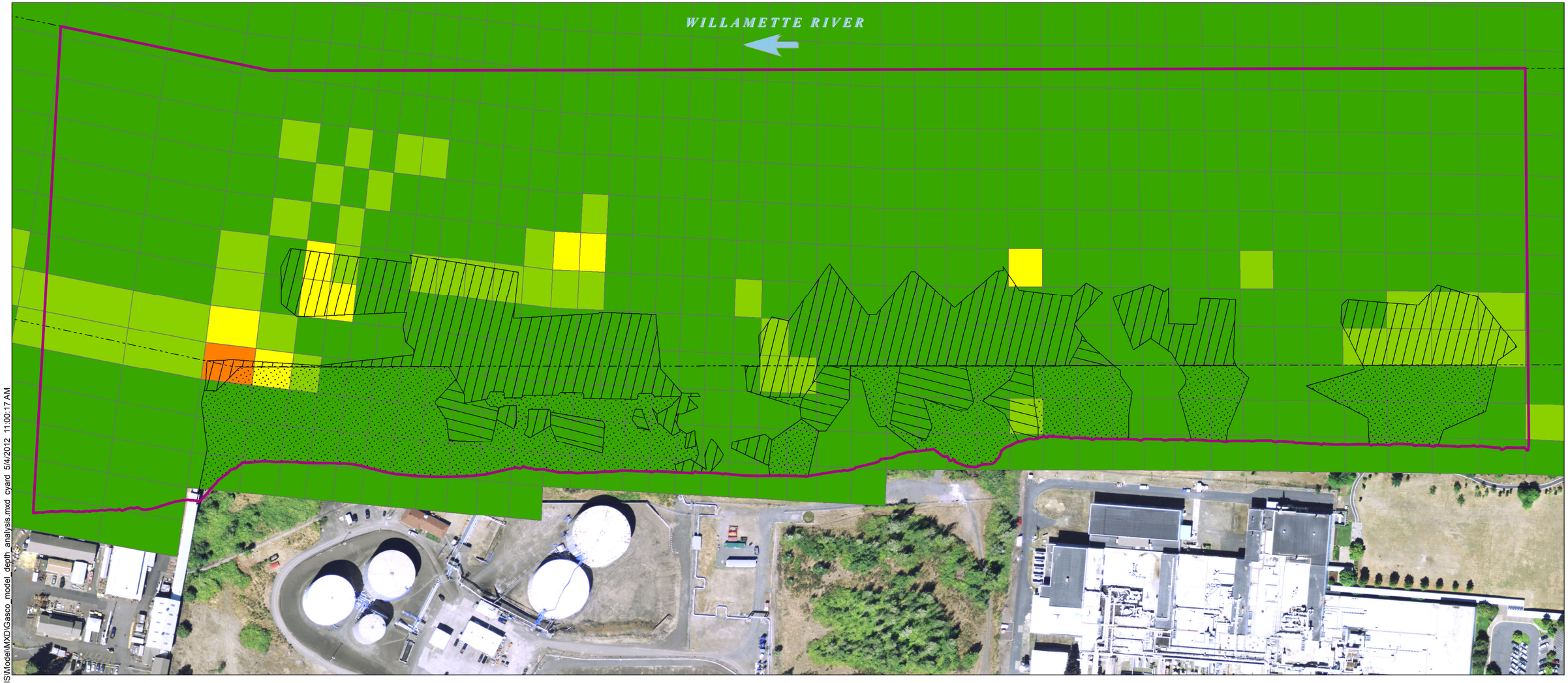
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-24b
Model Grid Cell Naphthalene Concentrations at Year 30 for Alternative 3
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 3 Year 45 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 3 Footprint

TechType

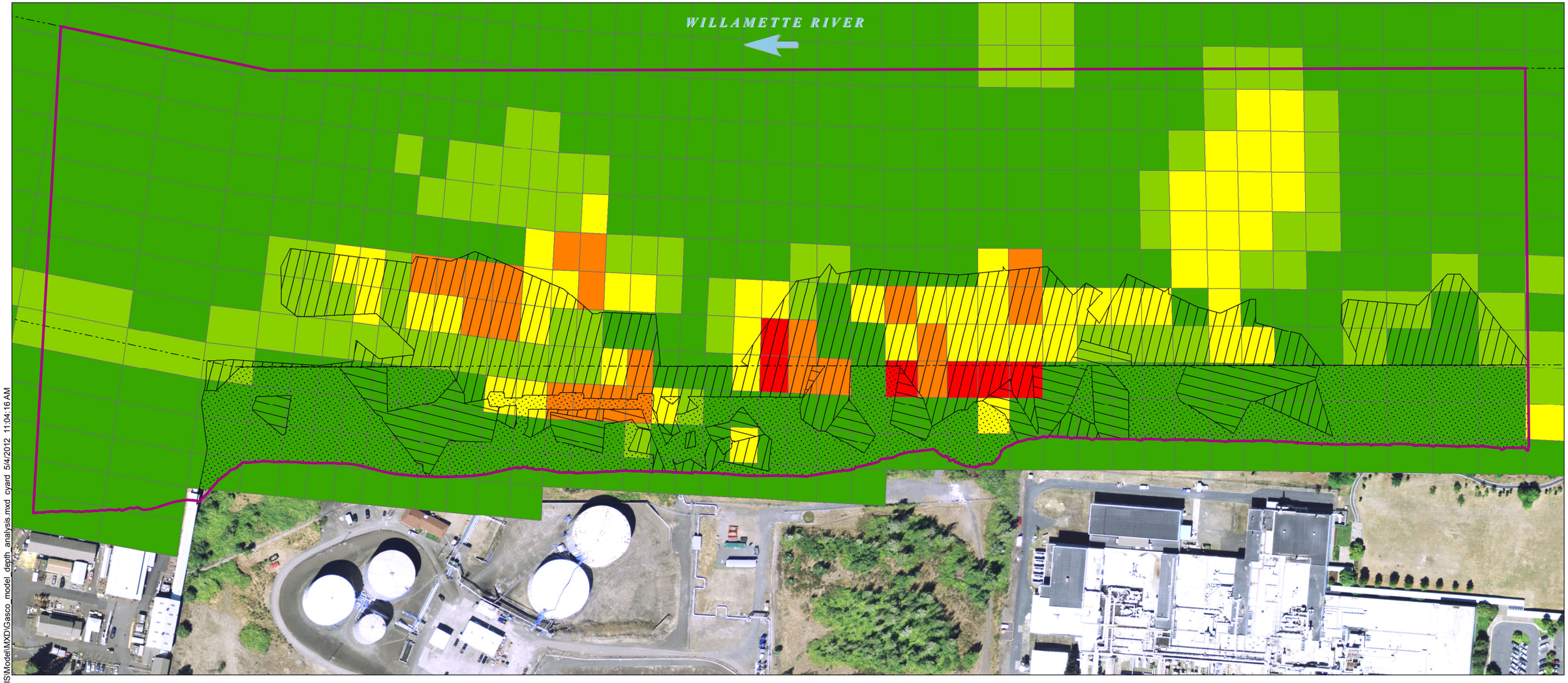
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-24c
Model Grid Cell Naphthalene Concentrations at Year 45 for Alternative 3
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 4 Year 10 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 4 Footprint

TechType

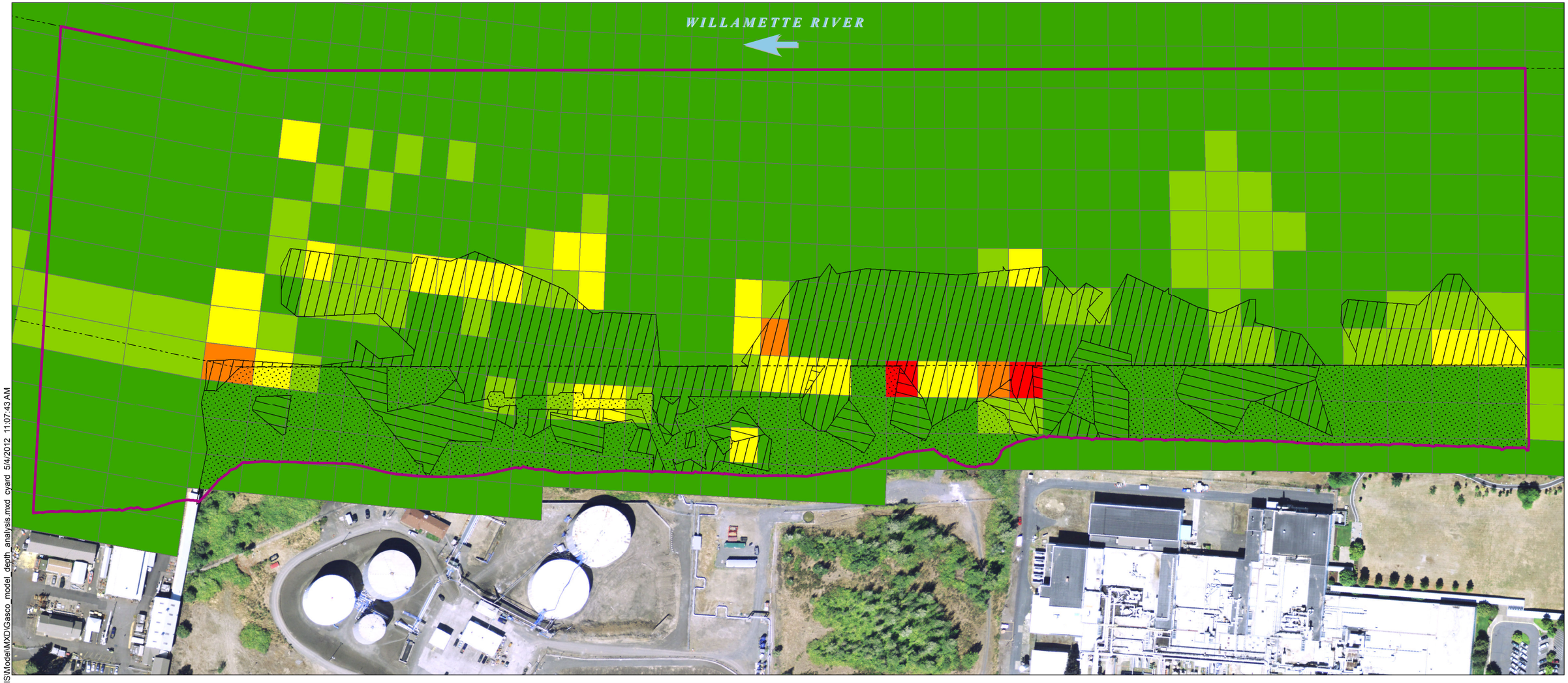
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-25a
Model Grid Cell Naphthalene Concentrations at Year 10 for Alternative 4
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 4 Year 30 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 4 Footprint

TechType

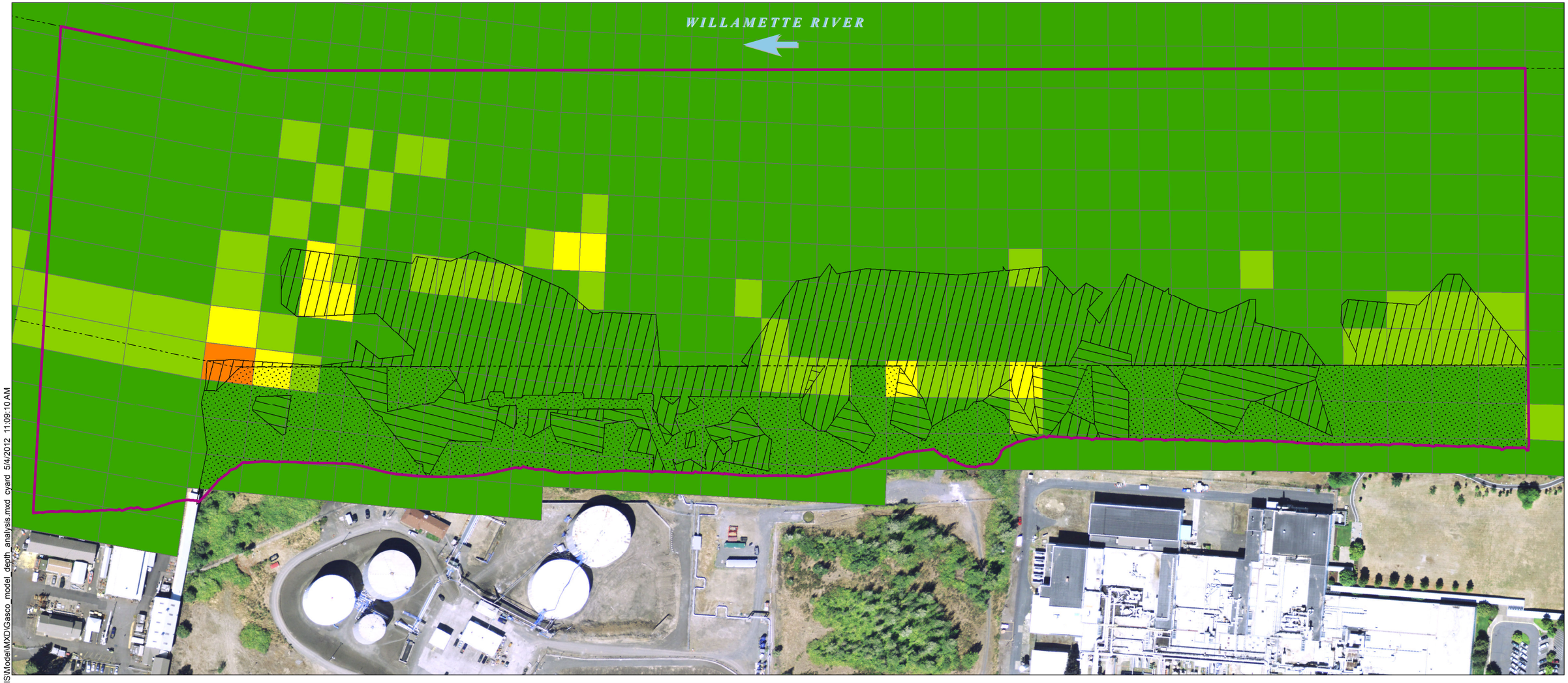
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-25b
Model Grid Cell Naphthalene Concentrations at Year 30 for Alternative 4
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 4 Year 45 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 4 Footprint

TechType

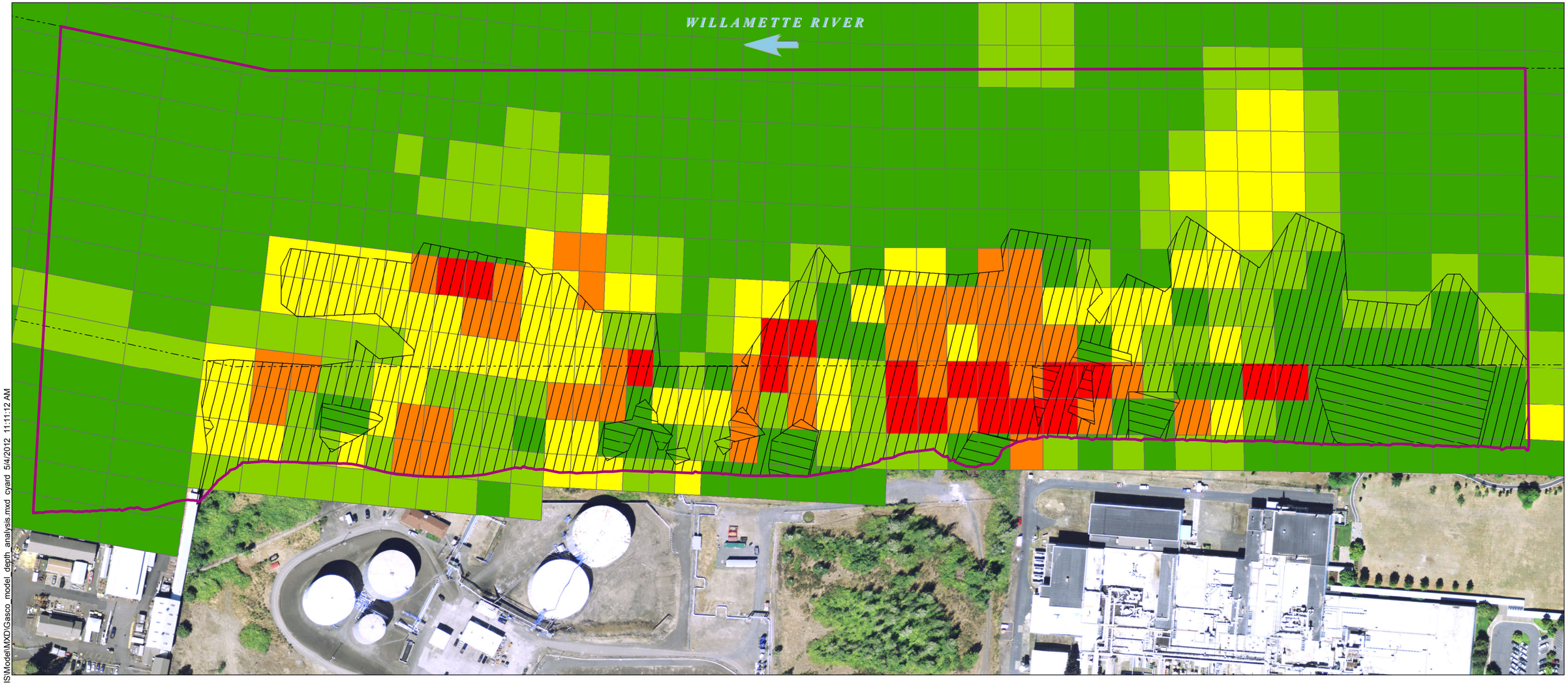
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-25c
Model Grid Cell Naphthalene Concentrations at Year 45 for Alternative 4
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 5 Year 10 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 5 Footprint

TechType

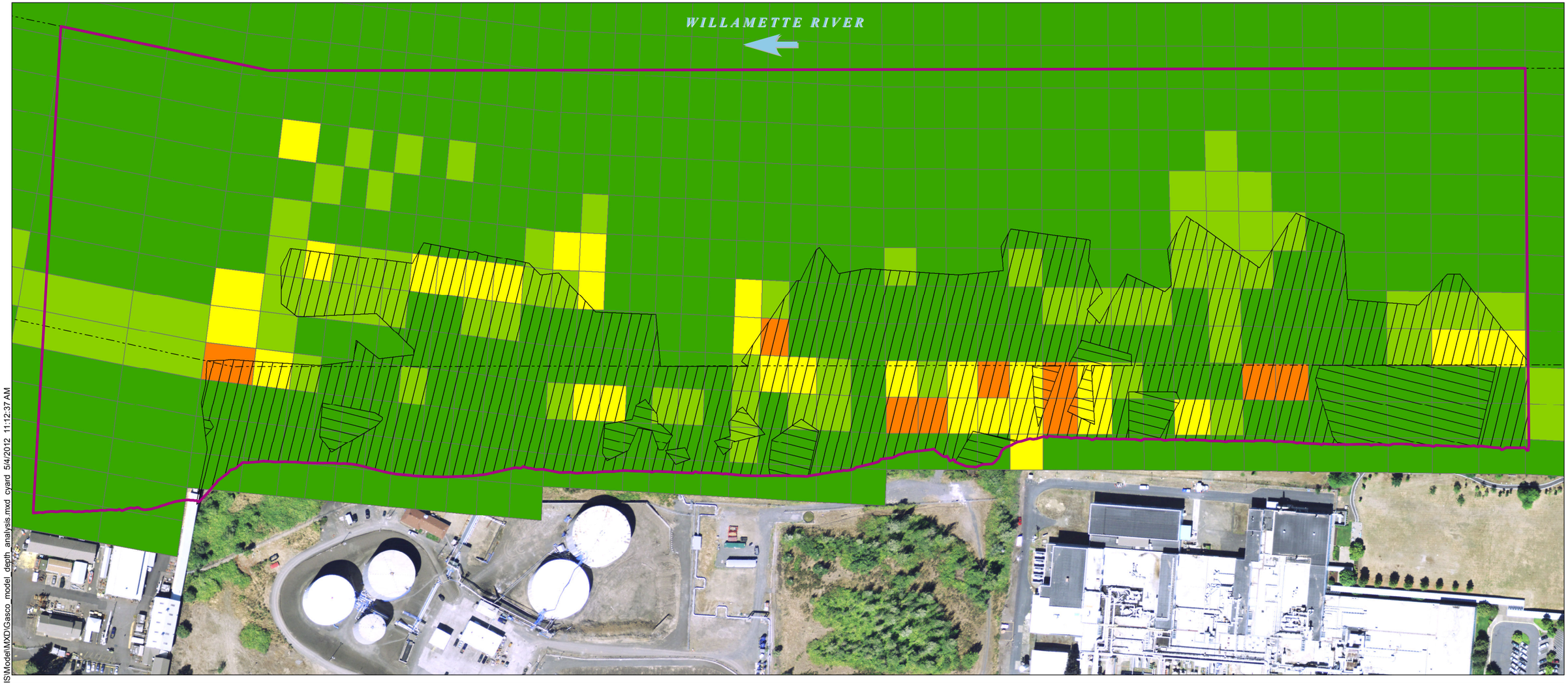
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-26a
Model Grid Cell Naphthalene Concentrations at Year 10 for Alternative 5
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 5 Year 30 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 5 Footprint

TechType

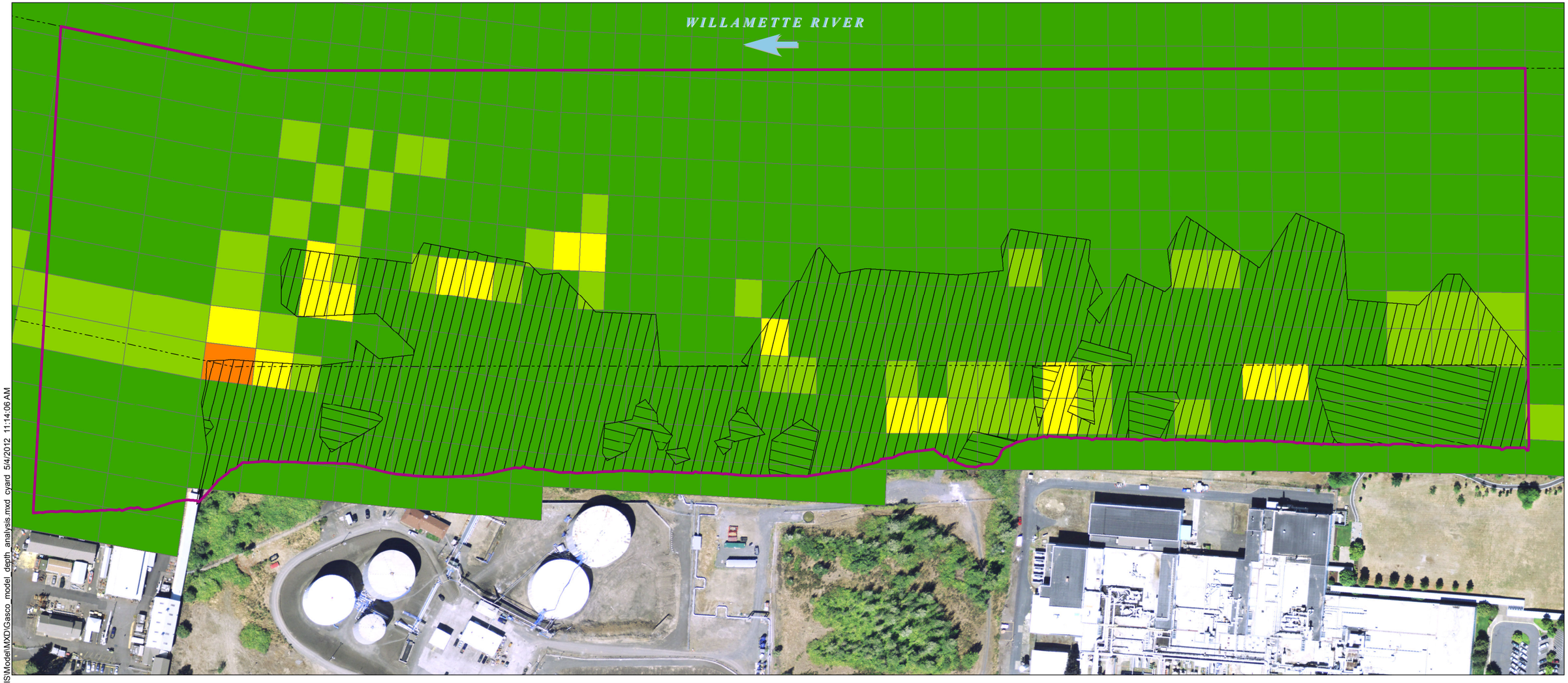
- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-26b
Model Grid Cell Naphthalene Concentrations at Year 30 for Alternative 5
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action



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Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Navigation Channel

Naphthalene Alt 5 Year 45 (ug/kg)

- 0 - 100
- 100 - 1000
- 1000 - 10000
- 10000 - 100000
- > 100000

Remedial Alternative 5 Footprint

TechType

- Cap
- Removal and Cap
- Removal and Cover

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 4-26c
Model Grid Cell Naphthalene Concentrations at Year 45 for Alternative 5
Draft Fate and Transport Modeling
Gasco Sediments Cleanup Action

APPENDIX F
DRAFT POTENTIAL RIVERBANK HOT SPOT DATA SCREEN

DRAFT

APPENDIX F

POTENTIAL RIVERBANK HOT SPOT DATA SCREEN

DRAFT ENGINEERING EVALUATION/COST ANALYSIS

GASCO SEDIMENTS CLEANUP ACTION

Prepared for

U.S. Environmental Protection Agency, Region 10

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Seattle, Washington 98101

Prepared by

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Portland, Oregon 97224

On behalf of

NW Natural

220 NW Second Avenue

Portland, Oregon 97209

May 2012

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LIST OF ACRONYMS AND ABBREVIATIONS

Abbreviation	Definition
µm/kg	Microgram per kilogram
AOC	Administrative Settlement Agreement and Order on Consent
COI	Contaminant of Interest
DEQ	Oregon Department of Environmental Quality
DDT	4,4′-Dichlorodiphenyltrichloroethane
EE/CA	Engineering Evaluation/Cost Analysis
eco SSL	Ecological Soil Screening Level
EPA	U.S. Environmental Protection Agency
ESL	Ecological Screening Levels
HPAH	High-molecular-weight Polycyclic Aromatic Hydrocarbon
HQ	Hazard Quotient
LPAH	Low-molecular-weight Polycyclic Aromatic Hydrocarbon
NAVD88	North American Vertical Datum 1988
OLW	Ordinary Low Water
PAH	Polycyclic Aromatic Hydrocarbon
RBC	Risk-Based Concentrations
RBDM	Risk-Based Decision Making
RSL	Regional Screening Levels
SLV	Screening Level Values
SOW	Statement of Work
T&E	Threatened and Endangered

1 INTRODUCTION

This document presents the methodology and results of the evaluation of riverbank soil data at the Gasco Sediments Site for the potential presence of Oregon hot spots. This evaluation was conducted in support of the *Draft Engineering Estimate and Cost Analysis* (EE/CA) and generally followed the potential Oregon hot spot identification process outlined in the Oregon Department of Environmental Protection's (DEQ's) *Guidance for Identification of Hot Spots* (DEQ Hot Spot Guidance, DEQ 1998).

2 METHODS

2.1 Data Set

The riverbank soil dataset used in the potential Oregon hot spot screening is described in Appendix G. This dataset includes samples collected from locations ranging from 13 feet North American Vertical Datum (NAVD88) to the top of bank (see Figure 2-1) based on available survey information. Due to the highly armored nature of the Gasco and Siltronic riverbanks, data density within this zone is limited. For this reason, samples collected in very close proximity of the top of bank elevation (i.e., within approximately 5 feet) were also included in the dataset to provide additional data density. Note that Oregon hot spots in areas landward of the top of bank will be addressed as part of the upland feasibility study remedy evaluation. In addition, samples collected below the 13 feet NAVD88 contour were included in the riverbank soil data set to be consistent with DEQ direction in the "Draft Meeting Summary and Next Steps" document transmitted by Dana Bayuk of DEQ to Ben Hung of Anchor QEA in an email dated May 12, 2011 (DEQ 2011). However, these samples are located within the in-water portion of the Gasco Sediments Site. Sediment impacts in this area will be addressed consistent with the sediment remedy. Samples collected landward of the riverbank or below the 13 feet NAVD88 contour are indicated on Figure 2-1 (and subsequent figures) by a square symbol.

The data set was grouped into two categories by depth interval: 0- to 3.5-foot soils and 0- to 12-foot soils. The 0- to 3.5-foot depth category is approximated by using soil samples collected from the 0- to 5-foot depth intervals for locations sampled during the Gasco Sediments Site Data Gaps Investigation (Anchor QEA 2010) and samples collected from the 0- to 3.5-foot depth interval for all other locations. Refer to EE/CA Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation. The 0- to 12-foot depth category consists of samples collected from the 0- to 12-foot depth interval for all locations.

2.2 Data Screen

The data were screened against potential Oregon hot spot screening levels for the Gasco Sediments Site chemicals of interest (COIs, as presented in Section 3.3 of the Statement of Work [SOW] attached to the Administrative Settlement Agreement and Order on Consent [AOC; Docket No. CERCLA 10-2009-0255]) presented on Tables 2-1 and 2-2. The screening was conducted on a point-by-point basis. This is a conservative approach for applying the human health screening levels and some of the ecological soil screening levels. These screening levels are more appropriately applied to exposure point concentrations calculated over larger

exposure areas, if those areas are known, for risk characterization purposes. These screening levels were derived generally following the DEQ Hot Spot Guidance, described as follows.

Table 2-1 presents the potential ecological Oregon hot spot screening levels derived from the following sources:

- Level II screening level values (SLVs) from Table 1 of the DEQ *Guidance for Ecological Risk Assessment* (DEQ 2001)
- U.S. Environmental Protection Agency (EPA) ecological soil screening levels (eco SSLs) from *EPA Ecological Soil Screening Levels for Zinc Interim Final* (EPA 2007c)
- EPA Region 5 ecological screening levels (ESLs) for soil from *Region 5 RCRA Ecological Screening Levels* (EPA2003)
- The alternative DEQ ecological soil screening level for dibenzofuran from a DEQ e-mail to NW Natural dated February 23, 2012
- The alternative cyanide ecological soil screening level from a October 31, 2011, memorandum from Taku Fuji and Kara Hitchko of Anchor QEA to Mr. Bayuk of DEQ entitled *Proposed Alternative Cyanide Screening Level*

Potential soil ecological hot spot screening levels were derived following DEQ hot spot guidance (DEQ 1988), which states that for non-threatened and endangered (non-T&E) species, the "highly concentrated" hot spot level is 50 times the screening benchmark value (SBV) or screening level value (SLV). As no T&E species have been identified as receptors for the Gasco upland exposure areas, this is the appropriate method to calculate soil highly concentrated "hot spot" levels. Therefore, for the DEQ SLVs that were derived based on the protection of individual T&E species receptors, which were already multiplied by a factor of five for screening of soil with no T&E receptors, an additional multiplier of ten was used to achieve a final multiplier of 50 consistent with DEQ Guidance. For the DEQ SLVs that were derived for the protection of populations (e.g., plant and invertebrate SLVs), these SLVs were multiplied by a factor of 50 consistent with DEQ Guidance. For chemicals without a DEQ SLV, the lowest of the screening levels shown on Table 2-1 was used for the potential hot spot screening. The 0- to 3.5-foot soil data were screened against the resulting list of potential ecological hot spot screening levels.

Table 2-2 presents potential human health Oregon hot spot screening levels derived from the following sources:

- Risk-based decision making (RBDM) risk-based concentrations (RBCs) from the DEQ Environmental Cleanup and Tanks Program table of *Risk-Based Concentrations for Individual Chemicals* (DEQ 2011)
- EPA regional screening levels (RSLs) for industrial soil from the EPA's *Regional Screening Level Summary Table* (EPA 2011)

Potential Oregon hot spot screening levels were derived from these sources by multiplying screening levels based on a carcinogenic endpoint by 100 and multiplying screening levels based on a non-carcinogenic endpoint by ten. This is because, per the DEQ hot spot guidance, hazard quotients (HQs, defined as result divided by screening level [without any multiplier applied to the screening level]) greater than 100 for carcinogenic endpoints and HQs greater than ten for a non-carcinogenic endpoint are indicative of potential human health hot spots.

Petroleum hydrocarbon RBCs were not included in the potential hot spot screen because they are based on mixtures. Note that a comparison of available petroleum hydrocarbon soil data to the RBCs indicates that no results exceed associated petroleum hydrocarbon RBCs. Refer to Appendix H for more detail on this comparison.

A single screening level for each COI was selected according to the following hierarchy: for 0- to 3.5 foot soils, the soil ingestion, dermal contact, and inhalation RBC for occupational workers was applied. For 0- to 12-foot soils, the lowest of the soil ingestion, dermal contact, and inhalation RBC for construction and excavation workers was applied. For all soils, the EPA RSL was applied for chemicals without an associated RBC.

3 RESULTS AND DISCUSSION

The results for the potential Oregon ecological hot spot, evaluation of 0- to 3.5-foot soil; potential human health Oregon hot spot, evaluation of 0- to 3.5-foot soil; and potential human health Oregon hot spot, evaluation of 0- to 12-foot soil are summarized below, presented in Tables 3-1, 3-2, and 3-3, and shown on Figures 3-1, 3-2, and 3-3.

3.1 Potential Ecological Hot Spots (Evaluation of 0- to 3.5-foot soil)

As presented in Table 3-1 and shown on Figure 3-1, one polycyclic aromatic hydrocarbon (PAH) was detected in soil samples at concentrations above potential ecological hot spot screening levels: naphthalene was detected in one location (GST-03) at concentrations above its associated potential hot spot screening level with a HQ of 110.

As shown on Figure 3-1, location GST-03 is located landward of the top of bank and is therefore outside of the Gasco Sediments Site. As described in Section 2.1, Oregon hot spots landward of the top of bank will be address as part of the upland feasibility study remedy evaluation (discussed in Section 1 of the EE/CA).

In addition, dibenzofuran was detected in five samples at concentrations above the DEQ SLV-based potential hot spot screening level. However, because all detected concentrations of dibenzofuran are below the DEQ's alternative screening level for dibenzofuran (85,000 micrograms per kilogram [µg/kg]), these exceedances are not considered indicative of potential ecological hot spots. These exceedances are not shown on Figure 3-1.

3.2 Potential Human Health Hot Spots (Evaluation of 0- to 3.5-foot soil)

As presented in Table 3-2 and shown on Figure 3-2, the concentrations of three PAHs were detected in samples at concentrations above potential human health hot spot screening levels for 0- to 3.5-foot soil.

- Benzo(a)pyrene was detected in six locations (GST-03, GST-05, SS-05, B-29, M-04-101, and MW-04-57) at concentrations above its associated potential hot spot screening level. The highest HQ for benzo(a)pyrene is 1,518.
- Benzo(a)anthracene and dibenzo(a,h)anthracene were detected in one location (GST-03) at concentrations above the associated potential hot spot screening level with HQs of 115 and 370, respectively.

The hot spot screening level exceedance at B-29 is considered indicative of a potential human health hot spot within the Gasco Sediment Site riverbank. As shown on Figure 3-2, station SS-05 is located below the 13 feet NAVD88 contour. Sediment impacts at this location will be addressed consistent with the sediment remedy. Stations GST-03, GST-05, M-04-101, and MW-04-57 (shown on Figure 3-2) are located landward of the top of bank and are therefore outside of the Gasco Sediments Site. Oregon hot spots landward of the top of bank will be addressed as part of the upland feasibility study remedy evaluation.

3.3 Potential Human Health Hot Spots (Evaluation of 0- to 12-foot soil)

As presented in Table 3-3 and shown on Figure 3-3, the concentrations of two analytes were detected in soil samples at concentrations above potential human health hot spot screening levels for 0- to 12-foot soil.

- Benzo(a)pyrene was detected in one location (GST-03) at a concentration above the associated potential hot spot screening level with a HQ of 195.
- Cyanide was detected in one location (P-5) at a concentration above the associated potential hot spot screening level, with a HQ 46.

As shown on Figure 3-3, stations GST-03 and P-5 are located landward of the top of bank and are therefore outside of the Gasco Sediments Site. Oregon hot spots landward of the top of bank will be addressed as part of the upland feasibility study remedy evaluation.

3.4 Summary and Discussion of Potential Hot Spots

In summary, the comparison of the riverbank soil data set to the screening levels in Tables 2-1 and 2-2 indicates the presence of a potential human health Oregon hot spot in the Gasco Sediments Site riverbank at one location, B-29, due to benzo(a)pyrene concentrations. The EE/CA remedial alternatives address the potential Oregon hot spots identified in riverbank areas (from 13 feet NAVD88 to the top of bank) through the application of both in-place and removal technologies. Refer to the EE/CA for more detail.

In addition, the screening of soil samples collected landward of the top of bank (outside of the Gasco Sediments Site) indicates the following additional potential hot spots:

- Potential ecological hot spot in 0- to 3.5-foot soil at location GST-03 due to naphthalene concentrations.
- Potential human health hot spots in 0- to 3.5-foot soil at locations GST-05, M-04-10, and

MW-04-57 due to benzo(a)pyrene concentrations.

- Potential human health hot spot in 0- to 3.5-foot soil at locations GST-03 due to benzo(a)pyrene, benzo(a)anthracene, and dibenzo(a,h,)anthracene concentrations.
- Potential human health hot spots in 0- to 12-foot soil at location GST-03 due to benzo(a)pyrene concentrations and at P-5 due to cyanide concentrations.

Oregon hot spots that are landward of the top of bank will be addressed consistent with the upland remedy feasibility study evaluations.

The potential hot spot screening level exceedance at station SS-05, located below the 13 feet NAVD88 contour, will be addressed consistent with the in-water sediment remedy. Refer to the EE/CA for more detail.

4 REFERENCES

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TABLES

Table 2-1
Screening Levels for Potential Ecological Hot Spots

Chemical	Upland Ecological Receptor Screening Levels and Potential Hot Spot Screening Levels[1,2]									
	EPA Eco SSLs[3] (µg/kg)		DEQ Alternative Screening Level[4] (µg/kg)		DEQ Level II SLVs for Soil[5] (µg/kg)		Alternative Cyanide Screening Level[6] (µg/kg)		EPA Region 5 RCRA ESLs[7] (µg/kg)	
	SSLs	Potential Hot Spot Screening Level	Screening Level	Potential Hot Spot Screening Level	SLV	Potential Hot Spot Screening Level	Screening Level	Potential Hot Spot Screening Level	ESL	Potential Hot Spot Screening Level
Metals/Inorganics										
Zinc	1.20E+05	6.00E+06			5.00.E+04	2.50E+06				
Cyanide							1.99E+06	1.99E+07 [b]	6.65E+03 [c]	6.65E+04 [b]
Polycyclic Aromatic Hydrocarbons										
Acenaphthene					2.00E+04	1.00E+06				
Benzo(a)pyrene					6.25E+05	6.25E+06 [b]				
Fluorene					3.00E+04	1.50E+06				
Naphthalene					1.00E+04	5.00E+05				
Pesticides										
alpha-Hexachlorocyclohexane									9.94E+01	4.97E+03
beta-Hexachlorocyclohexane									3.98E+00	1.99E+02
delta-Hexachlorocyclohexane									9.94E+03	4.97E+05
gamma-Hexachlorocyclohexane (Lindane)					4.00E+04	4.00E+05 [b]				
Technical-grade Hexachlorocyclohexane					1.25E+04	1.25E+05 [b]				
Endrin ketone									1.01E+01	5.05E+02
Polychlorinated Biphenyls										
Aroclor 1016					5.00E+05	5.00E+06 [b]				
Aroclor 1242					7.50E+03	7.50E+04 [b]				
Aroclor 1254					3.50E+03	3.50E+04 [b]				
Polychlorinated Biphenyl TEQ					2.75E-01 [a]	2.75E+00 [b]				
Semivolatile Organic Compounds										
Carbazole			8.50E+04	8.50E+05 [b]						
Dibenzofuran			8.50E+04	8.50E+05 [b]	1.00E+01	1.00E+02 [b]				
Volatile Organic Compounds										
1,1-Dichloroethene					1.88E+07	1.88E+08 [b]				
Benzene					1.65E+07	1.65E+08 [b]				
cis-1,2-Dichloroethene					1.25E+07	1.25E+08 [b]				
trans-1,2-Dichloroethene					1.25E+07	1.25E+08 [b]				
Ethylbenzene									5.16E+03	2.58E+05
Toluene					2.00E+05	1.00E+07				
Trichloroethene					2.00E+05	2.00E+06 [b]				
Vinyl chloride					1.00E+05	1.00E+06 [b]				
o-Xylene					1.00E+03	5.00E+04				

Table 2-1
Screening Levels for Potential Ecological Hot Spots

Notes:

[a] = 2,3,7,8 TCDD screening level used for PCB TEQ screening.

[b] = Potential hot spot screening level is multiplied by 10 to calculate a highly concentrated hot spot level because the NOAEL-based screening level was already multiplied by 5 (see associated notes).

[c] = Screening level is multiplied by 5 because the screening level is based on a NOAEL endpoint.

[1] = Refer to the source tables in the following footnotes for additional notes pertaining to the criteria listed in this table.

[2] = Potential hot spot screening levels were calculated generally following the DEQ's *Guidance for Identification of Hot Spots*, April 23, 1998. The following hiearchy was applied for selecting screening levels to be used in the potential hot spot evaluation: if a DEQ level II SLV was available, that value was used in the the potential hot spot evaluation. For chemicals without a DEQ SLV, the lowest of the screening levels shown on this table was used for potential hot spot screening. Consistent the DEQ guidance for non threatened and endangered species, an ultimate multiplier of 50 was used for all potential hot spot screening levels.

[3] = Values obtained fromEPA Ecological Soil Screening Levels for Zinc Interim Final (EPA 2007) (http://www.epa.gov/ecotox/ecossl/). Where more than one value is listed, then lowest is used for screening. A multiplier of 5 was applied to the bird and mammal screening levels.

[4] = Alternative DEQ screening level for dibenzofuran is from the DEQ e-mail to NW Natural dated February 23, 2012. This level is applied to carbazole as directed by DEQ. The screening level is multiplied by 5 because it is based on a NOAEL endpoint.

[5] = DEQ screening values from *Guidance For Ecological Risk Assessment*. Level 2 screening values. "Table 1 Screening Level Values for Plants, Invertebrates, and Wildlife Exposed to Soil and Surface Water" (DEQ revision 2001). When multiple values are listsed, the lowest was used. A multiplier of 5 was applied to the bird and mammal screening levels.

[6] = Alternative cyanide screening level is from the October 31, 2011, memorandum from Taku Fuji and Kara Hitchko of Anchor QEA to Dana Bayuk of DEQ entitled *Proposed Alternative Cyanide Screening Level*. The screening level is multiplied by 5 because it is based on a NOAEL endpoint.

[7] = EPA *Region 5 RCRA Ecological Screening Levels (ESLs) for Soil* (2003). Available at: http://www.epa.gov/reg5rcra/ca/pdfs/ecological-screening-levels-200308.pdf. Accessed March 21, 2012.

Acronyms:

µg/kg = microgram per kilogram
DEQ = Oregon Department of Environmental Quality
EPA = U. S. Environmental Protection Agency
ESL = ecological screening level
NOAEL = no observed adverse effect level
PCB = polychlorinated biphenyl
RCRA = Resource Conservation and Recovery Act
SLV = screening level value
Eco SSL = ecological soil screening level
TCDD = tetrachlorodibenzo-p-dioxin
TEQ = toxic equivalent quotient

Table 2-2
Screening Levels for Potential Human Health Hot Spots

Chemicals	Upland Human Health Screening Levels and Potential Hot Spot Screening Levels[1,2]							
	EPA RSLs[3] (µg/kg)		DEQ RBDM RBC Soil[4] (µg/kg)					
	Industrial Soil		Occupational Worker - Ingestion, Dermal Contact, and Inhalation		Construction Worker - Ingestion, Dermal Contact, and Inhalation		Excavation Worker - Ingestion, Dermal Contact, and Inhalation	
	RSL	Potential Hot Spot Screening Level	RBC	Potential Hot Spot Screening Level	RBC	Potential Hot Spot Screening Level	RBC	
Metals/Inorganics								
Zinc	3.10E+08	3.10E+09						
Cyanide			6.10E+05	6.10E+06	1.90E+05	1.90E+06	5.10E+06	5.10E+07
Polycyclic Aromatic Hydrocarbons								
2-Methylnaphthalene	4.10E+06	4.10E+07						
Acenaphthene			6.10E+07	6.10E+08	1.90E+07	1.90E+08	5.20E+08	5.20E+09
Anthracene			3.10E+08	3.10E+09	9.30E+07	9.30E+08	-- [e]	--
Benzo(a)anthracene			2.70E+03	2.70E+05	2.10E+04	2.10E+06	5.90E+05	5.90E+07
Benzo(a)pyrene			2.70E+02	2.70E+04	2.10E+03	2.10E+05	5.90E+04	5.90E+06
Benzo(b)fluoranthene			2.70E+03	2.70E+05	2.10E+04	2.10E+06	5.90E+05	5.90E+07
Benzo(g,h,i)perylene								
Benzo(k)fluoranthene			2.70E+04	2.70E+06	2.10E+05	2.10E+07	5.90E+06	5.90E+08
Chrysene			2.50E+05	2.50E+07	2.10E+06	2.10E+08	5.70E+07	5.70E+09
Dibenzo(a,h)anthracene			2.70E+02	2.70E+04	2.10E+03	2.10E+05	5.90E+04	5.90E+06
Fluoranthene			2.90E+07	2.90E+08	8.90E+06	8.90E+07	2.50E+08	2.50E+09
Fluorene			4.10E+07	4.10E+08	1.20E+07	1.20E+08	3.40E+08	3.40E+09
Indeno(1,2,3-cd)pyrene			2.70E+03	2.70E+05	2.10E+04	2.10E+06	5.90E+05	5.90E+07
Naphthalene			2.30E+04	2.30E+06	5.80E+05	5.80E+07	1.60E+07	1.60E+09
Pyrene			2.10E+07	2.10E+08	6.70E+06	6.70E+07	1.90E+08	1.90E+09
Pesticides								
alpha-Hexachlorocyclohexane			3.10E+02	3.10E+04	2.60E+03	2.60E+05	7.10E+04	7.10E+06
beta-Hexachlorocyclohexane	9.60E+02	9.60E+04						
gamma-Hexachlorocyclohexane (Lindane)			1.70E+03	1.70E+05	1.50E+04	1.50E+06	4.00E+05	4.00E+07
Technical-grade Hexachlorocyclohexane	9.60E+02	9.60E+04						
4,4'-Dichlorodiphenyldichloroethane			1.10E+04	1.10E+06	8.30E+04	8.30E+06	2.30E+06	2.30E+08
2,4'-Dichlorodiphenyldichloroethane	7.20E+03 [a]	7.20E+05						
4,4'-Dichlorodiphenyldichloroethylene			7.60E+03	7.60E+05	5.80E+04	5.80E+06	1.60E+06	1.60E+08
2,4'-Dichlorodiphenyldichloroethylene	5.10E+03 [b]	5.10E+05						
4,4'-Dichlorodiphenyltrichloroethane			7.70E+03	7.70E+05	5.80E+04	5.80E+06	1.60E+06	1.60E+08
2,4'-Dichlorodiphenyltrichloroethane	7.00E+03 [c]	7.00E+05						
Endrin ketone	1.80E+05 [f]	1.80E+06						

Table 2-2
Screening Levels for Potential Human Health Hot Spots

Chemicals	Upland Human Health Screening Levels and Potential Hot Spot Screening Levels[1,2]							
	EPA RSLs[3] (µg/kg)		DEQ RBDM RBC Soil[4] (µg/kg)					
	Industrial Soil		Occupational Worker - Ingestion, Dermal Contact, and Inhalation		Construction Worker - Ingestion, Dermal Contact, and Inhalation		Excavation Worker - Ingestion, Dermal Contact, and Inhalation	
	RSL	Potential Hot Spot Screening Level	RBC	Potential Hot Spot Screening Level	RBC	Potential Hot Spot Screening Level	RBC	
Polychlorinated Biphenyls								
Aroclor 1016	2.10E+04	2.10E+06						
Aroclor 1221	5.40E+02	5.40E+04						
Aroclor 1232	5.40E+02	5.40E+04						
Aroclor 1242	7.40E+02	7.40E+04						
Aroclor 1248	7.40E+02	7.40E+04						
Aroclor 1254	7.40E+02	7.40E+04						
Aroclor 1260	7.40E+02	7.40E+04						
Polychlorinated Biphenyl 77	1.10E+02	1.10E+04						
Polychlorinated Biphenyl 81	3.80E+01	3.80E+03						
Polychlorinated Biphenyl 105	3.80E+02	3.80E+04						
Polychlorinated Biphenyl 114	3.80E+02	3.80E+04						
Polychlorinated Biphenyl 118	3.80E+02	3.80E+04						
Polychlorinated Biphenyl 123	3.80E+02	3.80E+04						
Polychlorinated Biphenyl 126	1.10E-01	1.10E+01						
Polychlorinated Biphenyl 156	3.80E+02	3.80E+04						
Polychlorinated Biphenyl 157	3.80E+02	3.80E+04						
Polychlorinated Biphenyl 167	3.80E+02	3.80E+04						
Polychlorinated Biphenyl 169	3.80E-01	3.80E+01						
Polychlorinated Biphenyl 189	3.80E+02	3.80E+04						
Polychlorinated Biphenyl TEQ			1.50E-02 [d]	1.50E+00	1.50E-01	1.50E+01	4.20E+00	4.20E+02
Semivolatile Organic Compounds								
Carbazole	1.00E+06 [g]	1.00E+07						
Dibenzofuran	1.00E+06	1.00E+07						
Volatile Organic Compounds								
1,1-Dichloroethene			2.70E+07	2.70E+08	1.20E+07	1.20E+08	3.40E+08	3.40E+09
Benzene			3.40E+04	3.40E+06	3.40E+05	3.40E+07	9.50E+06	9.50E+08
cis-1,2-Dichloroethene			2.00E+06	2.00E+07	6.20E+05	6.20E+06	1.70E+07	1.70E+08
trans-1,2-Dichloroethene			9.20E+06	9.20E+07	4.50E+06	4.50E+07	1.30E+08	1.30E+09
Ethylbenzene			1.40E+05	1.40E+07	1.60E+06	1.60E+08	4.40E+07	4.40E+09
Toluene			7.70E+07	7.70E+08	2.40E+07	2.40E+08	6.80E+08	6.80E+09
Trichloroethene			4.60E+04	4.60E+06	1.20E+05	1.20E+07	3.40E+06	3.40E+08
Vinyl chloride			3.90E+03	3.90E+05	3.00E+04	3.00E+06	8.30E+05	8.30E+07
m-Xylene	2.50E+06	2.50E+07						
p-Xylene	2.60E+06	2.60E+07						
o-Xylene	3.00E+06	3.00E+07						

Table 2-2
Screening Levels for Potential Human Health Hot Spots

Notes:

[a] = EPA RSL for Dichlorodiphenyldichloroethane used for screening.

[b] = EPA RSL for Dichlorodiphenyldichloroethylene used for screening.

[c] = EPA RSL for Dichlorodiphenyltrichloroethane used for screening.

[d] = 2,3,7,8 TCDD screening level used for PCB TEQ screening.

[e] = RBC not available because the constituent value for this pathway is greater than 100,000 mg/kg or 100,000 mg/l.

[f] = EPA RSL for endrin used for endrin ketone screening.

[g] = The dibenzofuran human health and ecological screening levels will be used for carbazole as directed by DEQ (DEQ email to NW Natural, February 23, 2012).

[1] = Refer to the source tables in the following footnotes for additional notes pertaining to the criteria listed in this table.

[2] = Potential hot spot screening levels were calculated generally following the DEQ's *Guidance for Identification of Hot Spots* , April 23, 1998. Screening levels were used for potential hot spot screening according to the following hierarchy: for 0- to 3.5-foot soils, the soil ingestion, dermal contact, and inhalation RBC for occupational workers was applied. For 0- to 12-foot soils, the lowest of the the soil ingestion, dermal contact, and inhalation RBC for construction and excavation workers was applied. For all soils, the EPA RSL was applied for chemicals without an associated RBC. A multiplier of 10 was used for screening levels derived from a non-cancer endpoint and a multiplier of 100 was applied to screening levels derived from a cancer endpoint.

[3] = EPA RSLs are from EPA RSL Summary Table November 2011 (EPA 2011a). Available at: http://www.epa.gov/region9/superfund/prg/. Accessed March 21, 2012.

[4] = RBDM RBCs are from DEQ Environmental Cleanup and Tanks Program table entitled "*Risk-Based Concentrations for Individual Chemicals,"* November 15, 2011 revision. Available at http://www.deq.state.or.us/lq/pubs/docs/RBDMTable.pdf. Accessed March 21, 2012.

Acronyms:

µg/kg = microgram per kilogram
mg/kg = milligrams per kilogram
mg/l = milligrams per liter
DEQ = Oregon Department of Environmental Quality
EPA = U. S. Environmental Protection Agency
RBC = risk-based concentration
RBDM = Risk-Based Decision Making
RCRA = Resource Conservation and Recovery Act
RSL = Regional Screening Level
TCDD = 2,3,7,8-Tetrachlorodibenzo-p-Dioxin
TEQ = Toxic Equivalent Quotient

Table 3-1
Potential Ecological Hot Spot Data Screen: 0- to 3.5-Foot Riverbank Soil

	Task Code:	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps
	Sample Station:	GSM-07	GSM-08	GSM-14	GST-01	GST-02	GST-03	GST-04
	Sample Name:	GSM-07SO-0-5-100927	GSM-08SO-0-5-100928	GSM-14SO-0-5-101015	GST-01SO-0-5-101001	GST-02SO-0-5-101004	GST-03SO-0-5-101005	GST-04SO-0-5-101006
	Date Sampled:	9/27/2010	9/28/2010	10/15/2010	10/1/2010	10/4/2010	10/5/2010	10/6/2010
	Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
	Potential Hot Spot Screening Level							
Conventional Parameters (mg/kg)								
Cyanide, total	19900	**0.274**	0.124 U	**0.286**	**0.341**	**0.222**	**3.57**	**5.76 J**
Metals (mg/kg)								
Zinc	500	**158 J**	**85 J**	**77**	**96 J**	**78 J**	**103 J**	**102**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	188000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U	1 U
1,2-Dichloroethene, cis-	125000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U	1 U
1,2-Dichloroethene, trans-	125000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U	1 U
Benzene	165000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	**44**	**2.2**
Ethylbenzene	51600	1.2 U	1.5 U	1 U	1.1 U	1.2 U	**34**	1 U
o-Xylene	10000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	**40**	1 U
Toluene	2000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	**30**	1 U
Trichloroethene (TCE)	2000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U	1 U
Vinyl chloride	1000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U	1 U
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Acenaphthene	200000	62 U	**100**	60 U	60 U	65 U	**33000**	310 U
Benzo(a)pyrene	6250000	**350**	**100**	**270**	60 U	**150**	**410000**	**10000**
Fluorene	300000	62 U	**67**	60 U	60 U	65 U	**79000**	310 U
Naphthalene	100000	**160**	**220**	60 U	60 U	65 U	**220000**	**1800**
Semivolatile Organics (µg/kg)								
Carbazole	850000	62 U	63 U	60 U	60 U	65 U	**25000**	310 U
Dibenzofuran	100	62 U	63 U	60 U	60 U	65 U	**8600 a**	310 U
PCB Aroclors (µg/kg)								
Aroclor 1016	5000000	33 U	30 U	31 U	32 U	31 U	32 U	32 U
Aroclor 1242	75000	33 U	30 U	31 U	32 U	31 U	32 U	32 U
Aroclor 1254	35000	33 U	30 U	31 U	32 U	31 U	**58**	32 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	200000	33 UT	30 UT	31 UJT	32 UT	31 UT	**150 T**	32 UT
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	1050	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U	32 U	16 U
2,4'-DDE (o,p'-DDE)	1050	3.3 U	3.1 U	3.2 U	3.2 U	3.1 U	32 U	16 U
2,4'-DDT (o,p'-DDT)	1050	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U	32 U	16 U
4,4'-DDD (p,p'-DDD)	1050	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U	32 U	16 U
4,4'-DDE (p,p'-DDE)	1050	3.3 U	3.1 U	3.2 U	3.2 U	3.1 U	32 U	16 U
4,4'-DDT (p,p'-DDT)	1050	**5.6 J**	3.1 UJ	3.2 U	3.2 U	3.1 U	50 U	16 U
alpha-Hexachlorocyclohexane (BHC)	994	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	16 U	8 U
beta-Hexachlorocyclohexane (BHC)	39.8	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	16 U	8 U
delta-Hexachlorocyclohexane (BHC)	99400	1.6 U	1.6 U	1.6 UJ	1.6 UJ	1.6 UJ	16 UJ	8 U
Endrin ketone	101	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U	**84 J**	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	400000	1.6 UJ	1.6 U	1.6 U	1.6 U	1.6 U	16 U	8 U
LWG RA Sum DDD (Calculated U = 1/2)	500	3.3 UJT	3.1 UJT	3.2 UT	3.2 UT	3.1 UT	32 UT	16 UT
LWG RA Sum DDE (Calculated U = 1/2)	500	3.3 UT	3.1 UT	3.2 UT	3.2 UT	3.1 UT	32 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	500	**7.3 JT**	3.1 UJT	3.2 UT	3.2 UT	3.1 UT	50 UT	16 UT
LWG RA Total DDx (Calculated U = 1/2)	1050	**14 JT**	3.1 UJT	3.2 UT	3.2 UT	3.1 UT	50 UT	16 UT

Table 3-1
Potential Ecological Hot Spot Data Screen: 0- to 3.5-Foot Riverbank Soil

	Task Code:	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV
	Sample Station:	GST-05	GST-06	GST-09	GST-11	GST-13	B-29	B-31	B-53	B-54
	Sample Name:	GST-05SO-0-5-101005	GST-06SO-0-5-101007	GST-09SO-0-5-101008	GST-11SO-0-5-101011	GST-13SO-0-5-101012	950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013
	Date Sampled:	10/5/2010	10/7/2010	10/8/2010	10/11/2010	10/12/2010	9/22/1995	9/25/1995	6/7/2004	6/8/2004
	Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm
	Potential Hot Spot Screening Level									
Conventional Parameters (mg/kg)										
Cyanide, total	19900	**1.37 J**	**1.46 J**	0.11 U	0.105 U	**2.31**	--	**0.59**	--	--
Metals (mg/kg)										
Zinc	500	**108**	**232**	**90**	**51**	**75**	--	--	--	--
Volatile Organics (µg/kg)										
1,1-Dichloroethene	188000000	1.1 U	1.1 U	1 U	--	--	--	--	--	--
1,2-Dichloroethene, cis-	125000000	1.1 U	1.1 U	1 U	0.9 U	1 U	--	--	--	--
1,2-Dichloroethene, trans-	125000000	1.1 U	1.1 U	1 U	0.9 U	1 U	--	--	--	--
Benzene	165000000	1.1 U	1.1 U	1 U	0.9 U	1 U	--	300 U	50 U	50 U
Ethylbenzene	51600	1.1 U	1.1 U	1 U	0.9 U	1 U	--	300 U	50 U	50 U
o-Xylene	10000	1.1 U	1.1 U	1 U	0.9 U	1 U	--	--	--	--
Toluene	2000000	1.1 U	1.1 U	1 U	0.9 U	1 U	--	300 U	50 U	50 U
Trichloroethene (TCE)	2000000	1.1 U	1.1 U	1 U	0.9 U	1 U	--	--	--	--
Vinyl chloride	1000000	1.1 U	1.1 U	1 U	0.9 U	1 U	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)										
Acenaphthene	200000	**1300**	**110**	61 U	59 U	63 U	**400**	**110**	670 U	168 U
Benzo(a)pyrene	6250000	**43000**	**5500**	**3700 J**	**66**	**2200**	**32500**	**4800**	**6820**	**323**
Fluorene	300000	**1400**	**96**	**89**	59 U	63 U	**470**	**58**	670 U	168 U
Naphthalene	100000	**6700**	**1600**	**400**	59 U	**180**	**2400**	**300**	670 U	168 U
Semivolatile Organics (µg/kg)										
Carbazole	850000	**330**	**84**	**87**	59 U	63 U	--	--	--	--
Dibenzofuran	100	**240 a**	64 U	61 U	59 U	63 U	--	--	--	--
PCB Aroclors (µg/kg)										
Aroclor 1016	5000000	32 U	31 U	31 U	31 U	32 U	--	--	--	--
Aroclor 1242	75000	32 U	31 U	31 U	31 U	32 U	--	--	--	--
Aroclor 1254	35000	32 U	31 U	31 U	31 U	32 U	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	200000	32 UT	31 UT	31 UT	31 UT	32 UT	--	--	--	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	1050	16 U	16 U	16 U	3 U	**36**	--	--	--	--
2,4'-DDE (o,p'-DDE)	1050	16 U	16 U	16 U	3 U	16 U	--	--	--	--
2,4'-DDT (o,p'-DDT)	1050	16 U	16 U	16 U	3 U	16 U	--	--	--	--
4,4'-DDD (p,p'-DDD)	1050	16 U	16 U	16 U	3 U	**100**	--	--	--	--
4,4'-DDE (p,p'-DDE)	1050	16 U	16 U	16 U	3 U	16 U	--	--	--	--
4,4'-DDT (p,p'-DDT)	1050	16 U	16 U	16 U	**7.8**	**16 J**	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	994	7.9 U	7.9 U	7.9 U	1.5 U	8 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	39.8	7.9 U	7.9 U	7.9 U	1.5 U	8 U	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	99400	7.9 U	7.9 U	7.9 U	1.5 U	8 U	--	--	--	--
Endrin ketone	101	16 U	16 U	16 U	3 U	16 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	400000	7.9 U	7.9 U	7.9 U	1.5 U	8 U	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	500	16 UT	16 UT	16 UT	3 UT	**140 T**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	500	16 UT	16 UT	16 UT	3 UT	16 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	500	16 UT	16 UT	16 UT	**9.3 T**	**24 JT**	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	1050	16 UT	16 UT	16 UT	**15 T**	**180 JT**	--	--	--	--

Table 3-1
Potential Ecological Hot Spot Data Screen: 0- to 3.5-Foot Riverbank Soil

	Task Code:	**HAHNRINV**	**HAHNRINV**	**HAHNRINV**	**HAHNRINV**	**HAHNRINV**	**HAHNRINV**	**HAHNRINV**	**HAHNRINV**	**HAHNRINV**
	Sample Station:	**B-56**	**MW-04-101**	**MW-04-57**	**SS-1**	**SS-10**	**SS-11**	**SS-2**	**SS-3**	**SS-5**
	Sample Name:	**2708-040601-001**	**981014-M4-01**	**951030-M4-01**	**981112-SS-01**	**981112-SS-10**	**981112-SS-11**	**981112-SS-02**	**981112-SS-03**	**981112-SS-05**
	Date Sampled:	**6/1/2004**	**10/14/1998**	**10/30/1995**	**11/12/1998**	**11/12/1998**	**11/12/1998**	**11/12/1998**	**11/12/1998**	**11/12/1998**
	Depth Interval:	**76.2 - 106.68 cm**	**45.72 - 60.96 cm**	**0 - 6.1 cm**	**0 - 6.096 cm**	**0 - 6.096 cm**	**0 - 6.096 cm**	**0 - 6.096 cm**	**0 - 6.096 cm**	**0 - 6.096 cm**
	Potential Hot Spot Screening Level									
Conventional Parameters (mg/kg)										
Cyanide, total	19900	0.435 U	--	**0.8**	**0.68**	**41**	0.5 U	0.5 U	**0.58**	**1.3**
Metals (mg/kg)										
Zinc	500	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/kg)										
1,1-Dichloroethene	188000000	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	125000000	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	125000000	--	--	--	--	--	--	--	--	--
Benzene	165000000	50 U	25 U	--	--	--	--	--	--	--
Ethylbenzene	51600	50 U	25 U	--	--	--	--	--	--	--
o-Xylene	10000	--	--	--	--	--	--	--	--	--
Toluene	2000000	50 U	25 U	--	--	--	--	--	--	--
Trichloroethene (TCE)	2000000	--	--	--	--	--	--	--	--	--
Vinyl chloride	1000000	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)										
Acenaphthene	200000	13.4 U	**1100**	5000 U	50 U	**140**	50 U	50 U	**100**	**590**
Benzo(a)pyrene	6250000	13.4 U	**183000**	**28000**	**440**	50 U	**130**	**1500**	**14100**	**69100**
Fluorene	300000	13.4 U	**1500**	5000 U	50 U	**120**	50 U	50 U	**130**	**610**
Naphthalene	100000	13.4 U	**6100**	**1700**	50 U	**230**	50 U	**88**	**900**	**5000**
Semivolatile Organics (µg/kg)										
Carbazole	850000	--	--	--	--	--	--	--	--	--
Dibenzofuran	100	--	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)										
Aroclor 1016	5000000	--	--	--	--	--	--	--	--	--
Aroclor 1242	75000	--	--	--	--	--	--	--	--	--
Aroclor 1254	35000	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	200000	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	1050	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	1050	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	1050	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	1050	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	1050	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	1050	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	994	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	39.8	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	99400	--	--	--	--	--	--	--	--	--
Endrin ketone	101	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	400000	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	500	--	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	500	--	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	500	--	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	1050	--	--	--	--	--	--	--	--	--

Table 3-1
Potential Ecological Hot Spot Data Screen: 0- to 3.5-Foot Riverbank Soil

	Task Code:	**HAHNRINV**	**HAHNRINV**	**HAHNRINV**	**HAHNRINV**
	Sample Station:	**SS-6**	**SS-7**	**SS-8**	**SS-9**
	Sample Name:	**981112-SS-06**	**981112-SS-07**	**981112-SS-08**	**981112-SS-09**
	Date Sampled:	**11/12/1998**	**11/12/1998**	**11/12/1998**	**11/12/1998**
	Depth Interval:	**0 - 6.096 cm**	**0 - 6.096 cm**	**0 - 6.096 cm**	**0 - 6.096 cm**
	Potential Hot Spot Screening Level				
Conventional Parameters (mg/kg)					
Cyanide, total	19900	**0.58**	**13**	0.5 U	**56**
Metals (mg/kg)					
Zinc	500	--	--	--	--
Volatile Organics (µg/kg)					
1,1-Dichloroethene	188000000	--	--	--	--
1,2-Dichloroethene, cis-	125000000	--	--	--	--
1,2-Dichloroethene, trans-	125000000	--	--	--	--
Benzene	165000000	--	--	--	--
Ethylbenzene	51600	--	--	--	--
o-Xylene	10000	--	--	--	--
Toluene	2000000	--	--	--	--
Trichloroethene (TCE)	2000000	--	--	--	--
Vinyl chloride	1000000	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)					
Acenaphthene	200000	50 U	**640**	50 U	**380**
Benzo(a)pyrene	6250000	**360**	**23700**	50 U	**3400**
Fluorene	300000	50 U	**410**	50 U	**390**
Naphthalene	100000	50 U	**1800**	50 U	**550**
Semivolatile Organics (µg/kg)					
Carbazole	850000	--	--	--	--
Dibenzofuran	100	--	--	--	--
PCB Aroclors (µg/kg)					
Aroclor 1016	5000000	--	--	--	--
Aroclor 1242	75000	--	--	--	--
Aroclor 1254	35000	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	200000	--	--	--	--
Pesticides (µg/kg)					
2,4'-DDD (o,p'-DDD)	1050	--	--	--	--
2,4'-DDE (o,p'-DDE)	1050	--	--	--	--
2,4'-DDT (o,p'-DDT)	1050	--	--	--	--
4,4'-DDD (p,p'-DDD)	1050	--	--	--	--
4,4'-DDE (p,p'-DDE)	1050	--	--	--	--
4,4'-DDT (p,p'-DDT)	1050	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	994	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	39.8	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	99400	--	--	--	--
Endrin ketone	101	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	400000	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	500	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	500	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	500	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	1050	--	--	--	--

Table 3-1
Potential Ecological Hot Spot Data Screen: 0- to 3.5-Foot Riverbank Soil

Notes:

Detected concentration is greater than potential hot spot screening level

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R = Rejected

T = Result is the value of a total or calculation.

-- = Results not reported or not applicable

N = Normal Field Sample

a= the result is below the Oregon Department of Environmental Quality (DEQ) alternative screening level shown in Table 2-1 and therefore is not considered a potential hot spot based on this exceedance. Refer to Table 2-1 for additional detail.

The data set evaluated for potential ecological hot spots consists of soil samples collected from the 0- to 5- foot depth interval for locations sampled during the Gasco Sediments Site Data Gaps Investigation (GST-XX and GSM-XX locations) and soil samples collected from the 0- to 3.5- foot depth interval for all other locations shown. Refer to Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation. Appendix G descrives the soil dataset screened.

Potential hot spot screening levels are presented on Table 2-1.

Soil samples were generally collected from locations between +13-foot NAVD88 and the top of bank.

Upland soil samples collected outside of the Gasco Sediments Site Area of Interest or below +13-foot NAVD88 were included in this evaluation for informational purposes. However, remedial decisions will not be made solely based on the evaluation of these upland samples.

Acronyms:

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)

cPAH = carcinogenic PAH

cm = centimeters

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

HPAH = high molecular weight polycyclic aromatic hydrocarbon

LPAH = low-molecular-weight PAH

LWG RA = Lower Willamette Group Risk Assessment

NAVD88 = North American Vertican Datum 1988

PCB = Polychlorinated biphenyl

Table 3-2
Potential Human Health Hot Spot Data Screen: 0- to 3.5-Foot Riverbank Soil

	Task Code:	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps
	Sample Station:	GSM-07	GSM-08	GSM-14	GST-01	GST-02	GST-03	GST-04	GST-05
	Sample Name:	GSM-07SO-0-5-100927	GSM-08SO-0-5-100928	GSM-14SO-0-5-101015	GST-01SO-0-5-101001	GST-02SO-0-5-101004	GST-03SO-0-5-101005	GST-04SO-0-5-101006	GST-05SO-0-5-101005
	Date Sampled:	9/27/2010	9/28/2010	10/15/2010	10/1/2010	10/4/2010	10/5/2010	10/6/2010	10/5/2010
	Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
	Potential Hot Spot Screening Level								
Conventional Parameters (mg/kg)									
Cyanide, total	6100	**0.274**	0.124 U	**0.286**	**0.341**	**0.222**	**3.57**	**5.76 J**	**1.37 J**
Metals (mg/kg)									
Zinc	3100000	**158 J**	**85 J**	**77**	**96 J**	**78 J**	**103 J**	**102**	**108**
Volatile Organics (µg/kg)									
1,1-Dichloroethene	270000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U	1 U	1.1 U
1,2-Dichloroethene, cis-	20000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U	1 U	1.1 U
1,2-Dichloroethene, trans-	92000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U	1 U	1.1 U
Benzene	3400000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	**44**	**2.2**	1.1 U
Ethylbenzene	14000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	**34**	1 U	1.1 U
o-Xylene	30000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	**40**	1 U	1.1 U
Toluene	770000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	**30**	1 U	1.1 U
Trichloroethene (TCE)	4600000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U	1 U	1.1 U
Vinyl chloride	390000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U	1 U	1.1 U
Polycyclic Aromatic Hydrocarbons (µg/kg)									
Acenaphthene	610000000	62 U	**100**	60 U	60 U	65 U	**33000**	310 U	**1300**
Benzo(a)pyrene	27000	**350**	**100**	**270**	60 U	**150**	**410000**	**10000**	**43000**
Fluorene	410000000	62 U	**67**	60 U	60 U	65 U	**79000**	310 U	**1400**
Naphthalene	2300000	**160**	**220**	60 U	60 U	65 U	**220000**	**1800**	**6700**
Semivolatile Organics (µg/kg)									
Carbazole	10000000	62 U	63 U	60 U	60 U	65 U	**25000**	310 U	**330**
Dibenzofuran	10000000	62 U	63 U	60 U	60 U	65 U	**8600**	310 U	**240**
PCB Aroclors (µg/kg)									
Aroclor 1016	2100000	33 U	30 U	31 U	32 U	31 U	32 U	32 U	32 U
Aroclor 1221	54000	33 U	30 U	31 UJ	32 U	31 U	32 U	32 U	32 U
Aroclor 1232	54000	33 U	30 U	31 U	32 U	31 U	32 U	32 U	32 U
Aroclor 1242	74000	33 U	30 U	31 U	32 U	31 U	32 U	32 U	32 U
Aroclor 1248	74000	33 U	30 U	31 U	32 U	31 U	32 U	32 U	32 U
Aroclor 1254	74000	33 U	30 U	31 U	32 U	31 U	**58**	32 U	32 U
Aroclor 1260	74000	33 U	30 U	31 U	32 U	31 U	32 U	32 U	32 U
Pesticides (µg/kg)									
2,4'-DDD (o,p'-DDD)	720000	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U	32 U	16 U	16 U
2,4'-DDE (o,p'-DDE)	510000	3.3 U	3.1 U	3.2 U	3.2 U	3.1 U	32 U	16 U	16 U
2,4'-DDT (o,p'-DDT)	700000	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U	32 U	16 U	16 U
4,4'-DDD (p,p'-DDD)	1100000	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U	32 U	16 U	16 U
4,4'-DDE (p,p'-DDE)	760000	3.3 U	3.1 U	3.2 U	3.2 U	3.1 U	32 U	16 U	16 U
4,4'-DDT (p,p'-DDT)	770000	**5.6 J**	3.1 UJ	3.2 U	3.2 U	3.1 U	50 U	16 U	16 U
alpha-Hexachlorocyclohexane (BHC)	31000	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	16 U	8 U	7.9 U
beta-Hexachlorocyclohexane (BHC)	96000	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	16 U	8 U	7.9 U
Endrin ketone	1800000	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U	**84 J**	16 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	170000	1.6 UJ	1.6 U	1.6 U	1.6 U	1.6 U	16 U	8 U	7.9 U
Polycyclic Aromatic Hydrocarbons (µg/kg)									
2-Methylnaphthalene	41000000	62 U	**140**	60 U	60 U	65 U	**65000**	**480**	**1900**

Table 3-2
Potential Human Health Hot Spot Data Screen: 0- to 3.5-Foot Riverbank Soil

	Task Code:	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV
	Sample Station:	GST-06	GST-09	GST-11	GST-13	B-29	B-31	B-53	B-54	B-56	MW-04-101
	Sample Name:	GST-06SO-0-5-101007	GST-09SO-0-5-101008	GST-11SO-0-5-101011	GST-13SO-0-5-101012	950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013	2708-040601-001	981014-M4-01
	Date Sampled:	10/7/2010	10/8/2010	10/11/2010	10/12/2010	9/22/1995	9/25/1995	6/7/2004	6/8/2004	6/1/2004	10/14/1998
	Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm	76.2 - 106.68 cm	45.72 - 60.96 cm
	Potential Hot Spot Screening Level										
Conventional Parameters (mg/kg)											
Cyanide, total	6100	**1.46 J**	0.11 U	0.105 U	**2.31**	--	**0.59**	--	--	0.435 U	--
Metals (mg/kg)											
Zinc	3100000	**232**	**90**	**51**	**75**	--	--	--	--	--	--
Volatile Organics (µg/kg)											
1,1-Dichloroethene	270000000	1.1 U	1 U	--	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	20000000	1.1 U	1 U	0.9 U	1 U	--	--	--	--	--	--
1,2-Dichloroethene, trans-	92000000	1.1 U	1 U	0.9 U	1 U	--	--	--	--	--	--
Benzene	3400000	1.1 U	1 U	0.9 U	1 U	--	300 U	50 U	50 U	50 U	25 U
Ethylbenzene	14000000	1.1 U	1 U	0.9 U	1 U	--	300 U	50 U	50 U	50 U	25 U
o-Xylene	30000000	1.1 U	1 U	0.9 U	1 U	--	--	--	--	--	--
Toluene	770000000	1.1 U	1 U	0.9 U	1 U	--	300 U	50 U	50 U	50 U	25 U
Trichloroethene (TCE)	4600000	1.1 U	1 U	0.9 U	1 U	--	--	--	--	--	--
Vinyl chloride	390000	1.1 U	1 U	0.9 U	1 U	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)											
Acenaphthene	610000000	**110**	61 U	59 U	63 U	**400**	**110**	670 U	168 U	13.4 U	**1100**
Benzo(a)pyrene	27000	**5500**	**3700 J**	**66**	**2200**	**32500**	**4800**	**6820**	**323**	13.4 U	**183000**
Fluorene	410000000	**96**	**89**	59 U	63 U	**470**	**58**	670 U	168 U	13.4 U	**1500**
Naphthalene	2300000	**1600**	**400**	59 U	**180**	**2400**	**300**	670 U	168 U	13.4 U	**6100**
Semivolatile Organics (µg/kg)											
Carbazole	10000000	**84**	**87**	59 U	63 U	--	--	--	--	--	--
Dibenzofuran	10000000	64 U	61 U	59 U	63 U	--	--	--	--	--	--
PCB Aroclors (µg/kg)											
Aroclor 1016	2100000	31 U	31 U	31 U	32 U	--	--	--	--	--	--
Aroclor 1221	54000	31 U	31 U	31 U	32 U	--	--	--	--	--	--
Aroclor 1232	54000	31 U	31 U	31 U	32 U	--	--	--	--	--	--
Aroclor 1242	74000	31 U	31 U	31 U	32 U	--	--	--	--	--	--
Aroclor 1248	74000	31 U	31 U	31 U	32 U	--	--	--	--	--	--
Aroclor 1254	74000	31 U	31 U	31 U	32 U	--	--	--	--	--	--
Aroclor 1260	74000	31 U	31 U	31 U	32 U	--	--	--	--	--	--
Pesticides (µg/kg)											
2,4'-DDD (o,p'-DDD)	720000	16 U	16 U	3 U	**36**	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	510000	16 U	16 U	3 U	16 U	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	700000	16 U	16 U	3 U	16 U	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	1100000	16 U	16 U	3 U	**100**	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	760000	16 U	16 U	3 U	16 U	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	770000	16 U	16 U	**7.8**	**16 J**	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	31000	7.9 U	7.9 U	1.5 U	8 U	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	96000	7.9 U	7.9 U	1.5 U	8 U	--	--	--	--	--	--
Endrin ketone	1800000	16 U	16 U	3 U	16 U	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	170000	7.9 U	7.9 U	1.5 U	8 U	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)											
2-Methylnaphthalene	41000000	**400**	**120**	59 U	**70**	--	--	--	--	--	--

Table 3-2
Potential Human Health Hot Spot Data Screen: 0- to 3.5-Foot Riverbank Soil

	Task Code:	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV
	Sample Station:	MW-04-57	SS-1	SS-10	SS-11	SS-2	SS-3	SS-5	SS-6	SS-7	SS-8	SS-9
	Sample Name:	951030-M4-01	981112-SS-01	981112-SS-10	981112-SS-11	981112-SS-02	981112-SS-03	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-08	981112-SS-09
	Date Sampled:	10/30/1995	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998
	Depth Interval:	0 - 6.1 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
	Potential Hot Spot Screening Level											
Conventional Parameters (mg/kg)												
Cyanide, total	6100	**0.8**	**0.68**	**41**	0.5 U	0.5 U	**0.58**	**1.3**	**0.58**	**13**	0.5 U	**56**
Metals (mg/kg)												
Zinc	3100000	--	--	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/kg)												
1,1-Dichloroethene	270000000	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	20000000	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	92000000	--	--	--	--	--	--	--	--	--	--	--
Benzene	3400000	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	14000000	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	30000000	--	--	--	--	--	--	--	--	--	--	--
Toluene	770000000	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	4600000	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	390000	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Acenaphthene	610000000	5000 U	50 U	**140**	50 U	50 U	**100**	**590**	50 U	**640**	50 U	**380**
Benzo(a)pyrene	27000	**28000**	**440**	50 U	**130**	**1500**	**14100**	**69100**	**360**	**23700**	50 U	**3400**
Fluorene	410000000	5000 U	50 U	**120**	50 U	50 U	**130**	**610**	50 U	**410**	50 U	**390**
Naphthalene	2300000	**1700**	50 U	**230**	50 U	**88**	**900**	**5000**	50 U	**1800**	50 U	**550**
Semivolatile Organics (µg/kg)												
Carbazole	10000000	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	10000000	--	--	--	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)												
Aroclor 1016	2100000	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	54000	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	54000	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	74000	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	74000	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	74000	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260	74000	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	720000	--	--	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	510000	--	--	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	700000	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	1100000	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	760000	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	770000	--	--	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	31000	--	--	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	96000	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	1800000	--	--	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	170000	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)												
2-Methylnaphthalene	41000000	--	--	--	--	--	--	--	--	--	--	--

Table 3-2
Potential Human Health Hot Spot Data Screen: 0- to 3.5-Foot Riverbank Soil

Notes:

Detected concentration is greater than potential hot spot screening level

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R = Rejected

T = Result is the value of a total or calculation.

-- = Results not reported or not applicable

N = Normal Field Sample

a= the result is below the Oregon Department of Environmental Quality (DEQ) alternative screening level shown in Table 2-1 and therefore is not considered a potential hot spot based on this exceedance. Refer to Table 2-1 for additional detail.

The data set evaluated for 0- to 3.5- foot potential human health hot spots consists of soil samples collected from the 0- to 5- foot depth interval for locations sampled during the Gasco Sediments Site Data Gaps Investigation (GST-XX and GSM-XX locations) and soil samples collected from the 0- to 3.5- foot depth interval for all other locations shown. Refer to Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation. Appendix G descrives the soil dataset screened.

Potential hot spot screening levels are presented on Table 2-2.

Soil samples were collected from locations between +13-foot North American Vertican Datum 1988 and the top of bank.

Upland soil samples collected outside of the Gasco Sediments Site Area of Interest were included in this evaluation for informational purposes. However, remedial decisions will not be made solely based on the evaluation of these upland samples.

Acronyms:

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)

cPAH = carcinogenic PAH

cm = centimeters

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

HPAH = high molecular weight polycyclic aromatic hydrocarbon

LPAH = low-molecular-weight PAH

LWG RA = Lower Willamette Group Risk Assessment

PCB = Polychlorinated biphenyl

Table 3-3
Potential Human Health Hot Spot Data Screen: 0- to 12-Foot Riverbank Soil

Task Code:		2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps
Sample Station:		GSM-07	GSM-08	GSM-14	GST-01	GST-02	GST-03
Sample Name:		GSM-07SO-0-5-100927	GSM-08SO-0-5-100928	GSM-14SO-0-5-101015	GST-01SO-0-5-101001	GST-02SO-0-5-101004	GST-03SO-0-5-101005
Date Sampled:		9/27/2010	9/28/2010	10/15/2010	10/1/2010	10/4/2010	10/5/2010
Depth Interval:		0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
	Potential Hot Spot Screening Level						
Conventional Parameters (mg/kg)							
Cyanide, total	1900	**0.274**	0.124 U	**0.286**	**0.341**	**0.222**	**3.57**
Metals (mg/kg)							
Zinc	3100000	**158 J**	**85 J**	**77**	**96 J**	**78 J**	**103 J**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	120000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U
1,2-Dichloroethene, cis-	170000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U
1,2-Dichloroethene, trans-	1300000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U
Benzene	34000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	**44**
Ethylbenzene	160000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	**34**
Naphthalene	1600000000	--	--	--	--	--	--
o-Xylene	30000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	**40**
Toluene	240000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	**30**
Trichloroethene (TCE)	12000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U
Vinyl chloride	3000000	1.2 U	1.5 U	1 U	1.1 U	1.2 U	1.2 U
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Acenaphthene	190000000	62 U	**100**	60 U	60 U	65 U	**33000**
Benzo(a)pyrene	210000	**350**	**100**	**270**	60 U	**150**	**410000**
Fluorene	120000000	62 U	**67**	60 U	60 U	65 U	**79000**
Naphthalene	1600000000	**160**	**220**	60 U	60 U	65 U	**220000**
Semivolatile Organics (µg/kg)							
Carbazole	10000000	62 U	63 U	60 U	60 U	65 U	**25000**
Dibenzofuran	10000000	62 U	63 U	60 U	60 U	65 U	**8600**
PCB Aroclors (µg/kg)							
Aroclor 1016	2100000	33 U	30 U	31 U	32 U	31 U	32 U
Aroclor 1221	54000	33 U	30 U	31 UJ	32 U	31 U	32 U
Aroclor 1232	54000	33 U	30 U	31 U	32 U	31 U	32 U
Aroclor 1242	74000	33 U	30 U	31 U	32 U	31 U	32 U
Aroclor 1248	74000	33 U	30 U	31 U	32 U	31 U	32 U
Aroclor 1254	74000	33 U	30 U	31 U	32 U	31 U	**58**
Aroclor 1260	74000	33 U	30 U	31 U	32 U	31 U	32 U
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	720000	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U	32 U
2,4'-DDE (o,p'-DDE)	510000	3.3 U	3.1 U	3.2 U	3.2 U	3.1 U	32 U
2,4'-DDT (o,p'-DDT)	700000	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U	32 U
4,4'-DDD (p,p'-DDD)	230000000	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U	32 U
4,4'-DDE (p,p'-DDE)	160000000	3.3 U	3.1 U	3.2 U	3.2 U	3.1 U	32 U
4,4'-DDT (p,p'-DDT)	160000000	**5.6 J**	3.1 UJ	3.2 U	3.2 U	3.1 U	50 U
alpha-Hexachlorocyclohexane (BHC)	260000	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	16 U
beta-Hexachlorocyclohexane (BHC)	96000	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	16 U
Endrin ketone	1800000	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U	**84 J**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1500000	1.6 UJ	1.6 U	1.6 U	1.6 U	1.6 U	16 U

Table 3-3
Potential Human Health Hot Spot Data Screen: 0- to 12-Foot Riverbank Soil

Task Code:		2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	2010 Data Gaps	HAHNFRINV
Sample Station:		GST-04	GST-05	GST-06	GST-09	GST-11	GST-13	GP-04
Sample Name:		GST-04SO-0-5-101006	GST-05SO-0-5-101005	GST-06SO-0-5-101007	GST-09SO-0-5-101008	GST-11SO-0-5-101011	GST-13SO-0-5-101012	GP4-S-7.5
Date Sampled:		10/6/2010	10/5/2010	10/7/2010	10/8/2010	10/11/2010	10/12/2010	9/26/2002
Depth Interval:		0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	167.64 - 228.6 cm
	Potential Hot Spot Screening Level							
Conventional Parameters (mg/kg)								
Cyanide, total	1900	**5.76 J**	**1.37 J**	**1.46 J**	0.11 U	0.105 U	**2.31**	--
Metals (mg/kg)								
Zinc	3100000	**102**	**108**	**232**	**90**	**51**	**75**	--
Volatile Organics (µg/kg)								
1,1-Dichloroethene	120000000	1 U	1.1 U	1.1 U	1 U	--	--	--
1,2-Dichloroethene, cis-	170000000	1 U	1.1 U	1.1 U	1 U	0.9 U	1 U	15000 U
1,2-Dichloroethene, trans-	1300000000	1 U	1.1 U	1.1 U	1 U	0.9 U	1 U	--
Benzene	34000000	**2.2**	1.1 U	1.1 U	1 U	0.9 U	1 U	15000 U
Ethylbenzene	160000000	1 U	1.1 U	1.1 U	1 U	0.9 U	1 U	15000 U
Naphthalene	1600000000	--	--	--	--	--	--	**1500000 J**
o-Xylene	30000000	1 U	1.1 U	1.1 U	1 U	0.9 U	1 U	--
Toluene	240000000	1 U	1.1 U	1.1 U	1 U	0.9 U	1 U	15000 U
Trichloroethene (TCE)	12000000	1 U	1.1 U	1.1 U	1 U	0.9 U	1 U	1200 U
Vinyl chloride	3000000	1 U	1.1 U	1.1 U	1 U	0.9 U	1 U	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Acenaphthene	190000000	310 U	**1300**	**110**	61 U	59 U	63 U	**120000**
Benzo(a)pyrene	210000	**10000**	**43000**	**5500**	**3700 J**	**66**	**2200**	**78000**
Fluorene	120000000	310 U	**1400**	**96**	**89**	59 U	63 U	**77000**
Naphthalene	1600000000	**1800**	**6700**	**1600**	**400**	59 U	**180**	**1500000 J**
Semivolatile Organics (µg/kg)								
Carbazole	10000000	310 U	**330**	**84**	**87**	59 U	63 U	--
Dibenzofuran	10000000	310 U	**240**	64 U	61 U	59 U	63 U	**9200**
PCB Aroclors (µg/kg)								
Aroclor 1016	2100000	32 U	32 U	31 U	31 U	31 U	32 U	--
Aroclor 1221	54000	32 U	32 U	31 U	31 U	31 U	32 U	--
Aroclor 1232	54000	32 U	32 U	31 U	31 U	31 U	32 U	--
Aroclor 1242	74000	32 U	32 U	31 U	31 U	31 U	32 U	--
Aroclor 1248	74000	32 U	32 U	31 U	31 U	31 U	32 U	--
Aroclor 1254	74000	32 U	32 U	31 U	31 U	31 U	32 U	--
Aroclor 1260	74000	32 U	32 U	31 U	31 U	31 U	32 U	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	720000	16 U	16 U	16 U	16 U	3 U	**36**	--
2,4'-DDE (o,p'-DDE)	510000	16 U	16 U	16 U	16 U	3 U	16 U	--
2,4'-DDT (o,p'-DDT)	700000	16 U	16 U	16 U	16 U	3 U	16 U	--
4,4'-DDD (p,p'-DDD)	230000000	16 U	16 U	16 U	16 U	3 U	**100**	--
4,4'-DDE (p,p'-DDE)	160000000	16 U	16 U	16 U	16 U	3 U	16 U	--
4,4'-DDT (p,p'-DDT)	160000000	16 U	16 U	16 U	16 U	**7.8**	**16 J**	--
alpha-Hexachlorocyclohexane (BHC)	260000	8 U	7.9 U	7.9 U	7.9 U	1.5 U	8 U	--
beta-Hexachlorocyclohexane (BHC)	96000	8 U	7.9 U	7.9 U	7.9 U	1.5 U	8 U	--
Endrin ketone	1800000	16 U	16 U	16 U	16 U	3 U	16 U	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1500000	8 U	7.9 U	7.9 U	7.9 U	1.5 U	8 U	--

Table 3-3
Potential Human Health Hot Spot Data Screen: 0- to 12-Foot Riverbank Soil

Task Code:		HAHNFRINV	HAHNFRINV	HAHNFRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV
Sample Station:		**GP-07**	**P-03**	**P-05**	**B-08**	**B-29**	**B-31**	**B-53**	**B-54**	**B-54**	**B-56**
Sample Name:		**GP7-S-9.0**	**5237-010820-152**	**5237-010813-92**	**950918-B8-04**	**950922-B29-01**	**950925-B31-01**	**2708-040607-011**	**2708-040608-013**	**2708-040608-014**	**2708-040601-001**
Date Sampled:		**10/2/2002**	**8/20/2001**	**8/13/2001**	**9/18/1995**	**9/22/1995**	**9/25/1995**	**6/7/2004**	**6/8/2004**	**6/8/2004**	**6/1/2004**
Depth Interval:		**213.36 - 274.32 cm**	**198.12 - 198.12 cm**	**289.56 - 289.56 cm**	**289.56 - 304.8 cm**	**0 - 6.096 cm**	**0 - 6.1 cm**	**76.2 - 91.44 cm**	**60.96 - 76.2 cm**	**228.6 - 243.84 cm**	**76.2 - 106.68 cm**
	Potential Hot Spot Screening Level										
Conventional Parameters (mg/kg)											
Cyanide, total	1900	--	0.02 U	**8780**	--	--	**0.59**	--	--	--	0.435 U
Metals (mg/kg)											
Zinc	3100000	--	**42.6**	**38.7**	--	--	--	--	--	--	--
Volatile Organics (µg/kg)											
1,1-Dichloroethene	120000000	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	170000000	--	--	100 U	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	1300000000	--	--	--	--	--	--	--	--	--	--
Benzene	34000000	--	--	100 U	--	--	300 U	50 U	50 U	50 U	50 U
Ethylbenzene	160000000	--	--	**1380**	--	--	300 U	50 U	50 U	50 U	50 U
Naphthalene	1600000000	--	--	--	--	--	--	--	--	--	--
o-Xylene	30000000	--	--	--	--	--	--	--	--	--	--
Toluene	240000000	--	--	**150**	--	--	300 U	50 U	50 U	50 U	50 U
Trichloroethene (TCE)	12000000	--	--	100 U	--	--	--	--	--	--	--
Vinyl chloride	3000000	--	--	120 U	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)											
Acenaphthene	190000000	**18**	--	**463000**	**480**	**400**	**110**	670 U	168 U	3350 U	13.4 U
Benzo(a)pyrene	210000	**2100**	--	**205000**	**47000**	**32500**	**4800**	**6820**	**323**	**22100**	13.4 U
Fluorene	120000000	**3.2**	--	**307000**	**710**	**470**	**58**	670 U	168 U	3350 U	13.4 U
Naphthalene	1600000000	**380**	--	**905000**	**2300**	**2400**	**300**	670 U	168 U	3350 U	13.4 U
Semivolatile Organics (µg/kg)											
Carbazole	10000000	--	--	**68700**	--	--	--	--	--	--	--
Dibenzofuran	10000000	**14**	--	**40000**	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)											
Aroclor 1016	2100000	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	54000	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	54000	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	74000	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	74000	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	74000	--	--	--	--	--	--	--	--	--	--
Aroclor 1260	74000	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)											
2,4'-DDD (o,p'-DDD)	720000	--	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	510000	--	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	700000	--	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	230000000	--	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	160000000	--	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	160000000	--	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	260000	--	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	96000	--	--	--	--	--	--	--	--	--	--
Endrin ketone	1800000	--	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1500000	--	--	--	--	--	--	--	--	--	--

Table 3-3
Potential Human Health Hot Spot Data Screen: 0- to 12-Foot Riverbank Soil

	Task Code:	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV	HAHNRINV
	Sample Station:	B-56	MW-04-101	MW-04-101	MW-04-101	MW-04-57	SS-1	SS-10	SS-11	SS-2	SS-3	SS-5	SS-6
	Sample Name:	2708-040601-003	981014-M4-01	981014-M4-02	981014-M4-03	951030-M4-01	981112-SS-01	981112-SS-10	981112-SS-11	981112-SS-02	981112-SS-03	981112-SS-05	981112-SS-06
	Date Sampled:	6/1/2004	10/14/1998	10/14/1998	10/14/1998	10/30/1995	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998
	Depth Interval:	335.28 - 365.76 cm	45.72 - 60.96 cm	167.64 - 182.88 cm	304.8 - 320.04 cm	0 - 6.1 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
	Potential Hot Spot Screening Level												
Conventional Parameters (mg/kg)													
Cyanide, total	1900	0.379 U	--	--	0.02 U	**0.8**	**0.68**	**41**	0.5 U	0.5 U	**0.58**	**1.3**	**0.58**
Metals (mg/kg)													
Zinc	3100000	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/kg)													
1,1-Dichloroethene	120000000	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	170000000	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	1300000000	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	34000000	50 U	25 U	25 U	25 U	--	--	--	--	--	--	--	--
Ethylbenzene	160000000	50 U	25 U	25 U	25 U	--	--	--	--	--	--	--	--
Naphthalene	1600000000	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	30000000	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	240000000	50 U	25 U	25 U	25 U	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	12000000	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	3000000	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)													
Acenaphthene	190000000	13.4 U	**1100**	50 U	50 U	5000 U	50 U	**140**	50 U	50 U	**100**	**590**	50 U
Benzo(a)pyrene	210000	**35.1**	**183000**	**100**	**230**	**28000**	**440**	50 U	**130**	**1500**	**14100**	**69100**	**360**
Fluorene	120000000	13.4 U	**1500**	50 U	50 U	5000 U	50 U	**120**	50 U	50 U	**130**	**610**	50 U
Naphthalene	1600000000	13.4 U	**6100**	50 U	50 U	**1700**	50 U	**230**	50 U	**88**	**900**	**5000**	50 U
Semivolatile Organics (µg/kg)													
Carbazole	10000000	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	10000000	--	--	--	--	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)													
Aroclor 1016	2100000	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	54000	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	54000	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	74000	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	74000	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	74000	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260	74000	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)													
2,4'-DDD (o,p'-DDD)	720000	--	--	--	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	510000	--	--	--	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	700000	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	230000000	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	160000000	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	160000000	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	260000	--	--	--	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	96000	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	1800000	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1500000	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-3
Potential Human Health Hot Spot Data Screen: 0- to 12-Foot Riverbank Soil

Task Code:		HAHNRINV	HAHNRINV	HAHNRINV	RAA SedChar	WLCGSJ06	WLCGSJ06
Sample Station:		SS-7	SS-8	SS-9	RAA-20	GS-08	GS-08
Sample Name:		981112-SS-07	981112-SS-08	981112-SS-09	RAA-20SD-0506	WLCGSJ06GS08S34	WLCGSJ06GS08S89
Date Sampled:		11/12/1998	11/12/1998	11/12/1998	7/22/2004	10/25/2006	10/25/2006
Depth Interval:		0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	152.4 - 182.88 cm	91.44 - 121.9 cm	243.8 - 274.3 cm
	Potential Hot Spot Screening Level						
Conventional Parameters (mg/kg)							
Cyanide, total	1900	**13**	0.5 U	**56**	--	**0.34**	**0.21**
Metals (mg/kg)							
Zinc	3100000	--	--	--	--	**66.9**	**66.1**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	120000000	--	--	--	--	1.2 U	1.5 U
1,2-Dichloroethene, cis-	170000000	--	--	--	--	1.2 U	1.5 U
1,2-Dichloroethene, trans-	1300000000	--	--	--	--	1.2 U	1.5 U
Benzene	34000000	--	--	--	**400**	1.2 U	**3.6**
Ethylbenzene	160000000	--	--	--	**1300**	1.2 U	**17**
Naphthalene	1600000000	--	--	--	--	--	--
o-Xylene	30000000	--	--	--	**700**	1.2 U	**8.9**
Toluene	240000000	--	--	--	**100 J**	**0.14 J**	**0.6 J**
Trichloroethene (TCE)	12000000	--	--	--	--	1.2 U	1.5 U
Vinyl chloride	3000000	--	--	--	--	1.2 U	1.5 U
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Acenaphthene	190000000	**640**	50 U	**380**	--	**12**	**170**
Benzo(a)pyrene	210000	**23700**	50 U	**3400**	--	**26**	**15**
Fluorene	120000000	**410**	50 U	**390**	--	**12**	**45**
Naphthalene	1600000000	**1800**	50 U	**550**	--	4.9 U	**830**
Semivolatile Organics (µg/kg)							
Carbazole	10000000	--	--	--	--	--	--
Dibenzofuran	10000000	--	--	--	--	**3.2 J**	**8**
PCB Aroclors (µg/kg)							
Aroclor 1016	2100000	--	--	--	--	--	--
Aroclor 1221	54000	--	--	--	--	--	--
Aroclor 1232	54000	--	--	--	--	--	--
Aroclor 1242	74000	--	--	--	--	--	--
Aroclor 1248	74000	--	--	--	--	--	--
Aroclor 1254	74000	--	--	--	--	--	--
Aroclor 1260	74000	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	720000	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	510000	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	700000	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	230000000	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	160000000	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	160000000	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	260000	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	96000	--	--	--	--	--	--
Endrin ketone	1800000	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1500000	--	--	--	--	--	--

Table 3-3
Potential Human Health Hot Spot Data Screen: 0- to 12-Foot Riverbank Soil

Notes:

Detected concentration is greater than potential hot spot screening level

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R = Rejected

T = Result is the value of a total or calculation.

-- = Results not reported or not applicable

N = Normal Field Sample

The data set evaluated for 0- to 12- foot potential human health hot spots consists of soil samples collected from the 0- to 12- foot depth interval for all other locations shown. Appendix G descrives the soil dataset screened.

Potential hot spot screening levels are presented on Table 2-2.

Soil samples were collected from locations between +13-foot North American Vertican Datum 1988 and the top of bank.

Upland soil samples collected outside of the Gasco Sediments Site Area of Interest were included in this evaluation for informational purposes. However, remedial decisions will not be made solely based on the evaluation of these upland samples.

Acronyms:

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)

cPAH = carcinogenic PAH

cm = centimeters

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

HPAH = high molecular weight polycyclic aromatic hydrocarbon

LPAH = low-molecular-weight PAH

LWG RA = Lower Willamette Group Risk Assessment

PCB = Polychlorinated biphenyl

FIGURES

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- Soil Sample Location
- Soil locations below 13 feet NAVD88
- Soil locations landward of the top of bank
- Top of Bank
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

NOTES:
1. Acronyms:
EPA = Environmental Protection Agency
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD83 = North American Datum 1983
2. Arrow indicates direction of flow of river.
3. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
10. Vertical datum is NAVD88.
11. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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Figure 2-1
Riverbank Soil Sample Locations
Draft Potential Riverbank Hot Spot Data Screen
Gasco Sediments Cleanup Action

- Soil Sample Location
- Soil location outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Screening Level Exceedance outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Top of Bank
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

NOTES:
1. Potential hot spot evaluation was conducted generally following the DEQ's *Guidance for Identification of Hot Spots*, dated April 23, 1998.
2. Potential hot spot screening results are presented in Tables 3-1, 3-2, and 3-3 in Appendix F.
3. The data set evaluated for potential ecological hot spots consists of soil samples collected from the 0- to 5- foot depth interval for locations sampled during the Gasco Sediments Site Data Gaps Investigation (GST-XX and GSM-XX locations) and soil samples collected from the 0- to 3.5- foot depth interval for all other locations shown. Refer to Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation.
4. Locations with a HQ result greater than 50 are identified as potential ecological hot spot screening level exceedances. Refer to Table 2-1 in Appendix F for potential hot spot screening levels.
5. Dibenzofuran potential hot spot screening level exceedances are not shown because all dibenzofuran results are below the DEQ alternative screening level for dibenzofuran of 85.0 milligrams per kilogram. Refer to Table 2-1 in Appendix F for additional details.
6. Acronyms:
HQ = hazard quotient
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD83 = North American Datum 1983
EPA = Environmental Protection Agency
7. Arrow indicates direction of flow of river.
8. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
9. Vertical datum is NAVD88.
10. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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Figure 3-1
Potential Ecological Hot Spot Data Screen: 0- to 3.5-Foot Riverbank Soil
Draft Potential Riverbank Hot Spot Data Screen
Gasco Sediments Cleanup Action

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- Soil Sample Location
- Soil location outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Screening Level Exceedance
- Screening Level Exceedance outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Top of Bank
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

NOTES:
1. Potential hot spot evaluation was conducted generally following the DEQ's *Guidance for Identification of Hot Spots*, dated April 23, 1998.
2. Potential hot spot screening results are presented in Tables 3-1, 3-2, and 3-3 in Appendix F.
3. The data set evaluated for 0- to 3.5- foot potential human health hot spots consists of soil samples collected from the 0- to 5- foot depth interval for locations sampled during the Gasco Sediments Site Data Gaps Investigation (GST-XX and GSM-XX locations) and soil samples collected from the 0- to 3.5- foot depth interval for all other locations shown. Refer to Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation.
4. A HQ greater than 100 was used to identify locations as potential human health hot spots based on carcinogenic endpoint screening level exceedances. A HQ greater than 10 was used to identify locations as potential human health hot spots based on noncarcinogenic endpoint screening level exceedances. Refer to Table 2-2 in Appendix F for potential hot spot screening levels.

5. Acronyms:
HQ = hazard quotient
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD83 = North American Datum 1983
EPA = Environmental Protection Agency
6. Arrow indicates direction of flow of river.
7. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
8. Vertical datum is NAVD88.
9. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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Figure 3-2
Potential Human Health Hot Spot Data Screen: 0- to 3.5-foot Riverbank Soil
Draft Potential Riverbank Hot Spot Data Screen
Gasco Sediments Cleanup Action

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- Soil Sample Location
- Soil location outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Screening Level Exceedance
- Screening Level Exceedance outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Top of Bank
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

NOTES:
1. Potential hot spot evaluation was conducted generally following the DEQ's *Guidance for Identification of Hot Spots*, dated April 23, 1998.
2. Potential hot spot screening results are presented in Tables 3-1, 3-2, and 3-3 in Appendix F.
3. The data set evaluated for 0- to 12- foot potential human health hot spots consists of soil samples collected from the 0- to 12- foot depth interval for all locations shown.
4. A HQ greater than 100 was used to identify locations as potential human health hot spots based on carcinogenic endpoint screening level exceedances. A HQ greater than 10 was used to identify locations as potential human health hot spots based on noncarcinogenic endpoint screening level exceedances. Refer to Table 2-2 in Appendix F for potential hot spot screening levels.
5. Acronyms:
HQ = hazard quotient
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD83 = North American Datum 1983
EPA = Environmental Protection Agency
6. Arrow indicates direction of flow of river.
7. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
8. Vertical datum is NAVD88.
9. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 3-3
Potential Human Health Hot Spot Data Screen: 0- to 12-foot Riverbank Soil
Draft Potential Riverbank Hot Spot Data Screen
Gasco Sediments Cleanup Action

APPENDIX G
PROJECT AIR DATA RE-SCREEN

DRAFT

APPENDIX G

PROJECT AIR DATA RESCREEN

DRAFT ENGINEERING EVALUATION/COST ANALYSIS

GASCO SEDIMENTS CLEANUP ACTION

Prepared for

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May 2012

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List of Attachments

Attachment 1 – Screening Level Revisions
Attachment 2 – GIS layers (on CD)

LIST OF ACRONYMS AND ABBREVIATIONS

AIR	Area Identification and Data Gaps Report
BaP	benzo(a)pyrene
BHC	benzene hexachlorides
BTEX	Benzene, toluene, ethylbenzene, xylenes
COI	Contaminant of Interest
cPAH	carcinogenic polycyclic aromatic hydrocarbon
DCE	dichloroethylene
DEQ	Oregon Department of Environmental Quality
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	4,4'-Dichlorodiphenyltrichloroethane
EE/CA	Engineering Evaluation/Cost Analysis
EPA	U.S. Environmental Protection Agency
GIS	Geographic Information Systems
HPAH	High-molecular-weight Polycyclic Aromatic Hydrocarbon
LPAH	Low-molecular-weight Polycyclic Aromatic Hydrocarbon
MDL	method detection limit
LWG	Lower Willamette Group
NAVD88	North American Vertical Datum of 1988
PAH	Polycyclic Aromatic Hydrocarbon
PCB	polychlorinated biphenyl
PEF	potency equivalent factors
PRG	Preliminary Remediation Goals
QA	Quality Assurance
QC	Quality Control
RI	Remedial Investigation
RM	river mile
SCRA	Site Characterization and Risk Assessment
SOW	Statement of Work
TCE	trichloroethene
TEF	toxic equivalency factors
TEQ	toxic equivalency quotients
TZW	transition zone water

1 INTRODUCTION

This appendix presents the project data screen of Gasco Sediments Site data required under Section 3.4.1.2 of the Statement of Work (SOW) (Docket No. CERCLA 10-2009-0255). Pursuant to the SOW, available bulk sediment, riverbank soils, and water media chemistry data collected within the Gasco Sediment Site identified in the *Final Work Plan* (Anchor QEA 2010a; see Figure 1.2.1) were compared to ecological and human health screening levels and the screen results presented in data tables and on Geographic Information Systems (GIS) layers presented in Appendixes B and C, respectively, of the *Draft Project Area Identification and Data Gaps Report* (draft AIR; Anchor QEA 2010b).

Following its review of the Project AIR, the U.S. Environmental Protection Agency (EPA) provided comments on the screening levels in a May 4, 2009, memorandum. These comments were discussed during the June 3, 2010, monthly coordination meeting held between NW Natural, Siltronic, EPA, and the Oregon Department of Environmental Quality (DEQ). During this discussion, EPA stated that its pending comments on Risk Assessments on the Portland Harbor Superfund Site (Portland Harbor Site) *draft Portland Harbor RI/FS Remedial Investigation Report* (Integral et al. 2009) would affect the screening levels required for use in the Project AIR. In addition, NW Natural and DEQ were currently negotiating the upland risk assessment for the NW Natural "Gasco" property adjacent to the Gasco Sediments Site, which would also affect screening levels.

To facilitate incorporation of these pending screening level changes into the data screening of the existing dataset, EPA approved postponement of the revised data screening until the Portland Harbor Site draft RI comments are available and the upland risk assessment negotiations are complete. Because the results of the revised data screening would not affect delineation of the proposed initial Project Area and data gaps sampling, EPA also approved submittal of the *Final Project Area Identification and Data Gaps Report* (Project AIR) (Anchor QEA 2010a) without revision to the existing data screening.

This appendix presents the revised data screen. The revised data screen generally followed the methodology used in the draft AIR. Major revisions are as follows:

- Screening levels have been revised to be consistent with the Portland Harbor Site process and the Gasco upland risk assessment, and to incorporate the EPA comments provided in its February 3, 2010, comment letter. Refer to Attachment 1 to this appendix

for a detailed description of screening level revisions.

- The data screen has been revised to include data not available at the time of draft AIR development, primarily results from the Data Gaps Report (Appendix A to the draft Engineering Evaluation/Cost Analysis [EE/CA]) and the *Final Remedial Investigation Report, U. S. Government Moorings, Portland, Oregon* (U.S. Moorings RI; KTA and Tec 2010).

It is important to note that this data screening does not affect the Gasco Sediment Site remedy evaluation or decision making. This screening was completed for the sole purpose of complying with the data screening requirements set forth in the SOW. The data screening and evaluations performed in the EE/CA in accordance with the Portland Harbor Site process are used for evaluation of remedial alternatives for the Gasco Sediments Site.

1.1 Document Organization

The remainder of this document is organized into the following sections:

- Section 2 – Methods
- Section 3 – Results

The following attachments are attached to this document:

- Attachment 1 – Screening Level Revisions
- Attachment 2 – GIS layers (on CD)

2 METHODS

As described in Section 2.1, the SOW requires the screening of available data for samples collected within the Gasco Sediments Site (identified in the Final Work Plan, Anchor QEA 2010a) against ecological and human health risk-based screening levels consistent with the baseline risk assessment and draft final RI for the Portland Harbor Site. Only those chemicals of interest (COI) identified in Section 3.3 of the SOW were included in this data screening. The following subsections describe the screening process.

2.1 Screening Levels

The sediments, water, benthic toxicity, and soil screening levels used in this data screen are presented in Tables 2-1 through 2-4, respectively. Table 2-5 summarizes COIs without screening levels and Table 2-6 presents a matrix identifying the media to which each screening level was applied. Refer to Attachment 1 for additional detail.

2.2 Data Sources

The Site Characterization and Risk Assessment (SCRA) database developed for the Portland Harbor Site draft final RI (Integral et al. 2011) is the primary source of the data used in this screening. Additional data that were not included in the SCRA database and met the data quality requirements described in Section 2.2.2 (notably, the Data Gaps Investigation results provided in Appendix A of the EE/CA) were incorporated into this data screen. The original source documents for the data used for this screening are listed below:

- *Draft Source Control Evaluation Report, RPAC-Portland Site* (AMEC 2008)
- *NW Natural "Gasco" Site Draft Screening Level Nearshore Source Control Evaluation Results Report* (Anchor 2001)
- Public Review Draft Engineering Analysis/Cost Evaluation, Removal Action NW Natural "Gasco" Site" (Anchor 2005a)
- *Annual Data Evaluation Monitoring Report – Year 0 Long-Term Pilot Cap Monitoring* (Anchor 2007c)
- *Groundwater/NAPL Pilot Program Extraction Well and Performance Evaluation Design Report* (Anchor 2007f)
- *Offshore Investigation Report: NW Natural "Gasco" Site* (Anchor 2008b)
- *Annual Data Evaluation Monitoring Report – Year 1 Long-Term Pilot Cap Monitoring* (Anchor 2008d)
- *Portland Harbor RI/FS Round 3A In-River Sediment Trap Sampling Data Report; Draft;*

AE08-09 (Anchor 2008e)

- *Annual Data Evaluation Monitoring Report – Year 2 Long-Term Pilot Cap Monitoring* (Anchor 2009b)
- *Draft Annual Data Evaluation Monitoring Report – Year 3 Long-Term Pilot Cap Monitoring* (Anchor QEA 2010c)
- *Assessment of the Nature of PAH in Surface Sediments along the Southwestern Shore of Portland Harbor Superfund Site, Portland, Oregon* (Battelle 2002)
- *Updated Phase I Site Characterization Summary Report, Siltronic Corporation Property, Portland, Oregon* (HAI 2005)
- *Remedial Investigation Report, NW Natural "Gasco" Facility. Portland, Oregon* (HAI 2007a)
- *Sediment Characterization Study of Local Sponsors' Berths; Columbia and Willamette River Navigation Channel Deepening; Longview and Kalama, Washington and Portland, Oregon* (Hart Crowser 1999)
- *Round 1 Site Characterization Summary Report* (Integral 2004)
- *Portland Harbor Site RI/FS Round 2A Sediment Site Characterization Summary Report* (Integral 2005b)
- *Portland Harbor Site RI/FS Round 2 Groundwater Pathway Assessment Transition Zone Water Site Characterization Summary Report* (Integral 2006c)
- *Portland Harbor Site RI/FS Round 2A Surface Water Site Characterization Summary Report* (Integral 2006d)
- *Portland Harbor Site RI/FS Round 2B Subsurface Sediment Data* Report (Integral 2006e)
- *Portland Harbor Site RI/FS Round 3A Low-flow and Stormwater-Impacted Surface Water Data Report* (Integral 2007a)
- *Portland Harbor Site RI/FS Round 3A Winter 2007 High-flow Surface Water Data Report* (Integral 2007b)
- *Portland Harbor RI/FS Round 3B Sediment Data Report* (Integral 2008)
- *Portland Harbor RI/FS Sediment Chemical Mobility Testing Data Report* (Integral 2009)
- *Portland Harbor Site RI/FS Round 2 Benthic Tissue and Sediment Data Report* (Integral and Windward 2006)
- *Portland Harbor RI/FS Round 3B Fish and Invertebrate Tissue and Collocated Surface Sediment Field Sampling Report* (Integral and Windward 2008)
- *Remedial Investigation Report, Siltronic Corporation Site* (MFA 2007)
- *Dredged Material Management Plan Sediment Characterization Report* (Tetra Tech 2006)
- *Final Limited Sediment Investigation Report, U.S. Government Moorings, Portland, Oregon*

(URS 2003)

- *Results of July 1997 Willamette River Sediment Study* (USACE 1997)
- *Portland Harbor Sediment Investigation Report, Multnomah County, Oregon; Report No. 04000-019-036-AACE* (Weston 1998)
- *Data Gaps Report* (Anchor 2012)
- *U.S. Moorings RI* (KTA and Tec 2010)

2.3 Data Quality Review and Categorization

In accordance with the SOW, existing chemistry data used in this screening were reviewed to establish whether the data achieve the Category 1 or Category 2 data categories requirements identified in the *Portland Harbor Programmatic Work Plan* (Integral et al. 2004). The categories were defined as:

- **Category 1.** Category 1 data are of known quality and are considered acceptable for use in decision making for the project. There is sufficient information on these datasets to confidently verify that the data, along with associated data qualifiers, accurately represent chemical concentrations present at the time of sampling.
- **Category 2.** Category 2 data are of generally unknown or suspect quality. The quality assurance and quality control (QA/QC) information shows that data quality is poor or suspect, or essential QA/QC data (e.g., surrogate recoveries, matrix spike/matrix spike duplicates) are either incomplete or lacking.

Project decisions will be based on analyses using Category 1 data that have had an EPA-approved level of data validation. Only Category 1 data were used in the data screening.

2.4 Analytes Screened

Only chemicals on the COC list in Section 3.3 of the SOW were included in this data screening. The project COC list is:

- Benzene, toluene, ethylbenzene, xylenes (BTEX)
- Polycyclic aromatic hydrocarbon (PAHs); naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzofluoranthenes, benzo(a)pyrene, indeno(1,2,3-c,d)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene), extended to include 2-methylnaphthalene
- Dibenzofuran and carbazole

- Cyanide (including total cyanide in sediment and total, available, and free forms in water samples)
- Zinc
- trichloroethene (TCE)
- cis-dichloroethylene (DCE)
- Trans- 1,2 dichloroethylene (trans-DCE)
- 1,1 dichloroethylene (1,1-DCE)
- Vinyl chloride
- Polychlorinated biphenyls (PCBs)
- Dichlorodiphenyltrichloroethanes (DDTs)
- dichlorodiphenyldichloroethanes (DDDs)
- dichlorodiphenyldichloroethylenes (DDEs)
- Diesel range hydrocarbons
- Residual range hydrocarbons
- Alpha-, beta- and gamma- benzene hexachlorides (BHCs)
- Endrin ketone

Table 2-7 presents the individual analytes that were included in the more general categories listed above (e.g., 4,4-DDT, which is one of the DDTs).

Several of the COCs were screened as both an individual analyte and as part of a calculated total. For example, benzo(a)pyrene was both screened against criteria specific to that individual analyte and included in a calculated result for total PAHs, where sufficient data exists to calculate a total PAH value. Calculated totals followed the summing rules applied to the Portland Harbor Risk Assessment and background dataset. The *draft Final Portland Harbor RI/FS Remedial Investigation Report* (Integral et al. 2011) describes the general summing rules and rules for including individual analytes in calculated totals, which are summarized below.

2.5 Summation Rules

The general summation rules for calculated totals are:

- Calculated totals are the sum of all detected concentrations with non-detected results for analytes included in the summation at one-half the detection limit.
- If none of the analytes are detected for a given sample, then the highest detection limit is used as the summation value.

Individual analytes were included in totals generally following the summing rules outlined in the Attachment F2 of the draft final Baseline Human Health Risk Assessment (BHHRA) of the *draft Final Portland Harbor RI/FS Remedial Investigation Report* (Integral et al. 2011) with the following exception. The draft Final BHHRA specifies that an individual analyte determined not to be present in the medium (according to the rules in Section 3.1 of the attachment), was not included in the sum. For the dataset in this AIR, all non-detects were included in summations at one-half the associated method detection limit (MDL; when available), regardless of whether the analyte was determined to be presence in the medium. The detection limit reported by the analytical laboratory was used when a MDL was not available. Individual analytes included in totals were as follows:

- *Total PCBs:* Sum of PCB Aroclors or PCB congeners. Total PCB Aroclors represent the sum of all reported Aroclors. Total PCB congeners represent the sum of all reported (up to 209) individual congeners. For this data screening, total PCB congeners were selected to represent total PCBs when available. If not available, total PCB Aroclors were selected.
- *PCB TEQs:* Toxic equivalency factors (TEFs) were used to calculate PCB toxic equivalency quotients (TEQs). Concentrations of congeners were multiplied by their TEFs to estimate toxicity of the congeners relative to 2,3,7,8-TCDD. Resulting concentrations were summed. TEFs are published by the World Health Organization for fish and birds (Van den Berg et al. 1998) and for mammals (Van den Berg et al. 2006).
- *Total DDx:* Total DDx is calculated from the six DDx compounds: 2,4′-DDD; 4,4′-DDD, 2,4′-DDE; 4,4′-DDE; 2,4′-DDT; and 4,4′-DDT. Total DDD were calculated with 2,4′-DDD and 4,4′-DDD; total DDE were calculated with 2,4′-DDE and 4,4′-DDE; and total DDT were calculated with 2,4′-DDT and 4,4′-DDT.
- *Total LPAHs:* Total low-molecular-weight PAHs (LPAHs) are the sum of 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene.
- *Total HPAHs:* Total high-molecular-weight PAHs (HPAHs) are the sum of fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzofluoranthene, benzo(a)pyrene, indeno(1,2,3,-c,d)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene.
- *Total PAHs:* Sum of the individual LPAHs and HPAHs.
- *Total cPAHs:* A benzo(a)pyrene (BaP) equivalent (BaPEq) concentration is calculated by multiplying the carcinogenic PAHs (cPAHs) by their respective potency equivalent factors (PEFs), and summing the resulting concentrations. PAHs classified as

carcinogenic are benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, BaP, indeno(1,2,3,-c,d)pyrene, and dibenzo(a,h)anthracene. PEFs were assigned according to EPA (1993) and are shown in Appendix A3 of the *draft Final Portland Harbor RI/FS Remedial Investigation Report* (Integral et al. 2011).

- *Total Xylene:* Sum of m,p-xylene, o-xylene, and xylene.

A minimum number of individual analytes for a given sample was required to be analyzed in order to complete the totals. These rules are provided in Table 2-8. Totals with less than the expected number of analytes but above the minimum number of analytes are qualified with an "A." For PCB TEQs, all analytes with TEFs were required in order to calculate a total.

2.6 Other Data Handling Rules

The following addition data handling rules were applied during the data screening process:

- Non-detects are considered to not exceed any screening level.
- Field duplicates were not included in the dataset.
- The N-qualifier signifies the presumptive evidence of an analyte; for metals, the matrix spike sample recovery is not within control limits, and for organics, the identification is tentative; the analyte exhibits low spectral match parameters but is present.
- The A and T qualifier is applied to all data when applicable. Table 2-8 shows when the A qualifier was added. The T-qualifier is applied when any type of calculation is applied. This includes summing totals, a result that is the average of lab repetitions, or field splits.

2.7 Data Selection and Grouping

The following sections describe the horizontal and vertical extents of the data included in the sediment, surface water, groundwater, transition zone water (TZW), and riverbank soil datasets, and methods used to group the data into sampling horizons (when media was grouped).

2.7.1 Sediment Data

For purposes of this screening, sediment is considered to be the riverbed material collected from location within the Gasco Sediments Site where the mudline elevation is less than or equal to 13 feet North American Vertical Datum of 1988 (NAVD88). Grab samples, sediment cores (all depths), and sediment trap data were included. Surface sediment, subsurface sediment, and

sediment trap sample locations included in the data screen are shown on Figures 2-1, 2-2, and 2-3, respectively.

Sediment data was separated into eight sample horizons (identified as Categories A through H). All elevations were referenced as depth below mudline. The categories were defined as follows:

- *Category A:* This sampling horizon includes data collected at depth intervals meeting the Portland Harbor Site definition of surface sediment that was identified as the 0 to 40-centimenter depth interval when querying data.
- *Category B:* This sampling horizon includes data collected within the 0- to 4-foot depth interval, excluding data that meets the Category A description.
- *Category C-F:* The category C, D, E, and F sampling horizons include data collected within the 4- to 8-foot, 8- to 12-foot, 12- to 16-foot, and 16- to 20-foot depth intervals, respectively.
- *Category G:* This sampling horizon includes data collected from depths greater than 20 feet.
- *Category H:* This sampling horizon includes samples considered representative of depth intervals that exceed 8 feet in length. These samples, which were labeled "long composites," were excluded from the above categories, regardless of the elevation where the sample was collected.

Samples collected at depth intervals that span more than one category and do not meet the Category H definition were grouped according to the following rules:

- The sample is associated with the horizon containing more than 50 percent of the sample.
- If a sample is equally split between two horizons, it is associated with the deeper horizon.

In addition, sediment trap data was handled separately, and is not grouped into the above-described sample horizons.

Select sediment data was excluded from the data screen as follows:

- Samples collected as part of the Gasco 2005 Removal Action in areas and at depth intervals where sediment was removed as part of the removal action, as documented in

the *Final Removal Action Completion Report (*Anchor 2006), were excluded from the sediment dataset.

- For stations where samples were collected during multiple sampling events in approximately the same location (i.e., co-located), data from the most recent event was screened. The older data were excluded from the sediment dataset.

2.7.2 TZW Data

The TZW dataset consists of pore water samples collected within the 0 to 38 centimeter interval of sediment in locations within the Gasco Sediments Site where the mudline elevation is less than or equal to 13 feet. TZW sample locations included in this screen are shown on Figure 2-4. This approach is consistent with the *draft Final Portland Harbor RI/FS Remedial Investigation Report* (Integral et al. 2011) Note, however, that the Lower Willamette Group (LWG) sampled the upper 30 centimeters of the sediment as an operational definition of this mixed layer, but in many cases it likely does not extend that deep. Therefore, the 0- to 38-centimeter interval is not necessarily considered representative of the mixing zone and the interval of exposure to people or aquatic organisms.

2.7.3 Groundwater Data

The groundwater dataset includes samples collected from within the Gasco Sediments Site as well as select soil samples collected in upland areas near the Gasco Sediments Site, but outside of the Gasco Sediments Site (i.e., samples just landward of the top of riverbank). The latter samples are included in the groundwater dataset to provide additional information on Gasco Sediments Site areas with low sample spatial density. Groundwater sample locations included in the screen are shown on Figure 2-5.

For the purposes of this screening, groundwater was separated into three depth intervals: fill, alluvial, and deep. Fill and alluvial groundwater samples collected from upland monitoring wells were delineated based on boring observations. In-water samples collected at an elevation below 100 feet NAVD88 were designated as "deep" samples. The remaining in-water samples were designated as "alluvial."

2.7.4 Riverbank Soil Data

The riverbank soil dataset includes samples collected from locations ranging from 13 feet NAVD88 to the top of bank based on available survey information. Due to the highly armored

nature of the Gasco and Siltronic riverbanks, data density within this zone is limited. For this reason, samples collected in very close proximity of the top of bank elevation (i.e., within approximately 5 feet) were also included in the dataset to provide additional data density. Note that areas landward of the top of bank will be addressed as part of the upland feasibility study remedy evaluation. In addition, samples collected below the 13 feet NAVD88 contour were included in the riverbank soil dataset to be consistent with DEQ direction in the "Draft Meeting Summary and Next Steps" document transmitted by Dana Bayuk of DEQ to Ben Hung of Anchor QEA in an e-mail dated May 12, 2011 (DEQ 2011). However, these samples are located within the in-water portion of the Gasco Sediments Site. Sediment impacts in this area will be addressed consistent with the sediment remedy.

The dataset was grouped into two categories by depth interval: 0- to 3.5-foot soils and 0- to 12-foot soils. The 0- to 3.5-foot depth category consists of soil samples collected from the 0- to 5-foot depth interval for locations sampled during the Gasco Sediments Site Data Gaps Investigation and samples collected from the 0- to 3.5-foot depth interval for all other locations. Refer to EE/CA Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation. The 0- to 12-foot depth category consists of samples collected from the 0- to 12-foot depth interval for all other locations. Figures 2-6 and 2-7, respectively, show the 0- to 3.5-foot and 0- to 12-foot sample locations included in the data screen.

2.7.5 Surface Water Data

The surface water dataset consists of surface water samples collected that were either specifically collected to characterize the Gasco Sediments Site or were collected in the Willamette River from river mile (RM) 6.0 to 6.7. Figure 2-8 shows the location of surface water samples included in the data screen. The samples are grouped into the following three sampling horizons for the purposes of this data screening:

- Surface-depth (i.e., within a few feet of the water surface)
- Mid-depth
- Near-bottom (i.e., within a few feet of the river bottom)

It is important to note that these horizons are only intended to support this screening and may not be representative of actual exposures to either people or aquatic organisms that are the subject of water quality criteria. In the Portland Harbor Site process, for example, it has been agreed that for certain types of exposure assessments surface water should be evaluated using

vertically and horizontally integrated samples for comparison to water quality criteria and water Preliminary Remediation Goals (PRGs).

All surface water samples collected in the Gasco Sediments Site were included except for samples collected during the 2005 Removal Action construction. These construction data were not considered representative of normal ambient site conditions and were therefore omitted from the data screening. Samples from the 2005 Removal Action monitoring that were collected during development of the background conditions prior to construction were included in the dataset.

2.7.6 Benthic Toxicity Data

The benthic toxicity dataset consists of benthic toxicity data collected by the LWG and during the Data Gaps Investigation. Figure 2-9 shows the location of sediment stations for the bioassay results screened. As discussed in Appendix A of the EE/CA, the data gaps bioassay testing was conducted in two phases because the initial results for the midge bioassays were determined to be unsuitable for regulatory decision-making based on high variability within replicate test treatments and because the performance standards established for reference sediments were not met. Midge data from the first phase of data gaps tests is not included in this dataset for this reason. Refer to Anchor QEA's March 21, 2011, memorandum to EPA for additional detail on this issue.

3 RESULTS AND DISCUSSION

The data screen results are presented as follows:

- Tables 3-1 through 3-12 present summary statistics (such as number of samples, number of samples with a particular chemical detected, etc.) for the data by media and depth category.
- Tables 3-13 through 3-44 present the data screen results by media and depth category.
- Tables 3-45 through 3-47 present the benthic toxicity results.
- Figure 3-1 presents bioassay sample results.
- Attachment 2 presents GIS layers depicting the data screen results.

For tables 3-13 through 3-44 and the GIS layers, results above the associated screening levels are highlighted. The color of the highlight indicates the number of screening levels that were exceeded for the identified concentration, as defined in the table notes. The color coding scheme was maintained across all screened media to facilitate efficient cross-media exceedance count comparisons. Due to the number of screening levels used, separate data screening summary tables are provided for the human health, ecological, and background screening levels.

Bioassay results are presented in Tables 3-45 through 3-47 and on Figure 3-1. Refer to EE/CA Section 2.5.4 and EE/CA Appendix A for additional detail on the interpretation of these bioassay results.

Maps showing the screening level exceedances for each COI for each media within the identified depth intervals are provided in GIS layers in Attachment 2 in lieu of published maps. The GIS layers can be viewed by downloading ArcReader from http://www.esri.com/software/arcgis/arcreader/download.html. Locations with concentrations above the associated screening levels are highlighted on the maps and can be easily viewed and overlaid for various COIs within each media. Identical to the above-described results tables, the color of the highlight indicates the number of screening levels that were exceeded for the identified concentration, as defined in the table notes. The color coding scheme was maintained identical to the summary tables to maintain consistency across the table and figure highlights.

It is important to note that this data screening does not affect the Gasco Sediments Site remedy evaluation or decision-making. This screening was completed for the sole purpose of complying with the data screening requirements set forth in the SOW. The data screening and evaluations performed in the EE/CA in accordance with the Portland Harbor Site process are used for evaluation of remedial alternatives for the Gasco Sediments Site.

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TABLES

Table 2-1
Sediment Screening Levels [1]

Chemicals	Human Health					Ecological					Background	
	BHHRA Screening Concentrations		Portland Harbor RALs		EPA RSLs	BERA Screening Concentrations			DEQ Sediment Bioaccumulation Screening Values	Benthic SQVs	LWR Background	
	In-Water Sediment[2] (µg/kg)	Industrial Use Beach Sediment[3] (µg/kg)	Lowest RAL[4] (µg/kg)	Highest RAL[4] (µg/kg)	Industrial Soil [5] (µg/kg)	Dietary Dose TSC - NOAEL[6] (µg/kg dw)	Dietary Dose TSC - LOAEL[6] (µg/kg dw)	Benthic Risk Thresholds[11] (unitless)	DEQ Sediment Bioaccumulation Screening Values[10] (µg/kg)	SQVs SLs[7] (µg/kg)	Surface Sediment UPL[8] (µg/kg dw)	Surface Sediment UPL[9] (µg/kg OC-Eq)
Metals/Inorganics												
Zinc	3.10E+07	3.10E+07			3.10E+08	2.07E+06	5.36E+06			> 4.20E+06	1.10E+05	
Cyanide	2.00E+06				2.00E+07							
Petroleum												
Diesel Range Hydrocarbons	7.00E+07									5.10E+05		
Residual Range Hydrocarbons	1.00E+08									8.40E+06		
Polycyclic Aromatic Hydrocarbons												
2-Methylnaphthalene	4.10E+05	4.10E+05			4.10E+06							
Acenaphthene	3.30E+06	3.30E+06			3.30E+07							
Acenaphthylene	3.30E+06	3.30E+06										
Anthracene	1.70E+07	1.70E+07			1.70E+08							
Benzo(a)anthracene	2.10E+03	2.10E+03			2.10E+03						1.59E+01	2.45E+01
Benzo(a)pyrene	2.10E+02	2.10E+02			2.10E+02	8.77E+03	4.39E+04				1.47E+01	2.26E+01
Benzo(b)fluoranthene	2.10E+03	2.10E+03			2.10E+03						2.02E+01	3.11E+01
Benzo(g,h,i)perylene	1.70E+06	1.70E+06										
Benzo(k)fluoranthene	2.10E+04	2.10E+04			2.10E+04						1.05E+01	1.61E+01
Chrysene	2.10E+05	2.10E+05			2.10E+05						2.49E+01	3.84E+01
Dibenzo(a,h)anthracene	2.10E+02	2.10E+02			2.10E+02						3.20E+00	4.92E+00
Fluoranthene	2.20E+06	2.20E+06			2.20E+07							
Fluorene	2.20E+06	2.20E+06			2.20E+07							
Indeno(1,2,3-cd)pyrene	2.10E+03	2.10E+03			2.10E+03						1.14E+01	1.75E+01
Naphthalene	1.80E+04	1.80E+04			1.80E+04							
Phenanthrene	1.70E+06	1.70E+06										
Pyrene	1.70E+06	1.70E+06			1.70E+07							
Total LPAHs											2.36E+01	3.64E+01
Total HPAHs						1.57E+05	7.84E+05					
Total PAHs						1.25E+06	5.95E+06			3.00E+04	1.87E+02	2.88E+02
Total cPAH			6.00E+02	2.00E+04							2.15E+01 [f]	3.31E+01 [f]
Pesticides												
alpha-Hexachlorocyclohexane	2.70E+02	2.70E+02			2.70E+02						6.10E-01 [a]	9.40E-01 [a]
beta-Hexachlorocyclohexane	9.60E+02	9.60E+02			9.60E+02					1.10E+01	1.05E+00	1.62E+00
delta-Hexachlorocyclohexane											2.42E-01	3.73E-01
gamma-Hexachlorocyclohexane (Lindane)	2.10E+03				2.10E+03						1.17E-01 [r]	
Technical-grade Hexachlorocyclohexane					9.60E+02							
2,4'-Dichlorodiphenyldichloroethane									3.40E-01 [y]			
2,4'- Dichlorodiphenyldichloroethylene									3.40E-01 [y]			
2,4'-Dichlorodiphenyltrichloroethane									3.40E-01 [y]			
4,4'-Dichlorodiphenyldichloroethane									3.40E-01 [y]		9.64E-01	1.49E+00
4,4'-Dichlorodiphenyldichloroethylene									3.40E-01 [y]		1.59E+00	2.45E+00
4,4'-Dichlorodiphenyltrichloroethane									3.40E-01 [y]		9.53E-01	1.47E+00
Sum Dichlorodiphenyldichloroethane	7.20E+03	7.20E+03	1.50E+01	1.00E+02	7.20E+03 [c]				3.40E-01 [y]	8.60E+02	1.31E+00	2.02E+00
Sum Dichlorodiphenyldichloroethylene	5.10E+03		1.00E+01	1.00E+03	5.10E+03 [d]	1.00E+03	1.00E+04		3.40E-01 [y]	9.00E+02	1.72E+00	2.65E+00
Sum Dichlorodiphenyltrichloroethane	7.00E+03	7.00E+03	2.00E+01	1.50E+02	7.00E+03 [e]				3.40E-01 [y]	8.10E+03	1.10E+00	1.69E+00
Total DDx						7.11E+03	7.11E+04		3.40E-01 [y]		3.59E+00 [k]	5.53E+00 [k]
Endrin ketone	1.80E+04										1.03E-01	1.59E-01

Table 2-1
Sediment Screening Levels [1]

Chemicals	Human Health					Ecological					Background	
	BHHRA Screening Concentrations		Portland Harbor RALs		EPA RSLs	BERA Screening Concentrations			DEQ Sediment Bioaccumulation Screening Values	Benthic SQVs	LWR Background	
	In-Water Sediment[2] (µg/kg)	Industrial Use Beach Sediment[3] (µg/kg)	Lowest RAL[4] (µg/kg)	Highest RAL[4] (µg/kg)	Industrial Soil [5] (µg/kg)	Dietary Dose TSC - NOAEL[6] (µg/kg dw)	Dietary Dose TSC - LOAEL[6] (µg/kg dw)	Benthic Risk Thresholds[11] (unitless)	DEQ Sediment Bioaccumulation Screening Values[10] (µg/kg)	SQVs SLs[7] (µg/kg)	Surface Sediment UPL[8] (µg/kg dw)	Surface Sediment UPL[9] (µg/kg OC-Eq)
Polychlorinated Biphenyls												
Aroclor 1016					2.10E+04							
Aroclor 1221					5.40E+02							
Aroclor 1232					5.40E+02							
Aroclor 1242					7.40E+02							
Aroclor 1248					7.40E+02							
Aroclor 1254					7.40E+02							
Aroclor 1260					7.40E+02							
Polychlorinated Biphenyl 77					1.10E+02						2.52E-05	3.88E-05
Polychlorinated Biphenyl 81					3.80E+01						9.32E-07	1.44E-06
Polychlorinated Biphenyl 105					3.80E+02						1.63E-04	2.51E-04
Polychlorinated Biphenyl 114					3.80E+02							
Polychlorinated Biphenyl 118					3.80E+02						2.31E-04	3.56E-04
Polychlorinated Biphenyl 123					3.80E+02							
Polychlorinated Biphenyl 126					1.10E-01						3.92E-06	6.04E-06
Polychlorinated Biphenyl 156					3.80E+02						6.85E-05	1.06E-04
Polychlorinated Biphenyl 157					3.80E+02						4.86E-05	7.49E-05
Polychlorinated Biphenyl 167					3.80E+02							
Polychlorinated Biphenyl 169					3.80E+01						2.65E-05 [a]	4.08E-05 [a]
Polychlorinated Biphenyl 189					3.80E+02							
Total Polychlorinated Biphenyls	7.40E-01 [h]	7.40E+02 [i]	5.00E+01	1.00E+03	7.40E+02 [i]	1.89E+03	9.44E+03			2.50E+03 [i]	1.70E+01 [q]	2.62E+01 [q]
Total Polychlorinated Biphenyls TEQ	1.80E-05	1.80E-05			1.80E-02 [z]	5.62E-02	5.62E-01				6.06E-07	9.34E-07
Semi-Volatile Organic Compounds												
Carbazole	2.20E+06	2.20E+06								1.40E+03	2.20E+00	3.39E+00
Dibenzofuran	1.00E+05	1.00E+05			1.00E+06					6.80E+02		
Volatile Organic Compounds												
1,1-Dichloroethene					1.10E+06							
Benzene	5.40E+03				5.40E+03							
cis-1,2-Dichloroethene	2.00E+05				2.00E+06							
trans-1,2-Dichloroethene	6.90E+04				6.90E+05							
Ethylbenzene	2.70E+04				2.70E+04							
Toluene	4.50E+06				4.50E+07							
Trichloroethene	1.40E+04				6.45E+03							
Vinyl chloride	1.70E+03				1.70E+03							
m-Xylene					2.50E+06							
p-Xylene					2.60E+06							
m,p-Xylene												
o-Xylene					3.00E+06							
Xylenes	2.70E+05				2.70E+06 [j]							
Benthic Risk Thresholds												
pMAX								5.90E-01				
Mean Quotient								7.00E-01				

Table 2-1
Sediment Screening Levels[1]

Notes:

a = UPL not available, 95-percentile value used for screening this COI

c = EPA RSL for Dichlorodiphenyldichloroethane used for total Dichlorodiphenyldichloroethane screening.
d = EPA RSL for Dichlorodiphenyldichloroethylene used for total Dichlorodiphenyldichloroethylene screening.

e = EPA RSL for Dichlorodiphenyltrichloroethane used for total Dichlorodiphenyltrichloroethane screening.

f = Criteria for cPAH BaPEq used for Total cPAH screening.

g = No hill top number listed because the area-wide average in the Gasco Area of Interest is below the Portland Harbor PRG for this COI. A replacement value of 8.8 ug/kg was used in the hill topping routine.

h = Screening concentration for total polychlorinated biphenyls congeners used for total polychlorinated biphenyls screening.

I = Screening concentration for total polychlorinated biphenyls aroclors used for total polychlorinated biphenyls screening.

j = EPA RSL for xylene, mixture used for xylene screening.

k = Background level for total DDx - LWG case used for total DDx screening.

l = EPA RSL for polychlorinated biphenyls (high risk) used for total polychlorinated biphenyls screening.

m = Criteria for m-Xylene used for m,p-Xylene screening.

p = SQG for total polychlorinated biphenyls aroclors used for total polychlorinated biphenyls screening.

q = Background for total polychlorinated biphenyls congeners + aroclors used for total polychlorinated biphenyls screening

r = UPL not available, mean value used for screening this COI

u = HH Clam Consumption, high consumption rate 18 g/day, 10^-5, OC normalized. A replacement value of 5.9 mg/kg-OC was used in the hill topping routine.

v = HH HF Fisher Beach Sediment Direct Contact 10^-6 (cPAH). A replacement value of 423 ug/kg was used in the hill topping routine.

x = HH Adult Fish Consumption - Small Mouth Bass - Low IR - 10^-4. A replacement value of 29.5 ug/kg was used in the hill topping routine.

y = SLV for Dichlorodiphenyltrichloroethane used for Dichlorodiphenyltrichloroethane metabolite screening.

z = 2,3,7,8 Tetrachlorodibenxo-p-dioxin screening level used for polychlorinated biphenyl TEQ screening.

[1] = Refer to the source tables referenced in the following footnotes for additional notes pertaining to the criteria listed in this table.

[2] = BHHRA Screening Concentrations are from Table 2-11 of Draft BHHRA (Appendix F of the Portland Harbor RI/FS, Draft Final Remedial Investigation Report [Integral et al. 2011]).

[3] = BHHRA Screening Concentrations are from Table 2-9 of Draft BHHRA (Appendix F of the Portland Harbor RI/FS, Draft Final Remedial Investigation Report [Integral et al. 2011]).

[4] = Portland Harbor RALs are high and low RALs developed based on the August 23, 2011 Response to EPA August 11 2011 Alternatives Letter. From LWG to EPA (Private communication, EPA 2011)

[5] = EPA RSLs are from EPA Regional Screening Level (RSL) Summary Table November 2011 (EPA 2011a). Available at: http://www.epa.gov/region9/superfund/prg/. Accessed March 23, 2011.

[6] = BERA Screening Concentrations are from Tables 7-22, 8-12, 8-14, and 8-28 of Draft Final BERA (Appendix G of the Portland Harbor RI/FS, Draft Final Remedial Investigation Report [Integral et al. 2011]). The lowest screening level listed in these tables for each COI was selected.

[7] = SL2s are from SQV Report Final June 9, 2010. Table ES-1: Recommended Sediment Quality Guidelines. Development of Benthic SQVs for Freshwater Sediments in Washington, Oregon, and Idaho.

[8] = Surface sediment background UPLs are obtained from Table 7.3-5b. Upriver Surface Sediment Central Tendency and Upper Threshold Statistics, Dry Weight Concentrations, Primary Outliers Removed, from Portland Harbor RI/FS, Draft Final Remedial Investigation Report [Integral et al. 2011]. Criteria used are those with outliers excluded.

[9] = OC-eq surface sediment background UPLs are obtained from Table 7.3-6b. Upriver Surface Sediment Central Tendency and Upper Threshold Statistics, OC-Equivalent Dry Weight Concentrations, Primary Outliers Removed, from Portland Harbor RI/FS, Draft Final Remedial Investigation Report (Integral et al. 2011). Criteria used are those with outliers excluded.

[10] = Values from DEQ's Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment, Table A1a "Sediment Bioaccumulation Screening Level Values (SLVs) (DEQ 2007). Lowest population level value was used when multiple values are listed.

[11] = Benthic risk thresholds are from the Draft Final BERA (Appendix G of the Portland Harbor RI/FS, Draft Final Remedial Investigation Report [Integral et al. 2011]). The lowest screening level listed in these tables for each COI was selected.

Table 2-1
Sediment Screening Levels [1]

Acronyms:

BaPEq = Benzo(a)pyrene equivalent
BERA--Biological Ecological Risk Assessment
BHHRA--Biological Human Health Risk Assessment
COI = Contaminant of Interest
cPAH = Carcinogenic Polycyclic Aromatic Hydrocarbon
DDx = Sum of all six Dichlorodiphenyltrichloroethane isomers
DEQ = Oregon Department of Environmental Quality
DW-Dry Weight
EPA = U.S. Environmental Protection Agency
HF = high frequency
HPAH = High-mulecular-weight Polycyclic Aromatic Hydrocarbon
kg = kilogram
LOAEL = Lowest Observed Adverse Effect Level
LPAH = Low-molecular-weight Polycyclic Aromatic Hydrocarbon
LWG = Lower Willamette Group
LWR = Lower Willamette River
mg = milligram
NOAEL = No Observable Adverse Effect Level
OC = Organic Carbon
OC-Eq = Organic Carbon Equivalent
pMAX = Maximum Probability of Toxicity
RAL = Remedial Action Level
RI/FS = Remedial Investigation/Feasibility Study
RSL = Regional Screening Levels
SL = Screening Level
SL2 = Screening Level 2
SLV = Screening Level Value
SQG = Sediment Quality Guideline
SQV = Sediment Quality Value
TEQ = toxic equivalent quotient
ug = microgram (also µg)
UPL = Upper Percentile Limit

Table 2-2
Water Screening Levels [1]

Chemicals	Human Health						
	RI Human Health Screening Criteria for Surface Water				RI Human Health Screening Criteria for TZW		
	Surface Water Screening Value (MCL)[2] (µg/l)	Surface Water Screening Value (Tapwater RSL)[2] (µg/l)	NRWQC[2] (µg/)	NRWQC divided by 10[2] (µg/l)	Transition Zone Water Screening Value (MCL)[3] (µg/l)	Transition Zone Water Screening Value (Tapwater RSL)[3] (µg/l)	NRWQC [3] (µg/l)
Metals/Inorganics							
Zinc		1.10E+04	2.60E+04	2.60E+03		1.10E+04	2.60E+04
Cyanide					2.00E+02	7.30E+02	1.40E+02
Polycyclic Aromatic Hydrocarbons							
2-Methylnaphthalene		1.50E+02				1.50E+02	
Acenaphthene		2.20E+03	9.90E+02	9.90E+01		2.20E+03	9.90E+02
Acenaphthylene		2.20E+03				2.20E+03	
Anthracene		1.10E+04	4.00E+04	4.00E+03		1.10E+04	4.00E+04
Benzo(a)anthracene	2.00E-01	2.90E-02	1.80E-02	1.80E-03	2.00E-01	2.90E-02	1.80E-02
Benzo(a)pyrene	2.00E-01	2.90E-03	1.80E-02	1.80E-03	2.00E-01	2.90E-03	1.80E-02
Benzo(b)fluoranthene	2.00E-01	2.90E-02	1.80E-02	1.80E-03	2.00E-01	2.90E-02	1.80E-02
Benzo(g,h,i)perylene		1.10E+03				1.10E+03	
Benzo(k)fluoranthene	2.00E-01	2.90E-01	1.80E-02	1.80E-03	2.00E-01	2.90E-01	1.80E-02
Chrysene	2.00E-01	2.90E+00	1.80E-02	1.80E-03	2.00E-01	2.90E+00	1.80E-02
Dibenzo(a,h)anthracene	2.00E-01	2.90E-03	1.80E-02	1.80E-03	2.00E-01	2.90E-03	1.80E-02
Fluoranthene		1.50E+03	1.40E+02	1.40E+01		1.50E+03	1.40E+02
Fluorene		1.50E+03	5.30E+03	5.30E+02		1.50E+03	5.30E+03
Indeno(1,2,3-cd)pyrene	2.00E-01	2.90E-02	1.80E-02	1.80E-03	2.00E-01	2.90E-02	1.80E-02
Naphthalene		1.40E-01				1.40E-01	
Phenanthrene		1.10E+03				1.10E+03	
Pyrene		1.10E+03	4.00E+03	4.00E+02		1.10E+03	4.00E+03
Pesticides							
alpha-Hexachlorocyclohexane		1.10E-02	4.90E-03	4.90E-04			
beta-Hexachlorocyclohexane		3.70E-02	1.70E-02	1.70E-03			
gamma-Hexachlorocyclohexane (Lindane)	2.00E-01	6.10E-02	1.80E+00	1.80E-01			
Technical-grade Hexachlorocyclohexane							
delta-Hexachlorocyclohexane							
2,4-Dichlorodiphenyldichloroethane							
2,4 Dichlorodiphenyldichloroethylene							
2,4-Dichlorodiphenyltrichloroethane							
4,4'-Dichlorodiphenyldichloroethane							
4,4'- Dichlorodiphenyldichloroethylene							
4,4'-Dichlorodiphenyltrichloroethane							
Sum Dichlorodiphenyldichloroethane		2.80E-01	3.10E-04	3.10E-05		2.80E-01	3.10E-04
Sum Dichlorodiphenyldichloroethylene		2.00E-01	2.20E-04	2.20E-05		2.00E-01	2.20E-04
Sum Dichlorodiphenyltrichloroethane		2.00E-01	2.20E-04	2.20E-05		2.00E-01	2.20E-04
Total DDx[v]							
Endrin ketone	2.00E+00	1.10E+01					

Table 2-2
Water Screening Levels [1]

Chemicals	Human Health						
	RI Human Health Screening Criteria for Surface Water				RI Human Health Screening Criteria for TZW		
	Surface Water Screening Value (MCL)[2] (µg/l)	Surface Water Screening Value (Tapwater RSL)[2] (µg/l)	NRWQC[2] (µg/)	NRWQC divided by 10[2] (µg/l)	Transition Zone Water Screening Value (MCL)[3] (µg/l)	Transition Zone Water Screening Value (Tapwater RSL)[3] (µg/l)	NRWQC [3] (µg/l)
Polychlorinated Biphenyls							
Aroclor 1016							
Aroclor 1221							
Aroclor 1232							
Aroclor 1242							
Aroclor 1248							
Aroclor 1254							
Aroclor 1260							
Polychlorinated Biphenyl 77							
Polychlorinated Biphenyl 81							
Polychlorinated Biphenyl 105							
Polychlorinated Biphenyl 114							
Polychlorinated Biphenyl 118							
Polychlorinated Biphenyl 123							
Polychlorinated Biphenyl 126							
Polychlorinated Biphenyl 156							
Polychlorinated Biphenyl 157							
Polychlorinated Biphenyl 167							
Polychlorinated Biphenyl 169							
Polychlorinated Biphenyl 189							
Total Polychlorinated Biphenyls	5.00E-01	3.40E-02	6.40E-05	6.40E-06			
Total Polychlorinated Biphenyl TEQ	3.00E-05	5.20E-07	5.10E-09	5.10E-10			
Semivolatile Organic Compounds							
Carbazole		1.50E+03					
Dibenzofuran		3.70E+01				3.70E+01	
Volatile Organic Compounds							
1,1-Dichloroethene	7.00E+00	3.40E+02	7.10E+03	7.10E+02	7.00E+00	3.40E+02	7.10E+03
Benzene	5.00E+00	4.10E-01	5.10E+01	5.10E+00	5.00E+00	4.10E-01	5.10E+01
cis-1,2-Dichloroethene	7.00E+01	7.30E+01			7.00E+01	7.30E+01	
trans-1,2-Dichloroethene	1.00E+02	1.10E+02	1.00E+04	1.00E+03	1.00E+02	1.10E+02	1.00E+04
Ethylbenzene	7.00E+02	1.50E+00	2.10E+03	2.10E+02	7.00E+02	1.50E+00	2.10E+03
Toluene	1.00E+03	2.30E+03	1.50E+04	1.50E+03	1.00E+03	2.30E+03	1.50E+04
Trichloroethene	5.00E+00	2.00E+00	3.00E+01	3.00E+00	5.00E+00	2.00E+00	3.00E+01
Vinyl chloride	2.00E+00	1.60E-02	2.40E+00	2.40E-01	2.00E+00	1.60E-02	2.40E+00
m-Xylene							
p-Xylene							
m,p-Xylene	1.00E+04	2.00E+02					
o-Xylene	1.00E+04	1.20E+03					
Total Xylenes					1.00E+04	2.00E+02	
Petroleum Hydrocarbons							
Diesel Range Hydrocarbons							
Residual Range Hydrocarbons							

Table 2-2
Water Screening Levels [1]

Chemicals	Human Health						
	EPA RSLs	CWA and SDWA Criteria		DEQ RBDM RBC Groundwater			
	Tapwater[4] (µg/l)	Water MCLs[5] (µg/)	Human Health - Water + Organism[6] (µg/l)	Ingestion & Inhalation from Tapwater - Occupational[7] (µg/l)	Volatilization to Outdoor Air - Occupational[7] (µg/l)	GW in Excavation[7] (µg/l)	Vapor Intrusion into Buildings Occupational[7] (µg/l)
Metals/Inorganics							
Zinc	4.70E+03		7.40E+03				
Cyanide	3.10E+02 [t]	2.00E+02 [t]	1.40E+02	8.80E+01		7.50E+04	
Polycyclic Aromatic Hydrocarbons							
2-Methylnaphthalene	2.70E+01						
Acenaphthene	4.00E+02		6.70E+02	-- [s]	-- [s]	-- [s]	-- [s]
Acenaphthylene							
Anthracene	1.30E+03		8.30E+03	-- [s]	-- [s]	-- [s]	-- [s]
Benzo(a)anthracene	2.90E-02		3.80E-03	5.60E-01		9.10E+00	
Benzo(a)pyrene	2.90E-03	2.00E-01	3.80E-03	5.60E-02		5.30E-01	
Benzo(b)fluoranthene	2.90E-02		3.80E-03	1.60E-01	-- [s]	-- [s]	-- [s]
Benzo(g,h,i)perylene							
Benzo(k)fluoranthene	2.90E-01		3.80E-03	-- [s]		-- [s]	
Chrysene	2.90E+00		3.80E-03	-- [s]	-- [s]	-- [s]	-- [s]
Dibenzo(a,h)anthracene	2.90E-03		3.80E-03	5.60E-02		2.10E-01	
Fluoranthene	6.30E+02		1.30E+02	-- [s]	-- [s]	-- [s]	-- [s]
Fluorene	2.20E+02		1.10E+03	-- [s]	-- [s]	-- [s]	-- [s]
Indeno(1,2,3-cd)pyrene	2.90E-02		3.80E-03	-- [s]		-- [s]	
Naphthalene	1.40E-01			7.20E-01	1.60E+04	5.00E+02	1.00E+04
Phenanthrene							
Pyrene	8.70E+01		8.30E+02	-- [s]	-- [s]	-- [s]	-- [s]
Pesticides							
alpha-Hexachlorocyclohexane	6.20E-03		2.60E-03	1.10E-02	-- [s]	7.10E+00	-- [s]
beta-Hexachlorocyclohexane	2.20E-02		9.10E-03				
gamma-Hexachlorocyclohexane (Lindane)	3.60E-02	2.00E-01	9.80E-01	6.50E-02	-- [s]	4.20E+01	-- [s]
Technical-grade Hexachlorocyclohexane	2.20E-02						
delta-Hexachlorocyclohexane							
2,4-Dichlorodiphenyldichloroethane							
2,4 Dichlorodiphenyldichloroethylene							
2,4-Dichlorodiphenyltrichloroethane							
4,4'-Dichlorodiphenyldichloroethane			3.10E-04	1.70E+00		4.00E+01	
4,4'- Dichlorodiphenyldichloroethylene			2.20E-04	2.10E-01	-- [s]	2.70E+01	-- [s]
4,4'-Dichlorodiphenyltrichloroethane			2.20E-04	1.20E+00		1.50E+01	
Sum Dichlorodiphenyldichloroethane	2.80E-01 [a]		3.10E-04 [l]				
Sum Dichlorodiphenyldichloroethylene	2.00E-01 [b]		2.20E-04 [m]				
Sum Dichlorodiphenyltrichloroethane	2.00E-01 [c]		2.20E-04 [n]				
Total DDx[v]							
Endrin ketone							

Table 2-2
Water Screening Levels [1]

Chemicals	Human Health						
	EPA RSLs	CWA and SDWA Criteria		DEQ RBDM RBC Groundwater			
	Tapwater[4] (µg/l)	Water MCLs[5] (µg/)	Human Health - Water + Organism[6] (µg/l)	Ingestion & Inhalation from Tapwater - Occupational[7] (µg/l)	Volatilization to Outdoor Air - Occupational[7] (µg/l)	GW in Excavation[7] (µg/l)	Vapor Intrusion into Buildings Occupational[7] (µg/l)
Polychlorinated Biphenyls							
Aroclor 1016	9.60E-01						
Aroclor 1221	4.30E-03						
Aroclor 1232	4.30E-03						
Aroclor 1242	3.40E-02						
Aroclor 1248	3.40E-02						
Aroclor 1254	3.40E-02						
Aroclor 1260	3.40E-02						
Polychlorinated Biphenyl 77	5.20E-03						
Polychlorinated Biphenyl 81	1.70E-03						
Polychlorinated Biphenyl 105	1.70E-02						
Polychlorinated Biphenyl 114	1.70E-02						
Polychlorinated Biphenyl 118	1.70E-02						
Polychlorinated Biphenyl 123	1.70E-02						
Polychlorinated Biphenyl 126	5.20E-06						
Polychlorinated Biphenyl 156	1.70E-02						
Polychlorinated Biphenyl 157	1.70E-02						
Polychlorinated Biphenyl 167	1.70E-02						
Polychlorinated Biphenyl 169	1.70E-05						
Polychlorinated Biphenyl 189	1.70E-02						
Total Polychlorinated Biphenyls	1.70E-01 [g]	5.00E-01	6.40E-05	2.70E-02	-- [s]	1.90E+00	-- [s]
Total Polychlorinated Biphenyl TEQ	5.20E-07 [u]	3.00E-05 [u]	5.00E-09 [u]	4.12E-07 [u]	-- [s]	1.60E-05 [u]	-- [s]
Semivolatile Organic Compounds							
Carbazole							
Dibenzofuran	5.80E+00						
Volatile Organic Compounds							
1,1-Dichloroethene	2.60E+02	7.00E+00	3.30E+02	1.40E+03	-- [s]	4.30E+04	3.40E+05
Benzene	3.90E-01	5.00E+00	2.20E+00	2.20E+00	1.40E+04	1.70E+03	2.80E+03
cis-1,2-Dichloroethene	2.80E+01	7.00E+01		2.90E+02	-- [s]	2.40E+04	-- [s]
trans-1,2-Dichloroethene	8.60E+01	1.00E+02	1.40E+02	4.50E+02	1.80E+06	1.40E+04	3.50E+05
Ethylbenzene	1.30E+00	7.00E+02	5.30E+02	7.80E+00	4.10E+04	4.40E+03	7.40E+03
Toluene	8.60E+02	1.00E+03	1.30E+03	9.20E+03	-- [s]	2.10E+05	-- [s]
Trichloroethene	4.40E-01	5.00E+00	2.50E+00	3.60E+00	1.90E+04	4.30E+02	3.30E+03
Vinyl chloride	1.50E-02	2.00E+00	2.50E-02	5.20E-01	6.80E+03	1.20E+03	9.10E+02
m-Xylene	1.90E+02						
p-Xylene	1.90E+02						
m,p-Xylene							
o-Xylene	1.90E+02						
Total Xylenes	1.90E+02 [h]	1.00E+04		8.50E+02	-- [s]	2.30E+04	-- [s]
Petroleum Hydrocarbons							
Diesel Range Hydrocarbons				4.30E+02	-- [s]	-- [s]	-- [s]
Residual Range Hydrocarbons				1.30E+03	-- [s]	-- [s]	-- [s]

Table 2-2
Water Screening Levels [1]

Chemicals	Ecological									Background
	CWA Criteria		Upland RA Ecological Receptor Screening Levels[8]			Eisler, 1991 Cyanide Screening Level	DEQ SLVs	SLERA Screening Values		LWR Background
	Freshwater CMC (Acute)[6] (µg/l)	Freshwater CCC (Chronic)[6] (µg/l)	Oak Ridge National Laboratory (Tier II SCVs) Suter and Tsao[9] (µg/l)	EPA, 2003 PAH specific Final Chronic Values[10] (µg/l)	EPA 2006, EPA Region III BTAG, Freshwater Screening Criteria[11] (µg/l)	Eisler, 1991 Cyanide Screening Level[12] (µg/l)	DEQ Level II SLVs for Water[13] (µg/l)	Surface Water TRVs[14] (µg/l)	TZW TRVs[15] (µg/l)	Surface Water UPL - Total Basis[16] (µg/l)
Metals/Inorganics										
Zinc	3.62E+01 [i,q]	3.65E+01 [i,q]			3.65E+01 [i,q]		1.20E+02	3.65E+01 [i]	3.65E+01 [i]	6.04E+00
Cyanide	2.20E+01 [t]	5.20E+00 [t]			5.00E+00 [t]	5.00E+04	5.20E+00		5.2	
Polycyclic Aromatic Hydrocarbons										
2-Methylnaphthalene			2.10E+00					2.10E+00	2.10E+00	
Acenaphthene				5.59E+01			5.20E+02	2.30E+01	2.30E+01	
Acenaphthylene				3.07E+02				3.07E+02	3.07E+02	
Anthracene			7.30E-01				1.30E+01	7.30E-01	7.30E-01	
Benzo(a)anthracene			2.70E-02				2.70E-02	2.70E-02	2.70E-02	3.53E-04
Benzo(a)pyrene			1.40E-02				1.40E-02	1.40E-02	1.40E-02	5.04E-04
Benzo(b)fluoranthene				6.77E-01				6.774E-01	6.774E-01	5.93E-04
Benzo(g,h,i)perylene				4.39E-01				4.391E-01	4.391E-01	
Benzo(k)fluoranthene				6.42E-01				6.415E-01	6.415E-01	5.50E-03 [w]
Chrysene				2.04E+00				2.042E+00	2.042E+00	6.94E-04
Dibenzo(a,h)anthracene				2.83E-01				2.825E-01	2.825E-01	8.96E-05
Fluoranthene				7.11E+00			6.16E+00	6.16E+00	6.16E+00	
Fluorene			3.90E+00				3.90E+00	3.90E+00	3.90E+00	
Indeno(1,2,3-cd)pyrene				2.75E-01				2.75E-01	2.75E-01	3.18E-04
Naphthalene			1.20E+01				6.20E+02	1.20E+01	1.20E+01	2.42E-02
Phenanthrene				1.91E+01			6.30E+00	6.30E+00	6.30E+00	
Pyrene				1.01E+01				1.011E+01	1.011E+01	
Pesticides										
alpha-Hexachlorocyclohexane			2.20E+00				2.20E+00	8.00E-02		
beta-Hexachlorocyclohexane							2.20E+00	8.00E-02		
gamma-Hexachlorocyclohexane (Lindane)	9.50E-01				1.00E-02		8.00E-02	8.00E-02		3.72E-05
Technical-grade Hexachlorocyclohexane							2.00E+04			
delta-Hexachlorocyclohexane					1.41E+02			8.00E-02		1.26E-06
2,4-Dichlorodiphenyldichloroethane	1.10E+00 [j]	1.00E-03 [j]						1.00E-03	1.00E-03	
2,4 Dichlorodiphenyldichloroethylene	1.10E+00 [j]	1.00E-03 [j]						1.00E-03	1.00E-03	
2,4-Dichlorodiphenyltrichloroethane	1.10E+00 [j]	1.00E-03 [j]						1.00E-03	1.00E-03	
4,4'-Dichlorodiphenyldichloroethane	1.10E+00 [j]	1.00E-03 [j]						1.00E-03	1.00E-03	7.85E-05
4,4'- Dichlorodiphenyldichloroethylene	1.10E+00 [j]	1.00E-03 [j]						1.00E-03	1.00E-03	1.87E-04
4,4'-Dichlorodiphenyltrichloroethane	1.10E+00 [j]	1.00E-03 [j]						1.00E-03	1.00E-03	2.72E-04
Sum Dichlorodiphenyldichloroethane	1.10E+00 [j]	1.00E-03 [j]					1.00E-03			9.83E-05
Sum Dichlorodiphenyldichloroethylene	1.10E+00 [j]	1.00E-03 [j]	[j]				1.00E+02			1.92E-04
Sum Dichlorodiphenyltrichloroethane	1.10E+00 [j]	1.00E-03 [j]					1.00E-03			3.13E-04
Total DDx[v]	1.10E+00	1.00E-03						1.00E-03	1.00E-03	5.93E-04
Endrin ketone								3.60E-02		3.25E-06

Table 2-2
Water Screening Levels [1]

Chemicals	Ecological									Background
	CWA Criteria		Upland RA Ecological Receptor Screening Levels[8]			Eisler, 1991 Cyanide Screening Level	DEQ SLVs	SLERA Screening Values		LWR Background
	Freshwater CMC (Acute)[6] (µg/l)	Freshwater CCC (Chronic)[6] (µg/l)	Oak Ridge National Laboratory (Tier II SCVs) Suter and Tsao[9] (µg/l)	EPA, 2003 PAH specific Final Chronic Values[10] (µg/l)	EPA 2006, EPA Region III BTAG, Freshwater Screening Criteria[11] (µg/l)	Eisler, 1991 Cyanide Screening Level[12] (µg/l)	DEQ Level II SLVs for Water[13] (µg/l)	Surface Water TRVs[14] (µg/l)	TZW TRVs[15] (µg/l)	Surface Water UPL - Total Basis[16] (µg/l)
Polychlorinated Biphenyls										
Aroclor 1016		1.40E-02 [k]					6.50E+04			
Aroclor 1221		1.40E-02 [k]					2.80E-01			
Aroclor 1232		1.40E-02 [k]					5.80E-01			
Aroclor 1242		1.40E-02 [k]					5.30E-02			
Aroclor 1248		1.40E-02 [k]					8.10E-02	8.10E-02		
Aroclor 1254		1.40E-02 [k]					3.30E-02	3.30E-02		
Aroclor 1260		1.40E-02 [k]					9.40E+01	9.40E+01		
Polychlorinated Biphenyl 77		1.40E-02 [k]								5.63E-07
Polychlorinated Biphenyl 81		1.40E-02 [k]								1.55E-08
Polychlorinated Biphenyl 105		1.40E-02 [k]								3.43E-06
Polychlorinated Biphenyl 114		1.40E-02 [k]								
Polychlorinated Biphenyl 118		1.40E-02 [k]								9.22E-06
Polychlorinated Biphenyl 123		1.40E-02 [k]								
Polychlorinated Biphenyl 126		1.40E-02 [k]								4.66E-08
Polychlorinated Biphenyl 156		1.40E-02 [k]								1.16E-06 [x]
Polychlorinated Biphenyl 157		1.40E-02 [k]								1.16E-06 [x]
Polychlorinated Biphenyl 167		1.40E-02 [k]								
Polychlorinated Biphenyl 169		1.40E-02 [k]								2.79E-08
Polychlorinated Biphenyl 189		1.40E-02 [k]								
Total Polychlorinated Biphenyls		1.40E-02					1.40E-02	1.40E-02		3.89E-04 [p]
Total Polychlorinated Biphenyl TEQ							5.00E-01 [s]	1.00E-05		6.28E-09
Semivolatile Organic Compounds										
Carbazole								1.12E+02		7.50E-03 [w]
Dibenzofuran					3.70E+00		3.70E+00	3.70E+00	3.70E+00	
Volatile Organic Compounds										
1,1-Dichloroethene					2.50E+01		2.50E+01	2.50E+01	2.50E+01	
Benzene			1.30E+02				1.30E+02	1.30E+02	1.30E+02	
cis-1,2-Dichloroethene			5.90E+02				5.90E+02	5.90E+02	5.90E+02	
trans-1,2-Dichloroethene			5.90E+02				5.90E+02	5.90E+02	5.90E+02	
Ethylbenzene			7.30E+00				7.30E+00	7.30E+00	7.30E+00	
Toluene			9.80E+00				9.80E+00	9.80E+00	9.80E+00	
Trichloroethene			4.70E+01				1.50E+04	4.70E+01	4.70E+01	
Vinyl chloride					9.30E+02		6.50E+03	2.34E+04	2.34E+04	
m-Xylene					1.80E+00		1.80E+00			
p-Xylene										
m,p-Xylene			1.80E+00					6.67E+01	6.67E+01	
o-Xylene			1.30E+01					1.30E+01	1.30E+01	
Total Xylenes					1.30E+01		1.30E+01	1.30E+01	1.30E+01	
Petroleum Hydrocarbons										
Diesel Range Hydrocarbons										
Residual Range Hydrocarbons										

Table 2-2
Water Screening Levels[1]

Notes:

a = EPA RSL for Dichlorodiphenyldichloroethane used for sum Dichlorodiphenyldichloroethane screening.
b = EPA RSL for Dichlorodiphenyldichloroethylene used for sum Dichlorodiphenyldichloroethylene screening.
c = EPA RSL for Dichlorodiphenyltrichloroethane used for sum Dichlorodiphenyltrichloroethane screening.
d = DEQ RBDM RBC for Dichlorodiphenyldichloroethane (4-4' Dichlorodiphenyldichloroethane) used for sum Dichlorodiphenyldichloroethane screening.
e = DEQ RBDM RBC for Dichlorodiphenyldichloroethylene (4-4' Dichlorodiphenyldichloroethylene) used for sum Dichlorodiphenyldichloroethylene screening.
f = DEQ RBDM RBC for Dichlorodiphenyltrichloroethane (4-4' Dichlorodiphenyltrichloroethane) used for sum Dichlorodiphenyltrichloroethane screening.
g = EPA RSL for PCBs (low risk) used for total PCBs screening.
h = EPA RSL for xylene, mixture used for xylenes screening.
I = Criteria based on a dissolved zinc concentration.
j = Freshwater criteria for Dichlorodiphenyltrichloroethane and its metabolites used for Dichlorodiphenyldichloroethane, Dichlorodiphenyldichloroethylene, Dichlorodiphenyltrichloroethane screening.
k = National AWQC for total PCBs used for individual congeners and aroclors screening.
l = Human Health for consumption of water + organism criteria for 4,4'-Dichlorodiphenyldichloroethane used for sum Dichlorodiphenyldichloroethane screening.
m = Human Health for consumption of water + organism criteria for 4,4'-Dichlorodiphenyldichloroethylene used for sum Dichlorodiphenyldichloroethylene screening.
n = Human Health for consumption of water + organism criteria for 4,4'-Dichlorodiphenyltrichloroethane used for sum Dichlorodiphenyltrichloroethane screening.
o = Criteria for m-Xylene used for m,p-Xylene screening.
p = Background for total PCBs congeners used for total PCBs screening
q = Screening level for zinc is based on a hardness of 25 mg/l. From EPA. 2000. National Recommended Water Quality Criteria: 2002.
r = TRV based on dissolved criteria; TRV was compared to dissolved concentration.
s = Groundwater RBC not listed because the value exceeds the solubility limit.
t = Criteria based on free cyanide concentration.
u = 2,3,7,8 Tetrachlorodibenxo-p-dioxin screening level used for PCB TEQ screening.
v = Total DDx – sum of all six Dichlorodiphenyltrichloroethane isomers
w = 95 percentile used when UPL not available
x = Background value for PCB-156 & 157 used for screening.

[1] = Refer to the source tables in the following footnotes for additional notes pertaining to the criteria listed in this table.

[2] = RI Human Health Screening Criteria for Surface Water are from Table D3.3-1 of Appendix D of the *Draft Final Portland Harbor RI/FS Remedial Investigation Report* (Integral 2011c). Screening Evaluation of Surface Water Against Human Health Screening Criteria, Appendix D.

[3] = RI Human Health Screening Criteria for Surface Water are from Table D3.3-2 of Appendix D of the *Draft Final Portland Harbor RI/FS Remedial Investigation Report* (Integral 2011c).

[4] = EPA RSLs are from *EPA Regional Screening Level (RSL) Summary Table* November 2011 (EPA 2011a). Available at http://www.epa.gov/region9/superfund/prg/. Accessed March 23, 2011.

[5] = MCLs are from EPA 816-F-09-004, *National Primary Drinking Water Regulations* (EPA 2009).

[6] = Criteria are from *National Recommended Water Quality Criteria,* Office of Water, Office of Science and Technology, Updated 2009, Available from: http://water.epa.gov/scitech/swguidance/standards/current/index.cfm

[7] = RBDM RBCs are from DEQ Environmental Cleanup and Tanks Program table entitled "Risk-Based Concentrations for Individual Chemicals", November 15, 2011 revision, available at http://www.deq.state.or.us/lq/pubs/docs/RBDMTable.pdf. Accessed March 23, 2011.

[8] = The Upland RA Ecological Receptor Screening Levels presented follow the hierarchy presented in the screening level matrix attached to the letter from Jim Anderson of DEQ to Bob Wyatt of NW Natural regarding: “Summary of Agreements on the Remaining Uplands Risk Assessment Issues, NW Natural “Gasco” Site” dated January 5, 2012. This hierarchy states that the secondary criteria are only used when criteria are unavailable from the previous reference(s).

[9] = Oak Ridge National Laboratory's Tier II SCV values are from Suter, G.W. II, and Tsao, C.L. 1996. *Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota* : 1996 Revision. ES/ER/TM-96/R2. Available at: http://www.esd.ornl.gov/programs/ecorisk/documents/tm96r2.pdf.

[10] = Screening values are from EPA, 2003, *Procedures for the Deribation of Equilibrium Partitioning Sediment Benchmarks for the Protection of Benthic Organisms: PAH Mixtures. Final Chronic Values for PAHs* . EPA-600-R-02-013, Table 3-4 "Toxicity of PAHs in Water Exposures".

[11] = Screening values are from EPA 2006, *EPA Region III BTAG, Freshwater Screening Criteria* .

[12] = Cyanide Screening level from Eisler, Ronald. 1991. *Cyanide Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review- U.S. Fish Wildlife Service* , Biol. Rep. 85(1.23).

[13] = DEQ Screening values are from Table 1 Screening Level Values for Plants, Invertebrates, and Wildlife Exposed to Soil and Surface Water from the *Guidance For Ecological Risk Assessment, Level 2 screening values, DEQ* December 2001. When multiple values existed, the lowest was used. A 5x multiplier was applied to bird and mammal SLVs.

[14] = Surface Water TRVs are from the *Draft Final of Portland Harbor RI/FS Remedial Investigation Report* "Table 6-2. Water TRVs for Surface Water COIs" of Draft Final BERA (Appendix G of the Baseline Ecological Risk Assessment Attachment 5 SLERA and Refined Screen [Winward Environmental LLC. July 1, 2011]

[15] = TZW TRVs are from *Draft of Portland Harbor RI/FS Remedial Investigation Report* "Table 7-2. Water TRVs for TZW COIs" of Draft BERA (Appendix G of the Baseline Ecological Risk Assessment Attachment 5 SLERA and Refined Screen [Winward Environmental LLC. July 1, 2011]

[16] = Background UPLs are from "Table 7.4-4a: Upriver Surface Water Upper Threshold Calculations, Total Concentration Basis, Outliers Removed" of *Draft Final Portland Harbor RI/FS Remedial Investigation Report* (Integral et al. 2011). Criteria used are those with outliers excluded.

[17] = '-- = RBC value not available

Table 2-2
Water Screening Levels[1]

Acronyms:

AWOC = Ambient Water Quality Criteria
BERA = Biological Ecological Risk Assessment
BHHRA = Biological Human Health Risk Assessment
BTAG = Biological Technical Assistance Group
CCC = Criterion Continuous Concentration
CMC = Criterion Maximum Concentration
COI = Chemical of Interest
cPAH = Carcinogenic Polycyclic Aromatic Hydrocarbon
CWA = Clean Water Act
DDx = Sum of all six Dichlorodiphenyltrichloroethane isomers
DEQ = Oregon Department of Environmental Quality
ESB = Equilibrium Partitioning Benchmarks
EPA = U. S. Environmental Protection Agency
GW = Ground Water
HPAH = High-molecular-weight Polycyclic Aromatic Hydrocarbon
JSCS = Joint Source Control Strategy
L = liter
LPAH = Low-molecular-weight Polycyclic Aromatic Hydrocarbon
LWR = Lower Willamette River
MCL = Maximum Contaminant Level
NRWQC = National Recommended Water Quality Criteria
PAH = Polycyclic Aromatic Hydrocarbon
RA = Risk Assessment
RBC = Risk-Based Concentrations
RBDM = Risk-Based Decision Making
RI/FS = Remedial Investigation/Feasibility Study
RI = Remedial Investigation
RSL = Regional Screening Level
SCV = Secondary Chronic Value
SDWA = Safe Drinking Water Act
SLERA = Screening Level Ecological Risk Assessment
SLV = Screening Level Value
TEQ = Toxic Equivalent Quotient
TRV = Toxicity Reference Value
TZW = Transition Zone Water
ug = microgram (also µg)
UPL = Upper Percentile Limit

Table 2-3
Benthic Toxicity Screening Criteria

	REV (L1) Threshold (%)	Low (L2) Threshold (%)	High (L3) Threshold (%)
Chironomus dilutus survival	93.9	84.5	75.1
Chironomus dilutu s biomass	91.0	81.9	72.8
Hyalella azteca survival	88.1	79.3	70.5
Hyalella azteca biomass	73.6	66.2	58.9

Notes:

[1] = Criteria obtained from Table 6-2 - Biological Effects Levels Based on the REV of the Draft Final BERA (Appendix G of the *Draft Final Portland Harbor RI/FS Remedial Investigation Report* [Integral et al. 2011b])

[2] = L1 = Level 1 (REV)

[3] = L2 = Level 2 (90 percent threshold)

[4] = L3 = Level 3 (80 percent threshold)

Acronyms:

BERA = Baseline Ecological Risk Assessment

REV = Reference Envelope Value

Table 2-4
Upland Soil Screening Levels[1]

Chemicals	Human Health						
	EPA RSLs	DEQ RBDM RBC Soil					
	Industrial Soil[2] (µg/kg)	Occupational Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)	Construction Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)	Excavation Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)	Volatilization to Outdoor Air - Occupational[3] (µg/kg)	Vapor Intrusion into Buildings - Occupational[3] (µg/kg)	Leaching to Groundwater - Occupational (µg/kg)
Metals/Inorganics							
Zinc	3.10E+08						
Cyanide	2.00E+07	6.10E+05	1.90E+05	5.10E+06			
Polycyclic Aromatic Hydrocarbons							
2-Methylnaphthalene	4.10E+06						
Acenaphthene	3.30E+07	6.10E+07	1.90E+07	5.20E+08	-- [i]	-- [i]	-- [h]
Acenaphthylene							
Anthracene	1.70E+08	3.10E+08	9.30E+07	-- [i]	-- [i]	-- [i]	-- [h]
Benzo(a)anthracene	2.10E+03	2.70E+03	2.10E+04	5.90E+05			-- [h]
Benzo(a)pyrene	2.10E+02	2.70E+02	2.10E+03	5.90E+04			-- [h]
Benzo(b)fluoranthene	2.10E+03	2.70E+03	2.10E+04	5.90E+05	-- [h]	-- [h]	-- [h]
Benzo(g,h,i)perylene							
Benzo(k)fluoranthene	2.10E+04	2.70E+04	2.10E+05	5.90E+06			-- [h]
Chrysene	2.10E+05	2.50E+05	2.10E+06	5.70E+07	-- [h]	-- [h]	-- [h]
Dibenzo(a,h)anthracene	2.10E+02	2.70E+02	2.10E+03	5.90E+04	-- [h]		-- [h]
Fluoranthene	2.20E+07	2.90E+07	8.90E+06	2.50E+08	-- [i]	-- [i]	-- [h]
Fluorene	2.20E+07	4.10E+07	1.20E+07	3.40E+08	-- [i]	-- [i]	-- [h]
Indeno(1,2,3-cd)pyrene	2.10E+03	2.70E+03	2.10E+04	5.90E+05			-- [h]
Naphthalene	1.80E+04	2.30E+04	5.80E+05	1.60E+07	9.90E+04	9.90E+04	4.40E+02
Phenanthrene							
LPAH							
HPAH							
Pyrene	1.70E+07	2.10E+07	6.70E+06	1.90E+08	-- [i]	-- [i]	-- [h]
Pesticides							
alpha-Hexachlorocyclohexane	2.70E+02	3.10E+02	2.60E+03	7.10E+04	-- [h]	-- [h]	6.00E+00
beta-Hexachlorocyclohexane	9.60E+02						
delta-Hexachlorocyclohexane							
gamma-Hexachlorocyclohexane (Lindane)	2.10E+03	1.70E+03	1.50E+04	4.00E+05	-- [h]	-- [h]	2.10E+01
Technical-grade Hexachlorocyclohexane	9.60E+02						
4,4'-Dichlorodiphenyldichloroethane	7.20E+03 [a]	1.10E+04	8.30E+04	2.30E+06			-- [h]
2,4'-Dichlorodiphenyldichloroethane	7.20E+03 [a]						
4,4'-Dichlorodiphenyldichloroethylene	5.10E+03 [b]	7.60E+03	5.80E+04	1.60E+06	-- [i]	-- [i]	2.80E+05
2,4'-Dichlorodiphenyldichloroethylene	5.10E+03 [b]						
4,4'-Dichlorodiphenyltrichloroethane	7.00E+03 [c]	7.70E+03	5.80E+04	1.60E+06			-- [h]
2,4'-Dichlorodiphenyltrichloroethane	7.00E+03 [c]						
Sum Dichlorodiphenyldichloroethane	7.20E+03 [a]						

Table 2-4
Upland Soil Screening Levels[1]

Chemicals	Ecological						
	JSCS SLV - Upland Soil / Stormwater Sediment		Upland RA Ecological Receptor Screening Levels[5]				
	Toxicity[4] (µg/kg)	Bioaccumulation[4] (µg/kg)	EPA SSLs[6] (µg/kg)	DEQ Alternative Screening Level[7] (µg/kg)	DEQ Level II SLVs for Soil[8] (µg/kg)	Alternative Cyanide Screening Level[9] (µg/kg)	EPA Region 5 RCRA Ecological Screening Levels[10] (µg/kg)
Metals/Inorganics							
Zinc	4.59E+05		1.20E+05				
Cyanide						1.99E+06	6.65E+03 [n]
Polycyclic Aromatic Hydrocarbons							
2-Methylnaphthalene	2.00E+02		2.90E+04 [k]				
Acenaphthene	3.00E+02		2.90E+04 [k]				
Acenaphthylene	2.00E+02		2.90E+04 [k]				
Anthracene	8.45E+02		2.90E+04 [k]				
Benzo(a)anthracene	1.05E+03		5.50E+03 [l]				
Benzo(a)pyrene	1.45E+03		5.50E+03 [l]				
Benzo(b)fluoranthene			5.50E+03 [l]				
Benzo(g,h,i)perylene	3.00E+02		5.50E+03 [l]				
Benzo(k)fluoranthene	1.30E+04		5.50E+03 [l]				
Chrysene	1.29E+03		5.50E+03 [l]				
Dibenzo(a,h)anthracene	1.30E+03		5.50E+03 [l]				
Fluoranthene	2.23E+03	3.70E+04	5.50E+03 [l]				
Fluorene	5.36E+02		2.90E+04 [k]				
Indeno(1,2,3-cd)pyrene	1.00E+02		5.50E+03 [l]				
Naphthalene	5.61E+02		2.90E+04 [k]				
Phenanthrene	1.17E+03		2.90E+04 [k]				
LPAH			2.90E+04				
HPAH			5.50E+03				
Pyrene	1.52E+03	1.90E+03	5.50E+03 [l]				
Pesticides							
alpha-Hexachlorocyclohexane							9.94E+01
beta-Hexachlorocyclohexane							3.98E+00
delta-Hexachlorocyclohexane							9.94E+03
gamma-Hexachlorocyclohexane (Lindane)	4.99E+00				4.00E+04		
Technical-grade Hexachlorocyclohexane					1.25E+04		
4,4'-Dichlorodiphenyldichloroethane			1.05E+02 [m]				
2,4'-Dichlorodiphenyldichloroethane			1.05E+02 [m]				
4,4'-Dichlorodiphenyldichloroethylene			1.05E+02 [m]				
2,4'-Dichlorodiphenyldichloroethylene			1.05E+02 [m]				
4,4'-Dichlorodiphenyltrichloroethane			1.05E+02 [m]				
2,4'-Dichlorodiphenyltrichloroethane			1.05E+02 [m]				
Sum Dichlorodiphenyldichloroethane	2.80E+01	3.30E-01	1.05E+02 [m]				

Table 2-4
Upland Soil Screening Levels[1]

Chemicals	Human Health						
	EPA RSLs	DEQ RBDM RBC Soil					
	Industrial Soil[2] (µg/kg)	Occupational Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)	Construction Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)	Excavation Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)	Volatilization to Outdoor Air - Occupational[3] (µg/kg)	Vapor Intrusion into Buildings - Occupational[3] (µg/kg)	Leaching to Groundwater - Occupational (µg/kg)
Sum Dichlorodiphenyldichloroethylene	5.10E+03 [b]						
Sum Dichlorodiphenyltrichloroethane	7.00E+03 [c]						
Total DDx	7.00E+03 [c]						
Endrin ketone	1.80E+05						
Polychlorinated Biphenyls							
Aroclor 1016	2.10E+04						
Aroclor 1221	5.40E+02						
Aroclor 1232	5.40E+02						
Aroclor 1242	7.40E+02						
Aroclor 1248	7.40E+02						
Aroclor 1254	7.40E+02						
Aroclor 1260	7.40E+02						
Polychlorinated Biphenyl 77	1.10E+02						
Polychlorinated Biphenyl 81	3.80E+01						
Polychlorinated Biphenyl 105	3.80E+02						
Polychlorinated Biphenyl 114	3.80E+02						
Polychlorinated Biphenyl 118	3.80E+02						
Polychlorinated Biphenyl 123	3.80E+02						
Polychlorinated Biphenyl 126	1.10E-01						
Polychlorinated Biphenyl 156	3.80E+02						
Polychlorinated Biphenyl 157	3.80E+02						
Polychlorinated Biphenyl 167	3.80E+02						
Polychlorinated Biphenyl 169	3.80E-01						
Polychlorinated Biphenyl 189	3.80E+02						
Total Polychlorinated Biphenyls	7.40E+02 [d]	5.60E+02	4.40E+03	1.20E+05	-- [h]	-- [h]	6.20E+02
Polychlorinated Biphenyl TEQ	1.80E-02 [e]	1.50E-02 [e]	1.50E-01 [e]	4.20E+00 [e]	-- [e,h]	-- [e,h]	1.80E-02 [e]
Semivolatile Organic Compounds							
Carbazole	1.00E+06 [f]						
Dibenzofuran	1.00E+06						
Volatile Organic Compounds							
1,1-Dichloroethene	1.10E+06	2.70E+07	1.20E+07	3.40E+08	-- [h]	6.80E+05	4.50E+04
Benzene	5.40E+03	3.40E+04	3.40E+05	9.50E+06	5.00E+04	1.20E+03	5.30E+01
cis-1,2-Dichloroethene	2.00E+06	2.00E+06	6.20E+05	1.70E+07	-- [i]	-- [i]	4.80E+03
trans-1,2-Dichloroethene	6.90E+05	9.20E+06	4.50E+06	1.30E+08	-- [h]	2.00E+05	1.00E+04
Ethylbenzene	2.70E+04	1.40E+05	1.60E+06	4.40E+07	1.60E+05	1.20E+04	9.00E+02
Toluene	4.50E+07	7.70E+07	2.40E+07	6.80E+08	-- [h]	-- [h]	-- [h]
Trichloroethene	6.40E+03	4.60E+04	1.20E+05	3.40E+06	9.60E+04	2.70E+03	2.10E+02

Table 2-4
Upland Soil Screening Levels[1]

Chemicals	Ecological						
	JSCS SLV - Upland Soil / Stormwater Sediment		Upland RA Ecological Receptor Screening Levels[5]				
	Toxicity[4] (µg/kg)	Bioaccumulation[4] (µg/kg)	EPA SSLs[6] (µg/kg)	DEQ Alternative Screening Level[7] (µg/kg)	DEQ Level II SLVs for Soil[8] (µg/kg)	Alternative Cyanide Screening Level[9] (µg/kg)	EPA Region 5 RCRA Ecological Screening Levels[10] (µg/kg)
Sum Dichlorodiphenyldichloroethylene	3.13E+01	3.30E-01	1.05E+02 m				
Sum Dichlorodiphenyltrichloroethane	6.29E+01	3.30E-01	1.05E+02 m				
Total DDx		3.30E-01	1.05E+02 m				
Endrin ketone							1.01E+01
Polychlorinated Biphenyls							
Aroclor 1016	5.30E+02				5.00E+05		
Aroclor 1221							
Aroclor 1232							
Aroclor 1242					7.50E+03		
Aroclor 1248	1.50E+03						
Aroclor 1254	3.00E+02				3.50E+03		
Aroclor 1260	2.00E+02						
Polychlorinated Biphenyl 77		5.20E-02					
Polychlorinated Biphenyl 81		1.70E-02					
Polychlorinated Biphenyl 105		1.70E-01					
Polychlorinated Biphenyl 114		1.70E-01					
Polychlorinated Biphenyl 118		1.20E-01					
Polychlorinated Biphenyl 123		2.10E-01					
Polychlorinated Biphenyl 126		5.00E-05					
Polychlorinated Biphenyl 156		2.10E-01					
Polychlorinated Biphenyl 157		2.10E-01					
Polychlorinated Biphenyl 167		2.10E-01					
Polychlorinated Biphenyl 169		2.10E-04					
Polychlorinated Biphenyl 189		1.20E+00					
Total Polychlorinated Biphenyls	6.76E+02 j	3.90E-01 j			2.00E+04		
Polychlorinated Biphenyl TEQ	9.00E-03 e	9.10E-06 e			2.75E-01 e		
Semivolatile Organic Compounds							
Carbazole	1.60E+03			8.50E+04 f			
Dibenzofuran				8.50E+04			
Volatile Organic Compounds							
1,1-Dichloroethene					1.88E+07		
Benzene					1.65E+07		
cis-1,2-Dichloroethene					1.25E+07		
trans-1,2-Dichloroethene					1.25E+07		
Ethylbenzene							5.16E+03
Toluene					2.00E+05		
Trichloroethene	2.10E+03				2.00E+05		

Table 2-4
Upland Soil Screening Levels[1]

Chemicals	Human Health						
	EPA RSLs	DEQ RBDM RBC Soil					
	Industrial Soil[2] (µg/kg)	Occupational Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)	Construction Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)	Excavation Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)	Volatilization to Outdoor Air - Occupational[3] (µg/kg)	Vapor Intrusion into Buildings - Occupational[3] (µg/kg)	Leaching to Groundwater - Occupational (µg/kg)
Vinyl chloride	1.70E+03	3.90E+03	3.00E+04	8.30E+05	8.90E+04	2.20E+03	1.00E+01
m-Xylene	2.50E+06						
p-Xylene	2.60E+06						
o-Xylene	3.00E+06						
Xylenes	2.70E+06 [g]	2.50E+07	1.90E+07	5.40E+08	-- [h]	-- [h]	1.00E+05
Petroleum Hydrocarbons							
Diesel Range		1.40E+07	4.60E+06	-- [i]	-- [i]	-- [i]	-- [i]
Residual Range		3.60E+07	1.10E+07	-- [i]	-- [i]	-- [i]	-- [i]

Table 2-4
Upland Soil Screening Levels[1]

Chemicals	Ecological						
	JSCS SLV - Upland Soil / Stormwater Sediment		Upland RA Ecological Receptor Screening Levels[5]				
	Toxicity[4] (µg/kg)	Bioaccumulation[4] (µg/kg)	EPA SSLs[6] (µg/kg)	DEQ Alternative Screening Level[7] (µg/kg)	DEQ Level II SLVs for Soil[8] (µg/kg)	Alternative Cyanide Screening Level[9] (µg/kg)	EPA Region 5 RCRA Ecological Screening Levels[10] (µg/kg)
Vinyl chloride					1.00E+05		
m-Xylene							
p-Xylene							
o-Xylene					1.00E+03		
Xylenes					1.00E+05		
Petroleum Hydrocarbons							
Diesel Range							
Residual Range							

Table 2-4
Upland Soil Screening Levels[1]

Notes:

a = EPA RSL for Dichlorodiphenyldichloroethane used for screening.

b = EPA RSL for Dichlorodiphenyldichloroethylene used for screening.

c = EPA RSL for Dichlorodiphenyltrichloroethane used for screening.

d = EPA RSL for PCBs (high risk) used for PCB screening.

e = 2,3,7,8 TCDD screening level used for PCB Toxic Equivalent Quotient (TEQ) screening.

f = Dibenzofuran screening level used for carbazole as directed by DEQ (DEQ email to NW Natural, February 23, 2012).

g = EPA RSL for xylene, mixture used for xylenes screening.

h = RBC not available because value exceeds the limit of three-phase equilibrium partitioning.

I = RBC not available because the constituent value for this pathway is greater than 100,000 mg/kg or 100,000 mg/l.

j = Screening level for total PCB congeners used for total PCB screening.

k = Low-molecular Weight PAH (LPAH) - PAHs with 2 to 3 benzene rings.

l = High-molecular Weight PAH (HPAH) - PAHs with 4 to 7 benzene rings.

m = Eco-SSL for Dichlorodiphenyltrichloroethane and metabolites used for sum Dichlorodiphenyldichloroethane, Dichlorodiphenyldichloroethylene, and Dichlorodiphenyltrichloroethane screening, as well as screening of individual Dichlorodiphenyldichloroethane, Dichlorodiphenyldichloroethylene, and Dichlorodiphenyltrichloroethane isomers.

n = Screening level was multiplied by 5 because the screening level is based on a No Observed Adverse Effect Level (NOAEL) endpoint

[1] = Refer to the source tables in the following footnotes for additional notes pertaining to the criteria listed in this table

[2] = EPA RSLs are from EPA Regional Screening Level (RSL) Summary Table November 2011 (EPA 2011a). Available at: http://www.epa.gov/region9/superfund/prg/. Accessed March 22, 2012.

[3] = RBDM RBCs are from DEQ Environmental Cleanup and Tanks Program table entitled "*Risk-Based Concentrations for Individual Chemicals,"* November 15, 2011, revision, available at http://www.deq.state.or.us/lq/pubs/docs/RBDMTable.pdf. Accessed March 21, 2012.

[4] = JSCS Screening Level Values are from "Table 3-1 Screening Level Values for Soil/Stormwater Sediment, Stormwater, Groundwater, and Surface Water" of the *Portland Harbor Joint Source Control Strategy* (DEQ and EPA 2007 Revision).

[5] = The Upland Remedial Investigation (RA) ESLs presented follow the hierarchy presented in the screening level matrix attached to the letter from Jim Anderson of DEQ to Bob Wyatt of NW Natural regarding: "Summary of Agreements on the Remaining Uplands Risk Assessment Issues, NW Natural "Gasco" Site" dated January 5, 2012. This hierarchy states that the secondary criteria are only used when criteria are unavailable from the previous reference(s).

[6] = Values obtained from EPA Ecological Soil Screening Levels for Dichlorodiphenyltrichloroethane and Metabolites (EPA 2007), EPA Ecological Soil Screening Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Final (EPA 2007), and EPA Ecological Soil Screening Levels for Zinc Interim Final (EPA 2007) (http://www.epa.gov/ecotox/ecossl/). In cases where more than one level is listed, then the most conservative level is used for screening. A 5x multiplier was applied to the bird and mammal screening levels.

[7] = Alternative DEQ screening level for dibenzofuran is from the DEQ e-mail to NW Natural dated February 23, 2012. This level is applied to carbazole as directed by DEQ. The screening level is multiplied by 5 because it is based on a no observed adverse effect level (NOAEL) er

[8] = DEQ screening values from *Guidance For Ecological Risk Assessment*. Level 2 screening values. "Table 1 Screening Level Values for Plants, Invertebrates, and Wildlife Exposed to Soil and Surface Water" (DEQ revision 2001). When multiple values existed, the lowest was used. A 5x multiplier was applied to the bird and mammal screening levels.

[9] = Alternative cyanide screening level is from the October 31, 2011, memorandum from Mr. Fuji and Ms. Hitchko of Anchor QEA to Mr. Bayuk of DEQ entitled *Proposed Alternative Cyanide Screening Level*. The screening level is multiplied by 5 because it is based on a no observed adverse effect level (NOAEL) endpoint.

[10] = EPA *Region 5 RCRA Ecological Screening Levels (ESLs) for Soil* (2003). Available at: http://www.epa.gov/reg5rcra/ca/pdfs/ecological-screening-levels-200308.pdf. Accessed March 21, 2012.

Table 2-4
Upland Soil Screening Levels[1]

Acronyms
AWOC = Ambient Water Quality Criteria
BERA = Biological Ecological Risk Assessment
BHHRA = Biological Human Health Risk Assessment
BTAG = Biological Technical Assistance Group
CCC = Criterion Continuous Concentration
CMC = Criterion Maximum Concentration
COI = Chemical of Interest
CWA = Clean Water Act
Dichlorodiphenyltrichloroethane)
DEQ = Oregon Department of Environmental Quality
ESB = Equilibrium Partitioning Benchmarks
EPA = U. S. Environmental Protection Agency
GW = Ground Water
HPAH = High-molecular-weight Polycyclic Aromatic Hydrocarbon
JSCS = Joint Source Control Strategy
L = liter
LPAH = Low-molecular-weight Polycyclic Aromatic Hydrocarbon
LWR = Lower Willamette River
MCL = Maximum Contaminant Level
NRWQC = National Recommended Water Quality Criteria
RA = Risk Assessment
RBC = Risk-Based Concentrations
RBDM = Risk-Based Decision Making
RI/FS = Remedial Investigation/Feasibility Study
RI = Remedial Investigation
RSL = Regional Screening Level
SCV = Secondary Chronic Value
SDWA = Safe Drinking Water Act
SLERA = Screening Level Ecological Risk Assessment
SLV = Screening Level Value
TEQ = Toxic Equivalent Quotient
TRV = Toxicity Reference Value
TZW = Transition Zone Water
ug = microgram (also µg)
UPL = Upper Percentile Limit

Table 2-5
Summary of COIs without Screening Levels

Chemicals	Media		
	Sediment	Soil	Water
Petroleum			
Diesel Range Hydrocarbons		x	x
Residual Range Hydrocarbons		x	x
Polycyclic Aromatic Hydrocarbons			
Total LPAHs			x
Total HPAHs			x
Total PAHs		x	x
Total cPAHs		x	x

Acronyms:
COI = Contaminant of Interest
cPAH = Carcinogenic Polycyclic Aromatic Hydrocarbon
HPAH = High-molecular-weight Polycyclic Aromatic Hydrocarbon
LPAH = Low-molecular-weight Polycyclic Aromatic Hydrocarbon

Table 2-6
Summary of Screening

Criteria	Sediment			Water					Benthic Toxicity	Upland Soils	
	Surface Sediment	Subsurface Sediment	Sediment Trap Data	Surface Water	TZW	Fill Groundwater	Alluvial Groundwater	Deep Groundwater		Surface Soil	Subsurface Soil
BHHRA Screening Concentrations[1]											
In-water Sediment	X	X	X								
Industrial Use Beach Sediment	X	X	X								
RI Human Health Screening Criteria for Surface Water[2]											
Surface Water Screening Value (MCL)				X							
Surface Water Screening Value (Tap Water RSL)				X							
NRWQC				X							
NRWQC divided by 10				X							
RI Human Health Screening Criteria for TZW[3]											
TZW Screening Value (Tap Water RSL)					X						
TZW Screening Value (MCL)					X						
NRWQC					X						
BERA Screening Concentrations[4]											
Dietary Dose TSC – NOAEL	X	X	X								
Dietary Dose TSC – LOAEL	X	X	X								
Benthic Risk Thresholds	X	X	X								
SLERA Screening Values[5]											
Surface Water TRVs				X							
TZW TRVs					X						
Portland Harbor RALs[6]											
Lowest RAL	X	X	X								
Highest RAL	X	X	X								
Benthic SQVs[7]											
SQVs SLs	X	X	X								
EPA RSLs[8]											
Industrial Soil	X	X	X							X	X
Tapwater				X	X	X	X	X			
CWA and SDWA Criteria[9]											
Water MCLs				X	X	X	X	X			
NRWQC: Human Health – Water + Organism				X	X						
NRWQC: Freshwater (Acute)				X	X	X	X				
NRWQC: Freshwater (Chronic)				X	X	X	X				

Table 2-6
Summary of Screening

Criteria	Sediment			Water					Benthic Toxicity	Upland Soils	
	Surface Sediment	Subsurface Sediment	Sediment Trap Data	Surface Water	TZW	Fill Groundwater	Alluvial Groundwater	Deep Groundwater		Surface Soil	Subsurface Soil
Upland RA Ecological Receptor Criteria[10]											
Oak Ridge National Laboratory (Tier II SCVs) Suter and Tsao[11]						X	X				
EPA 2003, PAH-specific Final Chronic Values[12]						X	X				
EPA 2006, EPA Region III BTAG, Freshwater Screening Criteria[13]						X	X				
EPA ECO-SSLs[14]										X	
Alternate Cyanide Screening Level[15]										X	
EPA Region 5 RCRA ESLs for Soil[16]										X	
DEQ Alternative Screening Level[17]										X	
DEQ RBDM RBC Criteria[10,18]											
Soil, Occupational Worker – Ingestion, Dermal Contact, and Inhalation										X	
Soil, Construction Worker – Ingestion, Dermal Contact, and Inhalation										X	X
Soil, Excavation Worker – Ingestion, Dermal Contact, and Inhalation											X
Soil, Volatilization to Outdoor Air – Occupational										X	X
Soil, Vapor Intrusion into Buildings – Occupational											X
Soil, Leaching to Groundwater – Occupational										X	X
Groundwater, Ingestion and Inhalation from Tap Water – Occupational							X[10]	X			
Groundwater, Volatilization to Outdoor Air – Occupational						X					
Groundwater in Excavation						X					

Table 2-6
Summary of Screening

Criteria	Sediment			Water					Benthic Toxicity	Upland Soils	
	Surface Sediment	Subsurface Sediment	Sediment Trap Data	Surface Water	TZW	Fill Groundwater	Alluvial Groundwater	Deep Groundwater		Surface Soil	Subsurface Soil
Groundwater, Vapor Intrusion into Buildings – Occupational						X					
DEQ Sediment Bioaccumulation Screening Values[19]											
DEQ Sediment Bioaccumulation Screening Values	X	X	X								
JSCS Screening Level Values – Upland Soil/Stormwater Sediment[20]											
Toxicity										X	X
Bioaccumulation										X	X
DEQ SLVs[10,21]											
DEQ Level II SLVs for Water				X	X	X					
DEQ Level II SLVs for Soil										X	
Eisler 1991 Cyanide Screening Level											
Eisler 1991 Cyanide Screening Level [22]						X					
LWR Background[23]											
Surface Sediment UPL	X	X	X								
Surface Sediment UPL OC equivalent	X	X	X								
Surface Water UPL (total basis)				X							
Benthic Toxicity Screening Criteria[24]											
REV (L1) Threshold (%)									X		
Low (L2) Threshold (%)									X		
High (L3) Threshold (%)									X		

Table 2-6
Summary of Screening

Notes:

[1] BHHRA Screening Concentrations are from Tables 2-9 and 2-11 of Draft Final BHHRA (Appendix F of the *Draft Final Portland Harbor RI/FS Remedial Investigation Report* [Integral et al. 2011c]).
[2] RI Human Health Screening Criteria for Surface Water are from Table D3.3-1 of Appendix D of the *Draft Final Portland Harbor RI/FS Remedial Investigation Report* (Integral et al. 2011c).
[3] RI Human Health Screening Criteria for Surface Water are from Table D3.3-2 of Appendix D of the *Draft Final Portland Harbor RI/FS Remedial Investigation Report* (Integral et al. 2011c).
[4] BERA Screening Concentrations are from Tables 7-22, 8-12, 8-14, and 8-28 of *Draft Final BERA* (Appendix G of the *Draft Final Portland Harbor RI/FS Remedial Investigation Report* [Integral et al. 2011c]).
[5] SLERA Screening Concentrations are from Tables 6-2 and 7-2 from Attachment 5 of the *Draft Final BERA* (Appendix G of the *Draft Final Portland Harbor RI/FS Remedial Investigation Report* [Integral et al. 2011c]).
[6] Portland Harbor RALs from the August 23, 2011, Response to EPA August 11, 2011, Alternatives Letter from Lower Willamette Group to EPA (Private communication, EPA 2011).
[7] SQV screening levels are from SQV Report Final June 9, 2010. Table ES-1: Recommended Sediment Quality Guidelines. Development of Benthic SQVs for Freshwater Sediments in Washington, Oregon, and Idaho.
[8] EPA RSLs are from EPA RSL Summary Table November 2011 (EPA 2011a). Available at: http://www.epa.gov/region9/superfund/prg/.
[9] MCLs are from EPA 816-F-09-004, National Primary Drinking Water Regulations (EPA 2009) and NRWQC from EPA NRWQC for Priority Toxic Pollutants 2009.
[10] Upland RA criteria are applied consistent with current DEQ agreements for Gasco Site Uplands RA as memorialized in the letter from Jim Anderson of DEQ to Bob Wyatt of NW Natural regarding: "Summary of Agreements on the Remaining Uplands Risk Assessment Issues, NW Natural "Gasco" Site" dated January 5, 2012.
[11] Oak Ridge National Laboratory's Tier II SCV values were taken from Suter, G.W. II and Tsao, C.L. 1996. *Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision*. Available at: http://www.esd.ornl.gov/programs/ecorisk/documents/tm96r2.pdf.
[12] EPA 2003 values from *Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: PAH Mixtures. Final Chronic Values for PAHs*. EPA-600-R-02-013, Table 3-4 "Toxicity of PAHs in Water Exposures". ES/ER/TM-96/R2. Available at: http://www.esd.ornl.gov/programs/ecorisk/documents/tm96r2.pdf.
[13] BTAG values from EPA 2006, EPA Region III BTAG, Freshwater Screening Criteria.
[14] Values obtained from *EPA Ecological Soil Screening Levels for DDT and Metabolites* (EPA 2007), *EPA Ecological Soil Screening Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Final* (EPA 2007), and *EPA Ecological Soil Screening Levels for Zinc Interim Final* (http://www.epa.gov/ecotox/ecossl/).
[15] Alternative cyanide screening level is from the October 31, 2011, memorandum from Mr. Fuji and Ms. Hitchko of Anchor QEA to Mr. Bayuk of DEQ entitled Proposed Alternative Cyanide Screening Level.
[16] EPA *Region 5 RCRA ESLs for Soil* (2003). Available at: http://www.epa.gov/reg5rcra/ca/pdfs/ecological-screening-levels-200308.pdf
[17] Alternative DEQ screening level for dibenzofuran is from the DEQ e-mail to NW Natrual dated February 23, 2012.
[18] RBDM RBCs for Individual Chemicals are from DEQ Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites (DEQ 2009). http://www.deq.state.or.us/lq/rbdm.htm. Accessed November 18, 2011.
[19] Values from DEQ's *Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment*, Table A1a "Sediment Bioaccumulation Screening Level Values (SLVs)" (DEQ 2007).
[20] JSCS Screening Level Values are from "Table 3-1 Screening Level Values for Soil/Stormwater Sediment, Stormwater, Groundwater, and Surface Water" of the *Portland Harbor Joint Source Control Strategy* (DEQ and EPA 2007 Revision).
[21] DEQ SLVs are from Table 1 and 2 of the DEQ *Guidance For Ecological Risk Assessment* (DEQ revision 2001.)
[22] Eisler 1991. Cyanide screening level from Eisler, Ronald 1991. *Cyanide Hazards to Fish, Wildlife, and Invertebrates: A Synoptic Review*, U.S. Fish Wildlife Service, Biol. Rep. 85(1.23).
[23] Background levels obtained from Tables 7.3-5b, 7.3-6b, and 7.4-4a of the *Draft Final Portland Harbor RI/FS Remedial Investigation Report* (Integral et al. 2011).
[24] Benthic toxicity levels obtained from Table 6-2 of the *Draft Final BERA* (Appendix G of the *Draft Final Portland Harbor RI/FS Remedial Investigation Report* [Integral et al. 2011]).

Acronyms:
BERA = Baseline Ecological Risk Assessment
BHHRA = Baseline Human Health Risk Assessment
BTAG = Biological Technical Assistance Group
CWA = Clean Water Act
DEQ = Oregon Department of Environmental Quality
Eco-SSLs = EPA Ecological Soil Screening Levels
EPA = U.S. Environmental Protection Agency

Table 2-6
Summary of Screening

ESL = Ecological Screening Levels
FS = Feasibility Study
JSCS = Joint Source Control Strategy
LOAEL = Lowest observed adverse affect level
MCL = Maximum contaminant level
NOAEL = No observed adverse affect level
NRWQC = National Recommended Water Quality Criteria
PAH = Polycyclic Aromatic Hydrocarbon
RA = Risk Assessment
RAL = Remedial Action Levels
RBC = Risk-Based Concentrations
RBDM = Risk-Based Decision Making
RCRA = Resource Conservation and Recovery Act
REV = Reference Envelope Value
RI = Remedial Investigation
RSL = Regional Screening Levels
SDWA = Safe Drinking Water Act
SLERA = Screening-Level Ecological Risk Assessment
SSLs = Soil Screening Level
TRV = toxicity reference values
TZW = transition zone water

Table 2-7
Data Screening Analytes Listed by COC

COC	Data Screening Analytes
Zinc	Total Zinc Dissolved Zinc (water)
Cyanide	Total Cyanide Available Cyanide (water) Free Cyanide (water)
Diesel Range Hydrocarbons	Total Diesel Range Hydrocarbons
Residual Range Hydrocarbons	Total Residual Range Hydrocarbons
PAHs (Expanded list)	2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene Carbazole Dibenzofuran Total LPAHs Total HPAHs Total PAHs Total cPAH
BHCs	Alpha-HCH Beta-HCH Delta-HCH Gamma-HCH (Lindane) Technical-grade HCH
DDDs	2,4'-DDD 4,4'-DDD Total DDD
DDEs	2,4'-DDE 4,4'-DDE Total DDE

Table 2-7
Data Screening Analytes Listed by COC

COC	Data Screening Analytes
DDTs	2,4'-DDT 4,4'-DDT Total DDT
--	Total DDx*
Endrin ketone	Endrin ketone
Polychlorinated Biphenyls	Available Individual PCB Aroclors Available Individual PCB Congeners Total PCBs aroclors Total PCBs congeners Total PCB TEQ
BTEX	Benzene Toluene Ethylbenzene m-Xylene p-Xylene m,p-Xylene o-Xylene Total Xylenes
1,1-Dichloroethene	1,1-Dichloroethene
Cis-1,2-Dichloroethene	Cis-1,2-Dichloroethene
Trans-1,2-Dichloroethene	Trans-1,2-Dichloroethene
Trichloroethene	Trichloroethene
Vinyl Chloride	Vinyl Chloride

Notes:
* Total DDx is the sum of isomers 2,4'-DDD, 4,4'-DDD, 2,4'-DDE, 4,4'-DDE, 2,4'-DDT, and 4,4'-DDT.

Table 2-8
Number of Analytes Required for Each Calculated Total

Chemical Name[1]	Expected Analytes	A' qualify (Limited)	Do Not Sum
Total PCBs Aroclors	7 or 9	<7	<2
Total PCB Congeners	209	<150	<100
Total DDx	6	<6	--
Sum DDD	2	<2	--
Sum DDE	2	<2	--
Sum DDT	2	<2	--
Total HPAHs	10	<10	<5
Total LPAHs	7	<7	<3
Total PAHs	17	<17	<10
Total Xylene	2	<2	--

Notes:
Table based on Table 2.1-5 of the *Draft Portland Harbor RI/FS Remedial Investigation Report* (Integral et. al 2009)

DDx = sum of 2,4'- and 4,4'-DDD, DDE, and DDT
HPAH = high molecular weight PAH
LPAH = low molecular weight PAH
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyl

[1] = Sums and totals of chemicals are calculated.

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Conventional Parameters (mg/kg)						
Cyanide, total	84	59	25	78.1	0.11	7.99
Metals (mg/kg)						
Zinc	128	128	0	429	38.6	116.2
PCB Aroclors (µg/kg)						
Aroclor 1016	105	0	105			
Aroclor 1221	105	0	105			
Aroclor 1232	105	0	105			
Aroclor 1242	105	2	103	93	12	52.5
Aroclor 1248	105	15	90	100	6	37.43
Aroclor 1254	105	18	87	110	9.4	34.23
Aroclor 1260	105	33	72	170	3	31.17
Aroclor 1262	56	0	56			
Aroclor 1268	56	0	56			
LWG RA Total PCB Aroclors (Calculated U = 1/2)	92	31	61	310	10	95.09
PCB Congeners (µg/kg)						
Dichlorobiphenyl homologs (Total reported, not calculated)	7	7	0	0.5	0.25	0.36
Heptachlorobiphenyl homologs (Total reported, not calculated)	7	7	0	5.53	1.93	2.83
Hexachlorobiphenyl homologs (Total reported, not calculated)	7	7	0	7.16	3.22	4.63
LWG RA Total Decachlorobiphenyl homologs (Calculated U = 1/2)	15	15	0	0.72	0.03	0.29
LWG RA Total Dichlorobiphenyl homologs (Calculated U = 1/2)	15	14	1	2.72	0.21	0.68
LWG RA Total Heptachlorobiphenyl homologs (Calculated U = 1/2)	15	15	0	38	0.89	7
LWG RA Total Hexachlorobiphenyl homologs (Calculated U = 1/2)	15	15	0	55	1.1	9.92
LWG RA Total Monochlorobiphenyl homologs (Calculated U = 1/2)	15	13	2	0.24	0.02	0.07
LWG RA Total Nonachlorobiphenyl homologs (Calculated U = 1/2)	15	14	1	1.03	0.08	0.34
LWG RA Total Octachlorobiphenyl homologs (Calculated U = 1/2)	15	14	1	7.1	0.46	1.84
LWG RA Total PCB Congener (Calculated U = 1/2)	15	15	0	190	7.6	41.71

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
LWG RA Total PCB Congener TEQ 1998 (Avian) (Calculated U = 1/2)	15	15	0	0.02	0	0.01
LWG RA Total PCB Congener TEQ 1998 (Fish) (Calculated U = 1/2)	15	15	0	0	0	0
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	15	15	0	0.01	0	0
LWG RA Total Pentachlorobiphenyl homologs (Calculated U = 1/2)	15	15	0	39	1.76	9.56
LWG RA Total Tetrachlorobiphenyl homologs (Calculated U = 1/2)	15	15	0	32	1.2	7.53
LWG RA Total Trichlorobiphenyl homologs (Calculated U = 1/2)	15	15	0	14	0.42	3.18
Monochlorobiphenyl homologs (Total reported, not calculated)	7	7	0	0.06	0.02	0.03
Nonachlorobiphenyl homologs (Total reported, not calculated)	7	7	0	0.34	0.13	0.21
Octachlorobiphenyl homologs (Total reported, not calculated)	7	7	0	1.67	0.52	0.84
PCB-001	13	12	1	0.12	0.01	0.03
PCB-002	13	12	1	0.03	0.01	0.01
PCB-003	13	12	1	0.1	0.01	0.03
PCB-004	7	7	0	0.05	0.02	0.04
PCB-004/010	6	3	3	0.33	0.16	0.22
PCB-005	7	6	1	0.14	0	0.02
PCB-005/008	6	6	0	1.19	0.04	0.46
PCB-006	13	10	3	0.28	0.01	0.07
PCB-007	7	7	0	0.01	0	0
PCB-007/009	6	3	3	0.12	0.05	0.08
PCB-008	7	7	0	0.11	0.03	0.06
PCB-009	7	7	0	0.01	0	0
PCB-010	7	5	2	0	0	0
PCB-011	13	10	3	0.26	0.04	0.15
PCB-012/013	13	9	4	0.12	0	0.03
PCB-014	13	0	13			

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-015	13	12	1	0.6	0.05	0.15
PCB-016	7	5	2	0.07	0.02	0.05
PCB-016/032	6	6	0	1.4	0.07	0.61
PCB-017	13	12	1	1.02	0.04	0.22
PCB-018	6	6	0	1.51	0.09	0.59
PCB-018/030	7	6	1	0.2	0.07	0.13
PCB-019	13	12	1	0.19	0.03	0.07
PCB-020/021/033	6	5	1	1.1	0.09	0.49
PCB-020/028	7	7	0	0.56	0.17	0.29
PCB-021/033	7	7	0	0.19	0.06	0.11
PCB-022	13	13	0	0.98	0.04	0.22
PCB-023	13	3	10	0	0	0
PCB-024	7	5	2	0	0	0
PCB-024/027	6	5	1	0.15	0.02	0.08
PCB-025	13	12	1	0.4	0.01	0.1
PCB-026	6	6	0	0.58	0.03	0.24
PCB-026/029	7	7	0	0.1	0.03	0.05
PCB-027	7	5	2	0.02	0.01	0.01
PCB-028	6	6	0	3.31	0.19	1.48
PCB-029	6	4	2	0.02	0.01	0.01
PCB-030	6	0	6			
PCB-031	13	13	0	3.42	0.14	0.79
PCB-032	7	5	2	0.06	0.03	0.04
PCB-034	13	11	2	0.04	0	0.01
PCB-035	13	10	3	0.06	0	0.02
PCB-036	13	7	6	0	0	0
PCB-037	13	13	0	0.93	0.07	0.25

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-038	13	8	5	0.04	0	0.01
PCB-039	13	10	3	0.02	0	0
PCB-040	6	6	0	0.52	0.08	0.26
PCB-040/071	7	7	0	0.26	0.08	0.16
PCB-041	7	6	1	0.04	0.01	0.03
PCB-041/064/071/072	6	6	0	3.1	0.32	1.52
PCB-042	7	5	2	0.12	0.06	0.09
PCB-042/059	6	6	0	1.16	0.12	0.58
PCB-043	7	6	1	0.01	0.01	0.01
PCB-043/049	6	6	0	3.57	0.3	1.72
PCB-044	6	6	0	3.82	0.4	1.88
PCB-044/047/065	7	6	1	0.53	0.26	0.41
PCB-045	13	13	0	0.57	0.02	0.14
PCB-046	13	13	0	0.24	0.01	0.06
PCB-047	6	6	0	1.3	0.13	0.63
PCB-048	7	7	0	0.1	0.03	0.06
PCB-048/075	6	6	0	0.76	0.06	0.36
PCB-049/069	7	6	1	0.3	0.15	0.23
PCB-050	6	5	1	0.01	0.01	0.01
PCB-050/053	7	7	0	0.1	0.05	0.07
PCB-051	13	13	0	0.17	0.02	0.06
PCB-052	7	6	1	0.51	0.25	0.39
PCB-052/069	6	6	0	4.79	0.41	2.34
PCB-053	6	6	0	0.59	0.06	0.29
PCB-054	13	11	2	0.01	0	0.01
PCB-055	13	10	3	0.04	0	0.01
PCB-056	7	5	2	0.18	0.09	0.14

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-056/060	6	6	0	2.01	0.19	0.99
PCB-057	13	9	4	0.03	0	0.01
PCB-058	13	9	4	0.03	0	0.01
PCB-059/062/075	7	6	1	0.03	0.02	0.02
PCB-060	7	7	0	0.3	0.04	0.12
PCB-061/070	6	6	0	4.56	0.34	1.69
PCB-061/070/074/076	7	5	2	0.76	0.4	0.57
PCB-062	6	0	6			
PCB-063	13	10	3	0.14	0.01	0.05
PCB-064	7	7	0	0.19	0.08	0.14
PCB-065	6	1	5	0	0	0
PCB-066	7	5	2	0.4	0.21	0.3
PCB-066/076	6	6	0	3.66	0.31	1.68
PCB-067	13	10	3	0.15	0.01	0.04
PCB-068	13	11	2	0.05	0	0.01
PCB-072	7	6	1	0.01	0	0.01
PCB-073	13	5	8	0	0	0
PCB-074	6	6	0	1.61	0.14	0.68
PCB-077	13	13	0	0.32	0.03	0.1
PCB-078	13	1	12	0.02	0.02	0.02
PCB-079	13	12	1	0.08	0	0.02
PCB-080	13	3	10	0.33	0	0.2
PCB-081	13	12	1	0.02	0	0.01
PCB-082	13	12	1	0.65	0.05	0.2
PCB-083	13	8	5	0.06	0	0.04
PCB-084	7	5	2	0.18	0.09	0.13
PCB-084/092	6	6	0	3.26	0.19	1.41

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-085/116	13	13	0	0.92	0.05	0.25
PCB-086	6	4	2	0.02	0.01	0.02
PCB-086/087/097/108/119/125	7	7	0	0.56	0.27	0.42
PCB-087/117/125	6	6	0	2	0.14	0.95
PCB-088	7	0	7			
PCB-088/091	6	6	0	0.88	0.07	0.44
PCB-089	13	10	3	0.09	0	0.03
PCB-090/101	6	6	0	7.59	0.44	3.32
PCB-090/101/113	7	7	0	1.06	0.56	0.8
PCB-091	7	5	2	0.1	0.05	0.07
PCB-092	7	6	1	0.2	0.11	0.15
PCB-093	6	0	6			
PCB-093/100	7	5	2	0.02	0.01	0.02
PCB-094	13	11	2	0.03	0	0.01
PCB-095	7	5	2	0.6	0.32	0.45
PCB-095/098/102	6	6	0	5.23	0.38	2.42
PCB-096	13	12	1	0.05	0.01	0.02
PCB-097	6	6	0	1.76	0.12	0.81
PCB-098	7	5	2	0	0	0
PCB-099	13	13	0	2.91	0.21	0.78
PCB-100	6	5	1	0.06	0.01	0.03
PCB-102	7	5	2	0.03	0.02	0.02
PCB-103	13	11	2	0.17	0.01	0.05
PCB-104	13	7	6	0	0	0
PCB-105	13	13	0	1.37	0.12	0.44
PCB-106	7	0	7			
PCB-106/118	6	6	0	4.41	0.36	2.22

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-107/109	6	6	0	0.42	0.03	0.21
PCB-107/124	7	7	0	0.03	0.01	0.02
PCB-108/112	6	6	0	0.3	0.02	0.14
PCB-109	7	7	0	0.07	0.03	0.04
PCB-110	13	13	0	6.44	0.51	1.85
PCB-111	7	7	0	0	0	0
PCB-111/115	6	5	1	0.07	0.01	0.04
PCB-112	7	1	6	0	0	0
PCB-113	6	5	1	0.08	0.01	0.03
PCB-114	13	12	1	0.09	0.01	0.03
PCB-115	7	7	0	0.02	0	0.01
PCB-117	7	7	0	0.02	0.01	0.02
PCB-118	7	7	0	0.76	0.38	0.54
PCB-119	6	5	1	0.26	0.04	0.13
PCB-120	13	11	2	0.02	0	0.01
PCB-121	13	6	7	0.01	0	0
PCB-122	13	12	1	0.05	0	0.02
PCB-123	13	13	0	0.06	0.01	0.02
PCB-124	6	6	0	0.16	0.02	0.08
PCB-126	13	13	0	0.03	0	0.01
PCB-127	13	0	13			
PCB-128/162	6	6	0	1.04	0.08	0.46
PCB-128/166	7	7	0	0.2	0.12	0.15
PCB-129	6	6	0	0.29	0.02	0.13
PCB-129/138/163	7	7	0	1.59	0.71	1.02
PCB-130	13	13	0	0.77	0.04	0.16
PCB-131	13	9	4	0.01	0	0.01

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-132	7	7	0	0.43	0.2	0.29
PCB-132/161	6	6	0	3.15	0.16	1.18
PCB-133	7	7	0	0.04	0.02	0.03
PCB-133/142	6	5	1	0.43	0.04	0.17
PCB-134	7	7	0	0.08	0.04	0.05
PCB-134/143	6	6	0	0.55	0.03	0.21
PCB-135	6	6	0	2.28	0.09	0.76
PCB-135/151	7	7	0	0.62	0.28	0.4
PCB-136	13	13	0	1.75	0.09	0.39
PCB-137	13	13	0	0.22	0.02	0.07
PCB-138/163/164	6	6	0	10.8	0.56	4.1
PCB-139/140	7	7	0	0.03	0.01	0.02
PCB-139/149	6	6	0	10.9	0.53	4.02
PCB-140	6	5	1	0.1	0.01	0.04
PCB-141	13	13	0	2.54	0.13	0.51
PCB-142	7	6	1	0	0	0
PCB-143	7	5	2	0	0	0
PCB-144	13	13	0	0.55	0.03	0.12
PCB-145	13	2	11	0	0	0
PCB-146	7	7	0	0.29	0.12	0.19
PCB-146/165	6	6	0	2.36	0.1	0.83
PCB-147	6	6	0	0.16	0.01	0.08
PCB-147/149	7	7	0	1.22	0.55	0.78
PCB-148	13	12	1	0.06	0	0.01
PCB-150	13	11	2	0.04	0	0.01
PCB-151	6	6	0	3.22	0.18	1.2
PCB-152	13	9	4	0.01	0	0

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-153	6	6	0	11.4	0.62	4.36
PCB-153/168	7	7	0	1.42	0.58	0.85
PCB-154	13	12	1	0.32	0.02	0.07
PCB-155	13	7	6	0	0	0
PCB-156	6	6	0	0.81	0.05	0.32
PCB-156/157	7	7	0	0.15	0.07	0.1
PCB-157	6	6	0	0.1	0.01	0.05
PCB-158	7	7	0	0.15	0.06	0.09
PCB-158/160	6	6	0	0.99	0.06	0.37
PCB-159	13	4	9	0.17	0.02	0.08
PCB-160	7	0	7			
PCB-161	7	0	7			
PCB-162	7	6	1	0.01	0	0
PCB-164	7	7	0	0.1	0.04	0.06
PCB-165	7	7	0	0	0	0
PCB-166	6	4	2	0.02	0.01	0.01
PCB-167	13	13	0	0.31	0.02	0.08
PCB-168	6	4	2	0.02	0	0.01
PCB-169	13	1	12	0	0	0
PCB-170	13	13	0	4.2	0.2	0.82
PCB-171	6	6	0	1.14	0.05	0.4
PCB-171/173	7	7	0	0.2	0.07	0.1
PCB-172	13	13	0	0.78	0.03	0.15
PCB-173	6	5	1	0.1	0.01	0.04
PCB-174	13	13	0	4.07	0.22	0.92
PCB-175	13	12	1	0.21	0.01	0.05
PCB-176	13	13	0	0.64	0.03	0.13

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-177	13	13	0	2.9	0.12	0.57
PCB-178	13	13	0	1.12	0.05	0.22
PCB-179	13	13	0	2.21	0.11	0.47
PCB-180	6	6	0	9.61	0.46	3.49
PCB-180/193	7	7	0	1.44	0.46	0.71
PCB-181	13	12	1	0.05	0	0.01
PCB-182	7	7	0	0	0	0
PCB-182/187	6	6	0	6.12	0.31	2.28
PCB-183	13	13	0	2.61	0.14	0.56
PCB-184	13	8	5	0	0	0
PCB-185	13	13	0	0.46	0.02	0.1
PCB-186	13	1	12	0	0	0
PCB-187	7	7	0	0.86	0.33	0.46
PCB-188	13	9	4	0.01	0	0
PCB-189	13	13	0	0.16	0.01	0.03
PCB-190	13	13	0	0.79	0.04	0.17
PCB-191	13	12	1	0.17	0.01	0.04
PCB-192	13	0	13			
PCB-193	6	6	0	0.5	0.02	0.17
PCB-194	13	13	0	1.68	0.1	0.44
PCB-195	13	13	0	0.78	0.04	0.2
PCB-196	7	7	0	0.19	0.06	0.09
PCB-196/203	6	6	0	1.9	0.12	0.88
PCB-197	13	11	2	0.07	0	0.02
PCB-198	6	5	1	0.24	0.02	0.08
PCB-198/199	7	7	0	0.36	0.11	0.19
PCB-199	6	6	0	1.68	0.13	0.79

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-200	13	13	0	0.23	0.01	0.07
PCB-201	13	12	1	0.25	0.02	0.07
PCB-202	13	13	0	0.35	0.02	0.1
PCB-203	7	7	0	0.25	0.08	0.12
PCB-204	13	1	12	0	0	0
PCB-205	13	12	1	0.08	0.01	0.02
PCB-206	13	13	0	0.76	0.06	0.25
PCB-207	13	12	1	0.08	0.01	0.03
PCB-208	13	13	0	0.18	0.02	0.06
PCB-209	13	13	0	0.72	0.05	0.33
Pentachlorobiphenyl homologs (Total reported, not calculated)	7	7	0	5.59	2.99	3.98
Tetrachlorobiphenyl homologs (Total reported, not calculated)	7	7	0	3.69	1.41	2.52
Trichlorobiphenyl homologs (Total reported, not calculated)	7	7	0	1.66	0.72	1.17
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	98	51	47	320	0.1	23
2,4'-DDE (o,p'-DDE)	98	17	81	55.3	0.06	11.08
2,4'-DDT (o,p'-DDT)	98	31	67	53	0.52	4.9
4,4'-DDD (p,p'-DDD)	103	74	29	1040	0.18	53.4
4,4'-DDE (p,p'-DDE)	103	60	43	64.8	0.08	9.32
4,4'-DDT (p,p'-DDT)	103	60	43	290	0.22	38.04
alpha-Hexachlorocyclohexane (BHC)	101	8	93	1.5	0.15	0.67
beta-Chlordane (trans-Chlordane)	102	13	89	2.7	0.22	0.81
beta-Hexachlorocyclohexane (BHC)	101	19	82	20.3	0.1	4.96
delta-Hexachlorocyclohexane (BHC)	101	5	96	3.03	0.02	0.79
Endrin ketone	100	12	88	28	0.17	7.01
gamma-Hexachlorocyclohexane (BHC) (Lindane)	103	18	85	11	0.51	3.7
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	100	58	42	360	0.17	27.91

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	105	81	24	1370	0.35	85.67
LWG RA Sum DDD (Calculated U = 1/2)	105	76	29	1400	0.26	69.54
LWG RA Sum DDE (Calculated U = 1/2)	105	62	43	94.3	0.1	13.13
LWG RA Sum DDT (Calculated U = 1/2)	105	65	40	290	0.24	38.35
LWG RA Total DDx (Calculated U = 1/2)	105	84	21	1700	0.48	104.8
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	55	44	11	140000	0.5	5507.45
2-Methylnaphthalene	128	112	16	140000	0.65	4065.9
Acenaphthene	143	135	8	220000	0.84	10357.23
Acenaphthylene	142	126	16	11100	0.31	1082.03
Anthracene	143	133	10	160000	1.9	7968.18
Benzo(a)anthracene	143	138	5	120000	3.9	9892.2
Benzo(a)pyrene	143	136	7	140000	4.8	12364.72
Benzo(b)fluoranthene	102	101	1	130000	5.2	11081.11
Benzo(b,j,k)fluoranthene (reported calculated total)	1	1	0	551	551	551
Benzo(b,j,k)fluoranthenes	41	39	2	69000	15	9607.69
Benzo(b,k)fluoranthene (reported calculated total)	18	17	1	108000	175	15758.53
Benzo(e)pyrene	15	15	0	24000	4.2	4762.55
Benzo(g,h,i)perylene	143	137	6	100000	0.6	9574.77
Benzo(j,k)fluoranthene	1	1	0	275	275	275
Benzo(k)fluoranthene	101	98	3	62000	1.7	5640.79
C1-Chrysene	15	15	0	13000	4.5	3100.17
C1-Dibenzothiophene	15	13	2	770	3.5	192.04
C1-Fluoranthenes/Pyrenes	15	15	0	26000	6.7	5198.11
C1-Fluorenes	15	15	0	2100	2	463.51
C1-Naphthalenes	1	1	0	58	58	58
C1-Phenanthrenes/Anthracenes	15	15	0	15000	5.2	3337.21

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
C2-Chrysenes	15	14	1	5400	13	1590.86
C2-Dibenzothiophene	15	14	1	2900	8.9	696.85
C2-Fluoranthenes/Pyrenes	15	14	1	7200	3.1	1891.86
C2-Fluorenes	15	15	0	2300	2.4	581.34
C2-Naphthalenes	15	15	0	6000	1.3	955.91
C2-Phenanthrenes/Anthracenes	15	15	0	11000	3.4	2622.83
C3-Chrysenes	15	14	1	2300	6.9	748.21
C3-Dibenzothiophene	15	14	1	2500	5.5	603.46
C3-Fluoranthenes/Pyrenes	15	13	2	3700	11	1186.62
C3-Fluorenes	15	14	1	3000	11	796.86
C3-Naphthalenes	15	15	0	6100	1.2	1176.39
C3-Phenanthrenes/Anthracenes	15	14	1	5400	24	1524.07
C4-Chrysenes	15	7	8	220	13	89.57
C4-Dibenzothiophene	1	1	0	42	42	42
C4-Naphthalenes	15	15	0	2600	1.1	628.81
C4-Phenanthrenes/Anthracenes	15	14	1	1400	7.9	508.56
Chrysene	143	139	4	140000	5	11760.1
Dibenzo(a,h)anthracene	143	126	17	14000	0.67	1398.09
Fluoranthene	143	142	1	340000	0.8	25910.01
Fluorene	143	133	10	110000	0.87	5954.15
Indeno(1,2,3-c,d)pyrene	143	136	7	100000	2.9	8320.44
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	145	142	3	170000	6.9	14498.02
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	145	142	3	190000	6.7	16032.12
LWG RA Total HPAH (Calculated U = 1/2)	145	144	1	1500000	20	121763.94
LWG RA Total LPAH (Calculated U = 1/2)	145	144	1	1500000	12	66408.02
LWG RA Total PAH (Calculated U = 1/2)	145	145	0	2200000	32	186689.86
Naphthalene	140	130	10	530000	0.5	8825.43

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Perylene	56	54	2	16000	2.5	1977.19
Phenanthrene	143	141	2	440000	1	32519.77
Pyrene	143	142	1	420000	0.8	31609.85
Semivolatile Organics (µg/kg)						
Carbazole	127	96	31	30000	1.7	1618.94
Dibenzofuran	124	97	27	13000	0.5	856.46
Total Petroleum Hydrocarbons (mg/kg)						
C10-C12 Aliphatic	1	0	1			
C10-C12 Aromatic	1	0	1			
C12-C16 Aliphatic	1	1	0	19	19	19
C12-C16 Aromatic	1	1	0	16	16	16
C16-C21 Aliphatic	1	1	0	49	49	49
C16-C21 Aromatic	1	1	0	100	100	100
C21-C34 Aliphatic	1	1	0	180	180	180
C21-C34 Aromatic	1	1	0	92	92	92
C8-C10 Aliphatic	1	0	1			
C8-C10 Aromatic	1	0	1			
Diesel Range Hydrocarbons	103	92	11	20000	6	1065.08
Diesel Range Hydrocarbons (silica gel treated)	4	1	3	320	320	320
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)	105	101	4	33000	12	2184.73
Motor Oil Range	41	38	3	3200	15	463.5
Residual Range Hydrocarbons	62	60	2	17000	9.2	1716.47
Residual Range Hydrocarbons (silica gel treated)	4	4	0	420	7.1	111.78
Volatile Organics (µg/kg)						
1,1-Dichloroethene	98	0	98			
1,2-Dichloroethene, cis-	73	4	69	430	0.21	110.13
1,2-Dichloroethene, trans-	98	1	97	3.3	3.3	3.3

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Benzene	111	27	84	275	0.12	27.35
Ethylbenzene	111	29	82	4800	0.11	220.74
LWG RA Total Xylene (Calculated U = 1/2)	113	37	76	2700	0.29	99.15
m,p-Xylene	111	25	86	1300	0.08	63.68
Naphthalene	11	7	4	13000	0.89	1966.87
o-Xylene	111	35	76	1400	0.2	58.31
Toluene	111	18	93	830	0.08	55.53
Trichloroethene (TCE)	106	3	103	13	0.36	5.22
Vinyl chloride	106	5	101	120	0.34	25.02

Table 3-1
Summary Statistics - Surface Sediment (Category A)

Notes:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BaPEq = benzo[a]pyrene equivalents
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
BTEX = Benzene, Toluene, Ethylbenzene, Xylene
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyl
pct = percent
RA = Portland Harbor Site risk assessment
su = standard unit
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons

Table 3-2
Summary Statistics - Sub-surface Sediment (Category B-G)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Conventional Parameters (mg/kg)						
Cyanide, total	244	167	77	1410	0.03	17.5
Metals (mg/kg)						
Zinc	285	285	0	891	19.3	97.67
PCB Aroclors (µg/kg)						
Aroclor 1016	215	0	215			
Aroclor 1221	215	0	215			
Aroclor 1232	215	0	215			
Aroclor 1242	215	3	212	72	23	40
Aroclor 1248	215	19	196	180	6.76	60.61
Aroclor 1254	215	24	191	180	15.4	70.92
Aroclor 1260	215	55	160	290	2.03	64.6
Aroclor 1262	120	0	120			
Aroclor 1268	120	1	119	17	17	17
LWG RA Total PCB Aroclors (Calculated U = 1/2)	227	57	170	640	8.56	189.69
PCB Congeners (µg/kg)						
LWG RA Total Decachlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	7.76	0.28	2.85
LWG RA Total Dichlorobiphenyl homologs (Calculated U = 1/2)	4	2	2	2.43	2.33	2.38
LWG RA Total Heptachlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	26	5.3	15.38
LWG RA Total Hexachlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	42	7.5	22.6
LWG RA Total Monochlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	1.83	0.13	0.67
LWG RA Total Nonachlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	2.8	0.53	1.43
LWG RA Total Octachlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	7.1	1.78	4.39
LWG RA Total PCB Congener (Calculated U = 1/2)	4	4	0	230	33	103.25
LWG RA Total PCB Congener TEQ 1998 (Avian) (Calculated U = 1/2)	4	4	0	0.04	0.02	0.03
LWG RA Total PCB Congener TEQ 1998 (Fish) (Calculated U = 1/2)	4	4	0	0	0	0

Table 3-2
Summary Statistics - Sub-surface Sediment (Category B-G)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	4	4	0	0.01	0.01	0.01
LWG RA Total Pentachlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	45	6.96	20.54
LWG RA Total Tetrachlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	69	4.1	23.8
LWG RA Total Trichlorobiphenyl homologs (Calculated U = 1/2)	4	3	1	23	1.16	10.25
PCB-001	4	4	0	0.39	0.03	0.16
PCB-002	4	4	0	0.65	0.04	0.22
PCB-003	4	4	0	0.79	0.06	0.28
PCB-004/010	4	1	3	0.31	0.31	0.31
PCB-005/008	4	2	2	1.21	0.24	0.73
PCB-006	4	0	4			
PCB-007/009	4	0	4			
PCB-011	4	0	4			
PCB-012/013	4	0	4			
PCB-014	4	0	4			
PCB-015	4	1	3	0.36	0.36	0.36
PCB-016/032	4	2	2	2.44	0.48	1.46
PCB-017	4	2	2	1.51	0.31	0.91
PCB-018	4	2	2	1.95	0.53	1.24
PCB-019	4	1	3	0.28	0.28	0.28
PCB-020/021/033	4	3	1	2.69	0.12	1.12
PCB-022	4	2	2	1.5	0.35	0.92
PCB-023	4	0	4			
PCB-024/027	4	1	3	0.23	0.23	0.23
PCB-025	4	1	3	0.42	0.42	0.42
PCB-026	4	2	2	0.74	0.2	0.47
PCB-028	4	3	1	5	0.15	2.06

Table 3-2
Summary Statistics - Sub-surface Sediment (Category B-G)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-029	4	0	4			
PCB-030	4	0	4			
PCB-031	4	2	2	4.73	1.05	2.89
PCB-034	4	1	3	0.05	0.05	0.05
PCB-035	4	1	3	0.08	0.08	0.08
PCB-036	4	0	4			
PCB-037	4	2	2	1.08	0.34	0.71
PCB-038	4	1	3	0.05	0.05	0.05
PCB-039	4	0	4			
PCB-040	4	2	2	1.48	0.31	0.9
PCB-041/064/071/072	4	3	1	7.64	0.25	3.13
PCB-042/059	4	3	1	2.6	0.08	1.05
PCB-043/049	4	3	1	6.28	0.26	2.62
PCB-044	4	3	1	8.69	0.41	3.62
PCB-045	4	2	2	1.29	0.02	0.66
PCB-046	4	2	2	0.56	0.13	0.35
PCB-047	4	2	2	2.21	0.51	1.36
PCB-048/075	4	3	1	1.89	0.06	0.77
PCB-050	4	0	4			
PCB-051	4	1	3	0.32	0.32	0.32
PCB-052/069	4	3	1	9.02	0.71	3.94
PCB-053	4	2	2	1.29	0.28	0.78
PCB-054	4	1	3	0.02	0.02	0.02
PCB-055	4	1	3	0.12	0.12	0.12
PCB-056/060	4	3	1	5.18	0.2	2.22
PCB-057	4	1	3	0.05	0.05	0.05
PCB-058	4	0	4			

Table 3-2
Summary Statistics - Sub-surface Sediment (Category B-G)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-061/070	4	3	1	8.8	0.55	3.96
PCB-062	4	0	4			
PCB-063	4	1	3	0.32	0.32	0.32
PCB-065	4	0	4			
PCB-066/076	4	3	1	6.84	0.27	2.98
PCB-067	4	1	3	0.26	0.26	0.26
PCB-068	4	1	3	0.07	0.07	0.07
PCB-073	4	0	4			
PCB-074	4	3	1	3.44	0.16	1.53
PCB-077	4	4	0	0.6	0.06	0.24
PCB-078	4	0	4			
PCB-079	4	2	2	0.12	0.07	0.09
PCB-080	4	0	4			
PCB-081	4	2	2	0.09	0.06	0.07
PCB-082	4	3	1	0.98	0.14	0.5
PCB-083	4	0	4			
PCB-084/092	4	3	1	3.1	0.62	1.63
PCB-085/116	4	3	1	1.35	0.23	0.68
PCB-086	4	0	4			
PCB-087/117/125	4	3	1	2.67	0.62	1.42
PCB-088/091	4	3	1	1.12	0.18	0.56
PCB-089	4	1	3	0.16	0.16	0.16
PCB-090/101	4	4	0	7.32	0.71	3.29
PCB-093	4	1	3	0.68	0.68	0.68
PCB-094	4	1	3	0.05	0.05	0.05
PCB-095/098/102	4	4	0	5.74	0.63	2.52
PCB-096	4	1	3	0.1	0.1	0.1

Table 3-2
Summary Statistics - Sub-surface Sediment (Category B-G)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-097	4	3	1	2.07	0.4	1.07
PCB-099	4	3	1	3.1	0.59	1.62
PCB-100	4	1	3	0.05	0.05	0.05
PCB-103	4	1	3	0.1	0.1	0.1
PCB-104	4	0	4			
PCB-105	4	4	0	2.14	0.21	0.9
PCB-106/118	4	4	0	5.12	0.49	2.26
PCB-107/109	4	3	1	0.46	0.14	0.27
PCB-108/112	4	2	2	0.39	0.14	0.26
PCB-110	4	4	0	7.31	0.61	3.11
PCB-111/115	4	3	1	0.18	0.05	0.1
PCB-113	4	0	4			
PCB-114	4	2	2	0.17	0.09	0.13
PCB-119	4	3	1	0.17	0.04	0.09
PCB-120	4	0	4			
PCB-121	4	0	4			
PCB-122	4	2	2	0.09	0.04	0.07
PCB-123	4	2	2	0.12	0.05	0.08
PCB-124	4	2	2	0.25	0.1	0.18
PCB-126	4	2	2	0.07	0.06	0.07
PCB-127	4	1	3	0.05	0.05	0.05
PCB-128/162	4	3	1	1.01	0.36	0.61
PCB-129	4	3	1	0.32	0.11	0.18
PCB-130	4	2	2	0.5	0.2	0.35
PCB-131	4	0	4			
PCB-132/161	4	4	0	2.46	0.28	1.19
PCB-133/142	4	3	1	0.2	0.12	0.17

Table 3-2
Summary Statistics - Sub-surface Sediment (Category B-G)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-134/143	4	3	1	0.42	0.17	0.27
PCB-135	4	3	1	1.31	0.46	0.81
PCB-136	4	3	1	1.31	0.54	0.85
PCB-137	4	2	2	0.29	0.14	0.22
PCB-138/163/164	4	4	0	8.66	0.99	4.44
PCB-139/149	4	4	0	7.64	1.27	4.01
PCB-140	4	0	4			
PCB-141	4	4	0	1.96	0.28	1.04
PCB-144	4	2	2	0.56	0.21	0.39
PCB-145	4	0	4			
PCB-146/165	4	3	1	1.3	0.59	0.88
PCB-147	4	2	2	0.14	0.09	0.11
PCB-148	4	0	4			
PCB-150	4	0	4			
PCB-151	4	4	0	2.35	0.36	1.27
PCB-152	4	0	4			
PCB-153	4	4	0	8.97	1.17	4.7
PCB-154	4	2	2	0.11	0.05	0.08
PCB-155	4	0	4			
PCB-156	4	4	0	0.65	0.08	0.34
PCB-157	4	3	1	0.14	0.07	0.1
PCB-158/160	4	3	1	0.92	0.42	0.59
PCB-159	4	1	3	0.09	0.09	0.09
PCB-166	4	1	3	0.05	0.05	0.05
PCB-167	4	4	0	0.29	0.04	0.16
PCB-168	4	0	4			
PCB-169	4	0	4			

Table 3-2
Summary Statistics - Sub-surface Sediment (Category B-G)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-170	4	4	0	2.56	0.4	1.45
PCB-171	4	3	1	0.75	0.43	0.55
PCB-172	4	3	1	0.5	0.25	0.34
PCB-173	4	1	3	0.05	0.05	0.05
PCB-174	4	4	0	3.06	0.32	1.72
PCB-175	4	0	4			
PCB-176	4	3	1	0.44	0.24	0.32
PCB-177	4	4	0	1.63	0.26	0.97
PCB-178	4	3	1	0.59	0.32	0.43
PCB-179	4	4	0	1.48	0.27	0.84
PCB-180	4	4	0	6.73	1.12	3.9
PCB-181	4	1	3	0.22	0.22	0.22
PCB-182/187	4	4	0	3.9	0.68	2.24
PCB-183	4	4	0	1.85	0.32	1.06
PCB-184	4	0	4			
PCB-185	4	3	1	0.39	0.2	0.28
PCB-186	4	0	4			
PCB-188	4	0	4			
PCB-189	4	2	2	0.11	0.1	0.1
PCB-190	4	3	1	0.62	0.32	0.42
PCB-191	4	3	1	0.14	0.08	0.11
PCB-192	4	0	4			
PCB-193	4	3	1	0.34	0.18	0.24
PCB-194	4	4	0	1.42	0.28	0.86
PCB-195	4	3	1	0.66	0.32	0.48
PCB-196/203	4	4	0	2.03	0.34	1.18
PCB-197	4	1	3	0.08	0.08	0.08

Table 3-2
Summary Statistics - Sub-surface Sediment (Category B-G)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-198	4	1	3	0.11	0.11	0.11
PCB-199	4	3	1	1.83	1.08	1.36
PCB-200	4	3	1	0.25	0.14	0.19
PCB-201	4	1	3	0.23	0.23	0.23
PCB-202	4	2	2	0.35	0.21	0.28
PCB-204	4	0	4			
PCB-205	4	2	2	0.09	0.05	0.07
PCB-206	4	4	0	2.29	0.27	1.08
PCB-207	4	3	1	0.14	0.08	0.11
PCB-208	4	3	1	0.33	0.2	0.25
PCB-209	4	4	0	7.76	0.28	2.85
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	206	69	137	460	0.16	59.6
2,4'-DDE (o,p'-DDE)	206	34	172	69.7	0.04	16.45
2,4'-DDT (o,p'-DDT)	206	44	162	815	0.23	49.68
4,4'-DDD (p,p'-DDD)	219	114	105	1300	0.09	134.4
4,4'-DDE (p,p'-DDE)	219	71	148	500	0.05	27.4
4,4'-DDT (p,p'-DDT)	219	75	144	1060	0.09	89.04
alpha-Hexachlorocyclohexane (BHC)	219	9	210	38	0.21	7.62
beta-Hexachlorocyclohexane (BHC)	219	37	182	318	0.38	18.68
delta-Hexachlorocyclohexane (BHC)	217	13	204	45.4	0.32	9.1
Endrin ketone	219	17	202	263	0.17	39.12
gamma-Hexachlorocyclohexane (BHC) (Lindane)	222	11	211	12	0.2	4.95
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	206	89	117	832	0.08	82.69
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	234	133	101	1900	0.14	199.66
LWG RA Sum DDD (Calculated U = 1/2)	234	127	107	1700	0.14	166.15
LWG RA Sum DDE (Calculated U = 1/2)	234	85	149	530	0.06	34.8

Table 3-2
Summary Statistics - Sub-surface Sediment (Category B-G)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
LWG RA Sum DDT (Calculated U = 1/2)	234	86	148	1870	0.11	106.22
LWG RA Total DDx (Calculated U = 1/2)	234	138	96	2400	0.22	255.77
Polycyclic Aromatic Hydrocarbons (µg/kg)						
1-Methylnaphthalene	126	83	43	1300000	0.37	44491.83
2-Methylnaphthalene	409	286	123	3800000	0.4	100647.52
Acenaphthene	420	335	85	3900000	0.23	95646.69
Acenaphthylene	420	282	138	1500000	0.26	19836.16
Anthracene	420	317	103	1310000	0.3	50352.08
Benzo(a)anthracene	420	327	93	772000	0.21	32888.41
Benzo(a)pyrene	420	330	90	1010000	0.25	39502.71
Benzo(b)fluoranthene	331	266	65	850000	0.42	32732.74
Benzo(b,j,k)fluoranthenes	89	54	35	270000	70	32089
Benzo(b,k)fluoranthene (reported calculated total)	26	23	3	157000	4	33612.74
Benzo(e)pyrene	35	30	5	340000	0.4	18358.42
Benzo(g,h,i)perylene	420	325	95	730000	0.34	27245.78
Benzo(k)fluoranthene	331	258	73	540000	0.22	17633.91
C1-Chrysene	35	28	7	210000	0.52	12637.63
C1-Dibenzothiophene	35	21	14	68000	7.5	4642.55
C1-Fluoranthenes/Pyrenes	35	29	6	510000	1.9	28515.88
C1-Fluorenes	35	27	8	150000	0.69	8155.59
C1-Phenanthrenes/Anthracenes	35	30	5	880000	1.1	48217.3
C2-Chrysenes	35	23	12	97000	1.1	7346.74
C2-Dibenzothiophene	35	22	13	140000	0.88	11965.03
C2-Fluoranthenes/Pyrenes	35	25	10	210000	2.1	13610.72
C2-Fluorenes	35	25	10	180000	0.6	11625.34
C2-Naphthalenes	35	31	4	1300000	0.5	54597.21
C2-Phenanthrenes/Anthracenes	35	29	6	370000	1.9	25120.26

Table 3-2
Summary Statistics - Sub-surface Sediment (Category B-G)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
C3-Chrysenes	35	21	14	46000	23	3956.48
C3-Dibenzothiophene	35	20	15	87000	0.4	5918.86
C3-Fluoranthenes/Pyrenes	35	22	13	89000	0.84	7250.31
C3-Fluorenes	35	22	13	170000	0.8	13473.17
C3-Naphthalenes	35	28	7	570000	1.4	30646.08
C3-Phenanthrenes/Anthracenes	35	29	6	230000	1.2	13727.32
C4-Chrysenes	35	12	23	6900	47	887.25
C4-Naphthalenes	35	25	10	290000	0.75	16899.82
C4-Phenanthrenes/Anthracenes	35	22	13	95000	0.81	6791.31
Chrysene	420	322	98	980000	0.61	39821.18
Dibenzo(a,h)anthracene	420	268	152	88000	0.38	3875.12
Fluoranthene	420	350	70	3500000	0.51	120722.87
Fluorene	420	321	99	1500000	0.23	48999.69
Indeno(1,2,3-c,d)pyrene	420	315	105	610000	0.4	24694.91
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	436	339	97	1100000	0.64	47034.98
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	436	351	85	1300000	0.48	51388.61
LWG RA Total HPAH (Calculated U = 1/2)	436	378	58	13000000	2.2	457878.24
LWG RA Total LPAH (Calculated U = 1/2)	436	390	46	40000000	2.1	851553.2
LWG RA Total PAH (Calculated U = 1/2)	436	396	40	53000000	3.7	1281447.43
Naphthalene	364	272	92	20000000	0.61	473296
Perylene	124	85	39	140000	3.9	6244.83
Phenanthrene	420	360	60	8500000	0.46	251141.31
Pyrene	420	355	65	4700000	0.49	150582.59
Semivolatile Organics (µg/kg)						
Carbazole	285	170	115	520000	1.6	18068.04
Dibenzofuran	402	258	144	230000	0.24	7642.11
Total Petroleum Hydrocarbons (mg/kg)						

Table 3-2
Summary Statistics - Sub-surface Sediment (Category B-G)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
C10-C12 Aliphatic	2	2	0	9.4	8.3	8.85
C10-C12 Aromatic	2	1	1	41	41	41
C12-C16 Aliphatic	2	2	0	62	59	60.5
C12-C16 Aromatic	2	2	0	110	39	74.5
C16-C21 Aliphatic	2	2	0	120	110	115
C16-C21 Aromatic	2	2	0	510	210	360
C21-C34 Aliphatic	2	2	0	330	240	285
C21-C34 Aromatic	2	2	0	520	240	380
C8-C10 Aliphatic	2	0	2			
C8-C10 Aromatic	2	1	1	3.8	3.8	3.8
Diesel Range Hydrocarbons	225	166	59	190000	2.1	6360.18
Diesel Range Hydrocarbons (silica gel treated)	9	6	3	88000	710	17215
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)	249	197	52	320000	5.9	10429.02
Motor Oil Range	92	55	37	11000	21	1515.36
Residual Range Hydrocarbons	133	120	13	110000	3.1	4637.19
Residual Range Hydrocarbons (silica gel treated)	9	6	3	15000	770	3625
Volatile Organics (µg/kg)						
1,1-Dichloroethene	346	0	346			
1,2-Dichloroethene, cis-	264	15	249	2200	1.5	386.45
1,2-Dichloroethene, trans-	343	0	343			
Ethylbenzene	373	155	218	140000	0.05	7652.1
LWG RA Total Xylene (Calculated U = 1/2)	387	176	211	280000	0.06	8340.94
m,p-Xylene	373	141	232	200000	0.05	6028.93
Naphthalene	66	53	13	18000000	15.5	988264.78
o-Xylene	373	150	223	80000	0.04	2965.52
Toluene	373	109	264	190000	0.03	4245.79
Total Xylene (reported, not calculated)	7	3	4	330	4.4	124.13

Table 3-2
Summary Statistics - Sub-surface Sediment (Category B-G)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Trichloroethene (TCE)	347	25	322	1900000	0.14	88081.04
Vinyl chloride	347	10	337	4000	0.63	434.41

Table 3-2
Summary Statistics - Sub-surface Sediment (Category B-G)

Notes:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
PAH = polycyclic aromatic hydrocarbon
pct = percent
RA = Portland Harbor Site risk assessment
su = standard unit
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons

Table 3-3
Summary Statistics - Sediment Trap

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Conventional Parameters (mg/kg)						
Cyanide, total	6	5	1	32.7	1.3	12.6
Metals (mg/kg)						
Zinc	3	3	0	166	111	134.67
PCB Aroclors (µg/kg)						
Aroclor 1016	3	0	3			
Aroclor 1221	3	0	3			
Aroclor 1232	3	0	3			
Aroclor 1242	3	1	2	7.7	7.7	7.7
Aroclor 1248	3	0	3			
Aroclor 1254	3	1	2	13	13	13
Aroclor 1260	3	2	1	21	5.9	13.45
Aroclor 1262	3	0	3			
Aroclor 1268	3	0	3			
PCB Congeners (µg/kg)						
LWG RA Total Decachlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	0.28	0.08	0.19
LWG RA Total Dichlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	0.66	0.26	0.43
LWG RA Total Heptachlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	4.5	1.5	3.05
LWG RA Total Hexachlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	6.1	2.8	4.25
LWG RA Total Monochlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	0.05	0.01	0.03
LWG RA Total Nonachlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	0.51	0.09	0.26
LWG RA Total Octachlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	1.3	0.41	0.89
LWG RA Total PCB Congener (Calculated U = 1/2)	4	4	0	25	11	17
LWG RA Total PCB Congener TEQ 1998 (Avian) (Calculated U = 1/2)	4	4	0	0	0	0
LWG RA Total PCB Congener TEQ 1998 (Fish) (Calculated U = 1/2)	4	4	0	0	0	0
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	4	4	0	0	0	0
LWG RA Total Pentachlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	5.8	2.7	4.05
LWG RA Total Tetrachlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	4.4	1.6	2.82

Table 3-3
Summary Statistics - Sediment Trap

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
LWG RA Total Trichlorobiphenyl homologs (Calculated U = 1/2)	4	4	0	2.1	0.66	1.2
PCB-001	4	2	2	0.02	0	0.01
PCB-002	4	4	0	0.02	0	0.01
PCB-003	4	3	1	0.02	0	0.01
PCB-004/010	4	1	3	0.02	0.02	0.02
PCB-005/008	4	4	0	0.17	0.03	0.08
PCB-006	4	1	3	0.01	0.01	0.01
PCB-007/009	4	0	4			
PCB-011	4	4	0	0.3	0.17	0.25
PCB-012/013	4	0	4			
PCB-014	4	0	4			
PCB-015	4	3	1	0.13	0.04	0.07
PCB-016/032	4	4	0	0.14	0.06	0.09
PCB-017	4	4	0	0.11	0.04	0.07
PCB-018	4	4	0	0.22	0.09	0.14
PCB-019	4	4	0	0.06	0.02	0.04
PCB-020/021/033	4	4	0	0.22	0.06	0.12
PCB-022	4	4	0	0.15	0.04	0.08
PCB-023	4	0	4			
PCB-024/027	4	4	0	0.02	0.01	0.01
PCB-025	4	3	1	0.05	0.02	0.03
PCB-026	4	4	0	0.08	0.03	0.05
PCB-028	4	4	0	0.51	0.13	0.26
PCB-029	4	0	4			
PCB-030	4	0	4			
PCB-031	4	4	0	0.39	0.12	0.22
PCB-034	4	0	4			
PCB-035	4	3	1	0.01	0	0.01

Table 3-3
Summary Statistics - Sediment Trap

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-036	4	0	4			
PCB-037	4	4	0	0.15	0.04	0.08
PCB-038	4	1	3	0.01	0.01	0.01
PCB-039	4	0	4			
PCB-040	4	4	0	0.07	0.03	0.05
PCB-041/064/071/072	4	4	0	0.34	0.15	0.24
PCB-042/059	4	4	0	0.14	0.05	0.09
PCB-043/049	4	3	1	0.43	0.17	0.27
PCB-044	4	4	0	0.49	0.18	0.31
PCB-045	4	4	0	0.06	0.02	0.04
PCB-046	4	3	1	0.03	0.01	0.02
PCB-047	4	4	0	0.25	0.08	0.17
PCB-048/075	4	3	1	0.08	0.03	0.05
PCB-050	4	0	4			
PCB-051	4	4	0	0.06	0.02	0.04
PCB-052/069	4	4	0	0.55	0.25	0.39
PCB-053	4	4	0	0.09	0.03	0.06
PCB-054	4	4	0	0.01	0	0.01
PCB-055	4	3	1	0.01	0	0
PCB-056/060	4	4	0	0.29	0.1	0.18
PCB-057	4	0	4			
PCB-058	4	0	4			
PCB-061/070	4	4	0	0.62	0.21	0.4
PCB-062	4	0	4			
PCB-063	4	4	0	0.02	0.01	0.01
PCB-065	4	0	4			
PCB-066/076	4	4	0	0.51	0.16	0.33
PCB-067	4	4	0	0.02	0.01	0.01

Table 3-3
Summary Statistics - Sediment Trap

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-068	4	4	0	0.01	0	0.01
PCB-073	4	1	3	0.02	0.02	0.02
PCB-074	4	4	0	0.24	0.08	0.15
PCB-077	4	4	0	0.05	0.02	0.04
PCB-078	4	0	4			
PCB-079	4	3	1	0.01	0	0.01
PCB-080	4	0	4			
PCB-081	4	2	2	0	0	0
PCB-082	4	4	0	0.12	0.04	0.08
PCB-083	4	0	4			
PCB-084/092	4	4	0	0.38	0.17	0.26
PCB-085/116	4	4	0	0.14	0.07	0.1
PCB-086	4	0	4			
PCB-087/117/125	4	4	0	0.27	0.15	0.19
PCB-088/091	4	4	0	0.15	0.06	0.1
PCB-089	4	3	1	0.01	0	0.01
PCB-090/101	4	4	0	0.96	0.45	0.67
PCB-093	4	0	4			
PCB-094	4	4	0	0.01	0	0.01
PCB-095/098/102	4	4	0	0.69	0.33	0.5
PCB-096	4	3	1	0.01	0	0.01
PCB-097	4	4	0	0.24	0.12	0.17
PCB-099	4	4	0	0.47	0.19	0.31
PCB-100	4	3	1	0.02	0.01	0.01
PCB-103	4	4	0	0.02	0.01	0.02
PCB-104	4	0	4			
PCB-105	4	4	0	0.31	0.13	0.21
PCB-106/118	4	4	0	0.81	0.38	0.54

Table 3-3
Summary Statistics - Sediment Trap

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-107/109	4	4	0	0.07	0.03	0.05
PCB-108/112	4	4	0	0.04	0.02	0.03
PCB-110	4	4	0	0.96	0.49	0.69
PCB-111/115	4	3	1	0.01	0.01	0.01
PCB-113	4	1	3	0.01	0.01	0.01
PCB-114	4	4	0	0.02	0.01	0.01
PCB-119	4	4	0	0.03	0.01	0.02
PCB-120	4	0	4			
PCB-121	4	0	4			
PCB-122	4	3	1	0.01	0	0.01
PCB-123	4	3	1	0.01	0.01	0.01
PCB-124	4	4	0	0.04	0.01	0.02
PCB-126	4	3	1	0.01	0	0
PCB-127	4	0	4			
PCB-128/162	4	4	0	0.16	0.07	0.11
PCB-129	4	4	0	0.04	0.02	0.03
PCB-130	4	4	0	0.07	0.03	0.05
PCB-131	4	0	4			
PCB-132/161	4	4	0	0.33	0.14	0.23
PCB-133/142	4	3	1	0.05	0.02	0.03
PCB-134/143	4	4	0	0.06	0.03	0.04
PCB-135	4	4	0	0.18	0.08	0.13
PCB-136	4	4	0	0.17	0.07	0.12
PCB-137	4	4	0	0.05	0.02	0.03
PCB-138/163/164	4	4	0	1.21	0.6	0.86
PCB-139/149	4	4	0	0.92	0.49	0.68
PCB-140	4	4	0	0.01	0	0.01
PCB-141	4	4	0	0.28	0.11	0.19

Table 3-3
Summary Statistics - Sediment Trap

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-144	4	3	1	0.05	0.03	0.03
PCB-145	4	0	4			
PCB-146/165	4	4	0	0.25	0.1	0.16
PCB-147	4	4	0	0.03	0.01	0.02
PCB-148	4	1	3	0.01	0.01	0.01
PCB-150	4	2	2	0.01	0.01	0.01
PCB-151	4	4	0	0.34	0.14	0.23
PCB-152	4	0	4			
PCB-153	4	4	0	1.53	0.59	1.01
PCB-154	4	4	0	0.03	0.01	0.02
PCB-155	4	0	4			
PCB-156	4	4	0	0.12	0.05	0.08
PCB-157	4	3	1	0.02	0.01	0.01
PCB-158/160	4	4	0	0.11	0.06	0.08
PCB-159	4	3	1	0.02	0.01	0.01
PCB-166	4	0	4			
PCB-167	4	4	0	0.04	0.02	0.03
PCB-168	4	0	4			
PCB-169	4	0	4			
PCB-170	4	4	0	0.47	0.16	0.31
PCB-171	4	4	0	0.12	0.04	0.09
PCB-172	4	4	0	0.08	0.03	0.06
PCB-173	4	3	1	0.01	0	0.01
PCB-174	4	4	0	0.52	0.17	0.36
PCB-175	4	4	0	0.03	0.01	0.02
PCB-176	4	4	0	0.06	0.02	0.04
PCB-177	4	4	0	0.37	0.11	0.24
PCB-178	4	4	0	0.13	0.04	0.09

Table 3-3
Summary Statistics - Sediment Trap

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-179	4	4	0	0.26	0.08	0.18
PCB-180	4	4	0	1.2	0.4	0.81
PCB-181	4	1	3	0.01	0.01	0.01
PCB-182/187	4	4	0	0.74	0.24	0.49
PCB-183	4	4	0	0.31	0.09	0.2
PCB-184	4	0	4			
PCB-185	4	4	0	0.06	0.02	0.04
PCB-186	4	0	4			
PCB-188	4	0	4			
PCB-189	4	4	0	0.02	0.01	0.01
PCB-190	4	4	0	0.09	0.03	0.06
PCB-191	4	3	1	0.01	0.01	0.01
PCB-192	4	0	4			
PCB-193	4	4	0	0.05	0.02	0.04
PCB-194	4	4	0	0.27	0.09	0.19
PCB-195	4	4	0	0.14	0.04	0.09
PCB-196/203	4	4	0	0.36	0.12	0.23
PCB-197	4	3	1	0.01	0	0.01
PCB-198	4	4	0	0.03	0.01	0.02
PCB-199	4	4	0	0.33	0.1	0.24
PCB-200	4	3	1	0.04	0.01	0.02
PCB-201	4	4	0	0.05	0.01	0.03
PCB-202	4	4	0	0.07	0.03	0.05
PCB-204	4	0	4			
PCB-205	4	3	1	0.01	0	0.01
PCB-206	4	4	0	0.44	0.06	0.21
PCB-207	4	4	0	0.02	0.01	0.01
PCB-208	4	4	0	0.06	0.02	0.04

Table 3-3
Summary Statistics - Sediment Trap

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-209	4	4	0	0.28	0.08	0.19
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3	2	1	5.2	0.83	3.02
2,4'-DDE (o,p'-DDE)	3	1	2	0.91	0.91	0.91
2,4'-DDT (o,p'-DDT)	3	1	2	0.73	0.73	0.73
4,4'-DDD (p,p'-DDD)	3	3	0	13	2.4	5.97
4,4'-DDE (p,p'-DDE)	3	3	0	5	2	3.13
4,4'-DDT (p,p'-DDT)	3	3	0	9	2.1	4.5
Endrin ketone	3	0	3			
gamma-Hexachlorocyclohexane (BHC) (Lindane)	3	0	3			
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	3	2	1	7.2	1.9	4.55
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	3	3	0	27	6.5	13.6
LWG RA Sum DDD (Calculated U = 1/2)	3	3	0	18	3.3	8.33
LWG RA Sum DDE (Calculated U = 1/2)	3	3	0	5.9	2.3	3.63
LWG RA Sum DDT (Calculated U = 1/2)	3	3	0	10	2.4	5.17
LWG RA Total DDx (Calculated U = 1/2)	3	3	0	34	8.5	17.23
LWG RA Total Endosulfan (Calculated U = 1/2)	3	0	3			
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	9	9	0	4700	17	931.78
Acenaphthene	9	9	0	16000	30	2857.78
Acenaphthylene	9	9	0	5000	19	1079.67
Anthracene	9	9	0	38000	75	6424
Benzo(a)anthracene	9	9	0	43000	170	10653.33
Benzo(a)pyrene	9	9	0	60000	270	15051.11
Benzo(b)fluoranthene	9	9	0	38000	200	9521.11
Benzo(g,h,i)perylene	9	9	0	40000	260	10576.67
Benzo(k)fluoranthene	9	9	0	30000	130	7923.33
Chrysene	9	9	0	55000	250	13332.22

Table 3-3
Summary Statistics - Sediment Trap

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Dibenzo(a,h)anthracene	9	9	0	4200	31	1122.56
Fluoranthene	9	9	0	140000	320	27524.44
Fluorene	9	9	0	10000	21	1730.67
Indeno(1,2,3-c,d)pyrene	9	9	0	39000	210	10024.44
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	9	9	0	68000	350	17484.44
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	9	9	0	76000	360	19212.22
LWG RA Total HPAH (Calculated U = 1/2)	9	9	0	640000	2300	143588.89
LWG RA Total LPAH (Calculated U = 1/2)	9	9	0	180000	400	32793.33
LWG RA Total PAH (Calculated U = 1/2)	9	9	0	820000	2700	176311.11
Naphthalene	9	9	0	11000	50	2309.22
Phenanthrene	9	9	0	92000	180	17087.78
Pyrene	9	9	0	190000	400	37845.56
Semivolatile Organics (µg/kg)						
Carbazole	3	3	0	84	14	40.33
Dibenzofuran	9	9	0	1200	6	228.59
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	3	3	0	160	65	108.33
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)	3	3	0	890	670	756.67
Residual Range Hydrocarbons	3	3	0	730	590	640
Volatile Organics (µg/kg)						
1,1-Dichloroethene	4	0	4			
1,2-Dichloroethene, cis-	4	0	4			
1,2-Dichloroethene, trans-	4	0	4			
Benzene	4	0	4			
Ethylbenzene	4	0	4			
LWG RA Total Xylene (Calculated U = 1/2)	4	0	4			
m,p-Xylene	4	0	4			
Methyl isobutyl ketone (4-Methyl-2-pentanone or (MIBK))	4	0	4			

Table 3-3
Summary Statistics - Sediment Trap

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Methyl tert-butyl ether (MTBE)	4	0	4			
Naphthalene	1	0	1			
o-Xylene	4	0	4			
Toluene	4	3	1	2600	10	887
Trichloroethene (TCE)	4	0	4			
Vinyl chloride	4	0	4			

Table 3-3
Summary Statistics - Sediment Trap

Notes:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
PAH = polycyclic aromatic hydrocarbon
pct = percent
RA = Portland Harbor Site risk assessment
su = standard unit
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons

Table 3-4
Summary Statistics - Riverbank Soils (0-3.5 foot)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Conventional Parameters (mg/kg)						
Cyanide, total	25	18	7	56	0.22	7.23
Metals (mg/kg)						
Zinc	12	12	0	232	51	104.58
PCB Aroclors (ug/kg)						
Aroclor 1016	12	0	12			
Aroclor 1221	12	0	12			
Aroclor 1232	12	0	12			
Aroclor 1242	12	0	12			
Aroclor 1248	12	0	12			
Aroclor 1254	12	1	11	58	58	58
Aroclor 1260	12	0	12			
LWG RA Total PCB Aroclors (Calculated U = 1/2)	12	1	11	150	150	150
Pesticides (ug/kg)						
2,4'-DDD (o,p'-DDD)	12	1	11	36	36	36
2,4'-DDE (o,p'-DDE)	12	0	12			
2,4'-DDT (o,p'-DDT)	12	0	12			
4,4'-DDD (p,p'-DDD)	12	1	11	100	100	100
4,4'-DDE (p,p'-DDE)	12	0	12			
4,4'-DDT (p,p'-DDT)	12	3	9	16	5.6	9.8
alpha-Hexachlorocyclohexane (BHC)	12	0	12			
beta-Hexachlorocyclohexane (BHC)	12	0	12			
delta-Hexachlorocyclohexane (BHC)	12	0	12			
Endrin ketone	12	1	11	84	84	84
gamma-Hexachlorocyclohexane (BHC) (Lindane)	12	0	12			
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	12	1	11	52	52	52
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	12	3	9	120	8.9	46.63

Table 3-4
Summary Statistics - Riverbank Soils (0-3.5 foot)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
LWG RA Sum DDD (Calculated U = 1/2)	12	1	11	140	140	140
LWG RA Sum DDE (Calculated U = 1/2)	12	0	12			
LWG RA Sum DDT (Calculated U = 1/2)	12	3	9	24	7.3	13.53
LWG RA Total DDx (Calculated U = 1/2)	12	3	9	180	14	69.67
Polycyclic Aromatic Hydrocarbons (ug/kg)						
1-Methylnaphthalene	12	4	8	43000	76	11036.5
2-Methylnaphthalene	12	7	5	65000	70	9730
Acenaphthene	29	12	17	33000	100	3164.17
Acenaphthylene	29	20	9	100000	62	8259.95
Anthracene	29	17	12	120000	80	8625.18
Benzo(a)anthracene	29	25	4	310000	61	19057.32
Benzo(a)pyrene	29	25	4	410000	66	33740.36
Benzo(b)fluoranthene	17	15	2	209000	140	26156.2
Benzo(b,j,k)fluoranthenes	12	11	1	400000	77	42783.36
Benzo(g,h,i)perylene	29	26	3	340000	14	24005.42
Benzo(k)fluoranthene	17	14	3	49900	110	7795.79
Chrysene	29	25	4	400000	66	24944.24
Dibenzo(a,h)anthracene	29	19	10	100000	62	8430
Fluoranthene	29	25	4	610000	75	30993.8
Fluorene	29	13	16	79000	58	6487.69
Indeno(1,2,3-c,d)pyrene	29	24	5	230000	91	22411
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	29	26	3	400000	77	37413.5
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	29	26	3	600000	110	45625
LWG RA Total HPAH (Calculated U = 1/2)	29	27	2	3800000	74	235303.48
LWG RA Total LPAH (Calculated U = 1/2)	29	24	5	1400000	240	67041.67
LWG RA Total PAH (Calculated U = 1/2)	29	27	2	5200000	110	295628.15
Naphthalene	29	18	11	220000	88	13896

Table 3-4
Summary Statistics - Riverbank Soils (0-3.5 foot)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Perylene	12	8	4	94000	75	13838.12
Phenanthrene	29	23	6	760000	58	35922.96
Pyrene	29	26	3	1000000	63	52042.92
Semivolatile Organics (ug/kg)						
Carbazole	12	4	8	25000	84	6375.25
Dibenzofuran	12	2	10	8600	240	4420
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	12	6	6	6000	42	1163.5
Diesel/Oil	3	3	0	240	57	162.33
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)	15	14	1	24000	24	2249.57
Motor Oil Range	12	11	1	18000	21	2176.82
Volatile Organics (ug/kg)						
1,1-Dichloroethene	10	0	10			
1,2-Dichloroethene, cis-	12	0	12			
1,2-Dichloroethene, trans-	12	0	12			
Benzene	17	2	15	44	2.2	23.1
Ethylbenzene	17	1	16	34	34	34
LWG RA Total Xylene (Calculated U = 1/2)	12	1	11	95	95	95
m,p-Xylene	12	1	11	55	55	55
o-Xylene	12	1	11	40	40	40
Toluene	17	1	16	30	30	30
Total Xylene (reported, not calculated)	5	0	5			
Trichloroethene (TCE)	12	0	12			
Vinyl chloride	12	0	12			

Table 3-4
Summary Statistics - Riverbank Soils (0-3.5 foot)

Notes:

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)

cPAH = carcinogenic PAH

cm = centimeters

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

HPAH = high molecular weight polycyclic aromatic hydrocarbon

LPAH = low-molecular-weight PAH

LWG = Lower Willamette Group

PAH = polycyclic aromatic hydrocarbon

pct = percent

RA = Portland Harbor Site risk assessment

su = standard unit

TEQ = toxic equivalents quotient

TPH = Total Petroleum Hydrocarbons

Table 3-5
Summary Statistics - Riverbank Soils (0-12 foot)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Conventional Parameters (mg/kg)						
Cyanide, total	31	21	10	8780	0.21	424.32
Metals (mg/kg)						
Zinc	16	16	0	232	38.7	91.83
PCB Aroclors (ug/kg)						
Aroclor 1016	12	0	12			
Aroclor 1221	12	0	12			
Aroclor 1232	12	0	12			
Aroclor 1242	12	0	12			
Aroclor 1248	12	0	12			
Aroclor 1254	12	1	11	58	58	58
Aroclor 1260	12	0	12			
LWG RA Total PCB Aroclors (Calculated U = 1/2)	12	1	11	150	150	150
Pesticides (ug/kg)						
2,4'-DDD (o,p'-DDD)	12	1	11	36	36	36
2,4'-DDE (o,p'-DDE)	12	0	12			
2,4'-DDT (o,p'-DDT)	12	0	12			
4,4'-DDD (p,p'-DDD)	12	1	11	100	100	100
4,4'-DDE (p,p'-DDE)	12	0	12			
4,4'-DDT (p,p'-DDT)	12	3	9	16	5.6	9.8
alpha-Hexachlorocyclohexane (BHC)	12	0	12			
beta-Hexachlorocyclohexane (BHC)	12	0	12			
delta-Hexachlorocyclohexane (BHC)	12	0	12			
Endrin ketone	12	1	11	84	84	84
gamma-Hexachlorocyclohexane (BHC) (Lindane)	12	0	12			
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	12	1	11	52	52	52
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	12	3	9	120	8.9	46.63
LWG RA Sum DDD (Calculated U = 1/2)	12	1	11	140	140	140

Table 3-5
Summary Statistics - Riverbank Soils (0-12 foot)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
LWG RA Sum DDE (Calculated U = 1/2)	12	0	12			
LWG RA Sum DDT (Calculated U = 1/2)	12	3	9	24	7.3	13.53
LWG RA Total DDx (Calculated U = 1/2)	12	3	9	180	14	69.67
Polycyclic Aromatic Hydrocarbons (ug/kg)						
1-Methylnaphthalene	12	4	8	43000	76	11036.5
2-Methylnaphthalene	17	12	5	553000	0.53	58619.21
Acenaphthene	39	18	21	463000	12	34536.11
Acenaphthylene	39	26	13	100000	1.2	8372.78
Anthracene	39	23	16	322000	5.8	25296.99
Benzo(a)anthracene	39	34	5	310000	12	23256.41
Benzo(a)pyrene	39	35	4	410000	15	34231.86
Benzo(b)fluoranthene	27	25	2	209000	9.3	24118.27
Benzo(b,j,k)fluoranthenes	12	11	1	400000	77	42783.36
Benzo(g,h,i)perylene	39	34	5	340000	9.3	26615.07
Benzo(k)fluoranthene	27	22	5	103000	7.6	12826.83
Chrysene	39	35	4	400000	15	28400.02
Dibenzo(a,h)anthracene	39	25	14	100000	1.1	7853.78
Fluoranthene	39	34	5	655000	41.7	51926.26
Fluorene	39	19	20	307000	3.2	24690.01
Indeno(1,2,3-c,d)pyrene	39	32	7	230000	9.5	22675.69
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	39	36	3	400000	17	37679.28
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	39	36	3	600000	19	45885.98
LWG RA Total HPAH (Calculated U = 1/2)	39	37	2	3800000	74	282567.68
LWG RA Total LPAH (Calculated U = 1/2)	39	32	7	3700000	60	192997.88
LWG RA Total PAH (Calculated U = 1/2)	39	37	2	6300000	110	452018.11
Naphthalene	38	22	16	905000	88	52665.36
Perylene	12	8	4	94000	75	13838.12

Table 3-5
Summary Statistics - Riverbank Soils (0-12 foot)

Chemical Name	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Phenanthrene	39	31	8	1120000	26	77167.83
Pyrene	39	36	3	1000000	57	70327.14
Semivolatile Organics (ug/kg)						
Carbazole	13	5	8	68700	84	18840.2
Dibenzofuran	17	7	10	40000	3.2	8295.03
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	16	8	8	14000	37.4	2627.3
Diesel/Oil	4	4	0	240	54	135.25
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)	20	17	3	24000	24	2740.32
Motor Oil Range	12	11	1	18000	21	2176.82
Volatile Organics (ug/kg)						
1,1-Dichloroethene	12	0	12			
1,2-Dichloroethene, cis-	16	0	16			
1,2-Dichloroethene, trans-	14	0	14			
Benzene	26	4	22	400	2.2	112.45
Ethylbenzene	26	4	22	1380	17	682.75
LWG RA Total Xylene (Calculated U = 1/2)	15	3	12	1300	23	472.67
m,p-Xylene	15	3	12	570	14	213
Naphthalene	1	1	0	1500000	1500000	1500000
o-Xylene	15	3	12	700	8.9	249.63
Toluene	26	5	21	150	0.14	56.15
Total Xylene (reported, not calculated)	11	1	10	3670	3670	3670
Trichloroethene (TCE)	16	0	16			
Vinyl chloride	15	0	15			

Table 3-5
Summary Statistics - Riverbank Soils (0-12 foot)

Notes:

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)

cPAH = carcinogenic PAH

cm = centimeters

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

HPAH = high molecular weight polycyclic aromatic hydrocarbon

LPAH = low-molecular-weight PAH

LWG = Lower Willamette Group

PAH = polycyclic aromatic hydrocarbon

pct = percent

RA = Portland Harbor Site risk assessment

su = standard unit

TEQ = toxic equivalents quotient

TPH = Total Petroleum Hydrocarbons

Table 3-6
Summary Statistics - TZW

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Conventional Parameters (°C)							
Cyanide, total	T	30	28	2	23.1	0.01	0.97
Metals (µg/l)							
Zinc	D	8	0	8			
Zinc	T	30	15	15	983	15.3	213.41
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	D	8	4	4	44	0.15	12.49
2-Methylnaphthalene	T	17	13	4	84	0.08	14.7
Acenaphthene	D	8	8	0	64	1.8	25.33
Acenaphthene	T	30	30	0	399	1.2	72.37
Acenaphthylene	D	8	8	0	0.41	0.02	0.18
Acenaphthylene	T	30	29	1	6.72	0.03	0.97
Anthracene	D	8	7	1	1.1	0.06	0.57
Anthracene	T	30	28	2	63.8	0.14	8.58
Benzo(a)anthracene	D	8	3	5	0.17	0.01	0.06
Benzo(a)anthracene	T	30	24	6	32.3	0.01	4.1
Benzo(a)pyrene	D	8	2	6	0.08	0.01	0.04
Benzo(a)pyrene	T	30	24	6	37.8	0.01	4.65
Benzo(b)fluoranthene	D	8	2	6	0.06	0	0.03
Benzo(b)fluoranthene	T	30	19	11	33.3	0.01	5.11
Benzo(g,h,i)perylene	D	8	1	7	0.02	0.02	0.02
Benzo(g,h,i)perylene	T	30	23	7	28.8	0.01	3.54
Benzo(k)fluoranthene	D	8	2	6	0.07	0	0.04
Benzo(k)fluoranthene	T	30	16	14	9	0.01	1.85
Chrysene	D	8	3	5	0.24	0.02	0.09
Chrysene	T	30	25	5	34.5	0	4.04
Dibenzo(a,h)anthracene	D	8	1	7	0	0	0

Table 3-6
Summary Statistics - TZW

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Dibenzo(a,h)anthracene	T	30	15	15	3.71	0	0.72
Fluoranthene	D	8	6	2	2.1	0.13	0.92
Fluoranthene	T	30	28	2	106	0.11	14.67
Fluorene	D	8	7	1	17	0.44	9.13
Fluorene	T	30	29	1	108	0.43	23.32
Indeno(1,2,3-c,d)pyrene	D	8	1	7	0.02	0.02	0.02
Indeno(1,2,3-c,d)pyrene	T	30	22	8	16.9	0	2.48
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	D	8	2	6	0.13	0.01	0.07
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	T	30	19	11	42.3	0.02	6.68
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	D	8	3	5	0.1	0	0.04
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	T	30	30	0	49.9	0	4.93
LWG RA Total HPAH (Calculated U = 1/2)	D	8	6	2	5.5	0.29	2
LWG RA Total HPAH (Calculated U = 1/2)	T	30	30	0	450	0.25	51.53
LWG RA Total LPAH (Calculated U = 1/2)	D	8	8	0	1200	3	187.05
LWG RA Total LPAH (Calculated U = 1/2)	T	30	30	0	1200	2.8	196.78
LWG RA Total PAH (Calculated U = 1/2)	D	8	8	0	1200	3	187.96
LWG RA Total PAH (Calculated U = 1/2)	T	30	30	0	1390	3.3	249.67
Naphthalene	D	8	4	4	1100	0.88	276.32
Naphthalene	T	8	4	4	1100	0.07	275.19
Phenanthrene	D	8	7	1	21	0.52	8.89
Phenanthrene	T	30	29	1	362	0.86	53.08
Pyrene	D	8	6	2	2.7	0.15	0.96
Pyrene	T	30	27	3	148	0.12	20.19
Semivolatile Organics (µg/l)							
Dibenzofuran	D	8	5	3	2.3	0.07	0.99
Dibenzofuran	T	17	14	3	8	0.04	2.14
Total Petroleum Hydrocarbons (mg/l)							

Table 3-6
Summary Statistics - TZW

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Diesel Range Hydrocarbons	D	8	5	3	3.6	0.37	1.39
Diesel Range Hydrocarbons	T	17	11	6	6.1	0.24	1.57
Gasoline Range Hydrocarbons	T	17	12	5	4	0.02	0.97
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)	D	8	5	3	4.1	0.43	1.66
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)	T	17	16	1	11	0.12	2.06
Residual Range Hydrocarbons	D	8	4	4	0.5	0.14	0.33
Residual Range Hydrocarbons	T	17	6	11	1.2	0.13	0.52
Volatile Organics (µg/l)							
1,1-Dichloroethene	T	67	6	61	39	0.23	7.72
1,2-Dichloroethene, cis-	T	67	29	38	67000	0.26	2581.25
1,2-Dichloroethene, trans-	T	67	6	61	117	0.35	26.23
Benzene	T	67	42	25	3840	0.25	196.61
Ethylbenzene	T	67	31	36	416	0.2	56.94
LWG RA Total Xylene (Calculated U = 1/2)	T	67	34	33	440	0.22	40.16
m,p-Xylene	T	67	28	39	293	0.22	27.88
Naphthalene	T	59	43	16	13700	0.52	2104.53
o-Xylene	T	67	33	34	150	0.11	17.9
Toluene	T	67	43	24	178	0.26	11.72
Trichloroethene (TCE)	T	67	10	57	88500	0.31	8856.51
Vinyl chloride	T	67	37	30	4300	0.16	192.81

Table 3-6
Summary Statistics - TZW

Notes:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
D= dissolved
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
PAH = polycyclic aromatic hydrocarbon
pct = percent
RA = Portland Harbor Site risk assessment
su = standard unit
T = total
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons

Table 3-7
Summary Statistics - Fill Groundwater

Chemical_name	Total or Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Max Detect	Min Detect	Avg Detect
Conventional Parameters (mg/l)							
Cyanide, amenable	T	15	12	3	0.35	0.01	0.08
Cyanide, available	T	5	2	3	0.04	0	0.02
Cyanide, chlorinated	T	9	8	1	1.45	0.01	0.31
Cyanide, free	T	15	3	12	0.06	0.01	0.03
Cyanide, total	T	24	24	0	2.38	0.02	0.37
Cyanide, Weak acid dissociable (WAD)	T	12	11	1	0.22	0.01	0.04
Metals (µg/l)							
Zinc	T	15	13	2	305	4.18	69.67
Polycyclic Aromatic Hydrocarbons (µg/l)							
1-Methylnaphthalene	T	14	11	3	121	0.1	19.67
2-Methylnaphthalene	T	15	8	7	81.1	0.1	15
Acenaphthene	T	15	15	0	517	0.05	54.15
Acenaphthylene	T	15	12	3	6.7	0.18	1.79
Anthracene	T	15	13	2	2280	0.17	177.37
Benzo(a)anthracene	T	15	13	2	3500	0.02	271.3
Benzo(a)pyrene	T	15	13	2	4720	0.02	365.76
Benzo(b)fluoranthene	T	3	1	2	0.02	0.02	0.02
Benzo(b,k)fluoranthene	T	12	10	2	5700	0.2	574.21
Benzo(g,h,i)perylene	T	15	10	5	3960	0.35	400.02
Benzo(k)fluoranthene	T	3	1	2	0.01	0.01	0.01
Chrysene	T	15	13	2	5090	0.03	394.35
Dibenzo(a,h)anthracene	T	15	6	9	3.41	0.06	0.72
Fluoranthene	T	15	14	1	12500	0.28	898.74
Fluorene	T	15	14	1	650	0.11	52.44
Indeno(1,2,3-c,d)pyrene	T	15	11	4	3320	0.01	304.8
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	T	15	11	4	5700	0.03	522.01
1/2)	T	15	13	2	6200	0.02	480.87
LWG RA Total HPAH (Calculated U = 1/2)	T	15	15	0	55000	0.5	3694.16

Table 3-7
Summary Statistics - Fill Groundwater

Chemical_name	Total or Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Max Detect	Min Detect	Avg Detect
LWG RA Total LPAH (Calculated U = 1/2)	T	15	15	0	11000	2.11	815.81
LWG RA Total PAH (Calculated U = 1/2)	T	15	15	0	65000	2.61	4443.17
Naphthalene	T	15	13	2	1330	0.11	146.62
Phenanthrene	T	15	15	0	5330	0.06	362.45
Pyrene	T	15	15	0	15600	0.32	1046.85
Semivolatile Organics (µg/l)							
Carbazole	T	15	7	8	70.1	0.05	15.73
Dibenzofuran	T	15	7	8	4.65	0.04	1.55
Volatile Organics (µg/l)							
1,1-Dichloroethene	T	15	0	15			
1,2-Dichloroethene, cis-	T	15	0	15			
1,2-Dichloroethene, trans-	T	15	0	15			
Benzene	T	15	5	10	75.3	0.46	23.82
Ethylbenzene	T	15	4	11	24.7	1.32	13.56
LWG RA Total Xylene (Calculated U = 1/2)	T	15	5	10	45.4	1.37	18.37
m,p-Xylene	T	15	5	10	17.3	1.12	7.47
Naphthalene	T	14	5	9	864	92.6	327.54
o-Xylene	T	15	4	11	28.1	1.07	13.56
Toluene	T	15	3	12	1.62	0.7	1.02
Trichloroethene (TCE)	T	15	0	15			
Vinyl chloride	T	15	0	15			

Table 3-7
Summary Statistics - Fill Groundwater

Notes:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
D = dissolved
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
PAH = polycyclic aromatic hydrocarbon
pct = percent
RA = Portland Harbor Site risk assessment
su = standard unit
T = total
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons

Table 3-8
Summary Statistics – Alluvial Groundwater

Chemical_name	Total or Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Conventional Parameters							
Cyanide, amenable	T	189	71	118	0.35	0	0.06
Cyanide, available	T	8	3	5	0.03	0	0.01
Cyanide, chlorinated	T	28	23	5	2.83	0.01	0.38
Cyanide, free	T	194	16	178	0.03	0	0.01
Cyanide, total	D	9	9	0	0.19	0.02	0.06
Cyanide, total	T	250	233	17	2.74	0	0.29
Cyanide, Weak acid dissociable (WAD)	T	19	17	2	0.19	0.01	0.05
Metals (µg/l)							
Zinc	D	49	46	3	19200	2.52	485.62
Zinc	T	151	130	21	17400	5.47	624.75
Polycyclic Aromatic Hydrocarbons (µg/l)							
1-Methylnaphthalene	T	36	18	18	498	0.14	88.77
2-Methylnaphthalene	D	40	40	0	5700	0.01	194.88
2-Methylnaphthalene	T	218	192	26	1100	0	79.24
Acenaphthene	D	41	41	0	1600	0.02	62.18
Acenaphthene	T	219	201	18	720	0.01	72.42
Acenaphthylene	D	41	40	1	180	0.01	7.37
Acenaphthylene	T	219	187	32	140	0	4.13
Anthracene	D	41	39	2	1500	0	39.54
Anthracene	T	219	198	21	400	0	13.75
Benzo(a)anthracene	D	41	21	20	1000	0	48.17
Benzo(a)anthracene	T	219	176	43	260	0	8.97
Benzo(a)pyrene	D	41	16	25	990	0	62.52
Benzo(a)pyrene	T	219	160	59	330	0	11.65
Benzo(b)fluoranthene	D	41	13	28	530	0.01	41.25
Benzo(b)fluoranthene	T	210	163	47	180	0	8.06
Benzo(b,k)fluoranthene	T	9	7	2	6.39	0.39	1.94
Benzo(g,h,i)perylene	D	41	13	28	580	0.01	45.15

Table 3-8
Summary Statistics – Alluvial Groundwater

Chemical_name	Total or Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Benzo(g,h,i)perylene	T	219	167	52	240	0	8.87
Benzo(k)fluoranthene	D	41	13	28	520	0.01	40.48
Benzo(k)fluoranthene	T	210	142	68	170	0	4.92
Chrysene	D	41	24	17	1200	0.01	50.66
Chrysene	T	219	174	45	350	0	11.7
Dibenzo(a,h)anthracene	D	41	8	33	81	0	10.22
Dibenzo(a,h)anthracene	T	219	131	88	27	0	1.27
Fluoranthene	D	41	37	4	3700	0.01	101.59
Fluoranthene	T	219	198	21	820	0.01	31.31
Fluorene	D	41	40	1	1400	0.01	41.09
Fluorene	T	219	197	22	380	0.01	21.6
Indeno(1,2,3-c,d)pyrene	D	41	15	26	510	0	34.41
Indeno(1,2,3-c,d)pyrene	T	219	166	53	220	0	8.18
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	D	41	13	28	1000	0.02	77.88
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	T	221	170	51	350	0	11.9
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	D	41	27	14	1300	0.02	48.67
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	T	221	186	35	430	0	13.28
LWG RA Total HPAH (Calculated U = 1/2)	D	41	38	3	13000	0.09	347.08
LWG RA Total HPAH (Calculated U = 1/2)	T	222	202	20	3600	0.03	117.24
LWG RA Total LPAH (Calculated U = 1/2)	D	41	41	0	34000	0.11	1394.76
LWG RA Total LPAH (Calculated U = 1/2)	T	223	211	12	20400	0.02	832.3
LWG RA Total PAH (Calculated U = 1/2)	D	41	41	0	47000	0.22	1717.13
LWG RA Total PAH (Calculated U = 1/2)	T	223	211	12	20400	0.11	946.73
Naphthalene	D	40	38	2	15000	0.05	906.61
Naphthalene	T	155	128	27	19300	0.01	874.39
Phenanthrene	D	40	36	4	8700	0.02	250.7
Phenanthrene	T	220	200	20	1700	0.01	75.41
Pyrene	D	40	33	7	4300	0.01	132.22

Table 3-8
Summary Statistics – Alluvial Groundwater

Chemical_name	Total or Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Pyrene	T	220	197	23	1000	0.01	35.06
Semivolatile Organics (µg/l)							
Carbazole	T	65	39	26	248	0.04	34.87
Dibenzofuran	D	40	33	7	220	0.01	8.13
Dibenzofuran	T	212	153	59	49	0	4.81
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	T	30	27	3	23	0.24	2.72
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)	T	31	28	3	25.8	0.23	3.2
Residual Range Hydrocarbons	T	30	12	18	2.81	0.17	0.84
Volatile Organics (µg/l)							
1,1-Dichloroethene	T	272	22	250	283	0.63	22.01
1,2-Dichloroethene, cis-	T	254	68	186	574000	0.12	9503.46
1,2-Dichloroethene, trans-	T	272	22	250	1760	0.31	98.99
Benzene	T	281	184	97	12000	0.14	447.98
Ethylbenzene	T	281	150	131	690	0.14	64.7
LWG RA Total Xylene (Calculated U = 1/2)	T	282	173	109	665	0.22	49.6
m,p-Xylene	T	281	140	141	427	0.23	35.39
Naphthalene	T	161	126	35	19000	0.22	2235.5
n-Butylbenzene	T	117	19	98	1.21	0.3	0.52
o-Xylene	T	281	169	112	238	0.11	20.5
Toluene	T	281	190	91	821	0.11	21.23
Trichloroethene (TCE)	T	272	34	238	585000	0.16	17798.3
Vinyl chloride	T	272	80	192	28900	0.05	703.23

Table 3-8
Summary Statistics – Alluvial Groundwater

Notes:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
D = dissolved
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
PAH = polycyclic aromatic hydrocarbon
pct = percent
RA = Portland Harbor Site risk assessment
su = standard unit
T = total
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons

Table 3-9
Summary Statistics – Deep Groundwater

Chemical Name	Total or Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Max Detect	Min Detect	Avg Detect
Conventional Parameters (°C)							
Cyanide, amenable	T	33	7	26	0.02	0.01	0.01
Cyanide, free	T	31	3	28	0.02	0	0.01
Cyanide, total	T	53	50	3	0.76	0	0.13
Metals (µg/l)							
Zinc	D	23	23	0	197	1.8	15.6
Zinc	T	23	23	0	2890	5.2	407.24
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	D	16	14	2	0.35	0.01	0.08
2-Methylnaphthalene	T	53	48	5	772	0.01	55.52
Acenaphthene	D	16	16	0	0.64	0.01	0.13
Acenaphthene	T	53	53	0	432	0.01	42.43
Acenaphthylene	D	16	14	2	0.13	0	0.02
Acenaphthylene	T	53	47	6	41.7	0	1.49
Anthracene	D	16	11	5	0.09	0	0.03
Anthracene	T	53	50	3	41.4	0	6.28
Benzo(a)anthracene	D	16	3	13	0.01	0.01	0.01
Benzo(a)anthracene	T	53	49	4	28	0	2.88
Benzo(a)pyrene	D	16	0	16			
Benzo(a)pyrene	T	53	43	10	32.4	0	4.04
Benzo(b)fluoranthene	D	16	0	16			
Benzo(b)fluoranthene	T	53	46	7	27.3	0	3.3
Benzo(g,h,i)perylene	D	16	0	16			
Benzo(g,h,i)perylene	T	53	44	9	19.8	0	3.04
Benzo(k)fluoranthene	D	16	0	16			
Benzo(k)fluoranthene	T	53	43	10	7.85	0	1.1
Chrysene	D	16	4	12	0.01	0.01	0.01
Chrysene	T	53	48	5	25.5	0	3.08
Dibenzo(a,h)anthracene	D	16	1	15	0	0	0
Dibenzo(a,h)anthracene	T	53	34	19	2.79	0	0.51

Table 3-9
Summary Statistics – Deep Groundwater

Chemical Name	Total or Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Max Detect	Min Detect	Avg Detect
Fluoranthene	D	16	12	4	0.11	0.01	0.03
Fluoranthene	T	53	52	1	95.2	0.01	11.95
Fluorene	D	16	13	3	0.47	0.01	0.11
Fluorene	T	53	51	2	74.2	0.01	12.08
Indeno(1,2,3-c,d)pyrene	D	16	0	16			
Indeno(1,2,3-c,d)pyrene	T	53	42	11	13.9	0	2.37
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	D	16	0	16			
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	T	53	46	7	35.2	0.01	4.33
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	D	16	5	11	0.02	0.02	0.02
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	T	53	51	2	42.1	0	4.53
LWG RA Total HPAH (Calculated U = 1/2)	D	16	13	3	0.31	0.09	0.15
LWG RA Total HPAH (Calculated U = 1/2)	T	53	52	1	355	0.1	41.94
LWG RA Total LPAH (Calculated U = 1/2)	D	16	16	0	17	0.06	2.37
LWG RA Total LPAH (Calculated U = 1/2)	T	53	53	0	9550	0.06	359.11
LWG RA Total PAH (Calculated U = 1/2)	D	16	16	0	17	0.16	2.51
LWG RA Total PAH (Calculated U = 1/2)	T	53	53	0	9710	0.17	400.62
Naphthalene	D	16	14	2	16	0.03	2.02
Naphthalene	T	28	27	1	8020	0.02	417.6
Phenanthrene	D	16	14	2	1.3	0.02	0.32
Phenanthrene	T	53	52	1	237	0.02	36.14
Pyrene	D	16	11	5	0.12	0.01	0.03
Pyrene	T	53	52	1	105	0.01	12.4
Semivolatile Organics (µg/l)							
Carbazole	T	20	16	4	102	1.52	22.92
Dibenzofuran	D	15	11	4	0.05	0	0.02
Dibenzofuran	T	53	42	11	20.5	0.01	2.78
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	T	20	16	4	17	0.4	3.53
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)	T	20	16	4	17.9	0.64	4.15
Residual Range Hydrocarbons	T	20	8	12	1.8	0.56	1

Table 3-9
Summary Statistics – Deep Groundwater

Chemical Name	Total or Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Max Detect	Min Detect	Avg Detect
Volatile Organics (µg/l)							
1,1-Dichloroethene	T	56	6	50	19.4	0.7	6.41
1,2-Dichloroethene, cis-	T	56	27	29	5680	0.12	462.64
1,2-Dichloroethene, trans-	T	56	8	48	28.4	0.56	5.54
Benzene	T	56	38	18	64.2	0.22	6.68
Ethylbenzene	T	56	29	27	143	0.14	12.64
LWG RA Total Xylene (Calculated U = 1/2)	T	56	36	20	67	0.28	6.2
m,p-Xylene	T	56	29	27	32.5	0.22	3.74
Naphthalene	T	28	25	3	6010	0.39	581.96
o-Xylene	T	56	31	25	34.5	0.11	3.27
Toluene	T	56	29	27	520	0.11	81.34
Trichloroethene (TCE)	T	56	21	35	952	0.22	90.06
Vinyl chloride	T	56	23	33	1010	0.05	117.62

Table 3-9
Summary Statistics – Deep Groundwater

Notes:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
D = dissolved
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
PAH = polycyclic aromatic hydrocarbon
pct = percent
RA = Portland Harbor Site risk assessment
su = standard unit
T = total
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons

Table 3-10
Summary Statistics-Surface Water
(Near-Surface Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Conventional Parameters (mg/l)							
Cyanide, amenable	D	48	2	46	0.01	0	0.01
Cyanide, amenable	T	48	2	46	0.01	0	0.01
Cyanide, free	D	48	0	48			
Cyanide, free	T	51	0	51			
Cyanide, total	D	48	2	46	0.01	0	0.01
Cyanide, total	T	51	5	46	0.03	0	0.01
Cyanide, Weak acid dissociable (WAD)	T	3	3	0	0.04	0.01	0.03
Metals (µg/l)							
Zinc	D	5	4	1	5.4	1.5	2.6
Zinc	T	5	4	1	4.3	2.1	3.1
PCB Aroclors (µg/l)							
Aroclor 1016	T	3	0	3			
Aroclor 1221	T	3	0	3			
Aroclor 1232	T	3	0	3			
Aroclor 1242	T	3	0	3			
Aroclor 1248	T	3	0	3			
Aroclor 1254	T	3	0	3			
Aroclor 1260	T	3	0	3			
Aroclor 1262	T	3	0	3			
Aroclor 1268	T	3	0	3			
LWG RA Total PCB Aroclors (Calculated U = 1/2)	T	3	0	3			
PCB Congeners (ng/l)							
LWG RA Total Decachlorobiphenyl homologs (Calculated U = 1/2)	T	6	4	2	0	0	0
LWG RA Total Dichlorobiphenyl homologs (Calculated U = 1/2)	T	6	6	0	0.05	0	0.02
LWG RA Total Heptachlorobiphenyl homologs (Calculated U = 1/2)	T	6	6	0	0.02	0	0.01
LWG RA Total Hexachlorobiphenyl homologs (Calculated U = 1/2)	T	6	6	0	0.04	0.01	0.02
LWG RA Total Monochlorobiphenyl homologs (Calculated U = 1/2)	T	5	3	2	0.1	0	0.07

Table 3-10
Summary Statistics-Surface Water
(Near-Surface Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
LWG RA Total Nonachlorobiphenyl homologs (Calculated U = 1/2)	T	6	4	2	0	0	0
LWG RA Total Octachlorobiphenyl homologs (Calculated U = 1/2)	T	6	5	1	0.01	0	0
LWG RA Total PCB Congener (Calculated U = 1/2)	T	6	6	0	0.33	0.09	0.18
LWG RA Total PCB Congener TEQ 1998 (Avian) (Calculated U = 1/2)	T	6	6	0	0	0	0
LWG RA Total PCB Congener TEQ 1998 (Fish) (Calculated U = 1/2)	T	6	6	0	0	0	0
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	T	6	6	0	0	0	0
LWG RA Total Pentachlorobiphenyl homologs (Calculated U = 1/2)	T	6	6	0	0.05	0.01	0.03
LWG RA Total Tetrachlorobiphenyl homologs (Calculated U = 1/2)	T	6	5	1	0.05	0.01	0.04
LWG RA Total Trichlorobiphenyl homologs (Calculated U = 1/2)	T	6	6	0	0.04	0	0.02
PCB-001	T	6	2	4	0.04	0.04	0.04
PCB-002	T	6	2	4	0.04	0.04	0.04
PCB-003	T	6	2	4	0.02	0.02	0.02
PCB-004	T	6	5	1	0.01	0	0
PCB-005	T	6	0	6			
PCB-006	T	6	4	2	0	0	0
PCB-007	T	6	5	1	0	0	0
PCB-008	T	6	4	2	0	0	0
PCB-009	T	6	2	4	0	0	0
PCB-010	T	6	2	4	0	0	0
PCB-011	T	6	6	0	0.04	0	0.01
PCB-012/013	T	6	2	4	0	0	0
PCB-014	T	6	0	6			
PCB-015	T	6	5	1	0	0	0
PCB-016	T	6	5	1	0	0	0
PCB-017	T	6	5	1	0	0	0
PCB-018/030	T	6	5	1	0.01	0	0
PCB-019	T	6	6	0	0.01	0	0
PCB-020/028	T	6	5	1	0.01	0	0

Table 3-10
Summary Statistics-Surface Water
(Near-Surface Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-021/033	T	6	5	1	0	0	0
PCB-022	T	6	5	1	0	0	0
PCB-023	T	6	0	6			
PCB-024	T	6	5	1	0	0	0
PCB-025	T	6	3	3	0	0	0
PCB-026/029	T	6	3	3	0	0	0
PCB-027	T	6	5	1	0	0	0
PCB-031	T	6	5	1	0.01	0	0
PCB-032	T	6	6	0	0	0	0
PCB-034	T	6	0	6			
PCB-035	T	6	0	6			
PCB-036	T	6	0	6			
PCB-037	T	6	5	1	0	0	0
PCB-038	T	6	0	6			
PCB-039	T	6	3	3	0	0	0
PCB-040/041/071	T	6	5	1	0	0	0
PCB-042	T	6	5	1	0	0	0
PCB-043	T	6	5	1	0	0	0
PCB-044/047/065	T	6	5	1	0.01	0	0.01
PCB-045/051	T	6	5	1	0	0	0
PCB-046	T	6	3	3	0	0	0
PCB-048	T	6	5	1	0	0	0
PCB-049/069	T	6	5	1	0	0	0
PCB-050/053	T	6	5	1	0	0	0
PCB-052	T	6	5	1	0.01	0	0.01
PCB-054	T	6	4	2	0	0	0
PCB-055	T	6	0	6			
PCB-056	T	6	5	1	0	0	0

Table 3-10
Summary Statistics-Surface Water
(Near-Surface Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-057	T	6	0	6			
PCB-058	T	6	0	6			
PCB-059/062/075	T	6	5	1	0	0	0
PCB-060	T	6	5	1	0	0	0
PCB-061/070/074/076	T	6	5	1	0.01	0	0.01
PCB-063	T	6	4	2	0	0	0
PCB-064	T	6	5	1	0	0	0
PCB-066	T	6	5	1	0	0	0
PCB-067	T	6	0	6			
PCB-068	T	6	2	4	0	0	0
PCB-072	T	6	2	4	0	0	0
PCB-073	T	6	0	6			
PCB-077	T	6	5	1	0	0	0
PCB-078	T	6	0	6			
PCB-079	T	6	4	2	0	0	0
PCB-080	T	6	0	6			
PCB-081	T	6	0	6			
PCB-082	T	6	5	1	0	0	0
PCB-083/099	T	6	5	1	0	0	0
PCB-084	T	6	6	0	0	0	0
PCB-085/116/117	T	6	4	2	0	0	0
PCB-086/087/097/108/119/125	T	6	6	0	0	0	0
PCB-088/091	T	6	5	1	0	0	0
PCB-089	T	6	2	4	0	0	0
PCB-090/101/113	T	6	6	0	0.01	0	0
PCB-092	T	6	5	1	0	0	0
PCB-093/095/098/100/102	T	6	6	0	0.01	0	0
PCB-094	T	6	0	6			

Table 3-10
Summary Statistics-Surface Water
(Near-Surface Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-096	T	6	4	2	0	0	0
PCB-103	T	6	5	1	0	0	0
PCB-104	T	6	0	6			
PCB-105	T	6	6	0	0	0	0
PCB-106	T	6	0	6			
PCB-107/124	T	6	5	1	0	0	0
PCB-109	T	6	6	0	0	0	0
PCB-110/115	T	6	6	0	0.01	0	0
PCB-111	T	6	0	6			
PCB-112	T	6	0	6			
PCB-114	T	6	2	4	0	0	0
PCB-118	T	6	6	0	0	0	0
PCB-120	T	6	2	4	0	0	0
PCB-121	T	6	0	6			
PCB-122	T	6	2	4	0	0	0
PCB-123	T	6	2	4	0	0	0
PCB-126	T	6	0	6			
PCB-127	T	6	0	6			
PCB-128/166	T	6	6	0	0	0	0
PCB-129/138/160/163	T	6	3	3	0.01	0	0.01
PCB-130	T	6	3	3	0	0	0
PCB-131	T	6	0	6			
PCB-132	T	6	5	1	0	0	0
PCB-133	T	6	0	6			
PCB-134/143	T	6	3	3	0	0	0
PCB-135/151/154	T	6	6	0	0	0	0
PCB-136	T	6	5	1	0	0	0
PCB-137	T	6	3	3	0	0	0

Table 3-10
Summary Statistics-Surface Water
(Near-Surface Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-139/140	T	6	2	4	0	0	0
PCB-141	T	6	3	3	0	0	0
PCB-142	T	6	0	6			
PCB-144	T	6	3	3	0	0	0
PCB-145	T	6	0	6			
PCB-146	T	6	2	4	0	0	0
PCB-147/149	T	6	6	0	0.01	0	0
PCB-148	T	6	2	4	0	0	0
PCB-150	T	6	2	4	0	0	0
PCB-152	T	6	0	6			
PCB-153/168	T	6	5	1	0.01	0	0
PCB-155	T	6	0	6			
PCB-156/157	T	6	2	4	0	0	0
PCB-158	T	6	3	3	0	0	0
PCB-159	T	6	2	4	0	0	0
PCB-161	T	6	0	6			
PCB-162	T	6	0	6			
PCB-164	T	6	3	3	0	0	0
PCB-165	T	6	0	6			
PCB-167	T	6	5	1	0	0	0
PCB-169	T	6	0	6			
PCB-170	T	6	5	1	0	0	0
PCB-171/173	T	6	4	2	0	0	0
PCB-172	T	6	5	1	0	0	0
PCB-174	T	6	6	0	0	0	0
PCB-175	T	6	4	2	0	0	0
PCB-176	T	6	3	3	0	0	0
PCB-177	T	6	5	1	0	0	0

Table 3-10
Summary Statistics-Surface Water
(Near-Surface Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-178	T	6	5	1	0	0	0
PCB-179	T	6	3	3	0	0	0
PCB-180/193	T	6	3	3	0.01	0	0
PCB-181	T	6	2	4	0	0	0
PCB-182	T	6	3	3	0	0	0
PCB-183/185	T	6	3	3	0	0	0
PCB-184	T	6	2	4	0	0	0
PCB-186	T	6	0	6			
PCB-187	T	6	3	3	0	0	0
PCB-188	T	6	0	6			
PCB-189	T	6	2	4	0	0	0
PCB-190	T	6	4	2	0	0	0
PCB-191	T	6	4	2	0	0	0
PCB-192	T	6	0	6			
PCB-194	T	6	5	1	0	0	0
PCB-195	T	6	4	2	0	0	0
PCB-196	T	6	2	4	0	0	0
PCB-197/200	T	6	2	4	0	0	0
PCB-198/199	T	6	2	4	0	0	0
PCB-201	T	6	2	4	0	0	0
PCB-202	T	6	5	1	0	0	0
PCB-203	T	6	3	3	0	0	0
PCB-204	T	6	0	6			
PCB-205	T	6	0	6			
PCB-206	T	6	2	4	0	0	0
PCB-207	T	6	4	2	0	0	0
PCB-208	T	6	2	4	0	0	0
PCB-209	T	6	4	2	0	0	0

Table 3-10
Summary Statistics-Surface Water
(Near-Surface Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Pesticides (µg/l)							
2,4'-DDD (o,p'-DDD)	T	10	6	4	0	0	0
2,4'-DDE (o,p'-DDE)	T	10	5	5	0	0	0
2,4'-DDT (o,p'-DDT)	T	10	5	5	0	0	0
4,4'-DDD (p,p'-DDD)	T	10	7	3	0	0	0
4,4'-DDE (p,p'-DDE)	T	10	6	4	0	0	0
4,4'-DDT (p,p'-DDT)	T	10	7	3	0	0	0
Endrin ketone	T	10	2	8	0	0	0
gamma-Hexachlorocyclohexane (BHC) (Lindane)	T	10	5	5	0	0	0
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	T	10	6	4	0	0	0
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	T	10	8	2	0	0	0
LWG RA Sum DDD (Calculated U = 1/2)	T	10	7	3	0	0	0
LWG RA Sum DDE (Calculated U = 1/2)	T	10	6	4	0	0	0
LWG RA Sum DDT (Calculated U = 1/2)	T	10	7	3	0	0	0
LWG RA Total Chlordane (Calculated U = 1/2)	T	10	6	4	0	0	0
LWG RA Total DDx (Calculated U = 1/2)	T	10	8	2	0	0	0
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	T	5	2	3	0.22	0.01	0.12
Acenaphthene	T	5	2	3	0.21	0.04	0.12
Acenaphthylene	T	5	3	2	0.04	0	0.02
Anthracene	T	5	1	4	0.07	0.07	0.07
Benzo(a)anthracene	T	5	2	3	0.11	0.02	0.06
Benzo(a)pyrene	T	5	2	3	0.15	0.02	0.08
Benzo(b)fluoranthene	T	5	2	3	0.11	0.02	0.07
Benzo(g,h,i)perylene	T	5	3	2	0.14	0.01	0.06
Benzo(k)fluoranthene	T	5	2	3	0.1	0.01	0.05
Chrysene	T	5	2	3	0.19	0.03	0.11
Dibenzo(a,h)anthracene	T	5	1	4	0.01	0.01	0.01

Table 3-10
Summary Statistics-Surface Water
(Near-Surface Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Fluoranthene	T	5	3	2	0.4	0.02	0.16
Fluorene	T	5	2	3	0.06	0.02	0.04
Indeno(1,2,3-c,d)pyrene	T	5	3	2	0.11	0.01	0.05
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	T	5	2	3	0.21	0.03	0.12
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	T	5	3	2	0.2	0.01	0.08
LWG RA Total HPAH (Calculated U = 1/2)	T	5	4	1	1.8	0.06	0.54
LWG RA Total LPAH (Calculated U = 1/2)	T	5	4	1	1.1	0.02	0.48
LWG RA Total PAH (Calculated U = 1/2)	T	5	5	0	2.5	0.09	0.82
Naphthalene	T	5	4	1	0.77	0.01	0.24
Phenanthrene	T	5	2	3	0.17	0.04	0.1
Pyrene	T	5	3	2	0.45	0.01	0.17
Semivolatile Organics (µg/l)							
Carbazole	T	5	2	3	0.06	0.02	0.04
Dibenzofuran	T	5	0	5			

Table 3-10
Summary Statistics-Surface Water
(Near-Surface Depth)

Notes:
µg/l = micrograms per liter
mg/kg = milligrams per kilogram
BaPEq = benzo[a]pyrene equivalents
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
BTEX = Benzene, Toluene, Ethylbenzene, Xylene
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyl
pct = percent
RA = Portland Harbor Site risk assessment
su = standard unit
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons

Table 3-11
Summary Statistics-Surface Water
(Mid-depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Conventional Parameters (mg/l)							
Cyanide, amenable	D	48	0	48			
Cyanide, amenable	T	49	4	45	0.09	0.01	0.03
Cyanide, free	D	48	0	48			
Cyanide, free	T	49	0	49			
Cyanide, total	D	48	1	47	0.01	0.01	0.01
Cyanide, total	T	49	4	45	0.09	0.01	0.03
Metals (µg/l)							
Zinc	T	1	0	1			
PCB Aroclors (µg/l)							
Aroclor 1016	T	1	0	1			
Aroclor 1221	T	1	0	1			
Aroclor 1232	T	1	0	1			
Aroclor 1242	T	1	0	1			
Aroclor 1248	T	1	0	1			
Aroclor 1254	T	1	0	1			
Aroclor 1260	T	1	0	1			
Aroclor 1262	T	1	0	1			
Aroclor 1268	T	1	0	1			
PCB Congeners (ng/l)							
LWG RA Total Decachlorobiphenyl homologs (Calculated U = 1/2)	T	1	0	1			
LWG RA Total Dichlorobiphenyl homologs (Calculated U = 1/2)	T	1	0	1			
LWG RA Total Heptachlorobiphenyl homologs (Calculated U = 1/2)	T	1	0	1			
LWG RA Total Hexachlorobiphenyl homologs (Calculated U = 1/2)	T	1	1	0	0.41	0.41	0.41
LWG RA Total Monochlorobiphenyl homologs (Calculated U = 1/2)	T	1	0	1			
LWG RA Total Nonachlorobiphenyl homologs (Calculated U = 1/2)	T	1	0	1			
LWG RA Total Octachlorobiphenyl homologs (Calculated U = 1/2)	T	1	0	1			
LWG RA Total PCB Congener (Calculated U = 1/2)	T	1	1	0	2.2	2.2	2.2

Table 3-11
Summary Statistics-Surface Water
(Mid-depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
LWG RA Total PCB Congener TEQ 1998 (Avian) (Calculated U = 1/2)	T	1	0	1			
LWG RA Total PCB Congener TEQ 1998 (Fish) (Calculated U = 1/2)	T	1	0	1			
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	T	1	0	1			
LWG RA Total Pentachlorobiphenyl homologs (Calculated U = 1/2)	T	1	1	0	0.43	0.43	0.43
LWG RA Total Tetrachlorobiphenyl homologs (Calculated U = 1/2)	T	1	1	0	0.41	0.41	0.41
LWG RA Total Trichlorobiphenyl homologs (Calculated U = 1/2)	T	1	0	1			
PCB-001	T	1	0	1			
PCB-002	T	1	0	1			
PCB-003	T	1	0	1			
PCB-004/010	T	1	0	1			
PCB-005/008	T	1	0	1			
PCB-006	T	1	0	1			
PCB-007/009	T	1	0	1			
PCB-011	T	1	0	1			
PCB-012/013	T	1	0	1			
PCB-014	T	1	0	1			
PCB-015	T	1	0	1			
PCB-016/032	T	1	0	1			
PCB-017	T	1	0	1			
PCB-018	T	1	0	1			
PCB-019	T	1	0	1			
PCB-020/021/033	T	1	0	1			
PCB-022	T	1	0	1			
PCB-023	T	1	0	1			
PCB-024/027	T	1	0	1			
PCB-025	T	1	0	1			
PCB-026	T	1	0	1			
PCB-028	T	1	0	1			

Table 3-11
Summary Statistics-Surface Water
(Mid-depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-029	T	1	0	1			
PCB-030	T	1	0	1			
PCB-031	T	1	0	1			
PCB-034	T	1	0	1			
PCB-035	T	1	0	1			
PCB-036	T	1	0	1			
PCB-037	T	1	0	1			
PCB-038	T	1	0	1			
PCB-039	T	1	0	1			
PCB-040	T	1	0	1			
PCB-041/064/071/072	T	1	0	1			
PCB-042/059	T	1	0	1			
PCB-043/049	T	1	0	1			
PCB-044	T	1	0	1			
PCB-045	T	1	0	1			
PCB-046	T	1	0	1			
PCB-047	T	1	0	1			
PCB-048/075	T	1	0	1			
PCB-050	T	1	0	1			
PCB-051	T	1	0	1			
PCB-052/069	T	1	1	0	0.03	0.03	0.03
PCB-053	T	1	0	1			
PCB-054	T	1	0	1			
PCB-055	T	1	0	1			
PCB-056/060	T	1	0	1			
PCB-057	T	1	0	1			
PCB-058	T	1	0	1			
PCB-061/070	T	1	0	1			

Table 3-11
Summary Statistics-Surface Water
(Mid-depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-062	T	1	0	1			
PCB-063	T	1	0	1			
PCB-065	T	1	0	1			
PCB-066/076	T	1	0	1			
PCB-067	T	1	0	1			
PCB-068	T	1	0	1			
PCB-073	T	1	0	1			
PCB-074	T	1	0	1			
PCB-077	T	1	0	1			
PCB-078	T	1	0	1			
PCB-079	T	1	0	1			
PCB-080	T	1	0	1			
PCB-081	T	1	0	1			
PCB-082	T	1	0	1			
PCB-083	T	1	0	1			
PCB-084/092	T	1	0	1			
PCB-085/116	T	1	0	1			
PCB-086	T	1	0	1			
PCB-087/117/125	T	1	0	1			
PCB-088/091	T	1	0	1			
PCB-089	T	1	0	1			
PCB-090/101	T	1	0	1			
PCB-093	T	1	0	1			
PCB-094	T	1	0	1			
PCB-095/098/102	T	1	0	1			
PCB-096	T	1	0	1			
PCB-097	T	1	0	1			
PCB-099	T	1	0	1			

Table 3-11
Summary Statistics-Surface Water
(Mid-depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-100	T	1	0	1			
PCB-103	T	1	0	1			
PCB-104	T	1	0	1			
PCB-105	T	1	0	1			
PCB-106/118	T	1	1	0	0.01	0.01	0.01
PCB-107/109	T	1	0	1			
PCB-108/112	T	1	0	1			
PCB-110	T	1	1	0	0.03	0.03	0.03
PCB-111/115	T	1	0	1			
PCB-113	T	1	0	1			
PCB-114	T	1	0	1			
PCB-119	T	1	0	1			
PCB-120	T	1	0	1			
PCB-121	T	1	0	1			
PCB-122	T	1	0	1			
PCB-123	T	1	0	1			
PCB-124	T	1	0	1			
PCB-126	T	1	0	1			
PCB-127	T	1	0	1			
PCB-128/162	T	1	0	1			
PCB-129	T	1	0	1			
PCB-130	T	1	0	1			
PCB-131	T	1	0	1			
PCB-132/161	T	1	0	1			
PCB-133/142	T	1	0	1			
PCB-134/143	T	1	0	1			
PCB-135	T	1	0	1			
PCB-136	T	1	0	1			

Table 3-11
Summary Statistics-Surface Water
(Mid-depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-137	T	1	0	1			
PCB-138/163/164	T	1	0	1			
PCB-139/149	T	1	0	1			
PCB-140	T	1	0	1			
PCB-141	T	1	0	1			
PCB-144	T	1	0	1			
PCB-145	T	1	0	1			
PCB-146/165	T	1	0	1			
PCB-147	T	1	0	1			
PCB-148	T	1	0	1			
PCB-150	T	1	0	1			
PCB-151	T	1	0	1			
PCB-152	T	1	0	1			
PCB-153	T	1	1	0	0.03	0.03	0.03
PCB-154	T	1	0	1			
PCB-155	T	1	0	1			
PCB-156	T	1	0	1			
PCB-157	T	1	0	1			
PCB-158/160	T	1	0	1			
PCB-159	T	1	0	1			
PCB-166	T	1	0	1			
PCB-167	T	1	0	1			
PCB-168	T	1	0	1			
PCB-169	T	1	0	1			
PCB-170	T	1	0	1			
PCB-171	T	1	0	1			
PCB-172	T	1	0	1			
PCB-173	T	1	0	1			

Table 3-11
Summary Statistics-Surface Water
(Mid-depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-174	T	1	0	1			
PCB-175	T	1	0	1			
PCB-176	T	1	0	1			
PCB-177	T	1	0	1			
PCB-178	T	1	0	1			
PCB-179	T	1	0	1			
PCB-180	T	1	0	1			
PCB-181	T	1	0	1			
PCB-182/187	T	1	0	1			
PCB-183	T	1	0	1			
PCB-184	T	1	0	1			
PCB-185	T	1	0	1			
PCB-186	T	1	0	1			
PCB-188	T	1	0	1			
PCB-189	T	1	0	1			
PCB-190	T	1	0	1			
PCB-191	T	1	0	1			
PCB-192	T	1	0	1			
PCB-193	T	1	0	1			
PCB-194	T	1	0	1			
PCB-195	T	1	0	1			
PCB-196/203	T	1	0	1			
PCB-197	T	1	0	1			
PCB-198	T	1	0	1			
PCB-199	T	1	0	1			
PCB-200	T	1	0	1			
PCB-201	T	1	0	1			
PCB-202	T	1	0	1			

Table 3-11
Summary Statistics-Surface Water
(Mid-depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
PCB-204	T	1	0	1			
PCB-205	T	1	0	1			
PCB-206	T	1	0	1			
PCB-207	T	1	0	1			
PCB-208	T	1	0	1			
PCB-209	T	1	0	1			
Pesticides (µg/l)							
2,4'-DDD (o,p'-DDD)	T	1	0	1			
2,4'-DDE (o,p'-DDE)	T	1	0	1			
2,4'-DDT (o,p'-DDT)	T	1	0	1			
4,4'-DDD (p,p'-DDD)	T	1	0	1			
4,4'-DDE (p,p'-DDE)	T	1	0	1			
4,4'-DDT (p,p'-DDT)	T	1	0	1			
alpha-Hexachlorocyclohexane (BHC)	T	1	0	1			
beta-Hexachlorocyclohexane (BHC)	T	1	0	1			
delta-Hexachlorocyclohexane (BHC)	T	1	0	1			
Endrin ketone	T	1	0	1			
gamma-Hexachlorocyclohexane (BHC) (Lindane)	T	1	0	1			
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	T	1	0	1			
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	T	1	0	1			
LWG RA Sum DDD (Calculated U = 1/2)	T	1	0	1			
LWG RA Sum DDE (Calculated U = 1/2)	T	1	0	1			
LWG RA Sum DDT (Calculated U = 1/2)	T	1	0	1			
LWG RA Total DDx (Calculated U = 1/2)	T	1	0	1			
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	T	1	0	1			
Acenaphthene	T	1	0	1			
Acenaphthylene	T	1	0	1			

Table 3-11
Summary Statistics-Surface Water
(Mid-depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detection
Anthracene	T	1	0	1			
Benzo(a)anthracene	T	1	0	1			
Benzo(a)pyrene	T	1	0	1			
Benzo(b)fluoranthene	T	1	0	1			
Benzo(g,h,i)perylene	T	1	0	1			
Benzo(k)fluoranthene	T	1	0	1			
Chrysene	T	1	0	1			
Dibenzo(a,h)anthracene	T	1	0	1			
Fluoranthene	T	1	1	0	0.02	0.02	0.02
Fluorene	T	1	0	1			
Indeno(1,2,3-c,d)pyrene	T	1	0	1			
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	T	1	0	1			
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	T	1	0	1			
LWG RA Total HPAH (Calculated U = 1/2)	T	1	1	0	0.08	0.08	0.08
LWG RA Total LPAH (Calculated U = 1/2)	T	1	1	0	0.05	0.05	0.05
LWG RA Total PAH (Calculated U = 1/2)	T	1	1	0	0.12	0.12	0.12
Naphthalene	T	1	1	0	0.02	0.02	0.02
Phenanthrene	T	1	0	1			
Pyrene	T	1	1	0	0.02	0.02	0.02
Semivolatile Organics (µg/l)							
Dibenzofuran	T	1	0	1			
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	T	1	0	1			
LWG RA Total Petroleum Hydrocarbons (TPH) (Calculated U = 1/2)	T	1	0	1			
Motor Oil Range	T	1	0	1			

Table 3-11
Summary Statistics-Surface Water
(Mid-depth)

Notes:
µg/l = micrograms per liter
mg/kg = milligrams per kilogram
BaPEq = benzo[a]pyrene equivalents
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
BTEX = Benzene, Toluene, Ethylbenzene, Xylene
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyl
pct = percent
RA = Portland Harbor Site risk assessment
su = standard unit
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons

Table 3-12
Summary Statistics-Surface Water
(Near-bottom Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detetion
Conventional Parameters (mg/l)							
Cyanide, amenable	D	48	1	47	0.11	0.11	0.11
Cyanide, amenable	T	61	1	60	0.01	0.01	0.01
Cyanide, free	D	48	0	48			
Cyanide, free	T	62	0	62			
Cyanide, total	D	49	2	47	0.14	0	0.07
Cyanide, total	T	61	2	59	0.11	0.01	0.06
Metals (µg/l)							
Zinc	D	2	0	2			
Zinc	T	2	1	1	8.4	8.4	8.4
PCB Congeners (ng/l)							
LWG RA Total Decachlorobiphenyl homologs (Calculated U = 1/2)	T	6	4	2	0.01	0	0
LWG RA Total Dichlorobiphenyl homologs (Calculated U = 1/2)	T	6	5	1	0.04	0	0.02
LWG RA Total Heptachlorobiphenyl homologs (Calculated U = 1/2)	T	6	6	0	0.08	0	0.03
LWG RA Total Hexachlorobiphenyl homologs (Calculated U = 1/2)	T	6	6	0	0.13	0.02	0.06
LWG RA Total Monochlorobiphenyl homologs (Calculated U = 1/2)	T	6	4	2	0	0	0
LWG RA Total Nonachlorobiphenyl homologs (Calculated U = 1/2)	T	6	5	1	0	0	0
LWG RA Total Octachlorobiphenyl homologs (Calculated U = 1/2)	T	6	5	1	0.02	0	0.01
LWG RA Total PCB Congener (Calculated U = 1/2)	T	6	6	0	0.46	0.11	0.25
LWG RA Total PCB Congener TEQ 1998 (Avian) (Calculated U = 1/2)	T	6	6	0	0	0	0
LWG RA Total PCB Congener TEQ 1998 (Fish) (Calculated U = 1/2)	T	6	6	0	0	0	0
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	T	6	6	0	0	0	0
LWG RA Total Pentachlorobiphenyl homologs (Calculated U = 1/2)	T	6	6	0	0.1	0.02	0.05
LWG RA Total Tetrachlorobiphenyl homologs (Calculated U = 1/2)	T	6	6	0	0.07	0.02	0.05
LWG RA Total Trichlorobiphenyl homologs (Calculated U = 1/2)	T	6	6	0	0.04	0.01	0.02
PCB-001	T	6	4	2	0	0	0
PCB-002	T	6	2	4	0	0	0
PCB-003	T	6	0	6			
PCB-004	T	6	5	1	0.01	0	0

Table 3-12
Summary Statistics-Surface Water
(Near-bottom Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detetion
PCB-005	T	6	0	6			
PCB-006	T	6	5	1	0	0	0
PCB-007	T	6	3	3	0	0	0
PCB-008	T	6	5	1	0	0	0
PCB-009	T	6	2	4	0	0	0
PCB-010	T	6	2	4	0	0	0
PCB-011	T	6	5	1	0.02	0	0.01
PCB-012/013	T	6	2	4	0	0	0
PCB-014	T	6	0	6			
PCB-015	T	6	3	3	0	0	0
PCB-016	T	6	5	1	0	0	0
PCB-017	T	6	5	1	0	0	0
PCB-018/030	T	6	5	1	0.01	0	0
PCB-019	T	6	6	0	0	0	0
PCB-020/028	T	6	5	1	0.01	0	0.01
PCB-021/033	T	6	5	1	0	0	0
PCB-022	T	6	5	1	0	0	0
PCB-023	T	6	0	6			
PCB-024	T	6	3	3	0	0	0
PCB-025	T	6	5	1	0	0	0
PCB-026/029	T	6	5	1	0	0	0
PCB-027	T	6	3	3	0	0	0
PCB-031	T	6	5	1	0.01	0	0
PCB-032	T	6	6	0	0	0	0
PCB-034	T	6	3	3	0	0	0
PCB-035	T	6	3	3	0	0	0
PCB-036	T	6	0	6			
PCB-037	T	6	5	1	0	0	0
PCB-038	T	6	2	4	0	0	0

Table 3-12
Summary Statistics-Surface Water
(Near-bottom Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detetion
PCB-039	T	6	2	4	0	0	0
PCB-040/041/071	T	6	6	0	0	0	0
PCB-042	T	6	6	0	0	0	0
PCB-043	T	6	5	1	0	0	0
PCB-044/047/065	T	6	6	0	0.01	0	0.01
PCB-045/051	T	6	6	0	0	0	0
PCB-046	T	6	5	1	0	0	0
PCB-048	T	6	5	1	0	0	0
PCB-049/069	T	6	6	0	0.01	0	0
PCB-050/053	T	6	5	1	0	0	0
PCB-052	T	6	6	0	0.01	0	0.01
PCB-054	T	6	3	3	0	0	0
PCB-055	T	6	0	6			
PCB-056	T	6	6	0	0	0	0
PCB-057	T	6	0	6			
PCB-058	T	6	2	4	0	0	0
PCB-059/062/075	T	6	6	0	0	0	0
PCB-060	T	6	5	1	0	0	0
PCB-061/070/074/076	T	6	6	0	0.01	0	0.01
PCB-063	T	6	2	4	0	0	0
PCB-064	T	6	6	0	0	0	0
PCB-066	T	6	6	0	0.01	0	0
PCB-067	T	6	3	3	0	0	0
PCB-068	T	6	2	4	0	0	0
PCB-072	T	6	5	1	0	0	0
PCB-073	T	6	0	6			
PCB-077	T	6	5	1	0	0	0
PCB-078	T	6	0	6			
PCB-079	T	6	3	3	0	0	0

Table 3-12
Summary Statistics-Surface Water
(Near-bottom Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detetion
PCB-080	T	6	0	6			
PCB-081	T	6	0	6			
PCB-082	T	6	5	1	0	0	0
PCB-083/099	T	6	5	1	0.01	0	0
PCB-084	T	6	6	0	0	0	0
PCB-085/116/117	T	6	6	0	0	0	0
PCB-086/087/097/108/119/125	T	6	6	0	0.01	0	0.01
PCB-088/091	T	6	6	0	0	0	0
PCB-089	T	6	5	1	0	0	0
PCB-090/101/113	T	6	6	0	0.02	0	0.01
PCB-092	T	6	6	0	0	0	0
PCB-093/095/098/100/102	T	6	6	0	0.01	0	0.01
PCB-094	T	6	5	1	0	0	0
PCB-096	T	6	5	1	0	0	0
PCB-103	T	6	2	4	0	0	0
PCB-104	T	6	0	6			
PCB-105	T	6	6	0	0	0	0
PCB-106	T	6	0	6			
PCB-107/124	T	6	6	0	0	0	0
PCB-109	T	6	4	2	0	0	0
PCB-110/115	T	6	6	0	0.02	0	0.01
PCB-111	T	6	0	6			
PCB-112	T	6	0	6			
PCB-114	T	6	3	3	0	0	0
PCB-118	T	6	6	0	0.01	0	0.01
PCB-120	T	6	4	2	0	0	0
PCB-121	T	6	2	4	0	0	0
PCB-122	T	6	2	4	0	0	0
PCB-123	T	6	4	2	0	0	0

Table 3-12
Summary Statistics-Surface Water
(Near-bottom Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detetion
PCB-126	T	6	4	2	0	0	0
PCB-127	T	6	0	6			
PCB-128/166	T	6	6	0	0	0	0
PCB-129/138/160/163	T	6	6	0	0.03	0	0.01
PCB-130	T	6	6	0	0	0	0
PCB-131	T	6	2	4	0	0	0
PCB-132	T	6	6	0	0.01	0	0
PCB-133	T	6	5	1	0	0	0
PCB-134/143	T	6	5	1	0	0	0
PCB-135/151/154	T	6	5	1	0.01	0	0.01
PCB-136	T	6	6	0	0	0	0
PCB-137	T	6	4	2	0	0	0
PCB-139/140	T	6	2	4	0	0	0
PCB-141	T	6	5	1	0.01	0	0
PCB-142	T	6	0	6			
PCB-144	T	6	6	0	0	0	0
PCB-145	T	6	0	6			
PCB-146	T	6	5	1	0	0	0
PCB-147/149	T	6	6	0	0.02	0	0.01
PCB-148	T	6	0	6			
PCB-150	T	6	2	4	0	0	0
PCB-152	T	6	0	6			
PCB-153/168	T	6	6	0	0.03	0	0.01
PCB-155	T	6	0	6			
PCB-156/157	T	6	3	3	0	0	0
PCB-158	T	6	5	1	0	0	0
PCB-159	T	6	2	4	0	0	0
PCB-161	T	6	0	6			
PCB-162	T	6	0	6			

Table 3-12
Summary Statistics-Surface Water
(Near-bottom Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detetion
PCB-164	T	6	3	3	0	0	0
PCB-165	T	6	0	6			
PCB-167	T	6	4	2	0	0	0
PCB-169	T	6	0	6			
PCB-170	T	6	3	3	0.01	0	0.01
PCB-171/173	T	6	5	1	0	0	0
PCB-172	T	6	5	1	0	0	0
PCB-174	T	6	6	0	0.01	0	0
PCB-175	T	6	2	4	0	0	0
PCB-176	T	6	5	1	0	0	0
PCB-177	T	6	5	1	0.01	0	0
PCB-178	T	6	5	1	0	0	0
PCB-179	T	6	6	0	0	0	0
PCB-180/193	T	6	5	1	0.02	0	0.01
PCB-181	T	6	2	4	0	0	0
PCB-182	T	6	2	4	0	0	0
PCB-183/185	T	6	5	1	0.01	0	0
PCB-184	T	6	2	4	0	0	0
PCB-186	T	6	2	4	0	0	0
PCB-187	T	6	5	1	0.01	0	0.01
PCB-188	T	6	2	4	0	0	0
PCB-189	T	6	2	4	0	0	0
PCB-190	T	6	5	1	0	0	0
PCB-191	T	6	5	1	0	0	0
PCB-192	T	6	0	6			
PCB-194	T	6	3	3	0	0	0
PCB-195	T	6	5	1	0	0	0
PCB-196	T	6	2	4	0	0	0
PCB-197/200	T	6	4	2	0	0	0

Table 3-12
Summary Statistics-Surface Water
(Near-bottom Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detetion
PCB-198/199	T	6	5	1	0.01	0	0
PCB-201	T	6	2	4	0	0	0
PCB-202	T	6	5	1	0	0	0
PCB-203	T	6	5	1	0	0	0
PCB-204	T	6	2	4	0	0	0
PCB-205	T	6	3	3	0	0	0
PCB-206	T	6	4	2	0	0	0
PCB-207	T	6	3	3	0	0	0
PCB-208	T	6	4	2	0	0	0
PCB-209	T	6	4	2	0.01	0	0
Pesticides (µg/l)							
2,4'-DDD (o,p'-DDD)	T	6	6	0	0	0	0
2,4'-DDE (o,p'-DDE)	T	6	6	0	0	0	0
2,4'-DDT (o,p'-DDT)	T	6	5	1	0	0	0
4,4'-DDD (p,p'-DDD)	T	6	6	0	0	0	0
4,4'-DDE (p,p'-DDE)	T	6	6	0	0	0	0
4,4'-DDT (p,p'-DDT)	T	6	6	0	0	0	0
alpha-Hexachlorocyclohexane (BHC)	T	6	4	2	0	0	0
beta-Hexachlorocyclohexane (BHC)	T	6	4	2	0	0	0
delta-Hexachlorocyclohexane (BHC)	T	6	2	4	0	0	0
Endrin ketone	T	6	2	4	0	0	0
gamma-Hexachlorocyclohexane (BHC) (Lindane)	T	6	5	1	0	0	0
LWG RA Sum 2,4 DDT, DDE, DDD (Calculated U = 1/2)	T	6	6	0	0	0	0
LWG RA Sum 4,4 DDT, DDE, DDD (Calculated U = 1/2)	T	6	6	0	0	0	0
LWG RA Sum DDD (Calculated U = 1/2)	T	6	6	0	0	0	0
LWG RA Sum DDE (Calculated U = 1/2)	T	6	6	0	0	0	0
LWG RA Sum DDT (Calculated U = 1/2)	T	6	6	0	0	0	0
LWG RA Total DDx (Calculated U = 1/2)	T	6	6	0	0	0	0

Table 3-12
Summary Statistics-Surface Water
(Near-bottom Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detetion
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	T	15	14	1	0.62	0	0.05
Acenaphthene	D	1	1	0	0	0	0
Acenaphthene	T	29	28	1	230	0	74.8
Acenaphthylene	D	1	1	0	0	0	0
Acenaphthylene	T	29	15	14	20	0	10.94
Anthracene	D	1	0	1			
Anthracene	T	29	23	6	750	0	225.28
Benzo(a)anthracene	D	1	0	1			
Benzo(a)anthracene	T	29	15	14	650	0.01	258.75
Benzo(a)pyrene	D	1	0	1			
Benzo(a)pyrene	T	29	22	7	160	0	29.06
Benzo(b)fluoranthene	D	1	0	1			
Benzo(b)fluoranthene	T	29	24	5	200	0	34.42
Benzo(g,h,i)perylene	D	1	0	1			
Benzo(g,h,i)perylene	T	29	7	22	63	0.14	23.45
Benzo(k)fluoranthene	D	1	0	1			
Benzo(k)fluoranthene	T	29	15	14	58	0	19.54
Chrysene	D	1	0	1			
Chrysene	T	29	24	5	750	0	176.52
Dibenzo(a,h)anthracene	D	1	0	1			
Dibenzo(a,h)anthracene	T	29	1	28	0.02	0.02	0.02
Fluoranthene	D	1	0	1			
Fluoranthene	T	29	29	0	2400	0.01	574.87
Fluorene	D	1	0	1			
Fluorene	T	29	24	5	120	0	50.02
Indeno(1,2,3-c,d)pyrene	D	1	0	1			
Indeno(1,2,3-c,d)pyrene	T	29	14	15	44	0	6.37

Table 3-12
Summary Statistics-Surface Water
(Near-bottom Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detetion
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	D	1	0	1			
LWG RA Total Benzo(x)fluoranthenes (Calculated U = 1/2)	T	29	24	5	260	0.01	46.68
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	D	1	0	1			
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	T	29	25	4	260	0.02	48.18
LWG RA Total HPAH (Calculated U = 1/2)	D	1	0	1			
LWG RA Total HPAH (Calculated U = 1/2)	T	29	29	0	5700	0.07	1438.11
LWG RA Total LPAH (Calculated U = 1/2)	D	1	1	0	0.05	0.05	0.05
LWG RA Total LPAH (Calculated U = 1/2)	T	29	28	1	2100	0.08	637.05
LWG RA Total PAH (Calculated U = 1/2)	D	1	1	0	0.15	0.15	0.15
LWG RA Total PAH (Calculated U = 1/2)	T	29	29	0	7700	0.1	2065.95
Naphthalene	D	1	0	1			
Naphthalene	T	29	16	13	68	0.03	4.4
Phenanthrene	D	1	1	0	0	0	0
Phenanthrene	T	29	28	1	950	0.01	291.16
Pyrene	D	1	0	1			
Pyrene	T	29	29	0	2200	0.01	517.3
Semivolatile Organics (µg/l)							
Carbazole	T	2	1	1	0.16	0.16	0.16
Dibenzofuran	T	2	1	1	0.05	0.05	0.05
Volatile Organics (µg/l)							
1,1-Dichloroethene	T	22	1	21	0.51	0.51	0.51
1,2-Dichloroethene, cis-	T	22	5	17	279	1.24	83.64
1,2-Dichloroethene, trans-	T	22	1	21	1.46	1.46	1.46
Benzene	T	37	17	20	31.4	0.04	2.43
Ethylbenzene	T	37	9	28	11.4	0.14	2.76
LWG RA Total Xylene (Calculated U = 1/2)	T	37	5	32	5.9	0.34	1.66
m,p-Xylene	T	37	5	32	3.93	0.23	1.12
Naphthalene	T	23	16	7	605	2.46	152.17
o-Xylene	T	37	3	34	1.97	0.11	0.84

Table 3-12
Summary Statistics-Surface Water
(Near-bottom Depth)

Chemical Name	Total Dissolved	Number of Samples Analyzed	Number of Detections	Number of Non-Detections	Maximum Detection	Minimum Detection	Average Detetion
sec-Butylbenzene	T	22	1	21	0.55	0.55	0.55
Toluene	T	37	22	15	4.12	0.06	0.42
Trichloroethene (TCE)	T	22	2	20	194	0.61	97.3
Vinyl chloride	T	22	15	7	73.2	0.32	6.03

Table 3-12
Summary Statistics-Surface Water
(Near-bottom Depth)

Notes:
µg/l = micrograms per liter
mg/kg = milligrams per kilogram
BaPEq = benzo[a]pyrene equivalents
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
BTEX = Benzene, Toluene, Ethylbenzene, Xylene
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyl
pct = percent
RA = Portland Harbor Site risk assessment
su = standard unit
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	DGS-01	DGS-02	DGS-03SC	DGS-04	DGS-05	DGS-06	DGS-07SC
Sample Name:	DGS-01SG-110420	DGS-02SG-110420	DGS-03SC-0001-101005	DGS-04SG-110420	DGS-05SG-110418	DGS-06SG-110420	DGS-07SC-0001-101012
Sample Date:	4/20/2011	4/20/2011	10/5/2010	4/20/2011	4/18/2011	4/20/2011	10/12/2010
Depth interval:	0 - 23 cm	0 - 29 cm	0 - 30.48 cm	0 - 29 cm	0 - 25 cm	0 - 26 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)							
Cyanide, total	**1.52**	**6.83**	**2.51**	**28.3**	**0.479 J**	**3.9**	**78.1**
Metals (mg/kg)							
Zinc	**104**	**129**	**367 J**	**138**	**72**	**87**	**229**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	2.1 U	2 U	1.7 U	1.7 U	14 U	1.5 U	1.9 U
1,2-Dichloroethene, cis-	2.1 U	2 U	1.7 U	1.7 U	14 U	1.5 U	1.9 U
1,2-Dichloroethene, trans-	2.1 U	2 U	1.7 U	1.7 U	14 U	1.5 U	1.9 U
Benzene	2.1 U	2 U	1.7 U	1.7 U	**25**	1.5 U	**2**
Ethylbenzene	2.1 U	2 U	1.7 U	1.7 U	**980**	1.5 U	**2**
Naphthalene	--	--	--	--	--	--	--
o-Xylene	2.1 U	2 U	1.7 U	1.7 U	**230**	1.5 U	**13**
Toluene	2.1 U	2 U	1.7 U	**3.6**	**16**	1.5 U	**2.9**
Trichloroethene (TCE)	2.1 U	2 U	1.7 U	1.7 U	14 U	1.5 U	1.9 U
Vinyl chloride	2.1 U	2 U	1.7 U	1.7 U	14 U	1.5 U	1.9 U
LWG RA Total Xylene (Calculated U = 1/2)	2.1 UT	2 UT	1.7 UT	1.7 UT	**290 T**	1.5 UT	**18 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**240**	**550**	**430**	**1400**	**11000**	**1000**	**9000**
Acenaphthene	**440**	**1100**	**4300**	**3100**	**18000**	**3600**	**8600**
Acenaphthylene	**100**	**330**	**900**	**560**	**910**	**630**	**1200**
Anthracene	**680**	**1200**	**4400**	**6600**	**8200**	**1600**	**12000**
Benzo(a)anthracene	**810**	**4900**	**13000**	**5400**	**6800**	**5500**	**22000**
Benzo(a)pyrene	**1100**	**6600**	**19000**	**5200**	**8700**	**7200**	**26000**
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	**990**	**6100**	**18000**	**4900**	**7200**	**7000**	**12000**
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	**980**	**6300**	**17000**	**8200**	**8100**	**7100**	**28000**
Dibenzo(a,h)anthracene	**170**	**1100**	**4100**	**840**	**1000**	**1200**	**690**
Fluoranthene	**1900**	**7700**	**24000**	**12000**	**29000**	**10000**	**51000**
Fluorene	**290**	**600**	**3300**	**4500**	**7700**	**1500**	**7200**
Indeno(1,2,3-c,d)pyrene	**650**	**3900**	**12000**	**3000**	**4600**	**4000**	**11000**
Naphthalene	**590**	**1200**	**810**	**2800**	**14000**	**3200**	**4400**
Phenanthrene	**1700**	**6500**	**21000**	**7300**	**51000**	**9400**	**61000**
Pyrene	**2400**	**11000**	**38000**	**19000**	**35000**	**15000**	**66000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**1600 T**	**9100 T**	**28000 T**	**7600 T**	**12000 T**	**10000 T**	**33000 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	DGS-01	DGS-02	DGS-03SC	DGS-04	DGS-05	DGS-06	DGS-07SC
Sample Name:	DGS-01SG-110420	DGS-02SG-110420	DGS-03SC-0001-101005	DGS-04SG-110420	DGS-05SG-110418	DGS-06SG-110420	DGS-07SC-0001-101012
Sample Date:	4/20/2011	4/20/2011	10/5/2010	4/20/2011	4/18/2011	4/20/2011	10/12/2010
Depth interval:	0 - 23 cm	0 - 29 cm	0 - 30.48 cm	0 - 29 cm	0 - 25 cm	0 - 26 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)							
Carbazole	**150**	**520**	**1300**	**1500**	**2300**	**440**	**2300**
Dibenzofuran	**100**	**140**	310 U	**640**	**1400**	**240**	**870**
PCB Aroclors (µg/kg)							
Aroclor 1016	4 U	3.8 U	33 U	3.8 U	19 U	3.9 U	32 U
Aroclor 1221	4 U	3.8 U	33 U	3.8 U	19 U	3.9 U	32 UJ
Aroclor 1232	4 U	3.8 U	33 U	3.8 U	19 U	3.9 U	32 U
Aroclor 1242	4 U	3.8 U	33 U	3.8 U	19 U	3.9 U	32 U
Aroclor 1248	**6**	**13**	33 U	11 U	19 U	9.6 U	**100**
Aroclor 1254	**10 J**	**14**	33 U	**26**	19 U	**9.4**	95 U
Aroclor 1260	**7.8**	**11**	33 U	**32**	19 U	**7.4**	**88**
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**32 JT**	**46 T**	33 UT	**71 T**	19 UT	**29 T**	**300 JT**
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	9.9 U	4.8 U	8 U	4.9 U	9.9 U	5 U	8.1 U
beta-Hexachlorocyclohexane (BHC)	9.9 U	16 U	8 U	30 U	9.9 U	9.2 U	40 U
Endrin ketone	20 U	9.7 U	16 U	9.8 U	20 UJ	9.9 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	9.9 U	4.8 U	8 U	4.9 U	9.9 U	5 U	8.1 U
LWG RA Sum DDD (Calculated U = 1/2)	20 UT	**31 T**	16 UT	**53 T**	20 UJT	**20 T**	**94 JT**
LWG RA Sum DDE (Calculated U = 1/2)	20 UT	9.7 UT	**17 JT**	**21 JT**	20 UT	9.9 UT	**40 T**
LWG RA Sum DDT (Calculated U = 1/2)	20 UT	9.7 UT	16 UT	9.8 UT	20 UJT	9.9 UT	**24 T**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**26**	**100**	**300**	**250**	**320**	**140**	**1200 J**
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	DGS-08	DGS-09	DGS-11SC	DGS-12	DGS-12	DGS-13	DGS-16
Sample Name:	DGS-08SG-110418	DGS-09SG-110418	DGS-11SC-0001-101006	DGS-12SG-110418	DGS-62SG-110418	DGS-13SG-110418	DGS-16SG-110418
Sample Date:	4/18/2011	4/18/2011	10/6/2010	4/18/2011	4/18/2011	4/18/2011	4/18/2011
Depth interval:	0 - 25 cm	0 - 27 cm	0 - 30.48 cm	0 - 25 cm	0 - 25 cm	0 - 26 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)							
Cyanide, total	**1.48 J**	**5.6 J**	**4.82**	**0.19 J**	**0.184 J**	**0.634 J**	**0.197 J**
Metals (mg/kg)							
Zinc	**89**	**109**	**103**	**74**	**67**	**65**	**79**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.4 U	1.8 U	1.4 U	1.4 U	--	1.4 U	1.3 U
1,2-Dichloroethene, cis-	1.4 U	1.8 U	1.4 U	1.4 U	--	1.4 U	1.3 U
1,2-Dichloroethene, trans-	1.4 U	1.8 U	1.4 U	1.4 U	--	1.4 U	1.3 U
Benzene	1.4 U	1.8 U	**27**	**9.1**	--	1.4 U	1.3 U
Ethylbenzene	1.4 U	1.8 U	**12**	**1.4**	--	1.4 U	1.3 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	1.4 U	1.8 U	**6.4**	**14**	--	1.4 U	1.3 U
Toluene	1.4 U	1.8 U	**7.6**	1.4 U	--	1.4 U	1.3 U
Trichloroethene (TCE)	1.4 U	1.8 U	1.4 U	1.4 U	--	1.4 U	1.3 U
Vinyl chloride	1.4 U	1.8 U	1.4 U	1.4 U	--	1.4 U	1.3 U
LWG RA Total Xylene (Calculated U = 1/2)	1.4 UT	1.8 UT	**16 T**	**17 T**	--	1.4 UT	1.3 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**50**	**2900**	**6300**	**230**	**210**	**11000**	**34**
Acenaphthene	**3300**	**9100**	**18000**	**900**	**950**	**12000**	**120**
Acenaphthylene	**73**	**9500**	3300 U	**96**	**53**	**1100**	**24**
Anthracene	**410**	**20000**	**9000**	**220**	**190**	**4800**	**49**
Benzo(a)anthracene	**570**	**42000 J**	**8200**	**380**	**300**	**5800**	**170**
Benzo(a)pyrene	**770**	**12000**	**10000**	**560**	**430**	**8300**	**230**
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	**840**	**57000**	**7100**	**450**	**430**	**8200**	**200**
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	**730**	**50000 J**	**10000**	**450**	**360**	**7200**	**240**
Dibenzo(a,h)anthracene	**110**	**8600**	3300 U	**73**	**54**	**980**	**26**
Fluoranthene	**1700**	**150000**	**27000**	**1200**	**1000**	**18000**	**620**
Fluorene	**1100**	**6900**	**8900**	**300**	**350**	**6200**	**40**
Indeno(1,2,3-c,d)pyrene	**490**	**34000**	**5100**	**300**	**270**	**4800**	**130**
Naphthalene	**150**	**9100**	**36000**	**9000**	**7800**	**12000**	**88**
Phenanthrene	**2900**	**120000**	**52000**	**1400**	**1200**	**27000**	**140**
Pyrene	**2100**	**200000 J**	**32000**	**1300**	**1200**	**22000**	**800**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**1100 T**	**35000 JT**	**14000 T**	**780 T**	**600 T**	**11000 T**	**320 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	DGS-08	DGS-09	DGS-11SC	DGS-12	DGS-12	DGS-13	DGS-16
Sample Name:	DGS-08SG-110418	DGS-09SG-110418	DGS-11SC-0001-101006	DGS-12SG-110418	DGS-62SG-110418	DGS-13SG-110418	DGS-16SG-110418
Sample Date:	4/18/2011	4/18/2011	10/6/2010	4/18/2011	4/18/2011	4/18/2011	4/18/2011
Depth interval:	0 - 25 cm	0 - 27 cm	0 - 30.48 cm	0 - 25 cm	0 - 25 cm	0 - 26 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)							
Carbazole	**41**	**760**	3300 U	**110**	**110**	**520**	19 U
Dibenzofuran	**23**	**620**	3300 U	**56**	**66**	**1000**	19 U
PCB Aroclors (µg/kg)							
Aroclor 1016	20 U	19 U	32 U	19 U	19 U	19 U	19 U
Aroclor 1221	20 U	19 U	32 U	19 U	19 U	19 U	19 U
Aroclor 1232	20 U	19 U	32 U	19 U	19 U	19 U	19 U
Aroclor 1242	20 U	19 U	32 U	19 U	19 U	19 U	19 U
Aroclor 1248	20 U	19 U	65 U	19 U	19 U	19 U	19 U
Aroclor 1254	20 U	19 U	32 U	19 U	19 U	19 U	19 U
Aroclor 1260	20 U	19 U	32 U	19 U	19 U	19 U	19 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	20 UT	19 UT	65 UT	19 UT	19 UT	19 UT	19 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	0.95 U	9.5 U	7.9 U	0.96 U	9.6 U	9.6 U	0.96 U
beta-Hexachlorocyclohexane (BHC)	0.95 U	9.5 U	7.9 U	0.96 U	9.6 U	9.6 U	0.96 U
Endrin ketone	1.9 UJ	19 UJ	16 U	1.9 UJ	19 U	19 U	1.9 UJ
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.95 U	9.5 U	7.9 U	0.96 U	9.6 U	9.6 U	0.96 U
LWG RA Sum DDD (Calculated U = 1/2)	**4.2 NJT**	**50 NJT**	**17 JT**	**5.4 JT**	19 UT	19 UT	**3.4 NJT**
LWG RA Sum DDE (Calculated U = 1/2)	1.9 UT	19 UT	16 UT	1.9 UT	19 UT	19 UT	1.9 UT
LWG RA Sum DDT (Calculated U = 1/2)	1.9 UJT	19 UJT	16 UT	**7.2 JT**	19 UT	19 UT	1.9 UJT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**28**	**120**	**450**	**31**	34 U	**810**	**10**
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	DGS-16	DGS-17	DGS-18SC	DGS-19SC	DGS-20	DGS-21	DGS-22SC
Sample Name:	DGS-66SG-110418	DGS-17SG-110418	DGS-18SC-0001-101008	DGS-19SC-0001-101006	DGS-20SG-110419	DGS-21SG-110419	DGS-22SC-0001-101012
Sample Date:	4/18/2011	4/18/2011	10/8/2010	10/6/2010	4/19/2011	4/19/2011	10/12/2010
Depth interval:	0 - 25 cm	0 - 28.5 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 27 cm	0 - 27.5 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)							
Cyanide, total	--	**0.244 J**	**0.483**	**1.94**	0.138 UJ	**1.12 J**	**0.379**
Metals (mg/kg)							
Zinc	--	**59**	**89**	**142**	**67**	**93**	**53**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.3 U	1.2 U	14 U	1.7 U	1.4 U	1.7 U	1.2 U
1,2-Dichloroethene, cis-	1.3 U	1.2 U	14 U	1.7 U	1.4 U	1.7 U	1.2 U
1,2-Dichloroethene, trans-	1.3 U	1.2 U	14 U	1.7 U	1.4 U	1.7 U	1.2 U
Benzene	1.3 U	1.2 U	14 U	**29**	1.4 U	1.7 U	1.2 U
Ethylbenzene	1.3 U	1.2 U	14 U	**160**	1.4 U	1.7 U	1.2 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	1.3 U	1.2 U	**38**	**44**	1.4 U	1.7 U	1.2 U
Toluene	1.3 U	1.2 U	14 U	1.7 U	1.4 U	1.7 U	1.2 U
Trichloroethene (TCE)	1.3 U	1.2 U	14 U	1.7 U	1.4 U	1.7 U	1.2 U
Vinyl chloride	1.3 U	1.2 U	14 U	1.7 U	1.4 U	1.7 U	1.2 U
LWG RA Total Xylene (Calculated U = 1/2)	1.3 UT	1.2 UT	**52 T**	**100 T**	1.4 UT	1.7 UT	1.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	**220**	**28000**	**36000**	**18**	**790**	200 U
Acenaphthene	--	**1100**	**22000**	**44000**	**22**	**4100**	**1000**
Acenaphthylene	--	**110**	**2200**	3300 U	**18**	**460**	**240**
Anthracene	--	**1200**	**22000**	**15000**	**20**	**1400**	**1300**
Benzo(a)anthracene	--	**500**	**21000**	**13000**	**110**	**4400**	**2100**
Benzo(a)pyrene	--	**750**	**20000**	**19000**	**150**	**6600**	**3200**
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	**730**	**16000**	**16000**	**130**	**6900**	**2500**
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	**620**	**21000**	**17000**	**150**	**5500**	**2800**
Dibenzo(a,h)anthracene	--	**100**	**3700**	3300 U	**21**	**880**	200 U
Fluoranthene	--	**1700**	**51000**	**49000**	**200**	**13000**	**5600**
Fluorene	--	**680**	**21000**	**17000**	**10 J**	**2100**	**570**
Indeno(1,2,3-c,d)pyrene	--	**460**	**11000**	**10000**	**88**	**4000**	**1800**
Naphthalene	--	**470**	**9200**	**150000**	**46**	**2100**	**210**
Phenanthrene	--	**2400**	**120000**	**97000**	**44**	**16000**	**4400**
Pyrene	--	**2000**	**63000 J**	**63000**	**500**	**16000**	**6200**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	**1000 T**	**29000 T**	**25000 T**	**210 T**	**9100 T**	**4100 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	DGS-16	DGS-17	DGS-18SC	DGS-19SC	DGS-20	DGS-21	DGS-22SC
Sample Name:	DGS-66SG-110418	DGS-17SG-110418	DGS-18SC-0001-101008	DGS-19SC-0001-101006	DGS-20SG-110419	DGS-21SG-110419	DGS-22SC-0001-101012
Sample Date:	4/18/2011	4/18/2011	10/8/2010	10/6/2010	4/19/2011	4/19/2011	10/12/2010
Depth interval:	0 - 25 cm	0 - 28.5 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 27 cm	0 - 27.5 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)							
Carbazole	--	**390**	**1400**	3300 U	18 U	**160**	200 U
Dibenzofuran	--	**250**	**2700**	3300 U	18 U	**150**	200 U
PCB Aroclors (µg/kg)							
Aroclor 1016	--	19 U	33 U	32 U	19 U	19 U	33 U
Aroclor 1221	--	19 U	33 U	32 U	19 U	19 U	33 UJ
Aroclor 1232	--	19 U	33 U	32 U	19 U	19 U	33 U
Aroclor 1242	--	19 U	33 U	32 U	19 U	19 U	33 U
Aroclor 1248	--	19 U	33 U	64 U	19 U	19 U	33 U
Aroclor 1254	--	19 U	33 U	32 U	19 U	19 U	33 U
Aroclor 1260	--	19 U	33 U	32 U	19 U	19 U	33 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	19 UT	33 UT	64 UT	19 UT	19 UT	33 UJT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	9.3 U	8.1 U	7.9 U	0.97 U	9.7 U	8 U
beta-Hexachlorocyclohexane (BHC)	--	9.3 U	8.1 U	7.9 U	0.97 U	9.7 U	8 U
Endrin ketone	--	19 UJ	16 U	16 U	1.9 UJ	19 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	9.3 U	8.1 U	7.9 U	0.97 U	9.7 U	8 U
LWG RA Sum DDD (Calculated U = 1/2)	--	19 UJT	16 UT	16 UT	1.9 UJT	19 UT	16 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	19 UT	16 UT	16 UT	1.9 UT	19 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	19 UJT	16 UT	16 UT	1.9 UJT	19 UT	**100 T**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	**43**	**5100**	**620**	6.5 U	**120**	**61 J**
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	DGS-23SC	DGS-24SC	DGS-25	DGS-26	DGS-26SC	DGS-28SC	DGS-30
Sample Name:	DGS-23SC-0001-101008	DGS-24SC-0001-101012	DGS-25SG-110419	DGS-26SG-110419	DGS-26SC-0001-101011	DGS-28SC-0001-101007	DGS-30SG-110419
Sample Date:	10/8/2010	10/12/2010	4/19/2011	4/19/2011	10/11/2010	10/7/2010	4/19/2011
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 25 cm	0 - 26.5 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)							
Cyanide, total	0.127 U	**0.458**	0.143 UJ	**0.9 J**	**0.878**	**0.282**	0.16 UJ
Metals (mg/kg)							
Zinc	**49**	**104**	**64**	**89**	**81**	**64**	**69**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.3 U	1.5 U	1.2 U	1.4 U	1.5 U	1.3 U	1.5 U
1,2-Dichloroethene, cis-	1.3 U	1.5 U	**4.1**	1.4 U	**430 J**	**6.2**	1.5 U
1,2-Dichloroethene, trans-	1.3 U	1.5 U	1.2 U	1.4 U	**3.3 J**	1.3 U	1.5 U
Benzene	1.3 U	1.5 U	1.2 U	1.4 U	**92 J**	1.3 U	**11**
Ethylbenzene	1.3 U	1.5 U	1.2 U	1.4 U	**4800 J**	1.3 U	1.5 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	1.3 U	1.5 U	1.2 U	1.4 U	**1400 J**	1.3 U	1.5 U
Toluene	1.3 U	1.5 U	1.2 U	1.4 U	**89 J**	1.3 U	1.5 U
Trichloroethene (TCE)	1.3 U	1.5 U	1.2 U	1.4 U	**13 J**	1.3 U	1.5 U
Vinyl chloride	1.3 U	1.5 U	**2.3**	1.4 U	**120 J**	**1.9**	1.5 U
LWG RA Total Xylene (Calculated U = 1/2)	1.3 UT	1.5 UT	1.2 UT	1.4 UT	**2700 JT**	1.3 UT	1.5 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	62 U	**4800**	18 U	**360**	**140000**	60 U	19 U
Acenaphthene	**170**	**10000**	**950**	**7900**	**220000**	60 U	**28**
Acenaphthylene	62 U	**790**	18 U	**220**	**5800**	60 U	19 U
Anthracene	62 U	**7000**	**24**	**1800**	**79000**	60 U	**86**
Benzo(a)anthracene	62 U	**11000**	**24**	**1400**	**49000**	60 U	**77**
Benzo(a)pyrene	62 U	**14000**	**19**	**1900**	**58000**	60 U	19 U
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	62 U	**9400**	**20**	**1500**	**38000**	60 U	19 U
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	62 U	**14000**	**32**	**1900**	**61000**	**60**	**94**
Dibenzo(a,h)anthracene	62 U	**510**	18 U	**220**	**5700**	60 U	19 U
Fluoranthene	62 U	**27000**	**57**	**5000**	**190000**	**120**	**280**
Fluorene	**76**	**5200**	**63**	**3100**	**91000**	60 U	**12 J**
Indeno(1,2,3-c,d)pyrene	62 U	**7900**	**13 J**	**1000**	**28000**	60 U	19 U
Naphthalene	62 U	**2000**	**24**	**780**	**530000**	60 U	**15 J**
Phenanthrene	62 U	**31000**	**21**	**12000**	**440000**	60 U	**27**
Pyrene	62 UJ	**28000**	**520**	**5800**	**220000**	**370**	**2800**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	62 UT	**18000 T**	**35 JT**	**2600 T**	**78000 T**	**73 T**	**29 JT**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	DGS-23SC	DGS-24SC	DGS-25	DGS-26	DGS-26SC	DGS-28SC	DGS-30
Sample Name:	DGS-23SC-0001-101008	DGS-24SC-0001-101012	DGS-25SG-110419	DGS-26SG-110419	DGS-26SC-0001-101011	DGS-28SC-0001-101007	DGS-30SG-110419
Sample Date:	10/8/2010	10/12/2010	4/19/2011	4/19/2011	10/11/2010	10/7/2010	4/19/2011
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 25 cm	0 - 26.5 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)							
Carbazole	**67**	**1800**	18 U	**110**	**14000**	60 U	19 U
Dibenzofuran	62 U	**860**	18 U	**120**	**13000**	60 U	19 U
PCB Aroclors (µg/kg)							
Aroclor 1016	32 U	32 U	19 U	18 U	56 U	32 U	18 U
Aroclor 1221	32 U	32 UJ	19 U	18 U	56 UJ	32 U	18 U
Aroclor 1232	32 U	32 U	19 U	18 U	56 U	32 U	18 U
Aroclor 1242	32 U	32 U	19 U	18 U	56 U	32 U	18 U
Aroclor 1248	32 U	32 U	19 U	18 U	56 U	32 U	18 U
Aroclor 1254	32 U	32 U	19 U	18 U	56 U	32 U	18 U
Aroclor 1260	32 U	32 U	19 U	18 U	56 U	32 U	18 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	32 UJT	19 UT	18 UT	56 UJT	32 UT	18 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	1.6 U	7.8 U	0.94 U	9.2 U	15 U	1.6 U	0.94 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	7.8 U	0.94 U	9.2 U	15 U	1.6 U	0.94 U
Endrin ketone	3.2 U	16 U	1.9 U	18 U	29 U	3.2 U	1.9 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	7.8 U	0.94 U	9.2 U	15 U	1.6 U	0.94 U
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	**30 T**	1.9 UT	18 UT	29 UT	3.2 UT	**6 T**
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	16 UT	1.9 UT	18 UT	29 UT	3.2 UT	1.9 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	**80 T**	**8.4 T**	18 UT	29 UT	**11 T**	**17 T**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	6.8 U	**280 J**	6.5 U	**280**	**3800**	**18**	**28**
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	DGS-31	DGS-32SC	DGS-33	DGS-34	DGS-35	DGS-36SC	DGS-37SC
Sample Name:	DGS-31SG-110419	DGS-32SC-0001-101011	DGS-33SG-110419	DGS-34SG-110419	DGS-35SG-110419	DGS-36SC-0001-101012	DGS-37SC-0001-101011
Sample Date:	4/19/2011	10/11/2010	4/19/2011	4/19/2011	4/19/2011	10/12/2010	10/11/2010
Depth interval:	0 - 27 cm	0 - 30.48 cm	0 - 25 cm	0 - 26 cm	0 - 26.5 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)							
Cyanide, total	**1.7 J**	**1.25**	0.139 UJ	0.183 UJ	**4.32 J**	**58.7**	**1.11**
Metals (mg/kg)							
Zinc	**128**	**128**	**75**	**166**	**174**	**146**	**187**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.9 U	2 U	1.2 U	1.8 U	2.1 U	1.8 U	1.6 U
1,2-Dichloroethene, cis-	1.9 U	2 U	1.2 U	1.8 U	2.1 U	1.8 U	1.6 U
1,2-Dichloroethene, trans-	1.9 U	2 U	1.2 U	1.8 U	2.1 U	1.8 U	1.6 U
Benzene	**18**	2 U	1.2 U	1.8 U	2.1 U	**13**	1.6 U
Ethylbenzene	**11**	**3.1**	1.2 U	1.8 U	2.1 U	**110**	1.6 U
Naphthalene	**--**	**--**	**--**	**--**	**--**	**--**	**--**
o-Xylene	**23**	**12**	1.2 U	1.8 U	2.1 U	**14**	1.6 U
Toluene	**3.4**	2 U	1.2 U	1.8 U	2.1 U	**9.7**	1.6 U
Trichloroethene (TCE)	1.9 U	2 U	1.2 U	1.8 U	2.1 U	1.8 U	1.6 U
Vinyl chloride	1.9 U	2 U	1.2 U	1.8 U	2.1 U	1.8 U	1.6 U
LWG RA Total Xylene (Calculated U = 1/2)	**33 T**	**22 T**	1.2 UT	1.8 UT	2.1 UT	**24 T**	1.6 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**560**	**1300**	**16 J**	**2200**	**830**	**3400**	200 U
Acenaphthene	**19000**	**11000**	**49**	**23000**	**1800**	**13000**	**2900**
Acenaphthylene	**190**	**1500**	18 U	**110 J**	**240**	**1200**	200 U
Anthracene	**1600**	**11000**	**22**	**16000**	**1300**	**10000**	**1100**
Benzo(a)anthracene	**1100**	**13000**	**45**	**4300**	**2500**	**12000**	**1800**
Benzo(a)pyrene	**1300**	**12000**	**56**	**1600**	**2600**	**14000**	**1700**
Benzo(b)fluoranthene	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Benzo(g,h,i)perylene	**960**	**6300**	**56**	**560**	**2000**	**11000**	**1200**
Benzo(k)fluoranthene	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Chrysene	**1500**	**14000**	**65**	**4400**	**3500**	**16000**	**2400**
Dibenzo(a,h)anthracene	**160**	**400**	18 U	**160 J**	**340**	**480**	200 U
Fluoranthene	**4100**	**40000**	**120**	**28000**	**8000**	**43000**	**6400**
Fluorene	**9800**	**9000**	**21**	**20000**	**1400**	**12000**	**1800**
Indeno(1,2,3-c,d)pyrene	**640**	**5400**	**37**	**480**	**1300**	**8700**	**920**
Naphthalene	**810**	**1000**	**34**	**2400**	**1600**	**19000**	**280**
Phenanthrene	**14000**	**68000**	**100**	**65000**	**10000**	**40000**	**7400**
Pyrene	**4300**	**46000**	**190**	**21000**	**9100**	**48000**	**6100**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**1800 T**	**16000 T**	**82 T**	**2500 JT**	**3700 T**	**19000 T**	**2300 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	DGS-31	DGS-32SC	DGS-33	DGS-34	DGS-35	DGS-36SC	DGS-37SC
Sample Name:	DGS-31SG-110419	DGS-32SC-0001-101011	DGS-33SG-110419	DGS-34SG-110419	DGS-35SG-110419	DGS-36SC-0001-101012	DGS-37SC-0001-101011
Sample Date:	4/19/2011	10/11/2010	4/19/2011	4/19/2011	4/19/2011	10/12/2010	10/11/2010
Depth interval:	0 - 27 cm	0 - 30.48 cm	0 - 25 cm	0 - 26 cm	0 - 26.5 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)							
Carbazole	**1400**	**240**	18 U	**1400**	**190**	**1300**	200 U
Dibenzofuran	**310**	**1700**	18 U	**7300**	**250**	**2100**	**1100**
PCB Aroclors (µg/kg)							
Aroclor 1016	19 U	32 U	19 U	19 U	20 U	32 U	32 U
Aroclor 1221	19 U	32 UJ	19 U	19 U	20 U	32 UJ	32 UJ
Aroclor 1232	19 U	32 U	19 U	19 U	20 U	32 U	32 U
Aroclor 1242	19 U	32 U	19 U	19 U	20 U	32 U	32 U
Aroclor 1248	**34**	**93**	19 U	**56**	20 U	79 U	190 U
Aroclor 1254	**38**	81 U	19 U	**60**	78 U	130 U	160 U
Aroclor 1260	**25**	**48**	19 U	**46**	**35**	95 U	190 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**130 T**	**250 JT**	19 UT	**200 T**	**120 T**	130 UJT	190 UJT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	9.4 U	8.2 U	0.95 U	9.5 U	9.8 U	7.8 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	9.4 U	8.2 U	0.95 U	9.5 U	9.8 U	170 U	13 U
Endrin ketone	19 U	16 U	1.9 U	19 U	20 U	16 U	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	9.4 U	8.2 U	0.95 U	9.5 U	9.8 U	7.8 U	8.9 U
LWG RA Sum DDD (Calculated U = 1/2)	19 UT	**32 JT**	**2.9 T**	19 UT	**160 T**	**96 T**	**110 T**
LWG RA Sum DDE (Calculated U = 1/2)	19 UT	16 UT	1.9 UT	19 UT	**52 T**	**26 JT**	**28 T**
LWG RA Sum DDT (Calculated U = 1/2)	19 UT	**26 T**	**4.9 T**	19 UT	**35 T**	16 UT	**290 T**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**86**	**930**	**13**	**190**	**170**	**1100 J**	**150**
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	DGS-46	DGS-47	DGS-47	DGS-48	DGS-48	DGS-49	DGS-50
Sample Name:	DGS-46SG-110420	DGS-47SG-110420	DGS-97SG-110420	DGS-48SG-110420	DGS-98SG-110420	DGS-49SG-110420	DGS-50SG-110420
Sample Date:	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Depth interval:	0 - 23.8 cm	0 - 24.5 cm	0 - 24.5 cm	0 - 25 cm	0 - 25 cm	0 - 24 cm	0 - 24.5 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)							
Cyanide, total	**0.54 J**	**5.81 J**	**2.56 J**	0.133 U	--	0.135 U	0.13 UJ
Metals (mg/kg)							
Zinc	--	--	--	**59**	**56**	**54**	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	2 U	2.3 U	2.2 U	1.2 U	--	1.2 U	1.2 U
1,2-Dichloroethene, cis-	2 U	2.3 U	2.2 U	1.2 U	--	1.2 U	1.2 U
1,2-Dichloroethene, trans-	2 U	2.3 U	2.2 U	1.2 U	--	1.2 U	1.2 U
Benzene	2 U	2.3 U	2.2 U	1.2 U	--	1.2 U	1.2 U
Ethylbenzene	2 U	2.3 U	2.2 U	1.2 U	--	1.2 U	1.2 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	2 U	2.3 U	2.2 U	1.2 U	--	1.2 UJ	1.2 U
Toluene	2 U	2.3 U	2.2 U	1.2 U	--	1.2 U	1.2 U
Trichloroethene (TCE)	2 U	2.3 U	2.2 U	1.2 U	--	1.2 U	1.2 U
Vinyl chloride	2 U	2.3 U	2.2 U	1.2 U	--	1.2 U	1.2 U
LWG RA Total Xylene (Calculated U = 1/2)	2 UT	2.3 UT	2.2 UT	1.2 UT	--	1.2 UJT	1.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	--	--	**11 J**	**330**	19 U	--
Acenaphthene	--	--	--	**240**	**2000**	**200**	--
Acenaphthylene	--	--	--	**63**	**560**	**75**	--
Anthracene	--	--	--	**130**	**2100**	**130**	--
Benzo(a)anthracene	--	--	--	**410**	**4600**	**530**	--
Benzo(a)pyrene	--	--	--	**580**	**4800**	**720**	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	**430**	**3700 J**	**620**	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	**530**	**5800**	**540**	--
Dibenzo(a,h)anthracene	--	--	--	**66**	**760**	**87**	--
Fluoranthene	--	--	--	**1200**	**14000 J**	**1600**	--
Fluorene	--	--	--	**100**	**1400**	**55**	--
Indeno(1,2,3-c,d)pyrene	--	--	--	**290**	**2500**	**410**	--
Naphthalene	--	--	--	**43**	**1100**	**17 J**	--
Phenanthrene	--	--	--	**260**	**9400**	**20**	--
Pyrene	--	--	--	**1600**	**17000**	**2600**	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	--	--	**780 T**	**6800 T**	**980 T**	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	DGS-46	DGS-47	DGS-47	DGS-48	DGS-48	DGS-49	DGS-50
Sample Name:	DGS-46SG-110420	DGS-47SG-110420	DGS-97SG-110420	DGS-48SG-110420	DGS-98SG-110420	DGS-49SG-110420	DGS-50SG-110420
Sample Date:	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Depth interval:	0 - 23.8 cm	0 - 24.5 cm	0 - 24.5 cm	0 - 25 cm	0 - 25 cm	0 - 24 cm	0 - 24.5 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	19 U	**47 J**	19 U	--
Dibenzofuran	--	--	--	19 U	**68**	19 U	--
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	3.6 U	20 U	3.9 U	--
Aroclor 1221	--	--	--	3.6 U	20 U	3.9 U	--
Aroclor 1232	--	--	--	3.6 U	20 U	3.9 U	--
Aroclor 1242	--	--	--	3.6 U	20 U	3.9 U	--
Aroclor 1248	--	--	--	3.6 U	20 U	3.9 U	--
Aroclor 1254	--	--	--	3.6 U	20 U	3.9 U	--
Aroclor 1260	--	--	--	3.6 U	20 U	3.9 U	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	3.6 UT	20 UT	3.9 UT	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	0.9 U	0.95 U	0.95 U	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	0.9 U	0.95 U	0.95 U	--
Endrin ketone	--	--	--	1.8 U	1.9 UJ	1.9 U	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	0.9 U	0.95 U	0.95 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	1.8 UT	1.9 UJT	1.9 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	1.8 UT	1.9 UJT	1.9 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	1.8 UT	1.9 UJT	1.9 UT	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	**7.8 J**	**11**	**6 J**	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	DGS-51	DGS-52	DGS-53	GP-25	GP-26	GP-27	GP-28
Sample Name:	DGS-51SG-110421	DGS-52SG-110421	DGS-53SG-110420	GP25-S-1	GP26-S-1	GP27-S-1	GP28-S-1
Sample Date:	4/21/2011	4/21/2011	4/20/2011	9/30/2004	10/5/2004	10/8/2004	10/13/2004
Depth interval:	0 - 25 cm	0 - 25 cm	0 - 24 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)							
Cyanide, total	0.136 UJ	0.14 UJ	**0.625 J**	--	--	--	--
Metals (mg/kg)							
Zinc	--	--	**118**	--	--	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.1 U	1.3 U	1.6 U	--	--	--	--
1,2-Dichloroethene, cis-	1.1 U	1.3 U	1.6 U	13.1 U	17.7 U	2170 U	13.1 U
1,2-Dichloroethene, trans-	1.1 U	1.3 U	1.6 U	--	--	--	--
Benzene	1.1 U	1.3 U	1.6 U	13.1 U	17.7 U	2170 U	13.1 U
Ethylbenzene	1.1 U	1.3 U	1.6 U	13.1 U	17.7 U	2170 U	13.1 U
Naphthalene	--	--	--	**26.2**	**41.5**	2170 U	8.74 U
o-Xylene	1.1 U	1.3 U	1.6 U	13.1 U	17.7 U	2170 U	13.1 U
Toluene	1.1 U	1.3 U	1.6 U	13.1 U	17.7 U	2170 U	13.1 U
Trichloroethene (TCE)	1.1 U	1.3 U	1.6 U	13.1 U	17.7 U	2170 U	13.1 U
Vinyl chloride	1.1 U	1.3 U	1.6 U	13.1 U	17.7 U	2170 U	13.1 U
LWG RA Total Xylene (Calculated U = 1/2)	1.1 UT	1.3 UT	1.6 UT	26.2 UT	35.4 UT	4350 UT	26.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	--	**800 J**	87.4 U	**1310**	145 U	87.4 U
Acenaphthene	--	--	**8500**	**44.6**	**127000**	**4140**	**28**
Acenaphthylene	--	--	--	**127**	**7930**	**717**	**14**
Anthracene	--	--	**1800**	**97.9**	**82000**	**5250**	8.74 U
Benzo(a)anthracene	--	--	**770**	**393**	**55600**	**5680**	**35.8**
Benzo(a)pyrene	--	--	**440**	**740**	**59700**	**6810**	**92.2**
Benzo(b)fluoranthene	--	--	--	**649**	**48400**	**5640**	**75.1**
Benzo(g,h,i)perylene	--	--	**280 J**	**595**	**31300**	**3720**	**110**
Benzo(k)fluoranthene	--	--	--	**214**	**13600**	**1870**	**22.7**
Chrysene	--	--	**1000**	**519**	**49700**	**5420**	**33.2**
Dibenzo(a,h)anthracene	--	--	**53**	**101**	**5500**	**710**	**12.2**
Fluoranthene	--	--	**6400**	**766**	**186000**	**14400**	**131**
Fluorene	--	--	**10000**	**27.1**	**76500**	**2390**	8.74 U
Indeno(1,2,3-c,d)pyrene	--	--	**210**	**462**	**24400**	**2910**	**50.7**
Naphthalene	--	--	**1300**	13.1 U	**26.2**	**225**	13.1 U
Phenanthrene	--	--	**29000**	**196**	**405000**	**22100**	**20.1**
Pyrene	--	--	**5100**	**904**	**215000**	**18400**	**152**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	--	**670 T**	**990 T**	**78000 T**	**9000 T**	**121 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	DGS-51	DGS-52	DGS-53	GP-25	GP-26	GP-27	GP-28
Sample Name:	DGS-51SG-110421	DGS-52SG-110421	DGS-53SG-110420	GP25-S-1	GP26-S-1	GP27-S-1	GP28-S-1
Sample Date:	4/21/2011	4/21/2011	4/20/2011	9/30/2004	10/5/2004	10/8/2004	10/13/2004
Depth interval:	0 - 25 cm	0 - 25 cm	0 - 24 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)							
Carbazole	--	--	**140 J**	87.4 U	**861**	145 U	87.4 U
Dibenzofuran	--	--	**640 J**	87.4 U	**1100**	145 U	87.4 U
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	19 U	--	--	--	--
Aroclor 1221	--	--	19 U	--	--	--	--
Aroclor 1232	--	--	19 U	--	--	--	--
Aroclor 1242	--	--	19 U	--	--	--	--
Aroclor 1248	--	--	19 U	--	--	--	--
Aroclor 1254	--	--	19 U	--	--	--	--
Aroclor 1260	--	--	19 U	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	19 UT	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	0.96 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	0.96 U	--	--	--	--
Endrin ketone	--	--	1.9 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	**1.4**	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	3.1 UT	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	**9 T**	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	1.9 UT	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	**120**	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	GP-29	GP-30	GP-31	GP-32	GS-04-A-PG	GS-07-B-PG
Sample Name:	GP29-S-1	GP30-S-1	GP31-S-1	GP32-S-1	LWG2-PG-GS4A	LWG2-PG-GS7B
Sample Date:	10/20/2004	10/22/2004	10/26/2004	10/28/2004	12/1/2005	12/1/2005
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 26 cm	0 - 24 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)						
Cyanide, total	--	--	--	--	**2.4 J**	**0.4 J**
Metals (mg/kg)						
Zinc	--	--	--	--	**113**	**97.4**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	--	--	--	--	0.58 U	0.14 U
1,2-Dichloroethene, cis-	26.1 U	24 U	22.2 U	22.1 U	0.44 U	0.11 U
1,2-Dichloroethene, trans-	--	--	--	--	1.4 U	0.32 U
Benzene	**275**	24 U	**118**	**68.4**	**16**	0.065 U
Ethylbenzene	26.1 U	24 U	22.2 U	**69.2**	**220**	0.12 U
Naphthalene	**318**	48.1 U	**327**	**54.5**	--	--
o-Xylene	**29.9**	24 U	22.2 U	22.1 U	**170**	0.13 U
Toluene	26.1 U	24 U	22.2 U	22.1 U	11 U	0.25 U
Trichloroethene (TCE)	26.1 U	24 U	22.2 U	22.1 U	0.44 U	0.11 U
Vinyl chloride	26.1 U	24 U	22.2 U	22.1 U	0.6 U	0.15 U
LWG RA Total Xylene (Calculated U = 1/2)	**56 T**	48 UT	44.4 UT	44.2 UT	**260 T**	0.22 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	**1470**	160 U	**1780**	147 U	**22000**	**1000**
Acenaphthene	**686**	**65.7**	**1820**	**5610**	**59000**	**8800**
Acenaphthylene	17.4 U	16 U	14.8 U	**35.3**	**5400**	**4200**
Anthracene	17.4 U	**22.4**	14.8 U	**177**	**37000**	**14000**
Benzo(a)anthracene	**27.9**	**68.9**	**293**	**85.4**	**52000**	**28000**
Benzo(a)pyrene	**43.5**	**92.9**	**416**	**107**	**85000**	**43000**
Benzo(b)fluoranthene	**41.8**	**86.5**	**355**	**115**	**48000**	**25000**
Benzo(g,h,i)perylene	**34.8**	**57.7**	**296**	**80.9**	**65000**	**31000**
Benzo(k)fluoranthene	17.4 U	**24**	14.8 U	**39.7**	**46000**	**22000**
Chrysene	**26.1**	**62.5**	**366**	**78**	**59000**	**32000**
Dibenzo(a,h)anthracene	17.4 U	16 U	14.8 U	**16.2**	**6100**	**3000**
Fluoranthene	**48.7**	**160**	**683**	**311**	**160000**	**86000**
Fluorene	17.4 U	**32.1**	**661**	**2630**	**30000**	**5600**
Indeno(1,2,3-c,d)pyrene	**26.1**	**44.9**	**222**	**61.8**	**63000**	**31000**
Naphthalene	**310**	16 U	**77.2**	**44.6**	**15000**	**3800**
Phenanthrene	**31.3**	**80.1**	**595**	**1670**	**180000**	**54000**
Pyrene	**50.5**	**199**	**839**	**269**	**210000**	**110000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**61.9 T**	**120 T**	**511 T**	**150 T**	**110000 T**	**55000 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	GP-29	GP-30	GP-31	GP-32	GS-04-A-PG	GS-07-B-PG
Sample Name:	GP29-S-1	GP30-S-1	GP31-S-1	GP32-S-1	LWG2-PG-GS4A	LWG2-PG-GS7B
Sample Date:	10/20/2004	10/22/2004	10/26/2004	10/28/2004	12/1/2005	12/1/2005
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 26 cm	0 - 24 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)						
Carbazole	**647**	160 U	**733**	147 U	**650**	110 U
Dibenzofuran	174 U	160 U	148 U	147 U	**3600**	**510**
PCB Aroclors (µg/kg)						
Aroclor 1016	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	**10000 J**	**1700 J**
Residual Range Hydrocarbons	--	--	--	--	**13000 J**	**2300 J**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	**GS-07-D-PG**	**LW2-C255**	**LW2-C269**	**LW2-C299**	**LW2-C300-2**	**LW2-C301**
Sample Name:	**LWG2-PG-GS7D**	**LW2-C255-A**	**LW2-C269-A**	**LW2-C299-A**	**LW2-C300-A**	**LW2-C301-A**
Sample Date:	**12/1/2005**	**10/27/2004**	**10/28/2004**	**9/22/2004**	**10/27/2004**	**11/8/2004**
Depth interval:	**0 - 30 cm**	**0 - 30 cm**	**0 - 30 cm**	**0 - 30 cm**	**0 - 30 cm**	**0 - 30 cm**
Analysis Matrix:	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**
Conventional Parameters (mg/kg)						
Cyanide, total	**0.9 J**	--	--	--	--	--
Metals (mg/kg)						
Zinc	**126**	--	--	--	--	**126 T**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	0.18 U	--	--	--	--	--
1,2-Dichloroethene, cis-	**0.21 J**	--	--	--	--	--
1,2-Dichloroethene, trans-	0.42 U	--	--	--	--	--
Benzene	**0.28 J**	--	--	--	--	--
Ethylbenzene	0.16 U	--	--	--	--	--
Naphthalene	--	--	--	--	--	--
o-Xylene	0.17 U	--	--	--	--	--
Toluene	0.33 U	--	--	--	--	--
Trichloroethene (TCE)	0.14 U	--	--	--	--	--
Vinyl chloride	**0.34 J**	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.29 UT	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	**1300**	--	--	--	--	--
Acenaphthene	**2400**	--	--	--	--	--
Acenaphthylene	**1200**	--	--	--	--	--
Anthracene	**2900**	--	--	--	--	--
Benzo(a)anthracene	**8600**	--	--	--	--	--
Benzo(a)pyrene	**14000**	--	--	--	--	--
Benzo(b)fluoranthene	**8400**	--	--	--	--	--
Benzo(g,h,i)perylene	**11000**	--	--	--	--	--
Benzo(k)fluoranthene	**7200**	--	--	--	--	--
Chrysene	**10000**	--	--	--	--	--
Dibenzo(a,h)anthracene	**1100**	--	--	--	--	--
Fluoranthene	**16000**	--	--	--	--	--
Fluorene	**1400**	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	**11000**	--	--	--	--	--
Naphthalene	**3700**	--	--	--	--	--
Phenanthrene	**9200**	--	--	--	--	--
Pyrene	**21000**	--	--	--	--	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**18000 T**	--	--	--	--	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	GS-07-D-PG	LW2-C255	LW2-C269	LW2-C299	LW2-C300-2	LW2-C301
Sample Name:	LWG2-PG-GS7D	LW2-C255-A	LW2-C269-A	LW2-C299-A	LW2-C300-A	LW2-C301-A
Sample Date:	12/1/2005	10/27/2004	10/28/2004	9/22/2004	10/27/2004	11/8/2004
Depth interval:	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)						
Carbazole	290 U	--	--	--	--	--
Dibenzofuran	**210 J**	--	--	--	--	--
PCB Aroclors (µg/kg)						
Aroclor 1016	--	--	5 U	77 U	1.9 U	--
Aroclor 1221	--	--	5 U	20 U	1.9 U	--
Aroclor 1232	--	--	5 U	20 U	1.9 U	--
Aroclor 1242	--	--	5 U	54 U	**93**	--
Aroclor 1248	--	--	5 U	38 U	1.9 U	--
Aroclor 1254	--	--	65 U	37 U	**110 J**	--
Aroclor 1260	--	--	23 U	71 U	**100**	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	65 UT	77 UT	**310 JT**	--
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
alpha-Hexachlorocyclohexane (BHC)	--	--	--	1.5 U	0.17 U	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	2.2 U	0.65 U	--
Endrin ketone	--	--	--	**9.9 NJ**	1.1 U	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	3 U	0.16 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	**30 NJT**	**7.5 JNT**	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	**9.9 T**	**4.6 T**	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	**20 JT**	**7.4 JT**	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**1050 JT**	--	--	--	--	--
Residual Range Hydrocarbons	**1550 JT**	--	--	--	--	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	LW2-C312	LW2-C525	LW2-C527	LW2-C528	LW2-G248	LW2-G252
Sample Name:	LW2-C312-A	LW2-C525-A	LW2-C527-A	LW2-C528-A	LW2-G248	LW2-G252
Sample Date:	10/19/2005	10/26/2005	10/26/2005	10/26/2005	7/30/2004	8/12/2004
Depth interval:	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 26 cm	0 - 27 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)						
Cyanide, total	--	--	--	--	--	--
Metals (mg/kg)						
Zinc	194	172	120	111	61.1	79.9
Volatile Organics (µg/kg)						
1,1-Dichloroethene	0.17 U	0.17 U	0.2 U	0.2 U	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--
1,2-Dichloroethene, trans-	0.38 U	0.38 U	0.45 U	0.45 U	--	--
Benzene	**0.26 J**	0.077 U	0.092 U	0.093 U	--	--
Ethylbenzene	0.14 U	0.14 U	0.17 U	0.17 U	--	--
Naphthalene	--	--	--	--	--	--
o-Xylene	0.15 U	0.15 U	0.18 U	0.18 U	--	--
Toluene	0.86 U	0.3 U	0.36 U	0.36 U	--	--
Trichloroethene (TCE)	0.13 U	0.13 U	0.15 U	0.15 U	--	--
Vinyl chloride	**0.57 J**	0.17 U	0.2 U	0.21 U	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.26 UT	0.26 UT	0.31 UT	0.31 UT	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	120	1500	170	47	4.7	13
Acenaphthene	4000	16000	400	81	8.6	56
Acenaphthylene	300	1600	260	64	8.9	37
Anthracene	3300	20000	710	210	19	46
Benzo(a)anthracene	1800	62000	2800	630	43	240
Benzo(a)pyrene	1900	85000	3900	830	80	420
Benzo(b)fluoranthene	1100	55000	2900	630	71	330
Benzo(g,h,i)perylene	1400	53000	3400	730	73	330
Benzo(k)fluoranthene	1300	51000	2300	490	22	100
Chrysene	2200	67000	3500	850	67	290
Dibenzo(a,h)anthracene	140	7300	390	88	7.4	42
Fluoranthene	6700	140000	5800	1300	75	370
Fluorene	2800	6100	350	77	5.5	22
Indeno(1,2,3-c,d)pyrene	1400	59000	3300	710	65	310
Naphthalene	250	3200	490	110	11	33
Phenanthrene	8400	76000	3100	550	36	130
Pyrene	7000	160000	6900	1600	97	530
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2500 T	110000 T	5200 T	1100 T	110 T	550 T

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	LW2-C312	LW2-C525	LW2-C527	LW2-C528	LW2-G248	LW2-G252
Sample Name:	LW2-C312-A	LW2-C525-A	LW2-C527-A	LW2-C528-A	LW2-G248	LW2-G252
Sample Date:	10/19/2005	10/26/2005	10/26/2005	10/26/2005	7/30/2004	8/12/2004
Depth interval:	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 26 cm	0 - 27 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)						
Carbazole	**51**	**14000**	**240**	**37**	**3.6 J**	11 U
Dibenzofuran	**420**	**1600**	**76**	**20**	**2.2 J**	**4.5**
PCB Aroclors (µg/kg)						
Aroclor 1016	2.2 U	34 U	9.4 U	2.7 U	2.4 U	1.3 U
Aroclor 1221	2.2 U	160 U	140 U	2.7 U	4.5 U	2.5 U
Aroclor 1232	2.2 U	76 U	38 U	2.7 U	4.1 U	2.3 U
Aroclor 1242	2.2 U	73 U	19 U	2.7 U	2.5 U	1.4 U
Aroclor 1248	**54**	46 U	6 U	**6.7**	3.2 U	1.8 U
Aroclor 1254	45 U	31 U	25 U	**23**	1.5 U	0.82 U
Aroclor 1260	**74 J**	**34 J**	13 U	**11**	1.9 U	**4.1 J**
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**--**	**250 JT**	140 UT	**49 T**	4.5 UT	**10 JT**
PCB Congeners (µg/kg)						
PCB-077	**0.322**	**--**	**--**	**--**	**--**	**--**
PCB-081	**0.0233**	**--**	**--**	**--**	**--**	**--**
PCB-105	**1.27**	**--**	**--**	**--**	**--**	**--**
PCB-114	**0.0879**	**--**	**--**	**--**	**--**	**--**
PCB-118	**--**	**--**	**--**	**--**	**--**	**--**
PCB-123	**0.0628**	**--**	**--**	**--**	**--**	**--**
PCB-126	**0.0267**	**--**	**--**	**--**	**--**	**--**
PCB-156	**0.528**	**--**	**--**	**--**	**--**	**--**
PCB-157	**0.096**	**--**	**--**	**--**	**--**	**--**
PCB-167	**0.199**	**--**	**--**	**--**	**--**	**--**
PCB-169	**0.00167 J**	**--**	**--**	**--**	**--**	**--**
PCB-189	**0.073**	**--**	**--**	**--**	**--**	**--**
LWG RA Total PCB Congener (Calculated U = 1/2)	**150 JT**	**--**	**--**	**--**	**--**	**--**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**0.0028 JT**	**--**	**--**	**--**	**--**	**--**
Pesticides (µg/kg)						
alpha-Hexachlorocyclohexane (BHC)	0.16 U	5.1 U	2 U	0.19 U	**0.152 J**	**1.42 J**
beta-Hexachlorocyclohexane (BHC)	0.24 U	3 U	2.9 U	0.47 U	**0.099 J**	0.0368 U
Endrin ketone	**2.1 NJ**	**28**	1.4 U	**0.6 NJ**	0.0288 U	0.032 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.1 U	12 U	3.8 U	0.44 U	0.0748 U	0.0831 U
LWG RA Sum DDD (Calculated U = 1/2)	**24 JT**	**55 NJT**	**27 JT**	**9.2 T**	**0.743 JT**	**2.47 JNT**
LWG RA Sum DDE (Calculated U = 1/2)	**6 JT**	**7.5 T**	**11 NJT**	**3.1 JT**	**0.431 T**	**0.798 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	**240 JT**	**26 T**	**190 JT**	**7 T**	**0.244 T**	**0.863 JT**
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**500 JT**	**1800 J**	**270 J**	**140 J**	**--**	**32.5 JT**
Residual Range Hydrocarbons	**730 JT**	**4400 J**	**1000 J**	**660 J**	**--**	**135 JT**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	LW2-G253	LW2-G256	LW2-G258	LW2-G259	LW2-G261	LW2-G263	LW2-G264
Sample Name:	LW2-G253	LW2-G256	LW2-G258	LW2-G259	LW2-G261	LW2-G263	LW2-G264
Sample Date:	8/13/2004	8/19/2004	8/19/2004	8/12/2004	8/19/2004	8/30/2004	8/30/2004
Depth interval:	0 - 27 cm	0 - 27 cm	0 - 27 cm	0 - 28 cm	0 - 25 cm	0 - 25 cm	0 - 30 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	**58**	**74.2 T**	**53.7**	**208**	**44.8**	**111 T**	**160**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	0.13 U	--	--	--	0.13 U	0.19 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	0.29 U	--	--	--	0.29 U	0.42 U
Benzene	--	0.059 U	--	--	--	**16**	**0.41 J**
Ethylbenzene	--	**0.11 J**	--	--	--	**3.9**	**0.79 J**
Naphthalene	--	--	--	--	--	**13000**	--
o-Xylene	--	0.12 U	--	--	--	**3.4**	**2.4**
Toluene	--	0.23 U	--	--	--	0.44 U	0.45 U
Trichloroethene (TCE)	--	0.094 U	--	--	--	0.094 U	0.14 U
Vinyl chloride	--	0.13 U	--	--	--	0.13 U	0.19 U
LWG RA Total Xylene (Calculated U = 1/2)	--	0.2 UT	--	--	--	**4.5 T**	**3.4 JT**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**220**	**7.1**	**220**	**840**	**4.6**	**330**	**8900**
Acenaphthene	**430**	**1500**	**1200**	**2400**	**24**	**510**	**51000**
Acenaphthylene	**1200**	**37**	**200**	**1200**	**4.9**	**180**	**3700**
Anthracene	**1100**	**59**	**690**	**3900**	**23**	**640**	**60000**
Benzo(a)anthracene	**8000**	**150**	**980**	**14000**	**25**	**3100**	**120000**
Benzo(a)pyrene	**9900**	**220**	**1200**	**21000**	**32**	**4700**	**140000**
Benzo(b)fluoranthene	**8000**	**190**	**1000**	**18000**	**29**	**4100**	**120000**
Benzo(g,h,i)perylene	**6400**	**190**	**900**	**16000**	**24**	**4000**	**93000**
Benzo(k)fluoranthene	**2800**	**58**	**320**	**5900**	**9.7**	**1300**	**37000**
Chrysene	**9800**	**170**	**1300**	**17000**	**33**	**3700**	**130000**
Dibenzo(a,h)anthracene	**900**	**24**	**120**	**2400**	**3.2**	**530**	**14000**
Fluoranthene	**18000**	**750**	**3500**	**28000**	**70**	**6500**	**240000**
Fluorene	**360**	**15**	**730**	**1600**	**10**	**280**	**21000**
Indeno(1,2,3-c,d)pyrene	**6900**	**180**	**830**	**17000**	**22**	**3800**	**88000**
Naphthalene	**550**	**17**	**140**	**1700**	**11**	--	**22000**
Phenanthrene	**310**	**150**	**2500**	**16000**	**68**	**3100**	**230000**
Pyrene	**22000**	**860**	**3300**	**31000**	**89**	**7300**	**330000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**13000 T**	**300 T**	**1600 T**	**28000 T**	**43 T**	**6300 T**	**190000 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	LW2-G253	LW2-G256	LW2-G258	LW2-G259	LW2-G261	LW2-G263	LW2-G264
Sample Name:	LW2-G253	LW2-G256	LW2-G258	LW2-G259	LW2-G261	LW2-G263	LW2-G264
Sample Date:	8/13/2004	8/19/2004	8/19/2004	8/12/2004	8/19/2004	8/30/2004	8/30/2004
Depth interval:	0 - 27 cm	0 - 27 cm	0 - 27 cm	0 - 28 cm	0 - 25 cm	0 - 25 cm	0 - 30 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)							
Carbazole	35 U	**30 J**	**350**	**1500**	**5.6 J**	**220**	**30000**
Dibenzofuran	**34 J**	**4.3**	**82**	**250**	**3**	**42**	**2600**
PCB Aroclors (µg/kg)							
Aroclor 1016	1.2 U	--	1.2 U	3.8 UJ	2.5 UJ	3.17 UJ	4.64 UJ
Aroclor 1221	2.2 U	--	2.3 U	3.8 UJ	2.5 UJ	3.17 UJ	4.64 UJ
Aroclor 1232	2 U	--	2.1 U	3.8 UJ	2.5 UJ	3.17 UJ	4.64 UJ
Aroclor 1242	1.2 U	--	1.3 U	3.8 UJ	2.5 UJ	3.17 UJ	4.64 UJ
Aroclor 1248	1.6 U	--	1.6 U	3.8 UJ	2.5 UJ	3.17 UJ	4.64 UJ
Aroclor 1254	0.73 U	--	2.5 UJ	3.8 UJ	2.5 UJ	3.17 UJ	4.64 UJ
Aroclor 1260	0.94 U	--	2.5 UJ	3.8 UJ	2.5 UJ	3.17 UJ	4.64 UJ
LWG RA Total PCB Aroclors (Calculated U = 1/2)	2.2 UT	--	2.5 UJT	3.8 UJT	2.5 UJT	3.17 UJT	4.64 UJT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	0.166 UJ	--	**0.253 J**	0.0502 UJ	0.0324 U	0.21 U	0.308 UJ
beta-Hexachlorocyclohexane (BHC)	**7.75 NJ**	--	**5.14 J**	**4.04 J**	**1.32 J**	**2 NJ**	**5.97 J**
Endrin ketone	0.146 U	--	0.0288 U	0.0442 UJ	0.0285 U	0.185 U	0.271 UJ
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**8.3 NJ**	--	0.0749 U	0.115 UJ	0.074 U	0.48 U	0.703 UJ
LWG RA Sum DDD (Calculated U = 1/2)	**5.67 JT**	--	**2.09 T**	**80.4 JT**	0.0467 UT	**13.9 JNT**	**72 JNT**
LWG RA Sum DDE (Calculated U = 1/2)	**0.671 JT**	--	0.0443 UT	**7.5 JNT**	0.0438 UT	**2.74 JT**	**11.8 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	**1.91 NJT**	--	**2.25 JT**	**1.9 JT**	0.054 UT	**17.6 NJT**	**20.1 NJT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	**38 J**	**43 J**	--	--	**200 J**	**4700 J**
Residual Range Hydrocarbons	--	**110 J**	**65 J**	--	--	**400 J**	**10000 J**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	LW2-G265	LW2-G269	LW2-G270	LW2-G271	LW2-G272	LW2-G273	LW2-G274
Sample Name:	LW2-G265	LW2-G269	LW2-G270-1	LW2-G271	LW2-G272	LW2-G273	LW2-G274
Sample Date:	8/19/2004	8/30/2004	7/21/2004	8/19/2004	8/19/2004	10/7/2004	10/29/2004
Depth interval:	0 - 24 cm	0 - 26 cm	0 - 29 cm	0 - 26 cm	0 - 27 cm	0 - 28 cm	0 - 22 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	**60.7**	**166**	**130**	**43.2**	**79.1**	**159**	**127**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	0.17 U	0.18 U	--	--	0.16 U	0.13 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	0.38 U	0.4 U	--	--	0.36 U	0.3 U
Benzene	--	0.078 U	**0.12 J**	--	--	0.073 U	**1.4**
Ethylbenzene	--	0.15 U	0.15 U	--	--	0.14 U	**0.25 J**
Naphthalene	--	--	--	--	--	--	--
o-Xylene	--	0.23 U	**0.26 J**	--	--	0.43 U	**0.38 J**
Toluene	--	0.3 U	0.32 U	--	--	0.28 U	0.24 U
Trichloroethene (TCE)	--	0.13 U	0.13 U	--	--	0.12 U	0.096 U
Vinyl chloride	--	0.17 U	0.18 U	--	--	0.16 U	0.14 U
LWG RA Total Xylene (Calculated U = 1/2)	--	0.26 UT	**0.43 JT**	--	--	0.43 UT	**0.89 JT**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**27**	**2600**	**1800**	**0.77 J**	**15**	**360**	**250**
Acenaphthene	**390**	**7300**	**6300**	**1.6 J**	**32**	**3800**	**3300**
Acenaphthylene	**260**	**670**	**1100**	**1.6 J**	**18**	**750**	**1400**
Anthracene	**190**	**5700**	**6800**	**2.2 J**	**34**	**2500**	**6700**
Benzo(a)anthracene	**1400**	**13000**	**12000**	**7**	**110**	**9000**	**12000**
Benzo(a)pyrene	**1700**	**17000**	**17000**	**9.9**	**200**	**12000**	**17000**
Benzo(b)fluoranthene	**1400**	**16000**	**15000**	**10**	**170**	**12000**	**16000**
Benzo(g,h,i)perylene	**1300**	**15000**	**14000**	**9**	**180**	**10000**	**15000**
Benzo(k)fluoranthene	**510**	**4800**	**4700**	**3**	**55**	**3800**	**5900**
Chrysene	**1600**	**16000**	**14000**	**8.1**	**140**	**11000**	**16000**
Dibenzo(a,h)anthracene	**230**	**2000**	**2100**	**1.3 J**	**22**	**1300**	**2200**
Fluoranthene	**3600**	**32000**	**33000**	**11**	**210**	**26000**	**32000**
Fluorene	**42**	**4200**	**3200**	**1 J**	**17**	**2300**	**2100**
Indeno(1,2,3-c,d)pyrene	**1200**	**13000**	**14000**	**7**	**170**	**9800**	**13000**
Naphthalene	**120**	**2300**	**3200**	1.6 U	**41**	**860**	**1200**
Phenanthrene	**270**	**35000**	**43000 J**	**6**	**100**	**22000**	**8300**
Pyrene	**5400**	**41000**	**39000**	**14**	**300**	**28000**	**38000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**2300 T**	**23000 T**	**23000 T**	**14 JT**	**270 T**	**16000 T**	**23000 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	LW2-G265	LW2-G269	LW2-G270	LW2-G271	LW2-G272	LW2-G273	LW2-G274
Sample Name:	LW2-G265	LW2-G269	LW2-G270-1	LW2-G271	LW2-G272	LW2-G273	LW2-G274
Sample Date:	8/19/2004	8/30/2004	7/21/2004	8/19/2004	8/19/2004	10/7/2004	10/29/2004
Depth interval:	0 - 24 cm	0 - 26 cm	0 - 29 cm	0 - 26 cm	0 - 27 cm	0 - 28 cm	0 - 22 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)							
Carbazole	85 U	**2500**	**760**	**1.7 J**	**8 J**	**780 J**	**590 J**
Dibenzofuran	**7.5**	**530**	**420**	**0.5 J**	**5.5**	**450**	**210**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	**-- R**	4.3 UJ	2.3 UJ	1.5 U	1.73 UJ	1.34 U
Aroclor 1221	--	**-- R**	4.3 UJ	2.3 UJ	2.8 U	3.2 UJ	2.69 UJ
Aroclor 1232	--	**-- R**	4.3 UJ	2.3 UJ	2.5 U	2.89 UJ	2.25 U
Aroclor 1242	--	**-- R**	4.3 UJ	2.3 UJ	1.5 U	1.75 UJ	1.37 U
Aroclor 1248	--	**-- R**	4.3 UJ	2.3 UJ	2 U	**30.8 J**	1.75 U
Aroclor 1254	--	**-- R**	4.3 UJ	2.3 UJ	0.92 U	**59 J**	0.816 U
Aroclor 1260	--	**-- R**	4.3 UJ	2.3 UJ	**4.3 J**	**32.6 J**	1.05 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	4.3 UJT	2.3 UJT	**12 JT**	--	2.69 UJT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	**0.308**	--
PCB-081	--	--	--	--	--	**0.019**	--
PCB-105	--	--	--	--	--	**1.37**	--
PCB-114	--	--	--	--	--	**0.0806**	--
PCB-118	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	**0.0495**	--
PCB-126	--	--	--	--	--	**0.0254**	--
PCB-156	--	--	--	--	--	**0.811**	--
PCB-157	--	--	--	--	--	**0.104**	--
PCB-167	--	--	--	--	--	**0.311**	--
PCB-169	--	--	--	--	--	0.00194 U	--
PCB-189	--	--	--	--	--	**0.165**	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	**190 T**	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	**0.0027 T**	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	0.29 UJ	**0.46 NJ**	0.0315 U	**0.778 J**	**0.537 J**	0.357 U
beta-Hexachlorocyclohexane (BHC)	--	**7.82 J**	**2.14 NJ**	**0.555 J**	**6.21 J**	**2.94 J**	**20.3 J**
Endrin ketone	--	0.255 UJ	0.0507 U	0.0277 U	0.0354 U	0.204 U	0.314 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	0.662 UJ	0.132 U	**0.623 J**	0.0918 U	0.53 U	0.816 U
LWG RA Sum DDD (Calculated U = 1/2)	--	**81 JT**	**19.3 JT**	**0.353 JT**	**1.95 JT**	**26 NJT**	**39.4 NJT**
LWG RA Sum DDE (Calculated U = 1/2)	--	**13 JT**	**9.3 NJT**	**0.177 JT**	**0.85 T**	**6.7 JT**	**9.94 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	--	**43 JT**	**10.3 JT**	0.0525 UT	**0.39 JT**	**23 JNT**	**23.7 JT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**49 JT**	**1300 J**	**1100 J**	--	**49 J**	**620 J**	**940 J**
Residual Range Hydrocarbons	**100 T**	**3600 J**	**2000 J**	--	**170 J**	**1000 J**	**1700 J**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	**LW2-G281**	**LW2-G283**	**LW2-G285**	**LW2-G287**	**LW2-G289**	**LW2-G294**	**LW2-G297**
Sample Name:	**LW2-G281**	**LW2-G283**	**LW2-G285**	**LW2-G287**	**LW2-G289**	**LW2-G294-1**	**LW2-G297**
Sample Date:	**8/19/2004**	**8/30/2004**	**8/19/2004**	**8/19/2004**	**8/19/2004**	**7/21/2004**	**8/19/2004**
Depth interval:	**0 - 28 cm**	**0 - 27 cm**	**0 - 26 cm**	**0 - 28 cm**	**0 - 27 cm**	**0 - 26 cm**	**0 - 27 cm**
Analysis Matrix:	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	**59.9**	**183**	**56.5**	**87.3**	**135**	**129 T**	**118**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	0.17 U	--	0.13 U	0.2 U	0.17 U	0.17 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	0.38 U	--	0.31 U	0.45 U	0.4 U	0.39 U
Benzene	--	**3.8**	--	0.062 U	0.091 U	**1.7**	0.08 U
Ethylbenzene	--	**7.1**	--	0.12 U	0.17 U	**4**	**0.17 J**
Naphthalene	--	--	--	--	--	--	--
o-Xylene	--	**5.7**	--	**0.23 J**	**0.24 J**	**6.8**	**0.2 J**
Toluene	--	**4.5**	--	0.24 U	0.35 U	0.65 U	0.31 U
Trichloroethene (TCE)	--	0.13 U	--	0.099 U	0.15 U	0.13 U	0.13 U
Vinyl chloride	--	0.17 U	--	0.14 U	0.2 U	0.18 U	0.18 U
LWG RA Total Xylene (Calculated U = 1/2)	--	**11 T**	--	**0.34 JT**	**0.4 JT**	**8.9 T**	**0.34 JT**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**2.5**	**17000**	**1.7 J**	**23**	**760**	**52000**	**350**
Acenaphthene	**1.6 J**	**89000**	**1.3 J**	**430**	**5100**	**99000**	**13000**
Acenaphthylene	**8.8**	**11000**	**1.5 J**	**4.5**	**1400**	**3000**	**700**
Anthracene	**5.1**	**78000**	**1.9 J**	**26**	**4500**	**53000**	**5600**
Benzo(a)anthracene	**46**	**110000**	**5.8**	**12**	**11000**	**40000**	**3400**
Benzo(a)pyrene	**85**	**140000**	**11**	**18**	**17000**	**42000**	**4600**
Benzo(b)fluoranthene	**67**	**130000**	**9.3**	**18**	**15000**	**40000**	**3900**
Benzo(g,h,i)perylene	**73**	**100000**	**9.4**	**15**	**15000**	**44000**	**3700**
Benzo(k)fluoranthene	**22**	**42000**	**3.3**	**6.3**	**4700**	**17000**	**1200**
Chrysene	**56**	**120000**	**7**	**16**	**13000**	**51000**	**4200**
Dibenzo(a,h)anthracene	**8.4**	**12000**	**1.3 J**	**2.7**	**1700**	**5400**	**370**
Fluoranthene	**34**	**340000**	**11**	**48**	**36000**	**150000**	**17000**
Fluorene	**1.4 J**	**41000**	**0.87 J**	**110**	**2600**	**40000**	**5700**
Indeno(1,2,3-c,d)pyrene	**70**	**100000**	**8.5**	**14**	**14000**	**44000**	**3500**
Naphthalene	**3.8**	**38000**	**3.2**	**42**	**1600**	**73000**	**480**
Phenanthrene	**5.1**	**320000**	**5.3**	**200**	**35000**	**300000**	**41000**
Pyrene	**56**	**420000**	**13**	**47**	**46000**	**210000**	**18000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**110 T**	**190000 T**	**15 JT**	**25 T**	**23000 T**	**60000 T**	**6100 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	LW2-G281	LW2-G283	LW2-G285	LW2-G287	LW2-G289	LW2-G294	LW2-G297
Sample Name:	LW2-G281	LW2-G283	LW2-G285	LW2-G287	LW2-G289	LW2-G294-1	LW2-G297
Sample Date:	8/19/2004	8/30/2004	8/19/2004	8/19/2004	8/19/2004	7/21/2004	8/19/2004
Depth interval:	0 - 28 cm	0 - 27 cm	0 - 26 cm	0 - 28 cm	0 - 27 cm	0 - 26 cm	0 - 27 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)							
Carbazole	**2.3 J**	**8500**	1.8 U	**3.5 J**	**220 J**	**18000**	**280**
Dibenzofuran	**0.71 J**	**5400**	**0.59 J**	**7.4**	**210**	**7800**	**410**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	3.81 UJ	1.2 U	--	--	4.3 UJ	--
Aroclor 1221	--	3.81 UJ	2.3 U	--	--	4.3 UJ	--
Aroclor 1232	--	3.81 UJ	2.1 U	--	--	4.3 UJ	--
Aroclor 1242	--	3.81 UJ	1.3 U	--	--	4.3 UJ	--
Aroclor 1248	--	3.81 UJ	1.6 U	--	--	4.3 UJ	--
Aroclor 1254	--	3.81 UJ	0.76 U	--	--	4.3 UJ	--
Aroclor 1260	--	3.81 UJ	0.97 U	--	--	**80 J**	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	3.81 UJT	2.5 UJT	--	--	**97 JT**	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	**0.112 J**
PCB-081	--	--	--	--	--	--	**0.00444 J**
PCB-105	--	--	--	--	--	--	**0.431 J**
PCB-114	--	--	--	--	--	--	**0.0113 J**
PCB-118	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	**0.0226 J**
PCB-126	--	--	--	--	--	--	**0.014 J**
PCB-156	--	--	--	--	--	--	**0.239 J**
PCB-157	--	--	--	--	--	--	**0.0469 J**
PCB-167	--	--	--	--	--	--	**0.105 J**
PCB-169	--	--	--	--	--	--	0.0041 UJ
PCB-189	--	--	--	--	--	--	**0.0342 J**
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	**53 JT**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	**0.0015 JT**
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	0.255 UJ	0.033 U	--	--	0.0573 UJ	--
beta-Hexachlorocyclohexane (BHC)	--	**13.6 J**	0.0334 U	--	--	0.058 UJ	--
Endrin ketone	--	0.224 UJ	0.029 U	--	--	0.0505 UJ	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	0.582 UJ	0.0754 U	--	--	0.131 UJ	--
LWG RA Sum DDD (Calculated U = 1/2)	--	**440 JT**	**1.4 JT**	--	--	**840 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	--	**56.4 JNT**	**1.02 JT**	--	--	**70.3 JNT**	--
LWG RA Sum DDT (Calculated U = 1/2)	--	**60.5 NJT**	**5.11 T**	--	--	**9.59 NJT**	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	10 U	**14000 J**	--	**45 J**	**630 J**	**20000 J**	**630 J**
Residual Range Hydrocarbons	33 U	**17000 J**	--	**130 J**	**1200 J**	**13000 J**	**730 J**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	**LW2-G300**	**LW2-G301**	**LW2-G302**	**LW2-G305**	**LW2-G308**	**LW2-G309**	**LW2-G311**
Sample Name:	**LW2-G300**	**LW2-G301**	**LW2-G302**	**LW2-G305**	**LW2-G308**	**LW2-G309**	**LW2-G311-1**
Sample Date:	**8/20/2004**	**9/13/2004**	**9/13/2004**	**8/19/2004**	**9/13/2004**	**8/20/2004**	**7/21/2004**
Depth interval:	**0 - 26 cm**	**0 - 27 cm**	**0 - 27 cm**	**0 - 28 cm**	**0 - 27 cm**	**0 - 26 cm**	**0 - 21 cm**
Analysis Matrix:	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	**49.3**	**107**	**241**	**142**	**104**	**134**	**145 T**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	0.12 U	0.16 U	0.17 U	0.2 U	--	0.18 U	0.16 UT
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	0.28 U	0.37 U	0.38 U	0.45 U	--	0.4 U	0.37 UT
Benzene	0.056 U	0.075 U	**1.9**	0.091 U	--	0.082 U	0.075 UT
Ethylbenzene	0.11 U	0.14 U	**9.8**	**0.19 J**	--	0.15 U	0.14 UT
Naphthalene	0.5 U	--	--	--	--	--	--
o-Xylene	0.11 U	0.15 U	**17**	**0.23 J**	--	**0.28 J**	**0.53 JT**
Toluene	0.22 U	0.29 U	**0.73 J**	0.35 U	--	0.32 U	0.29 UT
Trichloroethene (TCE)	0.089 U	0.12 U	0.13 U	0.15 U	--	0.13 U	0.12 UT
Vinyl chloride	0.13 U	0.17 U	0.17 U	0.2 U	--	0.18 U	0.17 UT
LWG RA Total Xylene (Calculated U = 1/2)	0.19 UT	0.25 UT	**27 T**	**0.64 JT**	--	**0.42 JT**	**0.66 JT**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**1.5 J**	**37000**	**320**	**280**	**140**	**31**	**530 T**
Acenaphthene	**1.2 J**	**63000**	**650**	**1400**	**3000**	**140**	**2050 T**
Acenaphthylene	**1.1 J**	**6200**	**1700**	**210**	**100**	**76**	**415 T**
Anthracene	**2.2 J**	**78000**	**2400**	**480**	**4200**	**160**	**2900 T**
Benzo(a)anthracene	**3.9**	**52000**	**9300**	**1000**	**1400**	**400**	**3850 T**
Benzo(a)pyrene	**4.8**	**47000**	**17000**	**1300**	**780**	**550**	**4800 T**
Benzo(b)fluoranthene	**5.2**	**40000**	**15000**	**1100**	**930**	**540**	**4300 T**
Benzo(g,h,i)perylene	**3.4**	**29000**	**15000**	**1100**	**590**	**460**	**3500 T**
Benzo(k)fluoranthene	**1.7 J**	**13000**	**4800**	**380**	**370**	**170**	**1400 T**
Chrysene	**5**	**62000**	**11000**	**1100**	**1800**	**500**	**4900 T**
Dibenzo(a,h)anthracene	**0.67 J**	**4000**	**1500**	**180**	**100**	**53**	**425 T**
Fluoranthene	**8.4**	**140000**	**21000**	**2800**	**6400**	**900**	**13000 T**
Fluorene	**1.3 J**	**59000**	**420**	**1000**	**2800**	**100**	**1650 T**
Indeno(1,2,3-c,d)pyrene	**2.9**	**28000**	**13000**	**1100**	**600**	**430**	**3150 T**
Naphthalene	--	**2300**	**1100**	**590**	**170**	**74**	**685 T**
Phenanthrene	**5.1**	**400000**	**6200**	**5200**	**12000**	**820**	**19000 T**
Pyrene	**9.8**	**190000**	**27000**	**2700**	**5800**	**1100**	**15500 T**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**6.7 JT**	**63000 T**	**22000 T**	**1800 T**	**1200 T**	**740 T**	**6400 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	LW2-G300	LW2-G301	LW2-G302	LW2-G305	LW2-G308	LW2-G309	LW2-G311
Sample Name:	LW2-G300	LW2-G301	LW2-G302	LW2-G305	LW2-G308	LW2-G309	LW2-G311-1
Sample Date:	8/20/2004	9/13/2004	9/13/2004	8/19/2004	9/13/2004	8/20/2004	7/21/2004
Depth interval:	0 - 26 cm	0 - 27 cm	0 - 27 cm	0 - 28 cm	0 - 27 cm	0 - 26 cm	0 - 21 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)							
Carbazole	1.9 U	**290 J**	**9400**	**53 J**	**160**	**17**	**93 JT**
Dibenzofuran	**1.2 J**	**7200**	**72**	**280**	**690**	**23**	**255 T**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	1.82 U	4.02 UJ	4.2 UJ	1.45 U	2.3 U	3.9 UJT
Aroclor 1221	--	3.64 U	4.02 UJ	4.2 UJ	2.68 U	4.2 U	3.9 UJT
Aroclor 1232	--	3.04 U	4.02 UJ	4.2 UJ	2.42 U	3.8 U	3.9 UJT
Aroclor 1242	--	1.85 U	4.02 UJ	4.2 UJ	1.47 U	2.3 U	3.9 UJT
Aroclor 1248	--	3.64 UJ	**71 J**	**42**	**18.4 J**	**10 J**	3.9 UJT
Aroclor 1254	--	3.64 UJ	**58.8**	4.2 UJ	**34.4**	1.4 U	3.9 UJT
Aroclor 1260	--	**9.29**	**32.7 J**	**35**	**15.3 J**	**19 J**	**170 JT**
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	**20.7 JT**	**170 JT**	**92 JT**	--	**39 JT**	**190 JT**
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	**0.123**	--	--
PCB-081	--	--	--	--	**0.0075**	--	--
PCB-105	--	--	--	--	**0.709**	--	--
PCB-114	--	--	--	--	**0.0471**	--	--
PCB-118	--	--	--	--	--	--	--
PCB-123	--	--	--	--	**0.0329**	--	--
PCB-126	--	--	--	--	**0.0105**	--	--
PCB-156	--	--	--	--	**0.217**	--	--
PCB-157	--	--	--	--	**0.0409**	--	--
PCB-167	--	--	--	--	**0.083**	--	--
PCB-169	--	--	--	--	0.00124 U	--	--
PCB-189	--	--	--	--	**0.0259**	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	**59 T**	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	**0.0011 T**	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	0.483 U	0.568 U	0.0567 U	0.217 U	0.0605 U	0.0508 UJT
beta-Hexachlorocyclohexane (BHC)	--	0.488 U	0.574 U	**1.93 J**	**2.57 NJ**	**3.71 NJ**	**3.62 JT**
Endrin ketone	--	0.425 U	0.5 U	**1.52 NJ**	0.191 U	0.0533 U	**4.57 NJT**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	1.1 U	1.3 U	**1.95 J**	0.495 U	**4.13 NJ**	**2.39 JT**
LWG RA Sum DDD (Calculated U = 1/2)	--	**70 NJT**	**163 JT**	**25.7 JT**	**16.2 JNT**	**32 JNT**	**1400 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	**14.3 JT**	**83.2 NJT**	**8.9 JT**	**8.42 JNT**	**7.63 JT**	**94.3 JT**
LWG RA Sum DDT (Calculated U = 1/2)	--	**41.6 JT**	**24.3 JT**	**8.07 JT**	**1.62 JT**	**154 JT**	**271 JT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	14 UT	**460 J**	**9000 J**	**280 J**	**330 J**	**170 J**	**1080 JT**
Residual Range Hydrocarbons	13 UT	**1100 J**	**6000 J**	**630 J**	**310 J**	**510 J**	**1330 JT**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	LW2-G521	LW2-GBT015	LW3-G657	LW3-G658	LW3-G659-1	LW3-GCRSP06W	LWG0106B025SDS015C00
Sample Name:	LW2-G521	LW2-GBT015	LW3-G657	LW3-G658	LW3-G659-1	LW3-GCRSP06W	LWG0106B025SDS015C00
Sample Date:	9/13/2004	12/20/2005	11/28/2007	11/28/2007	11/28/2007	10/17/2007	10/14/2002
Depth interval:	0 - 28 cm	0 - 10 cm	0 - 26 cm	0 - 21 cm	0 - 26 cm	0 - 18 cm	0 - 15 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	142	134	50	53.1	53.8	74.2	81
Volatile Organics (µg/kg)							
1,1-Dichloroethene	0.17 U	0.23 U	--	--	--	--	--
1,2-Dichloroethene, cis-	--	0.18 U	--	--	--	--	--
1,2-Dichloroethene, trans-	0.4 U	0.53 U	--	--	--	--	--
Benzene	0.081 U	0.22 J	--	--	--	--	--
Ethylbenzene	0.15 U	0.2 U	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
o-Xylene	0.16 U	0.21 U	--	--	--	--	--
Toluene	0.31 U	0.42 U	--	--	--	--	--
Trichloroethene (TCE)	0.13 U	0.18 U	--	--	--	--	--
Vinyl chloride	0.18 U	0.24 U	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.27 UT	0.36 UT	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	190	190	0.97 J	4.4	0.65 J	110	2200
Acenaphthene	1100	410	7	60	0.84 J	880	3600
Acenaphthylene	550	160	4	11	0.31 J	280	5000
Anthracene	700	700	8.9	64	2.1 J	660	8000
Benzo(a)anthracene	2800	1500	39	140	5.1	2300	29000 T
Benzo(a)pyrene	4600	2100	50	160	6.3	3500	41000 T
Benzo(b)fluoranthene	3900	1200	47	140	6.5	3000	31000 T
Benzo(g,h,i)perylene	4200	1700	42	120	6	2900	36000 T
Benzo(k)fluoranthene	1200	1000	15	45	1.9 J	1100	24000 T
Chrysene	3200	1600	47	160	6.5	2500	38000 T
Dibenzo(a,h)anthracene	410	190	4.3	13	0.82 J	520	9500 JT
Fluoranthene	7600	2700	90	390	12	5300	68000
Fluorene	520	220	3.4	26	1.1 J	420	3600
Indeno(1,2,3-c,d)pyrene	3700	1500	39	110	5.7	2800	31000 T
Naphthalene	520	540	3.6	15	1.7 J	330	7000
Phenanthrene	5700	1700	19	42	8.2	2700	47000
Pyrene	9800	3400	130	460	14	5800	80000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	6100 T	2700 T	67 T	210 T	8.9 JT	4800 T	60000 JT

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	LW2-G521	LW2-GBT015	LW3-G657	LW3-G658	LW3-G659-1	LW3-GCRSP06W	LWG0106B025SDS015C00
Sample Name:	LW2-G521	LW2-GBT015	LW3-G657	LW3-G658	LW3-G659-1	LW3-GCRSP06W	LWG0106B025SDS015C00
Sample Date:	9/13/2004	12/20/2005	11/28/2007	11/28/2007	11/28/2007	10/17/2007	10/14/2002
Depth interval:	0 - 28 cm	0 - 10 cm	0 - 26 cm	0 - 21 cm	0 - 26 cm	0 - 18 cm	0 - 15 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)							
Carbazole	**75 J**	**71**	1.3 U	1.3 U	1.3 U	**26 J**	**2800 T**
Dibenzofuran	**55**	**31**	0.59 U	**3.2**	0.59 U	**35**	**560 T**
PCB Aroclors (µg/kg)							
Aroclor 1016	1.93 U	3.5 U	1.3 U	1.3 U	2.2 U	1.3 U	3.9 U
Aroclor 1221	3.58 U	14 U	1.3 U	1.3 U	3.3 U	1.3 U	7.7 U
Aroclor 1232	3.23 U	6.4 U	1.3 U	1.3 U	1.3 U	1.3 U	3.9 U
Aroclor 1242	1.96 U	5.5 U	1.3 U	1.3 U	1.3 U	1.3 U	3.9 U
Aroclor 1248	**6.61**	6.5 U	1.3 U	1.3 U	1.3 U	1.3 U	3.9 U
Aroclor 1254	**24.5**	20 U	1.3 U	1.3 U	1.3 U	**11 J**	**29**
Aroclor 1260	**11.6 J**	**13 J**	1.3 U	1.3 U	1.3 U	1.3 U	25 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**50 JT**	--	1.3 UT	1.3 UT	3.3 UT	--	**53 T**
PCB Congeners (µg/kg)							
PCB-077	--	**0.058**	--	--	--	**0.0362**	--
PCB-081	--	**0.00164 J**	--	--	--	0.0025 U	--
PCB-105	--	**0.254**	--	--	--	**0.124**	--
PCB-114	--	**0.0146**	--	--	--	0.00705 U	--
PCB-118	--	--	--	--	--	--	--
PCB-123	--	**0.0139**	--	--	--	**0.00613 J**	--
PCB-126	--	**0.00586**	--	--	--	**0.00263 J**	--
PCB-156	--	**0.0892**	--	--	--	**0.0466**	--
PCB-157	--	**0.0188**	--	--	--	**0.0113 J**	--
PCB-167	--	**0.0401**	--	--	--	**0.0219**	--
PCB-169	--	0.00134 U	--	--	--	0.00192 U	--
PCB-189	--	**0.016**	--	--	--	**0.00727 J**	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	**24 JT**	--	--	--	**12 JT**	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	**0.00063 JT**	--	--	--	**0.0003 JT**	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	0.283 U	0.0278 U	0.097 U	0.097 U	0.097 U	0.097 U	3.9 U
beta-Hexachlorocyclohexane (BHC)	**2.44 NJ**	0.235 U	0.14 U	0.5 U	0.14 U	0.14 U	42 U
Endrin ketone	0.249 U	0.221 U	0.029 U	0.029 U	0.029 U	0.17 U	20 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.647 U	0.0804 U	0.2 U	0.62 U	0.062 U	**0.99 J**	3.9 U
LWG RA Sum DDD (Calculated U = 1/2)	**36.1 JNT**	**46.2 T**	**0.47 T**	**0.56 NJT**	**0.26 JT**	**11 T**	9 UT
LWG RA Sum DDE (Calculated U = 1/2)	**10 JNT**	**5.4 JT**	**0.33 JNT**	**0.49 NJT**	**0.1 JT**	**2.4 JT**	200 UT
LWG RA Sum DDT (Calculated U = 1/2)	**38 JT**	**26.2 T**	0.18 UT	0.18 UT	0.18 UT	**10 T**	12 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**370 J**	**240 J**	8.1 U	4.3 U	2.7 U	--	--
Residual Range Hydrocarbons	**720 J**	**810 J**	**29 J**	**9.2 J**	**20 J**	--	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	LWG0106B029SDS015C00	PCM-02Y3E2	PCM-04Y3E2	PCM-06Y3E2	PCM-09Y3E2	PCM-14Y3E2
Sample Name:	LWG0106B029SDS015C00	PCM-02-DS-091209	PCM-04-DS-091209	PCM-06-DS-091209	PCM-09-DS-091209	PCM-14-DS-091210
Sample Date:	10/11/2002	12/9/2009	12/9/2009	12/9/2009	12/9/2009	12/10/2009
Depth interval:	0 - 15 cm	0 - 7 cm	0 - 2 cm	0 - 5 cm	0 - 8 cm	0 - 3 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)						
Cyanide, total	--	**1.77**	**0.65**	0.57 U	0.59 U	0.4 U
Metals (mg/kg)						
Zinc	**65**	**110**	**92.2**	**111**	**108**	**86.8**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	--	3700 U	1.1 U	1.4 U	1.3 U	1.2 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	3700 U	1.1 U	1.4 U	1.3 U	1.2 U
Benzene	--	3700 U	**1.9**	1.4 U	1.3 U	1.2 U
Ethylbenzene	--	3700 U	1.1 U	**1.9**	1.3 U	**0.27 J**
Naphthalene	--	--	--	--	--	--
o-Xylene	--	3700 U	1.1 U	**1.9**	1.3 U	**2.2**
Toluene	--	3700 U	1.1 U	1.4 U	1.3 U	1.2 U
Trichloroethene (TCE)	--	3700 U	1.1 U	1.4 U	1.3 U	1.2 U
Vinyl chloride	--	3700 U	1.1 U	1.4 U	1.3 U	1.2 U
LWG RA Total Xylene (Calculated U = 1/2)	--	3700 UT	2.1 UT	**3.3 T**	2.6 UT	**3.4 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	19 U	**1300**	**890**	**140**	**100**	**35**
Acenaphthene	19 U	**6500**	**6400**	**770**	**330**	**410**
Acenaphthylene	**71**	**1500**	**4300**	**310**	**530**	**40**
Anthracene	**33**	**6200**	**10000**	**930**	**690**	**110**
Benzo(a)anthracene	**140 T**	**11000**	**27000**	**2600**	**2800**	**300**
Benzo(a)pyrene	**320 T**	**17000**	**43000**	**4100**	**5000**	**530**
Benzo(b)fluoranthene	**250 T**	**15000**	**37000**	**3600**	**4100**	**460**
Benzo(g,h,i)perylene	**270 T**	**15000**	**35000**	**3700**	**5100**	**510**
Benzo(k)fluoranthene	**220 T**	**5000**	**14000**	**1300**	**1400**	**170**
Chrysene	**230 T**	**13000**	**31000**	**3000**	**3200**	**380**
Dibenzo(a,h)anthracene	**59 T**	**1600**	**3900**	**400**	**510**	**57**
Fluoranthene	**250**	**29000**	**76000**	**5600**	**5200**	**530**
Fluorene	19 U	**3100**	**4400**	**290**	**200**	**140**
Indeno(1,2,3-c,d)pyrene	**260 T**	**13000**	**30000**	**3100**	**4000**	**400**
Naphthalene	**23**	**11000**	**4500**	**5500**	**460**	**120**
Phenanthrene	**51**	**23000**	**42000**	**3000**	**1800**	**410**
Pyrene	**280**	**37000**	**110000**	**7200**	**6800**	**620**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**450 T**	**23000 T**	**56000 T**	**5400 T**	**6600 T**	**710 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	LWG0106B029SDS015C00	PCM-02Y3E2	PCM-04Y3E2	PCM-06Y3E2	PCM-09Y3E2	PCM-14Y3E2
Sample Name:	LWG0106B029SDS015C00	PCM-02-DS-091209	PCM-04-DS-091209	PCM-06-DS-091209	PCM-09-DS-091209	PCM-14-DS-091210
Sample Date:	10/11/2002	12/9/2009	12/9/2009	12/9/2009	12/9/2009	12/10/2009
Depth interval:	0 - 15 cm	0 - 7 cm	0 - 2 cm	0 - 5 cm	0 - 8 cm	0 - 3 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)						
Carbazole	6.5 T	960	920	200	77	140
Dibenzofuran	4.9 T	--	--	--	--	--
PCB Aroclors (µg/kg)						
Aroclor 1016	3.8 U	12 U	11 U	14 U	13 U	12 U
Aroclor 1221	7.7 U	24 U	22 U	28 U	26 U	23 U
Aroclor 1232	3.8 U	18 U	41 U	14 U	13 U	12 U
Aroclor 1242	3.8 U	12 U	11 U	14 U	13 U	12 U
Aroclor 1248	3.8 U	12 U	11 U	14 U	13 U	12 U
Aroclor 1254	3.8 U	60 U	29 U	29 U	24 U	12 U
Aroclor 1260	3.8 U	12 U	11 U	14 U	14 U	12 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	7.7 UT	--	--	--	--	--
PCB Congeners (µg/kg)						
PCB-077	--	0.0645	0.0467	0.0519	0.0473	0.0306
PCB-081	--	0.0021	0.00144	0.00189	0.00161	0.00101
PCB-105	--	0.286	0.203	0.269	0.244	0.156
PCB-114	--	0.0154	0.0102	0.0143	0.0125	0.00867
PCB-118	--	0.668	0.471	0.763	0.582	0.387
PCB-123	--	0.0128	0.0084	0.0118	0.0106	0.00672
PCB-126	--	0.00344	0.00359	0.00344	0.00299	0.00229
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-167	--	0.0402	0.0272	0.0563	0.0443	0.0323
PCB-169	--	0.000979 U	0.000949 U	0.000999 U	0.000957 U	0.000974 U
PCB-189	--	0.013	0.00849	0.0248	0.012	0.0125
LWG RA Total PCB Congener (Calculated U = 1/2)	--	18 JT	14 JT	26 JT	17 JT	14 JT
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	0.0004 T	0.0004 T	0.000404 T	0.00035 T	0.000268 T
Pesticides (µg/kg)						
alpha-Hexachlorocyclohexane (BHC)	0.19 U	1.2 UJ	1.1 U	1.4 U	1.3 U	1.2 U
beta-Hexachlorocyclohexane (BHC)	0.19 U	1.3 UJ	2.9 U	1.4 U	1.3 U	1.2 U
Endrin ketone	0.71 U	3.1 UJ	5.5	1.4 U	1.3 U	1.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.19 U	3.9 J	2.1 U	1.2 J	1.5	0.61 J
LWG RA Sum DDD (Calculated U = 1/2)	1.8 T	39 JT	21 JT	18 JT	13 T	5.8 JT
LWG RA Sum DDE (Calculated U = 1/2)	9.2 UT	7 JT	3.5 T	4.2 JT	3.1 T	2.4 T
LWG RA Sum DDT (Calculated U = 1/2)	1.1 UT	13 JT	11 JT	6.6 T	74 T	18 T
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	1900	1400	280	120	64
Residual Range Hydrocarbons	--	2300	2500	790	440	240

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	PCM-15Y3E2	PCM-16Y0E2	PCM-17Y0E2	PCM-22Y3E2	SL-02-A-PG	SL-02-E-PG
Sample Name:	PCM-15-DS-091210	PCM-16DS-060818	PCM-17DS-060818	PCM-22-DS-091210	LWG2-PG-SL2A	LWG2-PG-SL2E
Sample Date:	12/10/2009	8/18/2006	8/18/2006	12/10/2009	11/29/2005	11/29/2005
Depth interval:	0 - 3 cm	0 - 9.14 cm	0 - 7.92 cm	0 - 10 cm	0 - 29 cm	0 - 21 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)						
Cyanide, total	**1.19**	--	--	0.57 U	**0.155 JT**	0.08 UJ
Metals (mg/kg)						
Zinc	**91.1**	--	--	**121**	**237**	**122**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.2 U	--	--	1.3 U	0.16 U	0.17 U
1,2-Dichloroethene, cis-	--	--	--	--	0.12 U	0.13 U
1,2-Dichloroethene, trans-	1.2 U	--	--	1.3 U	0.37 U	0.38 U
Benzene	1.2 U	--	--	1.3 U	0.075 U	0.078 U
Ethylbenzene	1.2 U	--	--	**0.39 J**	0.14 U	**0.15 J**
Naphthalene	--	--	--	--	--	--
o-Xylene	1.2 U	--	--	**0.39 J**	**0.64 J**	**0.67 J**
Toluene	**0.31 J**	--	--	**0.57 J**	0.29 U	0.3 U
Trichloroethene (TCE)	**0.36 J**	--	--	1.3 U	0.12 U	0.13 U
Vinyl chloride	1.2 U	--	--	1.3 U	0.17 U	0.17 U
LWG RA Total Xylene (Calculated U = 1/2)	2.4 UT	**1.6 JT**	**1.4 JT**	**1.7 JT**	**1.2 JT**	**1.1 JT**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	**60**	--	--	**120**	**260**	**65**
Acenaphthene	**80**	--	--	**410**	**7100**	**400**
Acenaphthylene	**180**	--	--	**140**	**770 J**	**98**
Anthracene	**1100**	--	--	**520**	**5500**	**310**
Benzo(a)anthracene	**1600**	--	--	**1600**	**7900**	**640**
Benzo(a)pyrene	**2400**	--	--	**2500**	**9800**	**1100**
Benzo(b)fluoranthene	**2000**	--	--	**2100**	**5400**	**640**
Benzo(g,h,i)perylene	**2100**	--	--	**2300**	**7200**	**960**
Benzo(k)fluoranthene	**550**	--	--	**590**	**4900**	**570**
Chrysene	**2600**	--	--	**1800**	**9500**	**820**
Dibenzo(a,h)anthracene	**230**	--	--	**250**	**870 J**	**120**
Fluoranthene	**3800**	--	--	**3100**	**21000**	**1600**
Fluorene	**76**	--	--	**250**	**4100**	**140**
Indeno(1,2,3-c,d)pyrene	**1800**	--	--	**2000**	**6700**	**950**
Naphthalene	**250**	--	--	**280**	**640**	**130**
Phenanthrene	**1500**	--	--	**2200**	**26000**	**1200**
Pyrene	**5200**	--	--	**4000**	**27000**	**2400**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**3200 T**	**800 T**	**2200 T**	**3300 T**	**13000 JT**	**1400 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	PCM-15Y3E2	PCM-16Y0E2	PCM-17Y0E2	PCM-22Y3E2	SL-02-A-PG	SL-02-E-PG
Sample Name:	PCM-15-DS-091210	PCM-16DS-060818	PCM-17DS-060818	PCM-22-DS-091210	LWG2-PG-SL2A	LWG2-PG-SL2E
Sample Date:	12/10/2009	8/18/2006	8/18/2006	12/10/2009	11/29/2005	11/29/2005
Depth interval:	0 - 3 cm	0 - 9.14 cm	0 - 7.92 cm	0 - 10 cm	0 - 29 cm	0 - 21 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)						
Carbazole	**45**	--	--	**56**	**99 J**	**24**
Dibenzofuran	--	--	--	--	**250**	**24**
PCB Aroclors (µg/kg)						
Aroclor 1016	12 U	--	--	13 U	--	--
Aroclor 1221	24 U	--	--	26 U	--	--
Aroclor 1232	12 U	--	--	13 U	--	--
Aroclor 1242	12 U	--	--	13 U	--	--
Aroclor 1248	12 U	--	--	13 U	--	--
Aroclor 1254	13 U	--	--	25 U	--	--
Aroclor 1260	12 U	--	--	13 U	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
PCB-077	**0.0317**	--	--	**0.0443**	--	--
PCB-081	**0.00105**	--	--	**0.00112**	--	--
PCB-105	**0.155**	--	--	**0.225**	--	--
PCB-114	**0.00776**	--	--	**0.0118**	--	--
PCB-118	**0.385**	--	--	**0.558**	--	--
PCB-123	**0.00677**	--	--	**0.0102**	--	--
PCB-126	**0.00221**	--	--	**0.00269**	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-167	**0.0266**	--	--	**0.0345**	--	--
PCB-169	0.000952 U	--	--	0.000973 U	--	--
PCB-189	**0.00901**	--	--	**0.011**	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	**12 JT**	**12 JT**	**7.6 JT**	**17 JT**	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**0.000259 T**	**0.000484 JT**	**0.00585 T**	**0.00032 T**	--	--
Pesticides (µg/kg)						
alpha-Hexachlorocyclohexane (BHC)	1.2 U	--	--	1.3 U	--	--
beta-Hexachlorocyclohexane (BHC)	1.2 U	--	--	1.3 U	--	--
Endrin ketone	1.2 U	--	--	1.3 U	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**0.77 J**	--	--	**2.2 J**	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**7 JT**	**9.5 T**	**33 T**	**16 JT**	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**2 T**	**4.6 JT**	**5.4 JT**	**3.6 T**	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**3.9 JT**	**6.1 JT**	5 UT	**7.3 JT**	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**59 J**	--	--	**86**	**1150 JT**	**170 J**
Residual Range Hydrocarbons	**260**	--	--	**270**	**1400 JT**	**520 J**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	SL-03-F-PG	SL-04-A-PG	SL-04-F-PG	SL-05-A-PG	SS-10	SS-2
Sample Name:	LWG2-PG-SL3F	LWG2-PG-SL4A	LWG2-PG-SL4F	LWG2-PG-SL5A	981112-SS-10	981112-SS-02
Sample Date:	11/29/2005	11/29/2005	11/29/2005	11/29/2005	11/12/1998	11/12/1998
Depth interval:	0 - 30 cm	0 - 20 cm	0 - 30 cm	0 - 26 cm	0 - 6.096 cm	0 - 6.096 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)						
Cyanide, total	**0.68 J**	**0.14 J**	**0.44 J**	**0.17 J**	**41**	0.5 U
Metals (mg/kg)						
Zinc	**104**	**115**	**96.2**	**99.8**	--	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	0.19 U	0.13 U	0.16 U	0.14 U	--	--
1,2-Dichloroethene, cis-	0.14 U	0.096 U	0.12 U	0.11 U	--	--
1,2-Dichloroethene, trans-	0.42 U	0.3 U	0.37 U	0.32 U	--	--
Benzene	**6.3**	0.06 U	**0.26 J**	0.065 U	--	--
Ethylbenzene	**0.19 J**	0.11 U	**0.18 J**	0.12 U	--	--
Naphthalene	--	--	--	--	--	--
o-Xylene	**0.5 J**	0.12 U	**0.72 J**	0.13 U	--	--
Toluene	0.47 U	0.24 U	0.37 U	0.25 U	--	--
Trichloroethene (TCE)	0.14 U	0.096 U	0.12 U	0.11 U	--	--
Vinyl chloride	0.19 U	0.14 U	0.17 U	0.15 U	--	--
LWG RA Total Xylene (Calculated U = 1/2)	**0.81 JT**	0.2 UT	**1.2 JT**	0.22 UT	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	**39**	**62**	**130**	**23**	--	--
Acenaphthene	**710**	**670**	**2500**	**95**	**140**	50 U
Acenaphthylene	**53**	**71**	**100**	**47**	**310**	**200**
Anthracene	**220**	**260**	**590**	**94**	**360**	**80**
Benzo(a)anthracene	**420**	**580**	**800**	**350**	**2600**	**790**
Benzo(a)pyrene	**690**	**790**	**1000**	**560**	50 U	**1500**
Benzo(b)fluoranthene	**420**	**500**	**680**	**340**	**5800**	**1500**
Benzo(g,h,i)perylene	**570**	**590**	**900**	**450**	**3100**	**1600**
Benzo(k)fluoranthene	**330**	**370**	**510**	**290**	**1600**	**470**
Chrysene	**520**	**700**	**970**	**440**	**3500**	**930**
Dibenzo(a,h)anthracene	**64**	**80**	**110**	**59**	**520**	**220**
Fluoranthene	**870**	**1500**	**1900**	**670**	**5000**	**1200**
Fluorene	**69**	**480**	**1200**	**61**	**120**	50 U
Indeno(1,2,3-c,d)pyrene	**550**	**590**	**870**	**450**	**2500**	**1200**
Naphthalene	**100**	**120**	**320**	**61**	**230**	**88**
Phenanthrene	**480**	**950**	**2400**	**310**	**2700**	**220**
Pyrene	**1100**	**1600**	**2400**	**840**	**6800**	**1600**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**900 T**	**1000 T**	**1400 T**	**740 T**	**1700 T**	**2100 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	SL-03-F-PG	SL-04-A-PG	SL-04-F-PG	SL-05-A-PG	SS-10	SS-2
Sample Name:	LWG2-PG-SL3F	LWG2-PG-SL4A	LWG2-PG-SL4F	LWG2-PG-SL5A	981112-SS-10	981112-SS-02
Sample Date:	11/29/2005	11/29/2005	11/29/2005	11/29/2005	11/12/1998	11/12/1998
Depth interval:	0 - 30 cm	0 - 20 cm	0 - 30 cm	0 - 26 cm	0 - 6.096 cm	0 - 6.096 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)						
Carbazole	14	14	110	13	--	--
Dibenzofuran	12	68	64	16	--	--
PCB Aroclors (µg/kg)						
Aroclor 1016	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	98 J	150 J	130 J	100 J	--	--
Residual Range Hydrocarbons	390 J	290 J	320 J	250 J	--	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	SS-4	SS-5	SS-6	SS-7	SS-9	U3C2
Sample Name:	981112-SS-04	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-09	U3C2SG-110421
Sample Date:	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	4/21/2011
Depth interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)						
Cyanide, total	0.5 U	**1.3**	**0.58**	**13**	**56**	0.169 U
Metals (mg/kg)						
Zinc	--	--	--	--	--	**81**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	--	--	--	--	--	1.8 U
1,2-Dichloroethene, cis-	--	--	--	--	--	1.8 U
1,2-Dichloroethene, trans-	--	--	--	--	--	1.8 U
Benzene	--	--	--	--	--	1.8 U
Ethylbenzene	--	--	--	--	--	1.8 U
Naphthalene	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	1.8 U
Toluene	--	--	--	--	--	1.8 U
Trichloroethene (TCE)	--	--	--	--	--	1.8 U
Vinyl chloride	--	--	--	--	--	1.8 U
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--	1.8 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	--	--	--	--	--	20 U
Acenaphthene	**83**	**590**	50 U	**640**	**380**	20 U
Acenaphthylene	**500**	**11100**	**78**	**2800**	**190**	20 U
Anthracene	**250**	**2000**	50 U	**1300**	**1300**	20 U
Benzo(a)anthracene	**1300**	**21900**	**130**	**12800**	**3700**	**9.7 J**
Benzo(a)pyrene	**2900**	**69100**	**360**	**23700**	**3400**	**11 J**
Benzo(b)fluoranthene	**3100**	**60900**	**370**	**25000**	**6600**	--
Benzo(g,h,i)perylene	**3100**	**69900**	**550**	**22200**	**2500**	20 U
Benzo(k)fluoranthene	**880**	**17000**	**110**	**6900**	**1700**	--
Chrysene	**1700**	**29700**	**150**	**14300**	**4300**	**17 J**
Dibenzo(a,h)anthracene	**490**	**9400**	**62**	**1900**	**500**	20 U
Fluoranthene	**1400**	**16100**	**150**	**15000**	**10000**	**21**
Fluorene	**59**	**610**	50 U	**410**	**390**	20 U
Indeno(1,2,3-c,d)pyrene	**2400**	**47300**	**350**	**23700**	**2200**	20 U
Naphthalene	**230**	**5000**	50 U	**1800**	**550**	**15 J**
Phenanthrene	**610**	**4700**	**58**	**6900**	**7000**	**20 J**
Pyrene	**2200**	**33200**	**200**	**24200**	**10800**	**26**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**4100 T**	**92000 T**	**510 T**	**32000 T**	**5200 T**	**25 JT**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	SS-4	SS-5	SS-6	SS-7	SS-9	U3C2
Sample Name:	981112-SS-04	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-09	U3C2SG-110421
Sample Date:	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	4/21/2011
Depth interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	20 U
Dibenzofuran	--	--	--	--	--	20 U
PCB Aroclors (µg/kg)						
Aroclor 1016	--	--	--	--	--	3.8 U
Aroclor 1221	--	--	--	--	--	3.8 U
Aroclor 1232	--	--	--	--	--	3.8 U
Aroclor 1242	--	--	--	--	--	3.8 U
Aroclor 1248	--	--	--	--	--	3.8 U
Aroclor 1254	--	--	--	--	--	3.8 U
Aroclor 1260	--	--	--	--	--	3.8 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	3.8 UT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.98 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.98 U
Endrin ketone	--	--	--	--	--	2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	0.98 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	2 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	2 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	**3.9 T**
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	8.1 U
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	U4Q1	U4Q2	WLCASF97S016	WLCDRD05PG052	WLCDRD05PG054	WLCDRD05PG056
Sample Name:	U4Q1SG-110421	U4Q2SG-110421	WLCASF97S016W4150	WLCDRD05PG05252	WLCDRD05PG05454	WLCDRD05PG05656
Sample Date:	4/21/2011	4/21/2011	6/10/1997	5/27/2005	5/27/2005	5/25/2005
Depth interval:	0 - 24 cm	0 - 28.8 cm	0 - 10 cm	0 - 28 cm	0 - 28 cm	0 - 30 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)						
Cyanide, total	0.203 U	0.169 U	--	--	--	--
Metals (mg/kg)						
Zinc	**91**	**79**	--	**111 J**	**93.6 J**	**88.4 J**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	2 U	1.6 U	--	0.17 U	0.19 U	0.16 U
1,2-Dichloroethene, cis-	2 U	1.6 U	--	--	--	--
1,2-Dichloroethene, trans-	2 U	1.6 U	--	0.39 U	0.44 U	0.37 U
Benzene	2 U	1.6 U	--	0.1 U	0.09 U	0.075 U
Ethylbenzene	2 U	1.6 U	--	0.15 U	0.17 U	0.14 U
Naphthalene	--	--	--	--	**0.89 J**	--
o-Xylene	2 U	1.6 U	--	0.16 U	0.18 U	0.15 U
Toluene	2 U	1.6 U	--	0.31 U	0.35 U	0.29 U
Trichloroethene (TCE)	2 U	1.6 U	--	0.13 U	0.15 U	0.12 U
Vinyl chloride	2 U	1.6 U	--	0.18 U	0.2 U	0.17 U
LWG RA Total Xylene (Calculated U = 1/2)	2 UT	1.6 UT	--	0.27 UT	0.3 UT	0.25 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	20 U	19 U	--	**910**	**24**	**27**
Acenaphthene	20 U	19 U	**297**	**3400**	**110**	**93**
Acenaphthylene	20 U	19 U	**56**	**1200**	**220**	**110**
Anthracene	20 U	19 U	**149**	**1600**	**610**	**220**
Benzo(a)anthracene	20 U	19 U	**288**	**5200**	**1500**	**630**
Benzo(a)pyrene	20 U	19 U	**377**	**9700**	**1800**	**1000**
Benzo(b)fluoranthene	--	--	**276**	**6000**	**1100**	**710**
Benzo(g,h,i)perylene	20 U	19 U	**323**	**9600**	**1500**	**910**
Benzo(k)fluoranthene	--	--	--	**4800**	**950**	**590**
Chrysene	20 U	19 U	**346**	**6700**	**1900**	**810**
Dibenzo(a,h)anthracene	20 U	19 U	**55**	**980**	**190**	**150**
Fluoranthene	**15 J**	**15 J**	**563**	**9900**	**3100**	**940**
Fluorene	20 U	19 U	**187**	**1500**	**110**	**81**
Indeno(1,2,3-c,d)pyrene	20 U	19 U	**305**	**9100**	**1500**	**890**
Naphthalene	20 U	19 U	**102**	**3000**	--	**79**
Phenanthrene	**11 J**	**10 J**	**557**	**7400**	**2200**	**440**
Pyrene	**15 J**	**15 J**	**629**	**12000**	**3700**	**950**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	20 UT	**23 JT**	**520 T**	**13000 T**	**2400 T**	**1400 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	U4Q1	U4Q2	WLCASF97S016	WLCDRD05PG052	WLCDRD05PG054	WLCDRD05PG056
Sample Name:	U4Q1SG-110421	U4Q2SG-110421	WLCASF97S016W4150	WLCDRD05PG05252	WLCDRD05PG05454	WLCDRD05PG05656
Sample Date:	4/21/2011	4/21/2011	6/10/1997	5/27/2005	5/27/2005	5/25/2005
Depth interval:	0 - 24 cm	0 - 28.8 cm	0 - 10 cm	0 - 28 cm	0 - 28 cm	0 - 30 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)						
Carbazole	20 U	19 U	--	**250 J**	30 U	**50**
Dibenzofuran	20 U	19 U	**73**	**220**	**14 J**	**25**
PCB Aroclors (µg/kg)						
Aroclor 1016	3.9 U	3.8 U	--	2.7 U	3 U	19 U
Aroclor 1221	3.9 U	3.8 U	--	2.7 U	3 U	12 U
Aroclor 1232	3.9 U	3.8 U	--	2.7 U	3 U	21 U
Aroclor 1242	3.9 U	3.8 U	--	2.7 U	3 U	13 U
Aroclor 1248	3.9 U	3.8 U	--	**20**	3 U	18 U
Aroclor 1254	3.9 U	3.8 U	--	18 U	21 U	50 U
Aroclor 1260	3.9 U	3.8 U	--	**16**	**8.8 J**	20 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	3.9 UT	3.8 UT	--	**53 T**	**30 JT**	50 UT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
alpha-Hexachlorocyclohexane (BHC)	4.9 U	0.96 U	--	0.31 U	0.36 U	0.29 U
beta-Hexachlorocyclohexane (BHC)	4.9 U	0.96 U	--	0.98 U	1.8 U	0.92 U
Endrin ketone	9.8 U	1.9 U	--	1.1 U	0.23 U	1.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	4.9 U	0.96 U	--	2.7 U	0.56 U	0.85 U
LWG RA Sum DDD (Calculated U = 1/2)	9.8 UT	1.9 UT	--	**39 JT**	**21 JT**	**62 T**
LWG RA Sum DDE (Calculated U = 1/2)	9.8 UT	1.9 UT	--	**7.8 JT**	**5.7 JT**	**12 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	9.8 UT	**6.1 JT**	--	**9.9 JT**	**80 T**	**81 NJT**
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**11**	8 U	--	**840 J**	**190 J**	**120 J**
Residual Range Hydrocarbons	--	--	--	**1600 J**	**620 J**	**460 J**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	WLCGSD01AN0101	WLCGSD01AN0102	WLCGSD01AN0103	WLCGSD01AN0105	WLCGSD01AN0205	WLCMRD08SDBH4SS
Sample Name:	WLCGSD01AN0101_00-10	WLCGSD01AN0102_00-10	WLCGSD01AN0103_00-10	WLCGSD01AN0105_00-10	WLCGSD01AN0205_00-10	WLCMRD08BH4-1
Sample Date:	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/11/2001	4/18/2008
Depth interval:	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)						
Cyanide, total	**0.6**	**0.3 J**	**2.2**	0.2 U	0.2 U	**1.88**
Metals (mg/kg)						
Zinc	**70.5 J**	**108 J**	**281 J**	**56.1 J**	**70.6 J**	**131**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	--	--	--	--	--	11 U
1,2-Dichloroethene, cis-	--	--	--	--	--	11 U
1,2-Dichloroethene, trans-	--	--	--	--	--	11 U
Benzene	0.01 U	0.02 U	**0.36**	0.02 U	0.02 U	11 U
Ethylbenzene	0.009 U	**0.2 J**	**2**	0.01 U	0.02 U	11 U
Naphthalene	--	--	--	--	--	--
o-Xylene	0.008 U	**0.21**	**0.87**	0.009 U	0.01 U	11 U
Toluene	0.02 U	0.02 U	**0.08 J**	0.02 U	0.02 U	11 U
Trichloroethene (TCE)	--	--	--	--	--	11 U
Vinyl chloride	--	--	--	--	--	11 U
LWG RA Total Xylene (Calculated U = 1/2)	0.02 UT	**0.29 JT**	**1.5 T**	0.02 UT	0.03 UT	11 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	--	--	--	--	--	**210**
Acenaphthene	**8500 J**	**52000 J**	**180000 J**	**59 J**	**28**	**360**
Acenaphthylene	**980**	**1300**	**8800**	**7.1**	**14**	**80**
Anthracene	**7700**	**23000**	**160000**	**47**	**71**	**4800**
Benzo(a)anthracene	**12000**	**23000**	**100000**	**89**	**210**	**2200**
Benzo(a)pyrene	**18000**	**37000**	**93000**	**150**	**270**	**2200**
Benzo(b)fluoranthene	**9300**	**19000**	**46000**	**86**	**190**	**2600**
Benzo(g,h,i)perylene	**13000**	**31000**	**54000**	**130**	**240**	**1600**
Benzo(k)fluoranthene	**11000**	**21000**	**62000**	**89**	**190**	**750**
Chrysene	**16000**	**31000**	**140000**	**120**	**300**	**3000**
Dibenzo(a,h)anthracene	**1200**	**2200**	**6400**	**14**	**28**	**230**
Fluoranthene	**35000**	**86000**	**320000**	**180**	**530**	**6100**
Fluorene	**4200**	**21000**	**110000**	**25**	**24**	**1000**
Indeno(1,2,3-c,d)pyrene	**10000**	**26000**	**46000**	**110**	**200**	**1700**
Naphthalene	**1700 J**	**6500 J**	**73000 J**	**130 J**	**24**	**140**
Phenanthrene	**29000**	**120000**	**240000**	**170**	**190**	**4600**
Pyrene	**55000**	**120000**	**190000**	**270**	**650**	**5700**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**22000 T**	**46000 T**	**120000 T**	**190 T**	**360 T**	**3100 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	WLCGSD01AN0101	WLCGSD01AN0102	WLCGSD01AN0103	WLCGSD01AN0105	WLCGSD01AN0205	WLCMRD08SDBH4SS
Sample Name:	WLCGSD01AN0101_00-10	WLCGSD01AN0102_00-10	WLCGSD01AN0103_00-10	WLCGSD01AN0105_00-10	WLCGSD01AN0205_00-10	WLCMRD08BH4-1
Sample Date:	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/11/2001	4/18/2008
Depth interval:	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	**1100**
Dibenzofuran	--	--	--	--	--	**240**
PCB Aroclors (µg/kg)						
Aroclor 1016	--	--	--	--	--	2.7 U
Aroclor 1221	--	--	--	--	--	5.3 U
Aroclor 1232	--	--	--	--	--	2.7 U
Aroclor 1242	--	--	--	--	--	2.7 U
Aroclor 1248	--	--	--	--	--	2.7 U
Aroclor 1254	--	--	--	--	--	15 U
Aroclor 1260	--	--	--	--	--	**5.9**
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	**24 T**
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	1.1 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	1.1 U
Endrin ketone	--	--	--	--	--	**0.56 J**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	**8.1 NJ**
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	**15 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	**4.4 JT**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	**5.8 T**
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	**87**
Residual Range Hydrocarbons	--	--	--	--	--	**240**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	WLCMRD08SDBH5SS	WLCMRD08SDBH6SS	WLCMRD08SDDA17SS	WLCMRD08SDDA18SS	WLCMRD08SDDC25SS
Sample Name:	WLCMRD08BH5-1	WLCMRD08BH6-1	WLCMRD08DA17-1	WLCMRD08DA18-1	WLCMRD08DC25-1
Sample Date:	4/17/2008	4/17/2008	4/17/2008	4/18/2008	4/17/2008
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)					
Cyanide, total	0.41 UJ	0.41 UJ	**16.1 J**	**0.11 J**	**39.4 J**
Metals (mg/kg)					
Zinc	**121**	**135**	**218**	**175**	**402**
Volatile Organics (µg/kg)					
1,1-Dichloroethene	11 U	9.5 U	12 U	--	7.2 U
1,2-Dichloroethene, cis-	11 U	9.5 U	12 U	--	7.2 U
1,2-Dichloroethene, trans-	11 U	9.5 U	12 U	--	7.2 U
Benzene	11 U	9.5 U	12 U	--	7.2 U
Ethylbenzene	11 U	**1.3 J**	12 U	--	7.2 U
Naphthalene	--	--	--	--	--
o-Xylene	11 U	**0.93 J**	12 U	--	7.2 U
Toluene	11 U	**11**	**1.4 J**	--	**0.52 J**
Trichloroethene (TCE)	11 U	**2.3 J**	12 U	--	7.2 U
Vinyl chloride	11 U	9.5 U	12 U	--	7.2 U
LWG RA Total Xylene (Calculated U = 1/2)	11 UT	**4.2 JT**	12 UT	--	7.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)					
2-Methylnaphthalene	**29**	**29**	**480**	**200**	**860**
Acenaphthene	**94**	**46**	**1900**	**1100**	**5500**
Acenaphthylene	**36**	**45**	**430**	**170**	**1700**
Anthracene	**190**	**140**	**3800**	**1500**	**9500**
Benzo(a)anthracene	**710**	**590**	**10000**	**1700**	**30000**
Benzo(a)pyrene	**910**	**900**	**12000**	**1700**	**39000**
Benzo(b)fluoranthene	**1000**	**890**	**13000**	**1500**	**38000**
Benzo(g,h,i)perylene	**730**	**780**	**11000**	**1200**	**26000**
Benzo(k)fluoranthene	**350**	**290**	**4200**	**450**	**13000**
Chrysene	**910**	**760**	**12000**	**2100**	**34000**
Dibenzo(a,h)anthracene	**95**	**110**	**1400**	**220**	**3400**
Fluoranthene	**1800**	**1400**	**22000**	**4100**	**82000**
Fluorene	**76**	**42**	**1400**	**1100**	**4300**
Indeno(1,2,3-c,d)pyrene	**740**	**760**	**11000**	**1200**	**28000**
Naphthalene	**89**	**90**	**1000**	**310**	**1700**
Phenanthrene	**620**	**530**	**17000**	**9400**	**48000**
Pyrene	**2000**	**2000**	**30000**	**6400**	**94000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**1300 T**	**1200 T**	**17000 T**	**2400 T**	**52000 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	WLCMRD08SDBH5SS	WLCMRD08SDBH6SS	WLCMRD08SDDA17SS	WLCMRD08SDDA18SS	WLCMRD08SDDC25SS
Sample Name:	WLCMRD08BH5-1	WLCMRD08BH6-1	WLCMRD08DA17-1	WLCMRD08DA18-1	WLCMRD08DC25-1
Sample Date:	4/17/2008	4/17/2008	4/17/2008	4/18/2008	4/17/2008
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)					
Carbazole	**44**	**21**	**580**	**58 J**	**2900**
Dibenzofuran	**23**	**12**	**160**	**200**	**910**
PCB Aroclors (µg/kg)					
Aroclor 1016	2.7 U	2.6 U	2.8 U	2.9 U	14 U
Aroclor 1221	5.3 U	5.2 U	5.6 U	5.8 U	63 U
Aroclor 1232	2.7 U	2.6 U	2.8 U	2.9 U	48 U
Aroclor 1242	2.7 U	2.6 U	4.6 U	**12**	5.3 U
Aroclor 1248	2.7 U	2.6 U	2.8 U	2.9 U	11 U
Aroclor 1254	**16**	**11**	7.8 U	**31 J**	43 U
Aroclor 1260	**4.5 J**	**3**	**6.3**	**25**	5.1 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**31 JT**	**24 T**	**22 T**	**78 JT**	63 UT
PCB Congeners (µg/kg)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/kg)					
alpha-Hexachlorocyclohexane (BHC)	0.21 U	0.21 U	1.2 U	**0.24**	2 U
beta-Hexachlorocyclohexane (BHC)	0.21 U	0.21 U	1.2 U	0.23 U	2 U
Endrin ketone	**0.17 J**	0.21 U	1.2 U	0.4 U	**20 J**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**0.51 J**	0.49 U	2.7 U	0.76 U	25 U
LWG RA Sum DDD (Calculated U = 1/2)	**7.9 JT**	**4.8 T**	**27 JT**	**21 T**	**500 T**
LWG RA Sum DDE (Calculated U = 1/2)	**2.8 JT**	**1.6 JT**	**7.7 JT**	**16 JT**	2 UT
LWG RA Sum DDT (Calculated U = 1/2)	**3.1 JT**	**13 T**	**2.7 JT**	**6.1 JT**	5.7 UT
Total Petroleum Hydrocarbons (mg/kg)					
Diesel Range Hydrocarbons	**61**	**270**	**380**	**430**	**450**
Residual Range Hydrocarbons	**200 J**	**210 J**	**660**	**480**	**690**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	WLCMRD08SDUD1SS	WLCMRD08SDUD26SS	WLCMRD08SDUD27SS	WLCMRD08SDUD2SS	WLCT0I98GRAB04	WLCT0I98GRAB06	WLR0797WRBC23
Sample Name:	WLCMRD08UD1-1	WLCMRD08UD26-1	WLCMRD08UD27-1	WLCMRD08UD2-1	WLCT0I98GRAB04GRAB0	WLCT0I98GRAB06GRAB0	WLR0797WRBC23WRBC2
Sample Date:	4/15/2008	4/13/2008	4/14/2008	4/15/2008	9/14/1998	9/14/1998	7/25/1997
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 10 cm	0 - 10 cm	0 - 18 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)							
Cyanide, total	**12.3**	**4.58**	**39 J**	**16.2**	--	--	--
Metals (mg/kg)							
Zinc	**154**	**169**	**429 J**	**137**	**67.9**	**38.6**	**49.3**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	12 U	13 U	28 U	11 U	--	--	--
1,2-Dichloroethene, cis-	12 U	13 U	28 U	11 U	--	--	--
1,2-Dichloroethene, trans-	12 U	13 U	28 U	11 U	--	--	--
Benzene	12 U	13 U	28 U	11 U	--	--	--
Ethylbenzene	12 U	13 U	28 U	11 U	--	--	--
Naphthalene	--	--	--	--	--	--	--
o-Xylene	12 U	13 U	28 U	11 U	--	--	--
Toluene	**4.3 J**	**14**	**830**	11 U	--	--	--
Trichloroethene (TCE)	12 U	13 U	28 U	11 U	--	--	--
Vinyl chloride	12 U	13 U	28 U	11 U	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	12 UT	13 UT	28 UT	11 UT	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**160**	**27**	**570**	**200**	--	--	**1 J**
Acenaphthene	**1100**	**140**	**2600**	**790**	**250 J**	**160**	5 UJ
Acenaphthylene	**670**	**130**	**610 J**	**340**	**90 J**	100 U	5 UJ
Anthracene	**2700**	**330**	**4000**	**1400**	**310 J**	**340**	5 UJ
Benzo(a)anthracene	**14000**	**2300**	**15000**	**5400**	**1200 J**	**340**	5 UJ
Benzo(a)pyrene	**19000**	**3300**	**21000**	**6600**	**1500 J**	**340**	5 UJ
Benzo(b)fluoranthene	**20000**	**3300**	**21000**	**7300**	**1100 J**	**180**	5 UJ
Benzo(g,h,i)perylene	**15000**	**2600**	**15000**	**5600**	**620 J**	**170**	**0.6 J**
Benzo(k)fluoranthene	**6800**	**960**	**6800**	**2400**	**920 J**	**190**	5 UJ
Chrysene	**16000**	**2900**	**17000**	**6100**	**1200 J**	**360**	5 UJ
Dibenzo(a,h)anthracene	**2000**	**420**	**2000**	**750**	**140 J**	100 U	5 UJ
Fluoranthene	**28000**	**3600**	**32000**	**12000**	**2600 J**	**1200**	**0.8 J**
Fluorene	**1400**	**220**	**1900**	**610**	**180 J**	**140**	5 UJ
Indeno(1,2,3-c,d)pyrene	**15000**	**2700**	**16000**	**5800**	**980 J**	**230**	5 UJ
Naphthalene	**230**	**48**	**740**	**460**	**160 J**	100 U	**0.5 J**
Phenanthrene	**11000**	**1500**	**17000**	**5300**	**1200 J**	**1300**	**1 J**
Pyrene	**27000**	**3400**	**37000**	**14000**	**3000 J**	**1400**	**0.8 J**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**26000 T**	**4600 T**	**28000 T**	**9200 T**	**2000 JT**	**470 T**	5 UJT

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	WLCMRD08SDUD1SS	WLCMRD08SDUD26SS	WLCMRD08SDUD27SS	WLCMRD08SDUD2SS	WLCT0I98GRAB04	WLCT0I98GRAB06	WLR0797WRBC23
Sample Name:	WLCMRD08UD1-1	WLCMRD08UD26-1	WLCMRD08UD27-1	WLCMRD08UD2-1	WLCT0I98GRAB04GRAB0	WLCT0I98GRAB06GRAB0	WLR0797WRBC23WRBC2
Sample Date:	4/15/2008	4/13/2008	4/14/2008	4/15/2008	9/14/1998	9/14/1998	7/25/1997
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 10 cm	0 - 10 cm	0 - 18 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)							
Carbazole	**750**	**350**	**4400 J**	**270**	--	--	--
Dibenzofuran	**340**	**39**	**610 J**	**170**	**45 J**	100 U	5 UJ
PCB Aroclors (µg/kg)							
Aroclor 1016	16 U	2.7 U	3.4 U	7.3 U	10 U	10 U	10 U
Aroclor 1221	5.3 U	5.3 U	6 U	5.7 U	10 U	10 U	10 U
Aroclor 1232	28 U	2.7 U	3.4 U	21 U	10 U	10 U	10 U
Aroclor 1242	15 U	2.7 U	3.4 U	9.4 U	10 U	10 U	10 U
Aroclor 1248	13 U	2.7 U	3.4 U	5.9 U	10 U	10 U	10 U
Aroclor 1254	34 U	21 U	23 U	25 U	15 U	10 U	10 U
Aroclor 1260	2.7 U	2.7 U	3 U	2.9 U	**13**	10 U	10 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	34 UT	21 UT	23 UT	25 UT	**45 T**	10 UT	10 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	1.1 U	0.22 U	**1.5 J**	1.2 U	--	--	2 U
beta-Hexachlorocyclohexane (BHC)	2.4 U	0.22 U	1.7 U	1.2 U	--	--	2 U
Endrin ketone	**4.7 J**	0.32 U	**6.5 NJ**	1.2 U	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**6**	1.2 U	**11**	**11**	1.7 U	1.7 U	2 U
LWG RA Sum DDD (Calculated U = 1/2)	**31 JT**	**14 JT**	**18 T**	**19 JT**	**11 T**	3.3 UT	2 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.7 UT	**4.4 NJT**	**35 JT**	2.6 UT	**5.9 T**	2.3 UT	2 UT
LWG RA Sum DDT (Calculated U = 1/2)	**51 T**	2.8 UT	**65 T**	4.2 UT	**49 T**	6.7 UT	**1.7 T**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**190**	**96**	**300**	**170**	--	--	--
Residual Range Hydrocarbons	**320**	**230**	**560**	**300**	--	--	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	WR-WSI98SD061	WR-WSI98SD062	WR-WSI98SD063	WR-WSI98SD067	WR-WSI98SD069	WR-WSI98SD070
Sample Name:	WR-WSI98SD0610	WR-WSI98SD0620	WR-WSI98SD0630	WR-WSI98SD0670	WR-WSI98SD0690	WR-WSI98SD0700000CC
Sample Date:	9/21/1997	9/20/1997	9/20/1997	9/21/1997	9/20/1997	9/20/1997
Depth interval:	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Conventional Parameters (mg/kg)						
Cyanide, total	--	--	--	--	--	--
Metals (mg/kg)						
Zinc	107	161	185	150	144	117 T
Volatile Organics (µg/kg)						
1,1-Dichloroethene	--	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--	--
Benzene	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--
Toluene	--	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	21	18000	680	7600	210	385 T
Acenaphthene	63	15000	2600	11000	5600	8100 T
Acenaphthylene	24	560	370	2000	180	51.5 T
Anthracene	82	24000	3400	13000	22000	5750 T
Benzo(a)anthracene	290	72000	4000	14000	4800	2250 T
Benzo(a)pyrene	330	57000	5100	15000	2400	1120 T
Benzo(b)fluoranthene	310	33000	3100	12000	1900	935 T
Benzo(g,h,i)perylene	220	40000	3600	13000	1100	375 T
Benzo(k)fluoranthene	240	14000	3200	10000	1400	985 T
Chrysene	380	100000	5600	17000	6300	2500 T
Dibenzo(a,h)anthracene	65	9200	1000	2500	390	165 T
Fluoranthene	910	47000	11000	45000	22000	14300 T
Fluorene	61	20000	2400	9400	6700	7900 T
Indeno(1,2,3-c,d)pyrene	190	12000	3000	9500	1100	405 T
Naphthalene	40	1900	1200	13000	200	395 T
Phenanthrene	420	150000	17000	64000	31000	29000 T
Pyrene	690	140000	18000	54000	17000	12700 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	480 T	78000 T	7100 T	21000 T	3600 T	1700 T

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	WR-WSI98SD061	WR-WSI98SD062	WR-WSI98SD063	WR-WSI98SD067	WR-WSI98SD069	WR-WSI98SD070
Sample Name:	WR-WSI98SD0610	WR-WSI98SD0620	WR-WSI98SD0630	WR-WSI98SD0670	WR-WSI98SD0690	WR-WSI98SD0700000CC
Sample Date:	9/21/1997	9/20/1997	9/20/1997	9/21/1997	9/20/1997	9/20/1997
Depth interval:	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Semivolatile Organics (µg/kg)						
Carbazole	**77 J**	**8400 J**	**260 J**	**1800**	**3400 J**	**1290 JT**
Dibenzofuran	**38**	**2600**	**530**	**1300**	**1900**	**2050 T**
PCB Aroclors (µg/kg)						
Aroclor 1016	19 U	--	--	--	--	19 UT
Aroclor 1221	38 U	--	--	--	--	38 UT
Aroclor 1232	19 U	--	--	--	--	19 UT
Aroclor 1242	19 U	--	--	--	--	19 UT
Aroclor 1248	19 U	--	--	--	--	19 UT
Aroclor 1254	32 UJ	--	--	--	--	**51 T**
Aroclor 1260	19 U	--	--	--	--	19 UT
LWG RA Total PCB Aroclors (Calculated U = 1/2)	38 UJT	--	--	--	--	**120 T**
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.94 UT
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.94 UT
Endrin ketone	--	--	--	--	--	2.8 UJT
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	0.94 UT
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	**12.5 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	**7.35 T**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	**25.5 T**
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	**WR-WSI98SD072**
Sample Name:	**WR-WSI98SD0720**
Sample Date:	**9/20/1997**
Depth interval:	**0 - 10 cm**
Analysis Matrix:	**Surface Sediment**
Conventional Parameters (mg/kg)	
Cyanide, total	**--**
Metals (mg/kg)	
Zinc	**113**
Volatile Organics (µg/kg)	
1,1-Dichloroethene	**--**
1,2-Dichloroethene, cis-	**--**
1,2-Dichloroethene, trans-	**--**
Benzene	**--**
Ethylbenzene	**--**
Naphthalene	**--**
o-Xylene	**--**
Toluene	**--**
Trichloroethene (TCE)	**--**
Vinyl chloride	**--**
LWG RA Total Xylene (Calculated U = 1/2)	**--**
Polycyclic Aromatic Hydrocarbons (µg/kg)	
2-Methylnaphthalene	**130**
Acenaphthene	**1500**
Acenaphthylene	**85**
Anthracene	**440**
Benzo(a)anthracene	**700**
Benzo(a)pyrene	**980**
Benzo(b)fluoranthene	**800**
Benzo(g,h,i)perylene	**600**
Benzo(k)fluoranthene	**630**
Chrysene	**1100**
Dibenzo(a,h)anthracene	**160**
Fluoranthene	**1500**
Fluorene	**960**
Indeno(1,2,3-c,d)pyrene	**560**
Naphthalene	**210**
Phenanthrene	**1800**
Pyrene	**1600**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**1400 T**

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

System Location Code:	**WR-WSI98SD072**
Sample Name:	**WR-WSI98SD0720**
Sample Date:	**9/20/1997**
Depth interval:	**0 - 10 cm**
Analysis Matrix:	**Surface Sediment**
Semivolatile Organics (µg/kg)	
Carbazole	**86 J**
Dibenzofuran	**220**
PCB Aroclors (µg/kg)	
Aroclor 1016	20 U
Aroclor 1221	40 U
Aroclor 1232	20 U
Aroclor 1242	20 U
Aroclor 1248	20 U
Aroclor 1254	40 UJ
Aroclor 1260	20 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	40 UJT
PCB Congeners (µg/kg)	
PCB-077	--
PCB-081	--
PCB-105	--
PCB-114	--
PCB-118	--
PCB-123	--
PCB-126	--
PCB-156	--
PCB-157	--
PCB-167	--
PCB-169	--
PCB-189	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--
Pesticides (µg/kg)	
alpha-Hexachlorocyclohexane (BHC)	0.99 U
beta-Hexachlorocyclohexane (BHC)	0.99 U
Endrin ketone	2 UJ
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.99 U
LWG RA Sum DDD (Calculated U = 1/2)	**22 T**
LWG RA Sum DDE (Calculated U = 1/2)	**5.3 T**
LWG RA Sum DDT (Calculated U = 1/2)	**60 T**
Total Petroleum Hydrocarbons (mg/kg)	
Diesel Range Hydrocarbons	--
Residual Range Hydrocarbons	--

Table 3-13
Existing Data Screening Table – Surface Sediment (Category A) Human Health

Notes:

Detected concentration is greater than 1 screening level
Detected concentration is greater than 2 screening levels
Detected concentration is greater than 3 screening levels
Detected concentration is greater than 4 screening levels
Detected concentration is greater than 5 screening levels
Detected concentration is greater than 6 screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
T = Result is the value of a total or calculation
-- = Results not reported or not applicable
Totals are calculated as the sum of all detected results and 1/2 the undetected result. If all are undetected results, the highest reporting limit value is reported as the sum.

Acronyms:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
mg/kg-OC = milligrams per kilogram of organic carbon normalized
BaPEq = benzo[a]pyrene equivalents
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LWG = Lower Willamette Group
MQ = mean quotient
NA = not applicable
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyls
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	DGS-01	DGS-01	DGS-02	DGS-02	DGS-03SC	DGS-03SC
Sample Name:	DGS-01SG-110420	DGS-01SG-110420	DGS-02SG-110420	DGS-02SG-110420	DGS-03SC-0001-101005	DGS-03SC-0001-101005
Sample Date:	4/20/2011	4/20/2011	4/20/2011	4/20/2011	10/5/2010	10/5/2010
Depth interval:	0 - 23 cm	0 - 23 cm	0 - 29 cm	0 - 29 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	**104**	--	**129**	--	**367 J**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	**1100**	--	**6600**	--	**19000**	--
LWG RA Total HPAH (Calculated U = 1/2)	**10000 T**	--	**53000 T**	--	**170000 T**	--
LWG RA Total PAH (Calculated U = 1/2)	**14000 T**	--	**65000 T**	--	**200000 T**	--
Semivolatile Organics (µg/kg)						
Carbazole	**150**	--	**520**	--	**1300**	--
Dibenzofuran	**100**	--	**140**	--	310 U	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**32 JT**	--	**46 T**	--	33 UT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	20 U	--	**11**	--	16 U	--
2,4'-DDE (o,p'-DDE)	20 U	--	9.7 U	--	16 U	--
2,4'-DDT (o,p'-DDT)	20 U	--	9.7 U	--	16 U	--
4,4'-DDD (p,p'-DDD)	20 U	--	**20**	--	16 U	--
4,4'-DDE (p,p'-DDE)	20 U	--	9.7 U	--	**9.1 J**	--
4,4'-DDT (p,p'-DDT)	20 U	--	9.7 U	--	16 U	--
beta-Hexachlorocyclohexane (BHC)	9.9 U	--	16 U	--	8 U	--
LWG RA Sum DDD (Calculated U = 1/2)	20 UT	--	**31 T**	--	16 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	20 UT	--	9.7 UT	--	**17 JT**	--
LWG RA Sum DDT (Calculated U = 1/2)	20 UT	--	9.7 UT	--	16 UT	--
LWG RA Total DDx (Calculated U = 1/2)	20 UT	--	**50 T**	--	**49 JT**	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**26**	--	**100**	--	**300**	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**1.067469142**	--	**0.737371265**	--	**2.140895206**
pMax	--	**0.461518058**	--	**0.734572468**	--	**0.99935985**

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	DGS-04	DGS-04	DGS-05	DGS-05	DGS-06	DGS-06
Sample Name:	DGS-04SG-110420	DGS-04SG-110420	DGS-05SG-110418	DGS-05SG-110418	DGS-06SG-110420	DGS-06SG-110420
Sample Date:	4/20/2011	4/20/2011	4/18/2011	4/18/2011	4/20/2011	4/20/2011
Depth interval:	0 - 29 cm	0 - 29 cm	0 - 25 cm	0 - 25 cm	0 - 26 cm	0 - 26 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	138	--	72	--	87	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	5200	--	8700	--	7200	--
LWG RA Total HPAH (Calculated U = 1/2)	65000 T	--	110000 T	--	65000 T	--
LWG RA Total PAH (Calculated U = 1/2)	92000 T	--	220000 T	--	86000 T	--
Semivolatile Organics (µg/kg)						
Carbazole	1500	--	2300	--	440	--
Dibenzofuran	640	--	1400	--	240	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	71 T	--	19 UT	--	29 T	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	9.8 U	--	20 UJ	--	9.9 U	--
2,4'-DDE (o,p'-DDE)	9.8 U	--	20 U	--	9.9 U	--
2,4'-DDT (o,p'-DDT)	9.8 U	--	20 UJ	--	9.9 U	--
4,4'-DDD (p,p'-DDD)	48	--	20 UJ	--	15	--
4,4'-DDE (p,p'-DDE)	16 J	--	20 U	--	9.9 U	--
4,4'-DDT (p,p'-DDT)	9.8 U	--	20 UJ	--	9.9 U	--
beta-Hexachlorocyclohexane (BHC)	30 U	--	9.9 U	--	9.2 U	--
LWG RA Sum DDD (Calculated U = 1/2)	53 T	--	20 UJT	--	20 T	--
LWG RA Sum DDE (Calculated U = 1/2)	21 JT	--	20 UT	--	9.9 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	9.8 UT	--	20 UJT	--	9.9 UT	--
LWG RA Total DDx (Calculated U = 1/2)	84 JT	--	20 UJT	--	40 T	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	250	--	320	--	140	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	1.25930575	--	5.749898075	--	1.054855851
pMax	--	0.914769869	--	0.914083454	--	0.728563026

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	DGS-07SC	DGS-07SC	DGS-08	DGS-08	DGS-09	DGS-09
Sample Name:	DGS-07SC-0001-101012	DGS-07SC-0001-101012	DGS-08SG-110418	DGS-08SG-110418	DGS-09SG-110418	DGS-09SG-110418
Sample Date:	10/12/2010	10/12/2010	4/18/2011	4/18/2011	4/18/2011	4/18/2011
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 25 cm	0 - 25 cm	0 - 27 cm	0 - 27 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	**229**	--	**89**	--	**109**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	**26000**	--	**770**	--	**12000**	--
LWG RA Total HPAH (Calculated U = 1/2)	**250000 T**	--	**8400 T**	--	**620000 JT**	--
LWG RA Total PAH (Calculated U = 1/2)	**350000 T**	--	**16000 T**	--	**800000 JT**	--
Semivolatile Organics (µg/kg)						
Carbazole	**2300**	--	**41**	--	**760**	--
Dibenzofuran	**870**	--	**23**	--	**620**	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**300 JT**	--	20 UT	--	19 UT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	**20**	--	1.9 UJ	--	19 UJ	--
2,4'-DDE (o,p'-DDE)	16 U	--	1.9 U	--	19 U	--
2,4'-DDT (o,p'-DDT)	16 U	--	1.9 UJ	--	19 UJ	--
4,4'-DDD (p,p'-DDD)	**74 J**	--	**3.2 NJ**	--	**40 NJ**	--
4,4'-DDE (p,p'-DDE)	**32**	--	1.9 U	--	19 U	--
4,4'-DDT (p,p'-DDT)	**16**	--	**-- R**	--	**-- R**	--
beta-Hexachlorocyclohexane (BHC)	40 U	--	0.95 U	--	9.5 U	--
LWG RA Sum DDD (Calculated U = 1/2)	**94 JT**	--	**4.2 NJT**	--	**50 NJT**	--
LWG RA Sum DDE (Calculated U = 1/2)	**40 T**	--	1.9 UT	--	19 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	**24 T**	--	1.9 UJT	--	19 UJT	--
LWG RA Total DDx (Calculated U = 1/2)	**160 JT**	--	**7 NJT**	--	**78 NJT**	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**1200 J**	--	**28**	--	**120**	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**2.823589406**	--	**0.301765589**	--	**4.70875996**
pMax	--	**0.992682241**	--	**0.306394204**	--	**0.940603034**

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	DGS-11SC	DGS-11SC	DGS-12	DGS-12	DGS-12	DGS-13
Sample Name:	DGS-11SC-0001-101006	DGS-11SC-0001-101006	DGS-12SG-110418	DGS-62SG-110418	NA	DGS-13SG-110418
Sample Date:	10/6/2010	10/6/2010	4/18/2011	4/18/2011	4/18/2011	4/18/2011
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 25 cm	0 - 25 cm	0 - 25 cm	0 - 26 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	**103**	--	**74**	**67**	--	**65**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	**10000**	--	**560**	**430**	--	**8300**
LWG RA Total HPAH (Calculated U = 1/2)	**110000 T**	--	**5500 T**	**4600 T**	--	**85000 T**
LWG RA Total PAH (Calculated U = 1/2)	**240000 T**	--	**18000 T**	**15000 T**	--	**160000 T**
Semivolatile Organics (µg/kg)						
Carbazole	3300 U	--	**110**	**110**	--	**520**
Dibenzofuran	3300 U	--	**56**	**66**	--	**1000**
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	65 UT	--	19 UT	19 UT	--	19 UT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	16 U	--	1.9 UJ	19 U	--	19 U
2,4'-DDE (o,p'-DDE)	16 U	--	1.9 U	19 U	--	19 U
2,4'-DDT (o,p'-DDT)	16 U	--	1.9 UJ	19 U	--	19 U
4,4'-DDD (p,p'-DDD)	**9.2 J**	--	**4.4 J**	19 U	--	19 U
4,4'-DDE (p,p'-DDE)	16 U	--	1.9 U	19 U	--	19 U
4,4'-DDT (p,p'-DDT)	16 U	--	**6.2 J**	19 U	--	19 U
beta-Hexachlorocyclohexane (BHC)	7.9 U	--	0.96 U	9.6 U	--	9.6 U
LWG RA Sum DDD (Calculated U = 1/2)	**17 JT**	--	**5.4 JT**	19 UT	--	19 UT
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	--	1.9 UT	19 UT	--	19 UT
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	--	**7.2 JT**	19 UT	--	19 UT
LWG RA Total DDx (Calculated U = 1/2)	**49 JT**	--	**14 JT**	19 UT	--	19 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**450**	--	**31**	34 U	--	**810**
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**6.066848647**	--	--	**0.399478674**	--
pMax	--	**0.960867437**	--	--	**0.215907543**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	DGS-13	DGS-16	DGS-16	DGS-17	DGS-17	DGS-18SC
Sample Name:	DGS-13SG-110418	DGS-16SG-110418	NA	DGS-17SG-110418	DGS-17SG-110418	DGS-18SC-0001-101008
Sample Date:	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/18/2011	10/8/2010
Depth interval:	0 - 26 cm	0 - 25 cm	0 - 25 cm	0 - 28.5 cm	0 - 28.5 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	79	--	59	--	89
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	230	--	750	--	20000
LWG RA Total HPAH (Calculated U = 1/2)	--	2700 T	--	7800 T	--	230000 JT
LWG RA Total PAH (Calculated U = 1/2)	--	3200 T	--	14000 T	--	450000 JT
Semivolatile Organics (µg/kg)						
Carbazole	--	19 U	--	390	--	1400
Dibenzofuran	--	19 U	--	250	--	2700
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	19 UT	--	19 UT	--	33 UT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	1.9 UJ	--	19 UJ	--	16 U
2,4'-DDE (o,p'-DDE)	--	1.9 U	--	19 U	--	16 U
2,4'-DDT (o,p'-DDT)	--	1.9 UJ	--	19 UJ	--	16 U
4,4'-DDD (p,p'-DDD)	--	2.4 NJ	--	19 U	--	16 U
4,4'-DDE (p,p'-DDE)	--	1.9 U	--	19 U	--	16 U
4,4'-DDT (p,p'-DDT)	--	-- R	--	19 UJ	--	16 U
beta-Hexachlorocyclohexane (BHC)	--	0.96 U	--	9.3 U	--	8.1 U
LWG RA Sum DDD (Calculated U = 1/2)	--	3.4 NJT	--	19 UJT	--	16 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	1.9 UT	--	19 UT	--	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	1.9 UJT	--	19 UJT	--	16 UT
LWG RA Total DDx (Calculated U = 1/2)	--	6.2 NJT	--	19 UJT	--	16 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	10	--	43	--	5100
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	2.870437437	--	0.092198751	--	0.330247677	--
pMax	0.977817252	--	0.127117506	--	0.499581164	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	DGS-18SC	DGS-19SC	DGS-19SC	DGS-20	DGS-20	DGS-21
Sample Name:	DGS-18SC-0001-101008	DGS-19SC-0001-101006	DGS-19SC-0001-101006	DGS-20SG-110419	DGS-20SG-110419	DGS-21SG-110419
Sample Date:	10/8/2010	10/6/2010	10/6/2010	4/19/2011	4/19/2011	4/19/2011
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 27 cm	0 - 27 cm	0 - 27.5 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	142	--	67	--	93
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	19000	--	150	--	6600
LWG RA Total HPAH (Calculated U = 1/2)	--	210000 T	--	1500 T	--	65000 T
LWG RA Total PAH (Calculated U = 1/2)	--	570000 T	--	1700 JT	--	92000 T
Semivolatile Organics (µg/kg)						
Carbazole	--	3300 U	--	18 U	--	160
Dibenzofuran	--	3300 U	--	18 U	--	150
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	64 UT	--	19 UT	--	19 UT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	16 U	--	1.9 UJ	--	19 U
2,4'-DDE (o,p'-DDE)	--	16 U	--	1.9 U	--	19 U
2,4'-DDT (o,p'-DDT)	--	16 U	--	1.9 UJ	--	19 U
4,4'-DDD (p,p'-DDD)	--	16 U	--	1.9 U	--	19 U
4,4'-DDE (p,p'-DDE)	--	16 U	--	1.9 U	--	19 U
4,4'-DDT (p,p'-DDT)	--	16 U	--	1.9 UJ	--	19 U
beta-Hexachlorocyclohexane (BHC)	--	7.9 U	--	0.97 U	--	9.7 U
LWG RA Sum DDD (Calculated U = 1/2)	--	16 UT	--	1.9 UJT	--	19 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	16 UT	--	1.9 UT	--	19 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	16 UT	--	1.9 UJT	--	19 UT
LWG RA Total DDx (Calculated U = 1/2)	--	16 UT	--	1.9 UJT	--	19 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	620	--	6.5 U	--	120
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	9.509251574	--	20.46132226	--	0.898387299	--
pMax	0.900851646	--	0.998382274	--	0.680039832	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	DGS-21	DGS-22SC	DGS-22SC	DGS-23SC	DGS-23SC	DGS-24SC
Sample Name:	DGS-21SG-110419	DGS-22SC-0001-101012	DGS-22SC-0001-101012	DGS-23SC-0001-101008	DGS-23SC-0001-101008	DGS-24SC-0001-101012
Sample Date:	4/19/2011	10/12/2010	10/12/2010	10/8/2010	10/8/2010	10/12/2010
Depth interval:	0 - 27.5 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	**53**	--	**49**	--	**104**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	**3200**	--	62 U	--	**14000**
LWG RA Total HPAH (Calculated U = 1/2)	--	**28000 T**	--	62 UJT	--	**130000 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**36000 T**	--	**680 JT**	--	**190000 T**
Semivolatile Organics (µg/kg)						
Carbazole	--	200 U	--	**67**	--	**1800**
Dibenzofuran	--	200 U	--	62 U	--	**860**
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	33 UJT	--	32 UT	--	32 UJT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	16 U	--	3.2 U	--	16 U
2,4'-DDE (o,p'-DDE)	--	16 U	--	3.2 U	--	16 U
2,4'-DDT (o,p'-DDT)	--	16 U	--	3.2 U	--	16 U
4,4'-DDD (p,p'-DDD)	--	16 U	--	3.2 U	--	**22**
4,4'-DDE (p,p'-DDE)	--	16 U	--	3.2 U	--	16 U
4,4'-DDT (p,p'-DDT)	--	**94**	--	3.2 U	--	**72**
beta-Hexachlorocyclohexane (BHC)	--	8 U	--	1.6 U	--	7.8 U
LWG RA Sum DDD (Calculated U = 1/2)	--	16 UT	--	3.2 UT	--	**30 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	16 UT	--	3.2 UT	--	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	**100 T**	--	3.2 UT	--	**80 T**
LWG RA Total DDx (Calculated U = 1/2)	--	**130 T**	--	3.2 UT	--	**130 T**
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	**61 J**	--	6.8 U	--	**280 J**
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	**0.985238878**	--	**0.412406503**	--	**0.079988003**	--
pMax	**0.761455628**	--	**0.514769644**	--	**0.126206197**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	DGS-24SC	DGS-25	DGS-25	DGS-26	DGS-26	DGS-26SC
Sample Name:	DGS-24SC-0001-101012	DGS-25SG-110419	DGS-25SG-110419	DGS-26SG-110419	DGS-26SG-110419	DGS-26SC-0001-101011
Sample Date:	10/12/2010	4/19/2011	4/19/2011	4/19/2011	4/19/2011	10/11/2010
Depth interval:	0 - 30.48 cm	0 - 25 cm	0 - 25 cm	0 - 26.5 cm	0 - 26.5 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	64	--	89	--	81
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	19	--	1900	--	58000
LWG RA Total HPAH (Calculated U = 1/2)	--	730 JT	--	21000 T	--	720000 T
LWG RA Total PAH (Calculated U = 1/2)	--	1800 JT	--	47000 T	--	2200000 T
Semivolatile Organics (µg/kg)						
Carbazole	--	18 U	--	110	--	14000
Dibenzofuran	--	18 U	--	120	--	13000
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	19 UT	--	18 UT	--	56 UJT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	1.9 U	--	18 U	--	29 U
2,4'-DDE (o,p'-DDE)	--	1.9 U	--	18 U	--	29 U
2,4'-DDT (o,p'-DDT)	--	7.4	--	18 U	--	29 U
4,4'-DDD (p,p'-DDD)	--	1.9 U	--	18 U	--	29 U
4,4'-DDE (p,p'-DDE)	--	1.9 U	--	18 U	--	29 U
4,4'-DDT (p,p'-DDT)	--	1.9 U	--	18 U	--	29 U
beta-Hexachlorocyclohexane (BHC)	--	0.94 U	--	9.2 U	--	15 U
LWG RA Sum DDD (Calculated U = 1/2)	--	1.9 UT	--	18 UT	--	29 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	1.9 UT	--	18 UT	--	29 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	8.4 T	--	18 UT	--	29 UT
LWG RA Total DDx (Calculated U = 1/2)	--	12 T	--	18 UT	--	29 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	6.5 U	--	280	--	3800
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	2.165404374	--	0.596559028	--	1.015479748	--
pMax	0.975529106	--	0.623978906	--	0.575949491	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	**DGS-26SC**	**DGS-28SC**	**DGS-28SC**	**DGS-30**	**DGS-30**	**DGS-31**
Sample Name:	**DGS-26SC-0001-101011**	**DGS-28SC-0001-101007**	**DGS-28SC-0001-101007**	**DGS-30SG-110419**	**DGS-30SG-110419**	**DGS-31SG-110419**
Sample Date:	**10/11/2010**	**10/7/2010**	**10/7/2010**	**4/19/2011**	**4/19/2011**	**4/19/2011**
Depth interval:	**0 - 30.48 cm**	**0 - 30.48 cm**	**0 - 30.48 cm**	**0 - 25 cm**	**0 - 25 cm**	**0 - 27 cm**
Analysis Matrix:	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**
Metals (mg/kg)						
Zinc	--	**64**	--	**69**	--	**128**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	60 U	--	19 U	--	**1300**
LWG RA Total HPAH (Calculated U = 1/2)	--	**770 T**	--	**3300 JT**	--	**16000 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**980 T**	--	**3500 JT**	--	**62000 T**
Semivolatile Organics (µg/kg)						
Carbazole	--	60 U	--	19 U	--	**1400**
Dibenzofuran	--	60 U	--	19 U	--	**310**
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	32 UT	--	18 UT	--	**130 T**
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	3.2 U	--	**2.1**	--	19 U
2,4'-DDE (o,p'-DDE)	--	3.2 U	--	1.9 U	--	19 U
2,4'-DDT (o,p'-DDT)	--	3.2 U	--	**4.7**	--	19 U
4,4'-DDD (p,p'-DDD)	--	3.2 U	--	**3.9**	--	19 U
4,4'-DDE (p,p'-DDE)	--	3.2 U	--	1.9 U	--	19 U
4,4'-DDT (p,p'-DDT)	--	**8.9**	--	**12**	--	19 U
beta-Hexachlorocyclohexane (BHC)	--	1.6 U	--	0.94 U	--	9.4 U
LWG RA Sum DDD (Calculated U = 1/2)	--	3.2 UT	--	**6 T**	--	19 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	3.2 UT	--	1.9 UT	--	19 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	**11 T**	--	**17 T**	--	19 UT
LWG RA Total DDx (Calculated U = 1/2)	--	**17 T**	--	**25 T**	--	19 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	**18**	--	**28**	--	**86**
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	**63.021897**	--	**0.039114863**	--	**0.347196242**	--
pMax	**0.99908382**	--	**0.005872472**	--	**0.342302535**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	DGS-31	DGS-32SC	DGS-32SC	DGS-33	DGS-33	DGS-34
Sample Name:	DGS-31SG-110419	DGS-32SC-0001-101011	DGS-32SC-0001-101011	DGS-33SG-110419	DGS-33SG-110419	DGS-34SG-110419
Sample Date:	4/19/2011	10/11/2010	10/11/2010	4/19/2011	4/19/2011	4/19/2011
Depth interval:	0 - 27 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 25 cm	0 - 25 cm	0 - 26 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	128	--	75	--	166
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	12000	--	56	--	1600
LWG RA Total HPAH (Calculated U = 1/2)	--	150000 T	--	660 T	--	63000 JT
LWG RA Total PAH (Calculated U = 1/2)	--	250000 T	--	910 JT	--	190000 JT
Semivolatile Organics (µg/kg)						
Carbazole	--	240	--	18 U	--	1400
Dibenzofuran	--	1700	--	18 U	--	7300
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	250 JT	--	19 UT	--	200 T
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	16 U	--	1.9 U	--	19 U
2,4'-DDE (o,p'-DDE)	--	16 U	--	1.9 U	--	19 U
2,4'-DDT (o,p'-DDT)	--	16 U	--	2.9	--	19 U
4,4'-DDD (p,p'-DDD)	--	24 J	--	1.9	--	19 U
4,4'-DDE (p,p'-DDE)	--	16 U	--	1.9 U	--	19 U
4,4'-DDT (p,p'-DDT)	--	18	--	2	--	19 U
beta-Hexachlorocyclohexane (BHC)	--	8.2 U	--	0.95 U	--	9.5 U
LWG RA Sum DDD (Calculated U = 1/2)	--	32 JT	--	2.9 T	--	19 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	16 UT	--	1.9 UT	--	19 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	26 T	--	4.9 T	--	19 UT
LWG RA Total DDx (Calculated U = 1/2)	--	74 JT	--	9.7 T	--	19 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	930	--	13	--	190
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	1.294982943	--	3.120753313	--	0.13684341	--
pMax	0.750717991	--	0.891818985	--	0.045743768	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	DGS-34	DGS-35	DGS-35	DGS-36SC	DGS-36SC	DGS-37SC
Sample Name:	DGS-34SG-110419	DGS-35SG-110419	DGS-35SG-110419	DGS-36SC-0001-101012	DGS-36SC-0001-101012	DGS-37SC-0001-101011
Sample Date:	4/19/2011	4/19/2011	4/19/2011	10/12/2010	10/12/2010	10/11/2010
Depth interval:	0 - 26 cm	0 - 26.5 cm	0 - 26.5 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	174	--	146	--	187
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	2600	--	14000	--	1700
LWG RA Total HPAH (Calculated U = 1/2)	--	33000 T	--	170000 T	--	23000 T
LWG RA Total PAH (Calculated U = 1/2)	--	50000 T	--	270000 T	--	37000 T
Semivolatile Organics (µg/kg)						
Carbazole	--	190	--	1300	--	200 U
Dibenzofuran	--	250	--	2100	--	1100
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	120 T	--	130 UJT	--	190 UJT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	38	--	16 U	--	22
2,4'-DDE (o,p'-DDE)	--	26	--	16 U	--	13 U
2,4'-DDT (o,p'-DDT)	--	20 U	--	16 U	--	3.2 U
4,4'-DDD (p,p'-DDD)	--	120	--	88	--	92
4,4'-DDE (p,p'-DDE)	--	26	--	18 J	--	21
4,4'-DDT (p,p'-DDT)	--	25	--	16 U	--	290
beta-Hexachlorocyclohexane (BHC)	--	9.8 U	--	170 U	--	13 U
LWG RA Sum DDD (Calculated U = 1/2)	--	160 T	--	96 T	--	110 T
LWG RA Sum DDE (Calculated U = 1/2)	--	52 T	--	26 JT	--	28 T
LWG RA Sum DDT (Calculated U = 1/2)	--	35 T	--	16 UT	--	290 T
LWG RA Total DDx (Calculated U = 1/2)	--	240 T	--	140 JT	--	430 T
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	170	--	1100 J	--	150
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	4.766084558	--	0.976625223	--	3.668570381	--
pMax	0.936867906	--	0.844565792	--	0.971779143	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	DGS-37SC	DGS-46	DGS-46	DGS-47	DGS-47	DGS-47	DGS-48
Sample Name:	DGS-37SC-0001-101011	DGS-46SG-110420	DGS-46SG-110420	DGS-47SG-110420	DGS-97SG-110420	NA	DGS-48SG-110420
Sample Date:	10/11/2010	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Depth interval:	0 - 30.48 cm	0 - 23.8 cm	0 - 23.8 cm	0 - 24.5 cm	0 - 24.5 cm	0 - 24.5 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	**59**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	--	--	--	--	--	**580**
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	--	--	--	**5800 T**
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	--	--	--	**6600 JT**
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	19 U
Dibenzofuran	--	--	--	--	--	--	19 U
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	3.6 UT
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	1.8 U
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	1.8 U
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	1.8 U
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	1.8 U
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	1.8 U
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	1.8 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	0.9 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	1.8 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	1.8 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	1.8 UT
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	1.8 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	**7.8 J**
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	**0.804317031**	--	**0.24063495**	--	--	**0.529377254**	--
pMax	**0.951228267**	--	**0.161849542**	--	--	**0.332165345**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	DGS-48	DGS-48	DGS-49	DGS-49	DGS-50	DGS-50
Sample Name:	DGS-98SG-110420	NA	DGS-49SG-110420	DGS-49SG-110420	DGS-50SG-110420	DGS-50SG-110420
Sample Date:	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Depth interval:	0 - 25 cm	0 - 25 cm	0 - 24 cm	0 - 24 cm	0 - 24.5 cm	0 - 24.5 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	**56**	--	**54**	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	**4800**	--	**720**	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	**59000 JT**	--	**7900 T**	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	**76000 JT**	--	**8400 JT**	--	--	--
Semivolatile Organics (µg/kg)						
Carbazole	**47 J**	--	19 U	--	--	--
Dibenzofuran	**68**	--	19 U	--	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	20 UT	--	3.9 UT	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	1.9 UJ	--	1.9 U	--	--	--
2,4'-DDE (o,p'-DDE)	1.9 UJ	--	1.9 U	--	--	--
2,4'-DDT (o,p'-DDT)	1.9 UJ	--	1.9 U	--	--	--
4,4'-DDD (p,p'-DDD)	1.9 UJ	--	1.9 U	--	--	--
4,4'-DDE (p,p'-DDE)	1.9 U	--	1.9 U	--	--	--
4,4'-DDT (p,p'-DDT)	1.9 UJ	--	1.9 U	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.95 U	--	0.95 U	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	1.9 UJT	--	1.9 UT	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	1.9 UJT	--	1.9 UT	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	1.9 UJT	--	1.9 UT	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	1.9 UJT	--	1.9 UT	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**11**	--	**6 J**	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.08520455**	--	**0.054677883**	--	**0.06964708**
pMax	--	**0.155893679**	--	**0.155893679**	--	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	DGS-51	DGS-51	DGS-52	DGS-52	DGS-53	DGS-53	GP-25
Sample Name:	DGS-51SG-110421	DGS-51SG-110421	DGS-52SG-110421	DGS-52SG-110421	DGS-53SG-110420	DGS-53SG-110420	GP25-S-1
Sample Date:	4/21/2011	4/21/2011	4/21/2011	4/21/2011	4/20/2011	4/20/2011	9/30/2004
Depth interval:	0 - 25 cm	0 - 25 cm	0 - 25 cm	0 - 25 cm	0 - 24 cm	0 - 24 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)							
Zinc	--	--	--	--	**118**	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	--	--	--	**440**	--	**740**
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	--	**15000 JT**	--	**5300 T**
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	--	**66000 JT**	--	**5900 T**
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	**140 J**	--	87.4 U
Dibenzofuran	--	--	--	--	**640 J**	--	87.4 U
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	19 UT	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	3.1 U	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	2.4 U	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	1.9 U	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	1.9 U	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	**7.8**	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	1.9 U	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	0.96 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	3.1 UT	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	**9 T**	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	1.9 UT	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	**13 T**	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	**120**	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	**0.039687163**	--	**0.184582862**	--	**1.843579918**	--
pMax	--	--	--	**0.165163738**	--	**0.893739946**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	GP-25	GP-26	GP-26	GP-27	GP-27	GP-28
Sample Name:	GP25-S-1	GP26-S-1	GP26-S-1	GP27-S-1	GP27-S-1	GP28-S-1
Sample Date:	9/30/2004	10/5/2004	10/5/2004	10/8/2004	10/8/2004	10/13/2004
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	**59700**	--	**6810**	--	**92.2**
LWG RA Total HPAH (Calculated U = 1/2)	--	**690000 T**	--	**66000 T**	--	**710 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**1400000 T**	--	**100000 T**	--	**840 T**
Semivolatile Organics (µg/kg)						
Carbazole	--	**861**	--	145 U	--	87.4 U
Dibenzofuran	--	**1100**	--	145 U	--	87.4 U
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	**0.071275208**	--	**44.79663994**	--	**4.415664565**	--
pMax	**0.129609746**	--	**0.961045572**	--	**0.753781372**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	GP-28	GP-29	GP-29	GP-30	GP-30	GP-31
Sample Name:	GP28-S-1	GP29-S-1	GP29-S-1	GP30-S-1	GP30-S-1	GP31-S-1
Sample Date:	10/13/2004	10/20/2004	10/20/2004	10/22/2004	10/22/2004	10/26/2004
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	**43.5**	--	**92.9**	--	**416**
LWG RA Total HPAH (Calculated U = 1/2)	--	**317 T**	--	**800 T**	--	**3480 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**2800 T**	--	**1100 T**	--	**8430 T**
Semivolatile Organics (µg/kg)						
Carbazole	--	**647**	--	160 U	--	**733**
Dibenzofuran	--	174 U	--	160 U	--	148 U
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	**0.015473676**	--	**0.28782379**	--	**0.0380971**	--
pMax	--	--	**0.57018676**	--	**0.046344653**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

	System Location Code:	GP-31	GP-32	GP-32	GS-04-A-PG	GS-04-A-PG	GS-07-B-PG
	Sample Name:	GP31-S-1	GP32-S-1	GP32-S-1	LWG2-PG-GS4A	LWG2-PG-GS4A	LWG2-PG-GS7B
	Sample Date:	10/26/2004	10/28/2004	10/28/2004	12/1/2005	12/1/2005	12/1/2005
	Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 26 cm	0 - 26 cm	0 - 24 cm
	Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)							
Zinc		--	--	--	113	--	97.4
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene		--	107	--	85000	--	43000
LWG RA Total HPAH (Calculated U = 1/2)		--	1160 T	--	790000 T	--	410000 T
LWG RA Total PAH (Calculated U = 1/2)		--	11400 T	--	1100000 T	--	500000 T
Semivolatile Organics (µg/kg)							
Carbazole		--	147 U	--	650	--	110 U
Dibenzofuran		--	147 U	--	3600	--	510
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)		--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)		--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)		--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)		--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)		--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)		--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)		--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)		--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)		--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)		--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)		--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)		--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)		--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)		--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons		--	--	--	10000 J	--	1700 J
Residual Range Hydrocarbons		--	--	--	13000 J	--	2300 J
CALC							
Benthic MQ		0.504352226	--	1.279621564	--	10.28654253	--
pMax		0.599805467	--	0.189264994	--	0.992265832	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	GS-07-B-PG	GS-07-D-PG	GS-07-D-PG	LW2-C255	LW2-C255	LW2-C269	LW2-C269
Sample Name:	LWG2-PG-GS7B	LWG2-PG-GS7D	LWG2-PG-GS7D	LW2-C255-A	LW2-C255-A	LW2-C269-A	LW2-C269-A
Sample Date:	12/1/2005	12/1/2005	12/1/2005	10/27/2004	10/27/2004	10/28/2004	10/28/2004
Depth interval:	0 - 24 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)							
Zinc	--	126	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	14000	--	--	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	--	110000 T	--	--	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	--	130000 T	--	--	--	--	--
Semivolatile Organics (µg/kg)							
Carbazole	--	290 U	--	--	--	--	--
Dibenzofuran	--	210 J	--	--	--	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	65 UT	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	1050 JT	--	--	--	--	--
Residual Range Hydrocarbons	--	1550 JT	--	--	--	--	--
CALC							
Benthic MQ	2.939730106	--	0.862872035	--	--	--	--
pMax	0.908197599	--	0.863290364	--	--	--	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	LW2-C299	LW2-C299	LW2-C300-2	LW2-C300-2	LW2-C301	LW2-C301	LW2-C312
Sample Name:	LW2-C299-A	LW2-C299-A	LW2-C300-A	LW2-C300-A	LW2-C301-A	LW2-C301-A	LW2-C312-A
Sample Date:	9/22/2004	9/22/2004	10/27/2004	10/27/2004	11/8/2004	11/8/2004	10/19/2005
Depth interval:	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)							
Zinc	--	--	--	--	**126 T**	--	**194**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	--	--	--	--	--	**1900**
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	--	--	--	**25000 T**
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	--	--	--	**44000 T**
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	**51**
Dibenzofuran	--	--	--	--	--	--	**420**
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	77 UT	--	**310 JT**	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	**150 JT**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	**0.0028 JT**
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	**15**	--	**5.2 NJ**	--	--	--	**10 J**
2,4'-DDE (o,p'-DDE)	7.4 U	--	0.34 U	--	--	--	0.36 U
2,4'-DDT (o,p'-DDT)	**9.6 J**	--	**3.5 J**	--	--	--	**4.5 J**
4,4'-DDD (p,p'-DDD)	**15 NJ**	--	**2.3 J**	--	--	--	**14**
4,4'-DDE (p,p'-DDE)	**6.2**	--	**4.4**	--	--	--	**5.8 J**
4,4'-DDT (p,p'-DDT)	**10 J**	--	**3.9**	--	--	--	**240 J**
beta-Hexachlorocyclohexane (BHC)	2.2 U	--	0.65 U	--	--	--	0.24 U
LWG RA Sum DDD (Calculated U = 1/2)	**30 NJT**	--	**7.5 JNT**	--	--	--	**24 JT**
LWG RA Sum DDE (Calculated U = 1/2)	**9.9 T**	--	**4.6 T**	--	--	--	**6 JT**
LWG RA Sum DDT (Calculated U = 1/2)	**20 JT**	--	**7.4 JT**	--	--	--	**240 JT**
LWG RA Total DDx (Calculated U = 1/2)	**60 JNT**	--	**19 JNT**	--	--	--	**270 JT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	**500 JT**
Residual Range Hydrocarbons	--	--	--	--	--	--	**730 JT**
CALC							
Benthic MQ	--	**0.278715001**	--	**0.068166022**	--	**0.156085207**	--
pMax	--	**0.117065527**	--	**0.200826084**	--	**0.217697241**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	LW2-C312	LW2-C525	LW2-C525	LW2-C527	LW2-C527	LW2-C528
Sample Name:	LW2-C312-A	LW2-C525-A	LW2-C525-A	LW2-C527-A	LW2-C527-A	LW2-C528-A
Sample Date:	10/19/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005
Depth interval:	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	172	--	120	--	111
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	85000	--	3900	--	830
LWG RA Total HPAH (Calculated U = 1/2)	--	740000 T	--	35000 T	--	7900 T
LWG RA Total PAH (Calculated U = 1/2)	--	860000 T	--	41000 T	--	9000 T
Semivolatile Organics (µg/kg)						
Carbazole	--	14000	--	240	--	37
Dibenzofuran	--	1600	--	76	--	20
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	250 JT	--	140 UT	--	49 T
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	30 U	--	14 U	--	3.1
2,4'-DDE (o,p'-DDE)	--	5 U	--	4.3 U	--	0.74 J
2,4'-DDT (o,p'-DDT)	--	9.7 U	--	53 J	--	0.75 U
4,4'-DDD (p,p'-DDD)	--	40 NJ	--	20 J	--	6.1
4,4'-DDE (p,p'-DDE)	--	5	--	9 NJ	--	2.4
4,4'-DDT (p,p'-DDT)	--	21	--	140	--	6.6
beta-Hexachlorocyclohexane (BHC)	--	3 U	--	2.9 U	--	0.47 U
LWG RA Sum DDD (Calculated U = 1/2)	--	55 NJT	--	27 JT	--	9.2 T
LWG RA Sum DDE (Calculated U = 1/2)	--	7.5 T	--	11 NJT	--	3.1 JT
LWG RA Sum DDT (Calculated U = 1/2)	--	26 T	--	190 JT	--	7 T
LWG RA Total DDx (Calculated U = 1/2)	--	88 NJT	--	230 JNT	--	19 JT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	1800 J	--	270 J	--	140 J
Residual Range Hydrocarbons	--	4400 J	--	1000 J	--	660 J
CALC						
Benthic MQ	0.546945815	--	3.561757618	--	0.247710703	--
pMax	0.763214765	--	0.964054243	--	0.504979667	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	LW2-C528	LW2-G248	LW2-G248	LW2-G252	LW2-G252	LW2-G253
Sample Name:	LW2-C528-A	LW2-G248	LW2-G248	LW2-G252	LW2-G252	LW2-G253
Sample Date:	10/26/2005	7/30/2004	7/30/2004	8/12/2004	8/12/2004	8/13/2004
Depth interval:	0 - 30 cm	0 - 26 cm	0 - 26 cm	0 - 27 cm	0 - 27 cm	0 - 27 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	61.1	--	79.9	--	58
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	80	--	420	--	9900
LWG RA Total HPAH (Calculated U = 1/2)	--	600 T	--	3000 T	--	93000 T
LWG RA Total PAH (Calculated U = 1/2)	--	690 T	--	3300 T	--	97000 T
Semivolatile Organics (µg/kg)						
Carbazole	--	3.6 J	--	11 U	--	35 U
Dibenzofuran	--	2.2 J	--	4.5	--	34 J
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	4.5 UT	--	10 JT	--	2.2 UT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	0.262 J	--	0.229 J	--	0.975 J
2,4'-DDE (o,p'-DDE)	--	0.0335 U	--	0.0372 U	--	0.169 U
2,4'-DDT (o,p'-DDT)	--	0.0443 U	--	0.588 J	--	1.77 NJ
4,4'-DDD (p,p'-DDD)	--	0.481	--	2.24 NJ	--	4.69
4,4'-DDE (p,p'-DDE)	--	0.414	--	0.779 NJ	--	0.586 J
4,4'-DDT (p,p'-DDT)	--	0.222	--	0.275 J	--	0.276 U
beta-Hexachlorocyclohexane (BHC)	--	0.099 J	--	0.0368 U	--	7.75 NJ
LWG RA Sum DDD (Calculated U = 1/2)	--	0.743 JT	--	2.47 JNT	--	5.67 JT
LWG RA Sum DDE (Calculated U = 1/2)	--	0.431 T	--	0.798 NJT	--	0.671 JT
LWG RA Sum DDT (Calculated U = 1/2)	--	0.244 T	--	0.863 JT	--	1.91 NJT
LWG RA Total DDx (Calculated U = 1/2)	--	1.42 JT	--	4.13 JNT	--	8.24 JNT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	32.5 JT	--	--
Residual Range Hydrocarbons	--	--	--	135 JT	--	--
CALC						
Benthic MQ	0.100751563	--	0.05312636	--	0.060473275	--
pMax	0.526450517	--	0.070763437	--	0.157823082	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	**LW2-G253**	**LW2-G256**	**LW2-G256**	**LW2-G258**	**LW2-G258**	**LW2-G259**
Sample Name:	**LW2-G253**	**LW2-G256**	**LW2-G256**	**LW2-G258**	**LW2-G258**	**LW2-G259**
Sample Date:	**8/13/2004**	**8/19/2004**	**8/19/2004**	**8/19/2004**	**8/19/2004**	**8/12/2004**
Depth interval:	**0 - 27 cm**	**0 - 27 cm**	**0 - 27 cm**	**0 - 27 cm**	**0 - 27 cm**	**0 - 28 cm**
Analysis Matrix:	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**
Metals (mg/kg)						
Zinc	--	**74.2 T**	--	**53.7**	--	**208**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	**220**	--	**1200**	--	**21000**
LWG RA Total HPAH (Calculated U = 1/2)	--	**2800 T**	--	**13000 T**	--	**170000 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**4600 T**	--	**19000 T**	--	**200000 T**
Semivolatile Organics (µg/kg)						
Carbazole	--	**30 J**	--	**350**	--	**1500**
Dibenzofuran	--	**4.3**	--	**82**	--	**250**
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	2.5 UJT	--	3.8 UJT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	0.0316 U	--	**6.97 J**
2,4'-DDE (o,p'-DDE)	--	--	--	0.0335 U	--	**2.74 J**
2,4'-DDT (o,p'-DDT)	--	--	--	0.0443 U	--	0.0679 UJ
4,4'-DDD (p,p'-DDD)	--	--	--	**2.07**	--	**73.4 J**
4,4'-DDE (p,p'-DDE)	--	--	--	0.0443 U	--	**4.8 NJ**
4,4'-DDT (p,p'-DDT)	--	--	--	**2.23 J**	--	**1.87 J**
beta-Hexachlorocyclohexane (BHC)	--	--	--	**5.14 J**	--	**4.04 J**
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	**2.09 T**	--	**80.4 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	0.0443 UT	--	**7.5 JNT**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	**2.25 JT**	--	**1.9 JT**
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	**4.38 JT**	--	**90 JNT**
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	**38 J**	--	**43 J**	--	--
Residual Range Hydrocarbons	--	**110 J**	--	**65 J**	--	--
CALC						
Benthic MQ	**0.204103961**	--	**0.093657863**	--	**0.228524086**	--
pMax	**0.483072145**	--	**0.163429341**	--	**0.421109125**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	LW2-G259	LW2-G261	LW2-G261	LW2-G263	LW2-G263	LW2-G264
Sample Name:	LW2-G259	LW2-G261	LW2-G261	LW2-G263	LW2-G263	LW2-G264
Sample Date:	8/12/2004	8/19/2004	8/19/2004	8/30/2004	8/30/2004	8/30/2004
Depth interval:	0 - 28 cm	0 - 25 cm	0 - 25 cm	0 - 25 cm	0 - 25 cm	0 - 30 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	44.8	--	111 T	--	160
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	32	--	4700	--	140000
LWG RA Total HPAH (Calculated U = 1/2)	--	340 T	--	39000 T	--	1300000 T
LWG RA Total PAH (Calculated U = 1/2)	--	480 T	--	44000 T	--	1700000 T
Semivolatile Organics (µg/kg)						
Carbazole	--	5.6 J	--	220	--	30000
Dibenzofuran	--	3	--	42	--	2600
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	2.5 UJT	--	3.17 UJT	--	4.64 UJT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	0.0312 U	--	5.34 NJ	--	20.8 NJ
2,4'-DDE (o,p'-DDE)	--	0.0331 U	--	0.215 U	--	0.315 UJ
2,4'-DDT (o,p'-DDT)	--	0.0438 U	--	0.284 U	--	0.416 UJ
4,4'-DDD (p,p'-DDD)	--	0.0467 U	--	8.57 J	--	51 J
4,4'-DDE (p,p'-DDE)	--	0.0438 U	--	2.63 J	--	11.6 NJ
4,4'-DDT (p,p'-DDT)	--	0.054 U	--	17.5 NJ	--	19.9 NJ
beta-Hexachlorocyclohexane (BHC)	--	1.32 J	--	2 NJ	--	5.97 J
LWG RA Sum DDD (Calculated U = 1/2)	--	0.0467 UT	--	13.9 JNT	--	72 JNT
LWG RA Sum DDE (Calculated U = 1/2)	--	0.0438 UT	--	2.74 JT	--	11.8 NJT
LWG RA Sum DDT (Calculated U = 1/2)	--	0.054 UT	--	17.6 NJT	--	20.1 NJT
LWG RA Total DDx (Calculated U = 1/2)	--	0.054 UT	--	34.3 JNT	--	100 JNT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	200 J	--	4700 J
Residual Range Hydrocarbons	--	--	--	400 J	--	10000 J
CALC						
Benthic MQ	0.776724179	--	0.036578412	--	0.255215465	--
pMax	0.754148917	--	0.060800477	--	0.464692624	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	LW2-G264	LW2-G265	LW2-G265	LW2-G269	LW2-G269	LW2-G270
Sample Name:	LW2-G264	LW2-G265	LW2-G265	LW2-G269	LW2-G269	LW2-G270-1
Sample Date:	8/30/2004	8/19/2004	8/19/2004	8/30/2004	8/30/2004	7/21/2004
Depth interval:	0 - 30 cm	0 - 24 cm	0 - 24 cm	0 - 26 cm	0 - 26 cm	0 - 29 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	60.7	--	166	--	130
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	1700	--	17000	--	17000
LWG RA Total HPAH (Calculated U = 1/2)	--	18000 T	--	170000 T	--	160000 T
LWG RA Total PAH (Calculated U = 1/2)	--	20000 T	--	230000 T	--	230000 JT
Semivolatile Organics (µg/kg)						
Carbazole	--	85 U	--	2500	--	760
Dibenzofuran	--	7.5	--	530	--	420
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	4.3 UJT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	14.8 J	--	7.41 J
2,4'-DDE (o,p'-DDE)	--	--	--	0.296 UJ	--	6.9 NJ
2,4'-DDT (o,p'-DDT)	--	--	--	0.391 UJ	--	3.04
4,4'-DDD (p,p'-DDD)	--	--	--	66.2 J	--	11.9 J
4,4'-DDE (p,p'-DDE)	--	--	--	12.9 J	--	2.4 NJ
4,4'-DDT (p,p'-DDT)	--	--	--	42.8 J	--	7.26 J
beta-Hexachlorocyclohexane (BHC)	--	--	--	7.82 J	--	2.14 NJ
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	81 JT	--	19.3 JT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	13 JT	--	9.3 NJT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	43 JT	--	10.3 JT
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	137 JT	--	39 JNT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	49 JT	--	1300 J	--	1100 J
Residual Range Hydrocarbons	--	100 T	--	3600 J	--	2000 J
CALC						
Benthic MQ	9.14614924	--	0.079462959	--	2.685832861	--
pMax	0.989381962	--	0.197660178	--	0.958619958	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	**LW2-G270**	**LW2-G271**	**LW2-G271**	**LW2-G272**	**LW2-G272**	**LW2-G273**
Sample Name:	**LW2-G270-1**	**LW2-G271**	**LW2-G271**	**LW2-G272**	**LW2-G272**	**LW2-G273**
Sample Date:	**7/21/2004**	**8/19/2004**	**8/19/2004**	**8/19/2004**	**8/19/2004**	**10/7/2004**
Depth interval:	**0 - 29 cm**	**0 - 26 cm**	**0 - 26 cm**	**0 - 27 cm**	**0 - 27 cm**	**0 - 28 cm**
Analysis Matrix:	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**
Metals (mg/kg)						
Zinc	--	**43.2**	--	**79.1**	--	**159**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	**9.9**	--	**200**	--	**12000**
LWG RA Total HPAH (Calculated U = 1/2)	--	**80 JT**	--	**1600 T**	--	**120000 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**94 JT**	--	**1800 T**	--	**160000 T**
Semivolatile Organics (µg/kg)						
Carbazole	--	**1.7 J**	--	**8 J**	--	**780 J**
Dibenzofuran	--	**0.5 J**	--	**5.5**	--	**450**
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	2.3 UJT	--	**12 JT**	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	**190 T**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	**0.0027 T**
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	0.0303 U	--	**0.411 J**	--	**4.57 NJ**
2,4'-DDE (o,p'-DDE)	--	0.0322 U	--	0.0411 U	--	0.237 UJ
2,4'-DDT (o,p'-DDT)	--	0.0426 U	--	0.0543 U	--	**2.45 NJ**
4,4'-DDD (p,p'-DDD)	--	**0.338 J**	--	**1.54**	--	**21**
4,4'-DDE (p,p'-DDE)	--	**0.161 J**	--	**0.829**	--	**6.6 J**
4,4'-DDT (p,p'-DDT)	--	0.0525 U	--	**0.36 J**	--	**21 J**
beta-Hexachlorocyclohexane (BHC)	--	**0.555 J**	--	**6.21 J**	--	**2.94 J**
LWG RA Sum DDD (Calculated U = 1/2)	--	**0.353 JT**	--	**1.95 JT**	--	**26 NJT**
LWG RA Sum DDE (Calculated U = 1/2)	--	**0.177 JT**	--	**0.85 T**	--	**6.7 JT**
LWG RA Sum DDT (Calculated U = 1/2)	--	0.0525 UT	--	**0.39 JT**	--	**23 JNT**
LWG RA Total DDx (Calculated U = 1/2)	--	**0.578 JT**	--	**3.2 JT**	--	**56 JNT**
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	**49 J**	--	**620 J**
Residual Range Hydrocarbons	--	--	--	**170 J**	--	**1000 J**
CALC						
Benthic MQ	**1.480497528**	--	**0.02678037**	--	**0.078171441**	--
pMax	**0.903370635**	--	**0.008276069**	--	**0.062539952**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	LW2-G273	LW2-G274	LW2-G274	LW2-G281	LW2-G281	LW2-G283
Sample Name:	LW2-G273	LW2-G274	LW2-G274	LW2-G281	LW2-G281	LW2-G283
Sample Date:	10/7/2004	10/29/2004	10/29/2004	8/19/2004	8/19/2004	8/30/2004
Depth interval:	0 - 28 cm	0 - 22 cm	0 - 22 cm	0 - 28 cm	0 - 28 cm	0 - 27 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	127	--	59.9	--	183
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	17000	--	85	--	140000
LWG RA Total HPAH (Calculated U = 1/2)	--	170000 T	--	520 T	--	1500000 T
LWG RA Total PAH (Calculated U = 1/2)	--	190000 T	--	550 JT	--	2100000 T
Semivolatile Organics (µg/kg)						
Carbazole	--	590 J	--	2.3 J	--	8500
Dibenzofuran	--	210	--	0.71 J	--	5400
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	2.69 UJT	--	--	--	3.81 UJT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	17.3 NJ	--	--	--	114 J
2,4'-DDE (o,p'-DDE)	--	0.365 U	--	--	--	24.5 NJ
2,4'-DDT (o,p'-DDT)	--	5.83 J	--	--	--	0.345 UJ
4,4'-DDD (p,p'-DDD)	--	22.1 NJ	--	--	--	330 J
4,4'-DDE (p,p'-DDE)	--	9.76 NJ	--	--	--	31.9 J
4,4'-DDT (p,p'-DDT)	--	17.9 J	--	--	--	60.3 NJ
beta-Hexachlorocyclohexane (BHC)	--	20.3 J	--	--	--	13.6 J
LWG RA Sum DDD (Calculated U = 1/2)	--	39.4 NJT	--	--	--	440 JT
LWG RA Sum DDE (Calculated U = 1/2)	--	9.94 NJT	--	--	--	56.4 JNT
LWG RA Sum DDT (Calculated U = 1/2)	--	23.7 JT	--	--	--	60.5 NJT
LWG RA Total DDx (Calculated U = 1/2)	--	73.1 JNT	--	--	--	560 JNT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	940 J	--	10 U	--	14000 J
Residual Range Hydrocarbons	--	1700 J	--	33 U	--	17000 J
CALC						
Benthic MQ	1.316539813	--	1.024560206	--	0.020338245	--
pMax	0.789717969	--	0.78651479	--	0.015554542	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	**LW2-G283**	**LW2-G285**	**LW2-G285**	**LW2-G287**	**LW2-G287**	**LW2-G289**
Sample Name:	**LW2-G283**	**LW2-G285**	**LW2-G285**	**LW2-G287**	**LW2-G287**	**LW2-G289**
Sample Date:	**8/30/2004**	**8/19/2004**	**8/19/2004**	**8/19/2004**	**8/19/2004**	**8/19/2004**
Depth interval:	**0 - 27 cm**	**0 - 26 cm**	**0 - 26 cm**	**0 - 28 cm**	**0 - 28 cm**	**0 - 27 cm**
Analysis Matrix:	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**
Metals (mg/kg)						
Zinc	--	**56.5**	--	**87.3**	--	**135**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	**11**	--	**18**	--	**17000**
LWG RA Total HPAH (Calculated U = 1/2)	--	**80 JT**	--	**200 T**	--	**170000 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**95 JT**	--	**1000 T**	--	**220000 T**
Semivolatile Organics (µg/kg)						
Carbazole	--	1.8 U	--	**3.5 J**	--	**220 J**
Dibenzofuran	--	**0.59 J**	--	**7.4**	--	**210**
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	2.5 UJT	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	**0.098**	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	**0.713 J**	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	0.0446 U	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	**1.28 J**	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	**0.304**	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	**5.09**	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	0.0334 U	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	**1.4 JT**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	**1.02 JT**	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	**5.11 T**	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	**7.5 JT**	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	**45 J**	--	**630 J**
Residual Range Hydrocarbons	--	--	--	**130 J**	--	**1200 J**
CALC						
Benthic MQ	**11.80700361**	--	**0.02858462**	--	**0.072975551**	--
pMax	**0.996219764**	--	**0.016802358**	--	**0.140695728**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	LW2-G289	LW2-G294	LW2-G294	LW2-G297	LW2-G297	LW2-G300
Sample Name:	LW2-G289	LW2-G294-1	LW2-G294-1	LW2-G297	LW2-G297	LW2-G300
Sample Date:	8/19/2004	7/21/2004	7/21/2004	8/19/2004	8/19/2004	8/20/2004
Depth interval:	0 - 27 cm	0 - 26 cm	0 - 26 cm	0 - 27 cm	0 - 27 cm	0 - 26 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	129 T	--	118	--	49.3
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	42000	--	4600	--	4.8
LWG RA Total HPAH (Calculated U = 1/2)	--	640000 T	--	60000 T	--	46 JT
LWG RA Total PAH (Calculated U = 1/2)	--	1300000 T	--	130000 T	--	58 JT
Semivolatile Organics (µg/kg)						
Carbazole	--	18000	--	280	--	1.9 U
Dibenzofuran	--	7800	--	410	--	1.2 J
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	97 JT	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	53 JT	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	0.0015 JT	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	220 J	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	32.4 NJ	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	5.58 NJ	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	618 J	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	37.9 J	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	4.01 NJ	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	0.058 UJ	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	840 JT	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	70.3 JNT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	9.59 NJT	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	920 JNT	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	20000 J	--	630 J	--	14 UT
Residual Range Hydrocarbons	--	13000 J	--	730 J	--	13 UT
CALC						
Benthic MQ	1.890046594	--	12.37994932	--	2.45498637	--
pMax	0.855347492	--	0.999060952	--	0.790229687	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	LW2-G300	LW2-G301	LW2-G301	LW2-G302	LW2-G302	LW2-G305
Sample Name:	LW2-G300	LW2-G301	LW2-G301	LW2-G302	LW2-G302	LW2-G305
Sample Date:	8/20/2004	9/13/2004	9/13/2004	9/13/2004	9/13/2004	8/19/2004
Depth interval:	0 - 26 cm	0 - 27 cm	0 - 27 cm	0 - 27 cm	0 - 27 cm	0 - 28 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	107	--	241	--	142
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	47000	--	17000	--	1300
LWG RA Total HPAH (Calculated U = 1/2)	--	600000 T	--	130000 T	--	13000 T
LWG RA Total PAH (Calculated U = 1/2)	--	1300000 T	--	150000 T	--	22000 T
Semivolatile Organics (µg/kg)						
Carbazole	--	290 J	--	9400	--	53 J
Dibenzofuran	--	7200	--	72	--	280
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	20.7 JT	--	170 JT	--	92 JT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	31.3 NJ	--	28.7 J	--	7.21 J
2,4'-DDE (o,p'-DDE)	--	0.494 U	--	55.3 NJ	--	2.1 J
2,4'-DDT (o,p'-DDT)	--	4.02 J	--	0.767 U	--	3.18 J
4,4'-DDD (p,p'-DDD)	--	38.7	--	134 J	--	18.5
4,4'-DDE (p,p'-DDE)	--	14.1 J	--	27.9	--	6.83
4,4'-DDT (p,p'-DDT)	--	37.6 J	--	23.9 J	--	4.89
beta-Hexachlorocyclohexane (BHC)	--	0.488 U	--	0.574 U	--	1.93 J
LWG RA Sum DDD (Calculated U = 1/2)	--	70 NJT	--	163 JT	--	25.7 JT
LWG RA Sum DDE (Calculated U = 1/2)	--	14.3 JT	--	83.2 NJT	--	8.9 JT
LWG RA Sum DDT (Calculated U = 1/2)	--	41.6 JT	--	24.3 JT	--	8.07 JT
LWG RA Total DDx (Calculated U = 1/2)	--	126 JNT	--	270 JNT	--	43 JT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	460 J	--	9000 J	--	280 J
Residual Range Hydrocarbons	--	1100 J	--	6000 J	--	630 J
CALC						
Benthic MQ	0.023559349	--	12.89963974	--	0.668557053	--
pMax	0.018871892	--	0.996963593	--	0.990357231	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	LW2-G305	LW2-G308	LW2-G308	LW2-G309	LW2-G309	LW2-G311
Sample Name:	LW2-G305	LW2-G308	LW2-G308	LW2-G309	LW2-G309	LW2-G311-1
Sample Date:	8/19/2004	9/13/2004	9/13/2004	8/20/2004	8/20/2004	7/21/2004
Depth interval:	0 - 28 cm	0 - 27 cm	0 - 27 cm	0 - 26 cm	0 - 26 cm	0 - 21 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	104	--	134	--	145 T
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	780	--	550	--	4800 T
LWG RA Total HPAH (Calculated U = 1/2)	--	19000 T	--	5100 T	--	55000 T
LWG RA Total PAH (Calculated U = 1/2)	--	41000 T	--	6500 T	--	82000 T
Semivolatile Organics (µg/kg)						
Carbazole	--	160	--	17	--	93 JT
Dibenzofuran	--	690	--	23	--	255 T
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	39 JT	--	190 JT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	59 T	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	0.0011 T	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	2.13 NJ	--	2.13 NJ	--	320 JT
2,4'-DDE (o,p'-DDE)	--	2.87 NJ	--	0.958 J	--	29.5 JT
2,4'-DDT (o,p'-DDT)	--	0.293 U	--	1.65 J	--	8.61 JT
4,4'-DDD (p,p'-DDD)	--	14.1 J	--	29.9 J	--	1040 JT
4,4'-DDE (p,p'-DDE)	--	5.55 J	--	6.67 J	--	64.8 JT
4,4'-DDT (p,p'-DDT)	--	1.47 J	--	152 J	--	262 JT
beta-Hexachlorocyclohexane (BHC)	--	2.57 NJ	--	3.71 NJ	--	3.62 JT
LWG RA Sum DDD (Calculated U = 1/2)	--	16.2 JNT	--	32 JNT	--	1400 JT
LWG RA Sum DDE (Calculated U = 1/2)	--	8.42 JNT	--	7.63 JT	--	94.3 JT
LWG RA Sum DDT (Calculated U = 1/2)	--	1.62 JT	--	154 JT	--	271 JT
LWG RA Total DDx (Calculated U = 1/2)	--	26.3 JNT	--	193 JNT	--	1700 JT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	330 J	--	170 J	--	1080 JT
Residual Range Hydrocarbons	--	310 J	--	510 J	--	1330 JT
CALC						
Benthic MQ	0.309193137	--	0.656765087	--	0.113889737	--
pMax	0.499562931	--	0.721007454	--	0.262068925	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	**LW2-G311**	**LW2-G521**	**LW2-G521**	**LW2-GBT015**	**LW2-GBT015**	**LW3-G657**
Sample Name:	**LW2-G311-1**	**LW2-G521**	**LW2-G521**	**LW2-GBT015**	**LW2-GBT015**	**LW3-G657**
Sample Date:	**7/21/2004**	**9/13/2004**	**9/13/2004**	**12/20/2005**	**12/20/2005**	**11/28/2007**
Depth interval:	**0 - 21 cm**	**0 - 28 cm**	**0 - 28 cm**	**0 - 10 cm**	**0 - 10 cm**	**0 - 26 cm**
Analysis Matrix:	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**
Metals (mg/kg)						
Zinc	--	**142**	--	**134**	--	**50**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	**4600**	--	**2100**	--	**50**
LWG RA Total HPAH (Calculated U = 1/2)	--	**41000 T**	--	**17000 T**	--	**500 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**51000 T**	--	**21000 T**	--	**550 JT**
Semivolatile Organics (µg/kg)						
Carbazole	--	**75 J**	--	**71**	--	1.3 U
Dibenzofuran	--	**55**	--	**31**	--	0.59 U
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	**50 JT**	--	--	--	1.3 UT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	**24 JT**	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	**0.00063 JT**	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	**5.33 NJ**	--	**9.71**	--	0.16 U
2,4'-DDE (o,p'-DDE)	--	**0.979 NJ**	--	**0.13 J**	--	**0.06 J**
2,4'-DDT (o,p'-DDT)	--	0.383 U	--	**1.07**	--	0.061 U
4,4'-DDD (p,p'-DDD)	--	**30.8 J**	--	**36.5**	--	**0.39**
4,4'-DDE (p,p'-DDE)	--	**9.5 J**	--	**5.29**	--	**0.27 NJ**
4,4'-DDT (p,p'-DDT)	--	**38 J**	--	**25.1**	--	0.18 U
beta-Hexachlorocyclohexane (BHC)	--	**2.44 NJ**	--	0.235 U	--	0.14 U
LWG RA Sum DDD (Calculated U = 1/2)	--	**36.1 JNT**	--	**46.2 T**	--	**0.47 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	**10 JNT**	--	**5.4 JT**	--	**0.33 JNT**
LWG RA Sum DDT (Calculated U = 1/2)	--	**38 JT**	--	**26.2 T**	--	0.18 UT
LWG RA Total DDx (Calculated U = 1/2)	--	**85 JNT**	--	**78 JT**	--	**0.92 JNT**
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	**370 J**	--	**240 J**	--	8.1 U
Residual Range Hydrocarbons	--	**720 J**	--	**810 J**	--	**29 J**
CALC						
Benthic MQ	**0.920844164**	--	**0.282069313**	--	**0.176387544**	--
pMax	**0.989701322**	--	**0.520359378**	--	**0.441598623**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	LW3-G657	LW3-G658	LW3-G658	LW3-G659-1	LW3-G659-1	LW3-GCRSP06W
Sample Name:	LW3-G657	LW3-G658	LW3-G658	LW3-G659-1	LW3-G659-1	LW3-GCRSP06W
Sample Date:	11/28/2007	11/28/2007	11/28/2007	11/28/2007	11/28/2007	10/17/2007
Depth interval:	0 - 26 cm	0 - 21 cm	0 - 21 cm	0 - 26 cm	0 - 26 cm	0 - 18 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	**53.1**	--	**53.8**	--	**74.2**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	**160**	--	**6.3**	--	**3500**
LWG RA Total HPAH (Calculated U = 1/2)	--	**1700 T**	--	**65 JT**	--	**30000 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**2000 T**	--	**80 JT**	--	**35000 T**
Semivolatile Organics (µg/kg)						
Carbazole	--	1.3 U	--	1.3 U	--	**26 J**
Dibenzofuran	--	**3.2**	--	0.59 U	--	**35**
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	1.3 UT	--	3.3 UT	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	**12 JT**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	**0.0003 JT**
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	0.16 U	--	0.16 U	--	**3.4**
2,4'-DDE (o,p'-DDE)	--	0.046 U	--	0.046 U	--	0.046 U
2,4'-DDT (o,p'-DDT)	--	0.061 U	--	0.061 U	--	0.2 U
4,4'-DDD (p,p'-DDD)	--	**0.48 NJ**	--	**0.18 J**	--	**7.9**
4,4'-DDE (p,p'-DDE)	--	**0.47 NJ**	--	**0.077 J**	--	**2.4 J**
4,4'-DDT (p,p'-DDT)	--	0.18 U	--	0.18 U	--	**10**
beta-Hexachlorocyclohexane (BHC)	--	0.5 U	--	0.14 U	--	0.14 U
LWG RA Sum DDD (Calculated U = 1/2)	--	**0.56 NJT**	--	**0.26 JT**	--	**11 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	**0.49 NJT**	--	**0.1 JT**	--	**2.4 JT**
LWG RA Sum DDT (Calculated U = 1/2)	--	0.18 UT	--	0.18 UT	--	**10 T**
LWG RA Total DDx (Calculated U = 1/2)	--	**1.2 NJT**	--	**0.48 JT**	--	**24 JT**
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	4.3 U	--	2.7 U	--	--
Residual Range Hydrocarbons	--	**9.2 J**	--	**20 J**	--	--
CALC						
Benthic MQ	**0.019081306**	--	**0.02295576**	--	**0.017783494**	--
pMax	**0.023545892**	--	**0.097339981**	--	**0.007991159**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	LW3-GCRSP06W	LWG0106B025SDS015C00	LWG0106B025SDS015C00	LWG0106B029SDS015C00	LWG0106B029SDS015C00
Sample Name:	LW3-GCRSP06W	LWG0106B025SDS015C00	LWG0106B025SDS015C00	LWG0106B029SDS015C00	LWG0106B029SDS015C00
Sample Date:	10/17/2007	10/14/2002	10/14/2002	10/11/2002	10/11/2002
Depth interval:	0 - 18 cm	0 - 15 cm	0 - 15 cm	0 - 15 cm	0 - 15 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)					
Zinc	--	**81**	--	**65**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)					
Benzo(a)pyrene	--	**41000 T**	--	**320 T**	--
LWG RA Total HPAH (Calculated U = 1/2)	--	**390000 JT**	--	**2300 T**	--
LWG RA Total PAH (Calculated U = 1/2)	--	**460000 JT**	--	**2500 T**	--
Semivolatile Organics (µg/kg)					
Carbazole	--	**2800 T**	--	**6.5 T**	--
Dibenzofuran	--	**560 T**	--	**4.9 T**	--
PCB Aroclors (µg/kg)					
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	**53 T**	--	7.7 UT	--
PCB Congeners (µg/kg)					
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/kg)					
2,4'-DDD (o,p'-DDD)	--	7.7 U	--	0.64 U	--
2,4'-DDE (o,p'-DDE)	--	200 U	--	9.2 U	--
2,4'-DDT (o,p'-DDT)	--	7.7 U	--	0.38 U	--
4,4'-DDD (p,p'-DDD)	--	9 U	--	**1.5**	--
4,4'-DDE (p,p'-DDE)	--	7.7 U	--	1.2 U	--
4,4'-DDT (p,p'-DDT)	--	12 U	--	1.1 U	--
beta-Hexachlorocyclohexane (BHC)	--	42 U	--	0.19 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	9 UT	--	**1.8 T**	--
LWG RA Sum DDE (Calculated U = 1/2)	--	200 UT	--	9.2 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	12 UT	--	1.1 UT	--
LWG RA Total DDx (Calculated U = 1/2)	--	200 UT	--	**7.8 T**	--
Total Petroleum Hydrocarbons (mg/kg)					
Diesel Range Hydrocarbons	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--
CALC					
Benthic MQ	**0.167107482**	--	**3.370376021**	--	**0.02637079**
pMax	**0.388036486**	--	**0.847518028**	--	**0.061224213**

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	PCM-02Y3E2	PCM-02Y3E2	PCM-04Y3E2	PCM-04Y3E2	PCM-06Y3E2	PCM-06Y3E2
Sample Name:	PCM-02-DS-091209	PCM-02-DS-091209	PCM-04-DS-091209	PCM-04-DS-091209	PCM-06-DS-091209	PCM-06-DS-091209
Sample Date:	12/9/2009	12/9/2009	12/9/2009	12/9/2009	12/9/2009	12/9/2009
Depth interval:	0 - 7 cm	0 - 7 cm	0 - 2 cm	0 - 2 cm	0 - 5 cm	0 - 5 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	110	--	92.2	--	111
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	17000	--	43000	--	4100
LWG RA Total HPAH (Calculated U = 1/2)	--	160000 T	--	410000 T	--	35000 T
LWG RA Total PAH (Calculated U = 1/2)	--	210000 T	--	480000 T	--	46000 T
Semivolatile Organics (µg/kg)						
Carbazole	--	960	--	920	--	200
Dibenzofuran	--	--	--	--	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	18 JT	--	14 JT	--	26 JT
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	0.0004 T	--	0.0004 T	--	0.000404 T
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	10	--	5.6 J	--	6.1 J
2,4'-DDE (o,p'-DDE)	--	1.2 U	--	1.1 U	--	1.4 UJ
2,4'-DDT (o,p'-DDT)	--	5.5 J	--	3.1 J	--	1.4 U
4,4'-DDD (p,p'-DDD)	--	29 J	--	15	--	12
4,4'-DDE (p,p'-DDE)	--	6.4 J	--	2.9	--	3.5
4,4'-DDT (p,p'-DDT)	--	7.3 J	--	8	--	5.9
beta-Hexachlorocyclohexane (BHC)	--	1.3 UJ	--	2.9 U	--	1.4 U
LWG RA Sum DDD (Calculated U = 1/2)	--	39 JT	--	21 JT	--	18 JT
LWG RA Sum DDE (Calculated U = 1/2)	--	7 JT	--	3.5 T	--	4.2 JT
LWG RA Sum DDT (Calculated U = 1/2)	--	13 JT	--	11 JT	--	6.6 T
LWG RA Total DDx (Calculated U = 1/2)	--	59 JT	--	35 JT	--	29 JT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	1900	--	1400	--	280
Residual Range Hydrocarbons	--	2300	--	2500	--	790
CALC						
Benthic MQ	1.477412808	--	1.647149347	--	0.470859812	--
pMax	0.884032893	--	0.833147429	--	0.534544051	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	PCM-09Y3E2	PCM-09Y3E2	PCM-14Y3E2	PCM-14Y3E2	PCM-15Y3E2	PCM-15Y3E2
Sample Name:	PCM-09-DS-091209	PCM-09-DS-091209	PCM-14-DS-091210	PCM-14-DS-091210	PCM-15-DS-091210	PCM-15-DS-091210
Sample Date:	12/9/2009	12/9/2009	12/10/2009	12/10/2009	12/10/2009	12/10/2009
Depth interval:	0 - 8 cm	0 - 8 cm	0 - 3 cm	0 - 3 cm	0 - 3 cm	0 - 3 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	108	--	86.8	--	91.1
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	5000	--	530	--	2400
LWG RA Total HPAH (Calculated U = 1/2)	--	38000 T	--	4000 T	--	22000 T
LWG RA Total PAH (Calculated U = 1/2)	--	42000 T	--	5200 T	--	26000 T
Semivolatile Organics (µg/kg)						
Carbazole	--	77	--	140	--	45
Dibenzofuran	--	--	--	--	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	17 JT	--	14 JT	--	12 JT
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	0.00035 T	--	0.000268 T	--	0.000259 T
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	4.5	--	1.8	--	2.4 J
2,4'-DDE (o,p'-DDE)	--	1.3 U	--	1.2 U	--	1.2 U
2,4'-DDT (o,p'-DDT)	--	1.6	--	1.5	--	0.8 J
4,4'-DDD (p,p'-DDD)	--	8.7	--	4 J	--	4.6
4,4'-DDE (p,p'-DDE)	--	2.4	--	1.8	--	1.4
4,4'-DDT (p,p'-DDT)	--	72	--	16	--	3.1
beta-Hexachlorocyclohexane (BHC)	--	1.3 U	--	1.2 U	--	1.2 U
LWG RA Sum DDD (Calculated U = 1/2)	--	13 T	--	5.8 JT	--	7 JT
LWG RA Sum DDE (Calculated U = 1/2)	--	3.1 T	--	2.4 T	--	2 T
LWG RA Sum DDT (Calculated U = 1/2)	--	74 T	--	18 T	--	3.9 JT
LWG RA Total DDx (Calculated U = 1/2)	--	90 T	--	26 JT	--	13 JT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	120	--	64	--	59 J
Residual Range Hydrocarbons	--	440	--	240	--	260
CALC						
Benthic MQ	0.326202619	--	0.239969395	--	0.212883436	--
pMax	0.547059622	--	0.560185922	--	0.49907856	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	PCM-16Y0E2	PCM-16Y0E2	PCM-17Y0E2	PCM-17Y0E2	PCM-22Y3E2	PCM-22Y3E2
Sample Name:	PCM-16DS-060818	PCM-16DS-060818	PCM-17DS-060818	PCM-17DS-060818	PCM-22-DS-091210	PCM-22-DS-091210
Sample Date:	8/18/2006	8/18/2006	8/18/2006	8/18/2006	12/10/2009	12/10/2009
Depth interval:	0 - 9.14 cm	0 - 9.14 cm	0 - 7.92 cm	0 - 7.92 cm	0 - 10 cm	0 - 10 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	--	--	--	--	**121**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	--	--	--	--	**2500**
LWG RA Total HPAH (Calculated U = 1/2)	--	**5600 T**	--	**16000 T**	--	**20000 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**7300 T**	--	**19000 T**	--	**24000 T**
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	**56**
Dibenzofuran	--	--	--	--	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	**12 JT**	--	**7.6 JT**	--	**17 JT**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	**0.000484 JT**	--	**0.00585 T**	--	**0.00032 T**
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	**4.5 J**
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	1.3 U
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	**1.1 J**
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	**11**
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	**2.9**
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	**6.2**
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	1.3 U
LWG RA Sum DDD (Calculated U = 1/2)	--	**9.5 T**	--	**33 T**	--	**16 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	**4.6 JT**	--	**5.4 JT**	--	**3.6 T**
LWG RA Sum DDT (Calculated U = 1/2)	--	**6.1 JT**	--	5 UT	--	**7.3 JT**
LWG RA Total DDx (Calculated U = 1/2)	--	**20 JT**	--	**43 JT**	--	**26 JT**
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	**86**
Residual Range Hydrocarbons	--	--	--	--	--	**270**
CALC						
Benthic MQ	**0.088748731**	--	**0.232922653**	--	**0.333190877**	--
pMax	**0.05280988**	--	**0.136503425**	--	**0.602419793**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	SL-02-A-PG	SL-02-A-PG	SL-02-E-PG	SL-02-E-PG	SL-03-F-PG	SL-03-F-PG	SL-04-A-PG
Sample Name:	LWG2-PG-SL2A	LWG2-PG-SL2A	LWG2-PG-SL2E	LWG2-PG-SL2E	LWG2-PG-SL3F	LWG2-PG-SL3F	LWG2-PG-SL4A
Sample Date:	11/29/2005	11/29/2005	11/29/2005	11/29/2005	11/29/2005	11/29/2005	11/29/2005
Depth interval:	0 - 29 cm	0 - 29 cm	0 - 21 cm	0 - 21 cm	0 - 30 cm	0 - 30 cm	0 - 20 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)							
Zinc	237	--	122	--	104	--	115
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	9800	--	1100	--	690	--	790
LWG RA Total HPAH (Calculated U = 1/2)	100000 JT	--	9800 T	--	5500 T	--	7300 T
LWG RA Total PAH (Calculated U = 1/2)	140000 JT	--	12000 T	--	7200 T	--	9900 T
Semivolatile Organics (µg/kg)							
Carbazole	99 J	--	24	--	14	--	14
Dibenzofuran	250	--	24	--	12	--	68
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	1150 JT	--	170 J	--	98 J	--	150 J
Residual Range Hydrocarbons	1400 JT	--	520 J	--	390 J	--	290 J
CALC							
Benthic MQ	--	1.40642013	--	0.146015864	--	0.131059993	--
pMax	--	0.928221602	--	0.263219548	--	0.229306532	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	SL-04-A-PG	SL-04-F-PG	SL-04-F-PG	SL-05-A-PG	SL-05-A-PG	SS-10
Sample Name:	LWG2-PG-SL4A	LWG2-PG-SL4F	LWG2-PG-SL4F	LWG2-PG-SL5A	LWG2-PG-SL5A	981112-SS-10
Sample Date:	11/29/2005	11/29/2005	11/29/2005	11/29/2005	11/29/2005	11/12/1998
Depth interval:	0 - 20 cm	0 - 30 cm	0 - 30 cm	0 - 26 cm	0 - 26 cm	0 - 6.096 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	96.2	--	99.8	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	1000	--	560	--	50 U
LWG RA Total HPAH (Calculated U = 1/2)	--	10000 T	--	4400 T	--	31000 T
LWG RA Total PAH (Calculated U = 1/2)	--	17000 T	--	5100 T	--	35000 T
Semivolatile Organics (µg/kg)						
Carbazole	--	110	--	13	--	--
Dibenzofuran	--	64	--	16	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	130 J	--	100 J	--	--
Residual Range Hydrocarbons	--	320 J	--	250 J	--	--
CALC						
Benthic MQ	0.138979128	--	0.310395287	--	0.137810125	0.507666456494325
pMax	0.238150974	--	0.36802557	--	0.490658109	0.285820168

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	SS-2	SS-4	SS-5	SS-6	SS-7	SS-9
Sample Name:	981112-SS-02	981112-SS-04	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-09
Sample Date:	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998
Depth interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	1500	2900	69100	360	23700	3400
LWG RA Total HPAH (Calculated U = 1/2)	11000 T	19000 T	370000 T	2400 T	170000 T	46000 T
LWG RA Total PAH (Calculated U = 1/2)	12000 T	21000 T	400000 T	2700 T	180000 T	56000 T
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	0.0868697351828499	0.224594577553594	3.23202395964691	0.0315374527112232	1.85774905422446	1.25646784363178
pMax	0.113274832	0.23279045	0.595358111	--	0.514769644	0.514769644

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	**U3C2**	**U3C2**	**U4Q1**	**U4Q1**	**U4Q2**	**U4Q2**
Sample Name:	**U3C2SG-110421**	**U3C2SG-110421**	**U4Q1SG-110421**	**U4Q1SG-110421**	**U4Q2SG-110421**	**U4Q2SG-110421**
Sample Date:	**4/21/2011**	**4/21/2011**	**4/21/2011**	**4/21/2011**	**4/21/2011**	**4/21/2011**
Depth interval:	**0 - 25 cm**	**0 - 25 cm**	**0 - 24 cm**	**0 - 24 cm**	**0 - 28.8 cm**	**0 - 28.8 cm**
Analysis Matrix:	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**
Metals (mg/kg)						
Zinc	--	**81**	--	**91**	--	**79**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	**11 J**	--	20 U	--	19 U
LWG RA Total HPAH (Calculated U = 1/2)	--	**130 JT**	--	**100 JT**	--	**100 JT**
LWG RA Total PAH (Calculated U = 1/2)	--	**220 JT**	--	**170 JT**	--	**170 JT**
Semivolatile Organics (µg/kg)						
Carbazole	--	20 U	--	20 U	--	19 U
Dibenzofuran	--	20 U	--	20 U	--	19 U
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	3.8 UT	--	3.9 UT	--	3.8 UT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	2 U	--	9.8 U	--	1.9 U
2,4'-DDE (o,p'-DDE)	--	2 U	--	9.8 U	--	1.9 U
2,4'-DDT (o,p'-DDT)	--	**2.9**	--	9.8 U	--	**5.1**
4,4'-DDD (p,p'-DDD)	--	2 U	--	9.8 U	--	1.9 U
4,4'-DDE (p,p'-DDE)	--	2 U	--	9.8 U	--	1.9 U
4,4'-DDT (p,p'-DDT)	--	2 U	--	9.8 U	--	1.9 UJ
beta-Hexachlorocyclohexane (BHC)	--	0.98 U	--	4.9 U	--	0.96 U
LWG RA Sum DDD (Calculated U = 1/2)	--	2 UT	--	9.8 UT	--	1.9 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	2 UT	--	9.8 UT	--	1.9 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	**3.9 T**	--	9.8 UT	--	**6.1 JT**
LWG RA Total DDx (Calculated U = 1/2)	--	**7.9 T**	--	9.8 UT	--	**9.9 JT**
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	8.1 U	--	**11**	--	8 U
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	**0.463486128**	--	**1.414713566**	--	**0.338792613**	--
pMax	**0.240748829**	--	**0.576083795**	--	**0.329198966**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	**WLCASF97S016**	**WLCASF97S016**	**WLCDRD05PG052**	**WLCDRD05PG052**	**WLCDRD05PG054**	**WLCDRD05PG054**
Sample Name:	**WLCASF97S016W4150**	**WLCASF97S016W4150**	**WLCDRD05PG05252**	**WLCDRD05PG05252**	**WLCDRD05PG05454**	**WLCDRD05PG05454**
Sample Date:	**6/10/1997**	**6/10/1997**	**5/27/2005**	**5/27/2005**	**5/27/2005**	**5/27/2005**
Depth interval:	**0 - 10 cm**	**0 - 10 cm**	**0 - 28 cm**	**0 - 28 cm**	**0 - 28 cm**	**0 - 28 cm**
Analysis Matrix:	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**
Metals (mg/kg)						
Zinc	--	--	--	**111 J**	--	**93.6 J**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	**377**	--	**9700**	--	**1800**
LWG RA Total HPAH (Calculated U = 1/2)	--	**3400 T**	--	**74000 T**	--	**17000 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**4800 T**	--	**93000 T**	--	**21000 T**
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	**250 J**	--	30 U
Dibenzofuran	--	**73**	--	**220**	--	**14 J**
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	**53 T**	--	**30 JT**
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	**15 J**	--	**8.3**
2,4'-DDE (o,p'-DDE)	--	--	--	1 U	--	0.6 U
2,4'-DDT (o,p'-DDT)	--	--	--	**1 J**	--	1.1 U
4,4'-DDD (p,p'-DDD)	--	--	--	**24 J**	--	**13 J**
4,4'-DDE (p,p'-DDE)	--	--	--	**7.3 J**	--	**5.4 J**
4,4'-DDT (p,p'-DDT)	--	--	--	**8.9 J**	--	**79**
beta-Hexachlorocyclohexane (BHC)	--	--	--	0.98 U	--	1.8 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	**39 JT**	--	**21 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	**7.8 JT**	--	**5.7 JT**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	**9.9 JT**	--	**80 T**
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	**57 JT**	--	**110 JT**
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	**840 J**	--	**190 J**
Residual Range Hydrocarbons	--	--	--	**1600 J**	--	**620 J**
CALC						
Benthic MQ	**0.165397811**	--	**0.50653548**	--	**0.203999414**	--
pMax	**0.170012911**	--	**0.793952603**	--	**0.373931683**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	WLCDRD05PG056	WLCDRD05PG056	WLCGSD01AN0101	WLCGSD01AN0101	WLCGSD01AN0102	WLCGSD01AN0102
Sample Name:	WLCDRD05PG05656	WLCDRD05PG05656	WLCGSD01AN0101_00-10	WLCGSD01AN0101_00-10	WLCGSD01AN0102_00-10	WLCGSD01AN0102_00-10
Sample Date:	5/25/2005	5/25/2005	4/10/2001	4/10/2001	4/10/2001	4/10/2001
Depth interval:	0 - 30 cm	0 - 30 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	88.4 J	--	70.5 J	--	108 J
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	1000	--	18000	--	37000
LWG RA Total HPAH (Calculated U = 1/2)	--	7600 T	--	180000 T	--	400000 T
LWG RA Total PAH (Calculated U = 1/2)	--	8600 T	--	230000 JT	--	620000 JT
Semivolatile Organics (µg/kg)						
Carbazole	--	50	--	--	--	--
Dibenzofuran	--	25	--	--	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	50 UT	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	16	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	2.2 NJ	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	2.6 NJ	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	46	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	9.6	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	78	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	0.92 U	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	62 T	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	12 NJT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	81 NJT	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	150 NJT	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	120 J	--	--	--	--
Residual Range Hydrocarbons	--	460 J	--	--	--	--
CALC						
Benthic MQ	0.136481398	--	5.534359425	--	23.19356332	--
pMax	0.215907543	--	0.803712798	--	0.903825547	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	WLCGSD01AN0103	WLCGSD01AN0103	WLCGSD01AN0105	WLCGSD01AN0105	WLCGSD01AN0205
Sample Name:	WLCGSD01AN0103_00-10	WLCGSD01AN0103_00-10	WLCGSD01AN0105_00-10	WLCGSD01AN0105_00-10	WLCGSD01AN0205_00-10
Sample Date:	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/11/2001
Depth interval:	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)					
Zinc	--	281 J	--	56.1 J	--
Polycyclic Aromatic Hydrocarbons (µg/kg)					
Benzo(a)pyrene	--	93000	--	150	--
LWG RA Total HPAH (Calculated U = 1/2)	--	1100000 T	--	1200 T	--
LWG RA Total PAH (Calculated U = 1/2)	--	1800000 JT	--	1700 JT	--
Semivolatile Organics (µg/kg)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/kg)					
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (µg/kg)					
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/kg)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)					
Diesel Range Hydrocarbons	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--
CALC					
Benthic MQ	80.95797547	--	0.081877396	--	0.077657919
pMax	0.976180491	--	0.078598843	--	0.104487367

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	WLCGSD01AN0205	WLCMRD08SDBH4SS	WLCMRD08SDBH4SS	WLCMRD08SDBH5SS	WLCMRD08SDBH5SS	WLCMRD08SDBH6SS
Sample Name:	WLCGSD01AN0205_00-10	WLCMRD08BH4-1	WLCMRD08BH4-1	WLCMRD08BH5-1	WLCMRD08BH5-1	WLCMRD08BH6-1
Sample Date:	4/11/2001	4/18/2008	4/18/2008	4/17/2008	4/17/2008	4/17/2008
Depth interval:	0 - 10 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	70.6 J	--	131	--	121	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	270	--	2200	--	910	--
LWG RA Total HPAH (Calculated U = 1/2)	2800 T	--	26000 T	--	9200 T	--
LWG RA Total PAH (Calculated U = 1/2)	3200 T	--	37000 T	--	10000 T	--
Semivolatile Organics (µg/kg)						
Carbazole	--	--	1100	--	44	--
Dibenzofuran	--	--	240	--	23	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	24 T	--	31 JT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	6.3 J	--	2.3 J	--
2,4'-DDE (o,p'-DDE)	--	--	3.1 U	--	0.21 U	--
2,4'-DDT (o,p'-DDT)	--	--	1.1 U	--	1 J	--
4,4'-DDD (p,p'-DDD)	--	--	8.4 J	--	5.6	--
4,4'-DDE (p,p'-DDE)	--	--	2.8 J	--	2.7 J	--
4,4'-DDT (p,p'-DDT)	--	--	5.2	--	2.1	--
beta-Hexachlorocyclohexane (BHC)	--	--	1.1 U	--	0.21 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	15 JT	--	7.9 JT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	4.4 JT	--	2.8 JT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	5.8 T	--	3.1 JT	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	25 JT	--	14 JT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	87	--	61	--
Residual Range Hydrocarbons	--	--	240	--	200 J	--
CALC						
Benthic MQ	--	0.371711539	--	0.082769173	--	0.078808251
pMax	--	0.740937308	--	0.197660178	--	0.369281858

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	WLCMRD08SDBH6SS	WLCMRD08SDDA17SS	WLCMRD08SDDA17SS	WLCMRD08SDDA18SS	WLCMRD08SDDA18SS	WLCMRD08SDDC25SS
Sample Name:	WLCMRD08BH6-1	WLCMRD08DA17-1	WLCMRD08DA17-1	WLCMRD08DA18-1	WLCMRD08DA18-1	WLCMRD08DC25-1
Sample Date:	4/17/2008	4/17/2008	4/17/2008	4/18/2008	4/18/2008	4/17/2008
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	135	--	218	--	175	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	900	--	12000	--	1700	--
LWG RA Total HPAH (Calculated U = 1/2)	8500 T	--	130000 T	--	21000 T	--
LWG RA Total PAH (Calculated U = 1/2)	9400 T	--	150000 T	--	34000 T	--
Semivolatile Organics (µg/kg)						
Carbazole	21	--	580	--	58 J	--
Dibenzofuran	12	--	160	--	200	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	24 T	--	22 T	--	78 JT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	1.6	--	7.6 J	--	5.9	--
2,4'-DDE (o,p'-DDE)	0.21 U	--	1.2 U	--	3 U	--
2,4'-DDT (o,p'-DDT)	0.37 U	--	0.52 J	--	1.9 J	--
4,4'-DDD (p,p'-DDD)	3.2	--	19	--	15	--
4,4'-DDE (p,p'-DDE)	1.5 J	--	7.1 J	--	15 J	--
4,4'-DDT (p,p'-DDT)	13	--	2.2	--	4.2	--
beta-Hexachlorocyclohexane (BHC)	0.21 U	--	1.2 U	--	0.23 U	--
LWG RA Sum DDD (Calculated U = 1/2)	4.8 T	--	27 JT	--	21 T	--
LWG RA Sum DDE (Calculated U = 1/2)	1.6 JT	--	7.7 JT	--	16 JT	--
LWG RA Sum DDT (Calculated U = 1/2)	13 T	--	2.7 JT	--	6.1 JT	--
LWG RA Total DDx (Calculated U = 1/2)	20 JT	--	37 JT	--	43 JT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	270	--	380	--	430	--
Residual Range Hydrocarbons	210 J	--	660	--	480	--
CALC						
Benthic MQ	--	0.716664447	--	0.402763151	--	2.876306145
pMax	--	0.7068381	--	0.586982989	--	0.851900018

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	WLCMRD08SDDC25SS	WLCMRD08SDUD1SS	WLCMRD08SDUD1SS	WLCMRD08SDUD26SS	WLCMRD08SDUD26SS	WLCMRD08SDUD27SS
Sample Name:	WLCMRD08DC25-1	WLCMRD08UD1-1	WLCMRD08UD1-1	WLCMRD08UD26-1	WLCMRD08UD26-1	WLCMRD08UD27-1
Sample Date:	4/17/2008	4/15/2008	4/15/2008	4/13/2008	4/13/2008	4/14/2008
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	402	--	154	--	169	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	39000	--	19000	--	3300	--
LWG RA Total HPAH (Calculated U = 1/2)	390000 T	--	160000 T	--	25000 T	--
LWG RA Total PAH (Calculated U = 1/2)	460000 T	--	180000 T	--	28000 T	--
Semivolatile Organics (µg/kg)						
Carbazole	2900	--	750	--	350	--
Dibenzofuran	910	--	340	--	39	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	63 UT	--	34 UT	--	21 UT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	99	--	12 J	--	3.6 J	--
2,4'-DDE (o,p'-DDE)	2 U	--	1.1 U	--	0.31 NJ	--
2,4'-DDT (o,p'-DDT)	2 U	--	1.1 U	--	0.22 U	--
4,4'-DDD (p,p'-DDD)	400	--	19	--	10	--
4,4'-DDE (p,p'-DDE)	2 U	--	3.7 U	--	4.1	--
4,4'-DDT (p,p'-DDT)	5.7 U	--	50	--	2.8 U	--
beta-Hexachlorocyclohexane (BHC)	2 U	--	2.4 U	--	0.22 U	--
LWG RA Sum DDD (Calculated U = 1/2)	500 T	--	31 JT	--	14 JT	--
LWG RA Sum DDE (Calculated U = 1/2)	2 UT	--	3.7 UT	--	4.4 NJT	--
LWG RA Sum DDT (Calculated U = 1/2)	5.7 UT	--	51 T	--	2.8 UT	--
LWG RA Total DDx (Calculated U = 1/2)	500 T	--	84 JT	--	20 JNT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	450	--	190	--	96	--
Residual Range Hydrocarbons	690	--	320	--	230	--
CALC						
Benthic MQ	--	0.638100011	--	0.168098393	--	1.068452342
pMax	--	0.685685721	--	0.421109125	--	0.896345472

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	WLCMRD08SDUD27SS	WLCMRD08SDUD2SS	WLCMRD08SDUD2SS	WLCT0I98GRAB04	WLCT0I98GRAB04	WLCT0I98GRAB06
Sample Name:	WLCMRD08UD27-1	WLCMRD08UD2-1	WLCMRD08UD2-1	WLCT0I98GRAB04GRAB04	WLCT0I98GRAB04GRAB04	WLCT0I98GRAB06GRAB06
Sample Date:	4/14/2008	4/15/2008	4/15/2008	9/14/1998	9/14/1998	9/14/1998
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	429 J	--	137	--	67.9	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	21000	--	6600	--	1500 J	--
LWG RA Total HPAH (Calculated U = 1/2)	180000 T	--	66000 T	--	13000 JT	--
LWG RA Total PAH (Calculated U = 1/2)	210000 JT	--	75000 T	--	15000 JT	--
Semivolatile Organics (µg/kg)						
Carbazole	4400 J	--	270	--	--	--
Dibenzofuran	610 J	--	170	--	45 J	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	23 UT	--	25 UT	--	45 T	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	1.4 U	--	11 J	--	--	--
2,4'-DDE (o,p'-DDE)	1.4 U	--	1.2 U	--	--	--
2,4'-DDT (o,p'-DDT)	3 U	--	1.2 U	--	--	--
4,4'-DDD (p,p'-DDD)	17	--	8.2 J	--	11	--
4,4'-DDE (p,p'-DDE)	34 J	--	2.6 U	--	5.9	--
4,4'-DDT (p,p'-DDT)	64	--	4.2 U	--	49	--
beta-Hexachlorocyclohexane (BHC)	1.7 U	--	1.2 U	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	18 T	--	19 JT	--	11 T	--
LWG RA Sum DDE (Calculated U = 1/2)	35 JT	--	2.6 UT	--	5.9 T	--
LWG RA Sum DDT (Calculated U = 1/2)	65 T	--	4.2 UT	--	49 T	--
LWG RA Total DDx (Calculated U = 1/2)	120 JT	--	24 JT	--	66 T	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	300	--	170	--	--	--
Residual Range Hydrocarbons	560	--	300	--	--	--
CALC						
Benthic MQ	--	0.396334187	--	0.162040201	--	0.108371648
pMax	--	0.528808316	--	0.263219548	--	0.277044694

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	WLCT0I98GRAB06	WLR0797WRBC23	WLR0797WRBC23	WR-WSI98SD061	WR-WSI98SD061	WR-WSI98SD062
Sample Name:	WLCT0I98GRAB06GRAB06	WLR0797WRBC23WRBC23	WLR0797WRBC23WRBC23	WR-WSI98SD0610	WR-WSI98SD0610	WR-WSI98SD0620
Sample Date:	9/14/1998	7/25/1997	7/25/1997	9/21/1997	9/21/1997	9/20/1997
Depth interval:	0 - 10 cm	0 - 18 cm	0 - 18 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	**38.6**	--	**49.3**	--	**107**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	**340**	--	5 UJ	--	**330**	--
LWG RA Total HPAH (Calculated U = 1/2)	**4500 T**	--	**20 JT**	--	**3600 T**	--
LWG RA Total PAH (Calculated U = 1/2)	**6500 T**	--	**32 JT**	--	**4300 T**	--
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	**77 J**	--
Dibenzofuran	100 U	--	5 UJ	--	**38**	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	10 UT	--	10 UT	--	38 UJT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	3.3 U	--	2 U	--	--	--
4,4'-DDE (p,p'-DDE)	2.3 U	--	2 U	--	--	--
4,4'-DDT (p,p'-DDT)	6.7 U	--	**1.7**	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	2 U	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	3.3 UT	--	2 UT	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	2.3 UT	--	2 UT	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	6.7 UT	--	**1.7 T**	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	6.7 UT	--	**3.7 T**	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.029701787**	--	**0.280641039**	--	**9.073211523**
pMax	--	**0.003168382**	--	**0.705188856**	--	**0.996725457**

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	WR-WSI98SD062	WR-WSI98SD063	WR-WSI98SD063	WR-WSI98SD067	WR-WSI98SD067	WR-WSI98SD069	WR-WSI98SD069
Sample Name:	WR-WSI98SD0620	WR-WSI98SD0630	WR-WSI98SD0630	WR-WSI98SD0670	WR-WSI98SD0670	WR-WSI98SD0690	WR-WSI98SD0690
Sample Date:	9/20/1997	9/20/1997	9/20/1997	9/21/1997	9/21/1997	9/20/1997	9/20/1997
Depth interval:	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)							
Zinc	161	--	185	--	150	--	144
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	57000	--	5100	--	15000	--	2400
LWG RA Total HPAH (Calculated U = 1/2)	520000 T	--	58000 T	--	190000 T	--	58000 T
LWG RA Total PAH (Calculated U = 1/2)	750000 T	--	85000 T	--	310000 T	--	120000 T
Semivolatile Organics (µg/kg)							
Carbazole	8400 J	--	260 J	--	1800	--	3400 J
Dibenzofuran	2600	--	530	--	1300	--	1900
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	1.278587288	--	4.30282011	--	2.747633209	--
pMax	--	0.768878761	--	0.988772889	--	0.900851646	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

System Location Code:	**WR-WSI98SD070**	**WR-WSI98SD070**	**WR-WSI98SD072**	**WR-WSI98SD072**
Sample Name:	**WR-WSI98SD0700000CC**	**WR-WSI98SD0700000CC**	**WR-WSI98SD0720**	**WR-WSI98SD0720**
Sample Date:	**9/20/1997**	**9/20/1997**	**9/20/1997**	**9/20/1997**
Depth interval:	**0 - 10 cm**	**0 - 10 cm**	**0 - 10 cm**	**0 - 10 cm**
Analysis Matrix:	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**
Metals (mg/kg)				
Zinc	--	**117 T**	--	**113**
Polycyclic Aromatic Hydrocarbons (µg/kg)				
Benzo(a)pyrene	--	**1120 T**	--	**980**
LWG RA Total HPAH (Calculated U = 1/2)	--	**36000 T**	--	**8600 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**87000 T**	--	**14000 T**
Semivolatile Organics (µg/kg)				
Carbazole	--	**1290 JT**	--	**86 J**
Dibenzofuran	--	**2050 T**	--	**220**
PCB Aroclors (µg/kg)				
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	**120 T**	--	40 UJT
PCB Congeners (µg/kg)				
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--
Pesticides (µg/kg)				
2,4'-DDD (o,p'-DDD)	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	**12.5 T**	--	**22**
4,4'-DDE (p,p'-DDE)	--	**7.35 T**	--	**5.3**
4,4'-DDT (p,p'-DDT)	--	**25.5 T**	--	**60**
beta-Hexachlorocyclohexane (BHC)	--	0.94 UT	--	0.99 U
LWG RA Sum DDD (Calculated U = 1/2)	--	**12.5 T**	--	**22 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	**7.35 T**	--	**5.3 T**
LWG RA Sum DDT (Calculated U = 1/2)	--	**25.5 T**	--	**60 T**
LWG RA Total DDx (Calculated U = 1/2)	--	**45.4 T**	--	**87 T**
Total Petroleum Hydrocarbons (mg/kg)				
Diesel Range Hydrocarbons	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--
CALC				
Benthic MQ	**1.554404498**	--	**0.383540979**	--
pMax	**0.76637446**	--	**0.596716706**	--

Table 3-14
Existing Data Screening Table – Surface Sediment (Category A) Ecological

Notes:

	Detected concentration is greater than 1 screening level
	Detected concentration is greater than 2 screening levels
	Detected concentration is greater than 3 screening levels
	Detected concentration is greater than 4 screening levels
	Detected concentration is greater than 5 screening levels
	Detected concentration is greater than 6 screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
T = Result is the value of a total or calculation
-- = Results not reported or not applicable
Totals are calculated as the sum of all detected results and 1/2 the undetected result. If all are undetected results, the highest reporting limit value is reported as the sum.
NA = Not applicable, calculation based on sample and associated field duplicate

Acronyms:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LWG = Lower Willamette Group
MQ = mean quotient
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyls
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	DGS-01	DGS-02	DGS-03SC	DGS-04	DGS-05	DGS-06	DGS-07SC	DGS-08
Sample Name:	DGS-01SG-110420	DGS-02SG-110420	DGS-03SC-0001-101005	DGS-04SG-110420	DGS-05SG-110418	DGS-06SG-110420	DGS-07SC-0001-101012	DGS-08SG-110418
Sample Date:	4/20/2011	4/20/2011	10/5/2010	4/20/2011	4/18/2011	4/20/2011	10/12/2010	4/18/2011
Depth interval:	0 - 23 cm	0 - 29 cm	0 - 30.48 cm	0 - 29 cm	0 - 25 cm	0 - 26 cm	0 - 30.48 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)								
Zinc	104	129	367 J	138	72	87	229	89
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	810	4900	13000	5400	6800	5500	22000	570
Benzo(a)pyrene	1100	6600	19000	5200	8700	7200	26000	770
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	980	6300	17000	8200	8100	7100	28000	730
Dibenzo(a,h)anthracene	170	1100	4100	840	1000	1200	690	110
Indeno(1,2,3-c,d)pyrene	650	3900	12000	3000	4600	4000	11000	490
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1600 T	9100 T	28000 T	7600 T	12000 T	10000 T	33000 T	1100 T
LWG RA Total LPAH (Calculated U = 1/2)	4000 T	11000 T	35000 T	26000 T	110000 T	21000 T	100000 T	8000 T
LWG RA Total PAH (Calculated U = 1/2)	14000 T	65000 T	200000 T	92000 T	220000 T	86000 T	350000 T	16000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	37 T	240 T	710 T	300 T	200 T	360 T	770 T	30 T
Benzo(a)pyrene	50 T	320 T	1000 T	280 T	260 T	480 T	910 T	41 T
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	45 T	310 T	930 T	450 T	240 T	470 T	980 T	39 T
Dibenzo(a,h)anthracene	7.7 T	53 T	220 T	46 T	30 T	79 T	24 T	5.9 T
Indeno(1,2,3-c,d)pyrene	30 T	190 T	660 T	200 T	140 T	300 T	380 T	26 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	71 T	440 T	1500 T	410 T	350 T	680 T	1200 T	58 T
LWG RA Total LPAH (Calculated U = 1/2)	180 T	560 T	1900 T	1400 T	3300 T	1400 T	3600 T	430 T
LWG RA Total PAH (Calculated U = 1/2)	660 T	3100 T	11000 T	5000 T	6500 T	5800 T	12000 T	870 T
Semivolatile Organics (µg/kg)								
Carbazole	150	520	1300	1500	2300	440	2300	41
Semivolatile Organics (mg/kg-OC)								
Carbazole	6.8 T	25 T	71 T	82 T	69 T	29 T	80 T	2.2 T
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 JT	46 T	33 UT	71 T	19 UT	29 T	300 JT	20 UT
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	1.5 JT	2.2 T	1.8 UT	3.8 T	0.57 UT	2 T	9.95 JT	1 UT
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	DGS-01	DGS-02	DGS-03SC	DGS-04	DGS-05	DGS-06	DGS-07SC	DGS-08
Sample Name:	DGS-01SG-110420	DGS-02SG-110420	DGS-03SC-0001-101005	DGS-04SG-110420	DGS-05SG-110418	DGS-06SG-110420	DGS-07SC-0001-101012	DGS-08SG-110418
Sample Date:	4/20/2011	4/20/2011	10/5/2010	4/20/2011	4/18/2011	4/20/2011	10/12/2010	4/18/2011
Depth interval:	0 - 23 cm	0 - 29 cm	0 - 30.48 cm	0 - 29 cm	0 - 25 cm	0 - 26 cm	0 - 30.48 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	20 U	**20**	16 U	**48**	20 UJ	**15**	**74 J**	**3.2 NJ**
4,4'-DDE (p,p'-DDE)	20 U	9.7 U	**9.1 J**	**16 J**	20 U	9.9 U	**32**	1.9 U
4,4'-DDT (p,p'-DDT)	20 U	9.7 U	16 U	9.8 U	20 UJ	9.9 U	**16**	**-- R**
alpha-Hexachlorocyclohexane (BHC)	9.9 U	4.8 U	8 U	4.9 U	9.9 U	5 U	8.1 U	0.95 U
beta-Hexachlorocyclohexane (BHC)	9.9 U	16 U	8 U	30 U	9.9 U	9.2 U	40 U	0.95 U
delta-Hexachlorocyclohexane (BHC)	9.9 UJ	4.8 UJ	8 UJ	4.9 UJ	9.9 UJ	5 UJ	8.1 U	0.95 UJ
Endrin ketone	20 U	9.7 U	16 U	9.8 U	20 UJ	9.9 U	16 U	1.9 UJ
gamma-Hexachlorocyclohexane (BHC) (Lindane)	9.9 U	4.8 U	8 U	4.9 U	9.9 U	5 U	8.1 U	0.95 U
LWG RA Sum DDD (Calculated U = 1/2)	20 UT	**31 T**	16 UT	**53 T**	20 UJT	**20 T**	**94 JT**	**4.2 NJT**
LWG RA Sum DDE (Calculated U = 1/2)	20 UT	9.7 UT	**17 JT**	**21 JT**	20 UT	9.9 UT	**40 T**	1.9 UT
LWG RA Sum DDT (Calculated U = 1/2)	20 UT	9.7 UT	16 UT	9.8 UT	20 UJT	9.9 UT	**24 T**	1.9 UJT
LWG RA Total DDx (Calculated U = 1/2)	20 UT	**50 T**	**49 JT**	**84 JT**	20 UJT	**40 T**	**160 JT**	**7 NJT**
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	0.9 UT	**1 T**	0.87 UT	**2.6 T**	0.6 UJT	**0.99 T**	**2.6 JT**	**0.17 NJT**
4,4'-DDE (p,p'-DDE)	0.9 UT	0.47 UT	**0.5 JT**	**0.87 JT**	0.6 UT	0.66 UT	**1.1 T**	0.1 UT
4,4'-DDT (p,p'-DDT)	0.9 UT	0.47 UT	0.87 UT	0.54 UT	0.6 UJT	0.66 UT	**0.56 T**	**-- RT**
alpha-Hexachlorocyclohexane (BHC)	0.45 UT	0.23 UT	0.44 UT	0.27 UT	0.3 UT	0.33 UT	0.28 UT	0.051 UT
beta-Hexachlorocyclohexane (BHC)	0.45 UT	0.78 UT	0.44 UT	2 UT	0.3 UT	0.61 UT	1 UT	0.051 UT
delta-Hexachlorocyclohexane (BHC)	0.45 UJT	0.23 UJT	0.44 UJT	0.27 UJT	0.3 UJT	0.33 UJT	0.28 UT	0.051 UJT
Endrin ketone	0.9 UT	0.47 UT	0.87 UT	0.54 UT	0.6 UJT	0.66 UT	0.56 UT	0.1 UJT
LWG RA Sum DDD (Calculated U = 1/2)	0.9 UT	**1.5 T**	0.87 UT	**2.9 T**	0.6 UJT	**1.3 T**	**3.3 JT**	**0.22 NJT**
LWG RA Sum DDE (Calculated U = 1/2)	0.9 UT	0.47 UT	**0.94 JT**	**1.1 JT**	0.6 UT	0.66 UT	**1.4 T**	0.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.9 UT	0.47 UT	0.87 UT	0.54 UT	0.6 UJT	0.66 UT	**0.84 T**	0.1 UJT
LWG RA Total DDx (Calculated U = 1/2)	0.9 UT	**2.5 T**	**2.7 JT**	**4.6 JT**	0.6 UJT	**2.6 T**	**5.5 JT**	**0.37 NJT**

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	DGS-09	DGS-11SC	DGS-12	DGS-12	DGS-13	DGS-16	DGS-16	DGS-17
Sample Name:	DGS-09SG-110418	DGS-11SC-0001-101006	DGS-12SG-110418	DGS-62SG-110418	DGS-13SG-110418	DGS-16SG-110418	DGS-66SG-110418	DGS-17SG-110418
Sample Date:	4/18/2011	10/6/2010	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/18/2011
Depth interval:	0 - 27 cm	0 - 30.48 cm	0 - 25 cm	0 - 25 cm	0 - 26 cm	0 - 25 cm	0 - 25 cm	0 - 28.5 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)								
Zinc	109	103	74	67	65	79	--	59
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	42000 J	8200	380	300	5800	170	--	500
Benzo(a)pyrene	12000	10000	560	430	8300	230	--	750
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	50000 J	10000	450	360	7200	240	--	620
Dibenzo(a,h)anthracene	8600	3300 U	73	54	980	26	--	100
Indeno(1,2,3-c,d)pyrene	34000	5100	300	270	4800	130	--	460
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	35000 JT	14000 T	780 T	600 T	11000 T	320 T	--	1000 T
LWG RA Total LPAH (Calculated U = 1/2)	180000 T	130000 T	12000 T	11000 T	74000 T	490 T	--	6200 T
LWG RA Total PAH (Calculated U = 1/2)	800000 JT	240000 T	18000 T	15000 T	160000 T	3200 T	--	14000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	2000 JT	460 T	23 T	20 T	280 T	7.5 T	--	20 T
Benzo(a)pyrene	570 T	600 T	34 T	31 T	400 T	10 T	--	34 T
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	2000 JT	600 T	27 T	26 T	350 T	11 T	--	28 T
Dibenzo(a,h)anthracene	410 T	190 UT	4.4 T	3.9 T	48 T	1.2 T	--	5 T
Indeno(1,2,3-c,d)pyrene	1600 T	290 T	20 T	19 T	230 T	5.8 T	--	21 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1700 JT	830 T	47 T	43 T	550 T	14 T	--	48 T
LWG RA Total LPAH (Calculated U = 1/2)	8500 T	7400 T	690 T	770 T	3600 T	22 T	--	280 T
LWG RA Total PAH (Calculated U = 1/2)	38000 JT	14000 T	1000 T	1100 T	7700 T	150 T	--	630 T
Semivolatile Organics (µg/kg)								
Carbazole	760	3300 U	110	110	520	19 U	--	390
Semivolatile Organics (mg/kg-OC)								
Carbazole	36 T	190 UT	6.6 T	7.9 T	25 T	0.84 UT	--	18 T
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	19 UT	65 UT	19 UT	19 UT	19 UT	19 UT	--	19 UT
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	0.9 UT	3.7 UT	1.1 UT	1.4 UT	0.92 UT	0.84 UT	--	0.87 UT
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	DGS-09	DGS-11SC	DGS-12	DGS-12	DGS-13	DGS-16	DGS-16	DGS-17
Sample Name:	DGS-09SG-110418	DGS-11SC-0001-101006	DGS-12SG-110418	DGS-62SG-110418	DGS-13SG-110418	DGS-16SG-110418	DGS-66SG-110418	DGS-17SG-110418
Sample Date:	4/18/2011	10/6/2010	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/18/2011
Depth interval:	0 - 27 cm	0 - 30.48 cm	0 - 25 cm	0 - 25 cm	0 - 26 cm	0 - 25 cm	0 - 25 cm	0 - 28.5 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	**40 NJ**	**9.2 J**	**4.4 J**	19 U	19 U	**2.4 NJ**	--	19 U
4,4'-DDE (p,p'-DDE)	19 U	16 U	1.9 U	19 U	19 U	1.9 U	--	19 U
4,4'-DDT (p,p'-DDT)	**-- R**	16 U	**6.2 J**	19 U	19 U	**-- R**	--	19 UJ
alpha-Hexachlorocyclohexane (BHC)	9.5 U	7.9 U	0.96 U	9.6 U	9.6 U	0.96 U	--	9.3 U
beta-Hexachlorocyclohexane (BHC)	9.5 U	7.9 U	0.96 U	9.6 U	9.6 U	0.96 U	--	9.3 U
delta-Hexachlorocyclohexane (BHC)	9.5 UJ	7.9 U	0.96 UJ	9.6 UJ	9.6 UJ	0.96 UJ	--	9.3 UJ
Endrin ketone	19 UJ	16 U	1.9 UJ	19 U	19 U	1.9 UJ	--	19 UJ
gamma-Hexachlorocyclohexane (BHC) (Lindane)	9.5 U	7.9 U	0.96 U	9.6 U	9.6 U	0.96 U	--	9.3 U
LWG RA Sum DDD (Calculated U = 1/2)	**50 NJT**	**17 JT**	**5.4 JT**	19 UT	19 UT	**3.4 NJT**	--	19 UJT
LWG RA Sum DDE (Calculated U = 1/2)	19 UT	16 UT	1.9 UT	19 UT	19 UT	1.9 UT	--	19 UT
LWG RA Sum DDT (Calculated U = 1/2)	19 UJT	16 UT	**7.2 JT**	19 UT	19 UT	1.9 UJT	--	19 UJT
LWG RA Total DDx (Calculated U = 1/2)	**78 NJT**	**49 JT**	**14 JT**	19 UT	19 UT	**6.2 NJT**	--	19 UJT
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	**2 NJT**	**0.52 JT**	**0.27 JT**	1.4 UT	0.92 UT	**0.11 NJT**	--	0.87 UT
4,4'-DDE (p,p'-DDE)	0.9 UT	0.9 UT	0.11 UT	1.4 UT	0.92 UT	0.084 UT	--	0.87 UT
4,4'-DDT (p,p'-DDT)	**-- RT**	0.9 UT	**0.37 JT**	1.4 UT	0.92 UT	**-- RT**	--	0.87 UJT
alpha-Hexachlorocyclohexane (BHC)	0.45 UT	0.45 UT	0.058 UT	0.69 UT	0.47 UT	0.042 UT	--	0.42 UT
beta-Hexachlorocyclohexane (BHC)	0.45 UT	0.45 UT	0.058 UT	0.69 UT	0.47 UT	0.042 UT	--	0.42 UT
delta-Hexachlorocyclohexane (BHC)	0.45 UJT	0.45 UT	0.058 UJT	0.69 UJT	0.47 UJT	0.042 UJT	--	0.42 UJT
Endrin ketone	0.9 UJT	0.9 UT	0.11 UJT	1.4 UT	0.92 UT	0.084 UJT	--	0.87 UJT
LWG RA Sum DDD (Calculated U = 1/2)	**2.5 NJT**	**0.97 JT**	**0.33 JT**	1.4 UT	0.92 UT	**0.15 NJT**	--	0.87 UJT
LWG RA Sum DDE (Calculated U = 1/2)	0.9 UT	0.9 UT	0.11 UT	1.4 UT	0.92 UT	0.084 UT	--	0.87 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.9 UJT	0.9 UT	**0.43 JT**	1.4 UT	0.92 UT	0.084 UJT	--	0.87 UJT
LWG RA Total DDx (Calculated U = 1/2)	**3.8 NJT**	**2.8 JT**	**0.86 JT**	1.4 UT	0.92 UT	**0.28 NJT**	--	0.87 UJT

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	DGS-18SC	DGS-19SC	DGS-20	DGS-21	DGS-22SC	DGS-23SC	DGS-24SC
Sample Name:	DGS-18SC-0001-101008	DGS-19SC-0001-101006	DGS-20SG-110419	DGS-21SG-110419	DGS-22SC-0001-101012	DGS-23SC-0001-101008	DGS-24SC-0001-101012
Sample Date:	10/8/2010	10/6/2010	4/19/2011	4/19/2011	10/12/2010	10/8/2010	10/12/2010
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 27 cm	0 - 27.5 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)							
Zinc	89	142	67	93	53	49	104
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	21000	13000	110	4400	2100	62 U	11000
Benzo(a)pyrene	20000	19000	150	6600	3200	62 U	14000
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	21000	17000	150	5500	2800	62 U	14000
Dibenzo(a,h)anthracene	3700	3300 U	21	880	200 U	62 U	510
Indeno(1,2,3-c,d)pyrene	11000	10000	88	4000	1800	62 U	7900
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	29000 T	25000 T	210 T	9100 T	4100 T	62 UT	18000 T
LWG RA Total LPAH (Calculated U = 1/2)	220000 T	360000 T	180 JT	27000 T	7800 T	400 T	61000 T
LWG RA Total PAH (Calculated U = 1/2)	450000 JT	570000 T	1700 JT	92000 T	36000 T	680 JT	190000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	810 T	520 T	8.9 T	220 T	130 T	20 UT	920 T
Benzo(a)pyrene	800 T	770 T	12 T	330 T	190 T	20 UT	1200 T
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	810 T	690 T	12 T	270 T	170 T	20 UT	1200 T
Dibenzo(a,h)anthracene	140 T	130 UT	1.7 T	44 T	10 UT	20 UT	43 T
Indeno(1,2,3-c,d)pyrene	420 T	400 T	7.2 T	200 T	110 T	20 UT	660 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1200 T	1000 T	17 T	460 T	240 T	20 UT	1600 T
LWG RA Total LPAH (Calculated U = 1/2)	8700 T	15000 T	15 JT	1300 T	480 T	130 T	5100 T
LWG RA Total PAH (Calculated U = 1/2)	18000 JT	23000 T	140 JT	4600 T	2200 T	220 JT	17000 T
Semivolatile Organics (µg/kg)							
Carbazole	1400	3300 U	18 U	160	200 U	67	1800
Semivolatile Organics (mg/kg-OC)							
Carbazole	54 T	130 UT	1.5 UT	8 T	10 UT	22 T	150 T
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	33 UT	64 UT	19 UT	19 UT	33 UJT	32 UT	32 UJT
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	1.3 UT	2.6 UT	1.5 UT	0.95 UT	2 UJT	10 UT	2.7 UJT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	DGS-18SC	DGS-19SC	DGS-20	DGS-21	DGS-22SC	DGS-23SC	DGS-24SC
Sample Name:	DGS-18SC-0001-101008	DGS-19SC-0001-101006	DGS-20SG-110419	DGS-21SG-110419	DGS-22SC-0001-101012	DGS-23SC-0001-101008	DGS-24SC-0001-101012
Sample Date:	10/8/2010	10/6/2010	4/19/2011	4/19/2011	10/12/2010	10/8/2010	10/12/2010
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 27 cm	0 - 27.5 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	16 U	16 U	1.9 U	19 U	16 U	3.2 U	**22**
4,4'-DDE (p,p'-DDE)	16 U	16 U	1.9 U	19 U	16 U	3.2 U	16 U
4,4'-DDT (p,p'-DDT)	16 U	16 U	1.9 UJ	19 U	**94**	3.2 U	**72**
alpha-Hexachlorocyclohexane (BHC)	8.1 U	7.9 U	0.97 U	9.7 U	8 U	1.6 U	7.8 U
beta-Hexachlorocyclohexane (BHC)	8.1 U	7.9 U	0.97 U	9.7 U	8 U	1.6 U	7.8 U
delta-Hexachlorocyclohexane (BHC)	8.1 U	7.9 U	0.97 UJ	9.7 UJ	8 U	1.6 U	7.8 U
Endrin ketone	16 U	16 U	1.9 UJ	19 U	16 U	3.2 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8.1 U	7.9 U	0.97 U	9.7 U	8 U	1.6 U	7.8 U
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	16 UT	1.9 UJT	19 UT	16 UT	3.2 UT	**30 T**
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	16 UT	1.9 UT	19 UT	16 UT	3.2 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	16 UT	1.9 UJT	19 UT	**100 T**	3.2 UT	**80 T**
LWG RA Total DDx (Calculated U = 1/2)	16 UT	16 UT	1.9 UJT	19 UT	**130 T**	3.2 UT	**130 T**
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	0.62 UT	0.65 UT	0.15 UT	0.95 UT	0.97 UT	1 UT	**1.8 T**
4,4'-DDE (p,p'-DDE)	0.62 UT	0.65 UT	0.15 UT	0.95 UT	0.97 UT	1 UT	1.3 UT
4,4'-DDT (p,p'-DDT)	0.62 UT	0.65 UT	0.15 UJT	0.95 UT	**5.7 T**	1 UT	**6.1 T**
alpha-Hexachlorocyclohexane (BHC)	0.31 UT	0.32 UT	0.079 UT	0.48 UT	0.48 UT	0.52 UT	0.66 UT
beta-Hexachlorocyclohexane (BHC)	0.31 UT	0.32 UT	0.079 UT	0.48 UT	0.48 UT	0.52 UT	0.66 UT
delta-Hexachlorocyclohexane (BHC)	0.31 UT	0.32 UT	0.079 UJT	0.48 UJT	0.48 UT	0.52 UT	0.66 UT
Endrin ketone	0.62 UT	0.65 UT	0.15 UJT	0.95 UT	0.97 UT	1 UT	1.3 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.62 UT	0.65 UT	0.15 UJT	0.95 UT	0.97 UT	1 UT	**2.5 T**
LWG RA Sum DDE (Calculated U = 1/2)	0.62 UT	0.65 UT	0.15 UT	0.95 UT	0.97 UT	1 UT	1.3 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.62 UT	0.65 UT	0.15 UJT	0.95 UT	**6.2 T**	1 UT	**6.8 T**
LWG RA Total DDx (Calculated U = 1/2)	0.62 UT	0.65 UT	0.15 UJT	0.95 UT	**8.1 T**	1 UT	**11 T**

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	DGS-25	DGS-26	DGS-26SC	DGS-28SC	DGS-30	DGS-31	DGS-32SC	DGS-33
Sample Name:	DGS-25SG-110419	DGS-26SG-110419	DGS-26SC-0001-101011	DGS-28SC-0001-101007	DGS-30SG-110419	DGS-31SG-110419	DGS-32SC-0001-101011	DGS-33SG-110419
Sample Date:	4/19/2011	4/19/2011	10/11/2010	10/7/2010	4/19/2011	4/19/2011	10/11/2010	4/19/2011
Depth interval:	0 - 25 cm	0 - 26.5 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 25 cm	0 - 27 cm	0 - 30.48 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)								
Zinc	64	89	81	64	69	128	128	75
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	24	1400	49000	60 U	77	1100	13000	45
Benzo(a)pyrene	19	1900	58000	60 U	19 U	1300	12000	56
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	32	1900	61000	60	94	1500	14000	65
Dibenzo(a,h)anthracene	18 U	220	5700	60 U	19 U	160	400	18 U
Indeno(1,2,3-c,d)pyrene	13 J	1000	28000	60 U	19 U	640	5400	37
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	35 JT	2600 T	78000 T	73 T	29 JT	1800 T	16000 T	82 T
LWG RA Total LPAH (Calculated U = 1/2)	1100 T	26000 T	1500000 T	60 UT	190 JT	46000 T	100000 T	250 JT
LWG RA Total PAH (Calculated U = 1/2)	1800 JT	47000 T	2200000 T	980 T	3500 JT	62000 T	250000 T	910 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	1.5 T	80 T	1400 T	3 UT	1.6 T	66 T	600 T	3 T
Benzo(a)pyrene	1.2 T	110 T	1700 T	3 UT	0.41 UT	78 T	560 T	3.7 T
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	2 T	110 T	1700 T	3 T	2 T	90 T	650 T	4.3 T
Dibenzo(a,h)anthracene	1.1 UT	13 T	160 T	3 UT	0.41 UT	9.6 T	20 T	1.2 UT
Indeno(1,2,3-c,d)pyrene	0.8 JT	60 T	800 T	3 UT	0.41 UT	38 T	250 T	2.5 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2.2 JT	150 T	2300 T	3.6 T	0.62 JT	110 T	730 T	5.4 T
LWG RA Total LPAH (Calculated U = 1/2)	68 T	1500 T	43000 T	3 UT	4 JT	2700 T	4700 T	17 JT
LWG RA Total PAH (Calculated U = 1/2)	110 JT	2700 T	64000 T	48 T	75 JT	3700 T	12000 T	62 JT
Semivolatile Organics (µg/kg)								
Carbazole	18 U	110	14000	60 U	19 U	1400	240	18 U
Semivolatile Organics (mg/kg-OC)								
Carbazole	1.1 UT	6.3 T	400 T	3 UT	0.41 UT	84 T	11 T	1.2 UT
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	19 UT	18 UT	56 UJT	32 UT	18 UT	130 T	250 JT	19 UT
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	1.2 UT	1 UT	1.6 UJT	1.5 UT	0.39 UT	8 T	11 JT	1.3 UT
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	DGS-25	DGS-26	DGS-26SC	DGS-28SC	DGS-30	DGS-31	DGS-32SC	DGS-33
Sample Name:	DGS-25SG-110419	DGS-26SG-110419	DGS-26SC-0001-101011	DGS-28SC-0001-101007	DGS-30SG-110419	DGS-31SG-110419	DGS-32SC-0001-101011	DGS-33SG-110419
Sample Date:	4/19/2011	4/19/2011	10/11/2010	10/7/2010	4/19/2011	4/19/2011	10/11/2010	4/19/2011
Depth interval:	0 - 25 cm	0 - 26.5 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 25 cm	0 - 27 cm	0 - 30.48 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	1.9 U	18 U	29 U	3.2 U	**3.9**	19 U	**24 J**	**1.9**
4,4'-DDE (p,p'-DDE)	1.9 U	18 U	29 U	3.2 U	1.9 U	19 U	16 U	1.9 U
4,4'-DDT (p,p'-DDT)	1.9 U	18 U	29 U	**8.9**	**12**	19 U	**18**	**2**
alpha-Hexachlorocyclohexane (BHC)	0.94 U	9.2 U	15 U	1.6 U	0.94 U	9.4 U	8.2 U	0.95 U
beta-Hexachlorocyclohexane (BHC)	0.94 U	9.2 U	15 U	1.6 U	0.94 U	9.4 U	8.2 U	0.95 U
delta-Hexachlorocyclohexane (BHC)	0.94 UJ	9.2 UJ	15 U	1.6 U	0.94 UJ	9.4 UJ	8.2 U	0.95 UJ
Endrin ketone	1.9 U	18 U	29 U	3.2 U	1.9 U	19 U	16 U	1.9 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.94 U	9.2 U	15 U	1.6 U	0.94 U	9.4 U	8.2 U	0.95 U
LWG RA Sum DDD (Calculated U = 1/2)	1.9 UT	18 UT	29 UT	3.2 UT	**6 T**	19 UT	**32 JT**	**2.9 T**
LWG RA Sum DDE (Calculated U = 1/2)	1.9 UT	18 UT	29 UT	3.2 UT	1.9 UT	19 UT	16 UT	1.9 UT
LWG RA Sum DDT (Calculated U = 1/2)	**8.4 T**	18 UT	29 UT	**11 T**	**17 T**	19 UT	**26 T**	**4.9 T**
LWG RA Total DDx (Calculated U = 1/2)	**12 T**	18 UT	29 UT	**17 T**	**25 T**	19 UT	**74 JT**	**9.7 T**
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	0.12 UT	1 UT	0.83 UT	0.15 UT	**0.084 T**	1.1 UT	**1.1 JT**	**0.13 T**
4,4'-DDE (p,p'-DDE)	0.12 UT	1 UT	0.83 UT	0.15 UT	0.041 UT	1.1 UT	0.74 UT	0.13 UT
4,4'-DDT (p,p'-DDT)	0.12 UT	1 UT	0.83 UT	**0.42 T**	**0.26 T**	1.1 UT	**0.83 T**	**0.13 T**
alpha-Hexachlorocyclohexane (BHC)	0.058 UT	0.53 UT	0.43 UT	0.076 UT	0.02 UT	0.56 UT	0.38 UT	0.063 UT
beta-Hexachlorocyclohexane (BHC)	0.058 UT	0.53 UT	0.43 UT	0.076 UT	0.02 UT	0.56 UT	0.38 UT	0.063 UT
delta-Hexachlorocyclohexane (BHC)	0.058 UJT	0.53 UJT	0.43 UT	0.076 UT	0.02 UJT	0.56 UJT	0.38 UT	0.063 UJT
Endrin ketone	0.12 UT	1 UT	0.83 UT	0.15 UT	0.041 UT	1.1 UT	0.74 UT	0.13 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.12 UT	1 UT	0.83 UT	0.15 UT	**0.13 T**	1.1 UT	**1.5 JT**	**0.2 T**
LWG RA Sum DDE (Calculated U = 1/2)	0.12 UT	1 UT	0.83 UT	0.15 UT	0.041 UT	1.1 UT	0.74 UT	0.13 UT
LWG RA Sum DDT (Calculated U = 1/2)	**0.52 T**	1 UT	0.83 UT	**0.5 T**	**0.36 T**	1.1 UT	**1.2 T**	**0.32 T**
LWG RA Total DDx (Calculated U = 1/2)	**0.76 T**	1 UT	0.83 UT	**0.8 T**	**0.53 T**	1.1 UT	**3.4 JT**	**0.65 T**

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	DGS-34	DGS-35	DGS-36SC	DGS-37SC	DGS-46	DGS-47	DGS-47	DGS-48
Sample Name:	DGS-34SG-110419	DGS-35SG-110419	DGS-36SC-0001-101012	DGS-37SC-0001-101011	DGS-46SG-110420	DGS-47SG-110420	DGS-97SG-110420	DGS-48SG-110420
Sample Date:	4/19/2011	4/19/2011	10/12/2010	10/11/2010	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Depth interval:	0 - 26 cm	0 - 26.5 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 23.8 cm	0 - 24.5 cm	0 - 24.5 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)								
Zinc	166	174	146	187	--	--	--	59
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	4300	2500	12000	1800	--	--	--	410
Benzo(a)pyrene	1600	2600	14000	1700	--	--	--	580
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	4400	3500	16000	2400	--	--	--	530
Dibenzo(a,h)anthracene	160 J	340	480	200 U	--	--	--	66
Indeno(1,2,3-c,d)pyrene	480	1300	8700	920	--	--	--	290
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2500 JT	3700 T	19000 T	2300 T	--	--	--	780 T
LWG RA Total LPAH (Calculated U = 1/2)	130000 JT	17000 T	99000 T	14000 T	--	--	--	850 JT
LWG RA Total PAH (Calculated U = 1/2)	190000 JT	50000 T	270000 T	37000 T	--	--	--	6600 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	200 T	130 T	290 T	520 T	--	--	--	120 T
Benzo(a)pyrene	74 T	140 T	340 T	490 T	--	--	--	160 T
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	200 T	180 T	380 T	690 T	--	--	--	150 T
Dibenzo(a,h)anthracene	7.4 JT	18 T	12 T	60 UT	--	--	--	19 T
Indeno(1,2,3-c,d)pyrene	22 T	68 T	210 T	260 T	--	--	--	82 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	110 JT	200 T	450 T	670 T	--	--	--	220 T
LWG RA Total LPAH (Calculated U = 1/2)	6000 JT	880 T	2400 T	3900 T	--	--	--	240 JT
LWG RA Total PAH (Calculated U = 1/2)	8900 JT	2600 T	6600 T	11000 T	--	--	--	1900 JT
Semivolatile Organics (µg/kg)								
Carbazole	1400	190	1300	200 U	--	--	--	19 U
Semivolatile Organics (mg/kg-OC)								
Carbazole	65 T	10 T	31 T	60 UT	--	--	--	5.4 UT
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	200 T	120 T	130 UJT	190 UJT	--	--	--	3.6 UT
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	9.5 T	6.4 T	3.1 UJT	55 UJT	--	--	--	1 UT
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	DGS-34	DGS-35	DGS-36SC	DGS-37SC	DGS-46	DGS-47	DGS-47	DGS-48
Sample Name:	DGS-34SG-110419	DGS-35SG-110419	DGS-36SC-0001-101012	DGS-37SC-0001-101011	DGS-46SG-110420	DGS-47SG-110420	DGS-97SG-110420	DGS-48SG-110420
Sample Date:	4/19/2011	4/19/2011	10/12/2010	10/11/2010	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Depth interval:	0 - 26 cm	0 - 26.5 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 23.8 cm	0 - 24.5 cm	0 - 24.5 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	19 U	**120**	**88**	**92**	--	--	--	1.8 U
4,4'-DDE (p,p'-DDE)	19 U	**26**	**18 J**	**21**	--	--	--	1.8 U
4,4'-DDT (p,p'-DDT)	19 U	**25**	16 U	**290**	--	--	--	1.8 U
alpha-Hexachlorocyclohexane (BHC)	9.5 U	9.8 U	7.8 U	1.6 U	--	--	--	0.9 U
beta-Hexachlorocyclohexane (BHC)	9.5 U	9.8 U	170 U	13 U	--	--	--	0.9 U
delta-Hexachlorocyclohexane (BHC)	9.5 UJ	9.8 UJ	7.8 U	1.6 U	--	--	--	0.9 UJ
Endrin ketone	19 U	20 U	16 U	3.2 U	--	--	--	1.8 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	9.5 U	9.8 U	7.8 U	8.9 U	--	--	--	0.9 U
LWG RA Sum DDD (Calculated U = 1/2)	19 UT	**160 T**	**96 T**	**110 T**	--	--	--	1.8 UT
LWG RA Sum DDE (Calculated U = 1/2)	19 UT	**52 T**	**26 JT**	**28 T**	--	--	--	1.8 UT
LWG RA Sum DDT (Calculated U = 1/2)	19 UT	**35 T**	16 UT	**290 T**	--	--	--	1.8 UT
LWG RA Total DDx (Calculated U = 1/2)	19 UT	**240 T**	**140 JT**	**430 T**	--	--	--	1.8 UT
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	0.88 UT	**6.3 T**	**2.1 T**	**26 T**	--	--	--	0.51 UT
4,4'-DDE (p,p'-DDE)	0.88 UT	**1.4 T**	**0.43 JT**	**6 T**	--	--	--	0.51 UT
4,4'-DDT (p,p'-DDT)	0.88 UT	**1.3 T**	0.38 UT	**83 T**	--	--	--	0.51 UT
alpha-Hexachlorocyclohexane (BHC)	0.44 UT	0.52 UT	0.19 UT	0.46 UT	--	--	--	0.25 UT
beta-Hexachlorocyclohexane (BHC)	0.44 UT	0.52 UT	4.1 UT	3.7 UT	--	--	--	0.25 UT
delta-Hexachlorocyclohexane (BHC)	0.44 UJT	0.52 UJT	0.19 UT	0.46 UT	--	--	--	0.25 UJT
Endrin ketone	0.88 UT	1 UT	0.38 UT	0.92 UT	--	--	--	0.51 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.88 UT	**8.3 T**	**2.3 T**	**32 T**	--	--	--	0.51 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.88 UT	**2.8 T**	**0.62 JT**	**7.9 T**	--	--	--	0.51 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.88 UT	**1.8 T**	0.38 UT	**83 T**	--	--	--	0.51 UT
LWG RA Total DDx (Calculated U = 1/2)	0.88 UT	**13 T**	**3.3 JT**	**120 T**	--	--	--	0.51 UT

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	DGS-48	DGS-49	DGS-50	DGS-51	DGS-52	DGS-53	GP-25	GP-26	GP-27
Sample Name:	DGS-98SG-110420	DGS-49SG-110420	DGS-50SG-110420	DGS-51SG-110421	DGS-52SG-110421	DGS-53SG-110420	GP25-S-1	GP26-S-1	GP27-S-1
Sample Date:	4/20/2011	4/20/2011	4/20/2011	4/21/2011	4/21/2011	4/20/2011	9/30/2004	10/5/2004	10/8/2004
Depth interval:	0 - 25 cm	0 - 24 cm	0 - 24.5 cm	0 - 25 cm	0 - 25 cm	0 - 24 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)									
Zinc	56	54	--	--	--	118	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)									
Benzo(a)anthracene	4600	530	--	--	--	770	393	55600	5680
Benzo(a)pyrene	4800	720	--	--	--	440	740	59700	6810
Benzo(b)fluoranthene	--	--	--	--	--	--	649	48400	5640
Benzo(k)fluoranthene	--	--	--	--	--	--	214	13600	1870
Chrysene	5800	540	--	--	--	1000	519	49700	5420
Dibenzo(a,h)anthracene	760	87	--	--	--	53	101	5500	710
Indeno(1,2,3-c,d)pyrene	2500	410	--	--	--	210	462	24400	2910
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	6800 T	980 T	--	--	--	670 T	990 T	78000 T	9000 T
LWG RA Total LPAH (Calculated U = 1/2)	17000 T	510 JT	--	--	--	51000 JT	543 T	700000 T	34900 T
LWG RA Total PAH (Calculated U = 1/2)	76000 JT	8400 JT	--	--	--	66000 JT	5900 T	1400000 T	100000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)									
Benzo(a)anthracene	1200 T	60 T	--	--	--	45 T	39.3 T	5560 T	568 T
Benzo(a)pyrene	1200 T	81 T	--	--	--	26 T	74 T	5970 T	681 T
Benzo(b)fluoranthene	--	--	--	--	--	--	64.9 T	4840 T	564 T
Benzo(k)fluoranthene	--	--	--	--	--	--	21.4 T	1360 T	187 T
Chrysene	1500 T	61 T	--	--	--	60 T	51.9 T	4970 T	542 T
Dibenzo(a,h)anthracene	190 T	9.8 T	--	--	--	3.1 T	10.1 T	550 T	71 T
Indeno(1,2,3-c,d)pyrene	640 T	46 T	--	--	--	12 T	46.2 T	2440 T	291 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1700 T	110 T	--	--	--	39 T	99 T	7800 T	900 T
LWG RA Total LPAH (Calculated U = 1/2)	4300 T	55 JT	--	--	--	3000 JT	54.3 T	70000 T	3490 T
LWG RA Total PAH (Calculated U = 1/2)	19000 JT	950 JT	--	--	--	3900 JT	590 T	140000 T	10000 T
Semivolatile Organics (µg/kg)									
Carbazole	47 J	19 U	--	--	--	140 J	87.4 U	861	145 U
Semivolatile Organics (mg/kg-OC)									
Carbazole	12 JT	2.1 UT	--	--	--	8.2 JT	8.74 UT	86.1 T	14.5 UT
PCB Aroclors (µg/kg)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	20 UT	3.9 UT	--	--	--	19 UT	--	--	--
PCB Aroclors (mg/kg-OC)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	5 UT	0.44 UT	--	--	--	1.1 UT	--	--	--
PCB Congeners (µg/kg)									
PCB-077	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	DGS-48	DGS-49	DGS-50	DGS-51	DGS-52	DGS-53	GP-25	GP-26	GP-27
Sample Name:	DGS-98SG-110420	DGS-49SG-110420	DGS-50SG-110420	DGS-51SG-110421	DGS-52SG-110421	DGS-53SG-110420	GP25-S-1	GP26-S-1	GP27-S-1
Sample Date:	4/20/2011	4/20/2011	4/20/2011	4/21/2011	4/21/2011	4/20/2011	9/30/2004	10/5/2004	10/8/2004
Depth interval:	0 - 25 cm	0 - 24 cm	0 - 24.5 cm	0 - 25 cm	0 - 25 cm	0 - 24 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)									
PCB-077	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)									
4,4'-DDD (p,p'-DDD)	1.9 UJ	1.9 U	--	--	--	1.9 U	--	--	--
4,4'-DDE (p,p'-DDE)	1.9 U	1.9 U	--	--	--	**7.8**	--	--	--
4,4'-DDT (p,p'-DDT)	1.9 UJ	1.9 U	--	--	--	1.9 U	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.95 U	0.95 U	--	--	--	0.96 U	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.95 U	0.95 U	--	--	--	0.96 U	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.95 UJ	0.95 UJ	--	--	--	0.96 UJ	--	--	--
Endrin ketone	1.9 UJ	1.9 U	--	--	--	1.9 U	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.95 U	0.95 U	--	--	--	**1.4**	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	1.9 UJT	1.9 UT	--	--	--	3.1 UT	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	1.9 UJT	1.9 UT	--	--	--	**9 T**	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	1.9 UJT	1.9 UT	--	--	--	1.9 UT	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	1.9 UJT	1.9 UT	--	--	--	**13 T**	--	--	--
Pesticides (mg/kg-OC)									
4,4'-DDD (p,p'-DDD)	0.48 UJT	0.21 UT	--	--	--	0.11 UT	--	--	--
4,4'-DDE (p,p'-DDE)	0.48 UT	0.21 UT	--	--	--	**0.46 T**	--	--	--
4,4'-DDT (p,p'-DDT)	0.48 UJT	0.21 UT	--	--	--	0.11 UT	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.24 UT	0.11 UT	--	--	--	0.056 UT	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.24 UT	0.11 UT	--	--	--	0.056 UT	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.24 UJT	0.11 UJT	--	--	--	0.056 UJT	--	--	--
Endrin ketone	0.48 UJT	0.21 UT	--	--	--	0.11 UT	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	0.48 UJT	0.21 UT	--	--	--	0.18 UT	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	0.48 UJT	0.21 UT	--	--	--	**0.53 T**	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	0.48 UJT	0.21 UT	--	--	--	0.11 UT	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	0.48 UJT	0.21 UT	--	--	--	**0.79 T**	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	GP-28	GP-29	GP-30	GP-31	GP-32	GS-04-A-PG	GS-07-B-PG	GS-07-D-PG	LW2-C255
Sample Name:	GP28-S-1	GP29-S-1	GP30-S-1	GP31-S-1	GP32-S-1	LWG2-PG-GS4A	LWG2-PG-GS7B	LWG2-PG-GS7D	LW2-C255-A
Sample Date:	10/13/2004	10/20/2004	10/22/2004	10/26/2004	10/28/2004	12/1/2005	12/1/2005	12/1/2005	10/27/2004
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 26 cm	0 - 24 cm	0 - 30 cm	0 - 30 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)									
Zinc	--	--	--	--	--	113	97.4	126	--
Polycyclic Aromatic Hydrocarbons (µg/kg)									
Benzo(a)anthracene	35.8	27.9	68.9	293	85.4	52000	28000	8600	--
Benzo(a)pyrene	92.2	43.5	92.9	416	107	85000	43000	14000	--
Benzo(b)fluoranthene	75.1	41.8	86.5	355	115	48000	25000	8400	--
Benzo(k)fluoranthene	22.7	17.4 U	24	14.8 U	39.7	46000	22000	7200	--
Chrysene	33.2	26.1	62.5	366	78	59000	32000	10000	--
Dibenzo(a,h)anthracene	12.2	17.4 U	16 U	14.8 U	16.2	6100	3000	1100	--
Indeno(1,2,3-c,d)pyrene	50.7	26.1	44.9	222	61.8	63000	31000	11000	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	121 T	61.9 T	120 T	511 T	150 T	110000 T	55000 T	18000 T	--
LWG RA Total LPAH (Calculated U = 1/2)	120 T	2500 T	300 T	4950 T	10200 T	350000 T	91000 T	22000 T	--
LWG RA Total PAH (Calculated U = 1/2)	840 T	2800 T	1100 T	8430 T	11400 T	1100000 T	500000 T	130000 T	--
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)									
Benzo(a)anthracene	3.58 T	2.79 T	6.89 T	29.3 T	8.54 T	910 T	2100 T	210 T	--
Benzo(a)pyrene	9.22 T	4.35 T	9.29 T	41.6 T	10.7 T	1500 T	3300 T	340 T	--
Benzo(b)fluoranthene	7.51 T	4.18 T	8.65 T	35.5 T	11.5 T	840 T	1900 T	200 T	--
Benzo(k)fluoranthene	2.27 T	1.74 UT	2.4 T	1.48 UT	3.97 T	810 T	1700 T	170 T	--
Chrysene	3.32 T	2.61 T	6.25 T	36.6 T	7.8 T	1000 T	2400 T	200 T	--
Dibenzo(a,h)anthracene	1.22 T	1.74 UT	1.6 UT	1.48 UT	1.62 T	110 T	200 T	26 T	--
Indeno(1,2,3-c,d)pyrene	5.07 T	2.61 T	4.49 T	22.2 T	6.18 T	1100 T	2300 T	260 T	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	12.1 T	6.19 T	12 T	51.1 T	15 T	1900 T	4100 T	430 T	--
LWG RA Total LPAH (Calculated U = 1/2)	12 T	250 T	30 T	495 T	1020 T	6100 T	7000 T	530 T	--
LWG RA Total PAH (Calculated U = 1/2)	84 T	280 T	110 T	843 T	1140 T	20000 T	38000 T	3100 T	--
Semivolatile Organics (µg/kg)									
Carbazole	87.4 U	647	160 U	733	147 U	650	110 U	290 U	--
Semivolatile Organics (mg/kg-OC)									
Carbazole	8.74 UT	64.7 T	16 UT	73.3 T	14.7 UT	11 T	8.3 UT	7 UT	--
PCB Aroclors (µg/kg)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)									
PCB-077	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	GP-28	GP-29	GP-30	GP-31	GP-32	GS-04-A-PG	GS-07-B-PG	GS-07-D-PG	LW2-C255
Sample Name:	GP28-S-1	GP29-S-1	GP30-S-1	GP31-S-1	GP32-S-1	LWG2-PG-GS4A	LWG2-PG-GS7B	LWG2-PG-GS7D	LW2-C255-A
Sample Date:	10/13/2004	10/20/2004	10/22/2004	10/26/2004	10/28/2004	12/1/2005	12/1/2005	12/1/2005	10/27/2004
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 26 cm	0 - 24 cm	0 - 30 cm	0 - 30 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)									
PCB-077	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	LW2-C269	LW2-C299	LW2-C300-2	LW2-C301	LW2-C312	LW2-C525	LW2-C527	LW2-C528	LW2-G248
Sample Name:	LW2-C269-A	LW2-C299-A	LW2-C300-A	LW2-C301-A	LW2-C312-A	LW2-C525-A	LW2-C527-A	LW2-C528-A	LW2-G248
Sample Date:	10/28/2004	9/22/2004	10/27/2004	11/8/2004	10/19/2005	10/26/2005	10/26/2005	10/26/2005	7/30/2004
Depth interval:	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 26 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)									
Zinc	--	--	--	126 T	194	172	120	111	61.1
Polycyclic Aromatic Hydrocarbons (µg/kg)									
Benzo(a)anthracene	--	--	--	--	1800	62000	2800	630	43
Benzo(a)pyrene	--	--	--	--	1900	85000	3900	830	80
Benzo(b)fluoranthene	--	--	--	--	1100	55000	2900	630	71
Benzo(k)fluoranthene	--	--	--	--	1300	51000	2300	490	22
Chrysene	--	--	--	--	2200	67000	3500	850	67
Dibenzo(a,h)anthracene	--	--	--	--	140	7300	390	88	7.4
Indeno(1,2,3-c,d)pyrene	--	--	--	--	1400	59000	3300	710	65
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	--	--	--	2500 T	110000 T	5200 T	1100 T	110 T
LWG RA Total LPAH (Calculated U = 1/2)	--	--	--	--	19000 T	120000 T	5500 T	1100 T	94 T
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	--	44000 T	860000 T	41000 T	9000 T	690 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)									
Benzo(a)anthracene	--	--	--	--	91 T	1200 T	86 T	24 T	10 T
Benzo(a)pyrene	--	--	--	--	96 T	1700 T	120 T	32 T	20 T
Benzo(b)fluoranthene	--	--	--	--	56 T	1100 T	89 T	24 T	17 T
Benzo(k)fluoranthene	--	--	--	--	66 T	1000 T	70 T	19 T	5.4 T
Chrysene	--	--	--	--	110 T	1300 T	110 T	33 T	16 T
Dibenzo(a,h)anthracene	--	--	--	--	7.1 T	140 T	12 T	3.4 T	1.8 T
Indeno(1,2,3-c,d)pyrene	--	--	--	--	71 T	1200 T	100 T	27 T	16 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	--	--	--	130 T	2200 T	160 T	43 T	26 T
LWG RA Total LPAH (Calculated U = 1/2)	--	--	--	--	980 T	2500 T	170 T	44 T	23 T
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	--	2300 T	17000 T	1200 T	350 T	170 T
Semivolatile Organics (µg/kg)									
Carbazole	--	--	--	--	51	14000	240	37	3.6 J
Semivolatile Organics (mg/kg-OC)									
Carbazole	--	--	--	--	2.6 T	280 T	7.3 T	1.4 T	0.88 JT
PCB Aroclors (µg/kg)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	65 UT	77 UT	310 JT	--	--	250 JT	140 UT	49 T	4.5 UT
PCB Aroclors (mg/kg-OC)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	2.1 UT	3.3 UT	13 JT	--	--	4.9 JT	4.3 UT	1.9 T	1.1 UT
PCB Congeners (µg/kg)									
PCB-077	--	--	--	--	0.322	--	--	--	--
PCB-081	--	--	--	--	0.0233	--	--	--	--
PCB-105	--	--	--	--	1.27	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	0.0267	--	--	--	--
PCB-156	--	--	--	--	0.528	--	--	--	--
PCB-157	--	--	--	--	0.096	--	--	--	--
PCB-169	--	--	--	--	0.00167 J	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	150 JT	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	LW2-C269	LW2-C299	LW2-C300-2	LW2-C301	LW2-C312	LW2-C525	LW2-C527	LW2-C528	LW2-G248
Sample Name:	LW2-C269-A	LW2-C299-A	LW2-C300-A	LW2-C301-A	LW2-C312-A	LW2-C525-A	LW2-C527-A	LW2-C528-A	LW2-G248
Sample Date:	10/28/2004	9/22/2004	10/27/2004	11/8/2004	10/19/2005	10/26/2005	10/26/2005	10/26/2005	7/30/2004
Depth interval:	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 30 cm	0 - 26 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	**0.0028 JT**	--	--	--	--
PCB Congeners (mg/kg-OC)									
PCB-077	--	--	--	--	**0.0163 T**	--	--	--	--
PCB-081	--	--	--	--	**0.00118 T**	--	--	--	--
PCB-105	--	--	--	--	**0.0645 T**	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	**0.00136 T**	--	--	--	--
PCB-156	--	--	--	--	**0.0268 T**	--	--	--	--
PCB-157	--	--	--	--	**0.0049 T**	--	--	--	--
PCB-169	--	--	--	--	**8.48E-05 JT**	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	**7.4 JT**	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	**0.00014 JT**	--	--	--	--
Pesticides (µg/kg)									
4,4'-DDD (p,p'-DDD)	--	**15 NJ**	**2.3 J**	--	**14**	**40 NJ**	**20 J**	**6.1**	**0.481**
4,4'-DDE (p,p'-DDE)	--	**6.2**	**4.4**	--	**5.8 J**	**5**	**9 NJ**	**2.4**	**0.414**
4,4'-DDT (p,p'-DDT)	--	**10 J**	**3.9**	--	**240 J**	**21**	**140**	**6.6**	**0.222**
alpha-Hexachlorocyclohexane (BHC)	--	1.5 U	0.17 U	--	0.16 U	5.1 U	2 U	0.19 U	**0.152 J**
beta-Hexachlorocyclohexane (BHC)	--	2.2 U	0.65 U	--	0.24 U	3 U	2.9 U	0.47 U	**0.099 J**
delta-Hexachlorocyclohexane (BHC)	--	1.8 U	0.099 U	--	0.16 U	5.7 U	2 U	0.2 U	0.0701 U
Endrin ketone	--	**9.9 NJ**	1.1 U	--	**2.1 NJ**	**28**	1.4 U	**0.6 NJ**	0.0288 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	3 U	0.16 U	--	1.1 U	12 U	3.8 U	0.44 U	0.0748 U
LWG RA Sum DDD (Calculated U = 1/2)	--	**30 NJT**	**7.5 JNT**	--	**24 JT**	**55 NJT**	**27 JT**	**9.2 T**	**0.743 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	**9.9 T**	**4.6 T**	--	**6 JT**	**7.5 T**	**11 NJT**	**3.1 JT**	**0.431 T**
LWG RA Sum DDT (Calculated U = 1/2)	--	**20 JT**	**7.4 JT**	--	**240 JT**	**26 T**	**190 JT**	**7 T**	**0.244 T**
LWG RA Total DDx (Calculated U = 1/2)	--	**60 JNT**	**19 JNT**	--	**270 JT**	**88 NJT**	**230 JNT**	**19 JT**	**1.42 JT**
Pesticides (mg/kg-OC)									
4,4'-DDD (p,p'-DDD)	--	**0.64 NJT**	**0.096 JT**	--	**0.71 T**	**0.8 NJT**	**0.6 JT**	**0.23 T**	**0.12 T**
4,4'-DDE (p,p'-DDE)	--	**0.26 T**	**0.18 T**	--	**0.29 JT**	**0.1 T**	**0.3 NJT**	**0.092 T**	**0.1 T**
4,4'-DDT (p,p'-DDT)	--	**0.4 JT**	**0.16 T**	--	**12 JT**	**0.41 T**	**4.3 T**	**0.25 T**	**0.054 T**
alpha-Hexachlorocyclohexane (BHC)	--	0.064 UT	0.0071 UT	--	0.0081 UT	0.1 UT	0.06 UT	0.0073 UT	**0.037 JT**
beta-Hexachlorocyclohexane (BHC)	--	0.094 UT	0.027 UT	--	0.012 UT	0.06 UT	0.089 UT	0.018 UT	**0.024 JT**
delta-Hexachlorocyclohexane (BHC)	--	0.077 UT	0.0041 UT	--	0.0081 UT	0.11 UT	0.06 UT	0.008 UT	0.017 UT
Endrin ketone	--	**0.42 NJT**	0.046 UT	--	**0.11 NJT**	**0.55 T**	0.043 UT	**0.02 NJT**	0.007 UT
LWG RA Sum DDD (Calculated U = 1/2)	--	**1.3 NJT**	**0.32 JNT**	--	**1.2 JT**	**1.1 NJT**	**0.82 JT**	**0.35 T**	**0.18 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	**0.42 T**	**0.19 T**	--	**0.3 JT**	**0.15 T**	**0.37 NJT**	**0.12 JT**	**0.1 T**
LWG RA Sum DDT (Calculated U = 1/2)	--	**0.81 JT**	**0.31 JT**	--	**12 JT**	**0.51 T**	**5.9 JT**	**0.26 T**	**0.06 T**
LWG RA Total DDx (Calculated U = 1/2)	--	**2.5 JNT**	**0.81 JNT**	--	**14 JT**	**1.8 NJT**	**7.1 JNT**	**0.73 JT**	**0.35 JT**

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	LW2-G252	LW2-G253	LW2-G256	LW2-G258	LW2-G259	LW2-G261	LW2-G263	LW2-G264	LW2-G265
Sample Name:	LW2-G252	LW2-G253	LW2-G256	LW2-G258	LW2-G259	LW2-G261	LW2-G263	LW2-G264	LW2-G265
Sample Date:	8/12/2004	8/13/2004	8/19/2004	8/19/2004	8/12/2004	8/19/2004	8/30/2004	8/30/2004	8/19/2004
Depth interval:	0 - 27 cm	0 - 27 cm	0 - 27 cm	0 - 27 cm	0 - 28 cm	0 - 25 cm	0 - 25 cm	0 - 30 cm	0 - 24 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)									
Zinc	79.9	58	74.2 T	53.7	208	44.8	111 T	160	60.7
Polycyclic Aromatic Hydrocarbons (µg/kg)									
Benzo(a)anthracene	240	8000	150	980	14000	25	3100	120000	1400
Benzo(a)pyrene	420	9900	220	1200	21000	32	4700	140000	1700
Benzo(b)fluoranthene	330	8000	190	1000	18000	29	4100	120000	1400
Benzo(k)fluoranthene	100	2800	58	320	5900	9.7	1300	37000	510
Chrysene	290	9800	170	1300	17000	33	3700	130000	1600
Dibenzo(a,h)anthracene	42	900	24	120	2400	3.2	530	14000	230
Indeno(1,2,3-c,d)pyrene	310	6900	180	830	17000	22	3800	88000	1200
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	550 T	13000 T	300 T	1600 T	28000 T	43 T	6300 T	190000 T	2300 T
LWG RA Total LPAH (Calculated U = 1/2)	340 T	4200 T	1800 T	5700 T	28000 T	150 T	5000 T	400000 T	1300 T
LWG RA Total PAH (Calculated U = 1/2)	3300 T	97000 T	4600 T	19000 T	200000 T	480 T	44000 T	1700000 T	20000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)									
Benzo(a)anthracene	34 T	3000 T	22 T	360 T	440 T	13 T	230 T	1200 T	440 T
Benzo(a)pyrene	59 T	3800 T	32 T	440 T	660 T	16 T	360 T	1400 T	530 T
Benzo(b)fluoranthene	46 T	3000 T	28 T	400 T	570 T	15 T	310 T	1200 T	440 T
Benzo(k)fluoranthene	10 T	1100 T	8.5 T	120 T	190 T	4.9 T	98 T	370 T	160 T
Chrysene	41 T	3800 T	25 T	480 T	540 T	16 T	280 T	1300 T	500 T
Dibenzo(a,h)anthracene	5.9 T	300 T	3.5 T	44 T	76 T	1.6 T	40 T	140 T	72 T
Indeno(1,2,3-c,d)pyrene	44 T	2700 T	26 T	310 T	540 T	11 T	290 T	870 T	380 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	77 T	5000 T	43 T	590 T	890 T	22 T	480 T	1900 T	730 T
LWG RA Total LPAH (Calculated U = 1/2)	47 T	1600 T	260 T	2100 T	860 T	73 T	380 T	4000 T	400 T
LWG RA Total PAH (Calculated U = 1/2)	460 T	37000 T	670 T	7100 T	6200 T	240 T	3300 T	17000 T	6100 T
Semivolatile Organics (µg/kg)									
Carbazole	11 U	35 U	30 J	350	1500	5.6 J	220	30000	85 U
Semivolatile Organics (mg/kg-OC)									
Carbazole	1.5 UT	13 UT	4 JT	130 T	47 T	2.8 JT	17 T	300 T	27 UT
PCB Aroclors (µg/kg)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	10 JT	2.2 UT	--	2.5 UJT	3.8 UJT	2.5 UJT	3.17 UJT	4.64 UJT	--
PCB Aroclors (mg/kg-OC)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	1.5 JT	0.85 UT	--	0.93 UJT	0.12 UJT	1.3 UJT	0.24 UJT	0.0459 UJT	--
PCB Congeners (µg/kg)									
PCB-077	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	LW2-G252	LW2-G253	LW2-G256	LW2-G258	LW2-G259	LW2-G261	LW2-G263	LW2-G264	LW2-G265
Sample Name:	LW2-G252	LW2-G253	LW2-G256	LW2-G258	LW2-G259	LW2-G261	LW2-G263	LW2-G264	LW2-G265
Sample Date:	8/12/2004	8/13/2004	8/19/2004	8/19/2004	8/12/2004	8/19/2004	8/30/2004	8/30/2004	8/19/2004
Depth interval:	0 - 27 cm	0 - 27 cm	0 - 27 cm	0 - 27 cm	0 - 28 cm	0 - 25 cm	0 - 25 cm	0 - 30 cm	0 - 24 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)									
PCB-077	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)									
4,4'-DDD (p,p'-DDD)	**2.24 NJ**	**4.69**	--	**2.07**	**73.4 J**	0.0467 U	**8.57 J**	**51 J**	--
4,4'-DDE (p,p'-DDE)	**0.779 NJ**	**0.586 J**	--	0.0443 U	**4.8 NJ**	0.0438 U	**2.63 J**	**11.6 NJ**	--
4,4'-DDT (p,p'-DDT)	**0.275 J**	0.276 U	--	**2.23 J**	**1.87 J**	0.054 U	**17.5 NJ**	**19.9 NJ**	--
alpha-Hexachlorocyclohexane (BHC)	**1.42 J**	0.166 UJ	--	**0.253 J**	0.0502 UJ	0.0324 U	0.21 U	0.308 UJ	--
beta-Hexachlorocyclohexane (BHC)	0.0368 U	**7.75 NJ**	--	**5.14 J**	**4.04 J**	**1.32 J**	**2 NJ**	**5.97 J**	--
delta-Hexachlorocyclohexane (BHC)	0.0778 UJ	**0.503 J**	--	0.0701 U	0.107 UJ	0.0693 U	0.449 U	0.658 UJ	--
Endrin ketone	0.032 U	0.146 U	--	0.0288 U	0.0442 UJ	0.0285 U	0.185 U	0.271 UJ	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.0831 U	**8.3 NJ**	--	0.0749 U	0.115 UJ	0.074 U	0.48 U	0.703 UJ	--
LWG RA Sum DDD (Calculated U = 1/2)	**2.47 JNT**	**5.67 JT**	--	**2.09 T**	**80.4 JT**	0.0467 UT	**13.9 JNT**	**72 JNT**	--
LWG RA Sum DDE (Calculated U = 1/2)	**0.798 NJT**	**0.671 JT**	--	0.0443 UT	**7.5 JNT**	0.0438 UT	**2.74 JT**	**11.8 NJT**	--
LWG RA Sum DDT (Calculated U = 1/2)	**0.863 JT**	**1.91 NJT**	--	**2.25 JT**	**1.9 JT**	0.054 UT	**17.6 NJT**	**20.1 NJT**	--
LWG RA Total DDx (Calculated U = 1/2)	**4.13 JNT**	**8.24 JNT**	--	**4.38 JT**	**90 JNT**	0.054 UT	**34.3 JNT**	**100 JNT**	--
Pesticides (mg/kg-OC)									
4,4'-DDD (p,p'-DDD)	**0.32 NJT**	**1.8 T**	--	**0.77 T**	**2.32 JT**	0.0234 UT	**0.649 JT**	**0.5 JT**	--
4,4'-DDE (p,p'-DDE)	**0.11 NJT**	**0.23 JT**	--	0.016 UT	**0.15 NJT**	0.0219 UT	**0.199 JT**	**0.115 NJT**	--
4,4'-DDT (p,p'-DDT)	**0.039 JT**	0.11 UT	--	**0.83 JT**	**0.059 JT**	0.027 UT	**1.33 NJT**	**0.197 NJT**	--
alpha-Hexachlorocyclohexane (BHC)	**0.2 JT**	0.064 UJT	--	**0.094 JT**	0.00158 UJT	0.0162 UT	0.016 UT	0.00305 UJT	--
beta-Hexachlorocyclohexane (BHC)	0.0052 UT	**3 NJT**	--	**1.9 JT**	**0.127 JT**	**0.66 JT**	**0.2 NJT**	**0.0591 JT**	--
delta-Hexachlorocyclohexane (BHC)	0.011 UJT	**0.19 JT**	--	0.026 UT	0.00338 UJT	0.0347 UT	0.034 UT	0.00651 UJT	--
Endrin ketone	0.0045 UT	0.056 UT	--	0.011 UT	0.00139 UJT	0.0143 UT	0.014 UT	0.00268 UJT	--
LWG RA Sum DDD (Calculated U = 1/2)	**0.35 JNT**	**2.2 JT**	--	**0.78 T**	**2.54 JT**	0.0234 UT	**1.05 JNT**	**0.71 JNT**	--
LWG RA Sum DDE (Calculated U = 1/2)	**0.11 NJT**	**0.26 JT**	--	0.016 UT	**0.24 JNT**	0.0219 UT	**0.207 JT**	**0.117 NJT**	--
LWG RA Sum DDT (Calculated U = 1/2)	**0.12 JT**	**0.74 NJT**	--	**0.84 JT**	**0.0601 JT**	0.027 UT	**1.34 NJT**	**0.199 NJT**	--
LWG RA Total DDx (Calculated U = 1/2)	**0.59 JNT**	**3.2 JNT**	--	**1.6 JT**	**2.8 JNT**	0.027 UT	**2.6 JNT**	**1 JNT**	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	LW2-G269	LW2-G270	LW2-G271	LW2-G272	LW2-G273	LW2-G274	LW2-G281	LW2-G283	LW2-G285
Sample Name:	LW2-G269	LW2-G270-1	LW2-G271	LW2-G272	LW2-G273	LW2-G274	LW2-G281	LW2-G283	LW2-G285
Sample Date:	8/30/2004	7/21/2004	8/19/2004	8/19/2004	10/7/2004	10/29/2004	8/19/2004	8/30/2004	8/19/2004
Depth interval:	0 - 26 cm	0 - 29 cm	0 - 26 cm	0 - 27 cm	0 - 28 cm	0 - 22 cm	0 - 28 cm	0 - 27 cm	0 - 26 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)									
Zinc	166	130	43.2	79.1	159	127	59.9	183	56.5
Polycyclic Aromatic Hydrocarbons (µg/kg)									
Benzo(a)anthracene	13000	12000	7	110	9000	12000	46	110000	5.8
Benzo(a)pyrene	17000	17000	9.9	200	12000	17000	85	140000	11
Benzo(b)fluoranthene	16000	15000	10	170	12000	16000	67	130000	9.3
Benzo(k)fluoranthene	4800	4700	3	55	3800	5900	22	42000	3.3
Chrysene	16000	14000	8.1	140	11000	16000	56	120000	7
Dibenzo(a,h)anthracene	2000	2100	1.3 J	22	1300	2200	8.4	12000	1.3 J
Indeno(1,2,3-c,d)pyrene	13000	14000	7	170	9800	13000	70	100000	8.5
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	23000 T	23000 T	14 JT	270 T	16000 T	23000 T	110 T	190000 T	15 JT
LWG RA Total LPAH (Calculated U = 1/2)	58000 T	65000 JT	14 JT	260 T	33000 T	23000 T	28 JT	590000 T	16 JT
LWG RA Total PAH (Calculated U = 1/2)	230000 T	230000 JT	94 JT	1800 T	160000 T	190000 T	550 JT	2100000 T	95 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)									
Benzo(a)anthracene	300 T	370 T	4 T	12 T	400 T	510 T	22 T	2900 T	3 T
Benzo(a)pyrene	400 T	520 T	5 T	20 T	520 T	720 T	40 T	3800 T	6 T
Benzo(b)fluoranthene	400 T	460 T	5 T	18 T	520 T	680 T	32 T	3500 T	5 T
Benzo(k)fluoranthene	100 T	140 T	2 T	5.9 T	160 T	250 T	10 T	1100 T	2 T
Chrysene	400 T	430 T	4.1 T	15 T	470 T	680 T	27 T	3200 T	4 T
Dibenzo(a,h)anthracene	50 T	64 T	0.65 JT	2.4 T	56 T	94 T	4 T	320 T	0.7 JT
Indeno(1,2,3-c,d)pyrene	300 T	430 T	4 T	18 T	420 T	550 T	30 T	3000 T	4 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	550 T	710 T	7 JT	27 T	710 T	990 T	53 T	5100 T	7.9 JT
LWG RA Total LPAH (Calculated U = 1/2)	1400 T	2000 JT	7 JT	27 T	1400 T	990 T	13 JT	16000 T	8.8 JT
LWG RA Total PAH (Calculated U = 1/2)	5600 T	7000 JT	49 JT	190 T	6600 T	8100 T	260 JT	57000 T	52 JT
Semivolatile Organics (µg/kg)									
Carbazole	2500	760	1.7 J	8 J	780 J	590 J	2.3 J	8500	1.8 U
Semivolatile Organics (mg/kg-OC)									
Carbazole	60 T	23 T	0.85 JT	0.9 JT	34 JT	25 JT	1.1 JT	230 T	0.9 UT
PCB Aroclors (µg/kg)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	4.3 UJT	2.3 UJT	12 JT	--	2.69 UJT	--	3.81 UJT	2.5 UJT
PCB Aroclors (mg/kg-OC)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	0.13 UJT	1.2 UJT	1.3 JT	--	0.114 UJT	--	0.102 UJT	1 UJT
PCB Congeners (µg/kg)									
PCB-077	--	--	--	--	0.308	--	--	--	--
PCB-081	--	--	--	--	0.019	--	--	--	--
PCB-105	--	--	--	--	1.37	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	0.0254	--	--	--	--
PCB-156	--	--	--	--	0.811	--	--	--	--
PCB-157	--	--	--	--	0.104	--	--	--	--
PCB-169	--	--	--	--	0.00194 U	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	190 T	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	LW2-G269	LW2-G270	LW2-G271	LW2-G272	LW2-G273	LW2-G274	LW2-G281	LW2-G283	LW2-G285
Sample Name:	LW2-G269	LW2-G270-1	LW2-G271	LW2-G272	LW2-G273	LW2-G274	LW2-G281	LW2-G283	LW2-G285
Sample Date:	8/30/2004	7/21/2004	8/19/2004	8/19/2004	10/7/2004	10/29/2004	8/19/2004	8/30/2004	8/19/2004
Depth interval:	0 - 26 cm	0 - 29 cm	0 - 26 cm	0 - 27 cm	0 - 28 cm	0 - 22 cm	0 - 28 cm	0 - 27 cm	0 - 26 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	**0.0027 T**	--	--	--	--
PCB Congeners (mg/kg-OC)									
PCB-077	--	--	--	--	**0.0133 T**	--	--	--	--
PCB-081	--	--	--	--	**0.00082 T**	--	--	--	--
PCB-105	--	--	--	--	**0.0591 T**	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	**0.00109 T**	--	--	--	--
PCB-156	--	--	--	--	**0.035 T**	--	--	--	--
PCB-157	--	--	--	--	**0.00448 T**	--	--	--	--
PCB-169	--	--	--	--	8.36E-05 UT	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	**8 T**	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	**0.00012 T**	--	--	--	--
Pesticides (µg/kg)									
4,4'-DDD (p,p'-DDD)	**66.2 J**	**11.9 J**	**0.338 J**	**1.54**	**21**	**22.1 NJ**	--	**330 J**	**1.28 J**
4,4'-DDE (p,p'-DDE)	**12.9 J**	**2.4 NJ**	**0.161 J**	**0.829**	**6.6 J**	**9.76 NJ**	--	**31.9 J**	**0.304**
4,4'-DDT (p,p'-DDT)	**42.8 J**	**7.26 J**	0.0525 U	**0.36 J**	**21 J**	**17.9 J**	--	**60.3 NJ**	**5.09**
alpha-Hexachlorocyclohexane (BHC)	0.29 UJ	**0.46 NJ**	0.0315 U	**0.778 J**	**0.537 J**	0.357 U	--	0.255 UJ	0.033 U
beta-Hexachlorocyclohexane (BHC)	**7.82 J**	**2.14 NJ**	**0.555 J**	**6.21 J**	**2.94 J**	**20.3 J**	--	**13.6 J**	0.0334 U
delta-Hexachlorocyclohexane (BHC)	0.619 UJ	0.123 UJ	**0.189 J**	0.0859 U	0.496 UJ	0.764 U	--	**3.03 NJ**	**0.2**
Endrin ketone	0.255 UJ	0.0507 U	0.0277 U	0.0354 U	0.204 U	0.314 U	--	0.224 UJ	0.029 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.662 UJ	0.132 U	**0.623 J**	0.0918 U	0.53 U	0.816 U	--	0.582 UJ	0.0754 U
LWG RA Sum DDD (Calculated U = 1/2)	**81 JT**	**19.3 JT**	**0.353 JT**	**1.95 JT**	**26 NJT**	**39.4 NJT**	--	**440 JT**	**1.4 JT**
LWG RA Sum DDE (Calculated U = 1/2)	**13 JT**	**9.3 NJT**	**0.177 JT**	**0.85 T**	**6.7 JT**	**9.94 NJT**	--	**56.4 JNT**	**1.02 JT**
LWG RA Sum DDT (Calculated U = 1/2)	**43 JT**	**10.3 JT**	0.0525 UT	**0.39 JT**	**23 JNT**	**23.7 JT**	--	**60.5 NJT**	**5.11 T**
LWG RA Total DDx (Calculated U = 1/2)	**137 JT**	**39 JNT**	**0.578 JT**	**3.2 JT**	**56 JNT**	**73.1 JNT**	--	**560 JNT**	**7.5 JT**
Pesticides (mg/kg-OC)									
4,4'-DDD (p,p'-DDD)	**2 JT**	**0.364 JT**	**0.169 JT**	**0.17 T**	**0.91 T**	**0.94 NJT**	--	**8.8 JT**	**0.6 JT**
4,4'-DDE (p,p'-DDE)	**0.3 JT**	**0.073 NJT**	**0.0805 JT**	**0.089 T**	**0.28 JT**	**0.415 NJT**	--	**0.855 JT**	**0.2 T**
4,4'-DDT (p,p'-DDT)	**1 JT**	**0.222 JT**	0.0263 UT	**0.039 JT**	**0.91 JT**	**0.762 JT**	--	**1.62 NJT**	**3 T**
alpha-Hexachlorocyclohexane (BHC)	0.007 UJT	**0.014 NJT**	0.0158 UT	**0.084 JT**	**0.0231 JT**	0.0152 UT	--	0.00684 UJT	0.02 UT
beta-Hexachlorocyclohexane (BHC)	**0.2 JT**	**0.0654 NJT**	**0.278 JT**	**0.67 JT**	**0.127 JT**	**0.864 JT**	--	**0.365 JT**	0.02 UT
delta-Hexachlorocyclohexane (BHC)	0.02 UJT	0.00376 UJT	**0.0945 JT**	0.0092 UT	0.0214 UJT	0.0325 UT	--	**0.0812 NJT**	**0.1 T**
Endrin ketone	0.006 UJT	0.00155 UT	0.0139 UT	0.0038 UT	0.00879 UT	0.0134 UT	--	0.00601 UJT	0.01 UT
LWG RA Sum DDD (Calculated U = 1/2)	**2.4 JT**	**0.591 JT**	**0.177 JT**	**0.21 JT**	**1.1 NJT**	**1.68 NJT**	--	**12 JT**	**0.65 JT**
LWG RA Sum DDE (Calculated U = 1/2)	**0.3 JT**	**0.28 NJT**	**0.0886 JT**	**0.091 T**	**0.29 JT**	**0.423 NJT**	--	**1.51 JNT**	**0.6 JT**
LWG RA Sum DDT (Calculated U = 1/2)	**1 JT**	**0.315 JT**	0.0263 UT	**0.042 JT**	**1 JNT**	**1.01 JT**	--	**1.62 NJT**	**3 T**
LWG RA Total DDx (Calculated U = 1/2)	**3.7 JT**	**1.2 JNT**	**0.289 JT**	**0.35 JT**	**2.4 JNT**	**3.11 JNT**	--	**15 JNT**	**4.3 JT**

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	LW2-G287	LW2-G289	LW2-G294	LW2-G297	LW2-G300	LW2-G301	LW2-G302	LW2-G305	LW2-G308
Sample Name:	LW2-G287	LW2-G289	LW2-G294-1	LW2-G297	LW2-G300	LW2-G301	LW2-G302	LW2-G305	LW2-G308
Sample Date:	8/19/2004	8/19/2004	7/21/2004	8/19/2004	8/20/2004	9/13/2004	9/13/2004	8/19/2004	9/13/2004
Depth interval:	0 - 28 cm	0 - 27 cm	0 - 26 cm	0 - 27 cm	0 - 26 cm	0 - 27 cm	0 - 27 cm	0 - 28 cm	0 - 27 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)									
Zinc	87.3	135	129 T	118	49.3	107	241	142	104
Polycyclic Aromatic Hydrocarbons (µg/kg)									
Benzo(a)anthracene	12	11000	40000	3400	3.9	52000	9300	1000	1400
Benzo(a)pyrene	18	17000	42000	4600	4.8	47000	17000	1300	780
Benzo(b)fluoranthene	18	15000	40000	3900	5.2	40000	15000	1100	930
Benzo(k)fluoranthene	6.3	4700	17000	1200	1.7 J	13000	4800	380	370
Chrysene	16	13000	51000	4200	5	62000	11000	1100	1800
Dibenzo(a,h)anthracene	2.7	1700	5400	370	0.67 J	4000	1500	180	100
Indeno(1,2,3-c,d)pyrene	14	14000	44000	3500	2.9	28000	13000	1100	600
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	25 T	23000 T	60000 T	6100 T	6.7 JT	63000 T	22000 T	1800 T	1200 T
LWG RA Total LPAH (Calculated U = 1/2)	840 T	51000 T	620000 T	67000 T	12 JT	650000 T	13000 T	9200 T	22000 T
LWG RA Total PAH (Calculated U = 1/2)	1000 T	220000 T	1300000 T	130000 T	58 JT	1300000 T	150000 T	22000 T	41000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)									
Benzo(a)anthracene	2.1 T	390 T	500 T	200 T	1.4 T	2400 T	240 T	50 T	140 T
Benzo(a)pyrene	3.1 T	600 T	520 T	270 T	1.7 T	2100 T	440 T	63 T	78 T
Benzo(b)fluoranthene	3.1 T	530 T	500 T	230 T	1.9 T	2000 T	390 T	53 T	93 T
Benzo(k)fluoranthene	1.1 T	160 T	210 T	69 T	0.61 JT	590 T	120 T	18 T	37 T
Chrysene	2.8 T	460 T	640 T	240 T	2 T	2800 T	280 T	53 T	180 T
Dibenzo(a,h)anthracene	0.47 T	60 T	67 T	21 T	0.24 JT	200 T	39 T	8.7 T	10 T
Indeno(1,2,3-c,d)pyrene	2.4 T	490 T	550 T	200 T	1 T	1300 T	340 T	53 T	60 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	4.3 T	800 T	740 T	350 T	2.4 JT	2900 T	580 T	88 T	120 T
LWG RA Total LPAH (Calculated U = 1/2)	140 T	1800 T	8000 T	3900 T	4.4 JT	31000 T	330 T	440 T	2200 T
LWG RA Total PAH (Calculated U = 1/2)	170 T	7900 T	16000 T	7300 T	21 JT	59000 T	3800 T	1100 T	4100 T
Semivolatile Organics (µg/kg)									
Carbazole	3.5 J	220 J	18000	280	1.9 U	290 J	9400	53 J	160
Semivolatile Organics (mg/kg-OC)									
Carbazole	0.6 JT	7.7 JT	220 T	16 T	0.68 UT	13 JT	240 T	2.6 JT	16 T
PCB Aroclors (µg/kg)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	97 JT	--	--	20.7 JT	170 JT	92 JT	--
PCB Aroclors (mg/kg-OC)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	1.2 JT	--	--	0.943 JT	4.5 JT	4.4 JT	--
PCB Congeners (µg/kg)									
PCB-077	--	--	--	0.112 J	--	--	--	--	0.123
PCB-081	--	--	--	0.00444 J	--	--	--	--	0.0075
PCB-105	--	--	--	0.431 J	--	--	--	--	0.709
PCB-118	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	0.014 J	--	--	--	--	0.0105
PCB-156	--	--	--	0.239 J	--	--	--	--	0.217
PCB-157	--	--	--	0.0469 J	--	--	--	--	0.0409
PCB-169	--	--	--	0.0041 UJ	--	--	--	--	0.00124 U
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	53 JT	--	--	--	--	59 T

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	LW2-G287	LW2-G289	LW2-G294	LW2-G297	LW2-G300	LW2-G301	LW2-G302	LW2-G305	LW2-G308
Sample Name:	LW2-G287	LW2-G289	LW2-G294-1	LW2-G297	LW2-G300	LW2-G301	LW2-G302	LW2-G305	LW2-G308
Sample Date:	8/19/2004	8/19/2004	7/21/2004	8/19/2004	8/20/2004	9/13/2004	9/13/2004	8/19/2004	9/13/2004
Depth interval:	0 - 28 cm	0 - 27 cm	0 - 26 cm	0 - 27 cm	0 - 26 cm	0 - 27 cm	0 - 27 cm	0 - 28 cm	0 - 27 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	**0.0015 JT**	--	--	--	--	**0.0011 T**
PCB Congeners (mg/kg-OC)									
PCB-077	--	--	--	**0.00647 JT**	--	--	--	--	**0.0123 T**
PCB-081	--	--	--	**0.000257 JT**	--	--	--	--	**0.00075 T**
PCB-105	--	--	--	**0.0249 JT**	--	--	--	--	**0.0711 T**
PCB-118	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	**0.00081 JT**	--	--	--	--	**0.00105 T**
PCB-156	--	--	--	**0.0138 JT**	--	--	--	--	**0.0218 T**
PCB-157	--	--	--	**0.00271 JT**	--	--	--	--	**0.0041 T**
PCB-169	--	--	--	0.00024 UJT	--	--	--	--	0.000124 UT
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	**3 JT**	--	--	--	--	**5.9 T**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	**8.7E-05 JT**	--	--	--	--	**0.00011 T**
Pesticides (µg/kg)									
4,4'-DDD (p,p'-DDD)	--	--	**618 J**	--	--	**38.7**	**134 J**	**18.5**	**14.1 J**
4,4'-DDE (p,p'-DDE)	--	--	**37.9 J**	--	--	**14.1 J**	**27.9**	**6.83**	**5.55 J**
4,4'-DDT (p,p'-DDT)	--	--	**4.01 NJ**	--	--	**37.6 J**	**23.9 J**	**4.89**	**1.47 J**
alpha-Hexachlorocyclohexane (BHC)	--	--	0.0573 UJ	--	--	0.483 U	0.568 U	0.0567 U	0.217 U
beta-Hexachlorocyclohexane (BHC)	--	--	0.058 UJ	--	--	0.488 U	0.574 U	**1.93 J**	**2.57 NJ**
delta-Hexachlorocyclohexane (BHC)	--	--	0.123 UJ	--	--	1.03 UJ	1.21 UJ	0.121 U	0.463 UJ
Endrin ketone	--	--	0.0505 UJ	--	--	0.425 U	0.5 U	**1.52 NJ**	0.191 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	0.131 UJ	--	--	1.1 U	1.3 U	**1.95 J**	0.495 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	**840 JT**	--	--	**70 NJT**	**163 JT**	**25.7 JT**	**16.2 JNT**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	**70.3 JNT**	--	--	**14.3 JT**	**83.2 NJT**	**8.9 JT**	**8.42 JNT**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	**9.59 NJT**	--	--	**41.6 JT**	**24.3 JT**	**8.07 JT**	**1.62 JT**
LWG RA Total DDx (Calculated U = 1/2)	--	--	**920 JNT**	--	--	**126 JNT**	**270 JNT**	**43 JT**	**26.3 JNT**
Pesticides (mg/kg-OC)									
4,4'-DDD (p,p'-DDD)	--	--	**7.71 JT**	--	--	**1.77 T**	**3.47 JT**	**0.898 T**	**1.41 JT**
4,4'-DDE (p,p'-DDE)	--	--	**0.473 JT**	--	--	**0.644 JT**	**0.723 T**	**0.332 T**	**0.557 JT**
4,4'-DDT (p,p'-DDT)	--	--	**0.05 NJT**	--	--	**1.72 JT**	**0.619 JT**	**0.237 T**	**0.147 JT**
alpha-Hexachlorocyclohexane (BHC)	--	--	0.000714 UJT	--	--	0.0221 UT	0.0147 UT	0.00275 UT	0.0218 UT
beta-Hexachlorocyclohexane (BHC)	--	--	0.00072 UJT	--	--	0.0223 UT	0.0149 UT	**0.0937 JT**	**0.258 NJT**
delta-Hexachlorocyclohexane (BHC)	--	--	0.00153 UJT	--	--	0.047 UJT	0.0313 UJT	0.00587 UT	0.0464 UJT
Endrin ketone	--	--	0.00063 UJT	--	--	0.0194 UT	0.01 UT	**0.0738 NJT**	0.0192 UT
LWG RA Sum DDD (Calculated U = 1/2)	--	--	**10 JT**	--	--	**3.2 NJT**	**4.21 JT**	**1.25 JT**	**1.62 JNT**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	**0.877 JNT**	--	--	**0.655 JT**	**2.15 NJT**	**0.43 JT**	**0.845 JNT**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	**0.12 NJT**	--	--	**1.9 JT**	**0.629 JT**	**0.391 JT**	**0.162 JT**
LWG RA Total DDx (Calculated U = 1/2)	--	--	**11 JNT**	--	--	**5.76 JNT**	**7 JNT**	**2.1 JT**	**2.63 JNT**

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	LW2-G309	LW2-G311	LW2-G521	LW2-GBT015	LW3-G657	LW3-G658	LW3-G659-1	LW3-GCRSP06W
Sample Name:	LW2-G309	LW2-G311-1	LW2-G521	LW2-GBT015	LW3-G657	LW3-G658	LW3-G659-1	LW3-GCRSP06W
Sample Date:	8/20/2004	7/21/2004	9/13/2004	12/20/2005	11/28/2007	11/28/2007	11/28/2007	10/17/2007
Depth interval:	0 - 26 cm	0 - 21 cm	0 - 28 cm	0 - 10 cm	0 - 26 cm	0 - 21 cm	0 - 26 cm	0 - 18 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)								
Zinc	134	145 T	142	134	50	53.1	53.8	74.2
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	400	3850 T	2800	1500	39	140	5.1	2300
Benzo(a)pyrene	550	4800 T	4600	2100	50	160	6.3	3500
Benzo(b)fluoranthene	540	4300 T	3900	1200	47	140	6.5	3000
Benzo(k)fluoranthene	170	1400 T	1200	1000	15	45	1.9 J	1100
Chrysene	500	4900 T	3200	1600	47	160	6.5	2500
Dibenzo(a,h)anthracene	53	425 T	410	190	4.3	13	0.82 J	520
Indeno(1,2,3-c,d)pyrene	430	3150 T	3700	1500	39	110	5.7	2800
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	740 T	6400 T	6100 T	2700 T	67 T	210 T	8.9 JT	4800 T
LWG RA Total LPAH (Calculated U = 1/2)	1400 T	27000 T	9300 T	3900 T	47 JT	220 T	15 JT	5400 T
LWG RA Total PAH (Calculated U = 1/2)	6500 T	82000 T	51000 T	21000 T	550 JT	2000 T	80 JT	35000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	20 T	140 T	120 T	50 T	19 T	70 T	2.6 T	200 T
Benzo(a)pyrene	21 T	170 T	200 T	70 T	20 T	80 T	3.2 T	300 T
Benzo(b)fluoranthene	21 T	150 T	170 T	40 T	22 T	70 T	3.3 T	300 T
Benzo(k)fluoranthene	6.5 T	50 T	53 T	30 T	7.1 T	23 T	0.95 JT	94 T
Chrysene	20 T	180 T	140 T	50 T	22 T	80 T	3.3 T	210 T
Dibenzo(a,h)anthracene	2 T	15 T	18 T	6 T	2 T	6.5 T	0.41 JT	44 T
Indeno(1,2,3-c,d)pyrene	16 T	110 T	160 T	50 T	19 T	55 T	2.9 T	240 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	29 T	230 T	260 T	90 T	28 T	110 T	4.5 JT	420 T
LWG RA Total LPAH (Calculated U = 1/2)	53 T	970 T	410 T	130 T	22 JT	110 T	7.5 JT	460 T
LWG RA Total PAH (Calculated U = 1/2)	250 T	2900 T	2200 T	670 T	260 JT	990 T	40 JT	3000 T
Semivolatile Organics (µg/kg)								
Carbazole	17	93 JT	75 J	71	1.3 U	1.3 U	1.3 U	26 J
Semivolatile Organics (mg/kg-OC)								
Carbazole	0.65 T	3.3 JT	3.3 JT	2 T	0.62 UT	0.65 UT	0.65 UT	2.2 JT
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	39 JT	190 JT	50 JT	--	1.3 UT	1.3 UT	3.3 UT	--
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	1.5 JT	6.7 JT	2.2 JT	--	0.62 UT	0.65 UT	1.7 UT	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	0.058	--	--	--	0.0362
PCB-081	--	--	--	0.00164 J	--	--	--	0.0025 U
PCB-105	--	--	--	0.254	--	--	--	0.124
PCB-118	--	--	--	--	--	--	--	--
PCB-126	--	--	--	0.00586	--	--	--	0.00263 J
PCB-156	--	--	--	0.0892	--	--	--	0.0466
PCB-157	--	--	--	0.0188	--	--	--	0.0113 J
PCB-169	--	--	--	0.00134 U	--	--	--	0.00192 U
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	24 JT	--	--	--	12 JT

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	LW2-G309	LW2-G311	LW2-G521	LW2-GBT015	LW3-G657	LW3-G658	LW3-G659-1	LW3-GCRSP06W
Sample Name:	LW2-G309	LW2-G311-1	LW2-G521	LW2-GBT015	LW3-G657	LW3-G658	LW3-G659-1	LW3-GCRSP06W
Sample Date:	8/20/2004	7/21/2004	9/13/2004	12/20/2005	11/28/2007	11/28/2007	11/28/2007	10/17/2007
Depth interval:	0 - 26 cm	0 - 21 cm	0 - 28 cm	0 - 10 cm	0 - 26 cm	0 - 21 cm	0 - 26 cm	0 - 18 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	**0.00063 JT**	--	--	--	**0.0003 JT**
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	**0.002 T**	--	--	--	**0.00309 T**
PCB-081	--	--	--	**5E-05 JT**	--	--	--	0.00021 UT
PCB-105	--	--	--	**0.008 T**	--	--	--	**0.0106 T**
PCB-118	--	--	--	--	--	--	--	--
PCB-126	--	--	--	**0.0002 T**	--	--	--	**0.000225 JT**
PCB-156	--	--	--	**0.003 T**	--	--	--	**0.00398 T**
PCB-157	--	--	--	**0.0006 T**	--	--	--	**0.000966 JT**
PCB-169	--	--	--	4E-05 UT	--	--	--	0.000164 UT
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	**0.79 JT**	--	--	--	**1.1 JT**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	**2.1E-05 JT**	--	--	--	**2.6E-05 JT**
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	**29.9 J**	**1040 JT**	**30.8 J**	**36.5**	**0.39**	**0.48 NJ**	**0.18 J**	**7.9**
4,4'-DDE (p,p'-DDE)	**6.67 J**	**64.8 JT**	**9.5 J**	**5.29**	**0.27 NJ**	**0.47 NJ**	**0.077 J**	**2.4 J**
4,4'-DDT (p,p'-DDT)	**152 J**	**262 JT**	**38 J**	**25.1**	0.18 U	0.18 U	0.18 U	**10**
alpha-Hexachlorocyclohexane (BHC)	0.0605 U	0.0508 UJT	0.283 U	0.0278 U	0.097 U	0.097 U	0.097 U	0.097 U
beta-Hexachlorocyclohexane (BHC)	**3.71 NJ**	**3.62 JT**	**2.44 NJ**	0.235 U	0.14 U	0.5 U	0.14 U	0.14 U
delta-Hexachlorocyclohexane (BHC)	0.129 UJ	0.109 UJT	0.606 UJ	**0.0175 J**	0.11 U	0.11 U	0.11 U	0.19 U
Endrin ketone	0.0533 U	**4.57 NJT**	0.249 U	0.221 U	0.029 U	0.029 U	0.029 U	0.17 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**4.13 NJ**	**2.39 JT**	0.647 U	0.0804 U	0.2 U	0.62 U	0.062 U	**0.99 J**
LWG RA Sum DDD (Calculated U = 1/2)	**32 JNT**	**1400 JT**	**36.1 JNT**	**46.2 T**	**0.47 T**	**0.56 NJT**	**0.26 JT**	**11 T**
LWG RA Sum DDE (Calculated U = 1/2)	**7.63 JT**	**94.3 JT**	**10 JNT**	**5.4 JT**	**0.33 JNT**	**0.49 NJT**	**0.1 JT**	**2.4 JT**
LWG RA Sum DDT (Calculated U = 1/2)	**154 JT**	**271 JT**	**38 JT**	**26.2 T**	0.18 UT	0.18 UT	0.18 UT	**10 T**
LWG RA Total DDx (Calculated U = 1/2)	**193 JNT**	**1700 JT**	**85 JNT**	**78 JT**	**0.92 JNT**	**1.2 NJT**	**0.48 JT**	**24 JT**
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	**1.14 JT**	**37 JT**	**1.36 JT**	**1 T**	**0.19 T**	**0.24 NJT**	**0.09 JT**	**0.68 T**
4,4'-DDE (p,p'-DDE)	**0.254 JT**	**2.3 JT**	**0.42 JT**	**0.2 T**	**0.13 NJT**	**0.24 NJT**	**0.039 JT**	**0.21 JT**
4,4'-DDT (p,p'-DDT)	**5.78 JT**	**9.4 JT**	**1.7 JT**	**0.8 T**	0.086 UT	0.09 UT	0.09 UT	**0.9 T**
alpha-Hexachlorocyclohexane (BHC)	0.0023 UT	0.0018 UJT	0.0125 UT	0.0009 UT	0.046 UT	0.049 UT	0.049 UT	0.0083 UT
beta-Hexachlorocyclohexane (BHC)	**0.141 NJT**	**0.13 JT**	**0.107 NJT**	0.008 UT	0.067 UT	0.3 UT	0.07 UT	0.012 UT
delta-Hexachlorocyclohexane (BHC)	0.0049 UJT	0.0039 UJT	0.0267 UJT	**0.0006 JT**	0.052 UT	0.055 UT	0.055 UT	0.016 UT
Endrin ketone	0.00203 UT	**0.16 NJT**	0.011 UT	0.007 UT	0.014 UT	0.015 UT	0.015 UT	0.015 UT
LWG RA Sum DDD (Calculated U = 1/2)	**1.22 JNT**	**48 JT**	**1.6 JNT**	**1.3 T**	**0.23 T**	**0.28 NJT**	**0.13 JT**	**0.97 T**
LWG RA Sum DDE (Calculated U = 1/2)	**0.29 JT**	**3.4 JT**	**0.46 JNT**	**0.2 JT**	**0.16 JNT**	**0.25 NJT**	**0.051 JT**	**0.21 JT**
LWG RA Sum DDT (Calculated U = 1/2)	**5.84 JT**	**9.7 JT**	**1.7 JT**	**0.84 T**	0.086 UT	0.09 UT	0.09 UT	**0.91 T**
LWG RA Total DDx (Calculated U = 1/2)	**7.35 JNT**	**61 JT**	**3.8 JNT**	**2.3 JT**	**0.45 JNT**	**0.59 NJT**	**0.24 JT**	**2.1 JT**

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	WG0106B025SDS015C	WG0106B029SDS015C0	PCM-02Y3E2	PCM-04Y3E2	PCM-06Y3E2	PCM-09Y3E2	PCM-14Y3E2
Sample Name:	WG0106B025SDS015C	WG0106B029SDS015C0	PCM-02-DS-091209	PCM-04-DS-091209	PCM-06-DS-091209	PCM-09-DS-091209	PCM-14-DS-091210
Sample Date:	10/14/2002	10/11/2002	12/9/2009	12/9/2009	12/9/2009	12/9/2009	12/10/2009
Depth interval:	0 - 15 cm	0 - 15 cm	0 - 7 cm	0 - 2 cm	0 - 5 cm	0 - 8 cm	0 - 3 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)							
Zinc	81	65	110	92.2	111	108	86.8
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	29000 T	140 T	11000	27000	2600	2800	300
Benzo(a)pyrene	41000 T	320 T	17000	43000	4100	5000	530
Benzo(b)fluoranthene	31000 T	250 T	15000	37000	3600	4100	460
Benzo(k)fluoranthene	24000 T	220 T	5000	14000	1300	1400	170
Chrysene	38000 T	230 T	13000	31000	3000	3200	380
Dibenzo(a,h)anthracene	9500 JT	59 T	1600	3900	400	510	57
Indeno(1,2,3-c,d)pyrene	31000 T	260 T	13000	30000	3100	4000	400
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	60000 JT	450 T	23000 T	56000 T	5400 T	6600 T	710 T
LWG RA Total LPAH (Calculated U = 1/2)	76000 T	210 T	53000 T	72000 T	11000 T	4100 T	1300 T
LWG RA Total PAH (Calculated U = 1/2)	460000 JT	2500 T	210000 T	480000 T	46000 T	42000 T	5200 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	1000 T	26 T	340 T	1200 T	90 T	93 T	20 T
Benzo(a)pyrene	1500 T	59 T	520 T	2000 T	140 T	200 T	32 T
Benzo(b)fluoranthene	1100 T	46 T	460 T	1700 T	120 T	140 T	28 T
Benzo(k)fluoranthene	860 T	41 T	200 T	640 T	45 T	47 T	10 T
Chrysene	1400 T	43 T	400 T	1400 T	100 T	110 T	23 T
Dibenzo(a,h)anthracene	340 JT	11 T	49 T	180 T	10 T	17 T	3.5 T
Indeno(1,2,3-c,d)pyrene	1100 T	48 T	400 T	1000 T	110 T	100 T	20 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2200 JT	82 T	690 T	2600 T	180 T	250 T	42 T
LWG RA Total LPAH (Calculated U = 1/2)	2800 T	38 T	1600 T	3300 T	370 T	140 T	77 T
LWG RA Total PAH (Calculated U = 1/2)	17000 JT	460 T	6400 T	22000 T	1600 T	1400 T	310 T
Semivolatile Organics (µg/kg)							
Carbazole	2800 T	6.5 T	960	920	200	77	140
Semivolatile Organics (mg/kg-OC)							
Carbazole	100 T	1.2 T	30 T	42 T	7 T	2.6 T	8.5 T
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	53 T	7.7 UT	--	--	--	--	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	1.9 T	1.4 UT	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	0.0645	0.0467	0.0519	0.0473	0.0306
PCB-081	--	--	0.0021	0.00144	0.00189	0.00161	0.00101
PCB-105	--	--	0.286	0.203	0.269	0.244	0.156
PCB-118	--	--	0.668	0.471	0.763	0.582	0.387
PCB-126	--	--	0.00344	0.00359	0.00344	0.00299	0.00229
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	0.000979 U	0.000949 U	0.000999 U	0.000957 U	0.000974 U
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	18 JT	14 JT	26 JT	17 JT	14 JT

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	WG0106B025SDS015C	WG0106B029SDS015C0	PCM-02Y3E2	PCM-04Y3E2	PCM-06Y3E2	PCM-09Y3E2	PCM-14Y3E2
Sample Name:	WG0106B025SDS015C	WG0106B029SDS015C0	PCM-02-DS-091209	PCM-04-DS-091209	PCM-06-DS-091209	PCM-09-DS-091209	PCM-14-DS-091210
Sample Date:	10/14/2002	10/11/2002	12/9/2009	12/9/2009	12/9/2009	12/9/2009	12/10/2009
Depth interval:	0 - 15 cm	0 - 15 cm	0 - 7 cm	0 - 2 cm	0 - 5 cm	0 - 8 cm	0 - 3 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	0.0004 T	0.0004 T	0.000404 T	0.00035 T	0.000268 T
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	0.00198 T	0.00214 T	0.00179 T	0.00157 T	0.00185 T
PCB-081	--	--	6.5E-05 T	6.61E-05 T	6.52E-05 T	5.35E-05 T	6.12E-05 T
PCB-105	--	--	0.0088 T	0.00931 T	0.00928 T	0.00811 T	0.00945 T
PCB-118	--	--	0.0206 T	0.0216 T	0.0263 T	0.0193 T	0.0235 T
PCB-126	--	--	0.000106 T	0.000165 T	0.000119 T	9.93E-05 T	0.000139 T
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	3.01E-05 UT	4.35E-05 UT	3.44E-05 UT	3.18E-05 UT	5.9E-05 UT
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	0.54 JT	0.63 JT	0.91 JT	0.57 JT	0.87 JT
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	1.2E-05 T	1.8E-05 T	1.4E-05 T	1.2E-05 T	1.62E-05 T
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	9 U	1.5	29 J	15	12	8.7	4 J
4,4'-DDE (p,p'-DDE)	7.7 U	1.2 U	6.4 J	2.9	3.5	2.4	1.8
4,4'-DDT (p,p'-DDT)	12 U	1.1 U	7.3 J	8	5.9	72	16
alpha-Hexachlorocyclohexane (BHC)	3.9 U	0.19 U	1.2 UJ	1.1 U	1.4 U	1.3 U	1.2 U
beta-Hexachlorocyclohexane (BHC)	42 U	0.19 U	1.3 UJ	2.9 U	1.4 U	1.3 U	1.2 U
delta-Hexachlorocyclohexane (BHC)	3.9 U	0.19 U	1.2 UJ	1.1 U	1.4 U	1.3 U	1.2 U
Endrin ketone	20 U	0.71 U	3.1 UJ	5.5	1.4 U	1.3 U	1.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	3.9 U	0.19 U	3.9 J	2.1 U	1.2 J	1.5	0.61 J
LWG RA Sum DDD (Calculated U = 1/2)	9 UT	1.8 T	39 JT	21 JT	18 JT	13 T	5.8 JT
LWG RA Sum DDE (Calculated U = 1/2)	200 UT	9.2 UT	7 JT	3.5 T	4.2 JT	3.1 T	2.4 T
LWG RA Sum DDT (Calculated U = 1/2)	12 UT	1.1 UT	13 JT	11 JT	6.6 T	74 T	18 T
LWG RA Total DDx (Calculated U = 1/2)	200 UT	7.8 T	59 JT	35 JT	29 JT	90 T	26 JT
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	0.3 UT	0.28 T	0.89 JT	0.69 T	0.41 T	0.29 T	0.24 JT
4,4'-DDE (p,p'-DDE)	0.28 UT	0.22 UT	0.2 JT	0.13 T	0.12 T	0.08 T	0.11 T
4,4'-DDT (p,p'-DDT)	0.43 UT	0.2 UT	0.22 JT	0.37 T	0.2 T	2.4 T	0.97 T
alpha-Hexachlorocyclohexane (BHC)	0.14 UT	0.035 UT	0.037 UJT	0.05 UT	0.048 UT	0.043 UT	0.073 UT
beta-Hexachlorocyclohexane (BHC)	1.5 UT	0.035 UT	0.04 UJT	0.13 UT	0.048 UT	0.043 UT	0.073 UT
delta-Hexachlorocyclohexane (BHC)	0.14 UT	0.035 UT	0.037 UJT	0.05 UT	0.048 UT	0.043 UT	0.073 UT
Endrin ketone	0.7 UT	0.13 UT	0.095 UJT	0.25 T	0.048 UT	0.043 UT	0.073 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.3 UT	0.34 T	1.2 JT	0.95 JT	0.62 JT	0.44 T	0.35 JT
LWG RA Sum DDE (Calculated U = 1/2)	7 UT	1.7 UT	0.22 JT	0.16 T	0.14 JT	0.1 T	0.15 T
LWG RA Sum DDT (Calculated U = 1/2)	0.43 UT	0.2 UT	0.39 JT	0.51 JT	0.22 T	2.5 T	1.1 T
LWG RA Total DDx (Calculated U = 1/2)	7 UT	1.4 T	1.8 JT	1.6 JT	0.99 JT	3 T	1.6 JT

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	PCM-15Y3E2	PCM-16Y0E2	PCM-17Y0E2	PCM-22Y3E2	SL-02-A-PG	SL-02-E-PG
Sample Name:	PCM-15-DS-091210	PCM-16DS-060818	PCM-17DS-060818	PCM-22-DS-091210	LWG2-PG-SL2A	LWG2-PG-SL2E
Sample Date:	12/10/2009	8/18/2006	8/18/2006	12/10/2009	11/29/2005	11/29/2005
Depth interval:	0 - 3 cm	0 - 9.14 cm	0 - 7.92 cm	0 - 10 cm	0 - 29 cm	0 - 21 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	91.1	--	--	121	237	122
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	1600	--	--	1600	7900	640
Benzo(a)pyrene	2400	--	--	2500	9800	1100
Benzo(b)fluoranthene	2000	--	--	2100	5400	640
Benzo(k)fluoranthene	550	--	--	590	4900	570
Chrysene	2600	--	--	1800	9500	820
Dibenzo(a,h)anthracene	230	--	--	250	870 J	120
Indeno(1,2,3-c,d)pyrene	1800	--	--	2000	6700	950
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	3200 T	800 T	2200 T	3300 T	13000 JT	1400 T
LWG RA Total LPAH (Calculated U = 1/2)	3200 T	1600 T	3200 T	3900 T	44000 JT	2300 T
LWG RA Total PAH (Calculated U = 1/2)	26000 T	7300 T	19000 T	24000 T	140000 JT	12000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	89 T	--	--	67 T	390 T	27 T
Benzo(a)pyrene	130 T	--	--	100 T	480 T	46 T
Benzo(b)fluoranthene	100 T	--	--	88 T	270 T	27 T
Benzo(k)fluoranthene	31 T	--	--	25 T	240 T	24 T
Chrysene	150 T	--	--	75 T	470 T	35 T
Dibenzo(a,h)anthracene	13 T	--	--	10 T	43 JT	5.1 T
Indeno(1,2,3-c,d)pyrene	100 T	--	--	80 T	330 T	40 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	170 T	53 T	140 T	130 T	620 JT	61 T
LWG RA Total LPAH (Calculated U = 1/2)	180 T	100 T	210 T	160 T	2200 JT	100 T
LWG RA Total PAH (Calculated U = 1/2)	1400 T	470 T	1200 T	1000 T	7100 JT	520 T
Semivolatile Organics (µg/kg)						
Carbazole	45	--	--	56	99 J	24
Semivolatile Organics (mg/kg-OC)						
Carbazole	2.5 T	--	--	2.3 T	4.9 JT	1 T
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
PCB-077	0.0317	--	--	0.0443	--	--
PCB-081	0.00105	--	--	0.00112	--	--
PCB-105	0.155	--	--	0.225	--	--
PCB-118	0.385	--	--	0.558	--	--
PCB-126	0.00221	--	--	0.00269	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	0.000952 U	--	--	0.000973 U	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	12 JT	12 JT	7.6 JT	17 JT	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	PCM-15Y3E2	PCM-16Y0E2	PCM-17Y0E2	PCM-22Y3E2	SL-02-A-PG	SL-02-E-PG
Sample Name:	PCM-15-DS-091210	PCM-16DS-060818	PCM-17DS-060818	PCM-22-DS-091210	LWG2-PG-SL2A	LWG2-PG-SL2E
Sample Date:	12/10/2009	8/18/2006	8/18/2006	12/10/2009	11/29/2005	11/29/2005
Depth interval:	0 - 3 cm	0 - 9.14 cm	0 - 7.92 cm	0 - 10 cm	0 - 29 cm	0 - 21 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**0.000259 T**	**0.000484 JT**	**0.00585 T**	**0.00032 T**	--	--
PCB Congeners (mg/kg-OC)						
PCB-077	**0.00177 T**	--	--	**0.00185 T**	--	--
PCB-081	**5.87E-05 T**	--	--	**4.69E-05 T**	--	--
PCB-105	**0.00866 T**	--	--	**0.00941 T**	--	--
PCB-118	**0.0215 T**	--	--	**0.0233 T**	--	--
PCB-126	**0.000123 T**	--	--	**0.000113 T**	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	5.32E-05 UT	--	--	4.07E-05 UT	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	**0.68 JT**	**1.2 JT**	**0.76 JT**	**0.7 JT**	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**1.44E-05 T**	**4.84E-05 JT**	**0.000585 T**	**1.3E-05 T**	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	**4.6**	--	--	**11**	--	--
4,4'-DDE (p,p'-DDE)	**1.4**	--	--	**2.9**	--	--
4,4'-DDT (p,p'-DDT)	**3.1**	--	--	**6.2**	--	--
alpha-Hexachlorocyclohexane (BHC)	1.2 U	--	--	1.3 U	--	--
beta-Hexachlorocyclohexane (BHC)	1.2 U	--	--	1.3 U	--	--
delta-Hexachlorocyclohexane (BHC)	1.2 U	--	--	1.3 U	--	--
Endrin ketone	1.2 U	--	--	1.3 U	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**0.77 J**	--	--	**2.2 J**	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**7 JT**	**9.5 T**	**33 T**	**16 JT**	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**2 T**	**4.6 JT**	**5.4 JT**	**3.6 T**	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**3.9 JT**	**6.1 JT**	5 UT	**7.3 JT**	--	--
LWG RA Total DDx (Calculated U = 1/2)	**13 JT**	**20 JT**	**43 JT**	**26 JT**	--	--
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	**0.26 T**	--	--	**0.46 T**	--	--
4,4'-DDE (p,p'-DDE)	**0.078 T**	--	--	**0.12 T**	--	--
4,4'-DDT (p,p'-DDT)	**0.17 T**	--	--	**0.26 T**	--	--
alpha-Hexachlorocyclohexane (BHC)	0.067 UT	--	--	0.054 UT	--	--
beta-Hexachlorocyclohexane (BHC)	0.067 UT	--	--	0.054 UT	--	--
delta-Hexachlorocyclohexane (BHC)	0.067 UT	--	--	0.054 UT	--	--
Endrin ketone	0.067 UT	--	--	0.054 UT	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**0.39 JT**	**0.62 T**	**2.1 T**	**0.65 JT**	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**0.11 T**	**0.31 JT**	**0.34 JT**	**0.15 T**	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**0.22 JT**	**0.41 JT**	0.32 UT	**0.31 JT**	--	--
LWG RA Total DDx (Calculated U = 1/2)	**0.72 JT**	**1.3 JT**	**2.8 JT**	**1.1 JT**	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	SL-03-F-PG	SL-04-A-PG	SL-04-F-PG	SL-05-A-PG	SS-10	SS-2
Sample Name:	LWG2-PG-SL3F	LWG2-PG-SL4A	LWG2-PG-SL4F	LWG2-PG-SL5A	981112-SS-10	981112-SS-02
Sample Date:	11/29/2005	11/29/2005	11/29/2005	11/29/2005	11/12/1998	11/12/1998
Depth interval:	0 - 30 cm	0 - 20 cm	0 - 30 cm	0 - 26 cm	0 - 6.096 cm	0 - 6.096 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	104	115	96.2	99.8	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	420	580	800	350	2600	790
Benzo(a)pyrene	690	790	1000	560	50 U	1500
Benzo(b)fluoranthene	420	500	680	340	5800	1500
Benzo(k)fluoranthene	330	370	510	290	1600	470
Chrysene	520	700	970	440	3500	930
Dibenzo(a,h)anthracene	64	80	110	59	520	220
Indeno(1,2,3-c,d)pyrene	550	590	870	450	2500	1200
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	900 T	1000 T	1400 T	740 T	1700 T	2100 T
LWG RA Total LPAH (Calculated U = 1/2)	1700 T	2600 T	7200 T	690 T	3900 T	640 T
LWG RA Total PAH (Calculated U = 1/2)	7200 T	9900 T	17000 T	5100 T	35000 T	12000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	23 T	85 T	70 T	34 T	--	--
Benzo(a)pyrene	38 T	120 T	90 T	54 T	--	--
Benzo(b)fluoranthene	23 T	70 T	61 T	33 T	--	--
Benzo(k)fluoranthene	18 T	54 T	46 T	28 T	--	--
Chrysene	29 T	100 T	87 T	42 T	--	--
Dibenzo(a,h)anthracene	3.5 T	10 T	9.8 T	5.7 T	--	--
Indeno(1,2,3-c,d)pyrene	30 T	87 T	78 T	43 T	--	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	49 T	150 T	120 T	71 T	--	--
LWG RA Total LPAH (Calculated U = 1/2)	91 T	390 T	640 T	67 T	--	--
LWG RA Total PAH (Calculated U = 1/2)	390 T	1500 T	1500 T	490 T	--	--
Semivolatile Organics (µg/kg)						
Carbazole	14	14	110	13	--	--
Semivolatile Organics (mg/kg-OC)						
Carbazole	0.77 T	2.1 T	9.8 T	1.3 T	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	SL-03-F-PG	SL-04-A-PG	SL-04-F-PG	SL-05-A-PG	SS-10	SS-2
Sample Name:	LWG2-PG-SL3F	LWG2-PG-SL4A	LWG2-PG-SL4F	LWG2-PG-SL5A	981112-SS-10	981112-SS-02
Sample Date:	11/29/2005	11/29/2005	11/29/2005	11/29/2005	11/12/1998	11/12/1998
Depth interval:	0 - 30 cm	0 - 20 cm	0 - 30 cm	0 - 26 cm	0 - 6.096 cm	0 - 6.096 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	SS-4	SS-5	SS-6	SS-7	SS-9	U3C2
Sample Name:	981112-SS-04	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-09	U3C2SG-110421
Sample Date:	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	4/21/2011
Depth interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	--	--	--	--	--	81
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	1300	21900	130	12800	3700	9.7 J
Benzo(a)pyrene	2900	69100	360	23700	3400	11 J
Benzo(b)fluoranthene	3100	60900	370	25000	6600	--
Benzo(k)fluoranthene	880	17000	110	6900	1700	--
Chrysene	1700	29700	150	14300	4300	17 J
Dibenzo(a,h)anthracene	490	9400	62	1900	500	20 U
Indeno(1,2,3-c,d)pyrene	2400	47300	350	23700	2200	20 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	4100 T	92000 T	510 T	32000 T	5200 T	25 JT
LWG RA Total LPAH (Calculated U = 1/2)	1700 T	24000 T	240 T	14000 T	9800 T	85 JT
LWG RA Total PAH (Calculated U = 1/2)	21000 T	400000 T	2700 T	180000 T	56000 T	220 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	--	--	--	--	--	0.43 JT
Benzo(a)pyrene	--	--	--	--	--	0.49 JT
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	--	--	--	--	--	0.76 JT
Dibenzo(a,h)anthracene	--	--	--	--	--	0.9 UT
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	0.9 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	--	--	--	--	1.1 JT
LWG RA Total LPAH (Calculated U = 1/2)	--	--	--	--	--	3.8 JT
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	--	--	9.8 JT
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	20 U
Semivolatile Organics (mg/kg-OC)						
Carbazole	--	--	--	--	--	0.9 UT
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	3.8 UT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	0.17 UT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	SS-4	SS-5	SS-6	SS-7	SS-9	U3C2
Sample Name:	981112-SS-04	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-09	U3C2SG-110421
Sample Date:	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	4/21/2011
Depth interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 25 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	2 U
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	2 U
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	2 U
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.98 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.98 U
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.98 UJ
Endrin ketone	--	--	--	--	--	2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	0.98 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	2 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	2 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	**3.9 T**
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	**7.9 T**
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	0.09 UT
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	0.09 UT
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	0.09 UT
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.044 UT
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.044 UT
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.044 UJT
Endrin ketone	--	--	--	--	--	0.09 UT
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	0.09 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	0.09 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	**0.18 T**
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	**0.36 T**

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	U4Q1	U4Q2	WLCASF97S016	WLCDRD05PG052	WLCDRD05PG054	WLCDRD05PG056
Sample Name:	U4Q1SG-110421	U4Q2SG-110421	WLCASF97S016W4150	WLCDRD05PG05252	WLCDRD05PG05454	WLCDRD05PG05656
Sample Date:	4/21/2011	4/21/2011	6/10/1997	5/27/2005	5/27/2005	5/25/2005
Depth interval:	0 - 24 cm	0 - 28.8 cm	0 - 10 cm	0 - 28 cm	0 - 28 cm	0 - 30 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	91	79	--	111 J	93.6 J	88.4 J
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	20 U	19 U	288	5200	1500	630
Benzo(a)pyrene	20 U	19 U	377	9700	1800	1000
Benzo(b)fluoranthene	--	--	276	6000	1100	710
Benzo(k)fluoranthene	--	--	--	4800	950	590
Chrysene	20 U	19 U	346	6700	1900	810
Dibenzo(a,h)anthracene	20 U	19 U	55	980	190	150
Indeno(1,2,3-c,d)pyrene	20 U	19 U	305	9100	1500	890
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	20 UT	23 JT	520 T	13000 T	2400 T	1400 T
LWG RA Total LPAH (Calculated U = 1/2)	71 JT	67 JT	1300 T	19000 T	3300 T	1000 T
LWG RA Total PAH (Calculated U = 1/2)	170 JT	170 JT	4800 T	93000 T	21000 T	8600 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	1 UT	1.9 UT	13 T	190 T	69 T	39 T
Benzo(a)pyrene	1 UT	1.9 UT	17 T	360 T	83 T	60 T
Benzo(b)fluoranthene	--	--	13 T	200 T	51 T	44 T
Benzo(k)fluoranthene	--	--	--	180 T	44 T	37 T
Chrysene	1 UT	1.9 UT	16 T	250 T	88 T	51 T
Dibenzo(a,h)anthracene	1 UT	1.9 UT	2.5 T	36 T	8.8 T	9.4 T
Indeno(1,2,3-c,d)pyrene	1 UT	1.9 UT	14 T	330 T	69 T	56 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1 UT	2.3 JT	24 T	470 T	110 T	84 T
LWG RA Total LPAH (Calculated U = 1/2)	3.7 JT	6.7 JT	61 T	680 T	150 T	66 T
LWG RA Total PAH (Calculated U = 1/2)	9 JT	17 JT	220 T	3400 T	940 T	540 T
Semivolatile Organics (µg/kg)						
Carbazole	20 U	19 U	--	250 J	30 U	50
Semivolatile Organics (mg/kg-OC)						
Carbazole	1 UT	1.9 UT	--	9.2 JT	1 UT	3 T
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	3.9 UT	3.8 UT	--	53 T	30 JT	50 UT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	0.23 UT	0.38 UT	--	1.9 T	1.2 JT	3 UT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	U4Q1	U4Q2	WLCASF97S016	WLCDRD05PG052	WLCDRD05PG054	WLCDRD05PG056
Sample Name:	U4Q1SG-110421	U4Q2SG-110421	WLCASF97S016W4150	WLCDRD05PG05252	WLCDRD05PG05454	WLCDRD05PG05656
Sample Date:	4/21/2011	4/21/2011	6/10/1997	5/27/2005	5/27/2005	5/25/2005
Depth interval:	0 - 24 cm	0 - 28.8 cm	0 - 10 cm	0 - 28 cm	0 - 28 cm	0 - 30 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	9.8 U	1.9 U	--	**24 J**	**13 J**	**46**
4,4'-DDE (p,p'-DDE)	9.8 U	1.9 U	--	**7.3 J**	**5.4 J**	**9.6**
4,4'-DDT (p,p'-DDT)	9.8 U	1.9 UJ	--	**8.9 J**	**79**	**78**
alpha-Hexachlorocyclohexane (BHC)	4.9 U	0.96 U	--	0.31 U	0.36 U	0.29 U
beta-Hexachlorocyclohexane (BHC)	4.9 U	0.96 U	--	0.98 U	1.8 U	0.92 U
delta-Hexachlorocyclohexane (BHC)	4.9 UJ	0.96 UJ	--	1 U	0.46 U	0.31 U
Endrin ketone	9.8 U	1.9 U	--	1.1 U	0.23 U	1.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	4.9 U	0.96 U	--	2.7 U	0.56 U	0.85 U
LWG RA Sum DDD (Calculated U = 1/2)	9.8 UT	1.9 UT	--	**39 JT**	**21 JT**	**62 T**
LWG RA Sum DDE (Calculated U = 1/2)	9.8 UT	1.9 UT	--	**7.8 JT**	**5.7 JT**	**12 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	9.8 UT	**6.1 JT**	--	**9.9 JT**	**80 T**	**81 NJT**
LWG RA Total DDx (Calculated U = 1/2)	9.8 UT	**9.9 JT**	--	**57 JT**	**110 JT**	**150 NJT**
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	0.59 UT	0.19 UT	--	**0.88 JT**	**0.6 JT**	**2.9 T**
4,4'-DDE (p,p'-DDE)	0.59 UT	0.19 UT	--	**0.27 JT**	**0.25 JT**	**0.6 T**
4,4'-DDT (p,p'-DDT)	0.59 UT	0.19 UJT	--	**0.33 JT**	**3.7 T**	**4.9 T**
alpha-Hexachlorocyclohexane (BHC)	0.29 UT	0.097 UT	--	0.011 UT	0.017 UT	0.018 UT
beta-Hexachlorocyclohexane (BHC)	0.29 UT	0.097 UT	--	0.036 UT	0.083 UT	0.058 UT
delta-Hexachlorocyclohexane (BHC)	0.29 UJT	0.097 UJT	--	0.04 UT	0.021 UT	0.019 UT
Endrin ketone	0.59 UT	0.19 UT	--	0.04 UT	0.011 UT	0.075 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.59 UT	0.19 UT	--	**1.4 JT**	**0.98 JT**	**3.9 T**
LWG RA Sum DDE (Calculated U = 1/2)	0.59 UT	0.19 UT	--	**0.29 JT**	**0.27 JT**	**0.74 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	0.59 UT	**0.61 JT**	--	**0.37 JT**	**3.7 T**	**5.1 NJT**
LWG RA Total DDx (Calculated U = 1/2)	0.59 UT	**0.99 JT**	--	**2.1 JT**	**5 JT**	**9.7 NJT**

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	WLCGSD01AN0101	WLCGSD01AN0102	WLCGSD01AN0103	WLCGSD01AN0105	WLCGSD01AN0205	WLCMRD08SDBH4SS
Sample Name:	WLCGSD01AN0101_00-10	WLCGSD01AN0102_00-10	WLCGSD01AN0103_00-10	WLCGSD01AN0105_00-10	WLCGSD01AN0205_00-10	WLCMRD08BH4-1
Sample Date:	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/11/2001	4/18/2008
Depth interval:	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	70.5 J	108 J	281 J	56.1 J	70.6 J	131
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	12000	23000	100000	89	210	2200
Benzo(a)pyrene	18000	37000	93000	150	270	2200
Benzo(b)fluoranthene	9300	19000	46000	86	190	2600
Benzo(k)fluoranthene	11000	21000	62000	89	190	750
Chrysene	16000	31000	140000	120	300	3000
Dibenzo(a,h)anthracene	1200	2200	6400	14	28	230
Indeno(1,2,3-c,d)pyrene	10000	26000	46000	110	200	1700
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	22000 T	46000 T	120000 T	190 T	360 T	3100 T
LWG RA Total LPAH (Calculated U = 1/2)	52000 JT	220000 JT	770000 JT	440 JT	350 T	11000 T
LWG RA Total PAH (Calculated U = 1/2)	230000 JT	620000 JT	1800000 JT	1700 JT	3200 T	37000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	1600 T	540 T	2000 T	19 T	17 T	100 T
Benzo(a)pyrene	2300 T	870 T	2000 T	32 T	22 T	100 T
Benzo(b)fluoranthene	1200 T	450 T	800 T	18 T	16 T	100 T
Benzo(k)fluoranthene	1400 T	500 T	1000 T	19 T	16 T	40 T
Chrysene	2100 T	730 T	2000 T	26 T	20 T	100 T
Dibenzo(a,h)anthracene	160 T	52 T	100 T	3 T	2.3 T	10 T
Indeno(1,2,3-c,d)pyrene	1000 T	610 T	800 T	23 T	20 T	90 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2900 T	1100 T	2500 T	41 T	30 T	140 T
LWG RA Total LPAH (Calculated U = 1/2)	6800 JT	5200 JT	13000 JT	94 JT	29 T	490 T
LWG RA Total PAH (Calculated U = 1/2)	30000 JT	15000 JT	31000 JT	360 JT	260 T	1700 T
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	1100
Semivolatile Organics (mg/kg-OC)						
Carbazole	--	--	--	--	--	60 T
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	24 T
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	1.2 T
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	**WLCGSD01AN0101**	**WLCGSD01AN0102**	**WLCGSD01AN0103**	**WLCGSD01AN0105**	**WLCGSD01AN0205**	**WLCMRD08SDBH4SS**
Sample Name:	**WLCGSD01AN0101_00-10**	**WLCGSD01AN0102_00-10**	**WLCGSD01AN0103_00-10**	**WLCGSD01AN0105_00-10**	**WLCGSD01AN0205_00-10**	**WLCMRD08BH4-1**
Sample Date:	**4/10/2001**	**4/10/2001**	**4/10/2001**	**4/10/2001**	**4/11/2001**	**4/18/2008**
Depth interval:	**0 - 10 cm**	**0 - 10 cm**	**0 - 10 cm**	**0 - 10 cm**	**0 - 10 cm**	**0 - 30.48 cm**
Analysis Matrix:	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**	**Surface Sediment**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	**8.4 J**
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	**2.8 J**
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	**5.2**
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	1.1 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	1.1 U
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	1.1 U
Endrin ketone	--	--	--	--	--	**0.56 J**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	**8.1 NJ**
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	**15 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	**4.4 JT**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	**5.8 T**
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	**25 JT**
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	**0.4 JT**
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	**0.1 JT**
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	**0.3 T**
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.06 UT
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.06 UT
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.06 UT
Endrin ketone	--	--	--	--	--	**0.03 JT**
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	**0.7 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	**0.2 JT**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	**0.33 T**
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	**1.2 JT**

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	WLCMRD08SDBH5SS	WLCMRD08SDBH6SS	WLCMRD08SDDA17SS	WLCMRD08SDDA18SS	WLCMRD08SDDC25SS	WLCMRD08SDUD1SS
Sample Name:	WLCMRD08BH5-1	WLCMRD08BH6-1	WLCMRD08DA17-1	WLCMRD08DA18-1	WLCMRD08DC25-1	WLCMRD08UD1-1
Sample Date:	4/17/2008	4/17/2008	4/17/2008	4/18/2008	4/17/2008	4/15/2008
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)						
Zinc	121	135	218	175	402	154
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	710	590	10000	1700	30000	14000
Benzo(a)pyrene	910	900	12000	1700	39000	19000
Benzo(b)fluoranthene	1000	890	13000	1500	38000	20000
Benzo(k)fluoranthene	350	290	4200	450	13000	6800
Chrysene	910	760	12000	2100	34000	16000
Dibenzo(a,h)anthracene	95	110	1400	220	3400	2000
Indeno(1,2,3-c,d)pyrene	740	760	11000	1200	28000	15000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1300 T	1200 T	17000 T	2400 T	52000 T	26000 T
LWG RA Total LPAH (Calculated U = 1/2)	1100 T	920 T	26000 T	14000 T	72000 T	17000 T
LWG RA Total PAH (Calculated U = 1/2)	10000 T	9400 T	150000 T	34000 T	460000 T	180000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	33 T	28 T	300 T	68 T	2000 T	460 T
Benzo(a)pyrene	43 T	40 T	410 T	68 T	2400 T	620 T
Benzo(b)fluoranthene	50 T	42 T	440 T	60 T	2300 T	700 T
Benzo(k)fluoranthene	17 T	14 T	140 T	18 T	800 T	220 T
Chrysene	43 T	36 T	410 T	84 T	2100 T	520 T
Dibenzo(a,h)anthracene	4.5 T	5.2 T	47 T	8.8 T	210 T	70 T
Indeno(1,2,3-c,d)pyrene	35 T	36 T	370 T	48 T	1700 T	490 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	60 T	56 T	570 T	95 T	3200 T	860 T
LWG RA Total LPAH (Calculated U = 1/2)	53 T	43 T	870 T	550 T	4500 T	570 T
LWG RA Total PAH (Calculated U = 1/2)	490 T	440 T	5100 T	1400 T	28000 T	5900 T
Semivolatile Organics (µg/kg)						
Carbazole	44	21	580	58 J	2900	750
Semivolatile Organics (mg/kg-OC)						
Carbazole	2.1 T	0.99 T	20 T	2.3 JT	180 T	25 T
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 JT	24 T	22 T	78 JT	63 UT	34 UT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	1.5 JT	1.1 T	0.75 T	3.1 JT	3.9 UT	1.1 UT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	WLCMRD08SDBH5SS	WLCMRD08SDBH6SS	WLCMRD08SDDA17SS	WLCMRD08SDDA18SS	WLCMRD08SDDC25SS	WLCMRD08SDUD1SS
Sample Name:	WLCMRD08BH5-1	WLCMRD08BH6-1	WLCMRD08DA17-1	WLCMRD08DA18-1	WLCMRD08DC25-1	WLCMRD08UD1-1
Sample Date:	4/17/2008	4/17/2008	4/17/2008	4/18/2008	4/17/2008	4/15/2008
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	**5.6**	**3.2**	**19**	**15**	**400**	**19**
4,4'-DDE (p,p'-DDE)	**2.7 J**	**1.5 J**	**7.1 J**	**15 J**	2 U	3.7 U
4,4'-DDT (p,p'-DDT)	**2.1**	**13**	**2.2**	**4.2**	5.7 U	**50**
alpha-Hexachlorocyclohexane (BHC)	0.21 U	0.21 U	1.2 U	**0.24**	2 U	1.1 U
beta-Hexachlorocyclohexane (BHC)	0.21 U	0.21 U	1.2 U	0.23 U	2 U	2.4 U
delta-Hexachlorocyclohexane (BHC)	0.21 U	0.21 U	1.2 U	0.23 U	2.4 U	1.1 U
Endrin ketone	**0.17 J**	0.21 U	1.2 U	0.4 U	**20 J**	**4.7 J**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**0.51 J**	0.49 U	2.7 U	0.76 U	25 U	**6**
LWG RA Sum DDD (Calculated U = 1/2)	**7.9 JT**	**4.8 T**	**27 JT**	**21 T**	**500 T**	**31 JT**
LWG RA Sum DDE (Calculated U = 1/2)	**2.8 JT**	**1.6 JT**	**7.7 JT**	**16 JT**	2 UT	3.7 UT
LWG RA Sum DDT (Calculated U = 1/2)	**3.1 JT**	**13 T**	**2.7 JT**	**6.1 JT**	5.7 UT	**51 T**
LWG RA Total DDx (Calculated U = 1/2)	**14 JT**	**20 JT**	**37 JT**	**43 JT**	**500 T**	**84 JT**
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	**0.26 T**	**0.15 T**	**0.64 T**	**0.6 T**	**20 T**	**0.62 T**
4,4'-DDE (p,p'-DDE)	**0.13 JT**	**0.071 JT**	**0.24 JT**	**0.6 JT**	0.1 UT	0.12 UT
4,4'-DDT (p,p'-DDT)	**0.099 T**	**0.61 T**	**0.074 T**	**0.17 T**	0.35 UT	**2 T**
alpha-Hexachlorocyclohexane (BHC)	0.0099 UT	0.0099 UT	0.041 UT	**0.0096 T**	0.1 UT	0.036 UT
beta-Hexachlorocyclohexane (BHC)	0.0099 UT	0.0099 UT	0.041 UT	0.0092 UT	0.1 UT	0.079 UT
delta-Hexachlorocyclohexane (BHC)	0.0099 UT	0.0099 UT	0.041 UT	0.0092 UT	0.15 UT	0.036 UT
Endrin ketone	**0.008 JT**	0.0099 UT	0.041 UT	0.02 UT	**1 JT**	**0.15 JT**
LWG RA Sum DDD (Calculated U = 1/2)	**0.37 JT**	**0.23 T**	**0.9 JT**	**0.84 T**	**26 T**	**1 JT**
LWG RA Sum DDE (Calculated U = 1/2)	**0.13 JT**	**0.076 JT**	**0.26 JT**	**0.65 JT**	0.1 UT	0.12 UT
LWG RA Sum DDT (Calculated U = 1/2)	**0.15 JT**	**0.62 T**	**0.092 JT**	**0.25 JT**	0.35 UT	**2 T**
LWG RA Total DDx (Calculated U = 1/2)	**0.65 JT**	**0.92 JT**	**1.3 JT**	**1.7 JT**	**26 T**	**3.1 JT**

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	WLCMRD08SDUD26SS	WLCMRD08SDUD27SS	WLCMRD08SDUD2SS	WLCT0I98GRAB04	WLCT0I98GRAB06	WLR0797WRBC23	WR-WSI98SD061	WR-WSI98SD062
Sample Name:	WLCMRD08UD26-1	WLCMRD08UD27-1	WLCMRD08UD2-1	_CT0I98GRAB04GRAB	LCT0I98GRAB06GRAB	_R0797WRBC23WRBC	WR-WSI98SD0610	WR-WSI98SD0620
Sample Date:	4/13/2008	4/14/2008	4/15/2008	9/14/1998	9/14/1998	7/25/1997	9/21/1997	9/20/1997
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 10 cm	0 - 10 cm	0 - 18 cm	0 - 10 cm	0 - 10 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)								
Zinc	169	429 J	137	67.9	38.6	49.3	107	161
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	2300	15000	5400	1200 J	340	5 UJ	290	72000
Benzo(a)pyrene	3300	21000	6600	1500 J	340	5 UJ	330	57000
Benzo(b)fluoranthene	3300	21000	7300	1100 J	180	5 UJ	310	33000
Benzo(k)fluoranthene	960	6800	2400	920 J	190	5 UJ	240	14000
Chrysene	2900	17000	6100	1200 J	360	5 UJ	380	100000
Dibenzo(a,h)anthracene	420	2000	750	140 J	100 U	5 UJ	65	9200
Indeno(1,2,3-c,d)pyrene	2700	16000	5800	980 J	230	5 UJ	190	12000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	4600 T	28000 T	9200 T	2000 JT	470 T	5 UJT	480 T	78000 T
LWG RA Total LPAH (Calculated U = 1/2)	2400 T	27000 JT	9100 T	2200 JT	2000 T	13 JT	710 T	230000 T
LWG RA Total PAH (Calculated U = 1/2)	28000 T	210000 JT	75000 T	15000 JT	6500 T	32 JT	4300 T	750000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	93 T	410 T	230 T	53 JT	52 T	1 UJT	15 T	2800 T
Benzo(a)pyrene	130 T	570 T	280 T	66 JT	52 T	1 UJT	17 T	2200 T
Benzo(b)fluoranthene	130 T	570 T	310 T	48 JT	28 T	1 UJT	16 T	1300 T
Benzo(k)fluoranthene	39 T	180 T	100 T	41 JT	29 T	1 UJT	13 T	540 T
Chrysene	120 T	460 T	260 T	53 JT	55 T	1 UJT	20 T	4000 T
Dibenzo(a,h)anthracene	17 T	50 T	32 T	6.2 JT	20 UT	1 UJT	3.4 T	350 T
Indeno(1,2,3-c,d)pyrene	110 T	430 T	250 T	43 JT	35 T	1 UJT	10 T	460 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	180 T	760 T	390 T	87 JT	74 T	1 UJT	25 T	3000 T
LWG RA Total LPAH (Calculated U = 1/2)	97 T	730 JT	390 T	97 JT	320 T	2.5 JT	37 T	8900 T
LWG RA Total PAH (Calculated U = 1/2)	1100 T	5700 JT	3200 T	640 JT	1000 T	6.5 JT	230 T	30000 T
Semivolatile Organics (µg/kg)								
Carbazole	350	4400 J	270	--	--	--	77 J	8400 J
Semivolatile Organics (mg/kg-OC)								
Carbazole	14 T	120 JT	11 T	--	--	--	4.1 JT	320 JT
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	21 UT	23 UT	25 UT	45 T	10 UT	10 UT	38 UJT	--
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	0.85 UT	0.62 UT	1.1 UT	1.9 T	2 UT	2 UT	2 UJT	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	WLCMRD08SDUD26SS	WLCMRD08SDUD27SS	WLCMRD08SDUD2SS	WLCT0I98GRAB04	WLCT0I98GRAB06	WLR0797WRBC23	WR-WSI98SD061	WR-WSI98SD062
Sample Name:	WLCMRD08UD26-1	WLCMRD08UD27-1	WLCMRD08UD2-1	CT0I98GRAB04GRAB	LCT0I98GRAB06GRAB	R0797WRBC23WRBC	WR-WSI98SD0610	WR-WSI98SD0620
Sample Date:	4/13/2008	4/14/2008	4/15/2008	9/14/1998	9/14/1998	7/25/1997	9/21/1997	9/20/1997
Depth interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 10 cm	0 - 10 cm	0 - 18 cm	0 - 10 cm	0 - 10 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-118	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	**10**	**17**	**8.2 J**	**11**	3.3 U	2 U	--	--
4,4'-DDE (p,p'-DDE)	**4.1**	**34 J**	2.6 U	**5.9**	2.3 U	2 U	--	--
4,4'-DDT (p,p'-DDT)	2.8 U	**64**	4.2 U	**49**	6.7 U	**1.7**	--	--
alpha-Hexachlorocyclohexane (BHC)	0.22 U	**1.5 J**	1.2 U	--	--	2 U	--	--
beta-Hexachlorocyclohexane (BHC)	0.22 U	1.7 U	1.2 U	--	--	2 U	--	--
delta-Hexachlorocyclohexane (BHC)	0.22 U	1.4 U	1.2 U	--	--	2 U	--	--
Endrin ketone	0.32 U	**6.5 NJ**	1.2 U	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.2 U	**11**	**11**	1.7 U	1.7 U	2 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**14 JT**	**18 T**	**19 JT**	**11 T**	3.3 UT	2 UT	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**4.4 NJT**	**35 JT**	2.6 UT	**5.9 T**	2.3 UT	2 UT	--	--
LWG RA Sum DDT (Calculated U = 1/2)	2.8 UT	**65 T**	4.2 UT	**49 T**	6.7 UT	**1.7 T**	--	--
LWG RA Total DDx (Calculated U = 1/2)	**20 JNT**	**120 JT**	**24 JT**	**66 T**	6.7 UT	**3.7 T**	--	--
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	**0.4 T**	**0.46 T**	**0.35 JT**	**0.48 T**	0.51 UT	0.4 UT	--	--
4,4'-DDE (p,p'-DDE)	**0.17 T**	**0.92 JT**	0.11 UT	**0.26 T**	0.35 UT	0.4 UT	--	--
4,4'-DDT (p,p'-DDT)	0.11 UT	**1.7 T**	0.18 UT	**2.2 T**	1 UT	**0.33 T**	--	--
alpha-Hexachlorocyclohexane (BHC)	0.0089 UT	**0.041 JT**	0.051 UT	--	--	0.4 UT	--	--
beta-Hexachlorocyclohexane (BHC)	0.0089 UT	0.046 UT	0.051 UT	--	--	0.4 UT	--	--
delta-Hexachlorocyclohexane (BHC)	0.0089 UT	0.038 UT	0.051 UT	--	--	0.4 UT	--	--
Endrin ketone	0.013 UT	**0.18 NJT**	0.051 UT	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**0.55 JT**	**0.48 T**	**0.82 JT**	**0.48 T**	0.51 UT	0.4 UT	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**0.18 NJT**	**0.94 JT**	0.11 UT	**0.26 T**	0.35 UT	0.4 UT	--	--
LWG RA Sum DDT (Calculated U = 1/2)	0.11 UT	**1.7 T**	0.18 UT	**2.2 T**	1 UT	**0.33 T**	--	--
LWG RA Total DDx (Calculated U = 1/2)	**0.79 JNT**	**3.2 JT**	**1 JT**	**2.9 T**	1 UT	**0.73 T**	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	WR-WSI98SD063	WR-WSI98SD067	WR-WSI98SD069	WR-WSI98SD070	WR-WSI98SD072
Sample Name:	WR-WSI98SD0630	WR-WSI98SD0670	WR-WSI98SD0690	/R-WSI98SD0700000C	WR-WSI98SD0720
Sample Date:	9/20/1997	9/21/1997	9/20/1997	9/20/1997	9/20/1997
Depth interval:	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
Metals (mg/kg)					
Zinc	185	150	144	117 T	113
Polycyclic Aromatic Hydrocarbons (µg/kg)					
Benzo(a)anthracene	4000	14000	4800	2250 T	700
Benzo(a)pyrene	5100	15000	2400	1120 T	980
Benzo(b)fluoranthene	3100	12000	1900	935 T	800
Benzo(k)fluoranthene	3200	10000	1400	985 T	630
Chrysene	5600	17000	6300	2500 T	1100
Dibenzo(a,h)anthracene	1000	2500	390	165 T	160
Indeno(1,2,3-c,d)pyrene	3000	9500	1100	405 T	560
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	7100 T	21000 T	3600 T	1700 T	1400 T
LWG RA Total LPAH (Calculated U = 1/2)	28000 T	120000 T	66000 T	52000 T	5100 T
LWG RA Total PAH (Calculated U = 1/2)	85000 T	310000 T	120000 T	87000 T	14000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)					
Benzo(a)anthracene	200 T	640 T	440 T	214 T	70 T
Benzo(a)pyrene	300 T	680 T	220 T	107 T	100 T
Benzo(b)fluoranthene	180 T	550 T	170 T	89 T	80 T
Benzo(k)fluoranthene	190 T	500 T	130 T	93.8 T	65 T
Chrysene	330 T	770 T	570 T	240 T	110 T
Dibenzo(a,h)anthracene	60 T	110 T	35 T	15.7 T	16 T
Indeno(1,2,3-c,d)pyrene	200 T	430 T	100 T	38.6 T	58 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	420 T	960 T	330 T	160 T	140 T
LWG RA Total LPAH (Calculated U = 1/2)	1600 T	5400 T	6000 T	4900 T	530 T
LWG RA Total PAH (Calculated U = 1/2)	5000 T	14000 T	11000 T	8400 T	1400 T
Semivolatile Organics (µg/kg)					
Carbazole	260 J	1800	3400 J	1290 JT	86 J
Semivolatile Organics (mg/kg-OC)					
Carbazole	15 JT	82 T	310 JT	123 JT	8.9 JT
PCB Aroclors (µg/kg)					
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	120 T	40 UJT
PCB Aroclors (mg/kg-OC)					
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	11 T	4 UJT
PCB Congeners (µg/kg)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-169	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

System Location Code:	WR-WSI98SD063	WR-WSI98SD067	WR-WSI98SD069	WR-WSI98SD070	WR-WSI98SD072
Sample Name:	WR-WSI98SD0630	WR-WSI98SD0670	WR-WSI98SD0690	/R-WSI98SD0700000C	WR-WSI98SD0720
Sample Date:	9/20/1997	9/21/1997	9/20/1997	9/20/1997	9/20/1997
Depth interval:	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Analysis Matrix:	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment	Surface Sediment
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (mg/kg-OC)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-169	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/kg)					
4,4'-DDD (p,p'-DDD)	--	--	--	**12.5 T**	**22**
4,4'-DDE (p,p'-DDE)	--	--	--	**7.35 T**	**5.3**
4,4'-DDT (p,p'-DDT)	--	--	--	**25.5 T**	**60**
alpha-Hexachlorocyclohexane (BHC)	--	--	--	0.94 UT	0.99 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	0.94 UT	0.99 U
delta-Hexachlorocyclohexane (BHC)	--	--	--	0.94 UT	1.6 UJ
Endrin ketone	--	--	--	2.8 UJT	2 UJ
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	0.94 UT	0.99 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	**12.5 T**	**22 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	**7.35 T**	**5.3 T**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	**25.5 T**	**60 T**
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	**45.4 T**	**87 T**
Pesticides (mg/kg-OC)					
4,4'-DDD (p,p'-DDD)	--	--	--	**1.19 T**	**2.3 T**
4,4'-DDE (p,p'-DDE)	--	--	--	**0.7 T**	**0.55 T**
4,4'-DDT (p,p'-DDT)	--	--	--	**2.43 T**	**6 T**
alpha-Hexachlorocyclohexane (BHC)	--	--	--	0.09 UT	0.1 UT
beta-Hexachlorocyclohexane (BHC)	--	--	--	0.09 UT	0.1 UT
delta-Hexachlorocyclohexane (BHC)	--	--	--	0.09 UT	0.16 UJT
Endrin ketone	--	--	--	0.27 UJT	0.2 UJT
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	**1.19 T**	**2.3 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	**0.7 T**	**0.55 T**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	**2.43 T**	**6 T**
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	**4.32 T**	**8.9 T**

Table 3-15
Existing Data Screening Table – Surface Sediment (Category A) Background

Notes:

Detected concentration is greater than 1 screening level

Detected concentration is greater than 2 screening levels

Detected concentration is greater than 3 screening levels

Detected concentration is greater than 4 screening levels

Detected concentration is greater than 5 screening levels

Detected concentration is greater than 6 screening levels

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R = Rejected

T = Result is the value of a total or calculation

-- = Results not reported or not applicable

N = Normal Field Sample

Acronyms:

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

mg/kg-OC = milligrams per kilogram of organic carbon normalized

BaPEq = benzo[a]pyrene equivalents

BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)

cPAH = carcinogenic PAH

cm = centimeters

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

HPAH = high molecular weight polycyclic aromatic hydrocarbon

LWG = Lower Willamette Group

MQ = mean quotient

NA = not applicable

PAH = polycyclic aromatic hydrocarbon

PCB = polychlorinated biphenyls

RA = Portland Harbor Site risk assessment

TEQ = toxic equivalents quotient

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC
Sample Name:	DGS-03SC-0104-101005	DGS-06SC-0104-101007	DGS-07SC-0104-101012	DGS-08SC-0104-101007	DGS-11SC-0104-101006	DGS-13SC-0104-101005
Sample Date:	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm
Metals (mg/kg)						
Zinc	307 J	70	220	56	122	107 J
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	10000	5000	39000	10000	44000	2800
Benzo(a)pyrene	14000	7200	40000	13000	58000	3500
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	15000	6400	49000	13000	58000	4000
Dibenzo(a,h)anthracene	2900	1200	1800 U	1800	6500 U	550
Indeno(1,2,3-c,d)pyrene	9000	3600	9600	6700	26000	1800
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	20000 T	10000 T	51000 T	18000 T	74000 T	4900 T
LWG RA Total LPAH (Calculated U = 1/2)	48000 T	22000 T	240000 T	140000 T	1300000 T	32000 T
LWG RA Total PAH (Calculated U = 1/2)	180000 T	90000 T	620000 T	310000 T	2000000 T	72000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	400 T	300 T	1100 T	500 T	760 T	170 T
Benzo(a)pyrene	610 T	380 T	1000 T	640 T	998.2788696289 T	220 T
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	650 T	340 T	1300 T	640 T	998.2788696289 T	200 T
Dibenzo(a,h)anthracene	130 T	63 T	49 UT	89 T	110 UT	34 T
Indeno(1,2,3-c,d)pyrene	400 T	190 T	260 T	330 T	450 T	110 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	890 T	540 T	1300 T	880 T	1300 T	300 T
LWG RA Total LPAH (Calculated U = 1/2)	2200 T	1200 T	6600 T	7100 T	22000 T	2000 T
LWG RA Total PAH (Calculated U = 1/2)	8000 T	4800 T	17000 T	15000 T	34000 T	4400 T
Semivolatile Organics (µg/kg)						
Carbazole	900	620 U	3400	4000	15000	920
Semivolatile Organics (mg/kg-OC)						
Carbazole	40 T	32 UT	93 T	200 T	260 T	57 T
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	200 T	32 UT	410 JT	120 UT	140 T	31 UT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	8.8 T	1.7 UT	11 JT	5.9 UT	2.4 T	1.9 UT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC
Sample Name:	DGS-03SC-0104-101005	DGS-06SC-0104-101007	DGS-07SC-0104-101012	DGS-08SC-0104-101007	DGS-11SC-0104-101006	DGS-13SC-0104-101005
Sample Date:	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	16 U	16 U	**130**	65 U	16 U	16 U
4,4'-DDE (p,p'-DDE)	**17**	16 U	**52**	65 U	**8.3 J**	**6.4 J**
4,4'-DDT (p,p'-DDT)	**25**	16 U	34 U	65 U	16 U	16 U
alpha-Hexachlorocyclohexane (BHC)	8 U	8.2 U	17 U	32 U	29 U	7.9 U
beta-Hexachlorocyclohexane (BHC)	8 U	8.2 U	91 U	32 U	18 U	7.9 U
delta-Hexachlorocyclohexane (BHC)	8 UJ	8.2 U	17 U	32 U	7.8 U	7.9 UJ
Endrin ketone	16 U	16 U	34 U	65 U	16 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8 U	8.2 U	17 U	32 U	7.8 U	7.9 U
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	16 UT	**160 JT**	65 UT	16 UT	16 UT
LWG RA Sum DDE (Calculated U = 1/2)	**25 T**	16 UT	**69 T**	65 UT	**16 JT**	**14 JT**
LWG RA Sum DDT (Calculated U = 1/2)	**33 T**	16 UT	34 UT	65 UT	16 UT	16 UT
LWG RA Total DDx (Calculated U = 1/2)	**74 T**	16 UT	**270 JT**	65 UT	**48 JT**	**46 JT**
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	0.69 UT	0.84 UT	**3.6 T**	3.2 UT	0.28 UT	0.99 UT
4,4'-DDE (p,p'-DDE)	**0.74 T**	0.84 UT	**1.4 T**	3.2 UT	**0.14 JT**	**0.4 JT**
4,4'-DDT (p,p'-DDT)	**1.1 T**	0.84 UT	0.93 UT	3.2 UT	0.28 UT	0.99 UT
alpha-Hexachlorocyclohexane (BHC)	0.35 UT	0.43 UT	0.47 UT	1.6 UT	0.5 UT	0.49 UT
beta-Hexachlorocyclohexane (BHC)	0.35 UT	0.43 UT	2.5 UT	1.6 UT	0.31 UT	0.49 UT
delta-Hexachlorocyclohexane (BHC)	0.35 UJT	0.43 UT	0.47 UT	1.6 UT	0.13 UT	0.49 UJT
Endrin ketone	0.69 UT	0.84 UT	0.93 UT	3.2 UT	0.28 UT	0.99 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.69 UT	0.84 UT	**4.5 JT**	3.2 UT	0.28 UT	0.99 UT
LWG RA Sum DDE (Calculated U = 1/2)	**1.1 T**	0.84 UT	**1.9 T**	3.2 UT	**0.28 JT**	**0.9 JT**
LWG RA Sum DDT (Calculated U = 1/2)	**1.4 T**	0.84 UT	0.93 UT	3.2 UT	0.28 UT	0.99 UT
LWG RA Total DDx (Calculated U = 1/2)	**3.2 T**	0.84 UT	**7.3 JT**	3.2 UT	**0.84 JT**	**2.9 JT**

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-18SC	DGS-18SC	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC
Sample Name:	DGS-18SC-004.5-101008	DGS-18SC-0104-101008	DGS-18SC-015.5-101008	DGS-19SC-0104-101006	DGS-20SC-0104-101008	DGS-22SC-0104-101012
Sample Date:	10/8/2010	10/8/2010	10/8/2010	10/6/2010	10/8/2010	10/12/2010
Depth Interval:	0 - 137.16 cm	30.48 - 121.92 cm	30.48 - 167.64 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm
Metals (mg/kg)						
Zinc	53	54	51	149	55	140
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	2700	9200	2600	63000	62 U	29000
Benzo(a)pyrene	2200	9500	2100	82000	62 U	37000
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	3100	12000	2900	76000	62 U	37000
Dibenzo(a,h)anthracene	74	1700	64 U	13000 U	62 U	440
Indeno(1,2,3-c,d)pyrene	800	4800	660	41000	62 U	8400
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2900 T	14000 T	2700 T	110000 T	62 UT	44000 T
LWG RA Total LPAH (Calculated U = 1/2)	38000 T	73000 T	39000 T	3500000 T	62 UT	210000 T
LWG RA Total PAH (Calculated U = 1/2)	66000 T	170000 JT	67000 T	4500000 T	530 JT	580000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	270 T	4000 T	260 T	1200 T	31 UT	650 T
Benzo(a)pyrene	220 T	4100 T	210 T	1600 T	31 UT	820 T
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	310 T	5200 T	290 T	1500 T	31 UT	820 T
Dibenzo(a,h)anthracene	7.4 T	740 T	6.4 UT	250 UT	31 UT	9.8 T
Indeno(1,2,3-c,d)pyrene	80 T	2100 T	66 T	790 T	31 UT	190 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	290 T	5900 T	270 T	2100 T	31 UT	980 T
LWG RA Total LPAH (Calculated U = 1/2)	3800 T	31000 T	3900 T	68000 T	31 UT	4700 T
LWG RA Total PAH (Calculated U = 1/2)	6600 T	74000 JT	6700 T	85000 T	260 JT	13000 T
Semivolatile Organics (µg/kg)						
Carbazole	240	890	190	19000	62 U	1600
Semivolatile Organics (mg/kg-OC)						
Carbazole	24 T	390 T	19 T	360 T	31 UT	36 T
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	31 UT	31 UT	230 T	32 UT	33 UJT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	3.2 UT	13 UT	3.1 UT	4.4 T	16 UT	0.73 UJT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-18SC	DGS-18SC	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC
Sample Name:	DGS-18SC-004.5-101008	DGS-18SC-0104-101008	DGS-18SC-015.5-101008	DGS-19SC-0104-101006	DGS-20SC-0104-101008	DGS-22SC-0104-101012
Sample Date:	10/8/2010	10/8/2010	10/8/2010	10/6/2010	10/8/2010	10/12/2010
Depth Interval:	0 - 137.16 cm	30.48 - 121.92 cm	30.48 - 167.64 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	3.3 U	3.2 U	31 U	16 U	3.3 U	16 U
4,4'-DDE (p,p'-DDE)	3.3 U	3.2 U	31 U	**13 J**	3.3 U	16 U
4,4'-DDT (p,p'-DDT)	3.3 U	3.2 U	31 U	16 U	3.3 U	16 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	16 U	24 U	1.6 U	8.2 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	16 U	8.2 U	1.6 U	15 U
delta-Hexachlorocyclohexane (BHC)	1.6 UJ	1.6 U	16 UJ	8.2 U	1.6 U	8.2 U
Endrin ketone	3.3 U	3.2 U	31 U	16 U	3.3 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.6 U	16 U	8.2 U	1.6 U	8.2 U
LWG RA Sum DDD (Calculated U = 1/2)	3.3 UT	3.2 UT	31 UT	16 UT	3.3 UT	16 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.3 UT	3.2 UT	31 UT	**21 JT**	3.3 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.3 UT	3.2 UT	31 UT	16 UT	3.3 UT	16 UT
LWG RA Total DDx (Calculated U = 1/2)	3.3 UT	3.2 UT	31 UT	**53 JT**	3.3 UT	16 UT
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	0.33 UT	1.4 UT	3.1 UT	0.31 UT	1.7 UT	0.36 UT
4,4'-DDE (p,p'-DDE)	0.33 UT	1.4 UT	3.1 UT	**0.25 JT**	1.7 UT	0.36 UT
4,4'-DDT (p,p'-DDT)	0.33 UT	1.4 UT	3.1 UT	0.31 UT	1.7 UT	0.36 UT
alpha-Hexachlorocyclohexane (BHC)	0.16 UT	0.69 UT	1.6 UT	0.46 UT	0.8 UT	0.18 UT
beta-Hexachlorocyclohexane (BHC)	0.16 UT	0.69 UT	1.6 UT	0.16 UT	0.8 UT	0.33 UT
delta-Hexachlorocyclohexane (BHC)	0.16 UJT	0.69 UT	1.6 UJT	0.16 UT	0.8 UT	0.18 UT
Endrin ketone	0.33 UT	1.4 UT	3.1 UT	0.31 UT	1.7 UT	0.36 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.33 UT	1.4 UT	3.1 UT	0.31 UT	1.7 UT	0.36 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.33 UT	1.4 UT	3.1 UT	**0.41 JT**	1.7 UT	0.36 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.33 UT	1.4 UT	3.1 UT	0.31 UT	1.7 UT	0.36 UT
LWG RA Total DDx (Calculated U = 1/2)	0.33 UT	1.4 UT	3.1 UT	**1 JT**	1.7 UT	0.36 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-22SC	DGS-23SC	DGS-24SC	DGS-25SC	DGS-26SC	DGS-26SC
Sample Name:	DGS-22SC-1.92.9-101012	DGS-23SC-0104-101008	DGS-24SC-0104-101012	DGS-25SC-0104-101007	DGS-26SC-0104-101011	DGS-26SC-015.4-101011
Sample Date:	10/12/2010	10/8/2010	10/12/2010	10/7/2010	10/11/2010	10/11/2010
Depth Interval:	57.91 - 88.39 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 164.59 cm
Metals (mg/kg)						
Zinc	**133**	**49**	**94**	**45**	**45**	**45**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	**48000**	64 U	**7600**	64 U	**4800**	**6600**
Benzo(a)pyrene	**60000**	64 U	**9000**	64 U	**6000**	**8000**
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	**56000**	64 U	**8700**	64 U	**5800**	**8000**
Dibenzo(a,h)anthracene	**1400**	64 U	**220**	64 U	**200**	**250**
Indeno(1,2,3-c,d)pyrene	**37000**	64 U	**3800**	64 U	**3500**	**4800**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**77000 T**	64 UT	**11000 T**	64 UT	**7800 T**	**10000 T**
LWG RA Total LPAH (Calculated U = 1/2)	**330000 T**	**340 T**	**120000 T**	64 UT	**74000 T**	**110000 T**
LWG RA Total PAH (Calculated U = 1/2)	**990000 T**	**630 JT**	**230000 T**	64 UT	**130000 T**	**210000 T**
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	**4800 T**	12 UT	**440 T**	32 UT	**360 T**	**660 T**
Benzo(a)pyrene	**6000 T**	12 UT	**500 T**	32 UT	**400 T**	**800 T**
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	**5600 T**	12 UT	**510 T**	32 UT	**430 T**	**800 T**
Dibenzo(a,h)anthracene	**140 T**	12 UT	**13 T**	32 UT	**10 T**	**25 T**
Indeno(1,2,3-c,d)pyrene	**3700 T**	12 UT	**220 T**	32 UT	**260 T**	**480 T**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**7700 T**	12 UT	**640 T**	32 UT	**530 T**	**1000 T**
LWG RA Total LPAH (Calculated U = 1/2)	**33000 T**	**65 T**	**6800 T**	32 UT	**5500 T**	**11000 T**
LWG RA Total PAH (Calculated U = 1/2)	**99000 T**	**120 JT**	**13000 T**	32 UT	**9700 T**	**21000 T**
Semivolatile Organics (µg/kg)						
Carbazole	**4600**	64 U	**1200**	64 U	**1100**	**1300**
Semivolatile Organics (mg/kg-OC)						
Carbazole	**460 T**	12 UT	**70 T**	32 UT	**82 T**	**130 T**
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	33 UT	32 UJT	31 UT	33 UJT	33 UT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	3.2 UT	6.4 UT	1.9 UJT	16 UT	2.5 UJT	3.3 UT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-22SC	DGS-23SC	DGS-24SC	DGS-25SC	DGS-26SC	DGS-26SC
Sample Name:	DGS-22SC-1.92.9-101012	DGS-23SC-0104-101008	DGS-24SC-0104-101012	DGS-25SC-0104-101007	DGS-26SC-0104-101011	DGS-26SC-015.4-101011
Sample Date:	10/12/2010	10/8/2010	10/12/2010	10/7/2010	10/11/2010	10/11/2010
Depth Interval:	57.91 - 88.39 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 164.59 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	32 U	3.3 U	**23 J**	3.2 U	16 U	33 U
4,4'-DDE (p,p'-DDE)	32 U	3.3 U	16 U	3.2 U	16 U	33 U
4,4'-DDT (p,p'-DDT)	32 U	3.3 U	16 U	3.2 U	16 U	33 U
alpha-Hexachlorocyclohexane (BHC)	16 U	1.6 U	8 U	1.6 U	8.2 U	16 U
beta-Hexachlorocyclohexane (BHC)	16 U	1.6 U	8 U	1.6 U	8.2 U	16 U
delta-Hexachlorocyclohexane (BHC)	16 UJ	1.6 U	8 U	1.6 U	8.2 U	16 UJ
Endrin ketone	32 U	3.3 U	16 U	3.2 U	16 U	33 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	16 U	1.6 U	8 U	1.6 U	8.2 U	16 U
LWG RA Sum DDD (Calculated U = 1/2)	32 UT	3.3 UT	**31 JT**	3.2 UT	16 UT	33 UT
LWG RA Sum DDE (Calculated U = 1/2)	32 UT	3.3 UT	16 UT	3.2 UT	16 UT	33 UT
LWG RA Sum DDT (Calculated U = 1/2)	32 UT	3.3 UT	16 UT	3.2 UT	16 UT	33 UT
LWG RA Total DDx (Calculated U = 1/2)	32 UT	3.3 UT	**63 JT**	3.2 UT	16 UT	33 UT
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	3.2 UT	0.64 UT	**1.3 JT**	1.6 UT	1.2 UT	3.3 UT
4,4'-DDE (p,p'-DDE)	3.2 UT	0.64 UT	0.94 UT	1.6 UT	1.2 UT	3.3 UT
4,4'-DDT (p,p'-DDT)	3.2 UT	0.64 UT	0.94 UT	1.6 UT	1.2 UT	3.3 UT
alpha-Hexachlorocyclohexane (BHC)	1.6 UT	0.31 UT	0.47 UT	0.8 UT	0.61 UT	1.6 UT
beta-Hexachlorocyclohexane (BHC)	1.6 UT	0.31 UT	0.47 UT	0.8 UT	0.61 UT	1.6 UT
delta-Hexachlorocyclohexane (BHC)	1.6 UJT	0.31 UT	0.47 UT	0.8 UT	0.61 UT	1.6 UJT
Endrin ketone	3.2 UT	0.64 UT	0.94 UT	1.6 UT	1.2 UT	3.3 UT
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	0.64 UT	**1.8 JT**	1.6 UT	1.2 UT	3.3 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	0.64 UT	0.94 UT	1.6 UT	1.2 UT	3.3 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	0.64 UT	0.94 UT	1.6 UT	1.2 UT	3.3 UT
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	0.64 UT	**3.7 JT**	1.6 UT	1.2 UT	3.3 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-28SC	DGS-30SC	DGS-31SC	DGS-31SC	DGS-32SC	DGS-32SC
Sample Name:	DGS-28SC-0104-101007	DGS-30SC-0104-101006	DGS-31SC-0104-101011	DGS-31SC-011.9-101011	DGS-32SC-0104-101011	DGS-32SC-2.83.8-101011
Sample Date:	10/7/2010	10/6/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 57.912 cm	30.48 - 121.92 cm	85.34 - 115.82 cm
Metals (mg/kg)						
Zinc	46	49	94	121	199	157
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	59 U	59 U	7000	7800	32000	31000
Benzo(a)pyrene	59 U	73	6700	7100	28000	28000
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	59 U	65	8000	9200	39000	39000
Dibenzo(a,h)anthracene	59 U	59 U	230	230 J	540	800
Indeno(1,2,3-c,d)pyrene	59 U	59 U	3300	3700 J	7700	13000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	59 UT	120 T	8800 T	9400 JT	35000 T	37000 T
LWG RA Total LPAH (Calculated U = 1/2)	59 UT	3800 T	80000 T	99810 T	470000 T	480000 T
LWG RA Total PAH (Calculated U = 1/2)	59 UT	4500 T	160000 T	200000 JT	840000 T	860000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	30 UT	30 UT	600 T	780 T	2400 T	3100 T
Benzo(a)pyrene	30 UT	36 T	620 T	710 T	2100 T	2800 T
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	30 UT	33 T	700 T	920 T	3000 T	3900 T
Dibenzo(a,h)anthracene	30 UT	30 UT	21 T	23 JT	41 T	80 T
Indeno(1,2,3-c,d)pyrene	30 UT	30 UT	310 T	370 JT	580 T	1300 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	30 UT	58 T	810 T	940 JT	2700 T	3700 T
LWG RA Total LPAH (Calculated U = 1/2)	30 UT	1900 T	7800 T	9981 T	35000 T	48000 T
LWG RA Total PAH (Calculated U = 1/2)	30 UT	2300 T	15000 T	20000 JT	64000 T	86000 T
Semivolatile Organics (µg/kg)						
Carbazole	59 U	59 U	1100	2900	11000	14000
Semivolatile Organics (mg/kg-OC)						
Carbazole	30 UT	30 UT	100 T	290 T	830 T	1400 T
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	49 UT	32 UT	33 UJT	32 UT	490 JT	64 UT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	25 UT	16 UT	3.1 UJT	3.2 UT	38 JT	6.4 UT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-28SC	DGS-30SC	DGS-31SC	DGS-31SC	DGS-32SC	DGS-32SC
Sample Name:	DGS-28SC-0104-101007	DGS-30SC-0104-101006	DGS-31SC-0104-101011	DGS-31SC-011.9-101011	DGS-32SC-0104-101011	DGS-32SC-2.83.8-101011
Sample Date:	10/7/2010	10/6/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 57.912 cm	30.48 - 121.92 cm	85.34 - 115.82 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	3.3 U	3.2 U	**24**	32 U	**120 J**	**71**
4,4'-DDE (p,p'-DDE)	3.3 U	3.2 U	17 U	32 U	31 U	32 U
4,4'-DDT (p,p'-DDT)	3.3 U	3.2 U	17 U	32 U	31 U	32 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	8.3 U	16 U	28 U	16 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	8.3 U	16 U	58 U	16 U
delta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	8.3 U	16 UJ	16 U	16 UJ
Endrin ketone	3.3 U	3.2 U	17 U	32 U	31 U	32 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.6 U	8.3 U	16 U	16 U	16 U
LWG RA Sum DDD (Calculated U = 1/2)	3.3 UT	3.2 UT	**33 T**	32 UT	**140 JT**	**87 T**
LWG RA Sum DDE (Calculated U = 1/2)	3.3 UT	3.2 UT	17 UT	32 UT	31 UT	32 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.3 UT	3.2 UT	17 UT	32 UT	31 UT	32 UT
LWG RA Total DDx (Calculated U = 1/2)	3.3 UT	3.2 UT	**67 T**	32 UT	**200 JT**	**150 T**
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	1.7 UT	1.6 UT	**2.2 T**	3.2 UT	**9.1 JT**	**7.1 T**
4,4'-DDE (p,p'-DDE)	1.7 UT	1.6 UT	1.6 UT	3.2 UT	2.3 UT	3.2 UT
4,4'-DDT (p,p'-DDT)	1.7 UT	1.6 UT	1.6 UT	3.2 UT	2.3 UT	3.2 UT
alpha-Hexachlorocyclohexane (BHC)	0.8 UT	0.8 UT	0.77 UT	1.6 UT	2.1 UT	1.6 UT
beta-Hexachlorocyclohexane (BHC)	0.8 UT	0.8 UT	0.77 UT	1.6 UT	4.4 UT	1.6 UT
delta-Hexachlorocyclohexane (BHC)	0.8 UT	0.8 UT	0.77 UT	1.6 UJT	1.2 UT	1.6 UJT
Endrin ketone	1.7 UT	1.6 UT	1.6 UT	3.2 UT	2.3 UT	3.2 UT
LWG RA Sum DDD (Calculated U = 1/2)	1.7 UT	1.6 UT	**3 T**	3.2 UT	**10 JT**	**8.7 T**
LWG RA Sum DDE (Calculated U = 1/2)	1.7 UT	1.6 UT	1.6 UT	3.2 UT	2.3 UT	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	1.7 UT	1.6 UT	1.6 UT	3.2 UT	2.3 UT	3.2 UT
LWG RA Total DDx (Calculated U = 1/2)	1.7 UT	1.6 UT	**6.2 T**	3.2 UT	**15 JT**	**15 T**

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-36SC	DGS-37SC	GSM-14	GTC-03	GTC-03	GTC-05	GTC-05
Sample Name:	DGS-36SC-0104-101012	DGS-37SC-0104-101011	GSM-14SO-0-5-101015	GTC-03SC-090113	GTC-03SC-090113RE	GTC-05SC-090113RE	GTC-05SC-090114
Sample Date:	10/12/2010	10/11/2010	10/15/2010	1/13/2009	1/13/2009	1/14/2009	1/14/2009
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	0 - 152.4 cm	54.86 - 134.11 cm	54.86 - 134.11 cm	0 - 152.4 cm	0 - 152.4 cm
Metals (mg/kg)							
Zinc	110	249	77	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	5600	1300	100	5100	--	--	36000
Benzo(a)pyrene	6000	1200	270	6300	--	--	45000
Benzo(b)fluoranthene	--	--	--	4600	--	--	31000
Benzo(k)fluoranthene	--	--	--	3000	--	--	24000
Chrysene	6900	1600	150	5900	--	--	43000
Dibenzo(a,h)anthracene	160	200 U	60 U	1300 U	--	--	4300
Indeno(1,2,3-c,d)pyrene	3200	640	140	3200	--	--	20000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	7900 T	1700 T	360 T	8300 T	--	--	58000 T
LWG RA Total LPAH (Calculated U = 1/2)	17000 T	9800 T	240 T	69000 T	--	--	340000 JT
LWG RA Total PAH (Calculated U = 1/2)	100000 T	25000 T	1800 T	140000 T	--	--	900000 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	430 T	56 T	--	510 T	--	--	3600 T
Benzo(a)pyrene	500 T	52 T	--	630 T	--	--	4500 T
Benzo(b)fluoranthene	--	--	--	460 T	--	--	3100 T
Benzo(k)fluoranthene	--	--	--	300 T	--	--	2400 T
Chrysene	530 T	69 T	--	590 T	--	--	4300 T
Dibenzo(a,h)anthracene	12 T	9 UT	--	130 UT	--	--	430 T
Indeno(1,2,3-c,d)pyrene	250 T	27 T	--	320 T	--	--	2000 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	650 T	73 T	--	830 T	--	--	5800 T
LWG RA Total LPAH (Calculated U = 1/2)	1300 T	420 T	--	6900 T	--	--	34000 JT
LWG RA Total PAH (Calculated U = 1/2)	8000 T	1100 T	--	14000 T	--	--	90000 JT
Semivolatile Organics (µg/kg)							
Carbazole	460	200 U	60 U	--	--	--	--
Semivolatile Organics (mg/kg-OC)							
Carbazole	36 T	9 UT	--	--	--	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 UJT	410 UJT	31 UJT	--	--	--	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	2.4 UJT	18 UJT	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-36SC	DGS-37SC	GSM-14	GTC-03	GTC-03	GTC-05	GTC-05
Sample Name:	DGS-36SC-0104-101012	DGS-37SC-0104-101011	GSM-14SO-0-5-101015	GTC-03SC-090113	GTC-03SC-090113RE	GTC-05SC-090113RE	GTC-05SC-090114
Sample Date:	10/12/2010	10/11/2010	10/15/2010	1/13/2009	1/13/2009	1/14/2009	1/14/2009
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	0 - 152.4 cm	54.86 - 134.11 cm	54.86 - 134.11 cm	0 - 152.4 cm	0 - 152.4 cm
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	15 U	**110**	3.2 U	--	--	--	--
4,4'-DDE (p,p'-DDE)	15 U	**37**	3.2 U	--	--	--	--
4,4'-DDT (p,p'-DDT)	15 U	**74**	3.2 U	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	7.7 U	8.3 U	1.6 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	40 U	26 U	1.6 U	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	7.7 U	8.3 U	1.6 UJ	--	--	--	--
Endrin ketone	15 U	16 U	3.2 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	7.7 U	8.3 U	1.6 U	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	15 UT	**150 JT**	3.2 UT	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	15 UT	**45 T**	3.2 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	15 UT	**82 T**	3.2 UT	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	15 UT	**270 JT**	3.2 UT	--	--	--	--
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	1.2 UT	**4.7 T**	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	1.2 UT	**1.6 T**	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	1.2 UT	**3.2 T**	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.6 UT	0.36 UT	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	3 UT	1.1 UT	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.6 UT	0.36 UT	--	--	--	--	--
Endrin ketone	1.2 UT	0.69 UT	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	1.2 UT	**6.3 JT**	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	1.2 UT	**1.9 T**	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	1.2 UT	**3.5 T**	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	1.2 UT	**12 JT**	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	GTC-07	GTC-07	GTC-08	GTC-08	LW2-C252	LW2-C255	LW2-C258	LW2-C263	LW2-C264	LW2-C269
Sample Name:	GTC-07SC-090113	GTC-07SC-090113RE	GTC-08SC-090113	GTC-08SC-090113RE	LW2-C252-B	LW2-C255-B	LW2-C258-B	LW2-C263-B	LW2-C264-B	LW2-C269-B
Sample Date:	1/13/2009	1/13/2009	1/13/2009	1/13/2009	9/23/2004	10/27/2004	9/23/2004	10/1/2004	9/23/2004	10/28/2004
Depth Interval:	0 - 164.59 cm	0 - 164.59 cm	0 - 73.15 cm	0 - 73.15 cm	30 - 154 cm	30 - 152 cm	30 - 153 cm	30 - 152 cm	30 - 156 cm	30 - 151 cm
Metals (mg/kg)										
Zinc	--	--	--	--	62.4	46	55.1 T	191	162	146
Polycyclic Aromatic Hydrocarbons (µg/kg)										
Benzo(a)anthracene	19000	--	15000	--	1100	0.96 J	17000	10000	95000	3200
Benzo(a)pyrene	23000	--	17000	--	1600	0.96 J	25000	10000	110000	4800
Benzo(b)fluoranthene	12000	--	10000	--	920	1 J	15000	10000	72000	4000
Benzo(k)fluoranthene	13000	--	8800	--	920	0.48 J	15000	8800	58000	1300
Chrysene	23000	--	17000	--	1500	1.1 J	23000	15000	120000	4500
Dibenzo(a,h)anthracene	2200	--	1500	--	150	0.34 U	2200	1800	13000	560
Indeno(1,2,3-c,d)pyrene	10000	--	7700	--	1100	0.76 J	18000	11000	70000	3400
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	29000 T	--	22000 T	--	2100 T	1.4 JT	32000 T	15000 T	150000 T	6400 T
LWG RA Total LPAH (Calculated U = 1/2)	750000 T	--	260000 JT	--	3500 JT	4.2 JT	16000 T	120000 T	340000 T	19000 T
LWG RA Total PAH (Calculated U = 1/2)	1000000 T	--	480000 JT	--	18000 JT	13 JT	270000 T	290000 T	1400000 T	63000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)										
Benzo(a)anthracene	1900 T	--	1500 T	--	550 T	0.48 JT	8500 T	200 T	1400 T	100 T
Benzo(a)pyrene	2300 T	--	1700 T	--	800 T	0.48 JT	13000 T	200 T	1700 T	200 T
Benzo(b)fluoranthene	1200 T	--	1000 T	--	460 T	0.5 JT	7500 T	200 T	1100 T	100 T
Benzo(k)fluoranthene	1300 T	--	880 T	--	460 T	0.24 JT	7500 T	140 T	880 T	40 T
Chrysene	2300 T	--	1700 T	--	750 T	0.55 JT	12000 T	240 T	1800 T	100 T
Dibenzo(a,h)anthracene	220 T	--	150 T	--	75 T	0.17 UT	1100 T	28 T	200 T	20 T
Indeno(1,2,3-c,d)pyrene	1000 T	--	770 T	--	550 T	0.38 JT	9000 T	170 T	1000 T	100 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2900 T	--	2200 T	--	1000 T	0.7 JT	17000 T	290 T	2300 T	250 T
LWG RA Total LPAH (Calculated U = 1/2)	75000 T	--	26000 JT	--	1700 JT	2.1 JT	8200 T	1800 T	5200 T	670 T
LWG RA Total PAH (Calculated U = 1/2)	100000 T	--	48000 JT	--	8800 JT	6.6 JT	130000 T	4700 T	20000 T	2000 T
Semivolatile Organics (µg/kg)										
Carbazole	--	--	--	--	11	1.7 U	110 J	1100	6900	450
Semivolatile Organics (mg/kg-OC)										
Carbazole	--	--	--	--	5.5 T	0.85 UT	55 JT	17 T	100 T	20 T
PCB Aroclors (µg/kg)										
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	2.4 UT	2.33 UT	2.51 UT	220 T	32 UJT	42.6 T
PCB Aroclors (mg/kg-OC)										
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	1.2 UT	1.17 UT	1.26 UT	3.46 T	0.48 UJT	1.4 T
PCB Congeners (µg/kg)										
PCB-077	--	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	GTC-07	GTC-07	GTC-08	GTC-08	LW2-C252	LW2-C255	LW2-C258	LW2-C263	LW2-C264	LW2-C269
Sample Name:	GTC-07SC-090113	GTC-07SC-090113RE	GTC-08SC-090113	GTC-08SC-090113RE	LW2-C252-B	LW2-C255-B	LW2-C258-B	LW2-C263-B	LW2-C264-B	LW2-C269-B
Sample Date:	1/13/2009	1/13/2009	1/13/2009	1/13/2009	9/23/2004	10/27/2004	9/23/2004	10/1/2004	9/23/2004	10/28/2004
Depth Interval:	0 - 164.59 cm	0 - 164.59 cm	0 - 73.15 cm	0 - 73.15 cm	30 - 154 cm	30 - 152 cm	30 - 153 cm	30 - 152 cm	30 - 156 cm	30 - 151 cm
PCB Congeners (mg/kg-OC)										
PCB-077	--	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)										
4,4'-DDD (p,p'-DDD)	--	--	--	--	**19.1 NJ**	0.0481 U	**3.66 J**	**345 J**	**71.2 J**	**283 J**
4,4'-DDE (p,p'-DDE)	--	--	--	--	**1.7 NJ**	0.0451 U	0.247 U	**16.6 NJ**	**15.7 NJ**	**34.5 NJ**
4,4'-DDT (p,p'-DDT)	--	--	--	--	**5.54 NJ**	0.0556 UJ	**3.44 NJ**	**21.4 J**	**12.8 J**	**223 J**
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	0.174 UJ	0.0334 U	0.182 U	0.541 U	0.23 U	**0.604 J**
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	**4.16 NJ**	0.0338 U	**2.78 NJ**	**51.8 NJ**	0.233 U	0.259 U
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	0.373 UJ	**0.317 NJ**	0.39 UJ	1.16 UJ	0.492 U	0.548 UJ
Endrin ketone	--	--	--	--	0.153 UJ	0.0294 U	0.161 U	0.477 U	0.203 U	0.226 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	0.398 UJ	0.0763 U	**2.27 NJ**	1.24 U	0.526 U	**1.77 J**
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	**22.8 JNT**	0.0481 UT	**3.75 JT**	**396 JNT**	**106 JT**	**357 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	**1.8 NJT**	**0.318 JT**	0.247 UT	**49.4 NJT**	**50.5 NJT**	**34.6 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	**5.66 NJT**	0.0556 UJT	**5.96 NJT**	**36.6 JT**	**24 JNT**	**232 JT**
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	**30 JNT**	**0.408 JT**	**9.92 JNT**	**482 JNT**	**180 JNT**	**624 JNT**
Pesticides (mg/kg-OC)										
4,4'-DDD (p,p'-DDD)	--	--	--	--	**9.55 NJT**	0.0241 UT	**1.83 JT**	**5.43 JT**	**1.08 JT**	**9 JT**
4,4'-DDE (p,p'-DDE)	--	--	--	--	**0.85 NJT**	0.0225 UT	0.124 UT	**0.261 NJT**	**0.238 NJT**	**1 NJT**
4,4'-DDT (p,p'-DDT)	--	--	--	--	**2.77 NJT**	0.0278 UJT	**1.72 NJT**	**0.337 JT**	**0.194 JT**	**7 JT**
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	0.087 UJT	0.0167 UT	0.091 UT	0.00852 UT	0.0035 UT	**0.02 JT**
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	**2.08 NJT**	0.0169 UT	**1.39 NJT**	**0.816 NJT**	0.00354 UT	0.009 UT
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	0.187 UJT	**0.159 NJT**	0.2 UJT	0.0183 UJT	0.00747 UT	0.02 UJT
Endrin ketone	--	--	--	--	0.0765 UJT	0.0147 UT	0.0805 UT	0.00751 UT	0.00308 UT	0.008 UT
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	**11.4 JNT**	0.0241 UT	**1.87 JT**	**6.23 JNT**	**1.6 JT**	**11 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	**0.89 NJT**	**0.159 JT**	0.124 UT	**0.778 NJT**	**0.766 NJT**	**1 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	**2.83 NJT**	0.0278 UJT	**2.98 NJT**	**0.576 JT**	**0.36 JNT**	**7.3 JT**
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	**15 JNT**	**0.204 JT**	**4.96 JNT**	**7.58 JNT**	**2.7 JNT**	**19 JNT**

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C270	LW2-C272	LW2-C273	LW2-C276	LW2-C278	LW2-C283	LW2-C284	LW2-C288	LW2-C289	LW2-C294	LW2-C299	LW2-C300-2
Sample Name:	LW2-C270-B	LW2-C272-B	LW2-C273-B	LW2-C276-B	LW2-C278-B	LW2-C283-B	LW2-C284-B	LW2-C288-B	LW2-C289-B	LW2-C294-B	LW2-C299-B	LW2-C300-B
Sample Date:	9/21/2004	9/22/2004	10/20/2004	9/22/2004	10/19/2004	11/8/2004	9/22/2004	10/20/2004	10/19/2004	10/19/2004	9/22/2004	10/27/2004
Depth Interval:	30 - 87 cm	30 - 152 cm	30 - 153 cm	30 - 153 cm	30 - 152 cm	30 - 151 cm	30 - 104 cm	30 - 153 cm	30 - 155 cm	30 - 152 cm	30 - 104 cm	30 - 152 cm
Metals (mg/kg)												
Zinc	181	49.3	136	235	155	142	242	164	170	122	200	208
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)anthracene	32000	6.4	95000	11000	11000	30000 J	21000	56000	21000	200000	35000	42
Benzo(a)pyrene	41000	7	140000	14000	17000	31000 J	22000	76000	21000	260000	44000	63
Benzo(b)fluoranthene	27000	4.9	130000	9500	14000	28000 J	15000	69000	17000	200000	25000	61
Benzo(k)fluoranthene	26000	5.5	39000	7900	4700	13000 J	13000	22000	5600	64000	26000	21
Chrysene	40000	9.1	130000	13000	13000	34000 J	26000	71000	23000	220000	43000	54
Dibenzo(a,h)anthracene	4100	0.62 J	8700	1500	1500	3200 J	1900	5400	2100	27000	3600	7.9
Indeno(1,2,3-c,d)pyrene	29000	3.6	97000	11000	13000	22000 J	15000	49000	14000	190000	29000	44
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	54000 T	9.2 JT	180000 T	19000 T	22000 T	42000 JT	29000 T	99000 T	28000 T	350000 T	57000 T	86 T
LWG RA Total LPAH (Calculated U = 1/2)	160000 T	27 JT	770000 T	84000 T	96000 T	560000 JT	290000 T	580000 T	260000 T	3000000 T	690000 T	140 T
LWG RA Total PAH (Calculated U = 1/2)	590000 T	110 JT	2500000 T	240000 T	260000 T	1000000 JT	590000 T	1500000 T	520000 T	6100000 T	1200000 T	710 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)												
Benzo(a)anthracene	710 T	3.2 T	920 T	430 T	300 T	700 JT	800 T	630 T	790 T	1000 T	1000 T	1.7 T
Benzo(a)pyrene	910 T	4 T	1400 T	550 T	460 T	750 JT	840 T	860 T	790 T	1600 T	1300 T	2.5 T
Benzo(b)fluoranthene	600 T	2.5 T	1300 T	370 T	380 T	680 JT	570 T	780 T	640 T	1000 T	720 T	2.4 T
Benzo(k)fluoranthene	580 T	2.8 T	380 T	310 T	130 T	310 JT	490 T	250 T	210 T	400 T	750 T	0.84 T
Chrysene	900 T	4.6 T	1300 T	510 T	350 T	820 JT	990 T	800 T	860 T	1400 T	1200 T	2.2 T
Dibenzo(a,h)anthracene	91 T	0.31 JT	84 T	59 T	41 T	77 JT	72 T	61 T	79 T	170 T	100 T	0.32 T
Indeno(1,2,3-c,d)pyrene	640 T	1.8 T	940 T	430 T	350 T	530 JT	570 T	550 T	530 T	1200 T	830 T	1.8 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1200 T	5.1 JT	1800 T	740 T	610 T	1000 JT	1100 T	1100 T	1100 T	2100 T	1700 T	3.4 T
LWG RA Total LPAH (Calculated U = 1/2)	3400 T	14 JT	7600 T	3200 T	2200 T	14000 JT	11000 T	6600 T	9700 T	19000 T	20000 T	5.6 T
LWG RA Total PAH (Calculated U = 1/2)	13000 T	58 JT	25000 T	9600 T	6700 T	25000 JT	23000 T	17000 T	20000 T	38000 T	35000 T	28 T
Semivolatile Organics (µg/kg)												
Carbazole	3300	1.7 U	13000	2700	1500	5400	8000	8300	2700	41000	15000	4.8 U
Semivolatile Organics (mg/kg-OC)												
Carbazole	73 T	0.85 UT	130 T	110 T	41 T	130 T	300 T	94 T	100 T	260 T	430 T	0.19 UT
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	184 UJT	2.5 UJT	3.6 UJT	267 JT	66 JT	144 JT	130 JT	67 JT	--	47 JT	--	210 JT
PCB Aroclors (mg/kg-OC)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	4.1 UJT	1.3 UJT	0.035 UJT	10.4 JT	1.8 JT	3.48 JT	5.1 JT	0.75 JT	--	0.29 JT	--	8.5 JT
PCB Congeners (µg/kg)												
PCB-077	--	--	--	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C270	LW2-C272	LW2-C273	LW2-C276	LW2-C278	LW2-C283	LW2-C284	LW2-C288	LW2-C289	LW2-C294	LW2-C299	LW2-C300-2
Sample Name:	LW2-C270-B	LW2-C272-B	LW2-C273-B	LW2-C276-B	LW2-C278-B	LW2-C283-B	LW2-C284-B	LW2-C288-B	LW2-C289-B	LW2-C294-B	LW2-C299-B	LW2-C300-B
Sample Date:	9/21/2004	9/22/2004	10/20/2004	9/22/2004	10/19/2004	11/8/2004	9/22/2004	10/20/2004	10/19/2004	10/19/2004	9/22/2004	10/27/2004
Depth Interval:	30 - 87 cm	30 - 152 cm	30 - 153 cm	30 - 153 cm	30 - 152 cm	30 - 151 cm	30 - 104 cm	30 - 153 cm	30 - 155 cm	30 - 152 cm	30 - 104 cm	30 - 152 cm
PCB Congeners (mg/kg-OC)												
PCB-077	--	--	--	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
4,4'-DDD (p,p'-DDD)	**163 J**	**0.129 J**	**23.3**	**78.8 J**	**51.4 J**	**504 NJ**	**35.1 NJ**	**44.8 J**	--	**408 J**	--	**5.6**
4,4'-DDE (p,p'-DDE)	**27.6**	0.0448 U	**2.02**	**12.2 NJ**	**11.8 J**	**54.9 NJ**	**8.97 NJ**	**13.6**	--	**7.41 J**	--	**6.8**
4,4'-DDT (p,p'-DDT)	**19.9 NJ**	0.0552 U	**30.2 NJ**	**8.73 J**	**9.56 J**	**72.2 J**	**10.7 J**	**8.88 NJ**	--	**20 J**	--	**5.7 J**
alpha-Hexachlorocyclohexane (BHC)	1.24 U	0.0331 U	0.524 U	0.246 U	0.512 UJ	0.979 U	0.251 U	0.509 U	--	0.462 U	--	0.72 U
beta-Hexachlorocyclohexane (BHC)	**13.9 NJ**	**0.471 NJ**	**13.1 NJ**	**6.39 J**	**8.97 NJ**	**21.7 J**	0.254 U	**17.9 NJ**	--	**25.6 J**	--	1.2 U
delta-Hexachlorocyclohexane (BHC)	2.65 UJ	0.0709 UJ	1.12 U	0.527 UJ	1.1 UJ	2.09 UJ	0.537 UJ	1.09 U	--	**3.8 J**	--	**1.4 J**
Endrin ketone	1.09 U	0.0292 U	0.461 U	0.217 U	0.451 UJ	0.861 U	0.221 U	0.448 U	--	0.406 U	--	2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	2.83 U	0.0757 U	1.2 U	0.563 U	1.17 UJ	2.24 U	0.574 U	1.16 U	--	**6.22**	--	0.86 U
LWG RA Sum DDD (Calculated U = 1/2)	**229 JNT**	**0.145 JT**	**23.6 T**	**92 JT**	**61.6 JT**	**588 JNT**	**42.9 JNT**	**55 JT**	--	**491 JNT**	--	**8.5 T**
LWG RA Sum DDE (Calculated U = 1/2)	**28.2 T**	**0.063 JT**	**2.29 T**	**21.7 NJT**	**21.9 JNT**	**90.3 JNT**	**21.6 NJT**	**31 NJT**	--	**40.5 JNT**	--	**7.5 T**
LWG RA Sum DDT (Calculated U = 1/2)	**28.8 NJT**	0.0552 UT	**52.6 NJT**	**14.4 JNT**	**17.1 JT**	**82.4 JT**	**18.5 JNT**	**26.8 NJT**	--	**24 JNT**	--	**10 JT**
LWG RA Total DDx (Calculated U = 1/2)	**285 JNT**	**0.26 JT**	**78.4 NJT**	**130 JNT**	**101 JNT**	**760 JNT**	**83 JNT**	**110 JNT**	--	**560 JNT**	--	**26 JT**
Pesticides (mg/kg-OC)												
4,4'-DDD (p,p'-DDD)	**3.6 JT**	**0.0645 JT**	**0.226 T**	**3.08 JT**	**1.4 JT**	**12.2 NJT**	**1.33 NJT**	**0.505 JT**	--	**2.6 JT**	--	**0.22 T**
4,4'-DDE (p,p'-DDE)	**0.61 T**	0.0224 UT	**0.0196 T**	**0.477 NJT**	**0.32 JT**	**1.33 NJT**	**0.341 NJT**	**0.153 T**	--	**0.046 JT**	--	**0.27 T**
4,4'-DDT (p,p'-DDT)	**0.44 NJT**	0.0276 UT	**0.293 NJT**	**0.341 JT**	**0.26 JT**	**1.75 JT**	**0.407 JT**	**0.1 NJT**	--	**0.1 JT**	--	**0.23 JT**
alpha-Hexachlorocyclohexane (BHC)	0.028 UT	0.0166 UT	0.00509 UT	0.00961 UT	0.014 UJT	0.0237 UT	0.00954 UT	0.00574 UT	--	0.0029 UT	--	0.029 UT
beta-Hexachlorocyclohexane (BHC)	**0.31 NJT**	**0.236 NJT**	**0.127 NJT**	**0.25 JT**	**0.24 NJT**	**0.525 JT**	0.00966 UT	**0.202 NJT**	--	**0.16 JT**	--	0.048 UT
delta-Hexachlorocyclohexane (BHC)	0.059 UJT	0.0355 UJT	0.0109 UT	0.0206 UJT	0.03 UJT	0.0506 UJT	0.0204 UJT	0.0123 UT	--	**0.024 JT**	--	**0.056 JT**
Endrin ketone	0.024 UT	0.0146 UT	0.00448 UT	0.00848 UT	0.012 UJT	0.0208 UT	0.0084 UT	0.00505 UT	--	0.0025 UT	--	0.08 UT
LWG RA Sum DDD (Calculated U = 1/2)	**5.1 JNT**	**0.0725 JT**	**0.228 T**	**3.6 JT**	**1.7 JT**	**14.2 JNT**	**1.63 JNT**	**0.61 JT**	--	**3.1 JNT**	--	**0.34 T**
LWG RA Sum DDE (Calculated U = 1/2)	**0.62 T**	**0.032 JT**	**0.0222 T**	**0.849 NJT**	**0.59 JNT**	**2.19 JNT**	**0.82 NJT**	**0.349 NJT**	--	**0.26 JNT**	--	**0.3 T**
LWG RA Sum DDT (Calculated U = 1/2)	**0.64 NJT**	0.0276 UT	**0.51 NJT**	**0.562 JNT**	**0.46 JT**	**2 JT**	**0.703 JNT**	**0.302 NJT**	--	**0.12 JNT**	--	**0.41 JT**
LWG RA Total DDx (Calculated U = 1/2)	**6.4 JNT**	**0.13 JT**	**0.761 NJT**	**5 JNT**	**2.7 JNT**	**18.4 JNT**	**3.15 JNT**	**1.3 JNT**	--	**3.5 JNT**	--	**1 JT**

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C301	LW2-C302	LW2-C305	LW2-C311	LW2-C312	LW2-C521	LW2-C525	LW2-C527	LW2-C528	LW3-C658	LW3-C662	PCM-02Y1E2
Sample Name:	LW2-C301-B	LW2-C302-B	LW2-C305-B1	LW2-C311-B	LW2-C312-B	LW2-C521-B	LW2-C525-B	LW2-C527-B	LW2-C528-B	LW3-C658-B	LW3-C662-B	PCM-02SC-071107
Sample Date:	11/8/2004	9/22/2004	10/19/2004	11/9/2004	10/19/2005	10/19/2004	10/26/2005	10/26/2005	10/26/2005	12/14/2007	1/17/2008	11/7/2007
Depth Interval:	30 - 153 cm	32 - 198 cm	30 - 160 cm	30 - 153 cm	30 - 152 cm	30 - 99 cm	30 - 127 cm	30 - 152 cm	30 - 152 cm	30 - 151 cm	30 - 82 cm	0 - 36.576 cm
Metals (mg/kg)												
Zinc	156	222	190	167	82.3	200	159	107	128 T	41.1	166	19.3
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)anthracene	150000 J	29000 J	13000	10000 J	490	6400	4200	760	860	0.48 U	71000	360
Benzo(a)pyrene	150000 J	28000 J	14000	12000 J	540	8200	5900	1000	1100	0.14 U	70000	500
Benzo(b)fluoranthene	130000 J	17000 J	11000	10000 J	310	6600	3800	800	940	0.25 U	63000	430
Benzo(k)fluoranthene	51000 J	17000 J	3900	4600 J	320	2100	3200	670	680	0.15 U	19000	150
Chrysene	170000 J	38000 J	16000	11000 J	610	7400	5300	960	1200	0.25 U	80000	430
Dibenzo(a,h)anthracene	15000 J	3000 J	1300	1100 J	45	840	550	130	140	0.28 U	6000	39
Indeno(1,2,3-c,d)pyrene	93000 J	18000 J	9500	8700 J	370	6700	4600	910	1100	0.51 U	47000	360
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	200000 JT	38000 JT	19000 T	16000 JT	710 T	11000 T	7700 T	1400 T	1500 T	0.28 UT	94000 T	660 T
LWG RA Total LPAH (Calculated U = 1/2)	4900000 JT	450000 JT	160000 T	90000 JT	2900 T	95000 T	34000 T	1500 T	1300 T	0.75 UT	5500000 T	3600 T
LWG RA Total PAH (Calculated U = 1/2)	7200000 JT	830000 JT	340000 T	240000 JT	9600 T	190000 T	95000 T	11000 T	13000 T	3.7 JT	8900000 T	9300 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)												
Benzo(a)anthracene	2200 JT	920 JT	390 T	200 JT	100 T	300 T	140 T	32 T	38 T	0.24 UT	1800 T	180 T
Benzo(a)pyrene	2200 JT	890 JT	420 T	260 JT	110 T	380 T	200 T	40 T	49 T	0.07 UT	2000 T	300 T
Benzo(b)fluoranthene	1900 JT	540 JT	330 T	200 JT	63 T	310 T	130 T	30 T	42 T	0.13 UT	1600 T	220 T
Benzo(k)fluoranthene	740 JT	540 JT	120 T	99 JT	65 T	98 T	110 T	29 T	30 T	0.075 UT	490 T	75 T
Chrysene	2500 JT	1200 JT	470 T	240 JT	120 T	340 T	180 T	41 T	53 T	0.13 UT	2000 T	220 T
Dibenzo(a,h)anthracene	220 JT	100 JT	39 T	24 JT	9.2 T	39 T	19 T	5.5 T	6.2 T	0.14 UT	200 T	20 T
Indeno(1,2,3-c,d)pyrene	1300 JT	570 JT	280 T	190 JT	76 T	310 T	160 T	39 T	49 T	0.26 UT	1200 T	180 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	3000 JT	1200 JT	560 T	340 JT	140 T	510 T	260 T	56 T	68 T	0.14 UT	2700 T	380 T
LWG RA Total LPAH (Calculated U = 1/2)	71000 JT	14000 JT	4800 T	1900 JT	600 T	4400 T	1100 T	65 T	60 T	0.38 UT	150000 T	1800 T
LWG RA Total PAH (Calculated U = 1/2)	110000 JT	26000 JT	9900 T	5100 JT	2000 T	8900 T	3200 T	480 T	560 T	1.9 JT	230000 T	4700 T
Semivolatile Organics (µg/kg)												
Carbazole	100000	13000	5200	280	3.7 U	2800	590	64	62	1.3 U	27000	--
Semivolatile Organics (mg/kg-OC)												
Carbazole	1000 T	410 T	150 T	6 T	0.76 UT	130 T	20 T	2.7 T	2.7 T	0.65 UT	700 T	--
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	10 UJT	--	190 JT	34 JT	19 UT	550 T	220 JT	70 JT	63 JT	1.3 UT	110 JNT	20 UT
PCB Aroclors (mg/kg-OC)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	0.14 UJT	--	5.6 JT	0.72 JT	3.9 UT	25 T	7.8 JT	3 JT	2.8 JT	0.65 UT	2.9 JNT	10 UT
PCB Congeners (µg/kg)												
PCB-077	--	0.602	--	--	--	--	--	--	--	--	--	--
PCB-081	--	0.0621 J	--	--	--	--	--	--	--	--	--	--
PCB-105	--	2.14	--	--	--	--	--	--	--	--	--	--
PCB-126	--	0.0613 J	--	--	--	--	--	--	--	--	--	--
PCB-156	--	0.654	--	--	--	--	--	--	--	--	--	--
PCB-157	--	0.136	--	--	--	--	--	--	--	--	--	--
PCB-169	--	0.00128 U	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	230 JT	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	0.00634 JT	--	--	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C301	LW2-C302	LW2-C305	LW2-C311	LW2-C312	LW2-C521	LW2-C525	LW2-C527	LW2-C528	LW3-C658	LW3-C662	PCM-02Y1E2
Sample Name:	LW2-C301-B	LW2-C302-B	LW2-C305-B1	LW2-C311-B	LW2-C312-B	LW2-C521-B	LW2-C525-B	LW2-C527-B	LW2-C528-B	LW3-C658-B	LW3-C662-B	PCM-02SC-071107
Sample Date:	11/8/2004	9/22/2004	10/19/2004	11/9/2004	10/19/2005	10/19/2004	10/26/2005	10/26/2005	10/26/2005	12/14/2007	1/17/2008	11/7/2007
Depth Interval:	30 - 153 cm	32 - 198 cm	30 - 160 cm	30 - 153 cm	30 - 152 cm	30 - 99 cm	30 - 127 cm	30 - 152 cm	30 - 152 cm	30 - 151 cm	30 - 82 cm	0 - 36.576 cm
PCB Congeners (mg/kg-OC)												
PCB-077	--	**0.0191 T**	--	--	--	--	--	--	--	--	--	--
PCB-081	--	**0.00197 JT**	--	--	--	--	--	--	--	--	--	--
PCB-105	--	**0.0679 T**	--	--	--	--	--	--	--	--	--	--
PCB-126	--	**0.00195 JT**	--	--	--	--	--	--	--	--	--	--
PCB-156	--	**0.0208 T**	--	--	--	--	--	--	--	--	--	--
PCB-157	--	**0.00432 T**	--	--	--	--	--	--	--	--	--	--
PCB-169	--	4.06E-05 UT	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	**7.2 JT**	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	**0.000202 JT**	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
4,4'-DDD (p,p'-DDD)	**341 NJ**	**369**	**206 J**	**157 NJ**	**12**	**25**	**84**	**18**	**8.9**	0.073 U	**280**	**0.5 J**
4,4'-DDE (p,p'-DDE)	**59.5 NJ**	**58.8**	**13.8**	**7.01 J**	**1.8 J**	2.2 U	**20 NJ**	7.8 U	**5.4**	0.027 U	**110 J**	1 U
4,4'-DDT (p,p'-DDT)	**68.3 J**	**41.7 J**	**35.4 J**	**28.7 J**	**270 J**	7.7 U	**170**	**6.9 J**	**13**	0.18 U	9 U	1 U
alpha-Hexachlorocyclohexane (BHC)	**18.1 J**	1.11 U	0.464 U	0.471 U	0.11 U	1.3 U	1.8 U	1.6 U	0.16 U	0.097 U	**8.2 NJ**	1 U
beta-Hexachlorocyclohexane (BHC)	4.6 U	1.12 U	**12.9 NJ**	**5.22 NJ**	**0.38**	**4.4**	2.3 U	2.4 U	**1.4 NJ**	0.14 U	13 U	1 U
delta-Hexachlorocyclohexane (BHC)	9.73 UJ	2.38 UJ	0.993 U	1.01 U	0.081 U	2.1 U	2.7 U	1.2 U	0.2 U	0.11 U	**13 J**	1 U
Endrin ketone	4 U	0.978 U	**18.3 NJ**	0.414 U	0.57 UJ	13 U	**6.2 J**	**1.3 J**	**0.52 J**	0.029 U	21 U	1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	10.4 U	2.54 U	1.06 U	1.08 U	0.19 U	3.7 U	3.8 U	1.9 U	0.43 U	0.062 U	18 U	1 U
LWG RA Sum DDD (Calculated U = 1/2)	**448 JNT**	**477 JT**	**239 JT**	**203 NJT**	**19 T**	**48 T**	**120 T**	**24 T**	**13 NJT**	0.16 UT	**380 T**	**0.5 JT**
LWG RA Sum DDE (Calculated U = 1/2)	**129 JNT**	**102 NJT**	**27.9 NJT**	**10 JT**	**1.9 JT**	9.5 UT	**21 NJT**	7.8 UT	**5.9 T**	**0.081 JT**	**120 JT**	1 UT
LWG RA Sum DDT (Calculated U = 1/2)	**127 JT**	**42 JT**	**48 JNT**	**31 JNT**	**280 JT**	17 UT	**180 T**	**8.3 JT**	**13 T**	0.18 UT	43 UT	1 UT
LWG RA Total DDx (Calculated U = 1/2)	**704 JNT**	**620 JNT**	**320 JNT**	**240 JNT**	**300 JT**	**66 T**	**320 NJT**	**37 JT**	**32 NJT**	**0.32 JT**	**530 JT**	**1.5 JT**
Pesticides (mg/kg-OC)												
4,4'-DDD (p,p'-DDD)	**4.95 NJT**	**11.7 T**	**6.11 JT**	**3.38 NJT**	**2.4 T**	**1.2 T**	**2.9 T**	**0.77 T**	**0.39 T**	0.037 UT	**7.2 T**	**0.25 JT**
4,4'-DDE (p,p'-DDE)	**0.864 NJT**	**1.87 T**	**0.409 T**	**0.151 JT**	**0.37 JT**	0.1 UT	**0.7 NJT**	0.33 UT	**0.24 T**	0.014 UT	**2.8 JT**	0.5 UT
4,4'-DDT (p,p'-DDT)	**0.991 JT**	**1.32 JT**	**1.05 JT**	**0.619 JT**	**55 JT**	0.36 UT	**5.9 T**	**0.29 JT**	**0.58 T**	0.09 UT	0.2 UT	0.5 UT
alpha-Hexachlorocyclohexane (BHC)	**0.263 JT**	0.0352 UT	0.0138 UT	0.0102 UT	0.022 UT	0.06 UT	0.062 UT	0.068 UT	0.0071 UT	0.049 UT	**0.21 NJT**	0.5 UT
beta-Hexachlorocyclohexane (BHC)	0.067 UT	0.0356 UT	**0.383 NJT**	**0.113 NJT**	**0.078 T**	**0.2 T**	0.079 UT	0.1 UT	**0.062 NJT**	0.07 UT	0.34 UT	0.5 UT
delta-Hexachlorocyclohexane (BHC)	0.141 UJT	0.0756 UJT	0.0295 UT	0.0218 UT	0.017 UT	0.098 UT	0.093 UT	0.051 UT	0.009 UT	0.055 UT	**0.34 JT**	0.5 UT
Endrin ketone	0.06 UT	0.031 UT	**0.543 NJT**	0.00892 UT	0.12 UJT	0.6 UT	**0.21 JT**	**0.055 JT**	**0.023 JT**	0.015 UT	0.54 UT	0.5 UT
LWG RA Sum DDD (Calculated U = 1/2)	**6.5 JNT**	**15.1 JT**	**7.08 JT**	**4.38 NJT**	**3.8 T**	**2.3 T**	**4.2 T**	**1 T**	**0.58 NJT**	0.08 UT	**9.8 T**	**0.25 JT**
LWG RA Sum DDE (Calculated U = 1/2)	**1.87 JNT**	**3.25 NJT**	**0.827 NJT**	**0.22 JT**	**0.39 JT**	0.44 UT	**0.74 NJT**	0.33 UT	**0.26 T**	**0.041 JT**	**3.1 JT**	0.5 UT
LWG RA Sum DDT (Calculated U = 1/2)	**1.84 JT**	**1.3 JT**	**1.4 JNT**	**0.668 JNT**	**58 JT**	0.79 UT	**6.2 T**	**0.35 JT**	**0.59 T**	0.09 UT	1.1 UT	0.5 UT
LWG RA Total DDx (Calculated U = 1/2)	**10.2 JNT**	**20 JNT**	**9.4 JNT**	**5.3 JNT**	**62 JT**	**3.1 T**	**11 NJT**	**1.6 JT**	**1.4 NJT**	**0.16 JT**	**14 JT**	**0.75 JT**

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	PCM-03Y1E2	PCM-04Y1E2	PCM-05Y1E2	PCM-06Y1E2	PCM-07Y0E1b	PCM-08Y1E2	PCM-09Y1E2	PCM-10Y1E2
Sample Name:	PCM-03SC-071106	PCM-04SC-071107	PCM-05SC-071107	PCM-06SC-071106	PCM-07SC-060427	PCM-08SC-071108	PCM-09SC-071105	PCM-10SC-071105
Sample Date:	11/6/2007	11/7/2007	11/7/2007	11/6/2007	4/28/2006	11/8/2007	11/5/2007	11/5/2007
Depth Interval:	0 - 42.672 cm	0 - 21.34 cm	0 - 15.24 cm	0 - 57.912 cm	3.048 - 15.24 cm	0 - 42.672 cm	0 - 51.816 cm	0 - 15.24 cm
Metals (mg/kg)								
Zinc	23.4	26.6	22.2	24.3	--	28	22 J	24.4 J
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	660 J	1600	1100	730	--	1700	1000	200
Benzo(a)pyrene	960 J	2200	1500	1000	--	2400	1400	280
Benzo(b)fluoranthene	810 J	2000	1300	930	--	2100	1200	260
Benzo(k)fluoranthene	290 J	610	400	350	--	670	500	120
Chrysene	810 J	2000	1500	1100	--	2300	1400	270
Dibenzo(a,h)anthracene	63 J	170	110	77	--	190	120	27
Indeno(1,2,3-c,d)pyrene	720 J	1600	1100	820	--	1800	1100	230
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1200 JT	2900 T	2000 T	1300 T	1200 T	3200 T	1900 T	380 T
LWG RA Total LPAH (Calculated U = 1/2)	4200 JT	18000 T	11000 T	6900 T	12000 T	17000 T	11000 T	640 JT
LWG RA Total PAH (Calculated U = 1/2)	15000 JT	44000 T	28000 T	20000 T	26000 T	46000 T	28000 T	4100 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	45 JT	800 T	550 T	370 T	--	530 T	500 T	100 T
Benzo(a)pyrene	65 JT	1100 T	750 T	500 T	--	750 T	700 T	140 T
Benzo(b)fluoranthene	55 JT	1000 T	650 T	470 T	--	660 T	600 T	130 T
Benzo(k)fluoranthene	20 JT	300 T	200 T	180 T	--	210 T	300 T	60 T
Chrysene	55 JT	1000 T	750 T	550 T	--	720 T	700 T	130 T
Dibenzo(a,h)anthracene	4.3 JT	85 T	55 T	39 T	--	59 T	60 T	14 T
Indeno(1,2,3-c,d)pyrene	49 JT	800 T	550 T	410 T	--	560 T	550 T	120 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	84 JT	1400 T	980 T	670 T	590 T	990 T	930 T	190 T
LWG RA Total LPAH (Calculated U = 1/2)	290 JT	8900 T	5300 T	3500 T	5900 T	5100 T	5500 T	330 JT
LWG RA Total PAH (Calculated U = 1/2)	1000 JT	22000 T	14000 T	10000 T	13000 T	14000 T	14000 T	2100 JT
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)								
Carbazole	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	21 UT	20 UT	20 UT	20 UT	20 UT	20 UT	20 UT	20 UT
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	1.4 UT	10 UT	10 UT	10 UT	10 UT	6 UT	10 UT	10 UT
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	PCM-03Y1E2	PCM-04Y1E2	PCM-05Y1E2	PCM-06Y1E2	PCM-07Y0E1b	PCM-08Y1E2	PCM-09Y1E2	PCM-10Y1E2
Sample Name:	PCM-03SC-071106	PCM-04SC-071107	PCM-05SC-071107	PCM-06SC-071106	PCM-07SC-060427	PCM-08SC-071108	PCM-09SC-071105	PCM-10SC-071105
Sample Date:	11/6/2007	11/7/2007	11/7/2007	11/6/2007	4/28/2006	11/8/2007	11/5/2007	11/5/2007
Depth Interval:	0 - 42.672 cm	0 - 21.34 cm	0 - 15.24 cm	0 - 57.912 cm	3.048 - 15.24 cm	0 - 42.672 cm	0 - 51.816 cm	0 - 15.24 cm
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	0.81 UJ	**0.68 J**	**1.6**	**0.8 J**	--	**0.43 J**	1 U	1 U
4,4'-DDE (p,p'-DDE)	0.81 UJ	1 U	0.99 U	1 UJ	--	0.99 U	1 U	1 U
4,4'-DDT (p,p'-DDT)	0.81 UJ	1 U	0.99 U	**0.32 J**	--	0.99 U	1 U	1 U
alpha-Hexachlorocyclohexane (BHC)	0.81 UJ	1 U	0.99 U	1 U	--	0.99 U	1 U	1 U
beta-Hexachlorocyclohexane (BHC)	0.85 UJ	1 U	0.99 U	1 U	--	0.99 U	1 U	1 U
delta-Hexachlorocyclohexane (BHC)	**0.43 J**	1 U	0.99 U	1 U	--	0.99 U	1 U	1 U
Endrin ketone	**0.17 J**	1 U	0.99 U	1 U	--	0.99 U	1 U	1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	2.1 UJ	1.1 U	0.99 U	1 U	--	0.99 U	1 U	1 U
LWG RA Sum DDD (Calculated U = 1/2)	0.81 UJT	**0.68 JT**	**1.6 T**	**0.8 JT**	**1.1 T**	**0.43 JT**	1 UT	1 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.81 UJT	1 UT	0.99 UT	1 UJT	1 UT	0.99 UT	1 UT	1 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.81 UJT	1 UT	0.99 UT	**0.32 JT**	**0.8 JT**	0.99 UT	1 UT	1 UT
LWG RA Total DDx (Calculated U = 1/2)	0.81 UJT	**1.7 JT**	**2.6 T**	**1.6 JT**	**2.4 JT**	**1.4 JT**	1 UT	1 UT
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	0.055 UJT	**0.34 JT**	**0.8 T**	**0.4 JT**	--	**0.13 JT**	0.5 UT	0.5 UT
4,4'-DDE (p,p'-DDE)	0.055 UJT	0.5 UT	0.5 UT	0.5 UJT	--	0.31 UT	0.5 UT	0.5 UT
4,4'-DDT (p,p'-DDT)	0.055 UJT	0.5 UT	0.5 UT	**0.16 JT**	--	0.31 UT	0.5 UT	0.5 UT
alpha-Hexachlorocyclohexane (BHC)	0.055 UJT	0.5 UT	0.5 UT	0.5 UT	--	0.31 UT	0.5 UT	0.5 UT
beta-Hexachlorocyclohexane (BHC)	0.057 UJT	0.5 UT	0.5 UT	0.5 UT	--	0.31 UT	0.5 UT	0.5 UT
delta-Hexachlorocyclohexane (BHC)	**0.029 JT**	0.5 UT	0.5 UT	0.5 UT	--	0.31 UT	0.5 UT	0.5 UT
Endrin ketone	**0.011 JT**	0.5 UT	0.5 UT	0.5 UT	--	0.31 UT	0.5 UT	0.5 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.055 UJT	**0.34 JT**	**0.8 T**	**0.4 JT**	**0.55 T**	**0.13 JT**	0.5 UT	0.5 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.055 UJT	0.5 UT	0.5 UT	0.5 UJT	0.5 UT	0.31 UT	0.5 UT	0.5 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.055 UJT	0.5 UT	0.5 UT	**0.16 JT**	**0.4 JT**	0.31 UT	0.5 UT	0.5 UT
LWG RA Total DDx (Calculated U = 1/2)	0.055 UJT	**0.84 JT**	**1.3 T**	**0.81 JT**	**1.2 JT**	**0.44 JT**	0.5 UT	0.5 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	PCM-18Y0E3	PCM-21Y1E2	RAA-PD01	RAA-PD02	RAA-PD03	RAA-PD04	RAA-PD05	RAA-PD06
Sample Name:	PCM-18SC-061205	PCM-21SC-071106	RAA-PD01-051019	RAA-PD02-051019	RAA-PD03-051019	RAA-PD04-051019	RAA-PD05-051019	RAA-PD06-051019
Sample Date:	12/5/2006	11/6/2007	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
Depth Interval:	0 - 12.8 cm	0 - 30.48 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm
Metals (mg/kg)								
Zinc	23.3	27.1	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	220	4000	--	--	--	--	--	--
Benzo(a)pyrene	300	5000	--	--	--	--	--	--
Benzo(b)fluoranthene	180	4500	--	--	--	--	--	--
Benzo(k)fluoranthene	160	2000	--	--	--	--	--	--
Chrysene	370	4800	--	--	--	--	--	--
Dibenzo(a,h)anthracene	22	420	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	200	4000	--	--	--	--	--	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	380 T	6700 T	22000 T	65000 T	43000 T	20000 T	85000 T	24000 T
LWG RA Total LPAH (Calculated U = 1/2)	2300 T	42000 T	370000 T	390000 T	730000 T	300000 T	1400000 T	320000 T
LWG RA Total PAH (Calculated U = 1/2)	6000 T	110000 T	590000 T	990000 T	1200000 T	530000 T	2300000 T	550000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	110 T	800 T	--	--	--	--	--	--
Benzo(a)pyrene	100 T	1000 T	--	--	--	--	--	--
Benzo(b)fluoranthene	90 T	880 T	--	--	--	--	--	--
Benzo(k)fluoranthene	80 T	400 T	--	--	--	--	--	--
Chrysene	190 T	940 T	--	--	--	--	--	--
Dibenzo(a,h)anthracene	11 T	82 T	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	100 T	800 T	--	--	--	--	--	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	140 T	1300 T	990 T	1800 T	1600 T	950 T	3200 T	930 T
LWG RA Total LPAH (Calculated U = 1/2)	1200 T	8000 T	17000 T	11000 T	28000 T	14000 T	54000 T	12000 T
LWG RA Total PAH (Calculated U = 1/2)	2900 T	22000 T	27000 T	27000 T	45000 T	25000 T	87000 T	21000 T
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)								
Carbazole	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	20 UT	20 UT	200 UT	200 UT	200 UT	200 UT	200 UT	200 UT
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	10 UT	4 UT	9 UT	5 UT	8 UT	9 UT	7.1 UT	8 UT
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	PCM-18Y0E3	PCM-21Y1E2	RAA-PD01	RAA-PD02	RAA-PD03	RAA-PD04	RAA-PD05	RAA-PD06
Sample Name:	PCM-18SC-061205	PCM-21SC-071106	RAA-PD01-051019	RAA-PD02-051019	RAA-PD03-051019	RAA-PD04-051019	RAA-PD05-051019	RAA-PD06-051019
Sample Date:	12/5/2006	11/6/2007	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
Depth Interval:	0 - 12.8 cm	0 - 30.48 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	1 U	**1.4**	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	1 U	1 UJ	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	1 U	1 U	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	1 U	1 U	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	1 U	1 U	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	1 U	1 U	--	--	--	--	--	--
Endrin ketone	1 U	1 U	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1 U	1 U	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	1 UT	**1.4 T**	**19 JT**	**130 JT**	50 UT	100 UT	160 UT	**170 JT**
LWG RA Sum DDE (Calculated U = 1/2)	1 UT	1 UJT	10 UT	50 UT	50 UT	**140 JT**	150 UT	**51 JT**
LWG RA Sum DDT (Calculated U = 1/2)	1 UT	1 UT	10 UT	50 UJT	50 UT	100 UT	100 UT	**22 JT**
LWG RA Total DDx (Calculated U = 1/2)	1 UT	**2.4 JT**	**29 JT**	**180 JT**	50 UT	**240 JT**	160 UT	**240 JT**
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	0.5 UT	**0.27 T**	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	0.5 UT	0.2 UJT	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	0.5 UT	0.2 UT	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.5 UT	0.2 UT	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.5 UT	0.2 UT	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.5 UT	0.2 UT	--	--	--	--	--	--
Endrin ketone	0.5 UT	0.2 UT	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	0.5 UT	**0.27 T**	**0.87 JT**	**3.5 JT**	2 UT	5 UT	6 UT	**6.5 JT**
LWG RA Sum DDE (Calculated U = 1/2)	0.5 UT	0.2 UJT	0.5 UT	1 UT	2 UT	**6.6 JT**	5.6 UT	**2 JT**
LWG RA Sum DDT (Calculated U = 1/2)	0.5 UT	0.2 UT	0.5 UT	1 UJT	2 UT	5 UT	4 UT	**0.84 JT**
LWG RA Total DDx (Calculated U = 1/2)	0.5 UT	**0.47 JT**	**1.4 JT**	**4.5 JT**	2 UT	**12 JT**	6 UT	**9.3 JT**

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	RAA-PD07	RAA-PD08	RAA-PD09	RAA-PD10	RAA-PD11	RAA-PD12	RAA-PD13	RAA-PD14	RAA-PD15
Sample Name:	RAA-PD07-051019	RAA-PD08-051019	RAA-PD09-051019	RAA-PD10-051019	RAA-PD11-051019	RAA-PD12-051019	RAA-PD13-051019	RAA-PD14-051019	RAA-PD15-051019
Sample Date:	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
Depth Interval:	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm
Metals (mg/kg)									
Zinc	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)									
Benzo(a)anthracene	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**21000 T**	**76000 T**	**190000 T**	**13000 T**	**28000 T**	**300000 T**	**71000 T**	**23000 T**	**15000 T**
LWG RA Total LPAH (Calculated U = 1/2)	**260000 T**	**790000 T**	**3000000 T**	**130000 T**	**310000 T**	**6800000 JT**	**820000 T**	**340000 T**	**150000 T**
LWG RA Total PAH (Calculated U = 1/2)	**480000 T**	**1500000 T**	**4700000 T**	**270000 T**	**580000 T**	**9400000 JT**	**1500000 T**	**590000 T**	**300000 T**
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)									
Benzo(a)anthracene	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**590 T**	**1300 T**	**7700 T**	**260 T**	**1000 T**	**4700 T**	**1500 T**	**650 T**	**560 T**
LWG RA Total LPAH (Calculated U = 1/2)	**7200 T**	**16000 T**	**130000 T**	**3000 T**	**11000 T**	**110000 JT**	**18000 T**	**9400 T**	**5000 T**
LWG RA Total PAH (Calculated U = 1/2)	**13000 T**	**30000 T**	**200000 T**	**6000 T**	**22000 T**	**150000 JT**	**32000 T**	**16000 T**	**10000 T**
Semivolatile Organics (µg/kg)									
Carbazole	--	--	--	--	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)									
Carbazole	--	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	200 UT	200 UT	200 UT	200 UT	200 UT	200 UT	200 UT	**640 T**	200 UT
PCB Aroclors (mg/kg-OC)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	6 UT	4 UT	8 UT	4 UT	7 UT	3 UT	4 UT	**18 T**	7 UT
PCB Congeners (µg/kg)									
PCB-077	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	RAA-PD07	RAA-PD08	RAA-PD09	RAA-PD10	RAA-PD11	RAA-PD12	RAA-PD13	RAA-PD14	RAA-PD15
Sample Name:	RAA-PD07-051019	RAA-PD08-051019	RAA-PD09-051019	RAA-PD10-051019	RAA-PD11-051019	RAA-PD12-051019	RAA-PD13-051019	RAA-PD14-051019	RAA-PD15-051019
Sample Date:	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
Depth Interval:	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm
PCB Congeners (mg/kg-OC)									
PCB-077	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	50 UT	**130 JT**	**150 T**	**110 JT**	--	**150 JT**	**59 T**	**96 JT**	**90 T**
LWG RA Sum DDE (Calculated U = 1/2)	68 UT	50 UT	**45 JT**	58 UT	--	100 UT	10 UT	50 UT	**15 T**
LWG RA Sum DDT (Calculated U = 1/2)	50 UT	**17 JT**	50 UT	50 UT	--	100 UT	10 UT	50 UT	10 UT
LWG RA Total DDx (Calculated U = 1/2)	68 UT	**170 JT**	**220 JT**	**160 JT**	--	**250 JT**	**69 T**	**150 JT**	**110 T**
Pesticides (mg/kg-OC)									
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	1 UT	**2.6 JT**	**6.2 T**	**2.4 JT**	--	**2.4 JT**	**1.3 T**	**2.6 JT**	**3 T**
LWG RA Sum DDE (Calculated U = 1/2)	1.9 UT	1 UT	**1.9 JT**	1.3 UT	--	2 UT	0.2 UT	1 UT	**0.55 T**
LWG RA Sum DDT (Calculated U = 1/2)	1 UT	**0.34 JT**	2 UT	1 UT	--	2 UT	0.2 UT	1 UT	0.4 UT
LWG RA Total DDx (Calculated U = 1/2)	1.9 UT	**3.4 JT**	**9.1 JT**	**3.6 JT**	--	**4.4 JT**	**1.5 T**	**3.6 JT**	**3.8 T**

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCDRD05PG050	WLCDRD05VC050	WLCDRD05VC052	WLCDRD05VC054	WLCGSD01AN0101	WLCGSD01AN0101	WLCGSD01AN0102
Sample Name:	WLCDRD05PG05050	WLCDRD05VC05050	WLCDRD05VC05252	WLCDRD05VC05454	WLCGSD01AN0101_10-20	WLCGSD01AN0101_30-40	WLCGSD01AN0102_10-20
Sample Date:	5/27/2005	5/5/2005	5/5/2005	5/5/2005	4/10/2001	4/10/2001	4/10/2001
Depth Interval:	0 - 30 cm	0 - 140 cm	0 - 88 cm	0 - 201 cm	10 - 20 cm	30 - 40 cm	10 - 20 cm
Metals (mg/kg)							
Zinc	99.4 J	161 J	129 J	146 J	136 J	142 J	91 J
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	5300	27000	20000	2300	15000	8300	48000
Benzo(a)pyrene	8400	32000	26000	1900	20000	10000	66000
Benzo(b)fluoranthene	4900	18000	15000	1200	8800	5100	33000
Benzo(k)fluoranthene	4400	15000	13000	1100	14000	6500	42000
Chrysene	6700	32000	24000	2600	21000	11000	66000
Dibenzo(a,h)anthracene	820	2600	2000	170	1600	730	4800
Indeno(1,2,3-c,d)pyrene	7700	24000	19000	1400	11000	6100	41000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	11000 T	42000 T	34000 T	2600 T	25000 T	13000 T	83000 T
LWG RA Total LPAH (Calculated U = 1/2)	39000 T	580000 T	470000 T	41000 T	150000 JT	79000 JT	790000 JT
LWG RA Total PAH (Calculated U = 1/2)	120000 T	980000 T	790000 T	72000 T	400000 JT	200000 JT	1600000 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	170 T	800 T	700 T	120 T	960 T	490 T	1600 T
Benzo(a)pyrene	270 T	950 T	940 T	96 T	1000 T	600 T	2100 T
Benzo(b)fluoranthene	160 T	540 T	540 T	61 T	560 T	300 T	1100 T
Benzo(k)fluoranthene	140 T	450 T	470 T	56 T	890 T	380 T	1400 T
Chrysene	220 T	950 T	870 T	130 T	1300 T	640 T	2100 T
Dibenzo(a,h)anthracene	26 T	77 T	70 T	8.6 T	100 T	43 T	160 T
Indeno(1,2,3-c,d)pyrene	250 T	710 T	690 T	71 T	700 T	360 T	1300 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	360 T	1200 T	1200 T	130 T	1300 T	760 T	2700 T
LWG RA Total LPAH (Calculated U = 1/2)	1200 T	17000 T	17000 T	2100 T	9800 JT	4600 JT	25000 JT
LWG RA Total PAH (Calculated U = 1/2)	3900 T	29000 T	28000 T	3700 T	25000 JT	12000 JT	51000 JT
Semivolatile Organics (µg/kg)							
Carbazole	220 J	9500	7000	1500	--	--	--
Semivolatile Organics (mg/kg-OC)							
Carbazole	7.1 JT	280 T	300 T	76 T	--	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	46 T	230 T	380 T	200 T	--	--	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	1.5 T	6.8 T	14 T	9.9 T	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCDRD05PG050	WLCDRD05VC050	WLCDRD05VC052	WLCDRD05VC054	WLCGSD01AN0101	WLCGSD01AN0101	WLCGSD01AN0102
Sample Name:	WLCDRD05PG05050	WLCDRD05VC05050	WLCDRD05VC05252	WLCDRD05VC05454	WLCGSD01AN0101_10-20	WLCGSD01AN0101_30-40	WLCGSD01AN0102_10-20
Sample Date:	5/27/2005	5/5/2005	5/5/2005	5/5/2005	4/10/2001	4/10/2001	4/10/2001
Depth Interval:	0 - 30 cm	0 - 140 cm	0 - 88 cm	0 - 201 cm	10 - 20 cm	30 - 40 cm	10 - 20 cm
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	**26 J**	**46 J**	**30**	**32**	--	--	--
4,4'-DDE (p,p'-DDE)	**12 J**	10 U	10 U	25 U	--	--	--
4,4'-DDT (p,p'-DDT)	**34 J**	**27**	1.6 U	1.8 U	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.35 U	3.3 U	2.7 U	3 U	--	--	--
beta-Hexachlorocyclohexane (BHC)	1.2 U	9.8 U	8.6 U	9.5 U	--	--	--
delta-Hexachlorocyclohexane (BHC)	1 U	5.5 U	10 U	3.2 U	--	--	--
Endrin ketone	1 U	18 U	12 U	1.3 U	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1 U	10 U	12 U	11 U	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**42 JT**	**65 JT**	**48 T**	**46 T**	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**13 JT**	11 UT	15 UT	25 UT	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**36 JT**	**35 T**	27 UT	10 UT	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**90 JT**	**110 JT**	**75 T**	**71 T**	--	--	--
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	**0.84 JT**	**1.4 JT**	**1 T**	**1.6 T**	--	--	--
4,4'-DDE (p,p'-DDE)	**0.39 JT**	0.3 UT	0.4 UT	1.3 UT	--	--	--
4,4'-DDT (p,p'-DDT)	**1.1 JT**	**0.8 T**	0.058 UT	0.091 UT	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.011 UT	0.098 UT	0.097 UT	0.2 UT	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.039 UT	0.29 UT	0.31 UT	0.48 UT	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.03 UT	0.16 UT	0.4 UT	0.16 UT	--	--	--
Endrin ketone	0.03 UT	0.54 UT	0.43 UT	0.066 UT	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**1.4 JT**	**2 JT**	**1.7 T**	**2.3 T**	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**0.41 JT**	0.33 UT	0.54 UT	1.3 UT	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**1.2 JT**	**1.1 T**	0.97 UT	0.5 UT	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**2.9 JT**	**3.3 JT**	**2.6 T**	**3.6 T**	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSD01AN0102	WLCGSD01AN0103	WLCGSD01AN0103	WLCGSD01AN0105	WLCGSD01AN0105	WLCGSD01AN0205
Sample Name:	WLCGSD01AN0102_30-40	WLCGSD01AN0103_10-20	WLCGSD01AN0103_30-40	WLCGSD01AN0105_10-20	WLCGSD01AN0105_30-40	WLCGSD01AN0205_10-20
Sample Date:	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/11/2001
Depth Interval:	30 - 40 cm	10 - 20 cm	30 - 40 cm	10 - 20 cm	30 - 40 cm	10 - 20 cm
Metals (mg/kg)						
Zinc	**131 J**	**222 J**	**174 J**	**42.6 J**	**48.3 J**	**44.8 J**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	**17000**	**58000**	**120000**	**3 J**	2 U	2 U
Benzo(a)pyrene	**19000**	**58000**	**130000**	**3 J**	3 U	3 U
Benzo(b)fluoranthene	**11000**	**31000**	**65000**	2 U	2 U	2 U
Benzo(k)fluoranthene	**13000**	**35000**	**92000**	3 U	3 U	**4 J**
Chrysene	**23000**	**79000**	**160000**	**4 J**	3 U	**7.7**
Dibenzo(a,h)anthracene	**1400**	**5100**	**10000 J**	3 U	3 U	**3**
Indeno(1,2,3-c,d)pyrene	**12000**	**32000**	**76000**	**3 J**	**1 J**	0.7 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**25000 T**	**76000 T**	**170000 JT**	**5.2 JT**	**3.3 JT**	**4.8 JT**
LWG RA Total LPAH (Calculated U = 1/2)	**210000 JT**	**630000 JT**	**4300000 JT**	**25 JT**	**11 JT**	3 UT
LWG RA Total PAH (Calculated U = 1/2)	**460000 JT**	**1400000 JT**	**6200000 JT**	**61 JT**	**35 JT**	**54 JT**
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	**620 T**	**1100 T**	**1400 T**	**2 JT**	1 UT	1 UT
Benzo(a)pyrene	**690 T**	**1100 T**	**1500 T**	**2 JT**	2 UT	2 UT
Benzo(b)fluoranthene	**400 T**	**600 T**	**740 T**	1 UT	1 UT	1 UT
Benzo(k)fluoranthene	**470 T**	**680 T**	**1100 T**	2 UT	2 UT	**2 JT**
Chrysene	**840 T**	**1500 T**	**1800 T**	**2 JT**	2 UT	**4 T**
Dibenzo(a,h)anthracene	**51 T**	**99 T**	**100 JT**	2 UT	2 UT	**2 T**
Indeno(1,2,3-c,d)pyrene	**440 T**	**620 T**	**870 T**	**2 JT**	**0.5 JT**	0.4 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**890 T**	**1400 T**	**1900 JT**	**3.5 JT**	**2.2 JT**	**3.1 JT**
LWG RA Total LPAH (Calculated U = 1/2)	**7600 JT**	**12000 JT**	**50000 JT**	**13 JT**	**6 JT**	2 UT
LWG RA Total PAH (Calculated U = 1/2)	**17000 JT**	**27000 JT**	**71000 JT**	**33 JT**	**19 JT**	**29 JT**
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)						
Carbazole	--	--	--	--	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSD01AN0102	WLCGSD01AN0103	WLCGSD01AN0103	WLCGSD01AN0105	WLCGSD01AN0105	WLCGSD01AN0205
Sample Name:	WLCGSD01AN0102_30-40	WLCGSD01AN0103_10-20	WLCGSD01AN0103_30-40	WLCGSD01AN0105_10-20	WLCGSD01AN0105_30-40	WLCGSD01AN0205_10-20
Sample Date:	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/11/2001
Depth Interval:	30 - 40 cm	10 - 20 cm	30 - 40 cm	10 - 20 cm	30 - 40 cm	10 - 20 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSD01AN0205	WLCGSG07GSB2	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSC2	WLCGSG07GSC5
Sample Name:	WLCGSD01AN0205_30-40	WLCGSG07GSB2S02	WLCGSG07GSB5S02	WLCGSG07GSB7S02	WLCGSG07GSB7SC071011	WLCGSG07GSC2S02	WLCGSG07GSC5S02
Sample Date:	4/11/2001	9/21/2007	9/21/2007	8/30/2007	10/11/2007	9/21/2007	9/20/2007
Depth Interval:	30 - 40 cm	0 - 60.96 cm	0 - 60.96 cm	0 - 60.96 cm	24.38 - 39.62 cm	0 - 60.96 cm	0 - 60.96 cm
Metals (mg/kg)							
Zinc	37 J	93.7	94.5	120	--	73.2	54.2
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	2 U	17000	28000	6300	30000	29000	80
Benzo(a)pyrene	3 U	18000	37000	7800	33000 J	36000	110
Benzo(b)fluoranthene	2 U	18000	31000	7900	28000	31000	93
Benzo(k)fluoranthene	3 U	5600	9700	2200	8700	9700	29
Chrysene	3 U	18000	30000	6300	34000	32000	110
Dibenzo(a,h)anthracene	2 U	2100	3400	740	3800	3300	12
Indeno(1,2,3-c,d)pyrene	0.7 U	13000	27000	6500	24000	25000	79
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	3 UT	25000 T	49000 T	11000 T	45000 JT	48000 T	150 T
LWG RA Total LPAH (Calculated U = 1/2)	3 UT	73000 JT	600000 T	52000 T	450000 JT	470000 T	540 JT
LWG RA Total PAH (Calculated U = 1/2)	3 UT	270000 JT	1100000 T	130000 T	860000 JT	950000 T	1700 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	1 UT	1700 T	2800 T	210 T	900 T	2900 T	8 T
Benzo(a)pyrene	2 UT	1800 T	3700 T	260 T	996.9789428711 JT	3600 T	11 T
Benzo(b)fluoranthene	1 UT	1800 T	3100 T	260 T	850 T	3100 T	9.3 T
Benzo(k)fluoranthene	2 UT	560 T	970 T	73 T	260 T	970 T	2.9 T
Chrysene	2 UT	1800 T	3000 T	210 T	1000 T	3200 T	11 T
Dibenzo(a,h)anthracene	1 UT	210 T	340 T	25 T	110 T	330 T	1.2 T
Indeno(1,2,3-c,d)pyrene	0.4 UT	1300 T	2700 T	220 T	730 T	2500 T	7.9 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2 UT	2500 T	4900 T	350 T	1400 JT	4800 T	15 T
LWG RA Total LPAH (Calculated U = 1/2)	2 UT	7300 JT	60000 T	1700 T	14000 JT	47000 T	54 JT
LWG RA Total PAH (Calculated U = 1/2)	2 UT	27000 JT	110000 T	4100 T	26000 JT	95000 T	170 JT
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)							
Carbazole	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSD01AN0205	WLCGSG07GSB2	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSC2	WLCGSG07GSC5
Sample Name:	WLCGSD01AN0205_30-40	WLCGSG07GSB2S02	WLCGSG07GSB5S02	WLCGSG07GSB7S02	WLCGSG07GSB7SC071011	WLCGSG07GSC2S02	WLCGSG07GSC5S02
Sample Date:	4/11/2001	9/21/2007	9/21/2007	8/30/2007	10/11/2007	9/21/2007	9/20/2007
Depth Interval:	30 - 40 cm	0 - 60.96 cm	0 - 60.96 cm	0 - 60.96 cm	24.38 - 39.62 cm	0 - 60.96 cm	0 - 60.96 cm
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSD2	WLCGSG07GSD4	WLCGSG07GSD5	WLCGSJ06GS05	WLCGSJ06GS08
Sample Name:	WLCGSG07GSC7S02	WLCGSG07GSC7SC071011	WLCGSG07GSD2S02	WLCGSG07GSD4S02	WLCGSG07GSD5SC071011	WLCGSJ06GS05S34	WLCGSJ06GS08S34
Sample Date:	9/19/2007	10/11/2007	9/20/2007	9/20/2007	10/11/2007	10/24/2006	10/25/2006
Depth Interval:	0 - 60.96 cm	42.67 - 57.91 cm	0 - 60.96 cm	0 - 60.96 cm	45.72 - 60.96 cm	91.44 - 121.9 cm	91.44 - 121.9 cm
Metals (mg/kg)							
Zinc	99.7	--	50.7	48	--	--	66.9
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	82000	230000	25	5	520	58000	20
Benzo(a)pyrene	100000	280000 J	28	5.2	630 J	77000	26
Benzo(b)fluoranthene	81000	250000	26	5	570	48000	23
Benzo(k)fluoranthene	26000	81000	7.8	1.4 J	190	40000	17
Chrysene	110000	270000	29	5.4	760	69000	32
Dibenzo(a,h)anthracene	9100	29000	3.5 J	0.64 J	75	6300	3.4 J
Indeno(1,2,3-c,d)pyrene	63000	190000	22	4.2 J	470	51000	23
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	130000 T	380000 JT	39 JT	7.3 JT	860 JT	99000 T	36 JT
LWG RA Total LPAH (Calculated U = 1/2)	3100000 JT	9000000 JT	140 JT	28 JT	12000 JT	430000 T	60 JT
LWG RA Total PAH (Calculated U = 1/2)	4500000 JT	12000000 JT	470 JT	92 JT	21000 JT	1200000 T	340 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	8200 T	2400 T	2.5 T	0.5 T	79 T	1300 T	10 T
Benzo(a)pyrene	10000 T	2900 JT	2.8 T	0.52 T	95 JT	1700 T	13 T
Benzo(b)fluoranthene	8100 T	2600 T	2.6 T	0.5 T	86 T	1000 T	12 T
Benzo(k)fluoranthene	2600 T	830 T	0.78 T	0.14 JT	29 T	900 T	8.5 T
Chrysene	11000 T	2800 T	2.9 T	0.54 T	120 T	1500 T	16 T
Dibenzo(a,h)anthracene	910 T	300 T	0.35 JT	0.064 JT	11 T	140 T	1.7 JT
Indeno(1,2,3-c,d)pyrene	6300 T	2000 T	2.2 T	0.42 JT	71 T	1100 T	12 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	13000 T	3900 JT	3.9 JT	0.73 JT	130 JT	2200 T	18 JT
LWG RA Total LPAH (Calculated U = 1/2)	310000 JT	93000 JT	14 JT	2.8 JT	1800 JT	9300 T	30 JT
LWG RA Total PAH (Calculated U = 1/2)	450000 JT	130000 JT	47 JT	9.2 JT	3200 JT	27000 T	170 JT
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)							
Carbazole	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSD2	WLCGSG07GSD4	WLCGSG07GSD5	WLCGSJ06GS05	WLCGSJ06GS08
Sample Name:	WLCGSG07GSC7S02	WLCGSG07GSC7SC071011	WLCGSG07GSD2S02	WLCGSG07GSD4S02	WLCGSG07GSD5SC071011	WLCGSJ06GS05S34	WLCGSJ06GS08S34
Sample Date:	9/19/2007	10/11/2007	9/20/2007	9/20/2007	10/11/2007	10/24/2006	10/25/2006
Depth Interval:	0 - 60.96 cm	42.67 - 57.91 cm	0 - 60.96 cm	0 - 60.96 cm	45.72 - 60.96 cm	91.44 - 121.9 cm	91.44 - 121.9 cm
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCMRD08SDDA17SB	WLCMRD08SDUD1SB	WLCMRD08SDUD26SB	WLCMRD08SDUD27SB	WLCMRD08SDUD2SB	WLCMRI02CS001	WLCMRI02CS002
Sample Name:	WLCMRD08DA17-2	WLCMRD08UD1-2	WLCMRD08UD26-2	WLCMRD08UD27-2	WLCMRD08UD2-2	WLCMRI02CS001CS001	WLCMRI02CS002CS002
Sample Date:	4/20/2008	4/15/2008	4/13/2008	4/13/2008	4/15/2008	9/10/2002	9/10/2002
Depth Interval:	30.48 - 213 cm	30.48 - 182.88 cm	30.48 - 182.88 cm	30.48 - 182.88 cm	30.48 - 182.88 cm	0 - 91.44 cm	0 - 91.44 cm
Metals (mg/kg)							
Zinc	228	96.3	151	154	88.1	162	136
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	13000	1500	980	13000	32	10000	1900
Benzo(a)pyrene	19000	2400	1200	18000	37	12000	1900
Benzo(b)fluoranthene	17000	2000	1300	16000	51	8900	1600
Benzo(k)fluoranthene	5300	550	430	4900	17	8500	1600
Chrysene	16000	1800	1200	15000	36	14000	2400
Dibenzo(a,h)anthracene	2200	240	150	2100	4.2	1500	300
Indeno(1,2,3-c,d)pyrene	15000	1800	980	14000	34	9300	2000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	26000 T	3200 T	1700 T	24000 T	53 T	16000 T	2800 T
LWG RA Total LPAH (Calculated U = 1/2)	100000 T	9000 T	4600 T	78000 T	100 JT	98000 T	12000 T
LWG RA Total PAH (Calculated U = 1/2)	310000 T	34000 T	18000 T	280000 T	530 JT	250000 T	37000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	600 T	240 T	54 T	500 T	3.9 T	400 T	100 T
Benzo(a)pyrene	880 T	380 T	67 T	690 T	4.5 T	460 T	100 T
Benzo(b)fluoranthene	790 T	300 T	72 T	620 T	6.2 T	340 T	84 T
Benzo(k)fluoranthene	250 T	87 T	24 T	190 T	2.1 T	330 T	84 T
Chrysene	740 T	290 T	67 T	580 T	4.4 T	540 T	130 T
Dibenzo(a,h)anthracene	100 T	38 T	8.3 T	81 T	0.51 T	58 T	20 T
Indeno(1,2,3-c,d)pyrene	690 T	290 T	54 T	540 T	4.1 T	360 T	100 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1200 T	500 T	94 T	940 T	6.5 T	630 T	150 T
LWG RA Total LPAH (Calculated U = 1/2)	4700 T	1400 T	250 T	3000 T	12 JT	3400 T	610 T
LWG RA Total PAH (Calculated U = 1/2)	14000 T	5400 T	1000 T	11000 T	65 JT	9300 T	2000 T
Semivolatile Organics (µg/kg)							
Carbazole	2200	190	93	690	5.7 J	1000	190
Semivolatile Organics (mg/kg-OC)							
Carbazole	100 T	30 T	5.2 T	27 T	0.7 JT	40 T	10 T
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	20 UT	3.9 UT	15 UT	24 UT	5 UT	39 UT	39 UT
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	0.9 UT	0.62 UT	0.83 UT	0.93 UT	0.6 UT	1.5 UT	2.1 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCMRD08SDDA17SB	WLCMRD08SDUD1SB	WLCMRD08SDUD26SB	WLCMRD08SDUD27SB	WLCMRD08SDUD2SB	WLCMRI02CS001	WLCMRI02CS002
Sample Name:	WLCMRD08DA17-2	WLCMRD08UD1-2	WLCMRD08UD26-2	WLCMRD08UD27-2	WLCMRD08UD2-2	WLCMRI02CS001CS001	WLCMRI02CS002CS002
Sample Date:	4/20/2008	4/15/2008	4/13/2008	4/13/2008	4/15/2008	9/10/2002	9/10/2002
Depth Interval:	30.48 - 213 cm	30.48 - 182.88 cm	30.48 - 182.88 cm	30.48 - 182.88 cm	30.48 - 182.88 cm	0 - 91.44 cm	0 - 91.44 cm
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	**35 J**	**1.3 J**	**6.8**	**29**	**0.087 J**	**57**	**14**
4,4'-DDE (p,p'-DDE)	1.4 U	**0.3**	**4 J**	6.5 U	0.2 U	**8.8 J**	**4.6**
4,4'-DDT (p,p'-DDT)	**8**	0.2 U	**2.4**	3.7 U	**0.27**	**27**	**5.3**
alpha-Hexachlorocyclohexane (BHC)	1 U	0.15 U	0.2 U	2 U	0.2 U	0.98 U	0.98 U
beta-Hexachlorocyclohexane (BHC)	1.2 U	0.49 U	0.2 U	2 U	0.2 U	0.98 U	0.98 U
delta-Hexachlorocyclohexane (BHC)	1 U	0.15 U	0.2 U	2 U	0.2 U	--	--
Endrin ketone	1.3 U	0.22 U	**0.72 J**	2.6 U	0.2 U	2 U	2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	4 U	0.42 U	**0.2 J**	5.2 U	0.2 U	0.98 U	0.98 U
LWG RA Sum DDD (Calculated U = 1/2)	**46 JT**	**1.5 JT**	**9.4 T**	**44 T**	**0.19 JT**	**57 T**	**14 T**
LWG RA Sum DDE (Calculated U = 1/2)	1.4 UT	**0.47 T**	**5.1 JT**	6.5 UT	0.2 UT	**8.8 JT**	**4.6 T**
LWG RA Sum DDT (Calculated U = 1/2)	**11 T**	**0.33 JT**	**3 T**	3.9 UT	**0.37 T**	**27 T**	**5.3 T**
LWG RA Total DDx (Calculated U = 1/2)	**58 JT**	**2.3 JT**	**17 JT**	**52 T**	**0.76 JT**	**93 JT**	**24 T**
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	**1.6 JT**	**0.21 JT**	**0.38 T**	**1.1 T**	**0.011 JT**	**2.2 T**	**0.74 T**
4,4'-DDE (p,p'-DDE)	0.065 UT	**0.05 T**	**0.2 JT**	0.25 UT	0.02 UT	**0.34 JT**	**0.24 T**
4,4'-DDT (p,p'-DDT)	**0.4 T**	0.03 UT	**0.13 T**	0.14 UT	**0.033 T**	**1 T**	**0.28 T**
alpha-Hexachlorocyclohexane (BHC)	0.05 UT	0.024 UT	0.01 UT	0.08 UT	0.02 UT	0.038 UT	0.052 UT
beta-Hexachlorocyclohexane (BHC)	0.056 UT	0.078 UT	0.01 UT	0.08 UT	0.02 UT	0.038 UT	0.052 UT
delta-Hexachlorocyclohexane (BHC)	0.05 UT	0.024 UT	0.01 UT	0.08 UT	0.02 UT	--	--
Endrin ketone	0.06 UT	0.035 UT	**0.04 JT**	0.1 UT	0.02 UT	0.08 UT	0.1 UT
LWG RA Sum DDD (Calculated U = 1/2)	**2.1 JT**	**0.24 JT**	**0.52 T**	**1.7 T**	**0.021 JT**	**2.2 T**	**0.74 T**
LWG RA Sum DDE (Calculated U = 1/2)	0.065 UT	**0.077 T**	**0.26 JT**	0.25 UT	0.02 UT	**0.34 JT**	**0.24 T**
LWG RA Sum DDT (Calculated U = 1/2)	**0.53 T**	**0.052 JT**	**0.16 T**	0.15 UT	**0.043 T**	**1 T**	**0.28 T**
LWG RA Total DDx (Calculated U = 1/2)	**2.7 JT**	**0.37 JT**	**0.94 JT**	**2 T**	**0.084 JT**	**3.5 JT**	**1.3 T**

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP32
Sample Name:	WLCSLH01GP25S1	WLCSLH01GP26S1	WLCSLH01GP27S1	WLCSLH01GP28S1	WLCSLH01GP29S1	WLCSLH01GP30S1	WLCSLH01GP31S1	WLCSLH01GP32S1
Sample Date:	9/30/2004	10/5/2004	10/8/2004	10/13/2004	10/20/2004	10/22/2004	10/26/2004	10/28/2004
Depth Interval:	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	393	55600	5680	35.8	27.9	68.9	293	85.4
Benzo(a)pyrene	740	59700	6810	92.2	43.5	92.9	416	107
Benzo(b)fluoranthene	649	48400	5640	75.1	41.8	86.5	355	115
Benzo(k)fluoranthene	214	13600	1870	22.7	17.4 U	24	14.8 U	39.7
Chrysene	519	49700	5420	33.2	26.1	62.5	366	78
Dibenzo(a,h)anthracene	101	5500	710	12.2	17.4 U	16 U	14.8 U	16.2
Indeno(1,2,3-c,d)pyrene	462	24400	2910	50.7	26.1	44.9	222	61.8
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	990 T	78000 T	9000 T	121 T	61.9 T	120 T	511 T	150 T
LWG RA Total LPAH (Calculated U = 1/2)	563 T	700000 T	34900 T	119 T	2210 T	300 T	5200 T	10300 T
LWG RA Total PAH (Calculated U = 1/2)	5900 T	1400000 T	100000 T	830 T	2530 T	1100 T	8680 T	11400 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	197 T	26700 T	2270 T	17.9 T	14 T	5.47 T	17.3 T	9.37 T
Benzo(a)pyrene	370 T	28700 T	2720 T	46.1 T	21.8 T	7.37 T	24.6 T	11.7 T
Benzo(b)fluoranthene	325 T	23300 T	2260 T	37.6 T	20.9 T	6.87 T	21 T	12.6 T
Benzo(k)fluoranthene	107 T	6540 T	748 T	11.4 T	8.7 UT	1.9 T	0.876 UT	4.36 T
Chrysene	260 T	23900 T	2170 T	16.6 T	13.1 T	4.96 T	21.7 T	8.56 T
Dibenzo(a,h)anthracene	50.5 T	2600 T	280 T	6.1 T	8.7 UT	1.3 UT	0.876 UT	1.78 T
Indeno(1,2,3-c,d)pyrene	231 T	11700 T	1160 T	25.4 T	13.1 T	3.56 T	13.1 T	6.78 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	500 T	38000 T	3600 T	60.4 T	31 T	9.6 T	30.2 T	16.4 T
LWG RA Total LPAH (Calculated U = 1/2)	281 T	340000 T	14000 T	59.5 T	1110 T	24 T	307 T	1130 T
LWG RA Total PAH (Calculated U = 1/2)	3000 T	670000 T	40000 T	420 T	1270 T	88 T	514 T	1250 T
Semivolatile Organics (µg/kg)								
Carbazole	87.4 U	861	145 U	87.4 U	647	160 U	733	147 U
Semivolatile Organics (mg/kg-OC)								
Carbazole	43.7 UT	414 T	58 UT	43.7 UT	324 T	13 UT	43.4 T	16.1 UT
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP32
Sample Name:	WLCSLH01GP25S1	WLCSLH01GP26S1	WLCSLH01GP27S1	WLCSLH01GP28S1	WLCSLH01GP29S1	WLCSLH01GP30S1	WLCSLH01GP31S1	WLCSLH01GP32S1
Sample Date:	9/30/2004	10/5/2004	10/8/2004	10/13/2004	10/20/2004	10/22/2004	10/26/2004	10/28/2004
Depth Interval:	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	WR-WSI98SD072	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC
Sample Name:	WR-WSI98SD0720000A	DGS-03SC-0408-101005	DGS-06SC-0408-101007	DGS-07SC-0408-101012	DGS-08SC-0408-101007	DGS-11SC-0408-101006
Sample Date:	10/16/1997	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010
Depth Interval:	0 - 90 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
Metals (mg/kg)						
Zinc	145	98 J	50	172	65	51
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	1100	4500	250	24000	37000	42000
Benzo(a)pyrene	660	5000	350	28000	44000	52000
Benzo(b)fluoranthene	460	--	--	--	--	--
Benzo(k)fluoranthene	690	--	--	--	--	--
Chrysene	1500	5400	380	28000	48000	56000
Dibenzo(a,h)anthracene	110 U	1100	65	610	6000	7200
Indeno(1,2,3-c,d)pyrene	310	3800	200	8500	23000	25000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	910 T	7500 T	510 T	35000 T	61000 T	72000 T
LWG RA Total LPAH (Calculated U = 1/2)	33000 T	48000 T	1900 T	200000 T	1300000 T	1300000 T
LWG RA Total PAH (Calculated U = 1/2)	51000 T	120000 T	5900 T	480000 T	1800000 T	2000000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	92 T	180 T	8.6 T	760 T	1100 T	780 T
Benzo(a)pyrene	55 T	200 T	12 T	890 T	1300 T	960 T
Benzo(b)fluoranthene	38 T	--	--	--	--	--
Benzo(k)fluoranthene	58 T	--	--	--	--	--
Chrysene	130 T	220 T	13 T	890 T	1400 T	1000 T
Dibenzo(a,h)anthracene	9.2 UT	45 T	2.2 T	19 T	200 T	130 T
Indeno(1,2,3-c,d)pyrene	26 T	150 T	7 T	270 T	680 T	460 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	76 T	300 T	17 T	1100 T	1800 T	1300 T
LWG RA Total LPAH (Calculated U = 1/2)	2700 T	2000 T	56 T	6300 T	40000 T	25000 T
LWG RA Total PAH (Calculated U = 1/2)	4200 T	4900 T	200 T	15000 T	55000 T	37000 T
Semivolatile Organics (µg/kg)						
Carbazole	660	900	64 U	4000	7000	15000
Semivolatile Organics (mg/kg-OC)						
Carbazole	55 T	40 T	2.2 UT	100 T	200 T	280 T
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	140 JT	31 UT	33 UT	230 JT	33 UT	32 UT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	12 JT	1.3 UT	1.1 UT	7.2 JT	0.98 UT	0.59 UT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	B:_0-4_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	WR-WSI98SD072	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC
Sample Name:	WR-WSI98SD0720000A	DGS-03SC-0408-101005	DGS-06SC-0408-101007	DGS-07SC-0408-101012	DGS-08SC-0408-101007	DGS-11SC-0408-101006
Sample Date:	10/16/1997	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010
Depth Interval:	0 - 90 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	**16**	16 U	3.3 U	**360**	16 U	16 U
4,4'-DDE (p,p'-DDE)	**5.5**	**7.4 J**	3.3 U	**48**	16 U	16 U
4,4'-DDT (p,p'-DDT)	**17**	**240**	3.3 U	**34**	16 U	16 U
alpha-Hexachlorocyclohexane (BHC)	0.94 U	7.8 U	1.6 U	16 U	8.2 U	8 U
beta-Hexachlorocyclohexane (BHC)	0.94 U	7.8 U	1.6 U	45 U	16 U	8 U
delta-Hexachlorocyclohexane (BHC)	0.94 UJ	7.8 UJ	1.6 U	16 U	8.2 U	8 U
Endrin ketone	3.1 UJ	16 U	3.3 U	32 U	16 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.94 U	7.8 U	1.6 U	16 U	8.2 U	8 U
LWG RA Sum DDD (Calculated U = 1/2)	**16 T**	16 UT	3.3 UT	**420 T**	16 UT	16 UT
LWG RA Sum DDE (Calculated U = 1/2)	**5.5 T**	**15 JT**	3.3 UT	**64 T**	16 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	**17 T**	**250 T**	3.3 UT	**50 T**	16 UT	16 UT
LWG RA Total DDx (Calculated U = 1/2)	**39 T**	**280 JT**	3.3 UT	**540 T**	16 UT	16 UT
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	**1.3 T**	0.65 UT	0.11 UT	**11 T**	0.47 UT	0.3 UT
4,4'-DDE (p,p'-DDE)	**0.46 T**	**0.3 JT**	0.11 UT	**1.5 T**	0.47 UT	0.3 UT
4,4'-DDT (p,p'-DDT)	**1.4 T**	**9.7 T**	0.11 UT	**1.1 T**	0.47 UT	0.3 UT
alpha-Hexachlorocyclohexane (BHC)	0.078 UT	0.32 UT	0.055 UT	0.51 UT	0.24 UT	0.15 UT
beta-Hexachlorocyclohexane (BHC)	0.078 UT	0.32 UT	0.055 UT	1.4 UT	0.47 UT	0.15 UT
delta-Hexachlorocyclohexane (BHC)	0.078 UJT	0.32 UJT	0.055 UT	0.51 UT	0.24 UT	0.15 UT
Endrin ketone	0.26 UJT	0.65 UT	0.11 UT	1 UT	0.47 UT	0.3 UT
LWG RA Sum DDD (Calculated U = 1/2)	**1.3 T**	0.65 UT	0.11 UT	**13 T**	0.47 UT	0.3 UT
LWG RA Sum DDE (Calculated U = 1/2)	**0.46 T**	**0.63 JT**	0.11 UT	**2 T**	0.47 UT	0.3 UT
LWG RA Sum DDT (Calculated U = 1/2)	**1.4 T**	**10 T**	0.11 UT	**1.6 T**	0.47 UT	0.3 UT
LWG RA Total DDx (Calculated U = 1/2)	**3.2 T**	**11 JT**	0.11 UT	**17 T**	0.47 UT	0.3 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-11SC	DGS-13SC	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC
Sample Name:	DGS-11SC-1.58.2-101006	DGS-13SC-0408-101005	DGS-18SC-0408-101008	DGS-19SC-0408-101006	DGS-20SC-0408-101008	DGS-22SC-0408-101012
Sample Date:	10/6/2010	10/5/2010	10/8/2010	10/6/2010	10/8/2010	10/12/2010
Depth Interval:	45.72 - 249.94 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
Metals (mg/kg)						
Zinc	67	50 J	51	62	47	110
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	63000	62 U	3200	59000	61 U	13000
Benzo(a)pyrene	74000	62 U	2700	84000	61 U	20000
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	82000	62 U	4100	78000	61 U	17000
Dibenzo(a,h)anthracene	1500	62 U	460	12000	61 U	370 U
Indeno(1,2,3-c,d)pyrene	26000	62 U	1200	47000	61 U	8500
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	94000 T	62 UT	3800 T	120000 T	61 UT	25000 T
LWG RA Total LPAH (Calculated U = 1/2)	1500000 T	2700 JT	50000 T	2900000 T	290 T	97000 T
LWG RA Total PAH (Calculated U = 1/2)	2300000 T	3000 JT	84000 JT	3900000 T	570 JT	320000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	6300 T	5.3 UT	1600 T	1300 T	31 UT	410 T
Benzo(a)pyrene	7400 T	5.3 UT	1400 T	1900 T	31 UT	600 T
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	8200 T	5.3 UT	2000 T	1800 T	31 UT	530 T
Dibenzo(a,h)anthracene	150 T	5.3 UT	230 T	270 T	31 UT	12 UT
Indeno(1,2,3-c,d)pyrene	2600 T	5.3 UT	600 T	1100 T	31 UT	270 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	9400 T	5.3 UT	2000 T	2600 T	31 UT	750 T
LWG RA Total LPAH (Calculated U = 1/2)	150000 T	230 JT	26000 T	66000 T	150 T	3000 T
LWG RA Total PAH (Calculated U = 1/2)	230000 T	260 JT	42000 JT	88000 T	290 JT	9800 T
Semivolatile Organics (µg/kg)						
Carbazole	19000	330 J	310 U	19000	61 U	530
Semivolatile Organics (mg/kg-OC)						
Carbazole	1900 T	28 JT	150 UT	430 T	31 UT	17 T
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 UT	31 UT	32 UT	32 UT	31 UT	32 UJT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	3.1 UT	2.7 UT	16 UT	0.72 UT	16 UT	1 UJT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-11SC	DGS-13SC	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC
Sample Name:	DGS-11SC-1.58.2-101006	DGS-13SC-0408-101005	DGS-18SC-0408-101008	DGS-19SC-0408-101006	DGS-20SC-0408-101008	DGS-22SC-0408-101012
Sample Date:	10/6/2010	10/5/2010	10/8/2010	10/6/2010	10/8/2010	10/12/2010
Depth Interval:	45.72 - 249.94 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	32 U	3.1 U	16 U	16 U	3.2 U	16 U
4,4'-DDE (p,p'-DDE)	32 U	3.1 U	16 U	16 U	3.2 U	16 U
4,4'-DDT (p,p'-DDT)	32 U	3.1 U	16 U	16 U	3.2 U	16 U
alpha-Hexachlorocyclohexane (BHC)	16 U	1.5 U	8.2 U	8.2 U	1.6 U	8 U
beta-Hexachlorocyclohexane (BHC)	16 U	1.5 U	8.2 U	8.2 U	1.6 U	8 U
delta-Hexachlorocyclohexane (BHC)	16 UJ	1.5 UJ	8.2 U	8.2 U	1.6 U	8 U
Endrin ketone	32 U	3.1 U	16 U	16 U	3.2 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	16 U	1.5 U	8.2 U	8.2 U	1.6 U	8 U
LWG RA Sum DDD (Calculated U = 1/2)	32 UT	3.1 UT	16 UT	16 UT	3.2 UT	16 UT
LWG RA Sum DDE (Calculated U = 1/2)	32 UT	3.1 UT	16 UT	16 UT	3.2 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	32 UT	3.1 UT	16 UT	16 UT	3.2 UT	16 UT
LWG RA Total DDx (Calculated U = 1/2)	32 UT	3.1 UT	16 UT	16 UT	3.2 UT	16 UT
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	3.2 UT	0.27 UT	8 UT	0.36 UT	1.6 UT	0.5 UT
4,4'-DDE (p,p'-DDE)	3.2 UT	0.27 UT	8 UT	0.36 UT	1.6 UT	0.5 UT
4,4'-DDT (p,p'-DDT)	3.2 UT	0.27 UT	8 UT	0.36 UT	1.6 UT	0.5 UT
alpha-Hexachlorocyclohexane (BHC)	1.6 UT	0.13 UT	4.1 UT	0.18 UT	0.8 UT	0.25 UT
beta-Hexachlorocyclohexane (BHC)	1.6 UT	0.13 UT	4.1 UT	0.18 UT	0.8 UT	0.25 UT
delta-Hexachlorocyclohexane (BHC)	1.6 UJT	0.13 UJT	4.1 UT	0.18 UT	0.8 UT	0.25 UT
Endrin ketone	3.2 UT	0.27 UT	8 UT	0.36 UT	1.6 UT	0.5 UT
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	0.27 UT	8 UT	0.36 UT	1.6 UT	0.5 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	0.27 UT	8 UT	0.36 UT	1.6 UT	0.5 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	0.27 UT	8 UT	0.36 UT	1.6 UT	0.5 UT
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	0.27 UT	8 UT	0.36 UT	1.6 UT	0.5 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-23SC	DGS-24SC	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC
Sample Name:	DGS-23SC-0408-101008	DGS-24SC-0408-101012	DGS-25SC-0408-101007	DGS-26SC-0408-101011	DGS-28SC-0408-101007	DGS-30SC-0408-101006
Sample Date:	10/8/2010	10/12/2010	10/7/2010	10/11/2010	10/7/2010	10/6/2010
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
Metals (mg/kg)						
Zinc	47	134	45	47	43	46
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	61 U	130000	62 U	3900	63 U	60 U
Benzo(a)pyrene	61 U	160000	62 U	5000	63 U	60 U
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	61 U	170000	62 U	4800	63 U	60 U
Dibenzo(a,h)anthracene	61 U	1200	62 U	190 U	63 U	60 U
Indeno(1,2,3-c,d)pyrene	61 U	20000	62 U	2500	63 U	60 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	61 UT	200000 T	62 UT	6300 T	63 UT	60 UT
LWG RA Total LPAH (Calculated U = 1/2)	61 UT	5200000 T	450 T	69000 T	63 UT	440 T
LWG RA Total PAH (Calculated U = 1/2)	61 UJT	7100000 T	720 JT	120000 T	63 UT	710 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	31 UT	2500 T	31 UT	1200 T	32 UT	30 UT
Benzo(a)pyrene	31 UT	3000 T	31 UT	1000 T	32 UT	30 UT
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	31 UT	3200 T	31 UT	1400 T	32 UT	30 UT
Dibenzo(a,h)anthracene	31 UT	23 T	31 UT	57 UT	32 UT	30 UT
Indeno(1,2,3-c,d)pyrene	31 UT	400 T	31 UT	750 T	32 UT	30 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	31 UT	3700 T	31 UT	1400 T	32 UT	30 UT
LWG RA Total LPAH (Calculated U = 1/2)	31 UT	98000 T	220 T	21000 T	32 UT	220 T
LWG RA Total PAH (Calculated U = 1/2)	31 UJT	130000 T	360 JT	35000 T	32 UT	350 T
Semivolatile Organics (µg/kg)						
Carbazole	61 U	28000	62 U	1000	63 U	60 U
Semivolatile Organics (mg/kg-OC)						
Carbazole	31 UT	530 T	31 UT	300 T	32 UT	30 UT
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 UT	240 JT	32 UT	32 UJT	33 UT	32 UT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	16 UT	4.6 JT	16 UT	9.6 UJT	16 UT	16 UT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-23SC	DGS-24SC	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC
Sample Name:	DGS-23SC-0408-101008	DGS-24SC-0408-101012	DGS-25SC-0408-101007	DGS-26SC-0408-101011	DGS-28SC-0408-101007	DGS-30SC-0408-101006
Sample Date:	10/8/2010	10/12/2010	10/7/2010	10/11/2010	10/7/2010	10/6/2010
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	3.1 U	**160**	3.3 U	16 U	3.3 U	3.2 U
4,4'-DDE (p,p'-DDE)	3.1 U	44 U	3.3 U	16 U	3.3 U	3.2 U
4,4'-DDT (p,p'-DDT)	3.1 U	44 U	3.3 U	16 U	3.3 U	3.2 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	22 U	1.6 U	7.9 U	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	22 U	1.6 U	7.9 U	1.6 U	1.6 U
delta-Hexachlorocyclohexane (BHC)	1.6 U	22 U	1.6 U	7.9 U	1.6 U	1.6 U
Endrin ketone	3.1 U	44 U	3.3 U	16 U	3.3 U	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	22 U	1.6 U	7.9 U	1.6 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	3.1 UT	**180 T**	3.3 UT	16 UT	3.3 UT	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.1 UT	44 UT	3.3 UT	16 UT	3.3 UT	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.1 UT	44 UT	3.3 UT	16 UT	3.3 UT	3.2 UT
LWG RA Total DDx (Calculated U = 1/2)	3.1 UT	**270 T**	3.3 UT	16 UT	3.3 UT	3.2 UT
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	1.6 UT	**3 T**	1.7 UT	4.8 UT	1.7 UT	1.6 UT
4,4'-DDE (p,p'-DDE)	1.6 UT	0.84 UT	1.7 UT	4.8 UT	1.7 UT	1.6 UT
4,4'-DDT (p,p'-DDT)	1.6 UT	0.84 UT	1.7 UT	4.8 UT	1.7 UT	1.6 UT
alpha-Hexachlorocyclohexane (BHC)	0.8 UT	0.42 UT	0.8 UT	2.4 UT	0.8 UT	0.8 UT
beta-Hexachlorocyclohexane (BHC)	0.8 UT	0.42 UT	0.8 UT	2.4 UT	0.8 UT	0.8 UT
delta-Hexachlorocyclohexane (BHC)	0.8 UT	0.42 UT	0.8 UT	2.4 UT	0.8 UT	0.8 UT
Endrin ketone	1.6 UT	0.84 UT	1.7 UT	4.8 UT	1.7 UT	1.6 UT
LWG RA Sum DDD (Calculated U = 1/2)	1.6 UT	**3.4 T**	1.7 UT	4.8 UT	1.7 UT	1.6 UT
LWG RA Sum DDE (Calculated U = 1/2)	1.6 UT	0.84 UT	1.7 UT	4.8 UT	1.7 UT	1.6 UT
LWG RA Sum DDT (Calculated U = 1/2)	1.6 UT	0.84 UT	1.7 UT	4.8 UT	1.7 UT	1.6 UT
LWG RA Total DDx (Calculated U = 1/2)	1.6 UT	**5.1 T**	1.7 UT	4.8 UT	1.7 UT	1.6 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-31SC	DGS-32SC	DGS-36SC	DGS-37SC	GS-01	GS-02	GS-03
Sample Name:	DGS-31SC-0408-101011	DGS-32SC-0408-101011	DGS-36SC-0408-101012	DGS-37SC-0408-101011	GS-01-S (4-6)	GS-02-S (4-6)	GS-03-S (4-6)
Sample Date:	10/11/2010	10/11/2010	10/12/2010	10/11/2010	12/21/2006	12/27/2006	12/18/2006
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm
Metals (mg/kg)							
Zinc	50	165	93	181	--	72.7	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	230	55000	4500	2200	88	8.7	9900
Benzo(a)pyrene	380	44000	6300	2300	100	8.7	12000
Benzo(b)fluoranthene	--	--	--	--	90	6.2	8000
Benzo(k)fluoranthene	--	--	--	--	73	7.1	7100
Chrysene	300	69000	5800	3100 J	130	12	13000
Dibenzo(a,h)anthracene	62 U	910	200 U	190 U	9.5	0.81 J	1000
Indeno(1,2,3-c,d)pyrene	240	13000	2700	980	97	5.6	8100
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	500 T	57000 T	7900 T	3000 JT	140 T	12 JT	16000 T
LWG RA Total LPAH (Calculated U = 1/2)	590 T	900000 T	25000 T	16000 JT	470 T	62 JT	85000 T
LWG RA Total PAH (Calculated U = 1/2)	4000 T	1600000 T	83000 T	43000 JT	1900 T	180 JT	240000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	98 T	1100 T	380 T	76 T	11 T	0.78 T	480 T
Benzo(a)pyrene	160 T	910 T	520 T	79 T	10 T	0.78 T	580 T
Benzo(b)fluoranthene	--	--	--	--	10 T	0.56 T	400 T
Benzo(k)fluoranthene	--	--	--	--	9.2 T	0.64 T	340 T
Chrysene	100 T	1400 T	480 T	110 JT	16 T	1.1 T	630 T
Dibenzo(a,h)anthracene	26 UT	19 T	20 UT	6.6 UT	1.2 T	0.073 JT	50 T
Indeno(1,2,3-c,d)pyrene	100 T	270 T	230 T	34 T	12 T	0.5 T	390 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	210 T	1200 T	660 T	100 JT	15 T	1 JT	760 T
LWG RA Total LPAH (Calculated U = 1/2)	260 T	19000 T	2100 T	570 JT	60 T	5.6 JT	4100 T
LWG RA Total PAH (Calculated U = 1/2)	1700 T	32000 T	7000 T	1500 JT	230 T	16 JT	11000 T
Semivolatile Organics (µg/kg)							
Carbazole	62 U	22000	380	190 U	--	--	--
Semivolatile Organics (mg/kg-OC)							
Carbazole	26 UT	450 T	32 T	6.6 UT	--	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 UJT	330 JT	32 UJT	160 UJT	--	--	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	13 UJT	7.3 JT	2.7 UJT	5.5 UJT	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-31SC	DGS-32SC	DGS-36SC	DGS-37SC	GS-01	GS-02	GS-03
Sample Name:	DGS-31SC-0408-101011	DGS-32SC-0408-101011	DGS-36SC-0408-101012	DGS-37SC-0408-101011	GS-01-S (4-6)	GS-02-S (4-6)	GS-03-S (4-6)
Sample Date:	10/11/2010	10/11/2010	10/12/2010	10/11/2010	12/21/2006	12/27/2006	12/18/2006
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	3.2 U	**320 J**	16 U	**120**	--	--	--
4,4'-DDE (p,p'-DDE)	3.2 U	120 U	16 U	**32 J**	--	--	--
4,4'-DDT (p,p'-DDT)	3.2 U	32 U	16 U	**28 J**	--	--	--
alpha-Hexachlorocyclohexane (BHC)	1.6 U	37 U	7.8 U	8.1 U	--	--	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	16 U	12 U	8.1 U	--	--	--
delta-Hexachlorocyclohexane (BHC)	1.6 U	16 U	7.8 U	8.1 U	--	--	--
Endrin ketone	3.2 U	32 U	16 U	16 U	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	16 U	7.8 U	8.1 U	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	**430 JT**	16 UT	**160 T**	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	120 UT	16 UT	**40 JT**	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	32 UT	16 UT	**36 JT**	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	**540 JT**	16 UT	**230 JT**	--	--	--
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	1.4 UT	**6.6 JT**	1.3 UT	**4.1 T**	--	--	--
4,4'-DDE (p,p'-DDE)	1.4 UT	2.5 UT	1.3 UT	**1.1 JT**	--	--	--
4,4'-DDT (p,p'-DDT)	1.4 UT	0.66 UT	1.3 UT	**0.97 JT**	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.68 UT	0.76 UT	0.65 UT	0.28 UT	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.68 UT	0.33 UT	1 UT	0.28 UT	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.68 UT	0.33 UT	0.65 UT	0.28 UT	--	--	--
Endrin ketone	1.4 UT	0.66 UT	1.3 UT	0.55 UT	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	1.4 UT	**8.9 JT**	1.3 UT	**5.3 T**	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	1.4 UT	2.5 UT	1.3 UT	**1.4 JT**	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	1.4 UT	0.66 UT	1.3 UT	**1.2 JT**	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	1.4 UT	**11 JT**	1.3 UT	**7.9 JT**	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	GS-10	GS-11	GS-12	GTC-10	GTC-10	LW2-C252	LW2-C255	LW2-C258	LW2-C263	LW2-C264
Sample Name:	GS-10-S (4-6)	GS-11-S (4-6)	GS-12-S (4-6)	GTC-10SC-090113	GTC-10SC-090113RE	LW2-C252-C	LW2-C255-C	LW2-C258-C	LW2-C263-C	LW2-C264-C
Sample Date:	1/2/2007	1/5/2007	1/10/2007	1/14/2009	1/14/2009	9/23/2004	10/27/2004	9/23/2004	10/1/2004	9/23/2004
Depth Interval:	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	118.87 - 234.7 cm	118.87 - 234.7 cm	154 - 252 cm	152 - 238 cm	153 - 276 cm	152 - 277 cm	156 - 220 cm
Metals (mg/kg)										
Zinc	107	--	63.8	--	--	68.8	43.5	66.7	--	109
Polycyclic Aromatic Hydrocarbons (µg/kg)										
Benzo(a)anthracene	290000	59000	2.6 J	55000	--	380	0.21 U	13000	--	41000
Benzo(a)pyrene	370000	54000	2.8 J	50000	--	530	0.29 U	19000	--	54000
Benzo(b)fluoranthene	180000	29000	2.3 J	27000	--	360	0.62 U	12000	--	46000
Benzo(k)fluoranthene	140000	28000	1.8 J	32000	--	290	0.43 U	11000	--	33000
Chrysene	380000	73000	3.5 J	68000	--	490	0.53 U	17000	--	44000
Dibenzo(a,h)anthracene	27000	4400	5 U	4900	--	56	0.34 U	1700	--	6100
Indeno(1,2,3-c,d)pyrene	180000	33000	2.2 J	19000	--	410	0.31 U	15000	--	37000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	460000 T	71000 T	6 JT	65000 T	--	700 T	0.34 UT	25000 T	--	73000 T
LWG RA Total LPAH (Calculated U = 1/2)	12000000 T	1100000 T	16 JT	1600000 T	--	2000 T	1.7 UT	86000 T	--	81000 JT
LWG RA Total PAH (Calculated U = 1/2)	17000000 T	1800000 T	52 JT	2300000 T	--	7200 T	1.7 UT	290000 T	--	570000 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)										
Benzo(a)anthracene	2600 T	2200 T	0.22 JT	5500 T	--	11 T	0.11 UT	1000 T	--	3500 T
Benzo(a)pyrene	3300 T	2000 T	0.24 JT	5000 T	--	15 T	0.15 UT	2000 T	--	4600 T
Benzo(b)fluoranthene	1600 T	1100 T	0.19 JT	2700 T	--	10 T	0.31 UT	1000 T	--	3900 T
Benzo(k)fluoranthene	1200 T	1000 T	0.15 JT	3200 T	--	8.4 T	0.22 UT	1000 T	--	2800 T
Chrysene	3400 T	2700 T	0.3 JT	6800 T	--	14 T	0.27 UT	2000 T	--	3700 T
Dibenzo(a,h)anthracene	240 T	160 T	0.42 UT	490 T	--	1.6 T	0.17 UT	200 T	--	520 T
Indeno(1,2,3-c,d)pyrene	1600 T	1200 T	0.19 JT	1900 T	--	12 T	0.16 UT	2000 T	--	3100 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	4100 T	2600 T	0.51 JT	6500 T	--	20 T	0.17 UT	2600 T	--	6200 T
LWG RA Total LPAH (Calculated U = 1/2)	110000 T	34000 T	1.4 JT	160000 T	--	58 T	0.85 UT	9400 T	--	6900 JT
LWG RA Total PAH (Calculated U = 1/2)	150000 T	61000 T	4.4 JT	230000 T	--	200 T	0.85 UT	33000 T	--	48000 JT
Semivolatile Organics (µg/kg)										
Carbazole	--	--	--	--	--	15	1.7 U	810	--	5700
Semivolatile Organics (mg/kg-OC)										
Carbazole	--	--	--	--	--	0.43 T	0.85 UT	90 T	--	480 T
PCB Aroclors (µg/kg)										
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	30.2 JT	2.2 UT	8.56 JT	--	56 JT
PCB Aroclors (mg/kg-OC)										
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	0.872 JT	1.1 UT	0.95 JT	--	4.74 JT
PCB Congeners (µg/kg)										
PCB-077	--	--	--	--	--	--	--	--	0.0845 J	--
PCB-081	--	--	--	--	--	--	--	--	0.0853 J	--
PCB-105	--	--	--	--	--	--	--	--	0.438	--
PCB-126	--	--	--	--	--	--	--	--	0.0704 J	--
PCB-156	--	--	--	--	--	--	--	--	0.301	--
PCB-157	--	--	--	--	--	--	--	--	0.0678 J	--
PCB-169	--	--	--	--	--	--	--	--	0.0775 U	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	55 JT	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	0.00827 JT	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	GS-10	GS-11	GS-12	GTC-10	GTC-10	LW2-C252	LW2-C255	LW2-C258	LW2-C263	LW2-C264
Sample Name:	GS-10-S (4-6)	GS-11-S (4-6)	GS-12-S (4-6)	GTC-10SC-090113	GTC-10SC-090113RE	LW2-C252-C	LW2-C255-C	LW2-C258-C	LW2-C263-C	LW2-C264-C
Sample Date:	1/2/2007	1/5/2007	1/10/2007	1/14/2009	1/14/2009	9/23/2004	10/27/2004	9/23/2004	10/1/2004	9/23/2004
Depth Interval:	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	118.87 - 234.7 cm	118.87 - 234.7 cm	154 - 252 cm	152 - 238 cm	153 - 276 cm	152 - 277 cm	156 - 220 cm
PCB Congeners (mg/kg-OC)										
PCB-077	--	--	--	--	--	--	--	--	**0.00164 JT**	--
PCB-081	--	--	--	--	--	--	--	--	**0.00166 JT**	--
PCB-105	--	--	--	--	--	--	--	--	**0.0085 T**	--
PCB-126	--	--	--	--	--	--	--	--	**0.00137 JT**	--
PCB-156	--	--	--	--	--	--	--	--	**0.00584 T**	--
PCB-157	--	--	--	--	--	--	--	--	**0.00132 JT**	--
PCB-169	--	--	--	--	--	--	--	--	0.0015 UT	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	**1.1 JT**	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	**0.000161 JT**	--
Pesticides (µg/kg)										
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	**60.6 J**	**0.253 NJ**	**7.6 NJ**	--	**22.1 NJ**
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	**6.57 J**	0.0424 U	0.238 UJ	--	**4.36 NJ**
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	**6.44 NJ**	**0.113 J**	**7.1 NJ**	--	**1.67 NJ**
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.445 U	**0.212 J**	0.176 UJ	--	0.204 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.45 U	**0.575 NJ**	**3.25 J**	--	**5.57 J**
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.952 UJ	0.067 UJ	**-- R**	--	0.435 U
Endrin ketone	--	--	--	--	--	0.392 U	0.0276 U	0.155 U	--	0.179 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	**3.13 NJ**	0.0716 U	0.403 UJ	--	0.465 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	**72.5 JT**	**0.418 NJT**	**7.7 NJT**	--	**26.9 JNT**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	**6.8 JT**	**0.494 NJT**	0.24 UJT	--	**4.46 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	**28.7 NJT**	**0.134 JT**	**11 NJT**	--	**1.81 NJT**
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	**108 JNT**	**1.05 JNT**	**19 NJT**	--	**33.2 JNT**
Pesticides (mg/kg-OC)										
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	**1.75 JT**	**0.127 NJT**	**0.8 NJT**	--	**1.87 NJT**
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	**0.189 JT**	0.0212 UT	0.03 UJT	--	**0.369 NJT**
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	**0.186 NJT**	**0.0565 JT**	**0.8 NJT**	--	**0.142 NJT**
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.0128 UT	**0.106 JT**	0.02 UJT	--	0.0173 UT
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.013 UT	**0.288 NJT**	**0.4 JT**	--	**0.472 JT**
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.0274 UJT	0.034 UJT	--	--	0.0369 UT
Endrin ketone	--	--	--	--	--	0.0113 UT	0.0138 UT	0.02 UT	--	0.0152 UT
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	**2.09 JT**	**0.21 NJT**	**0.81 NJT**	--	**2.28 JNT**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	**0.196 JT**	**0.248 NJT**	0.03 UJT	--	**0.378 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	**0.829 NJT**	**0.0671 JT**	**1.3 NJT**	--	**0.154 NJT**
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	**3.12 JNT**	**0.524 JNT**	**2.1 NJT**	--	**2.81 JNT**

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C269	LW2-C270	LW2-C270	LW2-C272	LW2-C273	LW2-C276	LW2-C278	LW2-C283	LW2-C284	LW2-C284	LW2-C288	LW2-C289
Sample Name:	LW2-C269-C	LW2-C270-C	LW2-C270-D	LW2-C272-C	LW2-C273-C	LW2-C276-C	LW2-C278-C	LW2-C283-C	LW2-C284-C	LW2-C284-D	LW2-C288-C	LW2-C289-C
Sample Date:	10/28/2004	9/21/2004	9/21/2004	9/22/2004	10/20/2004	9/22/2004	10/19/2004	11/8/2004	9/22/2004	9/22/2004	10/20/2004	10/19/2004
Depth Interval:	151 - 272 cm	87 - 182 cm	182 - 272 cm	152 - 260 cm	153 - 274 cm	153 - 268 cm	152 - 288 cm	151 - 258 cm	104 - 183 cm	183 - 292 cm	153 - 274 cm	155 - 206 cm
Metals (mg/kg)												
Zinc	134	149	44.3	43.4	93.1	83.6	132	103 T	142	53.5	124	184
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)anthracene	3900	13000	350	110	31000	210000	26000	19000 J	280000	2300	21000	17000
Benzo(a)pyrene	4300	18000	580	150	49000	260000	33000	25000 J	340000	3000	29000	21000
Benzo(b)fluoranthene	3800	13000	340	86	42000	180000	27000	21000 J	230000	1900	26000	17000
Benzo(k)fluoranthene	1300	10000	280	95	13000	150000	9100	9400 J	190000	1800	8500	5300
Chrysene	5000	17000	490	150	39000	310000	29000	22000 J	390000	2600	26000	19000
Dibenzo(a,h)anthracene	390	1600	47	11	3000	21000	2800	2300 J	30000	250	2200	1900
Indeno(1,2,3-c,d)pyrene	3000	13000	460	91	36000	170000	25000	19000 J	240000	2100	20000	15000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	5800 T	24000 T	750 T	190 T	63000 T	340000 T	44000 T	33000 JT	450000 T	3900 T	38000 T	28000 T
LWG RA Total LPAH (Calculated U = 1/2)	63000 T	90000 T	2600 T	62 JT	310000 T	7700000 T	410000 T	240000 JT	8400000 T	26000 T	190000 T	190000 T
LWG RA Total PAH (Calculated U = 1/2)	120000 T	290000 T	8300 T	1200 JT	870000 T	11000000 T	780000 T	580000 JT	13000000 T	64000 T	530000 T	440000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)												
Benzo(a)anthracene	120 T	340 T	79 T	55 T	480 T	2400 T	760 T	460 JT	3400 T	1100 T	400 T	570 T
Benzo(a)pyrene	130 T	470 T	130 T	75 T	760 T	3000 T	970 T	610 JT	4200 T	2000 T	600 T	700 T
Benzo(b)fluoranthene	120 T	340 T	77 T	43 T	650 T	2100 T	790 T	510 JT	2800 T	950 T	500 T	570 T
Benzo(k)fluoranthene	40 T	300 T	63 T	48 T	200 T	1700 T	270 T	230 JT	2300 T	900 T	200 T	180 T
Chrysene	200 T	450 T	110 T	75 T	600 T	3600 T	850 T	540 JT	4800 T	1300 T	500 T	640 T
Dibenzo(a,h)anthracene	12 T	42 T	11 T	5.5 T	50 T	240 T	82 T	56 JT	400 T	130 T	40 T	64 T
Indeno(1,2,3-c,d)pyrene	90 T	340 T	100 T	46 T	560 T	2000 T	740 T	460 JT	2900 T	1000 T	400 T	500 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	180 T	620 T	170 T	95 T	980 T	3900 T	1300 T	810 JT	5500 T	2400 T	770 T	930 T
LWG RA Total LPAH (Calculated U = 1/2)	2000 T	2400 T	590 T	31 JT	4800 T	92000 T	12000 T	6000 JT	100000 T	13000 T	3500 T	6100 T
LWG RA Total PAH (Calculated U = 1/2)	3900 T	7700 T	1900 T	590 JT	13000 T	130000 T	22000 T	14000 JT	160000 T	33000 T	11000 T	14000 T
Semivolatile Organics (µg/kg)												
Carbazole	1200	2800	14 J	1.6 U	2600	98000	7200	2800	130000	1000	3100	4900
Semivolatile Organics (mg/kg-OC)												
Carbazole	37 T	73 T	3.2 JT	0.8 UT	40 T	1100 T	210 T	68 T	1600 T	500 T	60 T	160 T
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	240 JT	23.7 UJT	--	2.3 UJT	3.1 UT	2.8 UJT	78.1 JT	2.93 UT	6.2 UJT	2.5 UT	3.3 UT	--
PCB Aroclors (mg/kg-OC)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	7.2 JT	0.622 UJT	--	1.2 UJT	0.048 UT	0.033 UJT	2.3 JT	0.0716 UT	0.076 UJT	1.3 UT	0.07 UT	--
PCB Congeners (µg/kg)												
PCB-077	--	--	--	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C269	LW2-C270	LW2-C270	LW2-C272	LW2-C273	LW2-C276	LW2-C278	LW2-C283	LW2-C284	LW2-C284	LW2-C288	LW2-C289
Sample Name:	LW2-C269-C	LW2-C270-C	LW2-C270-D	LW2-C272-C	LW2-C273-C	LW2-C276-C	LW2-C278-C	LW2-C283-C	LW2-C284-C	LW2-C284-D	LW2-C288-C	LW2-C289-C
Sample Date:	10/28/2004	9/21/2004	9/21/2004	9/22/2004	10/20/2004	9/22/2004	10/19/2004	11/8/2004	9/22/2004	9/22/2004	10/20/2004	10/19/2004
Depth Interval:	151 - 272 cm	87 - 182 cm	182 - 272 cm	152 - 260 cm	153 - 274 cm	153 - 268 cm	152 - 288 cm	151 - 258 cm	104 - 183 cm	183 - 292 cm	153 - 274 cm	155 - 206 cm
PCB Congeners (mg/kg-OC)												
PCB-077	--	--	--	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
4,4'-DDD (p,p'-DDD)	**162 J**	**155 J**	**1.4 J**	0.0445 U	0.63 U	**99.1 NJ**	**130 J**	**98.2 NJ**	**156 NJ**	**2.15 NJ**	**17.6 J**	--
4,4'-DDE (p,p'-DDE)	**25.3 NJ**	**19.8**	**0.17 J**	0.0417 U	**2.02 NJ**	**14.9 NJ**	**9.54 J**	**3.9 NJ**	**22.1 NJ**	0.245 U	**1.92 NJ**	--
4,4'-DDT (p,p'-DDT)	**25.2 J**	**164**	0.2 U	**0.094**	**25.8 NJ**	**76.6 J**	**7.04 J**	**15.6 J**	**90.7 NJ**	**1.27 J**	**17.3 J**	--
alpha-Hexachlorocyclohexane (BHC)	0.238 U	1.13 U	0.11 U	0.0309 U	0.437 U	0.965 U	0.444 U	0.834 U	1.06 U	0.181 U	0.469 U	--
beta-Hexachlorocyclohexane (BHC)	0.241 U	**9.95 NJ**	0.2 U	0.0312 U	0.442 U	**43.4 J**	**12.1 NJ**	0.843 U	**45.8 J**	**0.734 NJ**	0.474 U	--
delta-Hexachlorocyclohexane (BHC)	0.51 UJ	2.42 UJ	**0.59**	0.066 UJ	0.934 U	**24.8 NJ**	0.949 U	1.78 UJ	2.27 U	0.388 U	1 U	--
Endrin ketone	0.21 U	0.996 U	0.077 U	0.0272 U	0.385 U	0.849 U	0.391 U	0.734 U	0.935 U	0.16 U	0.413 U	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.545 U	2.59 U	0.25 U	0.0705 U	0.998 U	2.2 U	1.01 U	1.9 U	2.43 U	0.414 U	1.07 U	--
LWG RA Sum DDD (Calculated U = 1/2)	**205 JT**	**211 JNT**	**2 JT**	0.0445 UT	0.63 UT	**138 JNT**	**150 JNT**	**145 JNT**	**193 NJT**	**2.24 NJT**	**17.8 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	**29.9 NJT**	**38.6 NJT**	**0.43 JT**	**0.072 JT**	**9.74 NJT**	**15.4 NJT**	**18 JNT**	**4.3 NJT**	**22.6 NJT**	0.245 UT	**2.2 NJT**	--
LWG RA Sum DDT (Calculated U = 1/2)	**26.3 JNT**	**165 T**	0.36 UT	**0.11 T**	**45.2 NJT**	**135 JNT**	**7.3 JT**	**24.4 JT**	**185 NJT**	**2.48 JNT**	**30.4 JNT**	--
LWG RA Total DDx (Calculated U = 1/2)	**261 JNT**	**415 JNT**	**2.7 JT**	**0.22 JT**	**55 NJT**	**288 JNT**	**170 JNT**	**170 JNT**	**400 NJT**	**4.93 JNT**	**50 JNT**	--
Pesticides (mg/kg-OC)												
4,4'-DDD (p,p'-DDD)	**4.95 JT**	**4.07 JT**	**0.32 JT**	0.0223 UT	0.0098 UT	**1.16 NJT**	**3.8 JT**	**2.4 NJT**	**1.91 NJT**	**1.08 NJT**	**0.4 JT**	--
4,4'-DDE (p,p'-DDE)	**0.774 NJT**	**0.52 T**	**0.038 JT**	0.0209 UT	**0.0313 NJT**	**0.174 NJT**	**0.28 JT**	**0.095 NJT**	**0.27 NJT**	0.123 UT	**0.04 NJT**	--
4,4'-DDT (p,p'-DDT)	**0.771 JT**	**4.3 T**	0.05 UT	**0.047 T**	**0.4 NJT**	**0.893 JT**	**0.21 JT**	**0.381 JT**	**1.11 NJT**	**0.635 JT**	**0.3 JT**	--
alpha-Hexachlorocyclohexane (BHC)	0.00728 UT	0.0297 UT	0.025 UT	0.0155 UT	0.00678 UT	0.0112 UT	0.013 UT	0.0204 UT	0.013 UT	0.0905 UT	0.009 UT	--
beta-Hexachlorocyclohexane (BHC)	0.00737 UT	**0.261 NJT**	0.05 UT	0.0156 UT	0.00685 UT	**0.506 JT**	**0.36 NJT**	0.0206 UT	**0.56 JT**	**0.367 NJT**	0.009 UT	--
delta-Hexachlorocyclohexane (BHC)	0.016 UJT	0.0635 UJT	**0.13 T**	0.033 UJT	0.0145 UT	**0.289 NJT**	0.028 UT	0.0435 UJT	0.0278 UT	0.194 UT	0.02 UT	--
Endrin ketone	0.0064 UT	0.0261 UT	0.017 UT	0.0136 UT	0.00597 UT	0.0099 UT	0.012 UT	0.0179 UT	0.0114 UT	0.08 UT	0.008 UT	--
LWG RA Sum DDD (Calculated U = 1/2)	**6.26 JT**	**5.55 JNT**	**0.45 JT**	0.0223 UT	0.0098 UT	**1.61 JNT**	**4.4 JNT**	**3.53 JNT**	**2.37 NJT**	**1.12 NJT**	**0.4 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	**0.914 NJT**	**1.01 NJT**	**0.098 JT**	**0.036 JT**	**0.151 NJT**	**0.18 NJT**	**0.53 JNT**	**0.11 NJT**	**0.277 NJT**	0.123 UT	**0.045 NJT**	--
LWG RA Sum DDT (Calculated U = 1/2)	**0.803 JNT**	**4.32 T**	0.081 UT	**0.057 T**	**0.701 NJT**	**1.58 JNT**	**0.22 JT**	**0.595 JT**	**2.26 NJT**	**1.24 JNT**	**0.6 JNT**	--
LWG RA Total DDx (Calculated U = 1/2)	**7.98 JNT**	**10.9 JNT**	**0.61 JT**	**0.11 JT**	**0.86 NJT**	**3.37 JNT**	**5.1 JNT**	**4.2 JNT**	**4.9 NJT**	**2.47 JNT**	**1 JNT**	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C294	LW2-C299	LW2-C300-2	LW2-C300-2	LW2-C301	LW2-C302	LW2-C305	LW2-C311	LW2-C312	LW2-C521	LW2-C521	LW2-C525
Sample Name:	LW2-C294-C	LW2-C299-C	LW2-C300-C	LW2-C300-D	LW2-C301-C	LW2-C302-C	LW2-C305-C1	LW2-C311-C	LW2-C312-C	LW2-C521-C	LW2-C521-D	LW2-C525-C
Sample Date:	10/19/2004	9/22/2004	10/27/2004	10/27/2004	11/8/2004	9/22/2004	10/19/2004	11/9/2004	10/19/2005	10/19/2004	10/19/2004	10/26/2005
Depth Interval:	152 - 272 cm	104 - 230 cm	152 - 204 cm	204 - 278 cm	153 - 231 cm	198 - 288 cm	160 - 220 cm	153 - 276 cm	152 - 245 cm	99 - 182 cm	182 - 280 cm	127 - 236 cm
Metals (mg/kg)												
Zinc	128	891	190	77.9	67.9	47.7	65.4	153	51.3	103	--	139
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)anthracene	18000	66000	170	510	600000 J	760000	880	1400 J	1.8 J	180000	18000	3200
Benzo(a)pyrene	24000	85000	220	580	690000 J	940000	1100 J	2100 J	2.7	220000	26000	4400
Benzo(b)fluoranthene	20000	50000	210	510	590000 J	580000	850 J	1900 J	1.6 J	180000	14000	2600
Benzo(k)fluoranthene	6500	54000	69	170	240000 J	540000	290 J	580 J	1.7 J	58000	12000	2300
Chrysene	22000	86000	240	610	690000 J	980000	1000	1900 J	2.1 J	190000	24000	4100
Dibenzo(a,h)anthracene	2000	6700	24	52	66000 J	67000	120 J	180 J	0.33 U	21000	2000	440
Indeno(1,2,3-c,d)pyrene	18000	59000	170	360	490000 J	610000	870 J	1700 J	1.7 J	170000	17000	3200
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	32000 T	110000 T	300 T	770 T	930000 JT	1200000 T	1500 JT	2800 JT	3.4 JT	290000 T	33000 T	5800 T
LWG RA Total LPAH (Calculated U = 1/2)	160000 T	2600000 T	1100 T	4600 T	12000000 JT	40000000 T	7300 T	9000 JT	20 JT	6200000 T	510000 T	21000 T
LWG RA Total PAH (Calculated U = 1/2)	450000 T	3700000 T	3800 T	12000 T	23000000 JT	53000000 T	20000 JT	32000 JT	44 JT	8900000 T	800000 T	64000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)												
Benzo(a)anthracene	370 T	2000 T	8.1 T	150 T	2000 JT	2100 T	170 T	38 JT	0.9 JT	3300 T	2800 T	110 T
Benzo(a)pyrene	490 T	2600 T	10 T	170 T	2600 JT	2600 T	220 JT	56 JT	1.4 T	4000 T	4000 T	150 T
Benzo(b)fluoranthene	400 T	2000 T	9.9526071548 T	150 T	2200 JT	1600 T	170 JT	51 JT	0.8 JT	3300 T	2200 T	91 T
Benzo(k)fluoranthene	130 T	1700 T	3.3 T	49 T	890 JT	1500 T	57 JT	16 JT	0.85 JT	1100 T	1800 T	80 T
Chrysene	450 T	2700 T	11 T	170 T	2600 JT	2800 T	200 T	51 JT	1.1 JT	3500 T	3700 T	140 T
Dibenzo(a,h)anthracene	40 T	210 T	1.1 T	15 T	240 JT	190 T	24 JT	4.8 JT	0.17 UT	380 T	300 T	15 T
Indeno(1,2,3-c,d)pyrene	370 T	1800 T	8.1 T	100 T	1800 JT	1700 T	170 JT	46 JT	0.85 JT	3100 T	2600 T	110 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	650 T	3400 T	14 T	230 T	3500 JT	3300 T	300 JT	75 JT	1.7 JT	5400 T	5100 T	200 T
LWG RA Total LPAH (Calculated U = 1/2)	3200 T	79000 T	51 T	1300 T	46000 JT	120000 T	1400 T	230 JT	10 JT	110000 T	79000 T	720 T
LWG RA Total PAH (Calculated U = 1/2)	9200 T	110000 T	180 T	3300 T	84000 JT	150000 T	3900 JT	870 JT	22 JT	160000 T	120000 T	2200 T
Semivolatile Organics (µg/kg)												
Carbazole	3400	30000	7.7 J	9.4 J	520000	490000	140 J	37 J	1.7 U	69000	6700	810
Semivolatile Organics (mg/kg-OC)												
Carbazole	70 T	900 T	0.36 JT	2.7 JT	1900 T	1400 T	27 JT	0.99 JT	0.85 UT	1300 T	1000 T	28 T
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	3.18 UT	580 UT	--	53 NJT	26 UT	--	2.8 UT	3.3 UT	1.4 UT	--	10 UT	210 T
PCB Aroclors (mg/kg-OC)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	0.065 UT	18 UT	--	15 NJT	0.095 UT	--	0.54 UT	0.089 UT	0.7 UT	--	2 UT	7 T
PCB Congeners (µg/kg)												
PCB-077	--	--	--	--	--	0.061 J	--	--	--	--	--	--
PCB-081	--	--	--	--	--	0.259 U	--	--	--	--	--	--
PCB-105	--	--	--	--	--	0.206 J	--	--	--	--	--	--
PCB-126	--	--	--	--	--	0.259 U	--	--	--	--	--	--
PCB-156	--	--	--	--	--	0.0812 J	--	--	--	--	--	--
PCB-157	--	--	--	--	--	0.0458 U	--	--	--	--	--	--
PCB-169	--	--	--	--	--	0.0091 U	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	33 JT	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	0.013 JT	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C294	LW2-C299	LW2-C300-2	LW2-C300-2	LW2-C301	LW2-C302	LW2-C305	LW2-C311	LW2-C312	LW2-C521	LW2-C521	LW2-C525
Sample Name:	LW2-C294-C	LW2-C299-C	LW2-C300-C	LW2-C300-D	LW2-C301-C	LW2-C302-C	LW2-C305-C1	LW2-C311-C	LW2-C312-C	LW2-C521-C	LW2-C521-D	LW2-C525-C
Sample Date:	10/19/2004	9/22/2004	10/27/2004	10/27/2004	11/8/2004	9/22/2004	10/19/2004	11/9/2004	10/19/2005	10/19/2004	10/19/2004	10/26/2005
Depth Interval:	152 - 272 cm	104 - 230 cm	152 - 204 cm	204 - 278 cm	153 - 231 cm	198 - 288 cm	160 - 220 cm	153 - 276 cm	152 - 245 cm	99 - 182 cm	182 - 280 cm	127 - 236 cm
PCB Congeners (mg/kg-OC)												
PCB-077	--	--	--	--	--	**0.00017 JT**	--	--	--	--	--	--
PCB-081	--	--	--	--	--	0.00073 UT	--	--	--	--	--	--
PCB-105	--	--	--	--	--	**0.00058 JT**	--	--	--	--	--	--
PCB-126	--	--	--	--	--	0.00073 UT	--	--	--	--	--	--
PCB-156	--	--	--	--	--	**0.000229 JT**	--	--	--	--	--	--
PCB-157	--	--	--	--	--	0.000129 UT	--	--	--	--	--	--
PCB-169	--	--	--	--	--	2.6E-05 UT	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	**0.093 JT**	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	**3.7E-05 JT**	--	--	--	--	--	--
Pesticides (µg/kg)												
4,4'-DDD (p,p'-DDD)	**10.6 J**	**24 J**	--	**4.1 J**	**972 NJ**	**717 J**	**68.4 J**	**3.08 J**	**0.52**	**30 NJ**	4.3 U	**68**
4,4'-DDE (p,p'-DDE)	0.619 U	9 U	--	**0.72 J**	**101 NJ**	**48.5 J**	**12.1 J**	**3.55 NJ**	**0.054 NJ**	3 U	2 U	**27 NJ**
4,4'-DDT (p,p'-DDT)	**14.9 NJ**	**42 NJ**	--	2.5 U	**830 J**	**286 NJ**	**1060 J**	0.783 UJ	**0.49 NJ**	2.3 U	1.8 U	5.1 U
alpha-Hexachlorocyclohexane (BHC)	0.458 U	9 U	--	0.5 U	14.9 U	7.61 U	0.183 U	0.47 U	0.097 U	1.5 U	1.9 U	1.4 U
beta-Hexachlorocyclohexane (BHC)	**6.92 J**	16 U	--	**2.6 NJ**	15.1 U	**318 NJ**	**1.53**	**2.17 J**	0.79 U	1.7 U	2 U	2.1 U
delta-Hexachlorocyclohexane (BHC)	0.979 U	14 U	--	0.4 U	32 UJ	**45.4 NJ**	0.392 U	1 U	0.073 U	2 U	**3.3**	2.3 U
Endrin ketone	0.403 U	2.6 U	--	1.4 U	13.2 U	6.7 U	0.161 U	0.413 U	0.2 UJ	9.7 U	5.8 U	**5.6**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.05 U	4.2 U	--	0.6 U	34.1 U	17.4 U	0.419 U	1.07 U	0.2 U	**9.6**	2.6 U	3.5 U
LWG RA Sum DDD (Calculated U = 1/2)	**10.8 JT**	**55 JT**	--	**7 JT**	**1110 JNT**	**780 JT**	**83.8 JT**	**3.31 JT**	**0.72 T**	**36 NJT**	13 UT	**100 T**
LWG RA Sum DDE (Calculated U = 1/2)	**5.6 NJT**	24 UT	--	**1.8 JT**	**109 NJT**	**52.4 JT**	**13.6 JT**	**4.51 NJT**	**0.089 NJT**	6.4 UT	5.5 UT	**51 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	**21.6 NJT**	**62 NJT**	--	**4.8 T**	**1100 JT**	**519 NJT**	**1870 JT**	**1.81 NJT**	**0.52 NJT**	**17 JT**	5.7 UT	15 UT
LWG RA Total DDx (Calculated U = 1/2)	**38 JNT**	**130 JNT**	--	**14 JT**	**2300 JNT**	**1350 JNT**	**1970 JT**	**9.62 JNT**	**1.3 NJT**	**58 JNT**	13 UT	**160 NJT**
Pesticides (mg/kg-OC)												
4,4'-DDD (p,p'-DDD)	**0.217 JT**	**0.74 JT**	--	**1.2 JT**	**3.6 NJT**	**2.02 JT**	**13 JT**	**0.0828 JT**	**0.26 T**	**0.5 NJT**	0.66 UT	**2.4 T**
4,4'-DDE (p,p'-DDE)	0.0127 UT	0.3 UT	--	**0.21 JT**	**0.37 NJT**	**0.137 JT**	**2.4 JT**	**0.0954 NJT**	**0.027 NJT**	0.05 UT	0.3 UT	**0.94 NJT**
4,4'-DDT (p,p'-DDT)	**0.305 NJT**	**1.3 NJT**	--	0.71 UT	**3.1 JT**	**0.806 NJT**	**210 JT**	0.021 UJT	**0.25 NJT**	0.042 UT	0.28 UT	0.18 UT
alpha-Hexachlorocyclohexane (BHC)	0.00937 UT	0.3 UT	--	0.1 UT	0.055 UT	0.0214 UT	0.036 UT	0.013 UT	0.049 UT	0.027 UT	0.29 UT	0.049 UT
beta-Hexachlorocyclohexane (BHC)	**0.142 JT**	0.5 UT	--	**0.74 NJT**	0.056 UT	**0.896 NJT**	**0.3 T**	**0.0583 JT**	0.4 UT	0.031 UT	0.3 UT	0.073 UT
delta-Hexachlorocyclohexane (BHC)	0.02 UT	0.43 UT	--	0.1 UT	0.12 UJT	**0.128 NJT**	0.077 UT	0.03 UT	0.037 UT	0.04 UT	**0.51 T**	0.08 UT
Endrin ketone	0.00824 UT	0.08 UT	--	0.4 UT	0.049 UT	0.019 UT	0.032 UT	0.0111 UT	0.1 UJT	0.18 UT	0.89 UT	**0.2 T**
LWG RA Sum DDD (Calculated U = 1/2)	**0.222 JT**	**1.7 JT**	--	**2.1 JT**	**4.1 JNT**	**2.2 JT**	**16 JT**	**0.0889 JT**	**0.36 T**	**0.62 NJT**	2 UT	**3.5 T**
LWG RA Sum DDE (Calculated U = 1/2)	**0.114 NJT**	0.74 UT	--	**0.51 JT**	**0.4 NJT**	**0.148 JT**	**2.7 JT**	**0.121 NJT**	**0.047 NJT**	0.12 UT	0.85 UT	**1.8 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	**0.442 NJT**	**1.9 NJT**	--	**1.4 T**	**4.1 JT**	**1.46 NJT**	**370 JT**	**0.0487 NJT**	**0.26 NJT**	**0.31 JT**	0.88 UT	0.52 UT
LWG RA Total DDx (Calculated U = 1/2)	**0.778 JNT**	**4.1 JNT**	--	**3.9 JT**	**8.6 JNT**	**3.81 JNT**	**390 JT**	**0.259 JNT**	**0.67 NJT**	**1 JNT**	2 UT	**5.6 NJT**

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C527	LW2-C528	LW3-C658	LW3-C662	LW3-C662	WLCGSG07GSB2	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSC2
Sample Name:	LW2-C527-C	LW2-C528-C	LW3-C658-C	LW3-C662-C	LW3-C662-D	WLCGSG07GSB2S57	WLCGSG07GSB5S57	WLCGSG07GSB7S57	WLCGSG07GSC2S57
Sample Date:	10/26/2005	10/26/2005	12/14/2007	1/17/2008	1/17/2008	9/21/2007	9/21/2007	8/30/2007	9/21/2007
Depth Interval:	152 - 250 cm	152 - 274 cm	151 - 273 cm	82 - 181 cm	181 - 256 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm
Metals (mg/kg)									
Zinc	213	181	37.3	114	56.5	209	110	182	49.4
Polycyclic Aromatic Hydrocarbons (µg/kg)									
Benzo(a)anthracene	1500	1800	0.48 U	490000	54000	12000	11000	130000 J	7600
Benzo(a)pyrene	2000	2200	0.25 J	570000	64000	16000	19000	140000 J	10000
Benzo(b)fluoranthene	1700	1800	0.42 J	520000	59000	16000	15000	130000 J	9100
Benzo(k)fluoranthene	1300	1500	0.22 J	150000	18000	5300	4400	34000 J	3000
Chrysene	2000	2300	0.42 U	530000	62000	12000	13000	120000 J	7600
Dibenzo(a,h)anthracene	230	220	0.28 U	44000	5700	1800	1300	11000 J	1000
Indeno(1,2,3-c,d)pyrene	1900	2200	0.47 U	410000	48000	11000	16000	100000 J	7800
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2800 T	3000 T	0.48 JT	760000 T	86000 T	22000 T	25000 T	190000 JT	13000 T
LWG RA Total LPAH (Calculated U = 1/2)	3500 T	6500 T	2.1 JT	22000000 T	1300000 JT	39000 JT	86000 JT	3500000 JT	39000 T
LWG RA Total PAH (Calculated U = 1/2)	24000 T	31000 T	4.9 JT	29000000 T	2100000 JT	190000 JT	300000 JT	5400000 JT	170000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)									
Benzo(a)anthracene	55 T	70 T	0.24 UT	2100 T	4600 T	1200 T	1100 T	2200 JT	760 T
Benzo(a)pyrene	70 T	86 T	0.13 JT	2500 T	5400 T	1600 T	1900 T	2400 JT	1000 T
Benzo(b)fluoranthene	62 T	70 T	0.21 JT	2300 T	5000 T	1600 T	1500 T	2200 JT	910 T
Benzo(k)fluoranthene	47 T	59 T	0.11 JT	650 T	1500 T	530 T	440 T	590 JT	300 T
Chrysene	70 T	90 T	0.21 UT	2300 T	5300 T	1200 T	1300 T	2100 JT	760 T
Dibenzo(a,h)anthracene	8.4 T	8.6 T	0.14 UT	190 T	480 T	180 T	130 T	190 JT	100 T
Indeno(1,2,3-c,d)pyrene	69 T	86 T	0.24 UT	1800 T	4100 T	1100 T	1600 T	2000 JT	780 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	98 T	120 T	0.25 JT	3300 T	7300 T	2200 T	2500 T	3200 JT	1300 T
LWG RA Total LPAH (Calculated U = 1/2)	130 T	260 T	1.1 JT	98000 T	110000 JT	3900 JT	8600 JT	60000 JT	3900 T
LWG RA Total PAH (Calculated U = 1/2)	820 T	1200 T	2.5 JT	130000 T	180000 JT	19000 JT	30000 JT	92000 JT	17000 T
Semivolatile Organics (µg/kg)									
Carbazole	170	210	1.3 U	210000	24000 J	--	--	--	--
Semivolatile Organics (mg/kg-OC)									
Carbazole	6.2 T	8.2 T	0.65 UT	910 T	2000 JT	--	--	--	--
PCB Aroclors (µg/kg)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	160 T	300 T	1.3 UT	120 JT	10 UJT	--	--	--	--
PCB Aroclors (mg/kg-OC)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	6 T	12 T	0.65 UT	0.51 JT	0.8 UJT	--	--	--	--
PCB Congeners (µg/kg)									
PCB-077	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C527	LW2-C528	LW3-C658	LW3-C662	LW3-C662	WLCGSG07GSB2	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSC2
Sample Name:	LW2-C527-C	LW2-C528-C	LW3-C658-C	LW3-C662-C	LW3-C662-D	WLCGSG07GSB2S57	WLCGSG07GSB5S57	WLCGSG07GSB7S57	WLCGSG07GSC2S57
Sample Date:	10/26/2005	10/26/2005	12/14/2007	1/17/2008	1/17/2008	9/21/2007	9/21/2007	8/30/2007	9/21/2007
Depth Interval:	152 - 250 cm	152 - 274 cm	151 - 273 cm	82 - 181 cm	181 - 256 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm
PCB Congeners (mg/kg-OC)									
PCB-077	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)									
4,4'-DDD (p,p'-DDD)	**22**	**62 J**	0.073 U	**1300 J**	52 U	--	--	--	--
4,4'-DDE (p,p'-DDE)	**8.4**	11 U	0.027 U	**500 J**	16 U	--	--	--	--
4,4'-DDT (p,p'-DDT)	**9**	5.4 U	0.18 U	35 U	18 U	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	1.6 U	3 U	0.097 U	**38 J**	9.7 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	**9.1**	4.6 U	0.14 U	46 U	14 U	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	1.1 U	**5.8**	0.11 U	11 U	11 U	--	--	--	--
Endrin ketone	**1.7 J**	6.2 U	0.029 U	**260 NJ**	22 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	2 U	4.5 U	0.062 U	77 U	41 U	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**27 T**	**130 JT**	0.16 UT	**1700 JT**	**85 NJT**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**9 T**	11 UT	0.046 UT	**530 JT**	16 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**11 T**	7.5 UT	0.18 UT	**170 T**	18 UT	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**47 T**	**140 JT**	0.18 UT	**2400 JT**	**110 NJT**	--	--	--	--
Pesticides (mg/kg-OC)									
4,4'-DDD (p,p'-DDD)	**0.8 T**	**2.4 JT**	0.037 UT	**5.6 JT**	4.4 UT	--	--	--	--
4,4'-DDE (p,p'-DDE)	**0.31 T**	0.43 UT	0.014 UT	**2 JT**	1.4 UT	--	--	--	--
4,4'-DDT (p,p'-DDT)	**0.3 T**	0.21 UT	0.09 UT	0.15 UT	1.5 UT	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.058 UT	0.1 UT	0.049 UT	**0.16 JT**	0.82 UT	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	**0.33 T**	0.18 UT	0.07 UT	0.2 UT	1.2 UT	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.04 UT	**0.23 T**	0.055 UT	0.048 UT	0.93 UT	--	--	--	--
Endrin ketone	**0.062 JT**	0.24 UT	0.015 UT	**1.1 NJT**	1.9 UT	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**0.98 T**	**4.9 JT**	0.08 UT	**7.2 JT**	**7.2 NJT**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**0.33 T**	0.43 UT	0.023 UT	**2.1 JT**	1.4 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**0.36 T**	0.29 UT	0.09 UT	**0.73 T**	1.5 UT	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**1.7 T**	**5.5 JT**	0.09 UT	**10 JT**	**9.3 NJT**	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	WLCGSG07GSC5	WLCGSG07GSC7	WLCGSG07GSD2	WLCGSG07GSD4	WLCGSJ06GS04	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS09
Sample Name:	WLCGSG07GSC5S57	WLCGSG07GSC7S57	WLCGSG07GSD2S57	WLCGSG07GSD4S57	WLCGSJ06GS04S46	WLCGSJ06GS06S46	WLCGSJ06GS07S46	WLCGSJ06GS09S46
Sample Date:	9/20/2007	9/19/2007	9/20/2007	9/20/2007	12/12/2006	1/17/2007	10/16/2006	10/5/2006
Depth Interval:	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	121.9 - 182.9 cm	121.9 - 182.9 cm	121.9 - 182.9 cm	121.9 - 182.9 cm
Metals (mg/kg)								
Zinc	48.2	78	38.8	48.4	70.4	66.2 T	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	10	55000	4.1 J	2.5 J	160	9100 T	300000	12000
Benzo(a)pyrene	9.1	71000	4.1 J	2.3 J	170	12000 T	290000	15000
Benzo(b)fluoranthene	9.5	60000	4.5 J	2.5 J	130	7900 T	160000	8700
Benzo(k)fluoranthene	3 J	19000	1.7 J	0.8 J	120	5400 T	150000	8400
Chrysene	12	68000	4.6 J	2.4 J	210	11000 T	350000	15000
Dibenzo(a,h)anthracene	1.3 J	6700	1.3 J	0.38 J	16	1000 T	20000	1000
Indeno(1,2,3-c,d)pyrene	7.1	49000	4.3 J	2.2 J	110	7900 T	160000	9600
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	13 JT	94000 T	6.7 JT	3.4 JT	230 T	16000 T	370000 T	19000 T
LWG RA Total LPAH (Calculated U = 1/2)	59 JT	1300000 T	27 JT	13 JT	50 JT	110000 T	7700000 T	180000 T
LWG RA Total PAH (Calculated U = 1/2)	210 JT	2300000 T	81 JT	42 JT	2300 JT	240000 T	11000000 T	350000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	1 T	5500 T	0.41 JT	0.25 JT	16 T	880 T	2000 T	1100 T
Benzo(a)pyrene	0.91 T	7100 T	0.41 JT	0.23 JT	17 T	1200 T	2000 T	1400 T
Benzo(b)fluoranthene	0.95 T	6000 T	0.45 JT	0.25 JT	13 T	770 T	1100 T	830 T
Benzo(k)fluoranthene	0.3 JT	1900 T	0.17 JT	0.08 JT	12 T	520 T	1000 T	800 T
Chrysene	1.2 T	6800 T	0.46 JT	0.24 JT	21 T	1100 T	2400 T	1400 T
Dibenzo(a,h)anthracene	0.13 JT	670 T	0.13 JT	0.038 JT	1.6 T	100 T	100 T	100 T
Indeno(1,2,3-c,d)pyrene	0.71 T	4900 T	0.43 JT	0.22 JT	11 T	770 T	1100 T	910 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1.3 JT	9400 T	0.67 JT	0.34 JT	23 T	1500 T	2500 T	1800 T
LWG RA Total LPAH (Calculated U = 1/2)	5.9 JT	130000 T	2.7 JT	1.3 JT	5 JT	10000 T	53000 T	17000 T
LWG RA Total PAH (Calculated U = 1/2)	21 JT	230000 T	8.1 JT	4.2 JT	230 JT	23000 T	78000 T	33000 T
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)								
Carbazole	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	WLCGSG07GSC5	WLCGSG07GSC7	WLCGSG07GSD2	WLCGSG07GSD4	WLCGSJ06GS04	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS09
Sample Name:	WLCGSG07GSC5S57	WLCGSG07GSC7S57	WLCGSG07GSD2S57	WLCGSG07GSD4S57	WLCGSJ06GS04S46	WLCGSJ06GS06S46	WLCGSJ06GS07S46	WLCGSJ06GS09S46
Sample Date:	9/20/2007	9/19/2007	9/20/2007	9/20/2007	12/12/2006	1/17/2007	10/16/2006	10/5/2006
Depth Interval:	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	121.9 - 182.9 cm	121.9 - 182.9 cm	121.9 - 182.9 cm	121.9 - 182.9 cm
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	WLCMRD08SDDA17SB	WLCMRD08SDDB20SB	WLCMRD08SDDB22SB	WLCMRD08SDDC25SB	WLCSLH01GP25	WLCSLH01GP28	WLCSLH01GP31
Sample Name:	WLCMRD08DA17-3	WLCMRD08DB20-3	WLCMRD08DB22-3	WLCMRD08DC25-3	WLCSLH01GP25S6	WLCSLH01GP28S5	WLCSLH01GP31S7
Sample Date:	4/20/2008	4/19/2008	4/19/2008	4/19/2008	9/28/2004	10/13/2004	10/26/2004
Depth Interval:	213 - 274.32 cm	182.88 - 243.84 cm	182.88 - 243.84 cm	152.4 - 243.84 cm	182.9 - 198.1 cm	152.4 - 167.6 cm	213.4 - 228.6 cm
Metals (mg/kg)							
Zinc	63.1	191	223	298	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	29	1600	3200	7100	13000	1050	74400
Benzo(a)pyrene	46	2100	3900	8600	11400	978	76300
Benzo(b)fluoranthene	40	2200	4700	10000	11000	886	56300
Benzo(k)fluoranthene	13	750	1700	3400	1550	364	24700
Chrysene	41	2000	4200	9500	14400	1150	90400
Dibenzo(a,h)anthracene	3.7	310	650	1300	1140	143	8430
Indeno(1,2,3-c,d)pyrene	39	1900	4400	9400	4380	584	36300
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	61 T	3000 T	5800 T	13000 T	15000 T	1380 T	102000 T
LWG RA Total LPAH (Calculated U = 1/2)	210 JT	5300 T	11000 T	19000 T	143000 T	7900 T	2800000 T
LWG RA Total PAH (Calculated U = 1/2)	740 JT	26000 T	56000 T	110000 T	270000 T	19100 T	3700000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	15 T	67 T	100 T	160 T	1300 T	105 T	7440 T
Benzo(a)pyrene	23 T	88 T	130 T	190 T	1140 T	97.8 T	7630 T
Benzo(b)fluoranthene	20 T	92 T	150 T	200 T	1100 T	88.6 T	5630 T
Benzo(k)fluoranthene	6.5 T	31 T	55 T	75 T	155 T	36.4 T	2470 T
Chrysene	21 T	80 T	140 T	210 T	1440 T	115 T	9040 T
Dibenzo(a,h)anthracene	1.9 T	13 T	21 T	29 T	114 T	14.3 T	843 T
Indeno(1,2,3-c,d)pyrene	20 T	79 T	140 T	210 T	438 T	58.4 T	3630 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	30 T	130 T	190 T	280 T	1500 T	138 T	10200 T
LWG RA Total LPAH (Calculated U = 1/2)	110 JT	220 T	350 T	410 T	14300 T	790 T	280000 T
LWG RA Total PAH (Calculated U = 1/2)	370 JT	1100 T	1800 T	2500 T	27000 T	1910 T	370000 T
Semivolatile Organics (µg/kg)							
Carbazole	11	140	380	1100	8460	147	33900
Semivolatile Organics (mg/kg-OC)							
Carbazole	5.5 T	5.8 T	12 T	24 T	846 T	14.7 T	3390 T
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	5 UT	200 T	240 JT	98 JT	--	--	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	3 UT	8.1 T	7.9 JT	2.1 JT	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	WLCMRD08SDDA17SB	WLCMRD08SDDB20SB	WLCMRD08SDDB22SB	WLCMRD08SDDC25SB	WLCSLH01GP25	WLCSLH01GP28	WLCSLH01GP31
Sample Name:	WLCMRD08DA17-3	WLCMRD08DB20-3	WLCMRD08DB22-3	WLCMRD08DC25-3	WLCSLH01GP25S6	WLCSLH01GP28S5	WLCSLH01GP31S7
Sample Date:	4/20/2008	4/19/2008	4/19/2008	4/19/2008	9/28/2004	10/13/2004	10/26/2004
Depth Interval:	213 - 274.32 cm	182.88 - 243.84 cm	182.88 - 243.84 cm	152.4 - 243.84 cm	182.9 - 198.1 cm	152.4 - 167.6 cm	213.4 - 228.6 cm
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	**0.47 J**	**32**	**49**	**31 J**	--	--	--
4,4'-DDE (p,p'-DDE)	0.2 U	**16**	**17 J**	**4.5 J**	--	--	--
4,4'-DDT (p,p'-DDT)	0.2 U	**7.7**	**62**	6.7 U	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.2 U	1.2 U	0.97 U	2.2 U	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.2 U	1.2 U	4.5 U	2.2 U	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.2 U	1.2 U	0.97 U	2.2 U	--	--	--
Endrin ketone	0.2 U	**6.9 J**	0.97 U	**8.5 J**	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.2 U	**4**	**6.2 J**	15 U	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**0.65 JT**	**47 T**	**82 JT**	**81 JT**	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	0.2 UT	**17 T**	**18 JT**	**5.6 JT**	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	0.2 UT	**12 T**	**64 T**	6.7 UT	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**1.1 JT**	**76 T**	**160 JT**	**91 JT**	--	--	--
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	**0.24 JT**	**1.3 T**	**1.6 T**	**0.68 JT**	--	--	--
4,4'-DDE (p,p'-DDE)	0.1 UT	**0.67 T**	**0.55 JT**	**0.099 JT**	--	--	--
4,4'-DDT (p,p'-DDT)	0.1 UT	**0.32 T**	**2 T**	0.15 UT	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.1 UT	0.05 UT	0.031 UT	0.049 UT	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.1 UT	0.05 UT	0.15 UT	0.049 UT	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.1 UT	0.05 UT	0.031 UT	0.049 UT	--	--	--
Endrin ketone	0.1 UT	**0.29 JT**	0.031 UT	**0.19 JT**	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**0.33 JT**	**1.9 T**	**2.7 JT**	**1.7 JT**	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	0.1 UT	**0.73 T**	**0.57 JT**	**0.12 JT**	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	0.1 UT	**0.5 T**	**2.1 T**	0.15 UT	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**0.53 JT**	**3.2 T**	**5.4 JT**	**1.9 JT**	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	WLCSLH01GP32	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC
Sample Name:	WLCSLH01GP32S6	DGS-03SC-0812-101005	DGS-06SC-0812-101007	DGS-07SC-0812-101012	DGS-08SC-089.3-101007	DGS-11SC-0812-101006	DGS-13SC-0812-101005
Sample Date:	10/27/2004	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010
Depth Interval:	182.9 - 198.1 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 283.46 cm	243.84 - 365.76 cm	243.84 - 365.76 cm
Metals (mg/kg)							
Zinc	--	53 J	48	153	47	51	47 J
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	30700	95	63 U	51000	62 U	5900	65 U
Benzo(a)pyrene	27200	110	63 U	56000	62 U	8600	65 U
Benzo(b)fluoranthene	25500	--	--	--	--	--	--
Benzo(k)fluoranthene	7550	--	--	--	--	--	--
Chrysene	31300	150	63 U	65000	62 U	7500	65 U
Dibenzo(a,h)anthracene	3290	62 U	63 U	640	62 U	1200	65 U
Indeno(1,2,3-c,d)pyrene	13100	62 U	63 U	11000	62 U	3600	65 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	37500 T	160 T	76 T	68000 T	62 UT	12000 T	65 UT
LWG RA Total LPAH (Calculated U = 1/2)	460000 T	640 T	310 T	820000 T	62 UT	96000 T	65 UT
LWG RA Total PAH (Calculated U = 1/2)	780000 T	1700 T	790 T	1500000 T	62 UT	190000 T	65 UT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	3070 T	9.1 T	32 UT	820 T	31 UT	540 T	33 UT
Benzo(a)pyrene	2720 T	11 T	32 UT	900 T	31 UT	780 T	33 UT
Benzo(b)fluoranthene	2550 T	--	--	--	--	--	--
Benzo(k)fluoranthene	755 T	--	--	--	--	--	--
Chrysene	3130 T	14 T	32 UT	1000 T	31 UT	680 T	33 UT
Dibenzo(a,h)anthracene	329 T	6 UT	32 UT	10 T	31 UT	110 T	33 UT
Indeno(1,2,3-c,d)pyrene	1310 T	6 UT	32 UT	180 T	31 UT	330 T	33 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	3750 T	16 T	38 T	1100 T	31 UT	1100 T	33 UT
LWG RA Total LPAH (Calculated U = 1/2)	46000 T	62 T	160 T	13000 T	31 UT	8700 T	33 UT
LWG RA Total PAH (Calculated U = 1/2)	78000 T	160 T	390 T	24000 T	31 UT	17000 T	33 UT
Semivolatile Organics (µg/kg)							
Carbazole	5130	62 U	63 U	6100	62 U	1100	65 U
Semivolatile Organics (mg/kg-OC)							
Carbazole	513 T	6 UT	32 UT	98 T	31 UT	100 T	33 UT
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	32 UT	32 UT	250 JT	33 UT	32 UT	32 UT
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	3.1 UT	16 UT	4 JT	16 UT	2.9 UT	16 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	C:_4-8_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	WLCSLH01GP32	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC
Sample Name:	WLCSLH01GP32S6	DGS-03SC-0812-101005	DGS-06SC-0812-101007	DGS-07SC-0812-101012	DGS-08SC-089.3-101007	DGS-11SC-0812-101006	DGS-13SC-0812-101005
Sample Date:	10/27/2004	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010
Depth Interval:	182.9 - 198.1 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 283.46 cm	243.84 - 365.76 cm	243.84 - 365.76 cm
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	--	3.2 U	3.3 U	**400**	3.3 U	16 U	3.3 U
4,4'-DDE (p,p'-DDE)	--	3.2 U	3.3 U	**45**	3.3 U	16 U	3.3 U
4,4'-DDT (p,p'-DDT)	--	3.2 U	3.3 U	**67**	3.3 U	16 U	3.3 U
alpha-Hexachlorocyclohexane (BHC)	--	1.6 U	1.6 U	16 U	1.6 U	7.9 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	--	1.6 U	1.6 U	58 U	1.6 U	7.9 U	1.6 U
delta-Hexachlorocyclohexane (BHC)	--	1.6 UJ	1.6 U	16 U	1.6 U	7.9 U	1.6 UJ
Endrin ketone	--	3.2 U	3.3 U	32 U	3.3 U	16 U	3.3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	1.6 U	1.6 U	16 U	1.6 U	7.9 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	--	3.2 UT	3.3 UT	**500 T**	3.3 UT	16 UT	3.3 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	3.2 UT	3.3 UT	**61 T**	3.3 UT	16 UT	3.3 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	3.2 UT	3.3 UT	**83 T**	3.3 UT	16 UT	3.3 UT
LWG RA Total DDx (Calculated U = 1/2)	--	3.2 UT	3.3 UT	**640 T**	3.3 UT	16 UT	3.3 UT
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	--	0.31 UT	1.7 UT	**6 T**	1.7 UT	1.5 UT	1.7 UT
4,4'-DDE (p,p'-DDE)	--	0.31 UT	1.7 UT	**0.72 T**	1.7 UT	1.5 UT	1.7 UT
4,4'-DDT (p,p'-DDT)	--	0.31 UT	1.7 UT	**1.1 T**	1.7 UT	1.5 UT	1.7 UT
alpha-Hexachlorocyclohexane (BHC)	--	0.15 UT	0.8 UT	0.26 UT	0.8 UT	0.72 UT	0.8 UT
beta-Hexachlorocyclohexane (BHC)	--	0.15 UT	0.8 UT	0.93 UT	0.8 UT	0.72 UT	0.8 UT
delta-Hexachlorocyclohexane (BHC)	--	0.15 UJT	0.8 UT	0.26 UT	0.8 UT	0.72 UT	0.8 UJT
Endrin ketone	--	0.31 UT	1.7 UT	0.52 UT	1.7 UT	1.5 UT	1.7 UT
LWG RA Sum DDD (Calculated U = 1/2)	--	0.31 UT	1.7 UT	**7.6 T**	1.7 UT	1.5 UT	1.7 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	0.31 UT	1.7 UT	**0.98 T**	1.7 UT	1.5 UT	1.7 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	0.31 UT	1.7 UT	**1.4 T**	1.7 UT	1.5 UT	1.7 UT
LWG RA Total DDx (Calculated U = 1/2)	--	0.31 UT	1.7 UT	**9.9 T**	1.7 UT	1.5 UT	1.7 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC
Sample Name:	DGS-18SC-089.6-101008	DGS-19SC-0812-101006	DGS-20SC-0812-101008	DGS-22SC-0812-101012	DGS-23SC-0812-101008	DGS-24SC-0811.3-101012
Sample Date:	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/12/2010
Depth Interval:	243.84 - 292.61 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 344.42 cm
Metals (mg/kg)						
Zinc	**46**	**48**	**46**	**104**	**45**	**71**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	65 U	**1900**	61 U	**7800**	65 U	**110000**
Benzo(a)pyrene	65 U	**2100**	61 U	**12000**	65 U	**130000**
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	65 U	**2500**	61 U	**9600**	65 U	**140000**
Dibenzo(a,h)anthracene	65 U	**290**	61 U	370 U	65 U	**940**
Indeno(1,2,3-c,d)pyrene	65 U	**810**	61 U	**4600 J**	65 U	**18000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	65 UT	**2900 T**	61 UT	**15000 JT**	65 UT	**160000 T**
LWG RA Total LPAH (Calculated U = 1/2)	65 UT	**30000 JT**	61 UT	**41000 JT**	65 UT	**4700000 T**
LWG RA Total PAH (Calculated U = 1/2)	65 UJT	**54000 JT**	61 UJT	**160000 JT**	65 UJT	**6200000 T**
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	33 UT	**710 T**	31 UT	**300 T**	33 UT	**2400 T**
Benzo(a)pyrene	33 UT	**790 T**	31 UT	**460 T**	33 UT	**2800 T**
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	33 UT	**940 T**	31 UT	**370 T**	33 UT	**3000 T**
Dibenzo(a,h)anthracene	33 UT	**110 T**	31 UT	14 UT	33 UT	**20 T**
Indeno(1,2,3-c,d)pyrene	33 UT	**300 T**	31 UT	**180 JT**	33 UT	**390 T**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	33 UT	**1100 T**	31 UT	**570 JT**	33 UT	**3500 T**
LWG RA Total LPAH (Calculated U = 1/2)	33 UT	**11000 JT**	31 UT	**1600 JT**	33 UT	**100000 T**
LWG RA Total PAH (Calculated U = 1/2)	33 UJT	**21000 JT**	31 UJT	**6100 JT**	33 UJT	**130000 T**
Semivolatile Organics (µg/kg)						
Carbazole	65 U	65 UJ	61 U	370 U	65 U	**30000**
Semivolatile Organics (mg/kg-OC)						
Carbazole	33 UT	24 UJT	31 UT	14 UT	33 UT	**700 T**
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	33 UT	33 UT	31 UT	32 UJT	33 UT	43 UJT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	16 UT	12 UT	16 UT	1.2 UJT	16 UT	0.93 UJT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC
Sample Name:	DGS-18SC-089.6-101008	DGS-19SC-0812-101006	DGS-20SC-0812-101008	DGS-22SC-0812-101012	DGS-23SC-0812-101008	DGS-24SC-0811.3-101012
Sample Date:	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/12/2010
Depth Interval:	243.84 - 292.61 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 344.42 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
4,4'-DDE (p,p'-DDE)	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
4,4'-DDT (p,p'-DDT)	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	1.6 U	8 U	1.6 U	22 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	1.6 U	8 U	1.6 U	22 U
delta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	1.6 U	8 U	1.6 U	22 U
Endrin ketone	3.2 U	3.2 U	3.1 U	16 U	3.3 U	44 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.6 U	1.6 U	8 U	1.6 U	22 U
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	3.2 UT	3.1 UT	16 UT	3.3 UT	44 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	3.2 UT	3.1 UT	16 UT	3.3 UT	44 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	3.2 UT	3.1 UT	16 UT	3.3 UT	44 UT
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	3.2 UT	3.1 UT	16 UT	3.3 UT	44 UT
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	1.6 UT	1.2 UT	1.6 UT	0.61 UT	1.7 UT	0.95 UT
4,4'-DDE (p,p'-DDE)	1.6 UT	1.2 UT	1.6 UT	0.61 UT	1.7 UT	0.95 UT
4,4'-DDT (p,p'-DDT)	1.6 UT	1.2 UT	1.6 UT	0.61 UT	1.7 UT	0.95 UT
alpha-Hexachlorocyclohexane (BHC)	0.8 UT	0.6 UT	0.8 UT	0.31 UT	0.8 UT	0.48 UT
beta-Hexachlorocyclohexane (BHC)	0.8 UT	0.6 UT	0.8 UT	0.31 UT	0.8 UT	0.48 UT
delta-Hexachlorocyclohexane (BHC)	0.8 UT	0.6 UT	0.8 UT	0.31 UT	0.8 UT	0.48 UT
Endrin ketone	1.6 UT	1.2 UT	1.6 UT	0.61 UT	1.7 UT	0.95 UT
LWG RA Sum DDD (Calculated U = 1/2)	1.6 UT	1.2 UT	1.6 UT	0.61 UT	1.7 UT	0.95 UT
LWG RA Sum DDE (Calculated U = 1/2)	1.6 UT	1.2 UT	1.6 UT	0.61 UT	1.7 UT	0.95 UT
LWG RA Sum DDT (Calculated U = 1/2)	1.6 UT	1.2 UT	1.6 UT	0.61 UT	1.7 UT	0.95 UT
LWG RA Total DDx (Calculated U = 1/2)	1.6 UT	1.2 UT	1.6 UT	0.61 UT	1.7 UT	0.95 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-24SC	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC
Sample Name:	DGS-24SC-6.710.7-101012	DGS-25SC-0812-101007	DGS-26SC-0811.3-101011	DGS-28SC-0809-101007	DGS-30SC-0812-101006	DGS-31SC-0812-101011
Sample Date:	10/12/2010	10/7/2010	10/11/2010	10/7/2010	10/6/2010	10/11/2010
Depth Interval:	204.22 - 326.14 cm	243.84 - 365.76 cm	243.84 - 344.42 cm	243.84 - 274.32 cm	243.84 - 365.76 cm	243.84 - 365.76 cm
Metals (mg/kg)						
Zinc	**68**	**46**	**45**	**47**	**44**	**47**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	**190000**	63 U	65 U	61 U	64 U	64 U
Benzo(a)pyrene	**230000**	63 U	65 U	61 U	64 U	64 U
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	**230000**	63 U	65 U	61 U	64 U	64 U
Dibenzo(a,h)anthracene	**3300**	63 U	65 U	61 U	64 U	64 U
Indeno(1,2,3-c,d)pyrene	**130000**	63 U	65 U	61 U	64 U	64 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**290000 T**	63 UT	65 UT	61 UT	64 UT	64 UT
LWG RA Total LPAH (Calculated U = 1/2)	**7900000 T**	63 UT	**370 T**	61 UT	**320 T**	64 UT
LWG RA Total PAH (Calculated U = 1/2)	**11000000 T**	63 UT	**660 JT**	61 UT	**610 T**	64 UJT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	**19000 T**	32 UT	33 UT	25 UT	31 UT	32 UT
Benzo(a)pyrene	**23000 T**	32 UT	33 UT	25 UT	31 UT	32 UT
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	**23000 T**	32 UT	33 UT	25 UT	31 UT	32 UT
Dibenzo(a,h)anthracene	**330 T**	32 UT	33 UT	25 UT	31 UT	32 UT
Indeno(1,2,3-c,d)pyrene	**13000 T**	32 UT	33 UT	25 UT	31 UT	32 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**29000 T**	32 UT	33 UT	25 UT	31 UT	32 UT
LWG RA Total LPAH (Calculated U = 1/2)	**790000 T**	32 UT	**190 T**	25 UT	**150 T**	32 UT
LWG RA Total PAH (Calculated U = 1/2)	**1100000 T**	32 UT	**330 JT**	25 UT	**290 T**	32 UJT
Semivolatile Organics (µg/kg)						
Carbazole	**49000**	63 U	65 U	61 U	64 U	64 U
Semivolatile Organics (mg/kg-OC)						
Carbazole	**4900 T**	32 UT	33 UT	25 UT	31 UT	32 UT
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	32 UT	32 UJT	33 UT	30 UT	31 UJT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	3.2 UT	16 UT	16 UJT	13 UT	10 UT	16 UJT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-24SC	DGS-25SC	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC
Sample Name:	DGS-24SC-6.710.7-101012	DGS-25SC-0812-101007	DGS-26SC-0811.3-101011	DGS-28SC-0809-101007	DGS-30SC-0812-101006	DGS-31SC-0812-101011
Sample Date:	10/12/2010	10/7/2010	10/11/2010	10/7/2010	10/6/2010	10/11/2010
Depth Interval:	204.22 - 326.14 cm	243.84 - 365.76 cm	243.84 - 344.42 cm	243.84 - 274.32 cm	243.84 - 365.76 cm	243.84 - 365.76 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	320 U	3.2 U	3.2 U	3.3 U	3 U	3.1 U
4,4'-DDE (p,p'-DDE)	320 U	3.2 U	3.2 U	3.3 U	3 U	3.1 U
4,4'-DDT (p,p'-DDT)	320 U	3.2 U	3.2 U	3.3 U	3 U	3.1 U
alpha-Hexachlorocyclohexane (BHC)	160 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	160 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
delta-Hexachlorocyclohexane (BHC)	160 UJ	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
Endrin ketone	320 U	3.2 U	3.2 U	3.3 U	3 U	3.1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	160 U	1.6 U	1.6 U	1.6 U	1.5 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	320 UT	3.2 UT	3.2 UT	3.3 UT	3 UT	3.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	320 UT	3.2 UT	3.2 UT	3.3 UT	3 UT	3.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	320 UT	3.2 UT	3.2 UT	3.3 UT	3 UT	3.1 UT
LWG RA Total DDx (Calculated U = 1/2)	320 UT	3.2 UT	3.2 UT	3.3 UT	3 UT	3.1 UT
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	32 UT	1.6 UT	1.6 UT	1.3 UT	1.4 UT	1.6 UT
4,4'-DDE (p,p'-DDE)	32 UT	1.6 UT	1.6 UT	1.3 UT	1.4 UT	1.6 UT
4,4'-DDT (p,p'-DDT)	32 UT	1.6 UT	1.6 UT	1.3 UT	1.4 UT	1.6 UT
alpha-Hexachlorocyclohexane (BHC)	16 UT	0.8 UT	0.8 UT	0.65 UT	0.72 UT	0.8 UT
beta-Hexachlorocyclohexane (BHC)	16 UT	0.8 UT	0.8 UT	0.65 UT	0.72 UT	0.8 UT
delta-Hexachlorocyclohexane (BHC)	16 UJT	0.8 UT	0.8 UT	0.65 UT	0.72 UT	0.8 UT
Endrin ketone	32 UT	1.6 UT	1.6 UT	1.3 UT	1.4 UT	1.6 UT
LWG RA Sum DDD (Calculated U = 1/2)	32 UT	1.6 UT	1.6 UT	1.3 UT	1.4 UT	1.6 UT
LWG RA Sum DDE (Calculated U = 1/2)	32 UT	1.6 UT	1.6 UT	1.3 UT	1.4 UT	1.6 UT
LWG RA Sum DDT (Calculated U = 1/2)	32 UT	1.6 UT	1.6 UT	1.3 UT	1.4 UT	1.6 UT
LWG RA Total DDx (Calculated U = 1/2)	32 UT	1.6 UT	1.6 UT	1.3 UT	1.4 UT	1.6 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-32SC	DGS-36SC	DGS-37SC	GS-01	GS-02	GS-03	GS-10
Sample Name:	DGS-32SC-0812-101011	DGS-36SC-0810-101012	DGS-37SC-0812-101011	GS-01-S (9-11)	GS-02-S (9-11)	GS-03-S (9-11)	GS-10-S (9-11)
Sample Date:	10/11/2010	10/12/2010	10/11/2010	12/21/2006	12/27/2006	12/18/2006	1/2/2007
Depth Interval:	243.84 - 365.76 cm	243.84 - 304.8 cm	243.84 - 365.76 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm
Metals (mg/kg)							
Zinc	89	69	151	--	69.9	--	112
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	5500	78	8000	0.46 J	13	13	23000
Benzo(a)pyrene	6400	100	10000	0.53 J	15	14	32000
Benzo(b)fluoranthene	--	--	--	5 U	11	11	20000
Benzo(k)fluoranthene	--	--	--	5 U	10	11	16000
Chrysene	7400	100	11000	0.79 J	18	20	30000
Dibenzo(a,h)anthracene	1100	58 U	1700	5 U	1.2 J	5 U	2500
Indeno(1,2,3-c,d)pyrene	3300	58 U	5800	0.54 J	9.1	11	22000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	9000 T	150 T	14000 T	3.4 JT	20 JT	20 T	41000 T
LWG RA Total LPAH (Calculated U = 1/2)	65000 T	1800 T	110000 T	13 JT	120 JT	150 JT	400000 T
LWG RA Total PAH (Calculated U = 1/2)	140000 JT	2900 T	240000 JT	27 JT	310 JT	360 JT	760000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	430 T	9.5 T	300 T	0.054 JT	1.2 T	1.2 T	770 T
Benzo(a)pyrene	500 T	10 T	300 T	0.062 JT	1.4 T	1.3 T	1100 T
Benzo(b)fluoranthene	--	--	--	0.59 UT	1 T	1 T	700 T
Benzo(k)fluoranthene	--	--	--	0.59 UT	1 T	1 T	540 T
Chrysene	570 T	10 T	350 T	0.093 JT	1.7 T	2 T	1000 T
Dibenzo(a,h)anthracene	85 T	7 UT	55 T	0.59 UT	0.11 JT	0.47 UT	84 T
Indeno(1,2,3-c,d)pyrene	260 T	7 UT	190 T	0.064 JT	0.87 T	1 T	740 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	700 T	16 T	430 T	0.4 JT	1.8 JT	1.9 T	1400 T
LWG RA Total LPAH (Calculated U = 1/2)	5000 T	220 T	3700 T	1.5 JT	12 JT	14 JT	14000 T
LWG RA Total PAH (Calculated U = 1/2)	11000 JT	350 T	7800 JT	3.2 JT	30 JT	34 JT	26000 T
Semivolatile Organics (µg/kg)							
Carbazole	1300	58 U	1400	--	--	--	--
Semivolatile Organics (mg/kg-OC)							
Carbazole	100 T	7 UT	45 T	--	--	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 UJT	32 UJT	240 JT	--	--	--	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	2.4 UJT	3.9 UJT	7.9 JT	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-32SC	DGS-36SC	DGS-37SC	GS-01	GS-02	GS-03	GS-10
Sample Name:	DGS-32SC-0812-101011	DGS-36SC-0810-101012	DGS-37SC-0812-101011	GS-01-S (9-11)	GS-02-S (9-11)	GS-03-S (9-11)	GS-10-S (9-11)
Sample Date:	10/11/2010	10/12/2010	10/11/2010	12/21/2006	12/27/2006	12/18/2006	1/2/2007
Depth Interval:	243.84 - 365.76 cm	243.84 - 304.8 cm	243.84 - 365.76 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	16 U	3.2 U	**1100**	--	--	--	--
4,4'-DDE (p,p'-DDE)	16 U	3.2 U	200 U	--	--	--	--
4,4'-DDT (p,p'-DDT)	16 U	3.2 U	**430**	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	7.7 U	1.6 U	8.3 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	7.7 U	1.6 U	8.3 U	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	7.7 U	1.6 U	8.3 U	--	--	--	--
Endrin ketone	16 U	3.2 U	16 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	7.7 U	1.6 U	8.3 U	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	3.2 UT	**1600 T**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	3.2 UT	200 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	3.2 UT	**440 T**	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	16 UT	3.2 UT	**2100 T**	--	--	--	--
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	1.2 UT	0.39 UT	**35 T**	--	--	--	--
4,4'-DDE (p,p'-DDE)	1.2 UT	0.39 UT	6 UT	--	--	--	--
4,4'-DDT (p,p'-DDT)	1.2 UT	0.39 UT	**14 T**	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.6 UT	0.19 UT	0.27 UT	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.6 UT	0.19 UT	0.27 UT	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.6 UT	0.19 UT	0.27 UT	--	--	--	--
Endrin ketone	1.2 UT	0.39 UT	0.52 UT	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	1.2 UT	0.39 UT	**50 T**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	1.2 UT	0.39 UT	6 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	1.2 UT	0.39 UT	**14 T**	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	1.2 UT	0.39 UT	**68 T**	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	GS-11	GS-12	LW2-C252	LW2-C258	LW2-C263	LW2-C264	LW2-C269	LW2-C273	LW2-C276	LW2-C278	LW2-C283
Sample Name:	GS-11-S (9-11)A	GS-12-S (9-11)	LW2-C252-D	LW2-C258-D	LW2-C263-D	LW2-C264-D	LW2-C269-D	LW2-C273-D	LW2-C276-D	LW2-C278-D	LW2-C283-D
Sample Date:	1/5/2007	1/10/2007	9/23/2004	9/23/2004	10/1/2004	9/23/2004	10/28/2004	10/20/2004	9/22/2004	10/19/2004	11/8/2004
Depth Interval:	274.32 - 335.28 cm	274.32 - 335.28 cm	252 - 297 cm	276 - 304 cm	277 - 376 cm	220 - 290 cm	272 - 395 cm	274 - 355 cm	268 - 319 cm	288 - 350 cm	258 - 380 cm
Metals (mg/kg)											
Zinc	--	62.6	--	--	143 T	--	--	--	--	53.4	--
Polycyclic Aromatic Hydrocarbons (µg/kg)											
Benzo(a)anthracene	2.8 J	190	480	2900	26000	38	--	5000	94	24	--
Benzo(a)pyrene	2.5 J	230	750	4000	30000	76	--	9000	140	34	--
Benzo(b)fluoranthene	1.8 J	150	480	2400	17000	44	--	5100	80	29	--
Benzo(k)fluoranthene	1.6 J	130	380	1800	18000	36	--	4600	73	9.6	--
Chrysene	3.5 J	250	570	3400	34000	54	--	7200	130	27	--
Dibenzo(a,h)anthracene	4.9 U	21	81	350	2400	6.1	--	540	12	4.7	--
Indeno(1,2,3-c,d)pyrene	2 J	160	610	3200	20000	66	--	7000	100	34	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	5.6 JT	300 T	990 T	5200 T	39000 T	97 T	--	11000 T	180 T	48 T	--
LWG RA Total LPAH (Calculated U = 1/2)	81 JT	960 T	2000 T	11000 T	220000 T	310 JT	--	37000 T	1800 T	220 T	--
LWG RA Total PAH (Calculated U = 1/2)	120 JT	3500 T	8100 T	57000 T	510000 T	1200 JT	--	140000 T	3400 T	580 T	--
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)											
Benzo(a)anthracene	0.2 JT	17 T	22 T	1000 T	490 T	19 T	--	200 T	20 T	12 T	--
Benzo(a)pyrene	0.18 JT	20 T	34 T	1000 T	600 T	38 T	--	400 T	30 T	17 T	--
Benzo(b)fluoranthene	0.13 JT	13 T	22 T	800 T	320 T	22 T	--	230 T	20 T	15 T	--
Benzo(k)fluoranthene	0.12 JT	11 T	17 T	600 T	340 T	18 T	--	210 T	20 T	4.8 T	--
Chrysene	0.25 JT	22 T	26 T	1000 T	640 T	27 T	--	330 T	30 T	14 T	--
Dibenzo(a,h)anthracene	0.36 UT	1.8 T	3.6 T	100 T	45 T	3.1 T	--	25 T	3 T	2.4 T	--
Indeno(1,2,3-c,d)pyrene	0.14 JT	14 T	27 T	1000 T	400 T	33 T	--	300 T	30 T	17 T	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	0.41 JT	26 T	45 T	1400 T	770 T	49 T	--	500 T	40 T	24 T	--
LWG RA Total LPAH (Calculated U = 1/2)	5.4 JT	84 T	88 T	3500 T	4600 T	160 JT	--	1700 T	450 T	110 T	--
LWG RA Total PAH (Calculated U = 1/2)	8.1 JT	310 T	370 T	19000 T	9997 T	580 JT	--	6400 T	820 T	290 T	--
Semivolatile Organics (µg/kg)											
Carbazole	--	--	39	--	4200	1.8 U	--	77 J	67 J	3.6 J	1.8 U
Semivolatile Organics (mg/kg-OC)											
Carbazole	--	--	1.7 T	--	79 T	0.9 UT	--	3.5 JT	20 JT	1.8 JT	0.31 UT
PCB Aroclors (µg/kg)											
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	24 T	--	7.36 UT	1.5 UT	180 UT	--	--	2.7 UT	--
PCB Aroclors (mg/kg-OC)											
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	1.1 T	--	0.138 UT	0.75 UT	3.7 UT	--	--	1.4 UT	--
PCB Congeners (µg/kg)											
PCB-077	--	--	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	GS-11	GS-12	LW2-C252	LW2-C258	LW2-C263	LW2-C264	LW2-C269	LW2-C273	LW2-C276	LW2-C278	LW2-C283
Sample Name:	GS-11-S (9-11)A	GS-12-S (9-11)	LW2-C252-D	LW2-C258-D	LW2-C263-D	LW2-C264-D	LW2-C269-D	LW2-C273-D	LW2-C276-D	LW2-C278-D	LW2-C283-D
Sample Date:	1/5/2007	1/10/2007	9/23/2004	9/23/2004	10/1/2004	9/23/2004	10/28/2004	10/20/2004	9/22/2004	10/19/2004	11/8/2004
Depth Interval:	274.32 - 335.28 cm	274.32 - 335.28 cm	252 - 297 cm	276 - 304 cm	277 - 376 cm	220 - 290 cm	272 - 395 cm	274 - 355 cm	268 - 319 cm	288 - 350 cm	258 - 380 cm
PCB Congeners (mg/kg-OC)											
PCB-077	--	--	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)											
4,4'-DDD (p,p'-DDD)	--	--	**5.8**	--	**177 J**	0.14 U	**120 J**	**1.3 NJ**	**1.1 J**	**0.128 J**	--
4,4'-DDE (p,p'-DDE)	--	--	**3.2 J**	--	**10.4 NJ**	0.058 U	5 U	0.81 U	0.3 U	0.0488 U	--
4,4'-DDT (p,p'-DDT)	--	--	1.5 U	--	**24.9 J**	0.19 U	**28 J**	0.57 U	0.97 U	0.0601 UJ	--
alpha-Hexachlorocyclohexane (BHC)	--	--	0.64 U	--	0.498 U	0.11 U	1.7 U	0.48 U	0.54 U	0.0361 U	--
beta-Hexachlorocyclohexane (BHC)	--	--	1 U	--	**7.87 NJ**	0.17 U	2.6 U	0.49 U	0.83 U	0.0365 U	--
delta-Hexachlorocyclohexane (BHC)	--	--	0.48 U	--	1.06 UJ	0.078 U	5.1 U	0.24 U	0.4 U	0.0772 U	--
Endrin ketone	--	--	0.47 U	--	0.438 U	0.076 U	7 U	0.81 U	0.39 U	0.0318 U	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	0.76 U	--	1.14 U	0.21 U	4.2 U	0.81 U	0.64 U	0.0824 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	**9.7 NJT**	--	**251 JNT**	0.2 UT	**220 JT**	**1.7 NJT**	**1.6 JT**	**0.145 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	**3.4 JT**	--	**10.7 NJT**	0.097 UT	8.9 UT	1.7 UT	0.39 UT	0.0488 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	1.6 UT	--	**26.4 JT**	0.19 UT	**34 JT**	1.1 UT	0.97 UT	**0.303 NJT**	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	**15 JNT**	--	**288 JNT**	0.2 UT	**260 JT**	**3.8 NJT**	**2.5 JT**	**0.491 JNT**	--
Pesticides (mg/kg-OC)											
4,4'-DDD (p,p'-DDD)	--	--	**0.26 T**	--	**3.31 JT**	0.07 UT	**2.4 JT**	**0.059 NJT**	**0.3 JT**	**0.064 JT**	--
4,4'-DDE (p,p'-DDE)	--	--	**0.14 JT**	--	**0.194 NJT**	0.029 UT	0.1 UT	0.037 UT	0.08 UT	0.0244 UT	--
4,4'-DDT (p,p'-DDT)	--	--	0.067 UT	--	**0.465 JT**	0.095 UT	**0.57 JT**	0.026 UT	0.2 UT	0.0301 UJT	--
alpha-Hexachlorocyclohexane (BHC)	--	--	0.029 UT	--	0.00931 UT	0.055 UT	0.035 UT	0.022 UT	0.1 UT	0.0181 UT	--
beta-Hexachlorocyclohexane (BHC)	--	--	0.04 UT	--	**0.147 NJT**	0.085 UT	0.053 UT	0.022 UT	0.2 UT	0.0183 UT	--
delta-Hexachlorocyclohexane (BHC)	--	--	0.022 UT	--	0.0198 UJT	0.039 UT	0.1 UT	0.011 UT	0.1 UT	0.0386 UT	--
Endrin ketone	--	--	0.021 UT	--	0.00819 UT	0.038 UT	0.1 UT	0.037 UT	0.1 UT	0.0159 UT	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	**0.43 NJT**	--	**4.7 JNT**	0.1 UT	**4.4 JT**	**0.078 NJT**	**0.4 JT**	**0.0727 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	**0.15 JT**	--	**0.199 NJT**	0.049 UT	0.18 UT	0.077 UT	0.1 UT	0.0244 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	0.072 UT	--	**0.493 JT**	0.095 UT	**0.68 JT**	0.05 UT	0.2 UT	**0.152 NJT**	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	**0.65 JNT**	--	**5.39 JNT**	0.1 UT	**5.2 JT**	**0.17 NJT**	**0.63 JT**	**0.246 JNT**	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	LW2-C284	LW2-C288	LW2-C289	LW2-C294	LW2-C301	LW2-C302	LW2-C305	LW2-C521	LW2-C525	LW2-C527	LW2-C528	LW3-C658
Sample Name:	LW2-C284-E	LW2-C288-D	LW2-C289-E	LW2-C294-D	LW2-C301-D	LW2-C302-D	LW2-C305-D1	LW2-C521-E	LW2-C525-D	LW2-C527-D	LW2-C528-D	LW3-C658-D
Sample Date:	9/22/2004	10/20/2004	10/19/2004	10/19/2004	11/8/2004	9/22/2004	10/19/2004	10/19/2004	10/26/2005	10/26/2005	10/26/2005	12/14/2007
Depth Interval:	292 - 353 cm	274 - 389 cm	249 - 336 cm	272 - 376 cm	231 - 358 cm	288 - 348 cm	220 - 330 cm	280 - 315 cm	236 - 341 cm	250 - 352 cm	274 - 386 cm	273 - 371 cm
Metals (mg/kg)												
Zinc	--	101	49.5	83.6	56.2	--	58.9	50.6	195	--	--	42.2
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)anthracene	2.9	14000	5.8	800	180000 J	310000	740	470	32000	--	3200	0.48 U
Benzo(a)pyrene	3.4	23000	6.6	1400	220000 J	370000	930 J	620	44000	--	3600	0.14 U
Benzo(b)fluoranthene	2.2	19000	5.3	1100	170000 J	230000	780 J	480	28000	--	2200	0.25 U
Benzo(k)fluoranthene	1.8 J	6100	2 J	360	86000 J	220000	260 J	160	23000	--	2200	0.15 U
Chrysene	3.5	17000	6.9	990	240000 J	430000	850	480	41000	--	4300	0.25 U
Dibenzo(a,h)anthracene	0.41 U	1500	0.94 J	150 J	24000 J	24000	90 J	66	3700	--	290	0.28 U
Indeno(1,2,3-c,d)pyrene	1.8 J	17000	5.6	1300	120000 J	270000	810 J	500	32000	--	2600	0.16 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	4.3 JT	30000 T	9.2 JT	1900 JT	290000 JT	480000 T	1300 JT	830 T	57000 T	--	4700 T	0.28 UT
LWG RA Total LPAH (Calculated U = 1/2)	35 JT	97000 T	28 JT	4500 T	7700000 JT	18000000 T	5500 T	3700 T	260000 T	--	26000 T	0.75 UT
LWG RA Total PAH (Calculated U = 1/2)	75 JT	350000 T	110 JT	19000 JT	11000000 JT	24000000 T	17000 JT	11000 T	750000 T	--	72000 T	0.75 UT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)												
Benzo(a)anthracene	0.2 T	400 T	2.9 T	60 T	6800 JT	1000 T	270 T	240 T	350 T	--	110 T	0.24 UT
Benzo(a)pyrene	0.23 T	650 T	3.3 T	110 T	8300 JT	1200 T	340 JT	310 T	480 T	--	130 T	0.07 UT
Benzo(b)fluoranthene	0.15 T	540 T	2.7 T	83 T	6400 JT	760 T	290 JT	240 T	300 T	--	77 T	0.13 UT
Benzo(k)fluoranthene	0.12 JT	170 T	1 JT	27 T	3200 JT	730 T	96 JT	80 T	250 T	--	77 T	0.075 UT
Chrysene	0.24 T	480 T	3.5 T	75 T	9000 JT	1400 T	310 T	240 T	450 T	--	150 T	0.13 UT
Dibenzo(a,h)anthracene	0.028 UT	43 T	0.47 JT	11 JT	900 JT	79 T	30 JT	33 T	40 T	--	10 T	0.14 UT
Indeno(1,2,3-c,d)pyrene	0.12 JT	480 T	2.8 T	98 T	4500 JT	890 T	300 JT	300 T	350 T	--	92 T	0.08 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	0.29 JT	840 T	4.6 JT	150 JT	11000 JT	1600 T	460 JT	420 T	620 T	--	170 T	0.14 UT
LWG RA Total LPAH (Calculated U = 1/2)	2.4 JT	2700 T	14 JT	340 T	290000 JT	61000 T	2000 T	1800 T	2800 T	--	910 T	0.38 UT
LWG RA Total PAH (Calculated U = 1/2)	5.1 JT	9800 T	53 JT	1400 JT	400000 JT	81000 T	6400 JT	5300 T	8000 T	--	2500 T	0.38 UT
Semivolatile Organics (µg/kg)												
Carbazole	--	530	1.8 U	23 J	94000	220000	35 U	120	4700	--	--	1.3 U
Semivolatile Organics (mg/kg-OC)												
Carbazole	--	15 T	0.9 UT	1.7 JT	3500 T	730 T	13 UT	60 T	51 T	--	--	0.65 UT
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	3.1 UT	--	2.8 UT	2.39 UT	260 UT	2.47 UT	--	250 UT	--	220 T	1 UT
PCB Aroclors (mg/kg-OC)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	0.088 UT	--	0.21 UT	0.0898 UT	0.86 UT	0.91 UT	--	2.7 UT	--	8 T	0.5 UT
PCB Congeners (µg/kg)												
PCB-077	--	--	--	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	LW2-C284	LW2-C288	LW2-C289	LW2-C294	LW2-C301	LW2-C302	LW2-C305	LW2-C521	LW2-C525	LW2-C527	LW2-C528	LW3-C658
Sample Name:	LW2-C284-E	LW2-C288-D	LW2-C289-E	LW2-C294-D	LW2-C301-D	LW2-C302-D	LW2-C305-D1	LW2-C521-E	LW2-C525-D	LW2-C527-D	LW2-C528-D	LW3-C658-D
Sample Date:	9/22/2004	10/20/2004	10/19/2004	10/19/2004	11/8/2004	9/22/2004	10/19/2004	10/19/2004	10/26/2005	10/26/2005	10/26/2005	12/14/2007
Depth Interval:	292 - 353 cm	274 - 389 cm	249 - 336 cm	272 - 376 cm	231 - 358 cm	288 - 348 cm	220 - 330 cm	280 - 315 cm	236 - 341 cm	250 - 352 cm	274 - 386 cm	273 - 371 cm
PCB Congeners (mg/kg-OC)												
PCB-077	--	--	--	--	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
4,4'-DDD (p,p'-DDD)	--	**1.52 NJ**	--	**3.38 NJ**	**183 NJ**	**260 J**	**2.8 J**	--	14 U	**100 NJ**	**480**	0.073 U
4,4'-DDE (p,p'-DDE)	--	0.296 U	--	0.551 U	**6.45 NJ**	8.5 U	**0.445 J**	--	2.2 U	340 U	**160 NJ**	0.027 U
4,4'-DDT (p,p'-DDT)	--	0.365 UJ	--	0.679 UJ	**103 NJ**	28 U	**6.81 J**	--	7 U	**62 NJ**	**190**	0.24 U
alpha-Hexachlorocyclohexane (BHC)	--	0.219 U	--	0.407 U	0.345 UJ	16 U	0.035 U	--	25 U	49 U	13 U	0.097 U
beta-Hexachlorocyclohexane (BHC)	--	**0.907 NJ**	--	0.412 U	**23.6**	41 U	**0.438 NJ**	--	6 U	56 U	15 U	1.2 U
delta-Hexachlorocyclohexane (BHC)	--	0.468 U	--	0.871 U	**17 NJ**	21 U	0.0748 U	--	15 U	11 U	2.7 U	0.11 U
Endrin ketone	--	0.193 U	--	0.358 U	0.304 U	220 U	**0.528 NJ**	--	**6.6 J**	16 U	3.9 U	0.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	0.5 U	--	0.93 U	**6.62 NJ**	40 U	0.0799 U	--	25 U	100 U	7.2 U	0.062 U
LWG RA Sum DDD (Calculated U = 1/2)	--	**1.63 NJT**	--	**3.58 NJT**	**198 NJT**	**360 JT**	**3.8 JT**	--	14 UT	**150 NJT**	**540 T**	0.16 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	0.296 UT	--	0.551 UT	**74.1 NJT**	89 UT	**0.463 JT**	--	28 UT	570 UT	**170 NJT**	0.046 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	0.365 UJT	--	0.679 UJT	**103 NJT**	250 UT	**7.57 JT**	--	20 UT	**110 NJT**	**190 T**	0.24 UT
LWG RA Total DDx (Calculated U = 1/2)	--	**2.22 NJT**	--	**4.67 NJT**	**375 NJT**	**550 JT**	**12 JT**	--	28 UT	**720 NJT**	**910 NJT**	0.24 UT
Pesticides (mg/kg-OC)												
4,4'-DDD (p,p'-DDD)	--	**0.0432 NJT**	--	**0.256 NJT**	**6.88 NJT**	**0.86 JT**	**1 JT**	--	0.15 UT	**2 NJT**	**17 T**	0.037 UT
4,4'-DDE (p,p'-DDE)	--	0.00841 UT	--	0.0417 UT	**0.242 NJT**	0.028 UT	**0.16 JT**	--	0.024 UT	5.5 UT	**5.6 NJT**	0.014 UT
4,4'-DDT (p,p'-DDT)	--	0.0104 UJT	--	0.0514 UJT	**3.87 NJT**	0.093 UT	**2.5 JT**	--	0.08 UT	**1 NJT**	**6.7 T**	0.12 UT
alpha-Hexachlorocyclohexane (BHC)	--	0.00622 UT	--	0.0308 UT	0.013 UJT	0.053 UT	0.013 UT	--	0.27 UT	0.8 UT	0.46 UT	0.049 UT
beta-Hexachlorocyclohexane (BHC)	--	**0.0258 NJT**	--	0.0312 UT	**0.887 T**	0.14 UT	**0.16 NJT**	--	0.07 UT	0.91 UT	0.53 UT	0.6 UT
delta-Hexachlorocyclohexane (BHC)	--	0.0133 UT	--	0.066 UT	**0.64 NJT**	0.07 UT	0.028 UT	--	0.16 UT	0.18 UT	0.095 UT	0.055 UT
Endrin ketone	--	0.00548 UT	--	0.0271 UT	0.0114 UT	0.73 UT	**0.2 NJT**	--	**0.072 JT**	0.26 UT	0.14 UT	0.1 UT
LWG RA Sum DDD (Calculated U = 1/2)	--	**0.0462 NJT**	--	**0.271 NJT**	**7.45 NJT**	**1.2 JT**	**1.4 JT**	--	0.15 UT	**3 NJT**	**19 T**	0.08 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	0.00841 UT	--	0.0417 UT	**2.78 NJT**	0.29 UT	**0.17 JT**	--	0.3 UT	9.3 UT	**6 NJT**	0.023 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	0.0104 UJT	--	0.0514 UJT	**3.88 NJT**	0.83 UT	**2.8 JT**	--	0.2 UT	**2 NJT**	**6.8 T**	0.12 UT
LWG RA Total DDx (Calculated U = 1/2)	--	**0.063 NJT**	--	**0.354 NJT**	**14.1 NJT**	**1.8 JT**	**4.3 JT**	--	0.3 UT	**12 NJT**	**32 NJT**	0.12 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	LW3-C662	WLCGSJ06GS04	WLCGSJ06GS05	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS08	WLCGSJ06GS09	WLCMRD08SDDA17SB
Sample Name:	LW3-C662-E	WLCGSJ06GS04S911	WLCGSJ06GS05S911	WLCGSJ06GS06S911	WLCGSJ06GS07S911	WLCGSJ06GS08S89	WLCGSJ06GS09S911	WLCMRD08DA17-4
Sample Date:	1/17/2008	12/12/2006	10/25/2006	1/17/2007	10/16/2006	10/25/2006	10/9/2006	4/20/2008
Depth Interval:	256 - 327 cm	274.3 - 335.3 cm	274.3 - 335.3 cm	274.3 - 335.3 cm	274.3 - 335.3 cm	243.8 - 274.3 cm	274.3 - 335.3 cm	274.32 - 365.76 cm
Metals (mg/kg)								
Zinc	81.2	60.4	--	65.3	--	66.1	--	58.6
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	19000	3.2 J	5300	3500	68000	12	17000	11
Benzo(a)pyrene	26000	3.5 J	6200	4400	85000	15	22000	16
Benzo(b)fluoranthene	25000	3.2 J	3400	2800	49000	9.3	12000	15
Benzo(k)fluoranthene	7400	2.4 J	3500	2300	48000	7.6	12000	5.2
Chrysene	25000	4.3 J	6900	4300	83000	15	22000	16
Dibenzo(a,h)anthracene	2500	5 U	520	360	6000	1.1 J	1500	1.7 J
Indeno(1,2,3-c,d)pyrene	21000	5 U	4300	2900	54000	9.5	13000	15
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	35000 T	6.9 JT	8100 T	5700 T	110000 T	19 JT	28000 T	22 JT
LWG RA Total LPAH (Calculated U = 1/2)	380000 T	6.8 JT	72000 T	34000 T	970000 T	1400 JT	310000 T	120 JT
LWG RA Total PAH (Calculated U = 1/2)	690000 T	56 JT	150000 T	83000 T	2000000 T	1600 JT	560000 T	320 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	780 T	0.97 JT	2700 T	330 T	1700 T	6 T	670 T	5.5 T
Benzo(a)pyrene	1100 T	1.1 JT	3100 T	420 T	2100 T	7.5 T	860 T	8 T
Benzo(b)fluoranthene	1000 T	0.97 JT	1700 T	260 T	1200 T	4.7 T	470 T	7.5 T
Benzo(k)fluoranthene	300 T	0.73 JT	1800 T	220 T	1200 T	3.8 T	470 T	2.6 T
Chrysene	1000 T	1.3 JT	3500 T	410 T	2000 T	7.5 T	860 T	8 T
Dibenzo(a,h)anthracene	100 T	2 UT	260 T	34 T	100 T	0.55 JT	59 T	0.85 JT
Indeno(1,2,3-c,d)pyrene	860 T	2 UT	2100 T	270 T	1300 T	4.8 T	510 T	7.5 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1500 T	2.4 JT	4000 T	540 T	2600 T	9.6 JT	1100 T	11 JT
LWG RA Total LPAH (Calculated U = 1/2)	16000 T	2.5 JT	36000 T	3200 T	23000 T	710 JT	12000 T	63 JT
LWG RA Total PAH (Calculated U = 1/2)	28000 T	18 JT	76000 T	7700 T	47000 T	800 JT	22000 T	160 JT
Semivolatile Organics (µg/kg)								
Carbazole	6000	--	--	--	--	--	--	2.6 J
Semivolatile Organics (mg/kg-OC)								
Carbazole	200 T	--	--	--	--	--	--	1.3 JT
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	16 UT	--	--	--	--	--	--	5 UT
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	0.65 UT	--	--	--	--	--	--	3 UT
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	LW3-C662	WLCGSJ06GS04	WLCGSJ06GS05	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS08	WLCGSJ06GS09	WLCMRD08SDDA17SB
Sample Name:	LW3-C662-E	WLCGSJ06GS04S911	WLCGSJ06GS05S911	WLCGSJ06GS06S911	WLCGSJ06GS07S911	WLCGSJ06GS08S89	WLCGSJ06GS09S911	WLCMRD08DA17-4
Sample Date:	1/17/2008	12/12/2006	10/25/2006	1/17/2007	10/16/2006	10/25/2006	10/9/2006	4/20/2008
Depth Interval:	256 - 327 cm	274.3 - 335.3 cm	274.3 - 335.3 cm	274.3 - 335.3 cm	274.3 - 335.3 cm	243.8 - 274.3 cm	274.3 - 335.3 cm	274.32 - 365.76 cm
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	25 U	--	--	--	--	--	--	0.2 U
4,4'-DDE (p,p'-DDE)	5.4 U	--	--	--	--	--	--	0.2 U
4,4'-DDT (p,p'-DDT)	3.6 U	--	--	--	--	--	--	0.2 U
alpha-Hexachlorocyclohexane (BHC)	2 U	--	--	--	--	--	--	0.2 U
beta-Hexachlorocyclohexane (BHC)	2.8 U	--	--	--	--	--	--	0.2 U
delta-Hexachlorocyclohexane (BHC)	2.2 U	--	--	--	--	--	--	0.2 U
Endrin ketone	5.7 U	--	--	--	--	--	--	0.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	9 U	--	--	--	--	--	--	0.2 U
LWG RA Sum DDD (Calculated U = 1/2)	**21 T**	--	--	--	--	--	--	0.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	**4.3 JT**	--	--	--	--	--	--	0.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	**10 JT**	--	--	--	--	--	--	0.2 UT
LWG RA Total DDx (Calculated U = 1/2)	**35 JT**	--	--	--	--	--	--	0.2 UT
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	1 UT	--	--	--	--	--	--	0.1 UT
4,4'-DDE (p,p'-DDE)	0.22 UT	--	--	--	--	--	--	0.1 UT
4,4'-DDT (p,p'-DDT)	0.15 UT	--	--	--	--	--	--	0.1 UT
alpha-Hexachlorocyclohexane (BHC)	0.08 UT	--	--	--	--	--	--	0.1 UT
beta-Hexachlorocyclohexane (BHC)	0.11 UT	--	--	--	--	--	--	0.1 UT
delta-Hexachlorocyclohexane (BHC)	0.09 UT	--	--	--	--	--	--	0.1 UT
Endrin ketone	0.23 UT	--	--	--	--	--	--	0.1 UT
LWG RA Sum DDD (Calculated U = 1/2)	**0.83 T**	--	--	--	--	--	--	0.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	**0.18 JT**	--	--	--	--	--	--	0.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	**0.43 JT**	--	--	--	--	--	--	0.1 UT
LWG RA Total DDx (Calculated U = 1/2)	**1.4 JT**	--	--	--	--	--	--	0.1 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	WLCMRD08SDDB20SB	WLCMRD08SDDB22SB	WLCMRD08SDDC24SB	WLCMRD08SDDC25SB	WLCMRD08SDUD1SB	WLCMRD08SDUD26SB	WLCMRD08SDUD27SB
Sample Name:	WLCMRD08DB20-4	WLCMRD08DB22-4	WLCMRD08DC24-3	WLCMRD08DC25-4	WLCMRD08UD1-3	WLCMRD08UD26-3	WLCMRD08UD27-3
Sample Date:	4/19/2008	4/19/2008	4/19/2008	4/19/2008	4/15/2008	4/13/2008	4/13/2008
Depth Interval:	243.84 - 335.28 cm	243.84 - 335.28 cm	304.8 - 365.76 cm	243.84 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm
Metals (mg/kg)							
Zinc	195	202	265	239	71.2	82.8	80
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	1800	2300	34000	15000	4.5	120	310
Benzo(a)pyrene	2000	2900	36000	19000	6.3	150	630
Benzo(b)fluoranthene	1900	3300	44000	21000	5.4	140	500
Benzo(k)fluoranthene	590	1100	20000	6900	1.3 J	49	150
Chrysene	2300	2900	46000	19000	5.6	130	370
Dibenzo(a,h)anthracene	290	450	7700	3000	0.59 J	14	43
Indeno(1,2,3-c,d)pyrene	1600	2900	36000	20000	5.1	110	600
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2800 T	4200 T	55000 T	28000 T	8.4 JT	200 T	820 T
LWG RA Total LPAH (Calculated U = 1/2)	14000 T	8500 T	200000 T	47000 T	30 JT	340 T	1300 T
LWG RA Total PAH (Calculated U = 1/2)	37000 T	39000 T	710000 T	250000 T	99 JT	1800 T	7700 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	65 T	88 T	210 T	210 T	0.8 T	17 T	34 T
Benzo(a)pyrene	70 T	110 T	220 T	270 T	1.1 T	21 T	69 T
Benzo(b)fluoranthene	69 T	130 T	270 T	300 T	0.96 T	20 T	50 T
Benzo(k)fluoranthene	21 T	42 T	100 T	98 T	0.23 JT	6.9 T	16 T
Chrysene	84 T	110 T	290 T	270 T	1 T	18 T	41 T
Dibenzo(a,h)anthracene	11 T	17 T	48 T	40 T	0.11 JT	2 T	4.7 T
Indeno(1,2,3-c,d)pyrene	58 T	110 T	220 T	300 T	0.91 T	15 T	70 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	100 T	160 T	340 T	390 T	1.5 JT	28 T	89 T
LWG RA Total LPAH (Calculated U = 1/2)	520 T	320 T	1200 T	680 T	5.5 JT	50 T	140 T
LWG RA Total PAH (Calculated U = 1/2)	1300 T	1500 T	4300 T	3600 T	18 JT	240 T	840 T
Semivolatile Organics (µg/kg)							
Carbazole	340	250	4600	1600	7.4 U	1.6 J	1.9 J
Semivolatile Organics (mg/kg-OC)							
Carbazole	12 T	9.5 T	29 T	23 T	1.3 UT	0.23 JT	0.21 JT
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	190 JT	200 T	230 UT	240 T	3.7 UT	4.3 UT	4.9 UT
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	7.2 JT	7.6 T	1.4 UT	3 T	0.66 UT	0.61 UT	0.54 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	WLCMRD08SDDB20SB	WLCMRD08SDDB22SB	WLCMRD08SDDC24SB	WLCMRD08SDDC25SB	WLCMRD08SDUD1SB	WLCMRD08SDUD26SB	WLCMRD08SDUD27SB
Sample Name:	WLCMRD08DB20-4	WLCMRD08DB22-4	WLCMRD08DC24-3	WLCMRD08DC25-4	WLCMRD08UD1-3	WLCMRD08UD26-3	WLCMRD08UD27-3
Sample Date:	4/19/2008	4/19/2008	4/19/2008	4/19/2008	4/15/2008	4/13/2008	4/13/2008
Depth Interval:	243.84 - 335.28 cm	243.84 - 335.28 cm	304.8 - 365.76 cm	243.84 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	**42**	**43**	**65 J**	**55**	0.15 U	0.18 U	0.2 U
4,4'-DDE (p,p'-DDE)	**29 J**	**17 J**	9.1 U	5.3 U	0.15 U	0.17 U	0.2 U
4,4'-DDT (p,p'-DDT)	**9.5**	6.7 U	30 U	23 U	0.2 U	0.17 U	0.2 U
alpha-Hexachlorocyclohexane (BHC)	**0.7 J**	0.96 U	9.1 U	11 U	0.15 U	0.17 U	0.2 U
beta-Hexachlorocyclohexane (BHC)	1.2 U	0.96 U	9.1 U	4.4 U	0.15 U	0.17 U	0.2 U
delta-Hexachlorocyclohexane (BHC)	1.2 U	0.96 U	11 U	4.4 U	0.15 U	0.17 U	0.2 U
Endrin ketone	1.3 U	1.6 U	**51 J**	**16 J**	0.15 U	0.17 U	0.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	2.7 U	**12 J**	50 U	40 U	0.15 U	0.17 U	0.2 U
LWG RA Sum DDD (Calculated U = 1/2)	**58 T**	**64 JT**	**200 JT**	**75 T**	0.15 UT	0.2 UT	0.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	**32 JT**	**18 JT**	68 UT	5.3 UT	0.15 UT	0.17 UT	0.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	**13 T**	**10 T**	30 UT	23 UT	0.2 UT	0.17 UT	0.2 UT
LWG RA Total DDx (Calculated U = 1/2)	**100 JT**	**93 JT**	**260 JT**	**94 T**	0.2 UT	0.2 UT	0.2 UT
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	**1.5 T**	**1.6 T**	**0.4 JT**	**0.78 T**	0.027 UT	0.025 UT	0.02 UT
4,4'-DDE (p,p'-DDE)	**1.1 JT**	**0.65 JT**	0.057 UT	0.076 UT	0.027 UT	0.024 UT	0.02 UT
4,4'-DDT (p,p'-DDT)	**0.35 T**	0.26 UT	0.2 UT	0.33 UT	0.04 UT	0.024 UT	0.02 UT
alpha-Hexachlorocyclohexane (BHC)	**0.03 JT**	0.037 UT	0.057 UT	0.16 UT	0.027 UT	0.024 UT	0.02 UT
beta-Hexachlorocyclohexane (BHC)	0.044 UT	0.037 UT	0.057 UT	0.063 UT	0.027 UT	0.024 UT	0.02 UT
delta-Hexachlorocyclohexane (BHC)	0.044 UT	0.037 UT	0.068 UT	0.063 UT	0.027 UT	0.024 UT	0.02 UT
Endrin ketone	0.047 UT	0.061 UT	**0.32 JT**	**0.23 JT**	0.027 UT	0.024 UT	0.02 UT
LWG RA Sum DDD (Calculated U = 1/2)	**2.1 T**	**2.4 JT**	**1.3 JT**	**1.1 T**	0.027 UT	0.03 UT	0.02 UT
LWG RA Sum DDE (Calculated U = 1/2)	**1.2 JT**	**0.71 JT**	0.42 UT	0.076 UT	0.027 UT	0.024 UT	0.02 UT
LWG RA Sum DDT (Calculated U = 1/2)	**0.5 T**	**0.43 T**	0.2 UT	0.33 UT	0.04 UT	0.024 UT	0.02 UT
LWG RA Total DDx (Calculated U = 1/2)	**3.8 JT**	**3.5 JT**	**1.6 JT**	**1.3 T**	0.04 UT	0.03 UT	0.02 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	E:_12-16_feet
System Location Code:	WLCMRD08SDUD2SB	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP28	WLCSLH01GP30	DGS-03SC
Sample Name:	WLCMRD08UD2-3	WLCSLH01GP25S11	WLCSLH01GP26S8	WLCSLH01GP27S10	WLCSLH01GP28S10	WLCSLH01GP30S8	DGS-03SC-1215.3-101005
Sample Date:	4/15/2008	9/28/2004	10/4/2004	10/7/2004	10/13/2004	10/22/2004	10/5/2010
Depth Interval:	182.88 - 365.76 cm	335.3 - 350.5 cm	243.8 - 259 cm	304.8 - 320 cm	304.8 - 320 cm	243.8 - 259 cm	365.76 - 466.34 cm
Metals (mg/kg)							
Zinc	89.1	--	--	--	--	--	49 J
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	7.1	34500	772000	13900	89800	1280	65 U
Benzo(a)pyrene	5.5	41900	1010000	18200	88300	1040	65 U
Benzo(b)fluoranthene	9.5	35400	850000	15000	79500	855	--
Benzo(k)fluoranthene	3	11300	278000	4750	24600	331	--
Chrysene	9	32000	743000	12500	89800	1450	65 U
Dibenzo(a,h)anthracene	0.87 J	5090	88000	1850	10000	152	65 U
Indeno(1,2,3-c,d)pyrene	7.2	21700	462000	8760	39200	635	65 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	8.8 JT	56000 T	1300000 T	24000 T	120000 T	1470 T	65 UT
LWG RA Total LPAH (Calculated U = 1/2)	38 JT	1400000 T	29000000 T	280000 T	2020000 T	12000 T	65 UT
LWG RA Total PAH (Calculated U = 1/2)	140 JT	1900000 T	39000000 T	480000 T	3100000 T	25000 T	65 UT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	0.99 T	3450 T	77200 T	1390 T	8980 T	128 T	18 UT
Benzo(a)pyrene	0.76 T	4190 T	101000 T	1820 T	8830 T	104 T	18 UT
Benzo(b)fluoranthene	1.3 T	3540 T	85000 T	1500 T	7950 T	85.5 T	--
Benzo(k)fluoranthene	0.4 T	1130 T	27800 T	475 T	2460 T	33.1 T	--
Chrysene	1 T	3200 T	74300 T	1250 T	8980 T	145 T	18 UT
Dibenzo(a,h)anthracene	0.12 JT	509 T	8800 T	185 T	1000 T	15.2 T	18 UT
Indeno(1,2,3-c,d)pyrene	1 T	2170 T	46200 T	876 T	3920 T	63.5 T	18 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1.2 JT	5600 T	130000 T	2400 T	12000 T	147 T	18 UT
LWG RA Total LPAH (Calculated U = 1/2)	5.3 JT	140000 T	2900000 T	28000 T	202000 T	1200 T	18 UT
LWG RA Total PAH (Calculated U = 1/2)	19 JT	190000 T	3900000 T	48000 T	310000 T	2500 T	18 UT
Semivolatile Organics (µg/kg)							
Carbazole	9.9 U	9570	42300	3270	44700	518	65 U
Semivolatile Organics (mg/kg-OC)							
Carbazole	1.4 UT	957 T	4230 T	327 T	4470 T	51.8 T	18 UT
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	5 UT	--	--	--	--	--	33 UT
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	0.7 UT	--	--	--	--	--	8.9 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	E:_12-16_feet
System Location Code:	WLCMRD08SDUD2SB	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP28	WLCSLH01GP30	DGS-03SC
Sample Name:	WLCMRD08UD2-3	WLCSLH01GP25S11	WLCSLH01GP26S8	WLCSLH01GP27S10	WLCSLH01GP28S10	WLCSLH01GP30S8	DGS-03SC-1215.3-101005
Sample Date:	4/15/2008	9/28/2004	10/4/2004	10/7/2004	10/13/2004	10/22/2004	10/5/2010
Depth Interval:	182.88 - 365.76 cm	335.3 - 350.5 cm	243.8 - 259 cm	304.8 - 320 cm	304.8 - 320 cm	243.8 - 259 cm	365.76 - 466.34 cm
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	0.2 U	--	--	--	--	--	3.3 U
4,4'-DDE (p,p'-DDE)	0.2 U	--	--	--	--	--	3.3 U
4,4'-DDT (p,p'-DDT)	0.2 U	--	--	--	--	--	3.3 U
alpha-Hexachlorocyclohexane (BHC)	0.2 U	--	--	--	--	--	1.6 U
beta-Hexachlorocyclohexane (BHC)	0.2 U	--	--	--	--	--	1.6 U
delta-Hexachlorocyclohexane (BHC)	0.2 U	--	--	--	--	--	1.6 UJ
Endrin ketone	0.2 U	--	--	--	--	--	3.3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.2 U	--	--	--	--	--	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	0.2 UT	--	--	--	--	--	3.3 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.2 UT	--	--	--	--	--	3.3 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.2 UT	--	--	--	--	--	3.3 UT
LWG RA Total DDx (Calculated U = 1/2)	0.2 UT	--	--	--	--	--	3.3 UT
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	0.03 UT	--	--	--	--	--	0.89 UT
4,4'-DDE (p,p'-DDE)	0.03 UT	--	--	--	--	--	0.89 UT
4,4'-DDT (p,p'-DDT)	0.03 UT	--	--	--	--	--	0.89 UT
alpha-Hexachlorocyclohexane (BHC)	0.03 UT	--	--	--	--	--	0.43 UT
beta-Hexachlorocyclohexane (BHC)	0.03 UT	--	--	--	--	--	0.43 UT
delta-Hexachlorocyclohexane (BHC)	0.03 UT	--	--	--	--	--	0.43 UJT
Endrin ketone	0.03 UT	--	--	--	--	--	0.89 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.03 UT	--	--	--	--	--	0.89 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.03 UT	--	--	--	--	--	0.89 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.03 UT	--	--	--	--	--	0.89 UT
LWG RA Total DDx (Calculated U = 1/2)	0.03 UT	--	--	--	--	--	0.89 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	DGS-06SC	DGS-07SC	DGS-11SC	DGS-13SC	DGS-19SC	DGS-20SC
Sample Name:	DGS-06SC-1216-101007	DGS-07SC-1213.4-101012	DGS-11SC-1216-101006	DGS-13SC-1216-101005	GS-19SC-1214.7-1010	DGS-20SC-1213.7-101008
Sample Date:	10/7/2010	10/12/2010	10/6/2010	10/5/2010	10/6/2010	10/8/2010
Depth Interval:	365.76 - 487.68 cm	365.76 - 408.43 cm	365.76 - 487.68 cm	365.76 - 487.68 cm	365.76 - 448.06 cm	365.76 - 417.58 cm
Metals (mg/kg)						
Zinc	**54**	**159**	**49**	**56 J**	**46**	**55**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	66 U	**47000**	62 U	61 U	61 U	65 U
Benzo(a)pyrene	66 U	**59000**	62 U	61 U	61 U	65 U
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	66 U	**53000**	62 U	61 U	61 U	65 U
Dibenzo(a,h)anthracene	66 U	**720**	62 U	61 U	61 U	65 U
Indeno(1,2,3-c,d)pyrene	66 U	**13000**	62 U	61 U	61 U	65 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	66 UT	**72000 T**	62 UT	61 UT	61 UT	65 UT
LWG RA Total LPAH (Calculated U = 1/2)	66 UT	**690000 T**	**300 T**	61 UT	**1500 T**	65 UT
LWG RA Total PAH (Calculated U = 1/2)	66 UT	**1300000 T**	**580 T**	61 UT	**2200 T**	65 UJT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	8 UT	**690 T**	23 UT	7 UT	31 UT	33 UT
Benzo(a)pyrene	8 UT	**870 T**	23 UT	7 UT	31 UT	33 UT
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	8 UT	**780 T**	23 UT	7 UT	31 UT	33 UT
Dibenzo(a,h)anthracene	8 UT	**11 T**	23 UT	7 UT	31 UT	33 UT
Indeno(1,2,3-c,d)pyrene	8 UT	**190 T**	23 UT	7 UT	31 UT	33 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	8 UT	**1100 T**	23 UT	7 UT	31 UT	33 UT
LWG RA Total LPAH (Calculated U = 1/2)	8 UT	**10000 T**	**110 T**	7 UT	**780 T**	33 UT
LWG RA Total PAH (Calculated U = 1/2)	8 UT	**20000 T**	**220 T**	7 UT	**1100 T**	33 UJT
Semivolatile Organics (µg/kg)						
Carbazole	66 U	**3200**	62 U	61 U	61 U	65 U
Semivolatile Organics (mg/kg-OC)						
Carbazole	8 UT	**47 T**	23 UT	7 UT	31 UT	33 UT
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	33 UT	**170 JT**	31 UT	32 UT	31 UT	33 UT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	4 UT	**2.5 JT**	11 UT	3.7 UT	16 UT	16 UT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	DGS-06SC	DGS-07SC	DGS-11SC	DGS-13SC	DGS-19SC	DGS-20SC
Sample Name:	DGS-06SC-1216-101007	DGS-07SC-1213.4-101012	DGS-11SC-1216-101006	DGS-13SC-1216-101005	GS-19SC-1214.7-1010	DGS-20SC-1213.7-101008
Sample Date:	10/7/2010	10/12/2010	10/6/2010	10/5/2010	10/6/2010	10/8/2010
Depth Interval:	365.76 - 487.68 cm	365.76 - 408.43 cm	365.76 - 487.68 cm	365.76 - 487.68 cm	365.76 - 448.06 cm	365.76 - 417.58 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	3.3 U	16 U	3.2 U	3.3 U	3.1 U	3.3 U
4,4'-DDE (p,p'-DDE)	3.3 U	16 U	3.2 U	3.3 U	3.1 U	3.3 U
4,4'-DDT (p,p'-DDT)	3.3 U	16 U	3.2 U	3.3 U	3.1 U	3.3 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	8 U	1.6 U	1.6 U	1.5 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	8 U	1.6 U	1.6 U	1.5 U	1.6 U
delta-Hexachlorocyclohexane (BHC)	1.6 U	8 U	1.6 U	1.6 UJ	1.5 U	1.6 U
Endrin ketone	3.3 U	16 U	3.2 U	3.3 U	3.1 U	3.3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	8 U	1.6 U	1.6 U	1.5 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	3.3 UT	16 UT	3.2 UT	3.3 UT	3.1 UT	3.3 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.3 UT	16 UT	3.2 UT	3.3 UT	3.1 UT	3.3 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.3 UT	16 UT	3.2 UT	3.3 UT	3.1 UT	3.3 UT
LWG RA Total DDx (Calculated U = 1/2)	3.3 UT	16 UT	3.2 UT	3.3 UT	3.1 UT	3.3 UT
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	0.4 UT	0.24 UT	1.2 UT	0.38 UT	1.6 UT	1.7 UT
4,4'-DDE (p,p'-DDE)	0.4 UT	0.24 UT	1.2 UT	0.38 UT	1.6 UT	1.7 UT
4,4'-DDT (p,p'-DDT)	0.4 UT	0.24 UT	1.2 UT	0.38 UT	1.6 UT	1.7 UT
alpha-Hexachlorocyclohexane (BHC)	0.19 UT	0.12 UT	0.59 UT	0.18 UT	0.75 UT	0.8 UT
beta-Hexachlorocyclohexane (BHC)	0.19 UT	0.12 UT	0.59 UT	0.18 UT	0.75 UT	0.8 UT
delta-Hexachlorocyclohexane (BHC)	0.19 UT	0.12 UT	0.59 UT	0.18 UJT	0.75 UT	0.8 UT
Endrin ketone	0.4 UT	0.24 UT	1.2 UT	0.38 UT	1.6 UT	1.7 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.4 UT	0.24 UT	1.2 UT	0.38 UT	1.6 UT	1.7 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.4 UT	0.24 UT	1.2 UT	0.38 UT	1.6 UT	1.7 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.4 UT	0.24 UT	1.2 UT	0.38 UT	1.6 UT	1.7 UT
LWG RA Total DDx (Calculated U = 1/2)	0.4 UT	0.24 UT	1.2 UT	0.38 UT	1.6 UT	1.7 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	DGS-22SC	DGS-23SC	DGS-25SC	DGS-30SC	DGS-31SC	DGS-32SC	DGS-37SC
Sample Name:	GS-22SC-1213.3-10101	DGS-23SC-1214.4-101008	GS-25SC-1214.5-10100	DGS-30SC-1213.9-101006	GS-31SC-1215.5-1010	DGS-32SC-1213.6-101011	GS-37SC-1216-10101
Sample Date:	10/12/2010	10/8/2010	10/7/2010	10/6/2010	10/11/2010	10/11/2010	10/11/2010
Depth Interval:	365.76 - 405.38 cm	365.76 - 438.91 cm	365.76 - 441.96 cm	365.76 - 423.67 cm	365.76 - 472.44 cm	365.76 - 414.53 cm	365.76 - 487.68 cm
Metals (mg/kg)							
Zinc	**97**	**48**	**50**	**45**	**47**	**47**	**177**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	**4900**	63 U	66 U	63 U	61 U	65 U	**10000**
Benzo(a)pyrene	**7800**	63 U	66 U	63 U	61 U	65 U	**16000**
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	**6100**	63 U	66 U	63 U	61 U	65 U	**14000**
Dibenzo(a,h)anthracene	180 U	63 U	66 U	63 U	61 U	65 U	**2400**
Indeno(1,2,3-c,d)pyrene	**2800**	63 U	66 U	63 U	61 U	65 U	**9300**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**9600 T**	63 UT	66 UT	63 UT	61 UT	65 UT	**22000 T**
LWG RA Total LPAH (Calculated U = 1/2)	**26000 T**	63 UT	66 UT	63 UT	61 UT	65 UT	**67000 T**
LWG RA Total PAH (Calculated U = 1/2)	**100000 T**	63 UJT	66 UT	63 UT	61 UJT	65 UJT	**230000 JT**
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	**180 T**	32 UT	33 UT	32 UT	31 UT	27 UT	**200 T**
Benzo(a)pyrene	**280 T**	32 UT	33 UT	32 UT	31 UT	27 UT	**300 T**
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	**220 T**	32 UT	33 UT	32 UT	31 UT	27 UT	**260 T**
Dibenzo(a,h)anthracene	6.4 UT	32 UT	33 UT	32 UT	31 UT	27 UT	**44 T**
Indeno(1,2,3-c,d)pyrene	**100 T**	32 UT	33 UT	32 UT	31 UT	27 UT	**170 T**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**340 T**	32 UT	33 UT	32 UT	31 UT	27 UT	**410 T**
LWG RA Total LPAH (Calculated U = 1/2)	**950 T**	32 UT	33 UT	32 UT	31 UT	27 UT	**1200 T**
LWG RA Total PAH (Calculated U = 1/2)	**3700 T**	32 UJT	33 UT	32 UT	31 UJT	27 UJT	**4300 JT**
Semivolatile Organics (µg/kg)							
Carbazole	180 U	63 U	66 U	63 U	61 U	65 U	310 U
Semivolatile Organics (mg/kg-OC)							
Carbazole	6.4 UT	32 UT	33 UT	32 UT	31 UT	27 UT	5.7 UT
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UJT	32 UT	32 UT	30 UT	33 UJT	32 UJT	**180 JT**
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	1.1 UJT	16 UT	16 UT	20 UT	16 UJT	13 UJT	**3.3 JT**
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	DGS-22SC	DGS-23SC	DGS-25SC	DGS-30SC	DGS-31SC	DGS-32SC	DGS-37SC
Sample Name:	GS-22SC-1213.3-10101	DGS-23SC-1214.4-101008	GS-25SC-1214.5-10100	DGS-30SC-1213.9-101006	GS-31SC-1215.5-1010	DGS-32SC-1213.6-101011	GS-37SC-1216-10101
Sample Date:	10/12/2010	10/8/2010	10/7/2010	10/6/2010	10/11/2010	10/11/2010	10/11/2010
Depth Interval:	365.76 - 405.38 cm	365.76 - 438.91 cm	365.76 - 441.96 cm	365.76 - 423.67 cm	365.76 - 472.44 cm	365.76 - 414.53 cm	365.76 - 487.68 cm
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	16 U	3.2 U	3.3 U	3 U	3.2 U	3.3 U	16 U
4,4'-DDE (p,p'-DDE)	16 U	3.2 U	3.3 U	3 U	3.2 U	3.3 U	16 U
4,4'-DDT (p,p'-DDT)	16 U	3.2 U	3.3 U	3 U	3.2 U	3.3 U	16 U
alpha-Hexachlorocyclohexane (BHC)	8 U	1.6 U	1.6 U	1.5 U	1.6 U	1.7 U	7.9 U
beta-Hexachlorocyclohexane (BHC)	8 U	1.6 U	1.6 U	1.5 U	1.6 U	1.7 U	7.9 U
delta-Hexachlorocyclohexane (BHC)	8 U	1.6 U	1.6 U	1.5 U	1.6 U	1.7 U	7.9 U
Endrin ketone	16 U	3.2 U	3.3 U	3 U	3.2 U	3.3 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8 U	1.6 U	1.6 U	1.5 U	1.6 U	1.7 U	7.9 U
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	3.2 UT	3.3 UT	3 UT	3.2 UT	3.3 UT	16 UT
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	3.2 UT	3.3 UT	3 UT	3.2 UT	3.3 UT	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	3.2 UT	3.3 UT	3 UT	3.2 UT	3.3 UT	16 UT
LWG RA Total DDx (Calculated U = 1/2)	16 UT	3.2 UT	3.3 UT	3 UT	3.2 UT	3.3 UT	16 UT
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	0.57 UT	1.6 UT	1.7 UT	1.5 UT	1.6 UT	1.4 UT	0.3 UT
4,4'-DDE (p,p'-DDE)	0.57 UT	1.6 UT	1.7 UT	1.5 UT	1.6 UT	1.4 UT	0.3 UT
4,4'-DDT (p,p'-DDT)	0.57 UT	1.6 UT	1.7 UT	1.5 UT	1.6 UT	1.4 UT	0.3 UT
alpha-Hexachlorocyclohexane (BHC)	0.29 UT	0.8 UT	0.8 UT	0.75 UT	0.8 UT	0.7 UT	0.15 UT
beta-Hexachlorocyclohexane (BHC)	0.29 UT	0.8 UT	0.8 UT	0.75 UT	0.8 UT	0.7 UT	0.15 UT
delta-Hexachlorocyclohexane (BHC)	0.29 UT	0.8 UT	0.8 UT	0.75 UT	0.8 UT	0.7 UT	0.15 UT
Endrin ketone	0.57 UT	1.6 UT	1.7 UT	1.5 UT	1.6 UT	1.4 UT	0.3 UT
LWG RA Sum DDD (Calculated U = 1/2)	0.57 UT	1.6 UT	1.7 UT	1.5 UT	1.6 UT	1.4 UT	0.3 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.57 UT	1.6 UT	1.7 UT	1.5 UT	1.6 UT	1.4 UT	0.3 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.57 UT	1.6 UT	1.7 UT	1.5 UT	1.6 UT	1.4 UT	0.3 UT
LWG RA Total DDx (Calculated U = 1/2)	0.57 UT	1.6 UT	1.7 UT	1.5 UT	1.6 UT	1.4 UT	0.3 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	GSM-14	LW2-C283	LW2-C301	LW2-C301	LW2-C311	LW2-C525
Sample Name:	SM-14SO-12.5-17.5-10101	LW2-C283-E	LW2-C301-E	LW2-C301-G	LW2-C311-E	LW2-C525-E
Sample Date:	10/15/2010	11/8/2004	11/8/2004	11/8/2004	11/9/2004	10/26/2005
Depth Interval:	381 - 533.4 cm	380 - 430 cm	358 - 398 cm	428 - 516 cm	398 - 533 cm	341 - 427 cm
Metals (mg/kg)						
Zinc	66	58.1	52.2	114	89.8	50.2
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	60 U	33 J	440000 J	46000 J	740 J	550
Benzo(a)pyrene	60 U	26 J	470000 J	71000 J	1300 J	800
Benzo(b)fluoranthene	--	27 J	440000 J	60000 J	1000 J	470
Benzo(k)fluoranthene	--	15 J	180000 J	18000 J	300 J	420
Chrysene	60 U	31 J	490000 J	59000 J	860 J	700
Dibenzo(a,h)anthracene	60 U	4 J	37000 J	4300 J	98 J	63
Indeno(1,2,3-c,d)pyrene	60 U	12 J	280000 J	49000 J	1000 J	630
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	60 UT	37 JT	630000 JT	91000 JT	1700 JT	1000 T
LWG RA Total LPAH (Calculated U = 1/2)	60 UT	160 JT	8300000 JT	750000 JT	1800 JT	4000 T
LWG RA Total PAH (Calculated U = 1/2)	60 UT	420 JT	15000000 JT	1700000 JT	14000 JT	13000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	--	10 JT	4000 JT	2100 JT	50 JT	240 T
Benzo(a)pyrene	--	8.1 JT	4300 JT	3200 JT	88 JT	300 T
Benzo(b)fluoranthene	--	8.4 JT	4000 JT	3000 JT	70 JT	200 T
Benzo(k)fluoranthene	--	4.7 JT	1600 JT	810 JT	20 JT	180 T
Chrysene	--	9.7 JT	4500 JT	2700 JT	58 JT	300 T
Dibenzo(a,h)anthracene	--	1 JT	340 JT	190 JT	6.6 JT	27 T
Indeno(1,2,3-c,d)pyrene	--	3.8 JT	2500 JT	2200 JT	70 JT	270 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	11 JT	5700 JT	4100 JT	110 JT	400 T
LWG RA Total LPAH (Calculated U = 1/2)	--	50 JT	76000 JT	34000 JT	120 JT	1700 T
LWG RA Total PAH (Calculated U = 1/2)	--	130 JT	140000 JT	76000 JT	930 JT	5800 T
Semivolatile Organics (µg/kg)						
Carbazole	60 U	2.4 J	210000	10000	18 J	22
Semivolatile Organics (mg/kg-OC)						
Carbazole	--	0.75 JT	1900 T	500 T	1.2 JT	9.6 T
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UJT	2.5 UJT	13 UT	2.89 UT	2.9 UT	1.5 UT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	0.78 UJT	0.11 UT	0.131 UT	0.19 UT	0.65 UT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	GSM-14	LW2-C283	LW2-C301	LW2-C301	LW2-C311	LW2-C525
Sample Name:	SM-14SO-12.5-17.5-10101	LW2-C283-E	LW2-C301-E	LW2-C301-G	LW2-C311-E	LW2-C525-E
Sample Date:	10/15/2010	11/8/2004	11/8/2004	11/8/2004	11/9/2004	10/26/2005
Depth Interval:	381 - 533.4 cm	380 - 430 cm	358 - 398 cm	428 - 516 cm	398 - 533 cm	341 - 427 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	3.2 U	0.0521 U	**571 NJ**	**43.3 NJ**	0.587 U	0.57 U
4,4'-DDE (p,p'-DDE)	3.2 U	0.0488 U	16.8 U	1.09 U	0.551 U	0.3 U
4,4'-DDT (p,p'-DDT)	3.2 U	0.0602 UJ	**446 J**	**61.5 J**	0.679 UJ	0.95 U
alpha-Hexachlorocyclohexane (BHC)	1.6 U	0.0361 U	12.4 U	0.81 U	0.407 U	0.53 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	**1.06 J**	12.6 U	0.819 U	**0.86 J**	0.81 U
delta-Hexachlorocyclohexane (BHC)	1.6 UJ	0.0773 UJ	26.6 UJ	1.73 UJ	0.871 U	0.4 U
Endrin ketone	3.2 U	0.0318 U	**263 NJ**	0.713 U	0.359 U	1.4 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	0.0825 U	28.4 U	1.85 U	0.931 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	0.0521 UT	**580 NJT**	**43.7 NJT**	0.587 UT	1 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	0.0488 UT	16.8 UT	**16.9 JT**	0.551 UT	**1.3 T**
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	0.0602 UJT	**649 JT**	**62 JT**	0.679 UJT	1.1 UT
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	0.0602 UJT	**1200 JNT**	**123 JNT**	0.679 UJT	**3.1 T**
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	--	0.016 UT	**5.2 NJT**	**1.96 NJT**	0.0397 UT	0.25 UT
4,4'-DDE (p,p'-DDE)	--	0.015 UT	0.15 UT	0.0493 UT	0.0372 UT	0.1 UT
4,4'-DDT (p,p'-DDT)	--	0.019 UJT	**4.1 JT**	**2.78 JT**	0.0459 UJT	0.41 UT
alpha-Hexachlorocyclohexane (BHC)	--	0.011 UT	0.11 UT	0.037 UT	0.0275 UT	0.23 UT
beta-Hexachlorocyclohexane (BHC)	--	**0.33 JT**	0.11 UT	0.0371 UT	**0.058 JT**	0.35 UT
delta-Hexachlorocyclohexane (BHC)	--	0.024 UJT	0.24 UJT	0.0783 UJT	0.0589 UT	0.2 UT
Endrin ketone	--	0.0099 UT	**2.4 NJT**	0.0323 UT	0.0243 UT	0.61 UT
LWG RA Sum DDD (Calculated U = 1/2)	--	0.016 UT	**5.3 NJT**	**1.98 NJT**	0.0397 UT	0.4 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	0.015 UT	0.15 UT	**0.767 JT**	0.0372 UT	**0.53 T**
LWG RA Sum DDT (Calculated U = 1/2)	--	0.019 UJT	**5.9 JT**	**2.8 JT**	0.0459 UJT	0.48 UT
LWG RA Total DDx (Calculated U = 1/2)	--	0.019 UJT	**11 JNT**	**5.55 JNT**	0.0459 UJT	**1.3 T**

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	LW2-C527	LW2-C528	WLCGSG07GSB2	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSC5	WLCGSG07GSC7
Sample Name:	LW2-C527-E	LW2-C528-F	WLCGSG07GSB2S1315	WLCGSG07GSB5S1315	WLCGSG07GSB7S1315	WLCGSG07GSC5S1315	LCGSG07GSC7S13
Sample Date:	10/26/2005	10/26/2005	9/21/2007	9/21/2007	8/30/2007	9/20/2007	9/19/2007
Depth Interval:	352 - 482 cm	451 - 491 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm
Metals (mg/kg)							
Zinc	135	46.9	61.7	68.4	81.6	50.5	46.3
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	3000	38	1200	46	140000	0.61 U	43
Benzo(a)pyrene	3700	44	1900	65	150000	0.18 U	50
Benzo(b)fluoranthene	2900	31	1700	58	150000	0.32 U	45
Benzo(k)fluoranthene	2600	27	490	20	38000	0.19 U	15
Chrysene	4300	52	1400	52	130000	0.32 U	50
Dibenzo(a,h)anthracene	370	3.1 U	180	7.9	11000	0.36 U	5.6
Indeno(1,2,3-c,d)pyrene	3900	35	1600	58	110000	0.21 U	40
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	5100 T	56 T	2500 T	89 T	200000 T	0.36 UT	69 T
LWG RA Total LPAH (Calculated U = 1/2)	29000 T	180 T	5600 JT	670 JT	1900000 T	3.3 JT	400 JT
LWG RA Total PAH (Calculated U = 1/2)	78000 T	780 T	27000 JT	1400 JT	3900000 T	5.9 JT	1000 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	70 T	19 T	120 T	4.6 T	5300 T	0.061 UT	4.3 T
Benzo(a)pyrene	90 T	22 T	190 T	6.5 T	5700 T	0.018 UT	5 T
Benzo(b)fluoranthene	70 T	16 T	170 T	5.8 T	5700 T	0.032 UT	4.5 T
Benzo(k)fluoranthene	63 T	14 T	49 T	2 T	1500 T	0.019 UT	1.5 T
Chrysene	100 T	26 T	140 T	5.2 T	5000 T	0.032 UT	5 T
Dibenzo(a,h)anthracene	9 T	1.6 UT	18 T	0.79 T	420 T	0.036 UT	0.56 T
Indeno(1,2,3-c,d)pyrene	95 T	18 T	160 T	5.8 T	4200 T	0.021 UT	4 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	120 T	28 T	250 T	8.9 T	7700 T	0.036 UT	6.9 T
LWG RA Total LPAH (Calculated U = 1/2)	700 T	92 T	560 JT	67 JT	73000 T	0.33 JT	40 JT
LWG RA Total PAH (Calculated U = 1/2)	1900 T	390 T	2700 JT	140 JT	150000 T	0.59 JT	100 JT
Semivolatile Organics (µg/kg)							
Carbazole	640	4.3 J	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)							
Carbazole	16 T	2.2 JT	--	--	--	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	360 T	4 UT	--	--	--	--	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	8.7 T	2 UT	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	LW2-C527	LW2-C528	WLCGSG07GSB2	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSC5	WLCGSG07GSC7
Sample Name:	LW2-C527-E	LW2-C528-F	WLCGSG07GSB2S1315	WLCGSG07GSB5S1315	WLCGSG07GSB7S1315	WLCGSG07GSC5S1315	LCGSG07GSC7S13
Sample Date:	10/26/2005	10/26/2005	9/21/2007	9/21/2007	8/30/2007	9/20/2007	9/19/2007
Depth Interval:	352 - 482 cm	451 - 491 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	**630**	**4.6**	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	**57 NJ**	**0.62**	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	**160**	0.19 U	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	6.3 U	0.11 U	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	4.4 U	0.17 U	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	6.7 U	0.2 U	--	--	--	--	--
Endrin ketone	4 U	0.075 U	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	11 U	0.13 U	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**830 T**	**8.7 NJT**	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**110 NJT**	**0.66 T**	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**180 T**	0.55 UT	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**1100 NJT**	**9.7 NJT**	--	--	--	--	--
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	**15 T**	**2.3 T**	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	**1.4 NJT**	**0.31 T**	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	**3.9 T**	0.095 UT	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.15 UT	0.055 UT	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.11 UT	0.085 UT	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.16 UT	0.1 UT	--	--	--	--	--
Endrin ketone	0.1 UT	0.038 UT	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**20 T**	**4.4 NJT**	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**2.4 NJT**	**0.33 T**	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**4.5 T**	0.28 UT	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**27 NJT**	**4.9 NJT**	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	LCMRD08SDDA18S	WLCMRD08SDDA18SB	WLCMRD08SDDC23SB	WLCMRD08SDDC23SB	WLCMRD08SDDC24SB	WLCSLH01GP26
Sample Name:	WLCMRD08DA18-3	WLCMRD08DA18-4	WLCMRD08DC23-3	WLCMRD08DC23-4	WLCMRD08DC24-4	WLCSLH01GP26S13
Sample Date:	4/20/2008	4/20/2008	4/20/2008	4/20/2008	4/19/2008	10/4/2004
Depth Interval:	335.28 - 396.24 cm	396.24 - 487.68 cm	365.76 - 426.72 cm	426.72 - 518.16 cm	365.76 - 457.2 cm	396.2 - 411.4 cm
Metals (mg/kg)						
Zinc	59.4	60.6	180	165	205	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	7.8	0.9 J	4400	2400	18000	116000
Benzo(a)pyrene	11	0.54 J	3100	2600	18000	184000
Benzo(b)fluoranthene	10	0.6 J	2900	2700	22000	157000
Benzo(k)fluoranthene	3.5	2.5 U	910	870	6800	50600
Chrysene	11	0.77 J	5300	3200	24000	135000
Dibenzo(a,h)anthracene	1.4 J	2.5 U	410	420	3200	15200
Indeno(1,2,3-c,d)pyrene	12	0.56 J	2100	2100	18000	94800
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	15 JT	2 JT	4500 T	3800 T	27000 T	237000 T
LWG RA Total LPAH (Calculated U = 1/2)	64 JT	45 JT	100000 T	21000 T	280000 T	2900000 T
LWG RA Total PAH (Calculated U = 1/2)	230 JT	57 JT	160000 T	58000 T	550000 T	4700000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	3.9 T	0.1 JT	140 T	71 T	230 T	11600 T
Benzo(a)pyrene	5.5 T	0.065 JT	96 T	77 T	230 T	18400 T
Benzo(b)fluoranthene	5 T	0.07 JT	90 T	80 T	280 T	15700 T
Benzo(k)fluoranthene	1.8 T	0.3 UT	28 T	26 T	86 T	5060 T
Chrysene	5.5 T	0.093 JT	160 T	95 T	300 T	13500 T
Dibenzo(a,h)anthracene	0.7 JT	0.3 UT	13 T	12 T	41 T	1520 T
Indeno(1,2,3-c,d)pyrene	6 T	0.067 JT	65 T	62 T	230 T	9480 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	7.7 JT	0.24 JT	140 T	110 T	350 T	23700 T
LWG RA Total LPAH (Calculated U = 1/2)	32 JT	5.4 JT	3200 T	640 T	3500 T	290000 T
LWG RA Total PAH (Calculated U = 1/2)	120 JT	6.9 JT	5000 T	1700 T	6900 T	470000 T
Semivolatile Organics (µg/kg)						
Carbazole	9.9 J	1.7 J	960	180	2700	39900
Semivolatile Organics (mg/kg-OC)						
Carbazole	5 JT	0.2 JT	30 T	5.3 T	34 T	3990 T
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	5 UT	5 UT	120 T	1300 UT	270 T	--
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	3 UT	0.6 UT	3.6 T	39 UT	3.4 T	--
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	LCMRD08SDDA18S	WLCMRD08SDDA18SB	WLCMRD08SDDC23SB	WLCMRD08SDDC23SB	WLCMRD08SDDC24SB	WLCSLH01GP26
Sample Name:	WLCMRD08DA18-3	WLCMRD08DA18-4	WLCMRD08DC23-3	WLCMRD08DC23-4	WLCMRD08DC24-4	WLCSLH01GP26S13
Sample Date:	4/20/2008	4/20/2008	4/20/2008	4/20/2008	4/19/2008	10/4/2004
Depth Interval:	335.28 - 396.24 cm	396.24 - 487.68 cm	365.76 - 426.72 cm	426.72 - 518.16 cm	365.76 - 457.2 cm	396.2 - 411.4 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	**0.1 J**	0.2 U	**19**	**350**	**100**	--
4,4'-DDE (p,p'-DDE)	0.2 U	0.2 U	**19 J**	25 U	8.8 U	--
4,4'-DDT (p,p'-DDT)	0.2 U	0.2 U	1.8 U	**180**	46 U	--
alpha-Hexachlorocyclohexane (BHC)	0.2 U	0.2 U	**1.9 J**	0.98 U	8.8 U	--
beta-Hexachlorocyclohexane (BHC)	0.2 U	0.2 U	0.98 U	0.98 U	8.8 U	--
delta-Hexachlorocyclohexane (BHC)	0.2 U	0.2 U	0.98 U	**1.9 J**	8.8 U	--
Endrin ketone	0.2 U	0.34 U	0.98 U	0.98 U	**18**	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.2 U	0.2 U	3.1 U	1.9 U	49 U	--
LWG RA Sum DDD (Calculated U = 1/2)	**0.2 JT**	0.2 UT	**25 JT**	**350 T**	**220 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	0.2 UT	0.2 UT	**20 JT**	**43 JT**	8.8 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	0.2 UT	0.2 UT	3.7 UT	**190 T**	46 UT	--
LWG RA Total DDx (Calculated U = 1/2)	**0.6 JT**	0.2 UT	**47 JT**	**580 JT**	**270 JT**	--
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	**0.05 JT**	0.02 UT	**0.59 T**	**10 T**	**1 T**	--
4,4'-DDE (p,p'-DDE)	0.1 UT	0.02 UT	**0.59 JT**	0.74 UT	0.11 UT	--
4,4'-DDT (p,p'-DDT)	0.1 UT	0.02 UT	0.056 UT	**5.3 T**	0.58 UT	--
alpha-Hexachlorocyclohexane (BHC)	0.1 UT	0.02 UT	**0.059 JT**	0.029 UT	0.11 UT	--
beta-Hexachlorocyclohexane (BHC)	0.1 UT	0.02 UT	0.03 UT	0.029 UT	0.11 UT	--
delta-Hexachlorocyclohexane (BHC)	0.1 UT	0.02 UT	0.03 UT	**0.056 JT**	0.11 UT	--
Endrin ketone	0.1 UT	0.041 UT	0.03 UT	0.029 UT	**0.23 T**	--
LWG RA Sum DDD (Calculated U = 1/2)	**0.1 JT**	0.02 UT	**0.76 JT**	**10 T**	**2.5 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	0.1 UT	0.02 UT	**0.62 JT**	**1.3 JT**	0.11 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	0.1 UT	0.02 UT	0.11 UT	**5.5 T**	0.58 UT	--
LWG RA Total DDx (Calculated U = 1/2)	**0.3 JT**	0.02 UT	**1.5 JT**	**17 JT**	**3.1 JT**	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	F:_16-20_feet
System Location Code:	WLCSLH01GP27	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP31	DGS-06SC
Sample Name:	WLCSLH01GP27S15	WLCSLH01GP28S15	WLCSLH01GP29S12	WLCSLH01GP30S13	WLCSLH01GP31S12	DGS-06SC-1616.6-101007
Sample Date:	10/7/2004	10/13/2004	10/19/2004	10/22/2004	10/26/2004	10/7/2010
Depth Interval:	457.2 - 472.4 cm	457.2 - 472.4 cm	365.8 - 381 cm	396.2 - 411.4 cm	365.8 - 381 cm	487.68 - 505.97 cm
Metals (mg/kg)						
Zinc	--	--	--	--	--	**61**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	**199**	**19200**	**1230**	**1850**	**7320**	60 U
Benzo(a)pyrene	**226**	**20900**	**1430**	**1400**	**7410**	60 U
Benzo(b)fluoranthene	**194**	**16300**	**1090**	**1580**	**5850**	--
Benzo(k)fluoranthene	**51.6**	**6590**	**419**	**1790**	**2370**	--
Chrysene	**236**	**19900**	**1340**	**1920**	**9150**	60 U
Dibenzo(a,h)anthracene	**18.7**	**1930**	**200**	**191**	**1080**	60 U
Indeno(1,2,3-c,d)pyrene	**133**	**12500**	**904**	**403**	**4720**	60 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**298 T**	**27700 T**	**2000 T**	**2000 T**	**10300 T**	60 UT
LWG RA Total LPAH (Calculated U = 1/2)	**6200 T**	**160000 T**	**16600 T**	**12500 T**	**130000 T**	60 UT
LWG RA Total PAH (Calculated U = 1/2)	**9000 T**	**400000 T**	**31000 T**	**30000 T**	**230000 T**	60 UT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	**19.9 T**	**1920 T**	**123 T**	**185 T**	**732 T**	7 UT
Benzo(a)pyrene	**22.6 T**	**2090 T**	**143 T**	**140 T**	**741 T**	7 UT
Benzo(b)fluoranthene	**19.4 T**	**1630 T**	**109 T**	**158 T**	**585 T**	--
Benzo(k)fluoranthene	**5.16 T**	**659 T**	**41.9 T**	**179 T**	**237 T**	--
Chrysene	**23.6 T**	**1990 T**	**134 T**	**192 T**	**915 T**	7 UT
Dibenzo(a,h)anthracene	**1.87 T**	**193 T**	**20 T**	**19.1 T**	**108 T**	7 UT
Indeno(1,2,3-c,d)pyrene	**13.3 T**	**1250 T**	**90.4 T**	**40.3 T**	**472 T**	7 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**29.8 T**	**2770 T**	**200 T**	**200 T**	**1030 T**	7 UT
LWG RA Total LPAH (Calculated U = 1/2)	**620 T**	**16000 T**	**1660 T**	**1250 T**	**13000 T**	7 UT
LWG RA Total PAH (Calculated U = 1/2)	**900 T**	**40000 T**	**3100 T**	**3000 T**	**23000 T**	7 UT
Semivolatile Organics (µg/kg)						
Carbazole	88.9 U	**1940**	**480**	**833**	**2750**	60 U
Semivolatile Organics (mg/kg-OC)						
Carbazole	8.89 UT	**194 T**	**48 T**	**83.3 T**	**275 T**	7 UT
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	32 UT
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	3.8 UT
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	F:_16-20_feet
System Location Code:	WLCSLH01GP27	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP31	DGS-06SC
Sample Name:	WLCSLH01GP27S15	WLCSLH01GP28S15	WLCSLH01GP29S12	WLCSLH01GP30S13	WLCSLH01GP31S12	DGS-06SC-1616.6-101007
Sample Date:	10/7/2004	10/13/2004	10/19/2004	10/22/2004	10/26/2004	10/7/2010
Depth Interval:	457.2 - 472.4 cm	457.2 - 472.4 cm	365.8 - 381 cm	396.2 - 411.4 cm	365.8 - 381 cm	487.68 - 505.97 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	3.2 U
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	3.2 U
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	3.2 U
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	1.6 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	1.6 U
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	1.6 U
Endrin ketone	--	--	--	--	--	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	3.2 UT
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	3.2 UT
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	0.38 UT
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	0.38 UT
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	0.38 UT
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.19 UT
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.19 UT
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.19 UT
Endrin ketone	--	--	--	--	--	0.38 UT
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	0.38 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	0.38 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	0.38 UT
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	0.38 UT

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	DGS-11SC	DGS-13SC	DGS-37SC	LW2-C269	WLCGSG04RAA11	WLCGSG04RAA12
Sample Name:	DGS-11SC-1617.5-101006	DGS-13SC-1617-101005	DGS-37SC-1619-101011	LW2-C269-F	WLCGSG04RAA11SD1320	WLCGSG04RAA12SD1820
Sample Date:	10/6/2010	10/5/2010	10/11/2010	10/28/2004	7/22/2004	7/20/2004
Depth Interval:	487.68 - 533.4 cm	487.68 - 518.16 cm	487.68 - 579.12 cm	509 - 541 cm	396.24 - 609.6 cm	548.64 - 609.6 cm
Metals (mg/kg)						
Zinc	54	47 J	131	112	51.7 T	65.1
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)anthracene	61 U	64 U	3000	10000	1010 T	7900
Benzo(a)pyrene	61 U	64 U	4200	16000	1950 T	11000
Benzo(b)fluoranthene	--	--	--	14000	1150 T	9900
Benzo(k)fluoranthene	--	--	--	4400	1000 T	2900
Chrysene	61 U	64 U	3800	13000	1400 T	10000
Dibenzo(a,h)anthracene	61 U	64 U	740	1200	104 T	860 J
Indeno(1,2,3-c,d)pyrene	61 U	64 U	2600	12000	1950 T	8900
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	61 UT	64 UT	5900 T	21000 T	2500 T	15000 JT
LWG RA Total LPAH (Calculated U = 1/2)	61 UT	64 UT	15000 T	99000 T	11000 T	78000 JT
LWG RA Total PAH (Calculated U = 1/2)	61 UT	64 UT	58000 JT	290000 T	34000 T	210000 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)						
Benzo(a)anthracene	13 UT	32 UT	100 T	200 T	70.1 T	290 T
Benzo(a)pyrene	13 UT	32 UT	200 T	330 T	135 T	400 T
Benzo(b)fluoranthene	--	--	--	290 T	79.9 T	360 T
Benzo(k)fluoranthene	--	--	--	91 T	70 T	110 T
Chrysene	13 UT	32 UT	180 T	270 T	97 T	400 T
Dibenzo(a,h)anthracene	13 UT	32 UT	34 T	25 T	7.22 T	31 JT
Indeno(1,2,3-c,d)pyrene	13 UT	32 UT	120 T	250 T	135 T	320 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	13 UT	32 UT	280 T	430 T	170 T	530 JT
LWG RA Total LPAH (Calculated U = 1/2)	13 UT	32 UT	730 T	2000 T	770 T	2800 JT
LWG RA Total PAH (Calculated U = 1/2)	13 UT	32 UT	2700 JT	5900 T	2400 T	7700 JT
Semivolatile Organics (µg/kg)						
Carbazole	61 U	64 U	310 U	1100 J	--	--
Semivolatile Organics (mg/kg-OC)						
Carbazole	13 UT	32 UT	14 UT	23 JT	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	30 UT	32 UT	32 UJT	3 UT	--	--
PCB Aroclors (mg/kg-OC)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	6 UT	16 UT	1.5 UJT	0.061 UT	--	--
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	DGS-11SC	DGS-13SC	DGS-37SC	LW2-C269	WLCGSG04RAA11	WLCGSG04RAA12
Sample Name:	DGS-11SC-1617.5-101006	DGS-13SC-1617-101005	DGS-37SC-1619-101011	LW2-C269-F	WLCGSG04RAA11SD1320	WLCGSG04RAA12SD1820
Sample Date:	10/6/2010	10/5/2010	10/11/2010	10/28/2004	7/22/2004	7/20/2004
Depth Interval:	487.68 - 533.4 cm	487.68 - 518.16 cm	487.68 - 579.12 cm	509 - 541 cm	396.24 - 609.6 cm	548.64 - 609.6 cm
PCB Congeners (mg/kg-OC)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
4,4'-DDD (p,p'-DDD)	3 U	3.2 U	16 U	**3.38 NJ**	--	--
4,4'-DDE (p,p'-DDE)	3 U	3.2 U	16 U	**1.6 NJ**	--	--
4,4'-DDT (p,p'-DDT)	3 U	3.2 U	16 U	**7.15 NJ**	--	--
alpha-Hexachlorocyclohexane (BHC)	1.5 U	1.6 U	8 U	**0.295 J**	--	--
beta-Hexachlorocyclohexane (BHC)	1.5 U	1.6 U	8 U	**3.53 NJ**	--	--
delta-Hexachlorocyclohexane (BHC)	1.5 U	1.6 UJ	8 U	0.448 UJ	--	--
Endrin ketone	3 U	3.2 U	16 U	0.184 U	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.5 U	1.6 U	8 U	0.478 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	3 UT	3.2 UT	16 UT	**5.1 NJT**	--	--
LWG RA Sum DDE (Calculated U = 1/2)	3 UT	3.2 UT	16 UT	**4.4 JNT**	--	--
LWG RA Sum DDT (Calculated U = 1/2)	3 UT	3.2 UT	16 UT	**9.64 NJT**	--	--
LWG RA Total DDx (Calculated U = 1/2)	3 UT	3.2 UT	16 UT	**19 JNT**	--	--
Pesticides (mg/kg-OC)						
4,4'-DDD (p,p'-DDD)	0.65 UT	1.6 UT	0.74 UT	**0.0703 NJT**	--	--
4,4'-DDE (p,p'-DDE)	0.65 UT	1.6 UT	0.74 UT	**0.033 NJT**	--	--
4,4'-DDT (p,p'-DDT)	0.65 UT	1.6 UT	0.74 UT	**0.149 NJT**	--	--
alpha-Hexachlorocyclohexane (BHC)	0.32 UT	0.8 UT	0.37 UT	**0.00613 JT**	--	--
beta-Hexachlorocyclohexane (BHC)	0.32 UT	0.8 UT	0.37 UT	**0.0734 NJT**	--	--
delta-Hexachlorocyclohexane (BHC)	0.32 UT	0.8 UJT	0.37 UT	0.00931 UJT	--	--
Endrin ketone	0.65 UT	1.6 UT	0.74 UT	0.00383 UT	--	--
LWG RA Sum DDD (Calculated U = 1/2)	0.65 UT	1.6 UT	0.74 UT	**0.106 NJT**	--	--
LWG RA Sum DDE (Calculated U = 1/2)	0.65 UT	1.6 UT	0.74 UT	**0.091 JNT**	--	--
LWG RA Sum DDT (Calculated U = 1/2)	0.65 UT	1.6 UT	0.74 UT	**0.201 NJT**	--	--
LWG RA Total DDx (Calculated U = 1/2)	0.65 UT	1.6 UT	0.74 UT	**0.4 JNT**	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	WLCGSG04RAA14	WLCGSG04RAA17	WLCMRD08SDUD1SB	WLCMRD08SDUD26SB	WLCMRD08SDUD27SB	WLCMRD08SDUD2SB	WLCSLH01GP25
Sample Name:	LCGSG04RAA14SD14	WLCGSG04RAA17SD142(	WLCMRD08UD1-4	WLCMRD08UD26-4	WLCMRD08UD27-4	WLCMRD08UD2-4	WLCSLH01GP25S16
Sample Date:	7/20/2004	7/22/2004	4/15/2008	4/13/2008	4/13/2008	4/15/2008	9/28/2004
Depth Interval:	426.72 - 609.6 cm	426.72 - 609.6 cm	365.76 - 609.6 cm	365.76 - 609.6 cm	365.76 - 609.6 cm	365.76 - 609.6 cm	487.7 - 502.9 cm
Metals (mg/kg)							
Zinc	42.4	57.6	65.4	69.7	61.8	73.7	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	42	78000	0.87 J	2.7	1.8 J	2.4 U	169000
Benzo(a)pyrene	60	130000	2.4 U	2.4 J	2.2 J	2.4 U	237000
Benzo(b)fluoranthene	53	110000	0.84 J	3	2.6	2.4 U	198000
Benzo(k)fluoranthene	16	260	2.4 U	0.86 J	0.85 J	2.4 U	40600
Chrysene	80	93000	0.61 J	2.7	2.5 U	2.4 U	151000
Dibenzo(a,h)anthracene	5.4 J	100	2.4 U	2.5 U	2.5 U	2.4 U	20000
Indeno(1,2,3-c,d)pyrene	47	110000	0.48 J	2.5 U	2.5 U	2.4 U	128000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	80 JT	160000 T	2.6 JT	4.4 JT	4 JT	2.4 UT	310000 T
LWG RA Total LPAH (Calculated U = 1/2)	780 T	590000 T	36 JT	23 JT	20 JT	11 JT	5000000 T
LWG RA Total PAH (Calculated U = 1/2)	1500 JT	1900000 T	47 JT	49 JT	47 JT	22 JT	7500000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	12 T	4700 T	0.38 JT	1.2 T	0.9 JT	0.35 UT	16900 T
Benzo(a)pyrene	20 T	7900 T	1 UT	1 JT	1.1 JT	0.35 UT	23700 T
Benzo(b)fluoranthene	15 T	6700 T	0.37 JT	1 T	1.3 T	0.35 UT	19800 T
Benzo(k)fluoranthene	4.4 T	16 T	1 UT	0.37 JT	0.43 JT	0.35 UT	4060 T
Chrysene	20 T	5600 T	0.27 JT	1.2 T	1.3 UT	0.35 UT	15100 T
Dibenzo(a,h)anthracene	1.5 JT	6 T	1 UT	1.1 UT	1.3 UT	0.35 UT	2000 T
Indeno(1,2,3-c,d)pyrene	13 T	6700 T	0.21 JT	1.1 UT	1.3 UT	0.35 UT	12800 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	26 JT	9700 T	1.1 JT	1.8 JT	2 JT	0.35 UT	31000 T
LWG RA Total LPAH (Calculated U = 1/2)	220 T	35000 T	15 JT	9.8 JT	10 JT	1.6 JT	500000 T
LWG RA Total PAH (Calculated U = 1/2)	410 JT	120000 T	20 JT	21 JT	24 JT	3.2 JT	750000 T
Semivolatile Organics (µg/kg)							
Carbazole	--	--	9.5 U	3.2 J	9.7 U	9.6 U	32300
Semivolatile Organics (mg/kg-OC)							
Carbazole	--	--	4.1 UT	1.4 JT	4.9 UT	1.4 UT	3230 T
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	4.8 UT	5 UT	5 UT	4.9 UT	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	2.1 UT	2 UT	3 UT	0.72 UT	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	WLCGSG04RAA14	WLCGSG04RAA17	WLCMRD08SDUD1SB	WLCMRD08SDUD26SB	WLCMRD08SDUD27SB	WLCMRD08SDUD2SB	WLCSLH01GP25
Sample Name:	LCGSG04RAA14SD14	WLCGSG04RAA17SD142(	WLCMRD08UD1-4	WLCMRD08UD26-4	WLCMRD08UD27-4	WLCMRD08UD2-4	WLCSLH01GP25S16
Sample Date:	7/20/2004	7/22/2004	4/15/2008	4/13/2008	4/13/2008	4/15/2008	9/28/2004
Depth Interval:	426.72 - 609.6 cm	426.72 - 609.6 cm	365.76 - 609.6 cm	365.76 - 609.6 cm	365.76 - 609.6 cm	365.76 - 609.6 cm	487.7 - 502.9 cm
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--
4,4'-DDE (p,p'-DDE)	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--
4,4'-DDT (p,p'-DDT)	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--
alpha-Hexachlorocyclohexane (BHC)	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--
beta-Hexachlorocyclohexane (BHC)	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--
delta-Hexachlorocyclohexane (BHC)	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--
Endrin ketone	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	0.2 U	0.2 U	0.2 U	0.2 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	0.2 UT	0.2 UT	0.2 UT	0.2 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	0.2 UT	0.2 UT	0.2 UT	0.2 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	0.2 UT	0.2 UT	0.2 UT	0.2 UT	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	0.2 UT	0.2 UT	0.2 UT	0.2 UT	--
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	--	--	0.09 UT	0.09 UT	0.1 UT	0.03 UT	--
4,4'-DDE (p,p'-DDE)	--	--	0.09 UT	0.09 UT	0.1 UT	0.03 UT	--
4,4'-DDT (p,p'-DDT)	--	--	0.09 UT	0.09 UT	0.1 UT	0.03 UT	--
alpha-Hexachlorocyclohexane (BHC)	--	--	0.09 UT	0.09 UT	0.1 UT	0.03 UT	--
beta-Hexachlorocyclohexane (BHC)	--	--	0.09 UT	0.09 UT	0.1 UT	0.03 UT	--
delta-Hexachlorocyclohexane (BHC)	--	--	0.09 UT	0.09 UT	0.1 UT	0.03 UT	--
Endrin ketone	--	--	0.09 UT	0.09 UT	0.1 UT	0.03 UT	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	0.09 UT	0.09 UT	0.1 UT	0.03 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	0.09 UT	0.09 UT	0.1 UT	0.03 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	0.09 UT	0.09 UT	0.1 UT	0.03 UT	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	0.09 UT	0.09 UT	0.1 UT	0.03 UT	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	WLCSLH01GP26	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP32
Sample Name:	WLCSLH01GP26S18	WLCSLH01GP29S17	WLCSLH01GP30S18	WLCSLH01GP31S17	WLCSLH01GP32S16
Sample Date:	10/4/2004	10/19/2004	10/22/2004	10/26/2004	10/27/2004
Depth Interval:	548.6 - 563.8 cm	518.2 - 533.4 cm	548.6 - 563.8 cm	518.2 - 533.4 cm	487.7 - 502.9 cm
Metals (mg/kg)					
Zinc	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)					
Benzo(a)anthracene	**37900**	**143**	8.99 U	**9.75**	8.91 U
Benzo(a)pyrene	**60600**	**147**	8.99 U	**11.5**	8.91 U
Benzo(b)fluoranthene	**53300**	**122**	8.99 U	**9.75**	8.91 U
Benzo(k)fluoranthene	**14200**	8.04 U	8.99 U	8.87 U	8.91 U
Chrysene	**33600**	**155**	8.99 U	8.87 U	8.91 U
Dibenzo(a,h)anthracene	**5260**	8.04 U	8.99 U	8.87 U	8.91 U
Indeno(1,2,3-c,d)pyrene	**26500**	**87.6**	8.99 U	8.87 U	8.91 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**77800 T**	**186 T**	8.99 UT	**18.4 T**	8.91 UT
LWG RA Total LPAH (Calculated U = 1/2)	**672000 T**	**2100 T**	**3600 T**	**264 T**	**263 T**
LWG RA Total PAH (Calculated U = 1/2)	**1200000 T**	**4260 T**	**3700 T**	**386 T**	**527 T**
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)					
Benzo(a)anthracene	**3790 T**	**14.3 T**	0.899 UT	**0.975 T**	0.891 UT
Benzo(a)pyrene	**6060 T**	**14.7 T**	0.899 UT	**1.15 T**	0.891 UT
Benzo(b)fluoranthene	**5330 T**	**12.2 T**	0.899 UT	**0.975 T**	0.891 UT
Benzo(k)fluoranthene	**1420 T**	0.804 UT	0.899 UT	0.887 UT	0.891 UT
Chrysene	**3360 T**	**15.5 T**	0.899 UT	0.887 UT	0.891 UT
Dibenzo(a,h)anthracene	**526 T**	0.804 UT	0.899 UT	0.887 UT	0.891 UT
Indeno(1,2,3-c,d)pyrene	**2650 T**	**8.76 T**	0.899 UT	0.887 UT	0.891 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**7780 T**	**18.6 T**	0.899 UT	**1.84 T**	0.891 UT
LWG RA Total LPAH (Calculated U = 1/2)	**67200 T**	**210 T**	**360 T**	**26.4 T**	**26.3 T**
LWG RA Total PAH (Calculated U = 1/2)	**120000 T**	**426 T**	**370 T**	**38.6 T**	**52.7 T**
Semivolatile Organics (µg/kg)					
Carbazole	**2180**	80.3 U	89.9 U	88.7 U	89 U
Semivolatile Organics (mg/kg-OC)					
Carbazole	**218 T**	8.03 UT	8.99 UT	8.87 UT	8.9 UT
PCB Aroclors (µg/kg)					
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Aroclors (mg/kg-OC)					
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (µg/kg)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-169	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Analysis Matrix	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	WLCSLH01GP26	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP32
Sample Name:	WLCSLH01GP26S18	WLCSLH01GP29S17	WLCSLH01GP30S18	WLCSLH01GP31S17	WLCSLH01GP32S16
Sample Date:	10/4/2004	10/19/2004	10/22/2004	10/26/2004	10/27/2004
Depth Interval:	548.6 - 563.8 cm	518.2 - 533.4 cm	548.6 - 563.8 cm	518.2 - 533.4 cm	487.7 - 502.9 cm
PCB Congeners (mg/kg-OC)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-169	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/kg)					
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Pesticides (mg/kg-OC)					
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--

Table 3-16
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Background

Notes:
Detected concentration is greater than 1 screening level

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation.
-- = Results not reported or not applicable
N = Normal Field Sample
R = Rejected

Acronyms:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
mg/kg-OC = milligrams per kilogram organic carbon normalized
BaPEq = benzo[a]pyrene equivalents
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
PCB = polychlorinated biphenyl
NA = not applicable
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC	DGS-18SC
Sample Name:	DGS-03SC-0104-101005	DGS-06SC-0104-101007	DGS-07SC-0104-101012	DGS-08SC-0104-101007	DGS-11SC-0104-101006	DGS-13SC-0104-101005	DGS-18SC-004.5-101008
Sample Date:	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010	10/8/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	0 - 137.16 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**54.6**	**1.37**	**26.1**	**0.258**	**2.26**	**3.26**	**0.204**
Metals (mg/kg)							
Zinc	**307 J**	**70**	**220**	**56**	**122**	**107 J**	**53**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.8 U	1.2 U	150 U	1.3 U	160 U	1.6 U	--
1,2-Dichloroethene, cis-	1.8 U	1.2 U	150 U	1.3 U	160 U	1.6 U	--
1,2-Dichloroethene, trans-	1.8 U	1.2 U	150 U	1.3 U	160 U	1.6 U	--
Benzene	1.8 U	1.2 U	150 U	**1.5**	**7000 J**	**1.7 J**	--
Ethylbenzene	1.8 U	1.2 U	**1800**	1.3 U	**12000 J**	**2.5 J**	--
Naphthalene	--	--	--	--	--	--	--
o-Xylene	1.8 U	1.2 U	**290**	**2.3**	**6000 J**	**3.2 J**	--
Toluene	1.8 U	1.2 U	150 U	1.3 U	**2300 J**	1.6 U	--
Trichloroethene (TCE)	1.8 U	1.2 U	150 U	1.3 U	160 U	1.6 U	--
Vinyl chloride	1.8 U	1.2 U	150 U	1.3 U	160 U	1.6 U	--
LWG RA Total Xylene (Calculated U = 1/2)	1.8 UT	1.2 UT	**360 T**	**3 T**	**18000 JT**	**5.3 JT**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**540**	620 U	**40000**	**12000**	**110000**	**180**	**5700**
Acenaphthene	**6000**	**3000**	**18000**	**24000**	**120000**	**7200**	**3800**
Acenaphthylene	**790**	620 U	1800 U	**890**	**6600**	**400**	**360**
Anthracene	**5800**	**2500**	**31000**	**11000**	**59000**	**2800**	**3300**
Benzo(a)anthracene	**10000**	**5000**	**39000**	**10000**	**44000**	**2800**	**2700**
Benzo(a)pyrene	**14000**	**7200**	**40000**	**13000**	**58000**	**3500**	**2200**
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	**13000**	**5200**	**10000**	**9500**	**38000**	**2700**	**1000**
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	**15000**	**6400**	**49000**	**13000**	**58000**	**4000**	**3100**
Dibenzo(a,h)anthracene	**2900**	**1200**	1800 U	**1800**	6500 U	**550**	**74**
Fluoranthene	**20000**	**13000**	**76000**	**41000**	**180000**	**8000**	**6600**
Fluorene	**4800**	**1700**	**20000**	**12000**	**57000**	**3700**	**3200**
Indeno(1,2,3-c,d)pyrene	**9000**	**3600**	**9600**	**6700**	**26000**	**1800**	**800**
Naphthalene	**890**	620 U	**3200**	820 U	**560000**	**210**	**1200**
Phenanthrene	**29000**	**14000**	**130000**	**82000**	**370000**	**18000**	**20000**
Pyrene	**35000**	**17000**	**100000**	**56000**	**210000**	**13000**	**9100**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**20000 T**	**10000 T**	**51000 T**	**18000 T**	**74000 T**	**4900 T**	**2900 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC	DGS-18SC
Sample Name:	DGS-03SC-0104-101005	DGS-06SC-0104-101007	DGS-07SC-0104-101012	DGS-08SC-0104-101007	DGS-11SC-0104-101006	DGS-13SC-0104-101005	DGS-18SC-004.5-101008
Sample Date:	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010	10/8/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	0 - 137.16 cm
Semivolatile Organics (µg/kg)							
Carbazole	**900**	620 U	**3400**	**4000**	**15000**	**920**	**240**
Dibenzofuran	**670**	620 U	**2800**	**1600**	**8200**	**890**	**510**
PCB Aroclors (µg/kg)							
Aroclor 1016	32 U	32 U	66 U	120 U	32 U	31 U	32 U
Aroclor 1221	32 U	32 U	66 UJ	120 U	32 U	31 U	32 U
Aroclor 1232	32 U	32 U	66 U	120 U	32 U	31 U	32 U
Aroclor 1242	32 U	32 U	66 U	120 U	32 U	31 U	32 U
Aroclor 1248	**61**	32 U	98 U	120 U	49 U	31 U	32 U
Aroclor 1254	48 U	32 U	150 U	120 U	40 U	31 U	32 U
Aroclor 1260	**54**	32 U	**150**	120 U	**33**	31 U	32 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**200 T**	32 UT	**410 JT**	120 UT	**140 T**	31 UT	32 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	8 U	8.2 U	17 U	32 U	29 U	7.9 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	8 U	8.2 U	91 U	32 U	18 U	7.9 U	1.6 U
Endrin ketone	16 U	16 U	34 U	65 U	16 U	16 U	3.3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8 U	8.2 U	17 U	32 U	7.8 U	7.9 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	16 UT	**160 JT**	65 UT	16 UT	16 UT	3.3 UT
LWG RA Sum DDE (Calculated U = 1/2)	**25 T**	16 UT	**69 T**	65 UT	**16 JT**	**14 JT**	3.3 UT
LWG RA Sum DDT (Calculated U = 1/2)	**33 T**	16 UT	34 UT	65 UT	16 UT	16 UT	3.3 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**380**	**160**	**4700 J**	**410**	**2200**	**250**	**330**
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-18SC	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-22SC	DGS-23SC
Sample Name:	DGS-18SC-0104-101008	DGS-18SC-015.5-101008	DGS-19SC-0104-101006	DGS-20SC-0104-101008	DGS-22SC-0104-101012	DGS-22SC-1.92.9-101012	DGS-23SC-0104-101008
Sample Date:	10/8/2010	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/12/2010	10/8/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 167.64 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	57.91 - 88.39 cm	30.48 - 121.92 cm
Conventional Parameters (mg/kg)							
Cyanide, total	0.124 U	0.12 U	**2.28**	0.13 U	**1.3**	**2.14**	0.126 U
Metals (mg/kg)							
Zinc	**54**	**51**	**149**	**55**	**140**	**133**	**49**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	73 U	**-- R**	450 U	1.3 U	1.7 U	**--**	1.2 U
1,2-Dichloroethene, cis-	73 U	**-- R**	450 U	1.3 U	1.7 U	**--**	1.2 U
1,2-Dichloroethene, trans-	73 U	**-- R**	450 U	1.3 U	1.7 U	**--**	1.2 U
Benzene	73 U	**-- R**	**1900 J**	1.3 U	**12**	**--**	1.2 U
Ethylbenzene	73 U	**-- R**	**25000 J**	1.3 U	**2**	**--**	1.2 U
Naphthalene	**--**	**--**	**--**	**--**	**--**	**--**	**--**
o-Xylene	73 U	**-- R**	**5800 J**	1.3 U	**2.5**	**--**	1.2 U
Toluene	73 U	**-- R**	450 U	1.3 U	1.7 U	**--**	1.2 U
Trichloroethene (TCE)	73 U	**-- R**	450 U	1.3 U	1.7 U	**--**	1.2 U
Vinyl chloride	73 U	**-- R**	450 U	1.3 U	1.7 U	**--**	1.2 U
LWG RA Total Xylene (Calculated U = 1/2)	73 UT	**--**	**14000 JT**	1.3 UT	**6.4 T**	**--**	1.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**3000**	**3600**	**250000**	62 U	**500**	**3900**	64 U
Acenaphthene	**10000**	**3600**	**270000**	62 U	**27000**	**37000**	**150**
Acenaphthylene	**970**	**200**	13000 U	62 U	**660**	**2100**	64 U
Anthracene	**7400**	**3300**	**86000**	62 U	**31000**	**46000**	64 U
Benzo(a)anthracene	**9200**	**2600**	**63000**	62 U	**29000**	**48000**	64 U
Benzo(a)pyrene	**9500**	**2100**	**82000**	62 U	**37000**	**60000**	64 U
Benzo(b)fluoranthene	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Benzo(g,h,i)perylene	**6800**	**780**	**60000**	**63**	**9300**	**52000**	64 U
Benzo(k)fluoranthene	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Chrysene	**12000**	**2900**	**76000**	62 U	**37000**	**56000**	64 U
Dibenzo(a,h)anthracene	**1700**	64 U	13000 U	62 U	**440**	**1400**	64 U
Fluoranthene	**21000**	**7500**	**240000**	62 U	**98000**	**150000**	64 U
Fluorene	**7700**	**3300**	**91000**	62 U	**12000**	**24000**	64 U
Indeno(1,2,3-c,d)pyrene	**4800**	**660**	**41000**	62 U	**8400**	**37000**	64 U
Naphthalene	**2600**	160 U	**2300000**	62 U	**1200**	**12000**	64 U
Phenanthrene	**41000**	**25000**	**520000**	62 U	**140000**	**210000**	64 U
Pyrene	**25000 J**	**9500**	**280000**	62 UJ	**120000**	**180000**	64 UJ
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**14000 T**	**2700 T**	**110000 T**	62 UT	**44000 T**	**77000 T**	64 UT

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-18SC	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-22SC	DGS-23SC
Sample Name:	DGS-18SC-0104-101008	DGS-18SC-015.5-101008	DGS-19SC-0104-101006	DGS-20SC-0104-101008	DGS-22SC-0104-101012	DGS-22SC-1.92.9-101012	DGS-23SC-0104-101008
Sample Date:	10/8/2010	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/12/2010	10/8/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 167.64 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	57.91 - 88.39 cm	30.48 - 121.92 cm
Semivolatile Organics (µg/kg)							
Carbazole	**890**	**190**	**19000**	62 U	**1600**	**4600**	64 U
Dibenzofuran	**910**	**550**	**14000**	62 U	**1300**	**3200**	64 U
PCB Aroclors (µg/kg)							
Aroclor 1016	31 U	31 U	32 U	32 U	33 U	32 U	33 U
Aroclor 1221	31 U	31 U	32 U	32 U	33 UJ	32 U	33 U
Aroclor 1232	31 U	31 U	32 U	32 U	33 U	32 U	33 U
Aroclor 1242	31 U	31 U	32 U	32 U	33 U	32 U	33 U
Aroclor 1248	31 U	31 U	**82**	32 U	33 U	32 U	33 U
Aroclor 1254	31 U	31 U	73 U	32 U	33 U	32 U	33 U
Aroclor 1260	31 U	31 U	**48**	32 U	33 U	32 U	33 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 UT	31 UT	**230 T**	32 UT	33 UJT	32 UT	33 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	1.6 U	16 U	24 U	1.6 U	8.2 U	16 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	16 U	8.2 U	1.6 U	15 U	16 U	1.6 U
Endrin ketone	3.2 U	31 U	16 U	3.3 U	16 U	32 U	3.3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	16 U	8.2 U	1.6 U	8.2 U	16 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	31 UT	16 UT	3.3 UT	16 UT	32 UT	3.3 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	31 UT	**21 JT**	3.3 UT	16 UT	32 UT	3.3 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	31 UT	16 UT	3.3 UT	16 UT	32 UT	3.3 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**81**	**300**	**2700**	6.9 U	**1200 J**	**1800**	7 U
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-24SC	DGS-25SC	DGS-26SC	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC
Sample Name:	DGS-24SC-0104-101012	DGS-25SC-0104-101007	DGS-26SC-0104-101011	DGS-26SC-015.4-101011	DGS-28SC-0104-101007	DGS-30SC-0104-101006	DGS-31SC-0104-101011
Sample Date:	10/12/2010	10/7/2010	10/11/2010	10/11/2010	10/7/2010	10/6/2010	10/11/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 164.59 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**5.64**	0.129 U	0.106 U	0.11 U	0.119 U	0.119 U	**1.22**
Metals (mg/kg)							
Zinc	**94**	**45**	**45**	**45**	**46**	**49**	**94**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.2 U	1.2 U	11 U	**-- R**	1.2 U	1.2 U	1.3 U
1,2-Dichloroethene, cis-	1.2 U	1.2 U	11 U	**-- R**	1.2 U	1.2 U	**1.5**
1,2-Dichloroethene, trans-	1.2 U	1.2 U	11 U	**-- R**	1.2 U	1.2 U	1.3 U
Benzene	**4.7 J**	1.2 U	11 U	**-- R**	1.2 U	1.2 U	**15**
Ethylbenzene	**41 J**	1.2 U	11 U	**-- R**	1.2 U	1.2 U	**10**
Naphthalene	**--**	**--**	**--**	**--**	**--**	**--**	**--**
o-Xylene	**28 J**	1.2 U	11 U	**-- R**	1.2 U	1.2 U	**2**
Toluene	**1.9 J**	1.2 U	11 U	**-- R**	1.2 U	1.2 U	**5.2**
Trichloroethene (TCE)	1.2 U	1.2 U	11 U	**-- R**	1.2 U	1.2 U	1.3 U
Vinyl chloride	1.2 U	1.2 U	11 U	**-- R**	1.2 U	1.2 U	**3.6**
LWG RA Total Xylene (Calculated U = 1/2)	**40 JT**	1.2 UT	11 UT	**--**	1.2 UT	1.2 UT	**5.5 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**8500**	64 U	**3600**	**8200**	59 U	**240**	**970**
Acenaphthene	**23000**	64 U	**12000**	**22000**	59 U	**220**	**12000**
Acenaphthylene	**960**	64 U	**620**	**820**	59 U	59 U	**800**
Anthracene	**8700**	64 U	**6300**	**8000**	59 U	**100**	**8200**
Benzo(a)anthracene	**7600**	64 U	**4800**	**6600**	59 U	59 U	**7000**
Benzo(a)pyrene	**9000**	64 U	**6000**	**8000**	59 U	**73**	**6700**
Benzo(b)fluoranthene	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Benzo(g,h,i)perylene	**4200**	64 U	**4600**	**6900**	59 U	59 U	**4000**
Benzo(k)fluoranthene	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Chrysene	**8700**	64 U	**5800**	**8000**	59 U	**65**	**8000**
Dibenzo(a,h)anthracene	**220**	64 U	**200**	**250**	59 U	59 U	**230**
Fluoranthene	**32000**	64 U	**12000**	**23000**	59 U	**140**	**14000**
Fluorene	**9300**	64 U	**6700**	**10000**	59 U	**78**	**7600**
Indeno(1,2,3-c,d)pyrene	**3800**	64 U	**3500**	**4800**	59 U	59 U	**3300**
Naphthalene	**3800**	64 U	**5400**	**15000**	59 U	**2800**	**470**
Phenanthrene	**64000**	64 U	**39000**	**49000**	59 U	**380**	**50000**
Pyrene	**40000**	64 U	**14000**	**28000**	59 U	**180**	**28000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**11000 T**	64 UT	**7800 T**	**10000 T**	59 UT	**120 T**	**8800 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-24SC	DGS-25SC	DGS-26SC	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC
Sample Name:	DGS-24SC-0104-101012	DGS-25SC-0104-101007	DGS-26SC-0104-101011	DGS-26SC-015.4-101011	DGS-28SC-0104-101007	DGS-30SC-0104-101006	DGS-31SC-0104-101011
Sample Date:	10/12/2010	10/7/2010	10/11/2010	10/11/2010	10/7/2010	10/6/2010	10/11/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 164.59 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm
Semivolatile Organics (µg/kg)							
Carbazole	**1200**	64 U	**1100**	**1300**	59 U	59 U	**1100**
Dibenzofuran	**1600**	64 U	**1100**	**1600**	59 U	59 U	**1200**
PCB Aroclors (µg/kg)							
Aroclor 1016	32 U	31 U	33 U	33 U	33 U	32 U	33 U
Aroclor 1221	32 UJ	31 U	33 UJ	33 U	33 U	32 U	33 UJ
Aroclor 1232	32 U	31 U	33 U	33 U	49 U	32 U	33 U
Aroclor 1242	32 U	31 U	33 U	33 U	33 U	32 U	33 U
Aroclor 1248	32 U	31 U	33 U	33 U	33 U	32 U	33 U
Aroclor 1254	32 U	31 U	33 U	33 U	33 U	32 U	33 U
Aroclor 1260	32 U	31 U	33 U	33 U	33 U	32 U	33 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UJT	31 UT	33 UJT	33 UT	49 UT	32 UT	33 UJT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	8 U	1.6 U	8.2 U	16 U	1.6 U	1.6 U	8.3 U
beta-Hexachlorocyclohexane (BHC)	8 U	1.6 U	8.2 U	16 U	1.6 U	1.6 U	8.3 U
Endrin ketone	16 U	3.2 U	16 U	33 U	3.3 U	3.2 U	17 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8 U	1.6 U	8.2 U	16 U	1.6 U	1.6 U	8.3 U
LWG RA Sum DDD (Calculated U = 1/2)	**31 JT**	3.2 UT	16 UT	33 UT	3.3 UT	3.2 UT	**33 T**
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	3.2 UT	16 UT	33 UT	3.3 UT	3.2 UT	17 UT
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	3.2 UT	16 UT	33 UT	3.3 UT	3.2 UT	17 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**260 J**	6.3 U	**260**	**370**	6.1 U	6 U	**400**
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-31SC	DGS-32SC	DGS-32SC	DGS-36SC	DGS-37SC	GSM-14	GTC-03
Sample Name:	DGS-31SC-011.9-101011	DGS-32SC-0104-101011	DGS-32SC-2.83.8-101011	DGS-36SC-0104-101012	DGS-37SC-0104-101011	GSM-14SO-0-5-101015	GTC-03SC-090113
Sample Date:	10/11/2010	10/11/2010	10/11/2010	10/12/2010	10/11/2010	10/15/2010	1/13/2009
Depth Interval:	30.48 - 57.912 cm	30.48 - 121.92 cm	85.34 - 115.82 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	0 - 152.4 cm	54.86 - 134.11 cm
Conventional Parameters (mg/kg)							
Cyanide, total	1.8	4.32	2.81	47.8	2.15	0.286	--
Metals (mg/kg)							
Zinc	121	199	157	110	249	77	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	1.8 U	--	1.3 U	2 U	1 U	--
1,2-Dichloroethene, cis-	--	1.8 U	--	1.3 U	2 U	1 U	--
1,2-Dichloroethene, trans-	--	1.8 U	--	1.3 U	2 U	1 U	--
Benzene	--	3.3 J	--	4.6	2 U	1 U	1.4 U
Ethylbenzene	--	16 J	--	1.3 U	2 U	1 U	3
Naphthalene	--	--	--	--	--	--	--
o-Xylene	--	35 J	--	1.3 U	2 U	1 U	1.5
Toluene	--	2.8 J	--	1.3 U	2 U	1 U	1.4 U
Trichloroethene (TCE)	--	1.8 U	--	1.3 U	2 U	1 U	--
Vinyl chloride	--	1.8 U	--	1.3 U	2 U	1 U	--
LWG RA Total Xylene (Calculated U = 1/2)	--	68 JT	--	1.3 UT	2 UT	1 UT	2.2 T
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	1200	54000	76000	130	200 U	60 U	5600
Acenaphthene	16000	61000	59000	2700	1800	60 U	12000
Acenaphthylene	870	3000	3700	540	200 U	62	1300 U
Anthracene	13000	48000	46000	4000	760	60 U	4800
Benzo(a)anthracene	7800	32000	31000	5600	1300	100	5100
Benzo(a)pyrene	7100	28000	28000	6000	1200	270	6300
Benzo(b)fluoranthene	--	--	--	--	--	--	4600
Benzo(g,h,i)perylene	5200 J	8600	17000	3700	770	170	4700
Benzo(k)fluoranthene	--	--	--	--	--	--	3000
Chrysene	9200	39000	39000	6900	1600	150	5900
Dibenzo(a,h)anthracene	230 J	540	800	160	200 U	60 U	1300 U
Fluoranthene	27000	100000	99000	23000	4000	130	16000
Fluorene	9900	39000	38000	3100	1300	60 U	4700
Indeno(1,2,3-c,d)pyrene	3700 J	7700	13000	3200	640	140	3200
Naphthalene	840	12000	26000	420	520	60 U	9000
Phenanthrene	58000	250000	230000	5900	5200	60 U	32000
Pyrene	30000	130000	120000	28000	4000	190	24000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	9400 JT	35000 T	37000 T	7900 T	1700 T	360 T	8300 T

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-31SC	DGS-32SC	DGS-32SC	DGS-36SC	DGS-37SC	GSM-14	GTC-03
Sample Name:	DGS-31SC-011.9-101011	DGS-32SC-0104-101011	DGS-32SC-2.83.8-101011	DGS-36SC-0104-101012	DGS-37SC-0104-101011	GSM-14SO-0-5-101015	GTC-03SC-090113
Sample Date:	10/11/2010	10/11/2010	10/11/2010	10/12/2010	10/11/2010	10/15/2010	1/13/2009
Depth Interval:	30.48 - 57.912 cm	30.48 - 121.92 cm	85.34 - 115.82 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	0 - 152.4 cm	54.86 - 134.11 cm
Semivolatile Organics (µg/kg)							
Carbazole	**2900**	**11000**	**14000**	**460**	200 U	60 U	--
Dibenzofuran	**1700**	**7100**	**5900**	**470**	**720**	60 U	1300 U
PCB Aroclors (µg/kg)							
Aroclor 1016	32 U	63 U	32 U	31 U	33 U	31 U	--
Aroclor 1221	32 U	63 UJ	32 U	31 UJ	33 UJ	31 UJ	--
Aroclor 1232	32 U	63 U	32 U	31 U	33 U	31 U	--
Aroclor 1242	32 U	63 U	32 U	31 U	33 U	31 U	--
Aroclor 1248	32 U	**180**	64 U	31 U	330 U	31 U	--
Aroclor 1254	32 U	160 U	32 U	31 U	330 U	31 U	--
Aroclor 1260	32 U	**100**	32 U	31 U	410 U	31 U	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	**490 JT**	64 UT	31 UJT	410 UJT	31 UJT	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	16 U	28 U	16 U	7.7 U	8.3 U	1.6 U	--
beta-Hexachlorocyclohexane (BHC)	16 U	58 U	16 U	40 U	26 U	1.6 U	--
Endrin ketone	32 U	31 U	32 U	15 U	16 U	3.2 U	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	16 U	16 U	16 U	7.7 U	8.3 U	1.6 U	--
LWG RA Sum DDD (Calculated U = 1/2)	32 UT	**140 JT**	**87 T**	15 UT	**150 JT**	3.2 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	32 UT	31 UT	32 UT	15 UT	**45 T**	3.2 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	32 UT	31 UT	32 UT	15 UT	**82 T**	3.2 UT	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**640**	**2400**	**3700**	**230 J**	**220**	6 U	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	GTC-03	GTC-05	GTC-05	GTC-07	GTC-07	GTC-08	GTC-08
Sample Name:	GTC-03SC-090113RE	GTC-05SC-090113RE	GTC-05SC-090114	GTC-07SC-090113	GTC-07SC-090113RE	GTC-08SC-090113	GTC-08SC-090113RE
Sample Date:	1/13/2009	1/14/2009	1/14/2009	1/13/2009	1/13/2009	1/13/2009	1/13/2009
Depth Interval:	54.86 - 134.11 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 164.59 cm	0 - 164.59 cm	0 - 73.15 cm	0 - 73.15 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	--	--	--	56 U	--	59 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	56 U	--	59 U
Benzene	4.3 U	**5.6**	**7.5**	--	**94**	--	59 U
Ethylbenzene	**36**	**73**	**7.1**	--	**6600**	--	**140**
Naphthalene	--	--	--	--	**600000**	--	**38000**
o-Xylene	**16**	**59**	**21**	--	**1600**	--	59 U
Toluene	4.3 U	4.3 U	4 U	--	56 U	--	59 U
Trichloroethene (TCE)	--	--	--	--	56 U	--	59 U
Vinyl chloride	--	--	--	--	56 U	--	59 U
LWG RA Total Xylene (Calculated U = 1/2)	**22 T**	**75 T**	**27 T**	--	**2200 T**	--	59 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	--	**5800**	**99000**	--	**32000**	--
Acenaphthene	--	--	**42000**	**92000**	--	**62000**	--
Acenaphthylene	--	--	**710 J**	**1500**	--	**980 J**	--
Anthracene	--	--	**38000**	**29000**	--	**22000**	--
Benzo(a)anthracene	--	--	**36000**	**19000**	--	**15000**	--
Benzo(a)pyrene	--	--	**45000**	**23000**	--	**17000**	--
Benzo(b)fluoranthene	--	--	**31000**	**12000**	--	**10000**	--
Benzo(g,h,i)perylene	--	--	**25000**	**14000**	--	**11000**	--
Benzo(k)fluoranthene	--	--	**24000**	**13000**	--	**8800**	--
Chrysene	--	--	**43000**	**23000**	--	**17000**	--
Dibenzo(a,h)anthracene	--	--	**4300**	**2200**	--	**1500**	--
Fluoranthene	--	--	**140000**	**71000**	--	**54000**	--
Fluorene	--	--	**23000**	**38000**	--	**24000**	--
Indeno(1,2,3-c,d)pyrene	--	--	**20000**	**10000**	--	**7700**	--
Naphthalene	--	--	**15000**	**310000**	--	**14000**	--
Phenanthrene	--	--	**220000**	**180000**	--	**110000**	--
Pyrene	--	--	**190000**	**97000**	--	**76000**	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	--	**58000 T**	**29000 T**	--	**22000 T**	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	GTC-03	GTC-05	GTC-05	GTC-07	GTC-07	GTC-08	GTC-08
Sample Name:	GTC-03SC-090113RE	GTC-05SC-090113RE	GTC-05SC-090114	GTC-07SC-090113	GTC-07SC-090113RE	GTC-08SC-090113	GTC-08SC-090113RE
Sample Date:	1/13/2009	1/14/2009	1/14/2009	1/13/2009	1/13/2009	1/13/2009	1/13/2009
Depth Interval:	54.86 - 134.11 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 164.59 cm	0 - 164.59 cm	0 - 73.15 cm	0 - 73.15 cm
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	--	--	**2600**	**5300**	--	**3000**	--
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C252	LW2-C255	LW2-C258	LW2-C263	LW2-C264	LW2-C269	LW2-C270
Sample Name:	LW2-C252-B	LW2-C255-B	LW2-C258-B	LW2-C263-B	LW2-C264-B	LW2-C269-B	LW2-C270-B
Sample Date:	9/23/2004	10/27/2004	9/23/2004	10/1/2004	9/23/2004	10/28/2004	9/21/2004
Depth Interval:	30 - 154 cm	30 - 152 cm	30 - 153 cm	30 - 152 cm	30 - 156 cm	30 - 151 cm	30 - 87 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	62.4	46	55.1 T	191	162	146	181
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	--	--	0.16 U	21 U	0.15 U	0.15 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	0.38 U	24 U	0.35 U	0.35 U
Benzene	--	--	--	46	280	0.072 U	0.31 J
Ethylbenzene	--	--	--	31	3200	0.21 J	1.2
Naphthalene	--	--	--	--	160000	--	--
o-Xylene	--	--	--	10	280	2.1 U	5.1
Toluene	--	--	--	34	30 J	0.28 U	0.97
Trichloroethene (TCE)	--	--	--	0.13 U	32 U	0.12 U	0.12 U
Vinyl chloride	--	--	--	0.17 U	36 U	0.16 U	0.16 U
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	25 T	790 T	2.1 UT	6.2 T
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	29	0.76 U	97	4400	34000	1500	1600
Acenaphthene	630	0.42 U	3500	7300	42000	2100	20000
Acenaphthylene	240 J	0.29 U	3600	940	3200	270	2500
Anthracene	480 J	0.41 J	5200	8900	43000	2100	21000
Benzo(a)anthracene	1100	0.96 J	17000	10000	95000	3200	32000
Benzo(a)pyrene	1600	0.96 J	25000	10000	110000	4800	41000
Benzo(b)fluoranthene	920	1 J	15000	10000	72000	4000	27000
Benzo(g,h,i)perylene	1300	0.9 J	20000	14000	75000	4200	34000
Benzo(k)fluoranthene	920	0.48 J	15000	8800	58000	1300	26000
Chrysene	1500	1.1 J	23000	15000	120000	4500	40000
Dibenzo(a,h)anthracene	150	0.34 U	2200	1800	13000	560	4100
Fluoranthene	2500	1.3 J	56000	42000	180000	8300	88000
Fluorene	310 J	0.4 U	1800	5300	27000	1400	13000
Indeno(1,2,3-c,d)pyrene	1100	0.76 J	18000	11000	70000	3400	29000
Naphthalene	86	2.7 U	360	21000	--	450	3200
Phenanthrene	1700	1.5 J	1800	68000	190000	11000	94000
Pyrene	3100	1.3 J	59000	48000	220000	9700	110000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2100 T	1.4 JT	32000 T	15000 T	150000 T	6400 T	54000 T

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C252	LW2-C255	LW2-C258	LW2-C263	LW2-C264	LW2-C269	LW2-C270
Sample Name:	LW2-C252-B	LW2-C255-B	LW2-C258-B	LW2-C263-B	LW2-C264-B	LW2-C269-B	LW2-C270-B
Sample Date:	9/23/2004	10/27/2004	9/23/2004	10/1/2004	9/23/2004	10/28/2004	9/21/2004
Depth Interval:	30 - 154 cm	30 - 152 cm	30 - 153 cm	30 - 152 cm	30 - 156 cm	30 - 151 cm	30 - 87 cm
Semivolatile Organics (µg/kg)							
Carbazole	**11**	1.7 U	**110 J**	**1100**	**6900**	**450**	**3300**
Dibenzofuran	**21**	0.28 U	**92**	**1100**	**3200**	**130**	**1900**
PCB Aroclors (µg/kg)							
Aroclor 1016	1.28 U	1.26 U	1.36 U	12.2 U	17.1 UJ	3.84 U	184 UJ
Aroclor 1221	2.36 U	2.33 U	2.51 U	22.5 U	31.7 UJ	7.11 U	184 UJ
Aroclor 1232	2.13 U	2.11 U	2.27 U	20.4 U	28.7 UJ	6.42 U	184 UJ
Aroclor 1242	1.3 U	1.28 U	1.38 U	12.4 U	17.4 UJ	3.91 U	184 UJ
Aroclor 1248	1.66 U	1.64 U	1.77 U	15.9 U	22.3 UJ	7.69 U	184 UJ
Aroclor 1254	0.775 U	0.766 U	0.825 U	7.39 U	10.4 UJ	7.69 U	184 UJ
Aroclor 1260	0.995 U	0.983 U	1.06 U	**164**	13.4 UJ	**20.9**	184 UJ
LWG RA Total PCB Aroclors (Calculated U = 1/2)	2.4 UT	2.33 UT	2.51 UT	**220 T**	32 UJT	**42.6 T**	184 UJT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	0.174 UJ	0.0334 U	0.182 U	0.541 U	0.23 U	**0.604 J**	1.24 U
beta-Hexachlorocyclohexane (BHC)	**4.16 NJ**	0.0338 U	**2.78 NJ**	**51.8 NJ**	0.233 U	0.259 U	**13.9 NJ**
Endrin ketone	0.153 UJ	0.0294 U	0.161 U	0.477 U	0.203 U	0.226 U	1.09 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.398 UJ	0.0763 U	**2.27 NJ**	1.24 U	0.526 U	**1.77 J**	2.83 U
LWG RA Sum DDD (Calculated U = 1/2)	**22.8 JNT**	0.0481 UT	**3.75 JT**	**396 JNT**	**106 JT**	**357 JT**	**229 JNT**
LWG RA Sum DDE (Calculated U = 1/2)	**1.8 NJT**	**0.318 JT**	0.247 UT	**49.4 NJT**	**50.5 NJT**	**34.6 NJT**	**28.2 T**
LWG RA Sum DDT (Calculated U = 1/2)	**5.66 NJT**	0.0556 UJT	**5.96 NJT**	**36.6 JT**	**24 JNT**	**232 JT**	**28.8 NJT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**13.9 JT**	--	**200 JT**	**1700 J**	**4800 J**	**860 J**	**3000 J**
Residual Range Hydrocarbons	27 UT	--	**365 JT**	**1800 J**	**5500 J**	**1400 J**	**3900 J**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C272	LW2-C273	LW2-C276	LW2-C278	LW2-C283	LW2-C284	LW2-C288
Sample Name:	LW2-C272-B	LW2-C273-B	LW2-C276-B	LW2-C278-B	LW2-C283-B	LW2-C284-B	LW2-C288-B
Sample Date:	9/22/2004	10/20/2004	9/22/2004	10/19/2004	11/8/2004	9/22/2004	10/20/2004
Depth Interval:	30 - 152 cm	30 - 153 cm	30 - 153 cm	30 - 152 cm	30 - 151 cm	30 - 104 cm	30 - 153 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	49.3	136	235	155	142	242	164
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	23 U	0.15 U	23 U	210 U	23 U	0.16 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	27 U	0.34 U	27 U	250 U	27 U	0.35 U
Benzene	--	190	30	20 U	440 J	740	2.9
Ethylbenzene	--	260	62	64 J	6000	940	13
Naphthalene	--	--	--	15000	510000	44000	48000
o-Xylene	--	150	24	31 J	2500	330	14
Toluene	--	19 U	5.5	19 U	180 U	19 U	1.5
Trichloroethene (TCE)	--	37 U	0.68 J	36 U	330 U	36 U	0.12 U
Vinyl chloride	--	41 U	0.15 U	41 U	370 U	40 U	0.16 U
LWG RA Total Xylene (Calculated U = 1/2)	--	330 T	40 T	49 JT	3100 JT	790 T	19 T
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	0.51 J	26000	8000	9600	97000 J	35000	26000
Acenaphthene	0.27 J	80000	14000	16000	98000 J	40000	76000
Acenaphthylene	2.1 J	6600	1500	1900	4300 J	4900	4900
Anthracene	18	95000	8300	9900	51000 J	28000	67000
Benzo(a)anthracene	6.4	95000	11000	11000	30000 J	21000	56000
Benzo(a)pyrene	7	140000	14000	17000	31000 J	22000	76000
Benzo(b)fluoranthene	4.9	130000	9500	14000	28000 J	15000	69000
Benzo(g,h,i)perylene	4.9	120000	13000	14000	25000 J	19000	55000
Benzo(k)fluoranthene	5.5	39000	7900	4700	13000 J	13000	22000
Chrysene	9.1	130000	13000	13000	34000 J	26000	71000
Dibenzo(a,h)anthracene	0.62 J	8700	1500	1500	3200 J	1900	5400
Fluoranthene	18	430000	32000	34000	130000 J	75000	260000
Fluorene	2.9	43000	7300	8200	52000 J	28000	36000
Indeno(1,2,3-c,d)pyrene	3.6	97000	11000	13000	22000 J	15000	49000
Naphthalene	1 J	31000	2800	--	--	--	--
Phenanthrene	2.4 J	490000	42000	50000	260000 J	150000	370000
Pyrene	27	550000	40000	44000	160000 J	95000	300000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	9.2 JT	180000 T	19000 T	22000 T	42000 JT	29000 T	99000 T

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C272	LW2-C273	LW2-C276	LW2-C278	LW2-C283	LW2-C284	LW2-C288
Sample Name:	LW2-C272-B	LW2-C273-B	LW2-C276-B	LW2-C278-B	LW2-C283-B	LW2-C284-B	LW2-C288-B
Sample Date:	9/22/2004	10/20/2004	9/22/2004	10/19/2004	11/8/2004	9/22/2004	10/20/2004
Depth Interval:	30 - 152 cm	30 - 153 cm	30 - 153 cm	30 - 152 cm	30 - 151 cm	30 - 104 cm	30 - 153 cm
Semivolatile Organics (µg/kg)							
Carbazole	1.7 U	**13000**	**2700**	**1500**	**5400**	**8000**	**8300**
Dibenzofuran	**0.69 J**	**4700**	**1500**	**1300**	**8000 J**	**10000**	**4600**
PCB Aroclors (µg/kg)							
Aroclor 1016	2.5 UJ	1.93 UJ	3.71 U	1.96 UJ	7.33 U	1.93 UJ	1.92 UJ
Aroclor 1221	2.5 UJ	3.57 UJ	7.44 U	3.64 UJ	13.6 U	3.58 UJ	3.56 UJ
Aroclor 1232	2.5 UJ	3.22 UJ	6.21 U	3.29 UJ	12.3 U	3.23 UJ	3.22 UJ
Aroclor 1242	2.5 UJ	1.96 UJ	3.78 U	2 UJ	7.46 U	1.96 UJ	1.96 UJ
Aroclor 1248	2.5 UJ	2.51 UJ	**82.3 J**	2.56 UJ	9.56 U	**36.1 J**	**12.6 J**
Aroclor 1254	2.5 UJ	1.17 UJ	**104 J**	**36.1 J**	14.7 UJ	**57.4 J**	**26.5 J**
Aroclor 1260	2.5 UJ	1.5 UJ	**66.9 J**	**21.4 J**	**105 J**	**34.4 J**	**20.5 J**
LWG RA Total PCB Aroclors (Calculated U = 1/2)	2.5 UJT	3.6 UJT	**267 JT**	**66 JT**	**144 JT**	**130 JT**	**67 JT**
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	0.0331 U	0.524 U	0.246 U	0.512 UJ	0.979 U	0.251 U	0.509 U
beta-Hexachlorocyclohexane (BHC)	**0.471 NJ**	**13.1 NJ**	**6.39 J**	**8.97 NJ**	**21.7 J**	0.254 U	**17.9 NJ**
Endrin ketone	0.0292 U	0.461 U	0.217 U	0.451 UJ	0.861 U	0.221 U	0.448 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.0757 U	1.2 U	0.563 U	1.17 UJ	2.24 U	0.574 U	1.16 U
LWG RA Sum DDD (Calculated U = 1/2)	**0.145 JT**	**23.6 T**	**92 JT**	**61.6 JT**	**588 JNT**	**42.9 JNT**	**55 JT**
LWG RA Sum DDE (Calculated U = 1/2)	**0.063 JT**	**2.29 T**	**21.7 NJT**	**21.9 JNT**	**90.3 JNT**	**21.6 NJT**	**31 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	0.0552 UT	**52.6 NJT**	**14.4 JNT**	**17.1 JT**	**82.4 JT**	**18.5 JNT**	**26.8 NJT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	14 UT	**4400 J**	**1500 J**	**2850 JT**	**4800 J**	**3100 J**	**5000 J**
Residual Range Hydrocarbons	8.7 UT	**6000 J**	**1700 J**	**3250 JT**	**2500 J**	**2300 J**	**5700 J**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C289	LW2-C294	LW2-C299	LW2-C300-2	LW2-C301	LW2-C302	LW2-C305
Sample Name:	LW2-C289-B	LW2-C294-B	LW2-C299-B	LW2-C300-B	LW2-C301-B	LW2-C302-B	LW2-C305-B1
Sample Date:	10/19/2004	10/19/2004	9/22/2004	10/27/2004	11/8/2004	9/22/2004	10/19/2004
Depth Interval:	30 - 155 cm	30 - 152 cm	30 - 104 cm	30 - 152 cm	30 - 153 cm	32 - 198 cm	30 - 160 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	170	122	200	208	156	222	190
Volatile Organics (µg/kg)							
1,1-Dichloroethene	0.16 U	980 U	1300 U	0.16 U	110 U	20 U	22 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	0.37 U	1200 U	1500 U	0.35 U	120 U	24 U	25 U
Benzene	0.4 J	2100 J	11000	0.072 U	1700	160	19 U
Ethylbenzene	2.3	13000	11000	0.14 U	5700	1200	120
Naphthalene	--	2200000	1100000	0.65 U	--	--	--
o-Xylene	3.5	4200	3800 J	0.18 U	2400	540	77 J
Toluene	0.63 U	800 U	3000 J	0.28 U	190 J	25 J	18 U
Trichloroethene (TCE)	0.12 U	1600 U	1900000	0.12 U	170 U	32 U	34 U
Vinyl chloride	0.17 U	1800 U	4000 J	0.16 U	190 U	36 U	38 U
LWG RA Total Xylene (Calculated U = 1/2)	5.3 T	7200 JT	11000 JT	0.24 UT	4300 T	1000 T	94 JT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	33000	550000	160000	3.3 U	620000 J	48000 J	13000
Acenaphthene	27000	530000	130000	12	700000 J	52000 J	21000
Acenaphthylene	3000	21000	6000	8.9	24000 J	4300 J	2600
Anthracene	28000	280000	46000	11	260000 J	41000 J	19000
Benzo(a)anthracene	21000	200000	35000	42	150000 J	29000 J	13000
Benzo(a)pyrene	21000	260000	44000	63	150000 J	28000 J	14000
Benzo(b)fluoranthene	17000	200000	25000	61	130000 J	17000 J	11000
Benzo(g,h,i)perylene	14000	190000	36000	53	95000 J	21000 J	9900
Benzo(k)fluoranthene	5600	64000	26000	21	51000 J	17000 J	3900
Chrysene	23000	220000	43000	54	170000 J	38000 J	16000
Dibenzo(a,h)anthracene	2100	27000	3600	7.9	15000 J	3000 J	1300
Fluoranthene	68000	800000	130000	100	700000 J	93000 J	41000
Fluorene	20000	230000	53000	7.6	250000 J	33000 J	13000
Indeno(1,2,3-c,d)pyrene	14000	190000	29000	44	93000 J	18000 J	9500
Naphthalene	17000	--	--	--	1700000 J	47000 J	1100
Phenanthrene	130000	1400000	300000	100	1300000 J	220000 J	92000
Pyrene	81000	960000	160000	120	840000 J	120000 J	54000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	28000 T	350000 T	57000 T	86 T	200000 JT	38000 JT	19000 T

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C289	LW2-C294	LW2-C299	LW2-C300-2	LW2-C301	LW2-C302	LW2-C305
Sample Name:	LW2-C289-B	LW2-C294-B	LW2-C299-B	LW2-C300-B	LW2-C301-B	LW2-C302-B	LW2-C305-B1
Sample Date:	10/19/2004	10/19/2004	9/22/2004	10/27/2004	11/8/2004	9/22/2004	10/19/2004
Depth Interval:	30 - 155 cm	30 - 152 cm	30 - 104 cm	30 - 152 cm	30 - 153 cm	32 - 198 cm	30 - 160 cm
Semivolatile Organics (µg/kg)							
Carbazole	**2700**	**41000**	**15000**	4.8 U	**100000**	**13000**	**5200**
Dibenzofuran	**3800**	**36000**	**9500**	1.5 U	**50000 J**	**5000 J**	**2200**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	1.76 UJ	--	2.1 U	5.01 U	20.1 UJ	5.16 U
Aroclor 1221	--	3.52 UJ	--	2.1 U	9.27 U	20.1 UJ	10.3 U
Aroclor 1232	--	2.94 UJ	--	2.1 U	8.38 U	20.1 UJ	8.63 U
Aroclor 1242	--	1.79 UJ	--	2.1 U	5.09 U	20.1 UJ	5.25 U
Aroclor 1248	--	2.29 UJ	--	**57**	6.53 U	**120 J**	**38 J**
Aroclor 1254	--	1.07 UJ	--	**75 J**	10 UJ	20.1 UJ	**82.9 J**
Aroclor 1260	--	**38.8 J**	--	**72**	3.9 U	**98.8 J**	**48.7 J**
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	**47 JT**	--	**210 JT**	10 UJT	--	**190 JT**
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	**0.602**	--
PCB-081	--	--	--	--	--	**0.0621 J**	--
PCB-105	--	--	--	--	--	**2.14**	--
PCB-114	--	--	--	--	--	**0.167**	--
PCB-123	--	--	--	--	--	**0.115**	--
PCB-126	--	--	--	--	--	**0.0613 J**	--
PCB-156	--	--	--	--	--	**0.654**	--
PCB-157	--	--	--	--	--	**0.136**	--
PCB-167	--	--	--	--	--	**0.293**	--
PCB-169	--	--	--	--	--	0.00128 U	--
PCB-189	--	--	--	--	--	**0.111**	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	**230 JT**	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	**0.00634 JT**	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	0.462 U	--	0.72 U	**18.1 J**	1.11 U	0.464 U
beta-Hexachlorocyclohexane (BHC)	--	**25.6 J**	--	1.2 U	4.6 U	1.12 U	**12.9 NJ**
Endrin ketone	--	0.406 U	--	2 U	4 U	0.978 U	**18.3 NJ**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	**6.22**	--	0.86 U	10.4 U	2.54 U	1.06 U
LWG RA Sum DDD (Calculated U = 1/2)	--	**491 JNT**	--	**8.5 T**	**448 JNT**	**477 JT**	**239 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	**40.5 JNT**	--	**7.5 T**	**129 JNT**	**102 NJT**	**27.9 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	--	**24 JNT**	--	**10 JT**	**127 JT**	**42 JT**	**48 JNT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**7100 J**	**30000 J**	**5200 J**	**250 J**	**30000 J**	**5000 J**	**3900 J**
Residual Range Hydrocarbons	**5100 J**	**17000 J**	**2700 J**	**640 J**	**14000 J**	**3500 J**	**2900 J**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C311	LW2-C312	LW2-C521	LW2-C525	LW2-C527	LW2-C528	LW3-C658
Sample Name:	LW2-C311-B	LW2-C312-B	LW2-C521-B	LW2-C525-B	LW2-C527-B	LW2-C528-B	LW3-C658-B
Sample Date:	11/9/2004	10/19/2005	10/19/2004	10/26/2005	10/26/2005	10/26/2005	12/14/2007
Depth Interval:	30 - 153 cm	30 - 152 cm	30 - 99 cm	30 - 127 cm	30 - 152 cm	30 - 152 cm	30 - 151 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	**167**	**82.3**	**200**	**159**	**107**	**128 T**	**41.1**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	0.15 U	0.12 U	99 UJ	0.16 U	0.17 U	0.17 U	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	0.34 U	0.27 U	120 U	0.35 U	0.38 U	0.38 U	--
Benzene	**0.089 J**	**0.086 J**	**1100**	0.096 U	0.077 U	0.078 U	--
Ethylbenzene	0.13 U	0.1 U	**1700**	**0.21 J**	0.14 U	0.15 U	--
Naphthalene	--	--	**200000**	--	--	--	--
o-Xylene	0.45 U	0.11 U	**780**	**1.6**	**0.39 J**	0.15 U	--
Toluene	0.27 U	0.21 U	**380 J**	0.31 U	0.3 U	0.3 U	--
Trichloroethene (TCE)	0.12 U	0.087 U	160 U	0.12 U	0.13 U	0.13 U	--
Vinyl chloride	0.16 U	**0.96 J**	180 U	0.16 U	0.17 U	0.17 U	--
LWG RA Total Xylene (Calculated U = 1/2)	0.45 UT	0.19 UT	**2400 T**	**2.2 JT**	**0.52 JT**	0.26 UT	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**1100 J**	**46**	**12000**	**2000**	**36**	**27**	0.39 U
Acenaphthene	**8200 J**	**280**	**17000**	**4000**	**130**	**150**	0.23 U
Acenaphthylene	**1200 J**	**53**	**1800**	**640**	**60**	**80**	0.24 U
Anthracene	**11000 J**	**160**	**9400**	**3600**	**170**	**140**	0.47 U
Benzo(a)anthracene	**10000 J**	**490**	**6400**	**4200**	**760**	**860**	0.48 U
Benzo(a)pyrene	**12000 J**	**540**	**8200**	**5900**	**1000**	**1100**	0.14 U
Benzo(b)fluoranthene	**10000 J**	**310**	**6600**	**3800**	**800**	**940**	0.25 U
Benzo(g,h,i)perylene	**11000 J**	**400**	**6600**	**4700**	**880**	**1100**	**0.71 J**
Benzo(k)fluoranthene	**4600 J**	**320**	**2100**	**3200**	**670**	**680**	0.15 U
Chrysene	**11000 J**	**610**	**7400**	**5300**	**960**	**1200**	0.25 U
Dibenzo(a,h)anthracene	**1100 J**	**45**	**840**	**550**	**130**	**140**	0.28 U
Fluoranthene	**36000 J**	**1600**	**24000**	**13000**	**1700**	**1900**	0.61 U
Fluorene	**6000 J**	**240**	**7900**	**2700**	**110**	**110**	0.5 U
Indeno(1,2,3-c,d)pyrene	**8700 J**	**370**	**6700**	**4600**	**910**	**1100**	0.51 U
Naphthalene	**410 J**	**71**	--	**1600**	**98**	**75**	0.44 U
Phenanthrene	**62000 J**	**2100**	**47000**	**19000**	**910**	**760**	0.75 U
Pyrene	**50000 J**	**2000**	**28000**	**16000**	**2000**	**2200**	0.37 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**16000 JT**	**710 T**	**11000 T**	**7700 T**	**1400 T**	**1500 T**	0.28 UT

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C311	LW2-C312	LW2-C521	LW2-C525	LW2-C527	LW2-C528	LW3-C658
Sample Name:	LW2-C311-B	LW2-C312-B	LW2-C521-B	LW2-C525-B	LW2-C527-B	LW2-C528-B	LW3-C658-B
Sample Date:	11/9/2004	10/19/2005	10/19/2004	10/26/2005	10/26/2005	10/26/2005	12/14/2007
Depth Interval:	30 - 153 cm	30 - 152 cm	30 - 99 cm	30 - 127 cm	30 - 152 cm	30 - 152 cm	30 - 151 cm
Semivolatile Organics (µg/kg)							
Carbazole	**280**	3.7 U	**2800**	**590**	**64**	**62**	1.3 U
Dibenzofuran	**640 J**	**23**	**2300**	**320**	**24**	**27**	0.59 U
PCB Aroclors (µg/kg)							
Aroclor 1016	1.78 U	5.3 U	2.6 U	2.1 U	3.8 U	2.2 U	1.3 U
Aroclor 1221	3.3 U	11 U	2.6 U	2.1 U	38 U	2.2 U	1.3 U
Aroclor 1232	2.98 U	8.1 U	2.6 U	2.1 U	21 U	2.2 U	1.3 U
Aroclor 1242	1.81 U	6.7 U	**72**	2.1 U	6.6 U	2.2 U	1.3 U
Aroclor 1248	2.32 U	8.5 U	2.6 U	**38**	6.9 U	**9.7**	1.3 U
Aroclor 1254	3.57 U	6.5 U	**180**	**110 J**	14 U	**28**	1.3 U
Aroclor 1260	**24.1 J**	19 U	**290**	**54**	**20 J**	**19 J**	1.3 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**34 JT**	19 UT	**550 T**	**220 JT**	**70 JT**	**63 JT**	1.3 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	0.471 U	0.11 U	1.3 U	1.8 U	1.6 U	0.16 U	0.097 U
beta-Hexachlorocyclohexane (BHC)	**5.22 NJ**	**0.38**	**4.4**	2.3 U	2.4 U	**1.4 NJ**	0.14 U
Endrin ketone	0.414 U	0.57 UJ	13 U	**6.2 J**	**1.3 J**	**0.52 J**	0.029 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.08 U	0.19 U	3.7 U	3.8 U	1.9 U	0.43 U	0.062 U
LWG RA Sum DDD (Calculated U = 1/2)	**203 NJT**	**19 T**	**48 T**	**120 T**	**24 T**	**13 NJT**	0.16 UT
LWG RA Sum DDE (Calculated U = 1/2)	**10 JT**	**1.9 JT**	9.5 UT	**21 NJT**	7.8 UT	**5.9 T**	**0.081 JT**
LWG RA Sum DDT (Calculated U = 1/2)	**31 JNT**	**280 JT**	17 UT	**180 T**	**8.3 JT**	**13 T**	0.18 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**2600 J**	**110 J**	**3400 J**	**1200 J**	**160 J**	**220 J**	**2.1 J**
Residual Range Hydrocarbons	**2300 J**	**190 J**	**2000 J**	**1800 J**	**540 J**	**690 J**	11 U

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW3-C662	PCM-02Y1E2	PCM-03Y1E2	PCM-04Y1E2	PCM-05Y1E2	PCM-06Y1E2	PCM-07Y0E1b
Sample Name:	LW3-C662-B	PCM-02SC-071107	PCM-03SC-071106	PCM-04SC-071107	PCM-05SC-071107	PCM-06SC-071106	PCM-07SC-060427
Sample Date:	1/17/2008	11/7/2007	11/6/2007	11/7/2007	11/7/2007	11/6/2007	4/28/2006
Depth Interval:	30 - 82 cm	0 - 36.576 cm	0 - 42.672 cm	0 - 21.34 cm	0 - 15.24 cm	0 - 57.912 cm	3.048 - 15.24 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	0.13	0.65	0.22	0.1 J	0.11 U	--
Metals (mg/kg)							
Zinc	166	19.3	23.4	26.6	22.2	24.3	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--	--	--
Benzene	--	1.1 U	2.3 J	8.8	6.5	1.2 U	--
Ethylbenzene	--	1.1 U	2.6 U	4.6	0.77 J	1.2 U	--
Naphthalene	--	--	--	--	--	--	--
o-Xylene	--	1.1 U	0.46 J	7.9	1.5 U	1.2 U	--
Toluene	--	1.1 U	2.6 U	0.84 J	0.62 J	1.2 U	--
Trichloroethene (TCE)	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	1.1 UT	1 JT	13 T	1.8 JT	1.2 UT	4.4 JT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	140000	94	16 J	630	330	87	--
Acenaphthene	140000	550	380 J	2300	1200	690	--
Acenaphthylene	12000	42	210 J	460	150	120	--
Anthracene	100000	380	680 J	1600	1300	990	--
Benzo(a)anthracene	71000	360	660 J	1600	1100	730	--
Benzo(a)pyrene	70000	500	960 J	2200	1500	1000	--
Benzo(b)fluoranthene	63000	430	810 J	2000	1300	930	--
Benzo(g,h,i)perylene	44000	410	780 J	1800	1200	890	--
Benzo(k)fluoranthene	19000	150	290 J	610	400	350	--
Chrysene	80000	430	810 J	2000	1500	1100	--
Dibenzo(a,h)anthracene	6000	39	63 J	170	110	77	--
Fluoranthene	230000	1400	2800 J	6500	4100	3300	--
Fluorene	78000	250	240 J	1200	740	450	--
Indeno(1,2,3-c,d)pyrene	47000	360	720 J	1600	1100	820	--
Naphthalene	110000	310	100 J	2400	1100	330	--
Phenanthrene	4900000	2000	2600 J	9500	5800	4200	--
Pyrene	2800000	1600	3200 J	7500	5200	4000	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	94000 T	660 T	1200 JT	2900 T	2000 T	1300 T	1200 T

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW3-C662	PCM-02Y1E2	PCM-03Y1E2	PCM-04Y1E2	PCM-05Y1E2	PCM-06Y1E2	PCM-07Y0E1b
Sample Name:	LW3-C662-B	PCM-02SC-071107	PCM-03SC-071106	PCM-04SC-071107	PCM-05SC-071107	PCM-06SC-071106	PCM-07SC-060427
Sample Date:	1/17/2008	11/7/2007	11/6/2007	11/7/2007	11/7/2007	11/6/2007	4/28/2006
Depth Interval:	30 - 82 cm	0 - 36.576 cm	0 - 42.672 cm	0 - 21.34 cm	0 - 15.24 cm	0 - 57.912 cm	3.048 - 15.24 cm
Semivolatile Organics (µg/kg)							
Carbazole	**27000**	--	--	--	--	--	--
Dibenzofuran	**11000**	**29**	--	**170**	**100**	--	--
PCB Aroclors (µg/kg)							
Aroclor 1016	7.1 U	10 U	11 U	10 U	9.9 U	10 U	--
Aroclor 1221	7.1 U	20 U	21 U	20 U	20 U	20 U	--
Aroclor 1232	7.1 U	10 U	11 U	10 U	9.9 U	10 U	--
Aroclor 1242	**23 J**	10 U	11 U	10 U	9.9 U	10 U	--
Aroclor 1248	7.1 U	10 U	11 U	10 U	9.9 U	10 U	--
Aroclor 1254	**37 NJ**	10 U	17 U	10 U	9.9 U	10 U	--
Aroclor 1260	**33**	10 U	11 U	10 U	9.9 U	10 U	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**110 JNT**	20 UT	21 UT	20 UT	20 UT	20 UT	20 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	**8.2 NJ**	1 U	0.81 UJ	1 U	0.99 U	1 U	--
beta-Hexachlorocyclohexane (BHC)	13 U	1 U	0.85 UJ	1 U	0.99 U	1 U	--
Endrin ketone	21 U	1 U	**0.17 J**	1 U	0.99 U	1 U	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	18 U	1 U	2.1 UJ	1.1 U	0.99 U	1 U	--
LWG RA Sum DDD (Calculated U = 1/2)	**380 T**	**0.5 JT**	0.81 UJT	**0.68 JT**	**1.6 T**	**0.8 JT**	**1.1 T**
LWG RA Sum DDE (Calculated U = 1/2)	**120 JT**	1 UT	0.81 UJT	1 UT	0.99 UT	1 UJT	1 UT
LWG RA Sum DDT (Calculated U = 1/2)	43 UT	1 UT	0.81 UJT	1 UT	0.99 UT	**0.32 JT**	**0.8 JT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**10000 J**	**11 J**	**430**	**140**	**81**	**56**	--
Residual Range Hydrocarbons	**7200 J**	**9.9 J**	**330**	**130**	**85 J**	**60 J**	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	PCM-08Y1E2	PCM-09Y1E2	PCM-10Y1E2	PCM-18Y0E3	PCM-21Y1E2	RAA-PD01	RAA-PD02
Sample Name:	PCM-08SC-071108	PCM-09SC-071105	PCM-10SC-071105	PCM-18SC-061205	PCM-21SC-071106	RAA-PD01-051019	RAA-PD02-051019
Sample Date:	11/8/2007	11/5/2007	11/5/2007	12/5/2006	11/6/2007	10/19/2005	10/19/2005
Depth Interval:	0 - 42.672 cm	0 - 51.816 cm	0 - 15.24 cm	0 - 12.8 cm	0 - 30.48 cm	0 - 9.14 cm	0 - 9.14 cm
Conventional Parameters (mg/kg)							
Cyanide, total	0.23	0.1 J	0.09 J	0.07 J	0.11	--	--
Metals (mg/kg)							
Zinc	28	22 J	24.4 J	23.3	27.1	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--	--	--
Benzene	1.5 U	1.4 U	1.1 U	730	1.2 U	--	--
Ethylbenzene	1.5 U	1.4 U	1.1 U	180	1.2 U	--	--
Naphthalene	--	--	--	23000	--	--	--
o-Xylene	1.5 U	0.34 J	1.1 U	80	1.2 U	--	--
Toluene	1.5 U	1.4 U	1.1 U	17 J	1.2 U	--	--
Trichloroethene (TCE)	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.98 JT	0.59 JT	1.1 UT	240 T	1.2 UT	3300 T	1500 JT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	210	83	3.4 J	--	100	--	--
Acenaphthene	2500	1400	140	220	7300	--	--
Acenaphthylene	190	250	39	150	400	--	--
Anthracene	2300	1200	160	370	6000	--	--
Benzo(a)anthracene	1700	1000	200	220	4000	--	--
Benzo(a)pyrene	2400	1400	280	300	5000	--	--
Benzo(b)fluoranthene	2100	1200	260	180	4500	--	--
Benzo(g,h,i)perylene	2000	1100	270	230	4500	--	--
Benzo(k)fluoranthene	670	500	120	160	2000	--	--
Chrysene	2300	1400	270	370	4800	--	--
Dibenzo(a,h)anthracene	190	120	27	22	420	--	--
Fluoranthene	7400	4500	850	880	18000	--	--
Fluorene	970	630	10	160	2800	--	--
Indeno(1,2,3-c,d)pyrene	1800	1100	230	200	4000	--	--
Naphthalene	630	940	59	--	470	--	--
Phenanthrene	10000	6400	230	1400	25000	--	--
Pyrene	8800	5200	970	1100	23000	--	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	3200 T	1900 T	380 T	380 T	6700 T	22000 T	65000 T

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	PCM-08Y1E2	PCM-09Y1E2	PCM-10Y1E2	PCM-18Y0E3	PCM-21Y1E2	RAA-PD01	RAA-PD02
Sample Name:	PCM-08SC-071108	PCM-09SC-071105	PCM-10SC-071105	PCM-18SC-061205	PCM-21SC-071106	RAA-PD01-051019	RAA-PD02-051019
Sample Date:	11/8/2007	11/5/2007	11/5/2007	12/5/2006	11/6/2007	10/19/2005	10/19/2005
Depth Interval:	0 - 42.672 cm	0 - 51.816 cm	0 - 15.24 cm	0 - 12.8 cm	0 - 30.48 cm	0 - 9.14 cm	0 - 9.14 cm
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	--	**91**	**11**	--	--	--	--
PCB Aroclors (µg/kg)							
Aroclor 1016	9.9 U	10 U	10 U	10 U	10 U	--	--
Aroclor 1221	20 U	20 U	20 U	20 U	20 U	--	--
Aroclor 1232	9.9 U	10 U	10 U	10 U	10 U	--	--
Aroclor 1242	9.9 U	10 U	10 U	10 U	10 U	--	--
Aroclor 1248	9.9 U	10 U	10 U	10 U	10 U	--	--
Aroclor 1254	9.9 U	10 U	10 U	10 U	10 U	--	--
Aroclor 1260	9.9 U	10 U	10 U	10 U	10 U	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	20 UT	20 UT	20 UT	20 UT	20 UT	200 UT	200 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	0.99 U	1 U	1 U	1 U	1 U	--	--
beta-Hexachlorocyclohexane (BHC)	0.99 U	1 U	1 U	1 U	1 U	--	--
Endrin ketone	0.99 U	1 U	1 U	1 U	1 U	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.99 U	1 U	1 U	1 U	1 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**0.43 JT**	1 UT	1 UT	1 UT	**1.4 T**	**19 JT**	**130 JT**
LWG RA Sum DDE (Calculated U = 1/2)	0.99 UT	1 UT	1 UT	1 UT	1 UJT	10 UT	50 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.99 UT	1 UT	1 UT	1 UT	1 UT	10 UT	50 UJT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**140**	**74**	**19**	**12 J**	**350**	--	--
Residual Range Hydrocarbons	**120 J**	**64 J**	**23 J**	**13 J**	**270**	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	RAA-PD03	RAA-PD04	RAA-PD05	RAA-PD06	RAA-PD07	RAA-PD08	RAA-PD09
Sample Name:	RAA-PD03-051019	RAA-PD04-051019	RAA-PD05-051019	RAA-PD06-051019	RAA-PD07-051019	RAA-PD08-051019	RAA-PD09-051019
Sample Date:	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
Depth Interval:	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	**18000 T**	**820 JT**	**51000 T**	**820 JT**	**1700 JT**	**970 JT**	**27000 JT**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**43000 T**	**20000 T**	**85000 T**	**24000 T**	**21000 T**	**76000 T**	**190000 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	RAA-PD03	RAA-PD04	RAA-PD05	RAA-PD06	RAA-PD07	RAA-PD08	RAA-PD09
Sample Name:	RAA-PD03-051019	RAA-PD04-051019	RAA-PD05-051019	RAA-PD06-051019	RAA-PD07-051019	RAA-PD08-051019	RAA-PD09-051019
Sample Date:	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
Depth Interval:	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	200 UT	200 UT	200 UT	200 UT	200 UT	200 UT	200 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	50 UT	100 UT	160 UT	**170 JT**	50 UT	**130 JT**	**150 T**
LWG RA Sum DDE (Calculated U = 1/2)	50 UT	**140 JT**	150 UT	**51 JT**	68 UT	50 UT	**45 JT**
LWG RA Sum DDT (Calculated U = 1/2)	50 UT	100 UT	100 UT	**22 JT**	50 UT	**17 JT**	50 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	RAA-PD10	RAA-PD11	RAA-PD12	RAA-PD13	RAA-PD14	RAA-PD15	WLCDRD05PG050
Sample Name:	RAA-PD10-051019	RAA-PD11-051019	RAA-PD12-051019	RAA-PD13-051019	RAA-PD14-051019	RAA-PD15-051019	WLCDRD05PG05050
Sample Date:	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	5/27/2005
Depth Interval:	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 30 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	**99.4 J**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	--	--	--	--	--	0.19 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--	--	0.44 U
Benzene	--	--	--	--	--	--	0.12 U
Ethylbenzene	--	--	--	--	--	--	**0.6 J**
Naphthalene	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	**2.2**
Toluene	--	--	--	--	--	--	0.35 U
Trichloroethene (TCE)	--	--	--	--	--	--	0.15 U
Vinyl chloride	--	--	--	--	--	--	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	**2600 T**	**1600 JT**	**52000 T**	**6500 T**	**1800 JT**	160 UJT	**4 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	--	--	--	--	--	**2000**
Acenaphthene	--	--	--	--	--	--	**7600**
Acenaphthylene	--	--	--	--	--	--	**990**
Anthracene	--	--	--	--	--	--	**3900**
Benzo(a)anthracene	--	--	--	--	--	--	**5300**
Benzo(a)pyrene	--	--	--	--	--	--	**8400**
Benzo(b)fluoranthene	--	--	--	--	--	--	**4900**
Benzo(g,h,i)perylene	--	--	--	--	--	--	**8100**
Benzo(k)fluoranthene	--	--	--	--	--	--	**4400**
Chrysene	--	--	--	--	--	--	**6700**
Dibenzo(a,h)anthracene	--	--	--	--	--	--	**820**
Fluoranthene	--	--	--	--	--	--	**16000**
Fluorene	--	--	--	--	--	--	**3300**
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	**7700**
Naphthalene	--	--	--	--	--	--	**2100**
Phenanthrene	--	--	--	--	--	--	**19000**
Pyrene	--	--	--	--	--	--	**19000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**13000 T**	**28000 T**	**300000 T**	**71000 T**	**23000 T**	**15000 T**	**11000 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	RAA-PD10	RAA-PD11	RAA-PD12	RAA-PD13	RAA-PD14	RAA-PD15	WLCDRD05PG050
Sample Name:	RAA-PD10-051019	RAA-PD11-051019	RAA-PD12-051019	RAA-PD13-051019	RAA-PD14-051019	RAA-PD15-051019	WLCDRD05PG05050
Sample Date:	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	5/27/2005
Depth Interval:	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 30 cm
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	**220 J**
Dibenzofuran	--	--	--	--	--	--	**240**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	3.1 U
Aroclor 1221	--	--	--	--	--	--	3.1 U
Aroclor 1232	--	--	--	--	--	--	3.1 U
Aroclor 1242	--	--	--	--	--	--	3.1 U
Aroclor 1248	--	--	--	--	--	--	3.1 U
Aroclor 1254	--	--	--	--	--	--	37 U
Aroclor 1260	--	--	--	--	--	--	**17**
LWG RA Total PCB Aroclors (Calculated U = 1/2)	200 UT	200 UT	200 UT	200 UT	**640 T**	200 UT	**46 T**
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	0.35 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.2 U
Endrin ketone	--	--	--	--	--	--	1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	1 U
LWG RA Sum DDD (Calculated U = 1/2)	**110 JT**	--	**150 JT**	**59 T**	**96 JT**	**90 T**	**42 JT**
LWG RA Sum DDE (Calculated U = 1/2)	58 UT	--	100 UT	10 UT	50 UT	**15 T**	**13 JT**
LWG RA Sum DDT (Calculated U = 1/2)	50 UT	--	100 UT	10 UT	50 UT	10 UT	**36 JT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	**840 J**
Residual Range Hydrocarbons	--	--	--	--	--	--	**1300 J**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCDRD05VC050	WLCDRD05VC052	WLCDRD05VC054	WLCGSD01AN0101	WLCGSD01AN0101	WLCGSD01AN0102	WLCGSD01AN0102
Sample Name:	WLCDRD05VC05050	WLCDRD05VC05252	WLCDRD05VC05454	WLCGSD01AN0101_10-20	WLCGSD01AN0101_30-40	WLCGSD01AN0102_10-20	WLCGSD01AN0102_30-40
Sample Date:	5/5/2005	5/5/2005	5/5/2005	4/10/2001	4/10/2001	4/10/2001	4/10/2001
Depth Interval:	0 - 140 cm	0 - 88 cm	0 - 201 cm	10 - 20 cm	30 - 40 cm	10 - 20 cm	30 - 40 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	1	0.6	0.2 J	2.6
Metals (mg/kg)							
Zinc	161 J	129 J	146 J	136 J	142 J	91 J	131 J
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--	--	--
Benzene	--	--	--	0.02 U	0.02 U	0.03 J	0.04 J
Ethylbenzene	--	--	--	0.07 J	0.05 J	0.36	0.21
Naphthalene	--	--	--	--	--	--	--
o-Xylene	--	--	--	0.04 J	0.04 J	0.26	0.09 J
Toluene	--	--	--	0.02 U	0.02 U	0.02 U	0.02 U
Trichloroethene (TCE)	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	0.09 JT	0.055 JT	0.36 JT	0.19 JT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	78000	41000	1300	--	--	--	--
Acenaphthene	52000	55000	7000	30000 J	17000 J	170000 J	25000 J
Acenaphthylene	3600	3300	220	1600	720	5800	900
Anthracene	34000	26000	6100	22000	8900	72000	22000
Benzo(a)anthracene	27000	20000	2300	15000	8300	48000	17000
Benzo(a)pyrene	32000	26000	1900	20000	10000	66000	19000
Benzo(b)fluoranthene	18000	15000	1200	8800	5100	33000	11000
Benzo(g,h,i)perylene	24000	20000	1400	15000	7500	47000	15000
Benzo(k)fluoranthene	15000	13000	1100	14000	6500	42000	13000
Chrysene	32000	24000	2600	21000	11000	66000	23000
Dibenzo(a,h)anthracene	2600	2000	170	1600	730	4800	1400
Fluoranthene	100000	79000	9600	66000	29000	200000	63000
Fluorene	38000	28000	5800	14000	7900	64000	21000
Indeno(1,2,3-c,d)pyrene	24000	19000	1400	11000	6100	41000	12000
Naphthalene	160000	170000	200	1900 J	3800 J	100000 J	20000 J
Phenanthrene	210000	150000	20000	83000	41000	380000	120000
Pyrene	130000	96000	9400	75000	34000	270000	81000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	42000 T	34000 T	2600 T	25000 T	13000 T	83000 T	25000 T

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCDRD05VC050	WLCDRD05VC052	WLCDRD05VC054	WLCGSD01AN0101	WLCGSD01AN0101	WLCGSD01AN0102	WLCGSD01AN0102
Sample Name:	WLCDRD05VC05050	WLCDRD05VC05252	WLCDRD05VC05454	WLCGSD01AN0101_10-20	WLCGSD01AN0101_30-40	WLCGSD01AN0102_10-20	WLCGSD01AN0102_30-40
Sample Date:	5/5/2005	5/5/2005	5/5/2005	4/10/2001	4/10/2001	4/10/2001	4/10/2001
Depth Interval:	0 - 140 cm	0 - 88 cm	0 - 201 cm	10 - 20 cm	30 - 40 cm	10 - 20 cm	30 - 40 cm
Semivolatile Organics (µg/kg)							
Carbazole	**9500**	**7000**	**1500**	--	--	--	--
Dibenzofuran	**12000**	**6300**	**3300**	--	--	--	--
PCB Aroclors (µg/kg)							
Aroclor 1016	2.7 U	2.4 U	2.6 U	--	--	--	--
Aroclor 1221	2.7 U	2.4 U	2.6 U	--	--	--	--
Aroclor 1232	2.7 U	2.4 U	2.6 U	--	--	--	--
Aroclor 1242	2.7 U	2.4 U	2.6 U	--	--	--	--
Aroclor 1248	**96**	**97**	**74**	--	--	--	--
Aroclor 1254	88 U	160 U	78 U	--	--	--	--
Aroclor 1260	**79**	**200**	**78**	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**230 T**	**380 T**	**200 T**	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	3.3 U	2.7 U	3 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	9.8 U	8.6 U	9.5 U	--	--	--	--
Endrin ketone	18 U	12 U	1.3 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	10 U	12 U	11 U	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**65 JT**	**48 T**	**46 T**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	11 UT	15 UT	25 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**35 T**	27 UT	10 UT	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**6000 J**	**2900 J**	**710 J**	--	--	--	--
Residual Range Hydrocarbons	**3600 J**	**2100 J**	**740 J**	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSD01AN0103	WLCGSD01AN0103	WLCGSD01AN0105	WLCGSD01AN0105	WLCGSD01AN0205	WLCGSD01AN0205	WLCGSG07GSB2
Sample Name:	WLCGSD01AN0103_10-20	WLCGSD01AN0103_30-40	WLCGSD01AN0105_10-20	WLCGSD01AN0105_30-40	WLCGSD01AN0205_10-20	WLCGSD01AN0205_30-40	WLCGSG07GSB2S02
Sample Date:	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/11/2001	4/11/2001	9/21/2007
Depth Interval:	10 - 20 cm	30 - 40 cm	10 - 20 cm	30 - 40 cm	10 - 20 cm	30 - 40 cm	0 - 60.96 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**5.4**	**1.7**	0.2 U	0.2 U	0.2 U	0.2 U	**24.8**
Metals (mg/kg)							
Zinc	**222 J**	**174 J**	**42.6 J**	**48.3 J**	**44.8 J**	**37 J**	**93.7**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	--	--	--	--	--	0.14 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--	0.24 U
1,2-Dichloroethene, trans-	--	--	--	--	--	--	0.2 U
Benzene	**0.06 J**	**6.4**	0.01 U	0.01 U	0.01 U	0.01 U	0.19 U
Ethylbenzene	**1.4**	**17**	0.009 U	0.009 U	0.009 U	0.009 U	**1.2 J**
Naphthalene	--	--	--	--	--	--	--
o-Xylene	**0.59**	**4**	0.008 U	0.008 U	0.008 U	0.008 U	**3.4**
Toluene	**0.03 J**	**0.3 J**	0.02 U	0.02 U	0.01 U	0.01 U	**1.1 J**
Trichloroethene (TCE)	--	--	--	--	--	--	**1.4 J**
Vinyl chloride	--	--	--	--	--	--	0.23 U
LWG RA Total Xylene (Calculated U = 1/2)	**0.86 T**	**9.1 T**	0.02 UT	0.02 UT	0.02 UT	0.02 UT	**4.6 JT**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	--	--	--	--	--	**2000**
Acenaphthene	**68000 J**	**580000 J**	**4 J**	2 UJ	2 U	2 U	**8000**
Acenaphthylene	**4400**	**9000 J**	2 U	2 U	2 U	2 U	**580**
Anthracene	**79000**	**250000**	**2 J**	2 U	2 U	2 U	**9600**
Benzo(a)anthracene	**58000**	**120000**	**3 J**	2 U	2 U	2 U	**17000**
Benzo(a)pyrene	**58000**	**130000**	**3 J**	3 U	3 U	3 U	**18000**
Benzo(b)fluoranthene	**31000**	**65000**	2 U	2 U	2 U	2 U	**18000**
Benzo(g,h,i)perylene	**40000**	**90000**	**3 J**	2 U	2 U	2 U	**13000**
Benzo(k)fluoranthene	**35000**	**92000**	3 U	3 U	**4 J**	3 U	**5600**
Chrysene	**79000**	**160000**	**4 J**	3 U	**7.7**	3 U	**18000**
Dibenzo(a,h)anthracene	**5100**	**10000 J**	3 U	3 U	**3**	2 U	**2100**
Fluoranthene	**180000**	**480000**	**7.3**	**6 J**	**11**	2 U	**46000**
Fluorene	**65000**	**260000**	2 U	2 U	2 U	2 U	**5300**
Indeno(1,2,3-c,d)pyrene	**32000**	**76000**	**3 J**	**1 J**	0.7 U	0.7 U	**13000**
Naphthalene	**15000 J**	**1900000 J**	**8.1 J**	3 UJ	3 U	3 U	**2600 J**
Phenanthrene	**400000**	**1300000**	**9.2**	**5 J**	2 U	2 U	**45000**
Pyrene	**240000**	**670000**	**8.8**	**8.5**	**17**	2 U	**46000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**76000 T**	**170000 JT**	**5.2 JT**	**3.3 JT**	**4.8 JT**	3 UT	**25000 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSD01AN0103	WLCGSD01AN0103	WLCGSD01AN0105	WLCGSD01AN0105	WLCGSD01AN0205	WLCGSD01AN0205	WLCGSG07GSB2
Sample Name:	WLCGSD01AN0103_10-20	WLCGSD01AN0103_30-40	WLCGSD01AN0105_10-20	WLCGSD01AN0105_30-40	WLCGSD01AN0205_10-20	WLCGSD01AN0205_30-40	WLCGSG07GSB2S02
Sample Date:	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/11/2001	4/11/2001	9/21/2007
Depth Interval:	10 - 20 cm	30 - 40 cm	10 - 20 cm	30 - 40 cm	10 - 20 cm	30 - 40 cm	0 - 60.96 cm
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	730
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSC2	WLCGSG07GSC5	WLCGSG07GSC7	WLCGSG07GSC7
Sample Name:	WLCGSG07GSB5S02	WLCGSG07GSB7S02	WLCGSG07GSB7SC07101	WLCGSG07GSC2S02	WLCGSG07GSC5S02	WLCGSG07GSC7S02	WLCGSG07GSC7SC07101
Sample Date:	9/21/2007	8/30/2007	10/11/2007	9/21/2007	9/20/2007	9/19/2007	10/11/2007
Depth Interval:	0 - 60.96 cm	0 - 60.96 cm	24.38 - 39.62 cm	0 - 60.96 cm	0 - 60.96 cm	0 - 60.96 cm	42.67 - 57.91 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**0.24 J**	**1**	**1.49**	0.06 U	**0.11 J**	**0.07 J**	**1.56**
Metals (mg/kg)							
Zinc	**94.5**	**120**	**--**	**73.2**	**54.2**	**99.7**	**--**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	150 U	0.13 U	0.088 U	27 U	0.084 U	27 U	3400 U
1,2-Dichloroethene, cis-	150 U	0.22 U	**--**	27 U	0.15 U	27 U	**--**
1,2-Dichloroethene, trans-	180 U	0.19 U	0.13 U	32 U	0.13 U	32 U	4000 U
Benzene	**4600**	0.18 U	0.13 U	24 U	0.12 U	**1500**	**18000**
Ethylbenzene	**90000**	0.15 U	**0.53 J**	**670**	0.096 U	**5600**	**60000**
Naphthalene	**1200000 J**	**--**	**--**	**180000 J**	**--**	**--**	**--**
o-Xylene	**20000**	**1.5 J**	**2.5**	**260**	0.084 U	**1700**	**16000**
Toluene	**890**	**0.41 J**	0.2 U	**23 J**	**1.2 J**	**45 J**	**9300 J**
Trichloroethene (TCE)	240 U	0.16 U	0.11 U	43 U	**0.57 J**	43 U	5400 U
Vinyl chloride	270 U	0.21 U	0.15 U	48 U	0.14 U	48 U	6000 U
LWG RA Total Xylene (Calculated U = 1/2)	**44000 T**	**2.2 JT**	**5 T**	**470 T**	0.23 UT	**4600 T**	**42000 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**100000**	**1400**	**46000 J**	**46000**	**3.5 J**	**370000**	**1000000 J**
Acenaphthene	**140000**	**15000**	**85000**	**100000**	**120**	**390000**	**970000**
Acenaphthylene	**3200**	**660**	**2900**	**4300**	**10**	**8900**	**33000**
Anthracene	**43000**	**3100**	**45000 J**	**41000**	**49**	**160000**	**410000 J**
Benzo(a)anthracene	**28000**	**6300**	**30000**	**29000**	**80**	**82000**	**230000**
Benzo(a)pyrene	**37000**	**7800**	**33000 J**	**36000**	**110**	**100000**	**280000 J**
Benzo(b)fluoranthene	**31000**	**7900**	**28000**	**31000**	**93**	**81000**	**250000**
Benzo(g,h,i)perylene	**29000**	**6700**	**25000**	**26000**	**83**	**63000**	**190000**
Benzo(k)fluoranthene	**9700**	**2200**	**8700**	**9700**	**29**	**26000**	**81000**
Chrysene	**30000**	**6300**	**34000**	**32000**	**110**	**110000**	**270000**
Dibenzo(a,h)anthracene	**3400**	**740**	**3800**	**3300**	**12**	**9100**	**29000**
Fluoranthene	**140000**	**14000**	**100000**	**130000**	**270**	**380000**	**840000**
Fluorene	**45000**	**5600**	**42000**	**42000**	**45**	**150000**	**420000**
Indeno(1,2,3-c,d)pyrene	**27000**	**6500**	**24000**	**25000**	**79**	**63000**	**190000**
Naphthalene	**--**	**4000**	**2700 J**	**--**	**13 J**	**1200000 J**	**4300000 J**
Phenanthrene	**270000**	**22000**	**230000**	**240000**	**300**	**870000**	**1900000**
Pyrene	**160000**	**15000**	**120000**	**150000**	**290**	**390000**	**930000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**49000 T**	**11000 T**	**45000 JT**	**48000 T**	**150 T**	**130000 T**	**380000 JT**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSC2	WLCGSG07GSC5	WLCGSG07GSC7	WLCGSG07GSC7
Sample Name:	WLCGSG07GSB5S02	WLCGSG07GSB7S02	WLCGSG07GSB7SC07101	WLCGSG07GSC2S02	WLCGSG07GSC5S02	WLCGSG07GSC7S02	WLCGSG07GSC7SC07101
Sample Date:	9/21/2007	8/30/2007	10/11/2007	9/21/2007	9/20/2007	9/19/2007	10/11/2007
Depth Interval:	0 - 60.96 cm	0 - 60.96 cm	24.38 - 39.62 cm	0 - 60.96 cm	0 - 60.96 cm	0 - 60.96 cm	42.67 - 57.91 cm
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	**6300**	**630**	--	**6100**	**2.1 J**	**26000**	--
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	**700**	--	--	--	--	--
Residual Range Hydrocarbons	--	**1100**	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSG07GSD2	WLCGSG07GSD4	WLCGSG07GSD5	WLCGSJ06GS05	WLCGSJ06GS08	WLCMRD08SDDA17SB	WLCMRD08SDUD1SB
Sample Name:	WLCGSG07GSD2S02	WLCGSG07GSD4S02	WLCGSG07GSD5SC07101	WLCGSJ06GS05S34	WLCGSJ06GS08S34	WLCMRD08DA17-2	WLCMRD08UD1-2
Sample Date:	9/20/2007	9/20/2007	10/11/2007	10/24/2006	10/25/2006	4/20/2008	4/15/2008
Depth Interval:	0 - 60.96 cm	0 - 60.96 cm	45.72 - 60.96 cm	91.44 - 121.9 cm	91.44 - 121.9 cm	30.48 - 213 cm	30.48 - 182.88 cm
Conventional Parameters (mg/kg)							
Cyanide, total	0.06 UJ	0.06 UJ	0.05 U	**10.7 J**	**0.34**	**20.1**	**1.04**
Metals (mg/kg)							
Zinc	**50.7**	**48**	**--**	**--**	**66.9**	**228**	**96.3**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	0.083 U	0.078 U	0.084 U	430 U	1.2 U	**--**	7.5 U
1,2-Dichloroethene, cis-	0.15 U	0.14 U	**--**	430 U	1.2 U	**--**	7.5 U
1,2-Dichloroethene, trans-	0.13 U	0.12 U	0.13 U	430 U	1.2 U	**--**	7.5 U
Benzene	0.12 U	0.11 U	0.12 U	430 U	1.2 U	**--**	7.5 U
Ethylbenzene	0.095 U	0.089 U	0.096 U	**1900**	1.2 U	**--**	7.5 U
Naphthalene	**22**	0.2 U	**--**	**--**	**--**	**--**	**--**
o-Xylene	0.083 U	0.078 U	0.084 U	**1200**	1.2 U	**--**	**0.63 J**
Toluene	**0.39 J**	**0.43 J**	**2.6**	430 U	**0.14 J**	**--**	**0.64 J**
Trichloroethene (TCE)	**0.51 J**	0.096 U	0.11 U	430 U	1.2 U	**--**	7.5 U
Vinyl chloride	0.14 U	0.13 U	0.14 U	430 U	1.2 U	**--**	7.5 U
LWG RA Total Xylene (Calculated U = 1/2)	0.22 UT	0.21 UT	0.23 UT	**2100 T**	2.4 UT	**--**	**0.94 JT**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**2.2 J**	**0.94 J**	**130 J**	**16000**	**0.53 J**	**1200**	**55**
Acenaphthene	**7.3**	**2.6 J**	**2500**	**62000**	**12**	**16000**	**1300**
Acenaphthylene	**2.8 J**	**0.57 J**	**65**	**5700**	**1.2 J**	**1300**	**56**
Anthracene	**21**	**3.7 J**	**920 J**	**44000**	**5.8**	**12000**	**1400**
Benzo(a)anthracene	**25**	**5**	**520**	**58000**	**20**	**13000**	**1500**
Benzo(a)pyrene	**28**	**5.2**	**630 J**	**77000**	**26**	**19000**	**2400**
Benzo(b)fluoranthene	**26**	**5**	**570**	**48000**	**23**	**17000**	**2000**
Benzo(g,h,i)perylene	**24**	**4.5 J**	**500**	**53000**	**25**	**16000**	**1900**
Benzo(k)fluoranthene	**7.8**	**1.4 J**	**190**	**40000**	**17**	**5300**	**550**
Chrysene	**29**	**5.4**	**760**	**69000**	**32**	**16000**	**1800**
Dibenzo(a,h)anthracene	**3.5 J**	**0.64 J**	**75**	**6300**	**3.4 J**	**2200**	**240**
Fluoranthene	**80**	**16**	**2600**	**190000**	**44**	**48000**	**5700**
Fluorene	**7.3**	**1.3 J**	**1300**	**39000**	**12**	**7400**	**700**
Indeno(1,2,3-c,d)pyrene	**22**	**4.2 J**	**470**	**51000**	**23**	**15000**	**1800**
Naphthalene	**--**	**--**	**170 J**	**15000**	4.9 U	**5000**	**290**
Phenanthrene	**100**	**19**	**6900**	**250000**	**26**	**58000**	**5200**
Pyrene	**86**	**17**	**3000**	**220000**	**65**	**61000**	**7500**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**39 JT**	**7.3 JT**	**860 JT**	**99000 T**	**36 JT**	**26000 T**	**3200 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSG07GSD2	WLCGSG07GSD4	WLCGSG07GSD5	WLCGSJ06GS05	WLCGSJ06GS08	WLCMRD08SDDA17SB	WLCMRD08SDUD1SB
Sample Name:	WLCGSG07GSD2S02	WLCGSG07GSD4S02	WLCGSG07GSD5SC07101	WLCGSJ06GS05S34	WLCGSJ06GS08S34	WLCMRD08DA17-2	WLCMRD08UD1-2
Sample Date:	9/20/2007	9/20/2007	10/11/2007	10/24/2006	10/25/2006	4/20/2008	4/15/2008
Depth Interval:	0 - 60.96 cm	0 - 60.96 cm	45.72 - 60.96 cm	91.44 - 121.9 cm	91.44 - 121.9 cm	30.48 - 213 cm	30.48 - 182.88 cm
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	**2200**	**190**
Dibenzofuran	**1 J**	0.81 U	--	**6700**	**3.2 J**	**880**	**70**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	2.5 U	1.9 U
Aroclor 1221	--	--	--	--	--	5 U	3.7 U
Aroclor 1232	--	--	--	--	--	2.5 U	1.9 U
Aroclor 1242	--	--	--	--	--	20 U	1.9 U
Aroclor 1248	--	--	--	--	--	2.5 U	1.9 U
Aroclor 1254	--	--	--	--	--	17 U	3.9 U
Aroclor 1260	--	--	--	--	--	18 U	2.2 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	20 UT	3.9 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	1 U	0.15 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	1.2 U	0.49 U
Endrin ketone	--	--	--	--	--	1.3 U	0.22 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	4 U	0.42 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	**46 JT**	**1.5 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	1.4 UT	**0.47 T**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	**11 T**	**0.33 JT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	**1000**	**78**
Residual Range Hydrocarbons	--	--	--	--	--	**740**	**120 J**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCMRD08SDUD26SB	WLCMRD08SDUD27SB	WLCMRD08SDUD2SB	WLCMRI02CS001	WLCMRI02CS002	WLCSLH01GP25	WLCSLH01GP26
Sample Name:	WLCMRD08UD26-2	WLCMRD08UD27-2	WLCMRD08UD2-2	WLCMRI02CS001CS001	WLCMRI02CS002CS002	WLCSLH01GP25S1	WLCSLH01GP26S1
Sample Date:	4/13/2008	4/13/2008	4/15/2008	9/10/2002	9/10/2002	9/30/2004	10/5/2004
Depth Interval:	30.48 - 182.88 cm	30.48 - 182.88 cm	30.48 - 182.88 cm	0 - 91.44 cm	0 - 91.44 cm	30.48 - 45.72 cm	30.48 - 45.72 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**2.5**	**6.4**	**0.37 J**	**2**	**1.9**	--	--
Metals (mg/kg)							
Zinc	**151**	**154**	**88.1**	**162**	**136**	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	8.1 U	36 U	7.6 U	--	--	13.1 U	17.7 U
1,2-Dichloroethene, cis-	8.1 U	36 U	7.6 U	--	--	13.1 U	17.7 U
1,2-Dichloroethene, trans-	8.1 U	36 U	7.6 U	--	--	13.1 U	17.7 U
Benzene	8.1 U	**17 J**	7.6 U	--	--	13.1 U	17.7 U
Ethylbenzene	8.1 U	**460**	7.6 U	--	--	13.1 U	17.7 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	8.1 U	**48**	7.6 U	--	--	13.1 U	17.7 U
Toluene	8.1 U	**4.2 J**	**0.38 J**	--	--	13.1 U	17.7 U
Trichloroethene (TCE)	8.1 U	36 U	7.6 U	--	--	13.1 U	17.7 U
Vinyl chloride	8.1 U	36 U	7.6 U	--	--	13.1 U	17.7 U
LWG RA Total Xylene (Calculated U = 1/2)	8.1 UT	**70 JT**	7.6 UT	--	--	26.2 UT	35.4 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**87**	**1300**	**4.1**	**4900**	**1600**	87.4 U	**1310**
Acenaphthene	**690**	**9000**	**7.1**	**13000**	**940**	**44.6**	**127000**
Acenaphthylene	**49**	**410**	**0.82 J**	**650**	**180**	**127**	**7930**
Anthracene	**370**	**12000**	**7.4**	**11000**	**870**	**97.9**	**82000**
Benzo(a)anthracene	**980**	**13000**	**32**	**10000**	**1900**	**393**	**55600**
Benzo(a)pyrene	**1200**	**18000**	**37**	**12000**	**1900**	**740**	**59700**
Benzo(b)fluoranthene	**1300**	**16000**	**51**	**8900**	**1600**	**649**	**48400**
Benzo(g,h,i)perylene	**1000**	**15000**	**31**	**12000**	**2400**	**595**	**31300**
Benzo(k)fluoranthene	**430**	**4900**	**17**	**8500**	**1600**	**214**	**13600**
Chrysene	**1200**	**15000**	**36**	**14000**	**2400**	**519**	**49700**
Dibenzo(a,h)anthracene	**150**	**2100**	**4.2**	**1500**	**300**	**101**	**5500**
Fluoranthene	**3000**	**46000**	**87**	**37000**	**6500**	**766**	**186000**
Fluorene	**530**	**5800**	**4.7**	**6000**	**620**	**27.1**	**76500**
Indeno(1,2,3-c,d)pyrene	**980**	**14000**	**34**	**9300**	**2000**	**462**	**24400**
Naphthalene	**170**	**2900**	**25**	**2800**	**2100**	**26.2**	**2870**
Phenanthrene	**2700**	**47000**	**53**	**60000**	**5400**	**196**	**405000**
Pyrene	**3200**	**59000**	**97**	**39000**	**5100**	**904**	**215000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**1700 T**	**24000 T**	**53 T**	**16000 T**	**2800 T**	**990 T**	**78000 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCMRD08SDUD26SB	WLCMRD08SDUD27SB	WLCMRD08SDUD2SB	WLCMRI02CS001	WLCMRI02CS002	WLCSLH01GP25	WLCSLH01GP26
Sample Name:	WLCMRD08UD26-2	WLCMRD08UD27-2	WLCMRD08UD2-2	WLCMRI02CS001CS001	WLCMRI02CS002CS002	WLCSLH01GP25S1	WLCSLH01GP26S1
Sample Date:	4/13/2008	4/13/2008	4/15/2008	9/10/2002	9/10/2002	9/30/2004	10/5/2004
Depth Interval:	30.48 - 182.88 cm	30.48 - 182.88 cm	30.48 - 182.88 cm	0 - 91.44 cm	0 - 91.44 cm	30.48 - 45.72 cm	30.48 - 45.72 cm
Semivolatile Organics (µg/kg)							
Carbazole	**93**	**690**	**5.7 J**	**1000**	**190**	87.4 U	**861**
Dibenzofuran	**180**	**870**	**2.2 J**	**980**	**180**	87.4 U	**1100**
PCB Aroclors (µg/kg)							
Aroclor 1016	2.5 U	5 U	2.5 U	20 U	20 U	--	--
Aroclor 1221	5 U	10 U	5 U	39 U	39 U	--	--
Aroclor 1232	2.5 U	5 U	2.5 U	20 U	20 U	--	--
Aroclor 1242	4.8 U	24 U	2.5 U	20 U	20 U	--	--
Aroclor 1248	2.5 U	5 U	2.5 U	20 U	20 U	--	--
Aroclor 1254	15 U	22 U	2.5 U	36 U	20 U	--	--
Aroclor 1260	6.1 U	22 U	2.5 U	34 U	20 U	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	15 UT	24 UT	5 UT	39 UT	39 UT	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	0.2 U	2 U	0.2 U	0.98 U	0.98 U	--	--
beta-Hexachlorocyclohexane (BHC)	0.2 U	2 U	0.2 U	0.98 U	0.98 U	--	--
Endrin ketone	**0.72 J**	2.6 U	0.2 U	2 U	2 U	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**0.2 J**	5.2 U	0.2 U	0.98 U	0.98 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**9.4 T**	**44 T**	**0.19 JT**	**57 T**	**14 T**	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**5.1 JT**	6.5 UT	0.2 UT	**8.8 JT**	**4.6 T**	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**3 T**	3.9 UT	**0.37 T**	**27 T**	**5.3 T**	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**110**	**590**	16 U	**2100 JT**	**130 J**	--	--
Residual Range Hydrocarbons	**190**	**680**	**7.3 J**	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCSLH01GP27	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP32	WR-WSI98SD072
Sample Name:	WLCSLH01GP27S1	WLCSLH01GP28S1	WLCSLH01GP29S1	WLCSLH01GP30S1	WLCSLH01GP31S1	WLCSLH01GP32S1	WR-WSI98SD0720000A
Sample Date:	10/8/2004	10/13/2004	10/20/2004	10/22/2004	10/26/2004	10/28/2004	10/16/1997
Depth Interval:	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	0 - 90 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	**145**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	2170 U	13.1 U	26.1 U	24 U	22.2 U	22.1 U	--
1,2-Dichloroethene, cis-	2170 U	13.1 U	26.1 U	24 U	22.2 U	22.1 U	--
1,2-Dichloroethene, trans-	2170 U	13.1 U	26.1 U	24 U	22.2 U	22.1 U	--
Benzene	2170 U	13.1 U	**275**	24 U	**118**	**68.4**	--
Ethylbenzene	2170 U	13.1 U	26.1 U	24 U	22.2 U	**69.2**	--
Naphthalene	--	--	**318**	--	--	--	--
o-Xylene	2170 U	13.1 U	**29.9**	24 U	22.2 U	22.1 U	--
Toluene	2170 U	13.1 U	26.1 U	24 U	22.2 U	22.1 U	--
Trichloroethene (TCE)	2170 U	13.1 U	26.1 U	24 U	22.2 U	22.1 U	--
Vinyl chloride	2170 U	13.1 U	26.1 U	24 U	22.2 U	22.1 U	--
LWG RA Total Xylene (Calculated U = 1/2)	4350 UT	26.2 UT	**56 T**	48 UT	44.4 UT	44.2 UT	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	145 U	87.4 U	**1470**	160 U	**1780**	147 U	**980**
Acenaphthene	**4140**	**28**	**686**	**65.7**	**1820**	**5610**	**7200**
Acenaphthylene	**717**	**14**	17.4 U	16 U	14.8 U	**35.3**	110 U
Anthracene	**5250**	8.74 U	17.4 U	**22.4**	14.8 U	**177**	**3100**
Benzo(a)anthracene	**5680**	**35.8**	**27.9**	**68.9**	**293**	**85.4**	**1100**
Benzo(a)pyrene	**6810**	**92.2**	**43.5**	**92.9**	**416**	**107**	**660**
Benzo(b)fluoranthene	**5640**	**75.1**	**41.8**	**86.5**	**355**	**115**	**460**
Benzo(g,h,i)perylene	**3720**	**110**	**34.8**	**57.7**	**296**	**80.9**	**340**
Benzo(k)fluoranthene	**1870**	**22.7**	17.4 U	**24**	14.8 U	**39.7**	**690**
Chrysene	**5420**	**33.2**	**26.1**	**62.5**	**366**	**78**	**1500**
Dibenzo(a,h)anthracene	**710**	**12.2**	17.4 U	16 U	14.8 U	**16.2**	110 U
Fluoranthene	**14400**	**131**	**48.7**	**160**	**683**	**311**	**7200**
Fluorene	**2390**	8.74 U	17.4 U	**32.1**	**661**	**2630**	**5000**
Indeno(1,2,3-c,d)pyrene	**2910**	**50.7**	**26.1**	**44.9**	**222**	**61.8**	**310**
Naphthalene	**225**	8.74 U	--	16 U	**327**	**54.5**	**200**
Phenanthrene	**22100**	**20.1**	**31.3**	**80.1**	**595**	**1670**	**16000**
Pyrene	**18400**	**152**	**50.5**	**199**	**839**	**269**	**6600**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**9000 T**	**121 T**	**61.9 T**	**120 T**	**511 T**	**150 T**	**910 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCSLH01GP27	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP32	WR-WSI98SD072
Sample Name:	WLCSLH01GP27S1	WLCSLH01GP28S1	WLCSLH01GP29S1	WLCSLH01GP30S1	WLCSLH01GP31S1	WLCSLH01GP32S1	WR-WSI98SD0720000A
Sample Date:	10/8/2004	10/13/2004	10/20/2004	10/22/2004	10/26/2004	10/28/2004	10/16/1997
Depth Interval:	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	0 - 90 cm
Semivolatile Organics (µg/kg)							
Carbazole	145 U	87.4 U	**647**	160 U	**733**	147 U	**660**
Dibenzofuran	145 U	87.4 U	174 U	160 U	148 U	147 U	**3600**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	19 U
Aroclor 1221	--	--	--	--	--	--	38 U
Aroclor 1232	--	--	--	--	--	--	19 U
Aroclor 1242	--	--	--	--	--	--	19 U
Aroclor 1248	--	--	--	--	--	--	19 U
Aroclor 1254	--	--	--	--	--	--	**57**
Aroclor 1260	--	--	--	--	--	--	50 UJ
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	**140 JT**
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	0.94 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	0.94 U
Endrin ketone	--	--	--	--	--	--	3.1 UJ
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	0.94 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	**16 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	**5.5 T**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	**17 T**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-11SC	DGS-13SC
Sample Name:	DGS-03SC-0408-101005	DGS-06SC-0408-101007	DGS-07SC-0408-101012	DGS-08SC-0408-101007	DGS-11SC-0408-101006	DGS-11SC-1.58.2-101006	DGS-13SC-0408-101005
Sample Date:	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/6/2010	10/5/2010
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	45.72 - 249.94 cm	121.92 - 243.84 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**28.7**	**0.325**	**95.2**	**1.14**	**0.24**	**4.69**	0.136 U
Metals (mg/kg)							
Zinc	**98 J**	**50**	**172**	**65**	**51**	**67**	**50 J**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.3 U	1.2 U	130 U	11 U	300 U	--	1.4 U
1,2-Dichloroethene, cis-	1.3 U	1.2 U	130 U	11 U	300 U	--	1.4 U
1,2-Dichloroethene, trans-	1.3 U	1.2 U	130 U	11 U	300 U	--	1.4 U
Benzene	**2.2 J**	1.2 U	130 U	**19**	**3500**	--	1.4 U
Ethylbenzene	**8.7 J**	1.2 U	**4900**	**840**	**7900**	--	1.4 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	**6.2 J**	1.2 U	**180**	**210**	**4000**	--	1.4 U
Toluene	1.3 U	1.2 U	130 U	11 U	**8600**	--	1.4 U
Trichloroethene (TCE)	1.3 U	1.2 U	130 U	11 U	300 U	--	1.4 U
Vinyl chloride	1.3 U	1.2 U	130 U	11 U	300 U	--	1.4 U
LWG RA Total Xylene (Calculated U = 1/2)	**8.4 JT**	1.2 UT	**340 T**	**350 T**	**14000 T**	--	1.4 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**1900**	64 U	**22000**	**170000**	**75000**	**110000**	62 U
Acenaphthene	**6600**	**89**	**18000**	**130000**	**92000**	**120000**	**1200 J**
Acenaphthylene	**450**	64 U	**950**	**2600**	**15000**	**18000**	62 U
Anthracene	**4600**	**270**	**18000**	**44000**	**57000**	**73000**	**68 J**
Benzo(a)anthracene	**4500**	**250**	**24000**	**37000**	**42000**	**63000**	62 U
Benzo(a)pyrene	**5000**	**350**	**28000**	**44000**	**52000**	**74000**	62 U
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	**5200**	**320**	**9100**	**34000**	**33000**	**31000**	62 U
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	**5400**	**380**	**28000**	**48000**	**56000**	**82000**	62 U
Dibenzo(a,h)anthracene	**1100**	**65**	**610**	**6000**	**7200**	**1500**	62 U
Fluoranthene	**15000**	**870**	**64000**	**120000**	**170000**	**230000**	62 U
Fluorene	**4700**	64 U	**14000**	**50000**	**52000**	**69000**	**390 J**
Indeno(1,2,3-c,d)pyrene	**3800**	**200**	**8500**	**23000**	**25000**	**26000**	62 U
Naphthalene	**730**	**400**	**30000**	**600000**	**680000**	**670000**	**74 J**
Phenanthrene	**29000**	**1000**	**95000**	**280000**	**350000**	**430000**	**930 J**
Pyrene	**26000**	**1200**	**81000**	**160000**	**200000**	**260000**	62 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**7500 T**	**510 T**	**35000 T**	**61000 T**	**72000 T**	**94000 T**	62 UT

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-03SC	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-11SC	DGS-13SC
Sample Name:	DGS-03SC-0408-101005	DGS-06SC-0408-101007	DGS-07SC-0408-101012	DGS-08SC-0408-101007	DGS-11SC-0408-101006	DGS-11SC-1.58.2-101006	DGS-13SC-0408-101005
Sample Date:	10/5/2010	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/6/2010	10/5/2010
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	45.72 - 249.94 cm	121.92 - 243.84 cm
Semivolatile Organics (µg/kg)							
Carbazole	**900**	64 U	**4000**	**7000**	**15000**	**19000**	**330 J**
Dibenzofuran	**620**	64 U	**1800**	**8600**	**7000**	**9400**	62 U
PCB Aroclors (µg/kg)							
Aroclor 1016	31 U	33 U	32 U	33 U	32 U	31 U	31 U
Aroclor 1221	31 U	33 U	32 UJ	33 U	32 U	31 U	31 U
Aroclor 1232	31 U	33 U	32 U	33 U	32 U	31 U	31 U
Aroclor 1242	31 U	33 U	32 U	33 U	32 U	31 U	31 U
Aroclor 1248	31 U	33 U	40 U	33 U	32 U	31 U	31 U
Aroclor 1254	31 U	33 U	110 U	33 U	32 U	31 U	31 U
Aroclor 1260	31 U	33 U	**92**	33 U	32 U	31 U	31 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 UT	33 UT	**230 JT**	33 UT	32 UT	31 UT	31 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	7.8 U	1.6 U	16 U	8.2 U	8 U	16 U	1.5 U
beta-Hexachlorocyclohexane (BHC)	7.8 U	1.6 U	45 U	16 U	8 U	16 U	1.5 U
Endrin ketone	16 U	3.3 U	32 U	16 U	16 U	32 U	3.1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	7.8 U	1.6 U	16 U	8.2 U	8 U	16 U	1.5 U
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	3.3 UT	**420 T**	16 UT	16 UT	32 UT	3.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	**15 JT**	3.3 UT	**64 T**	16 UT	16 UT	32 UT	3.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	**250 T**	3.3 UT	**50 T**	16 UT	16 UT	32 UT	3.1 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**320**	**7.7**	**2400 J**	**2800**	**2300**	**2600**	7 U
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC	DGS-25SC
Sample Name:	DGS-18SC-0408-101008	DGS-19SC-0408-101006	DGS-20SC-0408-101008	DGS-22SC-0408-101012	DGS-23SC-0408-101008	DGS-24SC-0408-101012	DGS-25SC-0408-101007
Sample Date:	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/12/2010	10/7/2010
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
Conventional Parameters (mg/kg)							
Cyanide, total	0.118 U	**1.36**	0.125 U	**0.921**	0.126 U	**4.98**	0.116 U
Metals (mg/kg)							
Zinc	**51**	**62**	**47**	**110**	**47**	**134**	**45**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	66 U	260 U	1.3 U	1.5 U	1.3 U	1500 U	1.2 U
1,2-Dichloroethene, cis-	66 U	260 U	1.3 U	1.5 U	1.3 U	1500 U	1.2 U
1,2-Dichloroethene, trans-	66 U	260 U	1.3 U	1.5 U	1.3 U	1500 U	1.2 U
Benzene	66 U	**4800 J**	1.3 U	**2**	1.3 U	**3800**	1.2 U
Ethylbenzene	66 U	**29000 J**	1.3 U	**1.9**	1.3 U	**22000**	1.2 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	66 U	**6800 J**	1.3 U	**2.8**	1.3 U	**10000**	1.2 U
Toluene	66 U	260 U	1.3 U	1.5 U	1.3 U	1500 U	1.2 U
Trichloroethene (TCE)	66 U	260 U	1.3 U	1.5 U	1.3 U	1500 U	1.2 U
Vinyl chloride	66 U	260 U	1.3 U	1.5 U	1.3 U	1500 U	1.2 U
LWG RA Total Xylene (Calculated U = 1/2)	66 UT	**17000 JT**	1.3 UT	**5 T**	1.3 UT	**29000 T**	1.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**5600**	**240000**	61 U	**1600**	61 U	**470000**	62 U
Acenaphthene	**5300**	**260000**	61 U	**11000**	61 U	**420000**	62 U
Acenaphthylene	**350**	6400 U	61 U	**770**	61 U	**18000**	62 U
Anthracene	**5200**	**84000**	61 U	**11000**	61 U	**190000**	62 U
Benzo(a)anthracene	**3200**	**59000**	61 U	**13000**	61 U	**130000**	62 U
Benzo(a)pyrene	**2700**	**84000**	61 U	**20000**	61 U	**160000**	62 U
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	**1800**	**76000**	61 U	**10000**	61 U	**22000**	62 UJ
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	**4100**	**78000**	61 U	**17000**	61 U	**170000**	62 U
Dibenzo(a,h)anthracene	**460**	**12000**	61 U	370 U	61 U	**1200**	62 U
Fluoranthene	**7200**	**230000**	61 U	**55000**	61 U	**550000**	62 U
Fluorene	**4400**	**86000**	61 U	**5500**	61 U	**180000**	62 U
Indeno(1,2,3-c,d)pyrene	**1200**	**47000**	61 U	**8500**	61 U	**20000**	62 U
Naphthalene	310 U	**1800000**	61 U	**2900**	61 U	**2800000**	**260**
Phenanthrene	**29000**	**470000**	**110**	**64000**	61 U	**1100000**	62 U
Pyrene	**11000 J**	**280000**	61 UJ	**71000**	61 UJ	**680000**	62 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**3800 T**	**120000 T**	61 UT	**25000 T**	61 UT	**200000 T**	62 UT

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-18SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC	DGS-25SC
Sample Name:	DGS-18SC-0408-101008	DGS-19SC-0408-101006	DGS-20SC-0408-101008	DGS-22SC-0408-101012	DGS-23SC-0408-101008	DGS-24SC-0408-101012	DGS-25SC-0408-101007
Sample Date:	10/8/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/12/2010	10/7/2010
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
Semivolatile Organics (µg/kg)							
Carbazole	310 U	**19000**	61 U	**530**	61 U	**28000**	62 U
Dibenzofuran	**700**	**13000**	61 U	**570**	61 U	**17000**	62 U
PCB Aroclors (µg/kg)							
Aroclor 1016	32 U	32 U	31 U	32 U	31 U	44 U	32 U
Aroclor 1221	32 U	32 U	31 U	32 UJ	31 U	44 UJ	32 U
Aroclor 1232	32 U	32 U	31 U	32 U	31 U	44 U	32 U
Aroclor 1242	32 U	32 U	31 U	32 U	31 U	44 U	32 U
Aroclor 1248	32 U	32 U	31 U	32 U	31 U	**66**	32 U
Aroclor 1254	32 U	32 U	31 U	32 U	31 U	66 U	32 U
Aroclor 1260	32 U	32 U	31 U	32 U	31 U	**49**	32 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	32 UT	31 UT	32 UJT	31 UT	**240 JT**	32 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	8.2 U	8.2 U	1.6 U	8 U	1.6 U	22 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	8.2 U	8.2 U	1.6 U	8 U	1.6 U	22 U	1.6 U
Endrin ketone	16 U	16 U	3.2 U	16 U	3.1 U	44 U	3.3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8.2 U	8.2 U	1.6 U	8 U	1.6 U	22 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	16 UT	3.2 UT	16 UT	3.1 UT	**180 T**	3.3 UT
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	16 UT	3.2 UT	16 UT	3.1 UT	44 UT	3.3 UT
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	16 UT	3.2 UT	16 UT	3.1 UT	44 UT	3.3 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**340**	**2900**	6.7 U	**730 J**	6.7 U	**5100 J**	6.2 U
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC	DGS-32SC	DGS-36SC	DGS-37SC
Sample Name:	DGS-26SC-0408-101011	DGS-28SC-0408-101007	DGS-30SC-0408-101006	DGS-31SC-0408-101011	DGS-32SC-0408-101011	DGS-36SC-0408-101012	DGS-37SC-0408-101011
Sample Date:	10/11/2010	10/7/2010	10/6/2010	10/11/2010	10/11/2010	10/12/2010	10/11/2010
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
Conventional Parameters (mg/kg)							
Cyanide, total	0.116 U	0.114 U	0.116 U	**0.202**	**2.76**	**13.1**	**1.62**
Metals (mg/kg)							
Zinc	**47**	**43**	**46**	**50**	**165**	**93**	**181**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	7.4 U	1 U	1.2 U	1.2 U	1.8 U	1.3 U	1.9 U
1,2-Dichloroethene, cis-	7.4 U	**2.3**	1.2 U	**2.3**	1.8 U	1.3 U	1.9 U
1,2-Dichloroethene, trans-	7.4 U	1 U	1.2 U	1.2 U	1.8 U	1.3 U	1.9 U
Benzene	7.4 U	1 U	1.2 U	1.2 U	**180**	1.3 U	1.9 U
Ethylbenzene	7.4 U	1 U	1.2 U	1.2 U	**4000**	**3.8**	1.9 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	7.4 U	1 U	1.2 U	1.2 U	**990**	1.3 U	1.9 U
Toluene	7.4 U	1 U	1.2 U	1.2 U	**10 J**	1.3 U	1.9 U
Trichloroethene (TCE)	7.4 U	1 U	1.2 U	1.2 U	1.8 U	1.3 U	1.9 U
Vinyl chloride	7.4 U	1 U	1.2 U	1.2 U	1.8 U	1.3 U	1.9 U
LWG RA Total Xylene (Calculated U = 1/2)	7.4 UT	1 UT	1.2 UT	1.2 UT	**1400 T**	1.3 UT	1.9 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**4300**	63 U	60 U	**66**	**110000**	**220**	**370**
Acenaphthene	**12000**	63 U	60 U	62 U	**110000**	**2700**	**1700**
Acenaphthylene	**490**	63 U	60 U	62 U	**4900**	**370**	**210**
Anthracene	**5500**	63 U	60 U	62 U	**89000**	**3700**	**2100**
Benzo(a)anthracene	**3900**	63 U	60 U	**230**	**55000**	**4500**	**2200**
Benzo(a)pyrene	**5000**	63 U	60 U	**380**	**44000**	**6300**	**2300**
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	**3200**	63 U	60 U	**380**	**14000**	**3200**	**1200 J**
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	**4800**	63 U	60 U	**300**	**69000**	**5800**	**3100 J**
Dibenzo(a,h)anthracene	190 U	63 U	60 U	62 U	**910**	200 U	190 U
Fluoranthene	**11000**	63 U	60 U	**610**	**190000**	**13000**	**6400 J**
Fluorene	**5900**	63 U	60 U	62 U	**66000**	**2000**	**1400**
Indeno(1,2,3-c,d)pyrene	**2500**	63 U	60 U	**240**	**13000**	**2700**	**980**
Naphthalene	**7300**	63 U	**260**	**270**	**62000**	**1900**	**830 J**
Phenanthrene	**34000**	63 U	60 U	**130**	**460000**	**14000**	**9800**
Pyrene	**13000**	63 U	60 U	**840**	**230000**	**15000**	**7500 J**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**6300 T**	63 UT	60 UT	**500 T**	**57000 T**	**7900 T**	**3000 JT**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-26SC	DGS-28SC	DGS-30SC	DGS-31SC	DGS-32SC	DGS-36SC	DGS-37SC
Sample Name:	DGS-26SC-0408-101011	DGS-28SC-0408-101007	DGS-30SC-0408-101006	DGS-31SC-0408-101011	DGS-32SC-0408-101011	DGS-36SC-0408-101012	DGS-37SC-0408-101011
Sample Date:	10/11/2010	10/7/2010	10/6/2010	10/11/2010	10/11/2010	10/12/2010	10/11/2010
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
Semivolatile Organics (µg/kg)							
Carbazole	**1000**	63 U	60 U	62 U	**22000**	**380**	190 U
Dibenzofuran	**970**	63 U	60 U	62 U	**8800**	**230**	**270**
PCB Aroclors (µg/kg)							
Aroclor 1016	32 U	33 U	32 U	31 U	63 U	32 U	32 U
Aroclor 1221	32 UJ	33 U	32 U	31 UJ	63 UJ	32 UJ	32 UJ
Aroclor 1232	32 U	33 U	32 U	31 U	95 U	32 U	32 U
Aroclor 1242	32 U	33 U	32 U	31 U	63 U	32 U	32 U
Aroclor 1248	32 U	33 U	32 U	31 U	63 U	32 U	160 U
Aroclor 1254	32 U	33 U	32 U	31 U	160 U	32 U	160 U
Aroclor 1260	32 U	33 U	32 U	31 U	**80**	32 U	130 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UJT	33 UT	32 UT	31 UJT	**330 JT**	32 UJT	160 UJT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	7.9 U	1.6 U	1.6 U	1.6 U	37 U	7.8 U	8.1 U
beta-Hexachlorocyclohexane (BHC)	7.9 U	1.6 U	1.6 U	1.6 U	16 U	12 U	8.1 U
Endrin ketone	16 U	3.3 U	3.2 U	3.2 U	32 U	16 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	7.9 U	1.6 U	1.6 U	1.6 U	16 U	7.8 U	8.1 U
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	3.3 UT	3.2 UT	3.2 UT	**430 JT**	16 UT	**160 T**
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	3.3 UT	3.2 UT	3.2 UT	120 UT	16 UT	**40 JT**
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	3.3 UT	3.2 UT	3.2 UT	32 UT	16 UT	**36 JT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**210**	5.7 U	6 U	6.7 U	**4300**	**170 J**	**170 J**
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	GS-01	GS-02	GS-03	GS-10	GS-11	GS-12	GTC-10
Sample Name:	GS-01-S (4-6)	GS-02-S (4-6)	GS-03-S (4-6)	GS-10-S (4-6)	GS-11-S (4-6)	GS-12-S (4-6)	GTC-10SC-090113
Sample Date:	12/21/2006	12/27/2006	12/18/2006	1/2/2007	1/5/2007	1/10/2007	1/14/2009
Depth Interval:	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	118.87 - 234.7 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**0.6 J**	**0.2 J**	**26.9 J**	**0.8 J**	**2.2 J**	0.3 UJ	--
Metals (mg/kg)							
Zinc	--	**72.7**	--	**107**	--	**63.8**	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.4 U	1.6 U	81 U	8600 U	150 U	1.4 U	6200 U
1,2-Dichloroethene, cis-	1.4 U	1.6 U	81 U	8600 U	150 U	1.4 U	--
1,2-Dichloroethene, trans-	1.4 U	1.6 U	81 U	8600 U	150 U	1.4 U	6200 U
Benzene	**0.31 J**	1.6 U	81 U	**28000**	**270**	1.4 U	6200 U
Ethylbenzene	**0.33 J**	1.6 U	**66 J**	**69000**	**4300**	1.4 U	**18000**
Naphthalene	--	--	--	--	--	--	**1400000**
o-Xylene	1.4 U	1.6 U	**18 J**	**21000**	**1600**	1.4 U	6200 U
Toluene	1.4 U	1.6 U	81 U	**3800 J**	**45 J**	1.4 U	6200 U
Trichloroethene (TCE)	1.4 U	1.6 U	81 U	8600 U	150 U	1.4 U	6200 U
Vinyl chloride	1.4 U	1.6 U	81 U	8600 U	150 U	1.4 U	6200 U
LWG RA Total Xylene (Calculated U = 1/2)	2.8 UT	1.6 UT	**58 JT**	**65000 T**	**2100 T**	1.4 UT	6200 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**9.7**	4.9 U	**1300**	**1600000**	**110000**	5 U	**180000**
Acenaphthene	**24**	**2.1 J**	**8800**	**1300000**	**120000**	**1.3 J**	**150000**
Acenaphthylene	**11**	**1.4 J**	**540**	**21000**	**5000**	**0.37 J**	**3100**
Anthracene	**43**	**6.2**	**9500**	**450000**	**84000**	**1.2 J**	**94000**
Benzo(a)anthracene	**88**	**8.7**	**9900**	**290000**	**59000**	**2.6 J**	**55000**
Benzo(a)pyrene	**100**	**8.7**	**12000**	**370000**	**54000**	**2.8 J**	**50000**
Benzo(b)fluoranthene	**90**	**6.2**	**8000**	**180000**	**29000**	**2.3 J**	**27000**
Benzo(g,h,i)perylene	**120**	**6.1**	**9800**	**180000**	**33000**	**2.7 J**	**24000**
Benzo(k)fluoranthene	**73**	**7.1**	**7100**	**140000**	**28000**	**1.8 J**	**32000**
Chrysene	**130**	**12**	**13000**	**380000**	**73000**	**3.5 J**	**68000**
Dibenzo(a,h)anthracene	**9.5**	**0.81 J**	**1000**	**27000**	**4400**	5 U	**4900**
Fluoranthene	**320**	**28**	**39000**	**1400000**	**190000**	**6.9**	**180000**
Fluorene	**31**	**4.1 J**	**7200**	**580000**	**66000**	**0.84 J**	**78000**
Indeno(1,2,3-c,d)pyrene	**97**	**5.6**	**8100**	**180000**	**33000**	**2.2 J**	**19000**
Naphthalene	**33**	**8.8**	**5500**	**5700000**	**270000**	7.7 U	**560000**
Phenanthrene	**320**	**37**	**52000**	**2800000**	**400000**	**6.4**	**540000**
Pyrene	**370**	**38**	**44000**	**1400000**	**230000**	**7.8**	**280000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**140 T**	**12 JT**	**16000 T**	**460000 T**	**71000 T**	**6 JT**	**65000 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	GS-01	GS-02	GS-03	GS-10	GS-11	GS-12	GTC-10
Sample Name:	GS-01-S (4-6)	GS-02-S (4-6)	GS-03-S (4-6)	GS-10-S (4-6)	GS-11-S (4-6)	GS-12-S (4-6)	GTC-10SC-090113
Sample Date:	12/21/2006	12/27/2006	12/18/2006	1/2/2007	1/5/2007	1/10/2007	1/14/2009
Depth Interval:	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	118.87 - 234.7 cm
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	6.5	0.75 J	860	78000	7700	0.36 J	10000
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	GTC-10	LW2-C252	LW2-C255	LW2-C258	LW2-C263	LW2-C264	LW2-C269
Sample Name:	GTC-10SC-090113RE	LW2-C252-C	LW2-C255-C	LW2-C258-C	LW2-C263-C	LW2-C264-C	LW2-C269-C
Sample Date:	1/14/2009	9/23/2004	10/27/2004	9/23/2004	10/1/2004	9/23/2004	10/28/2004
Depth Interval:	118.87 - 234.7 cm	154 - 252 cm	152 - 238 cm	153 - 276 cm	152 - 277 cm	156 - 220 cm	151 - 272 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	--	**68.8**	**43.5**	**66.7**	--	**109**	**134**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	390 U	--	--	--	56 U	0.12 U	0.15 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	390 U	--	--	--	65 U	0.27 U	0.34 U
Benzene	**700**	--	--	--	**140 J**	**0.19 J**	**1.2**
Ethylbenzene	**11000**	--	--	--	**1400**	0.1 U	**35**
Naphthalene	**720000**	--	--	--	**120000**	--	--
o-Xylene	**4500**	--	--	--	**340**	**0.17 J**	4.7 U
Toluene	390 U	--	--	--	46 U	0.21 U	**0.55 J**
Trichloroethene (TCE)	390 U	--	--	--	88 U	**0.65 J**	0.12 U
Vinyl chloride	390 U	--	--	--	99 U	0.12 U	0.16 U
LWG RA Total Xylene (Calculated U = 1/2)	**7100 T**	--	--	--	**430 JT**	**0.27 JT**	4.7 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	**17**	0.55 U	**340**	--	**540**	**7800**
Acenaphthene	--	**420**	0.21 U	**18000**	--	**8800**	**8900**
Acenaphthylene	--	**98**	0.29 U	**2900**	--	**160 J**	**370**
Anthracene	--	**270**	0.29 U	**12000**	--	**15000**	**7500**
Benzo(a)anthracene	--	**380**	0.21 U	**13000**	--	**41000**	**3900**
Benzo(a)pyrene	--	**530**	0.29 U	**19000**	--	**54000**	**4300**
Benzo(b)fluoranthene	--	**360**	0.62 U	**12000**	--	**46000**	**3800**
Benzo(g,h,i)perylene	--	**500**	0.3 U	**17000**	--	**34000**	**3500**
Benzo(k)fluoranthene	--	**290**	0.43 U	**11000**	--	**33000**	**1300**
Chrysene	--	**490**	0.53 U	**17000**	--	**44000**	**5000**
Dibenzo(a,h)anthracene	--	**56**	0.34 U	**1700**	--	**6100**	**390**
Fluoranthene	--	**950**	0.44 U	**50000**	--	**96000**	**16000**
Fluorene	--	**180**	0.25 U	**11000**	--	**4600**	**5000**
Indeno(1,2,3-c,d)pyrene	--	**410**	0.31 U	**15000**	--	**37000**	**3000**
Naphthalene	--	**45**	1.7 U	**860**	--	**610**	**920**
Phenanthrene	--	**980**	0.43 U	**41000**	--	**51000**	**33000**
Pyrene	--	**1200**	0.46 U	**52000**	--	**96000**	**19000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	**700 T**	0.34 UT	**25000 T**	--	**73000 T**	**5800 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	GTC-10	LW2-C252	LW2-C255	LW2-C258	LW2-C263	LW2-C264	LW2-C269
Sample Name:	GTC-10SC-090113RE	LW2-C252-C	LW2-C255-C	LW2-C258-C	LW2-C263-C	LW2-C264-C	LW2-C269-C
Sample Date:	1/14/2009	9/23/2004	10/27/2004	9/23/2004	10/1/2004	9/23/2004	10/28/2004
Depth Interval:	118.87 - 234.7 cm	154 - 252 cm	152 - 238 cm	153 - 276 cm	152 - 277 cm	156 - 220 cm	151 - 272 cm
Semivolatile Organics (µg/kg)							
Carbazole	--	**15**	1.7 U	**810**	--	**5700**	**1200**
Dibenzofuran	--	**22**	0.22 U	**1000**	--	**1900**	**560**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	1.66 U	1.17 U	1.33 UJ	16 U	1.53 UJ	3.54 U
Aroclor 1221	--	3.08 U	2.16 U	2.46 UJ	18 U	2.83 UJ	6.55 U
Aroclor 1232	--	2.78 U	1.95 U	2.23 UJ	47 U	2.56 UJ	5.92 U
Aroclor 1242	--	1.69 U	1.19 U	1.35 UJ	18 U	1.55 UJ	3.6 U
Aroclor 1248	--	**6.76**	1.52 U	1.73 UJ	9.9 U	**20.7 J**	7.08 U
Aroclor 1254	--	**15.4**	0.709 U	0.808 UJ	22 U	**29.1 J**	**126 J**
Aroclor 1260	--	**2.03 J**	0.91 U	**2.45 J**	44 U	1.19 UJ	**92.7 J**
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	**30.2 JT**	2.2 UT	**8.56 JT**	--	**56 JT**	**240 JT**
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	**0.0845 J**	--	--
PCB-081	--	--	--	--	**0.0853 J**	--	--
PCB-105	--	--	--	--	**0.438**	--	--
PCB-114	--	--	--	--	0.0996 U	--	--
PCB-123	--	--	--	--	**0.0467 J**	--	--
PCB-126	--	--	--	--	**0.0704 J**	--	--
PCB-156	--	--	--	--	**0.301**	--	--
PCB-157	--	--	--	--	**0.0678 J**	--	--
PCB-167	--	--	--	--	**0.139**	--	--
PCB-169	--	--	--	--	0.0775 U	--	--
PCB-189	--	--	--	--	0.0996 U	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	**55 JT**	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	**0.00827 JT**	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	0.445 U	**0.212 J**	0.176 UJ	--	0.204 U	0.238 U
beta-Hexachlorocyclohexane (BHC)	--	0.45 U	**0.575 NJ**	**3.25 J**	--	**5.57 J**	0.241 U
Endrin ketone	--	0.392 U	0.0276 U	0.155 U	--	0.179 U	0.21 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	**3.13 NJ**	0.0716 U	0.403 UJ	--	0.465 U	0.545 U
LWG RA Sum DDD (Calculated U = 1/2)	--	**72.5 JT**	**0.418 NJT**	**7.7 NJT**	--	**26.9 JNT**	**205 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	**6.8 JT**	**0.494 NJT**	0.24 UJT	--	**4.46 NJT**	**29.9 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	--	**28.7 NJT**	**0.134 JT**	**11 NJT**	--	**1.81 NJT**	**26.3 JNT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	**120 J**	--	**910 J**	--	**1300 J**	**1500 J**
Residual Range Hydrocarbons	--	**420 J**	--	**1000 J**	--	**3200 J**	**1400 J**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C270	LW2-C270	LW2-C272	LW2-C273	LW2-C276	LW2-C278	LW2-C283
Sample Name:	LW2-C270-C	LW2-C270-D	LW2-C272-C	LW2-C273-C	LW2-C276-C	LW2-C278-C	LW2-C283-C
Sample Date:	9/21/2004	9/21/2004	9/22/2004	10/20/2004	9/22/2004	10/19/2004	11/8/2004
Depth Interval:	87 - 182 cm	182 - 272 cm	152 - 260 cm	153 - 274 cm	153 - 268 cm	152 - 288 cm	151 - 258 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	149	44.3	43.4	93.1	83.6	132	103 T
Volatile Organics (µg/kg)							
1,1-Dichloroethene	0.14 U	--	--	0.14 U	1700 U	20 U	0.13 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	0.33 U	--	--	0.31 U	1900 U	23 U	0.3 U
Benzene	0.4 J	--	--	2.3	100000	18 U	80
Ethylbenzene	1.2	--	--	3.4	40000	680	2100
Naphthalene	--	--	--	--	--	--	400000
o-Xylene	2.6	--	--	9.7	21000	210	150
Toluene	0.34 J	--	--	0.56 U	38000	16 U	17
Trichloroethene (TCE)	1	--	--	0.11 U	2600 U	31 U	0.098 U
Vinyl chloride	0.15 U	--	--	0.14 U	2900 U	35 U	0.14 U
LWG RA Total Xylene (Calculated U = 1/2)	3.5 JT	--	--	14 T	68000 T	260 JT	230 T
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	900	9.4	3.3	13000	570000	50000	21000 J
Acenaphthene	14000	430	1.2 J	46000	360000	77000	34000 J
Acenaphthylene	1100	54	26	3200	260000	3500	1800 J
Anthracene	10000	230	15	31000	320000	37000	23000 J
Benzo(a)anthracene	13000	350	110	31000	210000	26000	19000 J
Benzo(a)pyrene	18000	580	150	49000	260000	33000	25000 J
Benzo(b)fluoranthene	13000	340	86	42000	180000	27000	21000 J
Benzo(g,h,i)perylene	16000	540	110	47000	200000	25000	23000 J
Benzo(k)fluoranthene	10000	280	95	13000	150000	9100	9400 J
Chrysene	17000	490	150	39000	310000	29000	22000 J
Dibenzo(a,h)anthracene	1600	47	11	3000	21000	2800	2300 J
Fluoranthene	44000	1100	120	130000	840000	79000	80000 J
Fluorene	8100	250	1.2 J	15000	300000	31000	15000 J
Indeno(1,2,3-c,d)pyrene	13000	460	91	36000	170000	25000	19000 J
Naphthalene	1600	46	12	52000	4000000	56000	--
Phenanthrene	54000	1600	3.6	150000	1900000	160000	150000 J
Pyrene	54000	1500	200	170000	970000	110000	110000 J
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	24000 T	750 T	190 T	63000 T	340000 T	44000 T	33000 JT

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C270	LW2-C270	LW2-C272	LW2-C273	LW2-C276	LW2-C278	LW2-C283
Sample Name:	LW2-C270-C	LW2-C270-D	LW2-C272-C	LW2-C273-C	LW2-C276-C	LW2-C278-C	LW2-C283-C
Sample Date:	9/21/2004	9/21/2004	9/22/2004	10/20/2004	9/22/2004	10/19/2004	11/8/2004
Depth Interval:	87 - 182 cm	182 - 272 cm	152 - 260 cm	153 - 274 cm	153 - 268 cm	152 - 288 cm	151 - 258 cm
Semivolatile Organics (µg/kg)							
Carbazole	**2800**	**14 J**	1.6 U	**2600**	**98000**	**7200**	**2800**
Dibenzofuran	**1300**	**37**	**0.47 J**	**1300**	**47000**	**5000**	**2000 J**
PCB Aroclors (µg/kg)							
Aroclor 1016	23.7 UJ	--	1.15 UJ	1.66 U	1.4 UJ	1.66 UJ	1.58 U
Aroclor 1221	23.7 UJ	--	2.13 UJ	3.08 U	2.81 UJ	3.31 UJ	2.93 U
Aroclor 1232	23.7 UJ	--	1.93 UJ	2.78 U	2.35 UJ	2.77 UJ	2.65 U
Aroclor 1242	23.7 UJ	--	1.17 UJ	1.69 U	1.43 UJ	1.68 UJ	1.61 U
Aroclor 1248	23.7 UJ	--	1.5 UJ	2.16 U	1.83 UJ	2.16 UJ	2.06 U
Aroclor 1254	23.7 UJ	--	2.31 UJ	1.01 U	0.852 UJ	**43.6 J**	0.961 U
Aroclor 1260	23.7 UJ	--	2.31 UJ	1.3 U	1.09 UJ	**27.3 J**	1.23 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	23.7 UJT	--	2.3 UJT	3.1 UT	2.8 UJT	**78.1 JT**	2.93 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	1.13 U	0.11 U	0.0309 U	0.437 U	0.965 U	0.444 U	0.834 U
beta-Hexachlorocyclohexane (BHC)	**9.95 NJ**	0.2 U	0.0312 U	0.442 U	**43.4 J**	**12.1 NJ**	0.843 U
Endrin ketone	0.996 U	0.077 U	0.0272 U	0.385 U	0.849 U	0.391 U	0.734 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	2.59 U	0.25 U	0.0705 U	0.998 U	2.2 U	1.01 U	1.9 U
LWG RA Sum DDD (Calculated U = 1/2)	**211 JNT**	**2 JT**	0.0445 UT	0.63 UT	**138 JNT**	**150 JNT**	**145 JNT**
LWG RA Sum DDE (Calculated U = 1/2)	**38.6 NJT**	**0.43 JT**	**0.072 JT**	**9.74 NJT**	**15.4 NJT**	**18 JNT**	**4.3 NJT**
LWG RA Sum DDT (Calculated U = 1/2)	**165 T**	0.36 UT	**0.11 T**	**45.2 NJT**	**135 JNT**	**7.3 JT**	**24.4 JT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**2000 J**	--	13 U	**4900 J**	**29000 J**	**5200 J**	**4200 J**
Residual Range Hydrocarbons	**2400 J**	--	8 U	**6000 J**	**15000 J**	**3500 J**	**3700 J**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C284	LW2-C284	LW2-C288	LW2-C289	LW2-C294	LW2-C299	LW2-C300-2
Sample Name:	LW2-C284-C	LW2-C284-D	LW2-C288-C	LW2-C289-C	LW2-C294-C	LW2-C299-C	LW2-C300-C
Sample Date:	9/22/2004	9/22/2004	10/20/2004	10/19/2004	10/19/2004	9/22/2004	10/27/2004
Depth Interval:	104 - 183 cm	183 - 292 cm	153 - 274 cm	155 - 206 cm	152 - 272 cm	104 - 230 cm	152 - 204 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	142	53.5	124	184	128	891	190
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1900 U	16 U	0.14 U	0.14 U	0.14 U	160 U	0.15 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	2200 U	18 U	0.33 U	0.33 U	0.32 U	190 U	0.33 U
Benzene	70000	14 U	1.3	4.8	6.5	1800	0.068 U
Ethylbenzene	31000	17 J	2	72	5.2	2700	0.13 U
Naphthalene	--	21000	--	--	64000 J	--	--
o-Xylene	15000	11 U	2.7	35	3.7	1300	0.19 U
Toluene	1600 U	13 U	0.57 U	2.2	0.86 J	1200	0.26 U
Trichloroethene (TCE)	3000 U	25 U	0.11 U	0.11 U	0.11 U	300000	0.11 U
Vinyl chloride	3400 U	28 U	0.15 U	0.15 U	0.15 U	280 U	0.15 U
LWG RA Total Xylene (Calculated U = 1/2)	49000 T	24 UT	4.5 T	45 T	5.7 T	3900 T	0.23 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	560000	780	6300	14000	6300	230000	13
Acenaphthene	600000	2900	28000	35000	24000	240000	140
Acenaphthylene	91000	680	2100	2700	1400	13000	34
Anthracene	370000	2500	23000	22000	22000	99000	49
Benzo(a)anthracene	280000	2300	21000	17000	18000	66000	170
Benzo(a)pyrene	340000	3000	29000	21000	24000	85000	220
Benzo(b)fluoranthene	230000	1900	26000	17000	20000	50000	210
Benzo(g,h,i)perylene	280000	2600	23000	16000	18000	72000	210
Benzo(k)fluoranthene	190000	1800	8500	5300	6500	54000	69
Chrysene	390000	2600	26000	19000	22000	86000	240
Dibenzo(a,h)anthracene	30000	250	2200	1900	2000	6700	24
Fluoranthene	1100000	10000	83000	60000	72000	260000	640
Fluorene	320000	1900	12000	17000	12000	100000	68
Indeno(1,2,3-c,d)pyrene	240000	2100	20000	15000	18000	59000	170
Naphthalene	4400000	--	3000	1200	--	1300000	32
Phenanthrene	2100000	17000	120000	100000	93000	590000	740
Pyrene	1300000	12000	100000	72000	86000	360000	730
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	450000 T	3900 T	38000 T	28000 T	32000 T	110000 T	300 T

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C284	LW2-C284	LW2-C288	LW2-C289	LW2-C294	LW2-C299	LW2-C300-2
Sample Name:	LW2-C284-C	LW2-C284-D	LW2-C288-C	LW2-C289-C	LW2-C294-C	LW2-C299-C	LW2-C300-C
Sample Date:	9/22/2004	9/22/2004	10/20/2004	10/19/2004	10/19/2004	9/22/2004	10/27/2004
Depth Interval:	104 - 183 cm	183 - 292 cm	153 - 274 cm	155 - 206 cm	152 - 272 cm	104 - 230 cm	152 - 204 cm
Semivolatile Organics (µg/kg)							
Carbazole	**130000**	**1000**	**3100**	**4900**	**3400**	**30000**	**7.7 J**
Dibenzofuran	**55000**	**280**	**1300**	**2800**	**1700**	**17000**	**9.1**
PCB Aroclors (µg/kg)							
Aroclor 1016	3.09 UJ	1.35 U	1.79 U	--	1.72 U	480 U	--
Aroclor 1221	6.2 UJ	2.5 U	3.32 U	--	3.18 U	580 U	--
Aroclor 1232	5.18 UJ	2.26 U	3 U	--	2.88 U	340 U	--
Aroclor 1242	3.15 UJ	1.37 U	1.82 U	--	1.75 U	260 U	--
Aroclor 1248	4.03 UJ	1.76 U	2.33 U	--	2.24 U	160 U	--
Aroclor 1254	1.88 UJ	0.82 U	1.09 U	--	1.04 U	320 U	--
Aroclor 1260	2.41 UJ	1.05 U	1.4 U	--	1.34 U	230 U	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	6.2 UJT	2.5 UT	3.3 UT	--	3.18 UT	580 UT	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	1.06 U	0.181 U	0.469 U	--	0.458 U	9 U	--
beta-Hexachlorocyclohexane (BHC)	**45.8 J**	**0.734 NJ**	0.474 U	--	**6.92 J**	16 U	--
Endrin ketone	0.935 U	0.16 U	0.413 U	--	0.403 U	2.6 U	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	2.43 U	0.414 U	1.07 U	--	1.05 U	4.2 U	--
LWG RA Sum DDD (Calculated U = 1/2)	**193 NJT**	**2.24 NJT**	**17.8 JT**	--	**10.8 JT**	**55 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	**22.6 NJT**	0.245 UT	**2.2 NJT**	--	**5.6 NJT**	24 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	**185 NJT**	**2.48 JNT**	**30.4 JNT**	--	**21.6 NJT**	**62 NJT**	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**38000 J**	**140 J**	**3800 J**	**4600 J**	**2850 JT**	**8400 J**	**300 J**
Residual Range Hydrocarbons	**20000 J**	**110 J**	**4900 J**	**3800 J**	**3400 JT**	**3300 J**	**670 J**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C300-2	LW2-C301	LW2-C302	LW2-C305	LW2-C311	LW2-C312	LW2-C521
Sample Name:	LW2-C300-D	LW2-C301-C	LW2-C302-C	LW2-C305-C1	LW2-C311-C	LW2-C312-C	LW2-C521-C
Sample Date:	10/27/2004	11/8/2004	9/22/2004	10/19/2004	11/9/2004	10/19/2005	10/19/2004
Depth Interval:	204 - 278 cm	153 - 231 cm	198 - 288 cm	160 - 220 cm	153 - 276 cm	152 - 245 cm	99 - 182 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	77.9	67.9	47.7	65.4	153	51.3	103
Volatile Organics (µg/kg)							
1,1-Dichloroethene	0.11 U	8400 U	3200 U	0.11 U	0.15 U	0.11 U	1700 UJ
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	0.26 U	9800 U	3700 U	0.26 U	0.34 U	0.24 U	1900 U
Benzene	0.15 J	160000	94000	2	0.52 J	0.049 U	23000
Ethylbenzene	0.098 J	140000	90000	1.1	0.13 U	0.089 U	28000
Naphthalene	--	18000000	--	--	--	--	--
o-Xylene	0.14 U	48000	27000	1.1	0.98 U	0.094 U	11000
Toluene	0.21 U	87000	39000	0.56 U	0.27 U	0.19 U	5000 J
Trichloroethene (TCE)	1	14000 U	5000 U	1	0.23 J	0.078 U	2600 U
Vinyl chloride	0.12 U	15000 U	5600 U	0.12 U	0.15 U	0.11 U	2900 U
LWG RA Total Xylene (Calculated U = 1/2)	0.25 UT	150000 T	78000 T	1.9 JT	1.5 T	0.17 UT	35000 T
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	36	1800000 J	3800000	120	120 J	1.7 J	510000
Acenaphthene	470	2600000 J	3900000	1000	500 J	0.66 J	480000
Acenaphthylene	95	240000 J	940000	190	92 J	0.34 J	79000
Anthracene	360	1100000 J	1300000	870	880 J	0.67 J	240000
Benzo(a)anthracene	510	600000 J	760000	880	1400 J	1.8 J	180000
Benzo(a)pyrene	580	690000 J	940000	1100 J	2100 J	2.7	220000
Benzo(b)fluoranthene	510	590000 J	580000	850 J	1900 J	1.6 J	180000
Benzo(g,h,i)perylene	420	500000 J	730000	890 J	1800 J	2.2 J	170000
Benzo(k)fluoranthene	170	240000 J	540000	290 J	580 J	1.7 J	58000
Chrysene	610	690000 J	980000	1000	1900 J	2.1 J	190000
Dibenzo(a,h)anthracene	52	66000 J	67000	120 J	180 J	0.33 U	21000
Fluoranthene	1700	2900000 J	3500000	2800	5600 J	3.9	690000
Fluorene	340	1300000 J	1500000	650	400 J	1.4 J	210000
Indeno(1,2,3-c,d)pyrene	360	490000 J	610000	870 J	1700 J	1.7 J	170000
Naphthalene	110	--	20000000	180	190 J	12	3600000
Phenanthrene	3200	5400000 J	8500000	4300	6800 J	3.6	1100000
Pyrene	2100	3600000 J	4700000	3800	6300 J	5.4	810000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	770 T	930000 JT	1200000 T	1500 JT	2800 JT	3.4 JT	290000 T

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C300-2	LW2-C301	LW2-C302	LW2-C305	LW2-C311	LW2-C312	LW2-C521
Sample Name:	LW2-C300-D	LW2-C301-C	LW2-C302-C	LW2-C305-C1	LW2-C311-C	LW2-C312-C	LW2-C521-C
Sample Date:	10/27/2004	11/8/2004	9/22/2004	10/19/2004	11/9/2004	10/19/2005	10/19/2004
Depth Interval:	204 - 278 cm	153 - 231 cm	198 - 288 cm	160 - 220 cm	153 - 276 cm	152 - 245 cm	99 - 182 cm
Semivolatile Organics (µg/kg)							
Carbazole	**9.4 J**	**520000**	**490000**	**140 J**	**37 J**	1.7 U	**69000**
Dibenzofuran	**21**	**190000 J**	**230000**	**67**	**48 J**	**0.59 J**	**33000**
PCB Aroclors (µg/kg)							
Aroclor 1016	1.5 U	13.9 U	846 UJ	1.38 U	1.79 U	1.4 U	--
Aroclor 1221	1.5 U	25.7 U	846 UJ	2.77 U	3.32 U	1.4 U	--
Aroclor 1232	1.5 U	23.2 U	846 UJ	2.31 U	3 U	1.4 U	--
Aroclor 1242	1.5 U	14.1 U	846 UJ	1.4 U	1.83 U	1.4 U	--
Aroclor 1248	**8.5 NJ**	18.1 U	846 UJ	1.8 U	2.34 U	1.4 U	--
Aroclor 1254	**19**	8.43 U	846 UJ	0.839 U	1.09 U	1.4 U	--
Aroclor 1260	**21**	10.8 U	846 UJ	1.08 U	1.4 U	1.4 U	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**53 NJT**	26 UT	--	2.8 UT	3.3 UT	1.4 UT	--
PCB Congeners (µg/kg)							
PCB-077	--	--	**0.061 J**	--	--	--	--
PCB-081	--	--	0.259 U	--	--	--	--
PCB-105	--	--	**0.206 J**	--	--	--	--
PCB-114	--	--	0.259 U	--	--	--	--
PCB-123	--	--	0.259 U	--	--	--	--
PCB-126	--	--	0.259 U	--	--	--	--
PCB-156	--	--	**0.0812 J**	--	--	--	--
PCB-157	--	--	0.0458 U	--	--	--	--
PCB-167	--	--	**0.0396 J**	--	--	--	--
PCB-169	--	--	0.0091 U	--	--	--	--
PCB-189	--	--	0.02 U	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	**33 JT**	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	**0.013 JT**	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	0.5 U	14.9 U	7.61 U	0.183 U	0.47 U	0.097 U	1.5 U
beta-Hexachlorocyclohexane (BHC)	**2.6 NJ**	15.1 U	**318 NJ**	**1.53**	**2.17 J**	0.79 U	1.7 U
Endrin ketone	1.4 U	13.2 U	6.7 U	0.161 U	0.413 U	0.2 UJ	9.7 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.6 U	34.1 U	17.4 U	0.419 U	1.07 U	0.2 U	**9.6**
LWG RA Sum DDD (Calculated U = 1/2)	**7 JT**	**1110 JNT**	**780 JT**	**83.8 JT**	**3.31 JT**	**0.72 T**	**36 NJT**
LWG RA Sum DDE (Calculated U = 1/2)	**1.8 JT**	**109 NJT**	**52.4 JT**	**13.6 JT**	**4.51 NJT**	**0.089 NJT**	6.4 UT
LWG RA Sum DDT (Calculated U = 1/2)	**4.8 T**	**1100 JT**	**519 NJT**	**1870 JT**	**1.81 NJT**	**0.52 NJT**	**17 JT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**110 J**	**190000 J**	**130000 J**	**210 J**	**870 J**	4.3 UT	**23000 J**
Residual Range Hydrocarbons	**160 J**	**110000 J**	**44000 J**	**230 J**	**1300 J**	4 UT	**11000 J**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C521	LW2-C525	LW2-C527	LW2-C528	LW3-C658	LW3-C662	LW3-C662
Sample Name:	LW2-C521-D	LW2-C525-C	LW2-C527-C	LW2-C528-C	LW3-C658-C	LW3-C662-C	LW3-C662-D
Sample Date:	10/19/2004	10/26/2005	10/26/2005	10/26/2005	12/14/2007	1/17/2008	1/17/2008
Depth Interval:	182 - 280 cm	127 - 236 cm	152 - 250 cm	152 - 274 cm	151 - 273 cm	82 - 181 cm	181 - 256 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	--	139	213	181	37.3	114	56.5
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	0.15 U	0.16 U	0.16 U	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	0.33 U	0.36 U	0.37 U	--	--	--
Benzene	--	8.6	0.073 U	0.084 U	--	--	--
Ethylbenzene	--	42	0.14 U	0.14 U	--	--	--
Naphthalene	--	3100	--	--	--	--	--
o-Xylene	--	7.5	0.53 J	0.8 J	--	--	--
Toluene	--	1 U	0.28 U	0.29 U	--	--	--
Trichloroethene (TCE)	--	0.11 U	0.12 U	0.12 U	--	--	--
Vinyl chloride	--	0.15 U	0.16 U	0.17 U	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	10 T	0.66 JT	1.1 JT	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	33000	930	77	120	0.39 U	2200000	87000
Acenaphthene	20000	2300	360	690	0.23 U	2200000	37000
Acenaphthylene	31000	270	150	180	0.24 U	88000	92000 J
Anthracene	22000	3500	390	700	0.48 J	830000	73000
Benzo(a)anthracene	18000	3200	1500	1800	0.48 U	490000	54000
Benzo(a)pyrene	26000	4400	2000	2200	0.25 J	570000	64000
Benzo(b)fluoranthene	14000	2600	1700	1800	0.42 J	520000	59000
Benzo(g,h,i)perylene	19000	3400	1900	2200	0.64 U	380000	51000
Benzo(k)fluoranthene	12000	2300	1300	1500	0.22 J	150000	18000
Chrysene	24000	4100	2000	2300	0.42 U	530000	62000
Dibenzo(a,h)anthracene	2000	440	230	220	0.28 U	44000	5700
Fluoranthene	77000	8400	3800	4900	0.83 U	1900000	230000
Fluorene	26000	1600	270	570	0.5 U	860000	62000
Indeno(1,2,3-c,d)pyrene	17000	3200	1900	2200	0.47 U	410000	48000
Naphthalene	240000	--	180	190	0.7 U	12000000	560000
Phenanthrene	140000	12000	2100	4100	1.1 U	4300000	390000
Pyrene	83000	11000	4000	5300	0.8 U	2000000	230000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	33000 T	5800 T	2800 T	3000 T	0.48 JT	760000 T	86000 T

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C521	LW2-C525	LW2-C527	LW2-C528	LW3-C658	LW3-C662	LW3-C662
Sample Name:	LW2-C521-D	LW2-C525-C	LW2-C527-C	LW2-C528-C	LW3-C658-C	LW3-C662-C	LW3-C662-D
Sample Date:	10/19/2004	10/26/2005	10/26/2005	10/26/2005	12/14/2007	1/17/2008	1/17/2008
Depth Interval:	182 - 280 cm	127 - 236 cm	152 - 250 cm	152 - 274 cm	151 - 273 cm	82 - 181 cm	181 - 256 cm
Semivolatile Organics (µg/kg)							
Carbazole	**6700**	**810**	**170**	**210**	1.3 U	**210000**	**24000 J**
Dibenzofuran	**3800**	**150**	**78**	**170**	0.59 U	**140000**	**9400**
PCB Aroclors (µg/kg)							
Aroclor 1016	5 U	9.3 U	14 U	11 U	1.3 U	6.3 U	2.5 UJ
Aroclor 1221	10 U	40 U	120 U	11 U	1.3 U	6.3 U	6.3 UJ
Aroclor 1232	8.5 U	14 U	29 U	11 U	1.3 U	6.3 U	10 UJ
Aroclor 1242	2.6 U	16 U	19 U	11 U	1.3 U	**25 J**	4.3 UJ
Aroclor 1248	2 U	8.9 U	13 U	**66**	1.3 U	6.3 U	1.9 UJ
Aroclor 1254	4.6 U	120 U	46 U	**120**	1.3 U	30 U	4 UJ
Aroclor 1260	2.1 U	**71**	**32**	**79**	1.3 U	**52 J**	0.91 UJ
LWG RA Total PCB Aroclors (Calculated U = 1/2)	10 UT	**210 T**	**160 T**	**300 T**	1.3 UT	**120 JT**	10 UJT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	1.9 U	1.4 U	1.6 U	3 U	0.097 U	**38 J**	9.7 U
beta-Hexachlorocyclohexane (BHC)	2 U	2.1 U	**9.1**	4.6 U	0.14 U	46 U	14 U
Endrin ketone	5.8 U	**5.6**	**1.7 J**	6.2 U	0.029 U	**260 NJ**	22 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	2.6 U	3.5 U	2 U	4.5 U	0.062 U	77 U	41 U
LWG RA Sum DDD (Calculated U = 1/2)	13 UT	**100 T**	**27 T**	**130 JT**	0.16 UT	**1700 JT**	**85 NJT**
LWG RA Sum DDE (Calculated U = 1/2)	5.5 UT	**51 NJT**	**9 T**	11 UT	0.046 UT	**530 JT**	16 UT
LWG RA Sum DDT (Calculated U = 1/2)	5.7 UT	15 UT	**11 T**	7.5 UT	0.18 UT	**170 T**	18 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	**990 J**	**520 J**	**670 J**	1.6 U	**110000 J**	**7700 J**
Residual Range Hydrocarbons	--	**1500 J**	**1300 J**	**1300 J**	5.9 U	**37000 J**	**3700 J**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	WLCGSG07GSB2	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSC2	WLCGSG07GSC5	WLCGSG07GSC7	WLCGSG07GSD2
Sample Name:	WLCGSG07GSB2S57	WLCGSG07GSB5S57	WLCGSG07GSB7S57	WLCGSG07GSC2S57	WLCGSG07GSC5S57	WLCGSG07GSC7S57	WLCGSG07GSD2S57
Sample Date:	9/21/2007	9/21/2007	8/30/2007	9/21/2007	9/20/2007	9/19/2007	9/20/2007
Depth Interval:	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**0.46**	**0.13 J**	**1.6**	0.06 U	**0.2 J**	0.06 UJ	0.06 UJ
Metals (mg/kg)							
Zinc	**209**	**110**	**182**	**49.4**	**48.2**	**78**	**38.8**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	0.14 U	0.11 U	300 U	0.078 U	0.074 U	110 U	0.069 U
1,2-Dichloroethene, cis-	0.24 U	0.19 U	300 U	0.14 U	0.13 U	98 U	0.13 U
1,2-Dichloroethene, trans-	0.2 U	0.16 U	360 U	0.12 U	0.11 U	120 U	0.11 U
Benzene	0.19 U	0.15 U	**14000**	0.11 U	0.11 U	**23000**	0.095 U
Ethylbenzene	0.15 U	**5.4**	**13000**	0.089 U	0.084 U	**65000**	0.079 U
Naphthalene	**--**	**--**	**--**	**2600 J**	0.18 U	**810000 J**	0.17 U
o-Xylene	**1.9 J**	**5.1**	**5300**	0.078 U	0.074 U	**18000**	0.069 U
Toluene	**1 J**	**0.97 J**	**480 J**	**0.19 J**	**2.9**	**420 J**	**0.29 J**
Trichloroethene (TCE)	0.17 U	0.14 U	480 U	0.096 U	**0.49 J**	160 U	0.085 U
Vinyl chloride	0.22 U	0.18 U	540 U	0.13 U	0.13 U	180 U	0.12 U
LWG RA Total Xylene (Calculated U = 1/2)	**4.2 JT**	**6.4 JT**	**12000 T**	0.21 UT	0.2 UT	**48000 T**	0.19 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**590**	**2200**	**320000 J**	**570**	**1.2 J**	**240000**	**1.3 J**
Acenaphthene	**4400**	**11000**	**420000 J**	**7300**	**8**	**260000**	**2.8 J**
Acenaphthylene	**300**	**510**	**10000 J**	**1200**	**1 J**	**6700**	**0.53 J**
Anthracene	**5100**	**10000**	**200000 J**	**5000**	**7.1**	**110000**	**3.3 J**
Benzo(a)anthracene	**12000**	**11000**	**130000 J**	**7600**	**10**	**55000**	**4.1 J**
Benzo(a)pyrene	**16000**	**19000**	**140000 J**	**10000**	**9.1**	**71000**	**4.1 J**
Benzo(b)fluoranthene	**16000**	**15000**	**130000 J**	**9100**	**9.5**	**60000**	**4.5 J**
Benzo(g,h,i)perylene	**11000**	**20000**	**100000 J**	**8000**	**7.9**	**50000**	**4.5 J**
Benzo(k)fluoranthene	**5300**	**4400**	**34000 J**	**3000**	**3 J**	**19000**	**1.7 J**
Chrysene	**12000**	**13000**	**120000 J**	**7600**	**12**	**68000**	**4.6 J**
Dibenzo(a,h)anthracene	**1800**	**1300**	**11000 J**	**1000**	**1.3 J**	**6700**	**1.3 J**
Fluoranthene	**35000**	**58000**	**510000 J**	**32000**	**43**	**280000**	**12**
Fluorene	**2400**	**4500**	**170000 J**	**3300**	**4.5 J**	**100000**	**1.7 J**
Indeno(1,2,3-c,d)pyrene	**11000**	**16000**	**100000 J**	**7800**	**7.1**	**49000**	**4.3 J**
Naphthalene	**760 J**	**3400 J**	**1300000**	**--**	**--**	**--**	**--**
Phenanthrene	**25000**	**54000**	**1100000 J**	**22000**	**37**	**620000**	**17**
Pyrene	**33000**	**60000**	**580000 J**	**40000**	**46**	**290000**	**13**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**22000 T**	**25000 T**	**190000 JT**	**13000 T**	**13 JT**	**94000 T**	**6.7 JT**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	WLCGSG07GSB2	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSC2	WLCGSG07GSC5	WLCGSG07GSC7	WLCGSG07GSD2
Sample Name:	WLCGSG07GSB2S57	WLCGSG07GSB5S57	WLCGSG07GSB7S57	WLCGSG07GSC2S57	WLCGSG07GSC5S57	WLCGSG07GSC7S57	WLCGSG07GSD2S57
Sample Date:	9/21/2007	9/21/2007	8/30/2007	9/21/2007	9/20/2007	9/19/2007	9/20/2007
Depth Interval:	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	**680**	**470**	**26000 J**	**150**	0.76 U	**17000**	0.71 U
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	**64000**	--	--	--	--
Residual Range Hydrocarbons	--	--	**25000**	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	WLCGSG07GSD4	WLCGSJ06GS04	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS09	WLCMRD08SDDA17SB	WLCMRD08SDDB20SB
Sample Name:	WLCGSG07GSD4S57	WLCGSJ06GS04S46	WLCGSJ06GS06S46	WLCGSJ06GS07S46	WLCGSJ06GS09S46	WLCMRD08DA17-3	WLCMRD08DB20-3
Sample Date:	9/20/2007	12/12/2006	1/17/2007	10/16/2006	10/5/2006	4/20/2008	4/19/2008
Depth Interval:	152.4 - 213.4 cm	121.9 - 182.9 cm	121.9 - 182.9 cm	121.9 - 182.9 cm	121.9 - 182.9 cm	213 - 274.32 cm	182.88 - 243.84 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**0.08 J**	**0.3 J**	**1.4 T**	**4.7**	0.2 UJ	**0.26 J**	**2.63**
Metals (mg/kg)							
Zinc	**48.4**	**70.4**	**66.2 T**	**--**	**--**	**63.1**	**191**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	0.069 U	1.7 U	1.2 UT	2300 U	69 U	**--**	**--**
1,2-Dichloroethene, cis-	0.13 U	1.7 U	1.2 UT	2300 U	69 U	**--**	**--**
1,2-Dichloroethene, trans-	0.11 U	1.7 U	1.2 UT	2300 U	69 U	**--**	**--**
Benzene	0.095 U	1.7 U	**19 T**	**3000**	69 U	**--**	**--**
Ethylbenzene	0.079 U	1.7 UJ	**26 T**	**14000**	**56 J**	**--**	**--**
Naphthalene	0.17 U	1.7 UJ	**--**	**--**	**--**	**--**	**--**
o-Xylene	0.069 U	1.7 UJ	**10 T**	**9000**	**30 J**	**--**	**--**
Toluene	**0.21 J**	1.7 U	**1.6 T**	**1200 J**	69 U	**--**	**--**
Trichloroethene (TCE)	0.085 U	1.7 U	1.2 UT	2300 U	69 U	**--**	**--**
Vinyl chloride	0.12 U	1.7 U	1.2 UT	2300 U	69 U	**--**	**--**
LWG RA Total Xylene (Calculated U = 1/2)	0.19 UT	3.4 UJT	**17 T**	**25000 T**	**65 JT**	**--**	**--**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**0.99 J**	5 U	**10000 T**	**1400000**	**21000**	**1.1 J**	**140**
Acenaphthene	**1.8 J**	**4.3 J**	**15000 T**	**550000**	**31000**	**33**	**600**
Acenaphthylene	0.29 U	**9.9**	**960 T**	**42000**	**2000**	**2.2 J**	**98**
Anthracene	**1.3 J**	**9.4**	**8600 T**	**490000**	**17000**	**26**	**590**
Benzo(a)anthracene	**2.5 J**	**160**	**9100 T**	**300000**	**12000**	**29**	**1600**
Benzo(a)pyrene	**2.3 J**	**170**	**12000 T**	**290000**	**15000**	**46**	**2100**
Benzo(b)fluoranthene	**2.5 J**	**130**	**7900 T**	**160000**	**8700**	**40**	**2200**
Benzo(g,h,i)perylene	**2.4 J**	**130**	**8600 T**	**170000**	**10000**	**42**	**1900**
Benzo(k)fluoranthene	**0.8 J**	**120**	**5400 T**	**150000**	**8400**	**13**	**750**
Chrysene	**2.4 J**	**210**	**11000 T**	**350000**	**15000**	**41**	**2000**
Dibenzo(a,h)anthracene	**0.38 J**	**16**	**1000 T**	**20000**	**1000**	**3.7**	**310**
Fluoranthene	**6.7**	**560**	**31000 T**	**920000**	**44000**	**120**	**3900**
Fluorene	**0.72 J**	**5.9**	**8800 T**	**390000**	**15000**	**11**	**430**
Indeno(1,2,3-c,d)pyrene	**2.2 J**	**110**	**7900 T**	**160000**	**9600**	**39**	**1900**
Naphthalene	**--**	**--**	**10000 T**	**2500000**	**5000**	**9.6**	**260**
Phenanthrene	**7.6**	**18**	**53000 T**	**2300000**	**85000**	**130**	**3200**
Pyrene	**7.2**	**660**	**38000 T**	**1200000**	**49000**	**150**	**4400**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**3.4 JT**	**230 T**	**16000 T**	**370000 T**	**19000 T**	**61 T**	**3000 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	WLCGSG07GSD4	WLCGSJ06GS04	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS09	WLCMRD08SDDA17SB	WLCMRD08SDDB20SB
Sample Name:	WLCGSG07GSD4S57	WLCGSJ06GS04S46	WLCGSJ06GS06S46	WLCGSJ06GS07S46	WLCGSJ06GS09S46	WLCMRD08DA17-3	WLCMRD08DB20-3
Sample Date:	9/20/2007	12/12/2006	1/17/2007	10/16/2006	10/5/2006	4/20/2008	4/19/2008
Depth Interval:	152.4 - 213.4 cm	121.9 - 182.9 cm	121.9 - 182.9 cm	121.9 - 182.9 cm	121.9 - 182.9 cm	213 - 274.32 cm	182.88 - 243.84 cm
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	**11**	**140**
Dibenzofuran	0.71 U	5 U	**1700 T**	**64000**	**2400**	**1.2 J**	**180**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	2.5 U	3 U
Aroclor 1221	--	--	--	--	--	5 U	5.9 U
Aroclor 1232	--	--	--	--	--	2.5 U	3 U
Aroclor 1242	--	--	--	--	--	2.5 U	32 U
Aroclor 1248	--	--	--	--	--	2.5 U	3 U
Aroclor 1254	--	--	--	--	--	2.5 U	**100**
Aroclor 1260	--	--	--	--	--	2.5 U	**74**
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	5 UT	**200 T**
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.2 U	1.2 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.2 U	1.2 U
Endrin ketone	--	--	--	--	--	0.2 U	**6.9 J**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	0.2 U	**4**
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	**0.65 JT**	**47 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	0.2 UT	**17 T**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	0.2 UT	**12 T**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	14 U	**310**
Residual Range Hydrocarbons	--	--	--	--	--	140 U	**510**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	D:_8-12_feet
System Location Code:	WLCMRD08SDDB22SB	WLCMRD08SDDC25SB	WLCSLH01GP25	WLCSLH01GP28	WLCSLH01GP31	WLCSLH01GP32	DGS-03SC
Sample Name:	WLCMRD08DB22-3	WLCMRD08DC25-3	WLCSLH01GP25S6	WLCSLH01GP28S5	WLCSLH01GP31S7	WLCSLH01GP32S6	DGS-03SC-0812-101005
Sample Date:	4/19/2008	4/19/2008	9/28/2004	10/13/2004	10/26/2004	10/27/2004	10/5/2010
Depth Interval:	182.88 - 243.84 cm	152.4 - 243.84 cm	182.9 - 198.1 cm	152.4 - 167.6 cm	213.4 - 228.6 cm	182.9 - 198.1 cm	243.84 - 365.76 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**52.7**	**129**	--	--	--	--	**0.603**
Metals (mg/kg)							
Zinc	**223**	**298**	--	--	--	--	**53 J**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	--	173 U	15.4 U	12.4 U	15.9 U	1.2 U
1,2-Dichloroethene, cis-	--	--	173 U	15.4 U	**255**	15.9 U	1.2 U
1,2-Dichloroethene, trans-	--	--	173 U	15.4 U	12.4 U	15.9 U	1.2 U
Benzene	--	--	173 U	15.4 U	**64.6**	**43.6**	1.2 U
Ethylbenzene	--	--	173 U	15.4 U	**2050**	**171**	1.2 U
Naphthalene	--	--	--	**86.7**	--	--	--
o-Xylene	--	--	173 U	15.4 U	**425**	**30.9**	1.2 U
Toluene	--	--	173 U	15.4 U	**79.8**	**18.3**	1.2 U
Trichloroethene (TCE)	--	--	173 U	15.4 U	**19.4**	15.9 U	1.2 U
Vinyl chloride	--	--	173 U	15.4 U	12.4 U	15.9 U	1.2 U
LWG RA Total Xylene (Calculated U = 1/2)	--	--	345 UT	30.8 UT	**900 T**	**46.8 T**	1.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**240**	**530**	**29900**	103 U	**320000**	**44800**	62 U
Acenaphthene	**970**	**1100**	**23800**	**1780**	**317000**	**66100**	**210**
Acenaphthylene	**290**	**620**	**1620**	**211**	**10500**	**1610**	62 U
Anthracene	**1500**	**2200**	**17600**	**1250**	**123000**	**45900**	62 U
Benzo(a)anthracene	**3200**	**7100**	**13000**	**1050**	**74400**	**30700**	**95**
Benzo(a)pyrene	**3900**	**8600**	**11400**	**978**	**76300**	**27200**	**110**
Benzo(b)fluoranthene	**4700**	**10000**	**11000**	**886**	**56300**	**25500**	--
Benzo(g,h,i)perylene	**4500**	**9400**	**5220**	**848**	**64800**	**18000**	**65**
Benzo(k)fluoranthene	**1700**	**3400**	**1550**	**364**	**24700**	**7550**	--
Chrysene	**4200**	**9500**	**14400**	**1150**	**90400**	**31300**	**150**
Dibenzo(a,h)anthracene	**650**	**1300**	**1140**	**143**	**8430**	**3290**	62 U
Fluoranthene	**8400**	**16000**	**28700**	**2860**	**267000**	**77900**	**160**
Fluorene	**860**	**1200**	**15700**	**1440**	**124000**	**35500**	62 U
Indeno(1,2,3-c,d)pyrene	**4400**	**9400**	**4380**	**584**	**36300**	**13100**	62 U
Naphthalene	**370**	**1900**	**5710**	--	**1390000**	**100000**	62 U
Phenanthrene	**6600**	**11000**	**48600**	**3170**	**490000**	**162000**	**280**
Pyrene	**9700**	**19000**	**39700**	**2380**	**275000**	**92000**	**300**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**5800 T**	**13000 T**	**15000 T**	**1380 T**	**102000 T**	**37500 T**	**160 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	D:_8-12_feet
System Location Code:	WLCMRD08SDDB22SB	WLCMRD08SDDC25SB	WLCSLH01GP25	WLCSLH01GP28	WLCSLH01GP31	WLCSLH01GP32	DGS-03SC
Sample Name:	WLCMRD08DB22-3	WLCMRD08DC25-3	WLCSLH01GP25S6	WLCSLH01GP28S5	WLCSLH01GP31S7	WLCSLH01GP32S6	DGS-03SC-0812-101005
Sample Date:	4/19/2008	4/19/2008	9/28/2004	10/13/2004	10/26/2004	10/27/2004	10/5/2010
Depth Interval:	182.88 - 243.84 cm	152.4 - 243.84 cm	182.9 - 198.1 cm	152.4 - 167.6 cm	213.4 - 228.6 cm	182.9 - 198.1 cm	243.84 - 365.76 cm
Semivolatile Organics (µg/kg)							
Carbazole	**380**	**1100**	**8460**	**147**	**33900**	**5130**	62 U
Dibenzofuran	**240**	**290**	**2080**	**622**	**20500**	**1920**	62 U
PCB Aroclors (µg/kg)							
Aroclor 1016	49 U	2.7 U	--	--	--	--	32 U
Aroclor 1221	93 U	5.3 U	--	--	--	--	32 U
Aroclor 1232	27 U	2.7 U	--	--	--	--	32 U
Aroclor 1242	85 U	15 U	--	--	--	--	32 U
Aroclor 1248	13 U	2.7 U	--	--	--	--	32 U
Aroclor 1254	**42 J**	**56 J**	--	--	--	--	32 U
Aroclor 1260	**53**	**25 J**	--	--	--	--	32 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**240 JT**	**98 JT**	--	--	--	--	32 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	0.97 U	2.2 U	--	--	--	--	1.6 U
beta-Hexachlorocyclohexane (BHC)	4.5 U	2.2 U	--	--	--	--	1.6 U
Endrin ketone	0.97 U	**8.5 J**	--	--	--	--	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**6.2 J**	15 U	--	--	--	--	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	**82 JT**	**81 JT**	--	--	--	--	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	**18 JT**	**5.6 JT**	--	--	--	--	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	**64 T**	6.7 UT	--	--	--	--	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**620**	**770**	--	--	--	--	6.8 U
Residual Range Hydrocarbons	**940**	**1200**	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC	DGS-18SC	DGS-19SC
Sample Name:	DGS-06SC-0812-101007	DGS-07SC-0812-101012	DGS-08SC-089.3-101007	DGS-11SC-0812-101006	DGS-13SC-0812-101005	DGS-18SC-089.6-101008	DGS-19SC-0812-101006
Sample Date:	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010	10/8/2010	10/6/2010
Depth Interval:	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 283.46 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 292.61 cm	243.84 - 365.76 cm
Conventional Parameters (mg/kg)							
Cyanide, total	0.124 U	**29.9**	0.128 U	0.132 U	**0.177**	0.124 U	0.125 U
Metals (mg/kg)							
Zinc	**48**	**153**	**47**	**51**	**47 J**	**46**	**48**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.2 U	130 U	1.2 U	3.4 U	1.1 U	1.3 U	320 U
1,2-Dichloroethene, cis-	1.2 U	130 U	1.2 U	3.4 U	1.1 U	1.3 U	320 U
1,2-Dichloroethene, trans-	1.2 U	130 U	1.2 U	3.4 U	1.1 U	1.3 U	320 U
Benzene	1.2 U	**280**	1.2 U	**42**	1.1 U	1.3 U	320 U
Ethylbenzene	**1.7**	**3500**	1.2 U	**28**	1.1 U	1.3 U	320 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	1.2 U	**770**	1.2 U	**13**	1.1 U	1.3 U	320 U
Toluene	1.2 U	130 U	1.2 U	**5.8**	1.1 U	1.3 U	320 U
Trichloroethene (TCE)	1.2 U	130 U	1.2 U	3.4 U	1.1 U	1.3 U	320 U
Vinyl chloride	1.2 U	130 U	1.2 U	3.4 U	1.1 U	1.3 U	320 U
LWG RA Total Xylene (Calculated U = 1/2)	1.2 UT	**940 T**	1.2 UT	**20 T**	1.1 UT	1.3 UT	320 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	63 U	**95000**	62 U	**5800**	65 U	65 U	**1200 J**
Acenaphthene	63 U	**100000**	62 U	**13000**	65 U	65 U	**4800**
Acenaphthylene	63 U	**1500**	62 U	**660**	65 U	65 U	**220**
Anthracene	63 U	**73000**	62 U	**7300**	65 U	65 U	**2800 J**
Benzo(a)anthracene	63 U	**51000**	62 U	**5900**	65 U	65 U	**1900**
Benzo(a)pyrene	63 U	**56000**	62 U	**8600**	65 U	65 U	**2100**
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	63 U	**12000**	62 U	**4500**	65 U	65 U	**1100**
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	63 U	**65000**	62 U	**7500**	65 U	65 U	**2500**
Dibenzo(a,h)anthracene	63 U	**640**	62 U	**1200**	65 U	65 U	**290**
Fluoranthene	**110**	**200000**	62 U	**23000**	65 U	65 U	**5900**
Fluorene	63 U	**57000**	62 U	**6600**	65 U	65 U	**2900**
Indeno(1,2,3-c,d)pyrene	63 U	**11000**	62 U	**3600**	65 U	65 U	**810**
Naphthalene	63 U	**93000**	62 U	**19000**	65 U	65 U	**320 J**
Phenanthrene	**120**	**400000**	62 U	**44000**	65 U	65 U	**18000**
Pyrene	**110**	**250000**	62 U	**28000**	65 U	65 UJ	**7400**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**76 T**	**68000 T**	62 UT	**12000 T**	65 UT	65 UT	**2900 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-06SC	DGS-07SC	DGS-08SC	DGS-11SC	DGS-13SC	DGS-18SC	DGS-19SC
Sample Name:	DGS-06SC-0812-101007	DGS-07SC-0812-101012	DGS-08SC-089.3-101007	DGS-11SC-0812-101006	DGS-13SC-0812-101005	DGS-18SC-089.6-101008	DGS-19SC-0812-101006
Sample Date:	10/7/2010	10/12/2010	10/7/2010	10/6/2010	10/5/2010	10/8/2010	10/6/2010
Depth Interval:	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 283.46 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 292.61 cm	243.84 - 365.76 cm
Semivolatile Organics (µg/kg)							
Carbazole	63 U	**6100**	62 U	**1100**	65 U	65 U	65 UJ
Dibenzofuran	63 U	**5800**	62 U	**670**	65 U	65 U	**380**
PCB Aroclors (µg/kg)							
Aroclor 1016	32 U	32 U	33 U	32 U	32 U	33 U	33 U
Aroclor 1221	32 U	32 UJ	33 U	32 U	32 U	33 U	33 U
Aroclor 1232	32 U	32 U	33 U	32 U	32 U	33 U	33 U
Aroclor 1242	32 U	32 U	33 U	32 U	32 U	33 U	33 U
Aroclor 1248	32 U	32 U	33 U	32 U	32 U	33 U	33 U
Aroclor 1254	32 U	96 U	33 U	32 U	32 U	33 U	33 U
Aroclor 1260	32 U	**120**	33 U	32 U	32 U	33 U	33 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	**250 JT**	33 UT	32 UT	32 UT	33 UT	33 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	1.6 U	16 U	1.6 U	7.9 U	1.6 U	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	58 U	1.6 U	7.9 U	1.6 U	1.6 U	1.6 U
Endrin ketone	3.3 U	32 U	3.3 U	16 U	3.3 U	3.2 U	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	16 U	1.6 U	7.9 U	1.6 U	1.6 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	3.3 UT	**500 T**	3.3 UT	16 UT	3.3 UT	3.2 UT	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.3 UT	**61 T**	3.3 UT	16 UT	3.3 UT	3.2 UT	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.3 UT	**83 T**	3.3 UT	16 UT	3.3 UT	3.2 UT	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	6.5 U	**4000 J**	6.6 U	**250**	6.5 U	6.5 U	**140**
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC	DGS-24SC	DGS-25SC	DGS-26SC
Sample Name:	DGS-20SC-0812-101008	DGS-22SC-0812-101012	DGS-23SC-0812-101008	DGS-24SC-0811.3-101012	DGS-24SC-6.710.7-101012	DGS-25SC-0812-101007	DGS-26SC-0811.3-101011
Sample Date:	10/8/2010	10/12/2010	10/8/2010	10/12/2010	10/12/2010	10/7/2010	10/11/2010
Depth Interval:	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 344.42 cm	204.22 - 326.14 cm	243.84 - 365.76 cm	243.84 - 344.42 cm
Conventional Parameters (mg/kg)							
Cyanide, total	0.115 U	**0.172**	0.121 U	**2.5**	**4.75**	0.116 U	**0.134**
Metals (mg/kg)							
Zinc	**46**	**104**	**45**	**71**	**68**	**46**	**45**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.2 U	1.6 U	1.3 U	420 U	--	1.1 U	1.2 U
1,2-Dichloroethene, cis-	1.2 U	1.6 U	1.3 U	420 U	--	1.1 U	1.2 U
1,2-Dichloroethene, trans-	1.2 U	1.6 U	1.3 U	420 U	--	1.1 U	1.2 U
Benzene	1.2 U	**56**	1.3 U	**2600**	--	1.1 U	1.2 U
Ethylbenzene	1.2 U	**8.1**	1.3 U	**5800**	--	1.1 U	1.2 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	1.2 U	**2.4**	1.3 U	**2000**	--	1.1 U	1.2 U
Toluene	1.2 U	**3.2**	1.3 U	**530**	--	1.1 U	1.2 U
Trichloroethene (TCE)	1.2 U	1.6 U	1.3 U	420 U	--	1.1 U	1.2 U
Vinyl chloride	1.2 U	1.6 U	1.3 U	420 U	--	1.1 U	1.2 U
LWG RA Total Xylene (Calculated U = 1/2)	1.2 UT	**8 T**	1.3 UT	**5600 T**	--	1.1 UT	1.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	61 U	370 U	65 U	**510000**	**780000**	63 U	65 U
Acenaphthene	61 U	**4600 J**	65 U	**410000**	**620000**	63 U	**76**
Acenaphthylene	61 U	370 U	65 U	**11000**	**25000**	63 U	65 U
Anthracene	61 U	**6500**	65 U	**150000**	**250000**	63 U	65 U
Benzo(a)anthracene	61 U	**7800**	65 U	**110000**	**190000**	63 U	65 U
Benzo(a)pyrene	61 U	**12000**	65 U	**130000**	**230000**	63 U	65 U
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	61 U	**5700 J**	65 U	**21000**	**190000**	63 U	65 UJ
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	61 U	**9600**	65 U	**140000**	**230000**	63 U	65 U
Dibenzo(a,h)anthracene	61 U	370 U	65 U	**940**	**3300**	63 U	65 U
Fluoranthene	61 U	**25000**	65 U	**410000**	**740000**	63 U	65 U
Fluorene	61 U	**2500 J**	65 U	**170000**	**280000**	63 U	65 U
Indeno(1,2,3-c,d)pyrene	61 U	**4600 J**	65 U	**18000**	**130000**	63 U	65 U
Naphthalene	61 U	**1200**	65 U	**2500000**	**4300000**	63 U	65 U
Phenanthrene	61 U	**26000**	65 U	**960000**	**1600000**	63 U	**130**
Pyrene	61 UJ	**39000**	65 UJ	**510000**	**900000**	63 U	65 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	61 UT	**15000 JT**	65 UT	**160000 T**	**290000 T**	63 UT	65 UT

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-20SC	DGS-22SC	DGS-23SC	DGS-24SC	DGS-24SC	DGS-25SC	DGS-26SC
Sample Name:	DGS-20SC-0812-101008	DGS-22SC-0812-101012	DGS-23SC-0812-101008	DGS-24SC-0811.3-101012	DGS-24SC-6.710.7-101012	DGS-25SC-0812-101007	DGS-26SC-0811.3-101011
Sample Date:	10/8/2010	10/12/2010	10/8/2010	10/12/2010	10/12/2010	10/7/2010	10/11/2010
Depth Interval:	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 344.42 cm	204.22 - 326.14 cm	243.84 - 365.76 cm	243.84 - 344.42 cm
Semivolatile Organics (µg/kg)							
Carbazole	61 U	370 U	65 U	**30000**	**49000**	63 U	65 U
Dibenzofuran	61 U	370 U	65 U	**19000**	**30000**	63 U	65 U
PCB Aroclors (µg/kg)							
Aroclor 1016	31 U	32 U	33 U	43 U	32 U	32 U	32 U
Aroclor 1221	31 U	32 UJ	33 U	43 UJ	32 U	32 U	32 UJ
Aroclor 1232	31 U	32 U	33 U	43 U	32 U	32 U	32 U
Aroclor 1242	31 U	32 U	33 U	43 U	32 U	32 U	32 U
Aroclor 1248	31 U	32 U	33 U	43 U	32 U	32 U	32 U
Aroclor 1254	31 U	32 U	33 U	43 U	32 U	32 U	32 U
Aroclor 1260	31 U	32 U	33 U	43 U	32 U	32 U	32 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 UT	32 UJT	33 UT	43 UJT	32 UT	32 UT	32 UJT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	1.6 U	8 U	1.6 U	22 U	160 U	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	8 U	1.6 U	22 U	160 U	1.6 U	1.6 U
Endrin ketone	3.1 U	16 U	3.3 U	44 U	320 U	3.2 U	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	8 U	1.6 U	22 U	160 U	1.6 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	3.1 UT	16 UT	3.3 UT	44 UT	320 UT	3.2 UT	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.1 UT	16 UT	3.3 UT	44 UT	320 UT	3.2 UT	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.1 UT	16 UT	3.3 UT	44 UT	320 UT	3.2 UT	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	6.3 U	**530 J**	6.5 U	**4000 J**	**10000**	5.6 U	6.5 UJ
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-28SC	DGS-30SC	DGS-31SC	DGS-32SC	DGS-36SC	DGS-37SC	GS-01
Sample Name:	DGS-28SC-0809-101007	DGS-30SC-0812-101006	DGS-31SC-0812-101011	DGS-32SC-0812-101011	DGS-36SC-0810-101012	DGS-37SC-0812-101011	GS-01-S (9-11)
Sample Date:	10/7/2010	10/6/2010	10/11/2010	10/11/2010	10/12/2010	10/11/2010	12/21/2006
Depth Interval:	243.84 - 274.32 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 304.8 cm	243.84 - 365.76 cm	274.32 - 335.28 cm
Conventional Parameters (mg/kg)							
Cyanide, total	0.122 U	0.113 U	0.115 U	**1.72**	**3.26**	**2.87**	**0.2 J**
Metals (mg/kg)							
Zinc	**47**	**44**	**47**	**89**	**69**	**151**	**--**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.1 U	1.2 U	1 U	1.4 U	1.3 U	1.6 U	1.4 U
1,2-Dichloroethene, cis-	1.1 U	1.2 U	1 U	1.4 U	1.3 U	1.6 U	1.4 U
1,2-Dichloroethene, trans-	1.1 U	1.2 U	1 U	1.4 U	1.3 U	1.6 U	1.4 U
Benzene	1.1 U	**16**	1 U	1.4 U	**2.8**	1.6 U	**0.17 J**
Ethylbenzene	1.1 U	**2.6**	1 U	**3.5**	1.3 U	1.6 U	1.4 U
Naphthalene	**--**	**--**	**--**	**--**	**--**	**--**	**--**
o-Xylene	1.1 U	1.2 U	1 U	**2.6**	1.3 U	1.6 U	1.4 U
Toluene	1.1 U	**3.3**	1 U	1.4 U	1.3 U	1.6 U	1.4 U
Trichloroethene (TCE)	1.1 U	1.2 U	1 U	1.4 U	1.3 U	1.6 U	1.4 U
Vinyl chloride	1.1 U	1.2 U	1 U	1.4 U	1.3 U	1.6 U	1.4 U
LWG RA Total Xylene (Calculated U = 1/2)	1.1 UT	**2.5 T**	1 UT	**3.3 T**	**2.1 T**	1.6 UT	2.7 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	61 U	64 U	64 U	**5300**	**100**	**12000**	**0.55 J**
Acenaphthene	61 U	64 U	64 U	**8000**	**110**	**15000**	5 U
Acenaphthylene	61 U	64 U	64 U	**500**	58 U	**490**	5 U
Anthracene	61 U	64 U	64 U	**6800**	**74**	**10000**	5 U
Benzo(a)anthracene	61 U	64 U	64 U	**5500**	**78**	**8000**	**0.46 J**
Benzo(a)pyrene	61 U	64 U	64 U	**6400**	**100**	**10000**	**0.53 J**
Benzo(b)fluoranthene	**--**	**--**	**--**	**--**	**--**	**--**	5 U
Benzo(g,h,i)perylene	61 U	64 U	64 UJ	**5100 J**	58 U	**8400 J**	**0.8 J**
Benzo(k)fluoranthene	**--**	**--**	**--**	**--**	**--**	**--**	5 U
Chrysene	61 U	64 U	64 U	**7400**	**100**	**11000**	**0.79 J**
Dibenzo(a,h)anthracene	61 U	64 U	64 U	**1100**	58 U	**1700**	5 U
Fluoranthene	61 U	64 U	64 U	**16000**	**290**	**29000**	**1.6 J**
Fluorene	61 U	64 U	64 U	**4800**	**63**	**9100**	**0.35 J**
Indeno(1,2,3-c,d)pyrene	61 U	64 U	64 U	**3300**	58 U	**5800**	**0.54 J**
Naphthalene	61 U	**67**	64 U	300 U	**960**	**500**	5 U
Phenanthrene	61 U	**94**	64 U	**39000**	**430**	**67000**	**1.9 J**
Pyrene	61 U	64 U	64 U	**22000**	**350**	**42000 J**	**1.8 J**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	61 UT	64 UT	64 UT	**9000 T**	**150 T**	**14000 T**	**3.4 JT**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-28SC	DGS-30SC	DGS-31SC	DGS-32SC	DGS-36SC	DGS-37SC	GS-01
Sample Name:	DGS-28SC-0809-101007	DGS-30SC-0812-101006	DGS-31SC-0812-101011	DGS-32SC-0812-101011	DGS-36SC-0810-101012	DGS-37SC-0812-101011	GS-01-S (9-11)
Sample Date:	10/7/2010	10/6/2010	10/11/2010	10/11/2010	10/12/2010	10/11/2010	12/21/2006
Depth Interval:	243.84 - 274.32 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 304.8 cm	243.84 - 365.76 cm	274.32 - 335.28 cm
Semivolatile Organics (µg/kg)							
Carbazole	61 U	64 U	64 U	**1300**	58 U	**1400**	--
Dibenzofuran	61 U	64 U	64 U	**620**	58 U	**1300**	5 U
PCB Aroclors (µg/kg)							
Aroclor 1016	33 U	30 U	31 U	31 U	32 U	33 U	--
Aroclor 1221	33 U	30 U	31 UJ	31 UJ	32 UJ	33 UJ	--
Aroclor 1232	33 U	30 U	31 U	31 U	32 U	33 U	--
Aroclor 1242	33 U	30 U	31 U	31 U	32 U	33 U	--
Aroclor 1248	33 U	30 U	31 U	31 U	32 U	33 U	--
Aroclor 1254	33 U	30 U	31 U	31 U	32 U	160 U	--
Aroclor 1260	33 U	30 U	31 U	31 U	32 U	**77**	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	33 UT	30 UT	31 UJT	31 UJT	32 UJT	**240 JT**	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.5 U	1.6 U	7.7 U	1.6 U	8.3 U	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.5 U	1.6 U	7.7 U	1.6 U	8.3 U	--
Endrin ketone	3.3 U	3 U	3.1 U	16 U	3.2 U	16 U	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.5 U	1.6 U	7.7 U	1.6 U	8.3 U	--
LWG RA Sum DDD (Calculated U = 1/2)	3.3 UT	3 UT	3.1 UT	16 UT	3.2 UT	**1600 T**	--
LWG RA Sum DDE (Calculated U = 1/2)	3.3 UT	3 UT	3.1 UT	16 UT	3.2 UT	200 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	3.3 UT	3 UT	3.1 UT	16 UT	3.2 UT	**440 T**	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	6.2 U	5.8 U	5.9 UJ	**640 J**	7.3 UJ	**980 J**	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	GS-02	GS-03	GS-10	GS-11	GS-12	LW2-C252	LW2-C258
Sample Name:	GS-02-S (9-11)	GS-03-S (9-11)	GS-10-S (9-11)	GS-11-S (9-11)A	GS-12-S (9-11)	LW2-C252-D	LW2-C258-D
Sample Date:	12/27/2006	12/18/2006	1/2/2007	1/5/2007	1/10/2007	9/23/2004	9/23/2004
Depth Interval:	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	252 - 297 cm	276 - 304 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**0.6**	**0.4 J**	**0.4 J**	**0.06 J**	**0.09 J**	--	--
Metals (mg/kg)							
Zinc	**69.9**	--	**112**	--	**62.6**	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.6 U	1.4 U	1800 U	1.5 U	1.5 UJ	--	--
1,2-Dichloroethene, cis-	1.6 U	1.4 U	1800 U	1.5 U	1.5 UJ	--	--
1,2-Dichloroethene, trans-	1.6 U	1.4 U	1800 U	1.5 U	1.5 UJ	--	--
Benzene	1.6 U	**0.2 J**	**3600**	1.5 U	1.5 UJ	--	--
Ethylbenzene	1.6 U	**0.38 J**	**13000**	**6.9**	1.5 UJ	--	--
Naphthalene	--	--	--	--	--	--	--
o-Xylene	1.6 U	1.4 U	**3800**	**2.7**	1.5 UJ	--	--
Toluene	1.6 U	1.4 U	**470 J**	1.5 U	1.5 UJ	--	--
Trichloroethene (TCE)	1.6 U	1.4 U	1800 U	1.5 U	1.5 UJ	--	--
Vinyl chloride	1.6 U	1.4 U	1800 U	1.5 U	1.5 UJ	--	--
LWG RA Total Xylene (Calculated U = 1/2)	1.6 UT	**0.9 JT**	**11000 T**	**4 JT**	1.5 UJT	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**5.4**	**5.4**	**31000**	**10**	**9.6**	**16**	**25**
Acenaphthene	**4.8 J**	**14**	**50000**	**8.9**	**140**	**690**	**3200**
Acenaphthylene	**2.3 J**	**1.1 J**	**1500**	**0.48 J**	**18**	**58**	**590**
Anthracene	**12**	**12**	**28000**	**3.1 J**	**120**	**150**	**2300**
Benzo(a)anthracene	**13**	**13**	**23000**	**2.8 J**	**190**	**480**	**2900**
Benzo(a)pyrene	**15**	**14**	**32000**	**2.5 J**	**230**	**750**	**4000**
Benzo(b)fluoranthene	**11**	**11**	**20000**	**1.8 J**	**150**	**480**	**2400**
Benzo(g,h,i)perylene	**9.7**	**14**	**25000**	**2.2 J**	**190**	**660**	**3500**
Benzo(k)fluoranthene	**10**	**11**	**16000**	**1.6 J**	**130**	**380**	**1800**
Chrysene	**18**	**20**	**30000**	**3.5 J**	**250**	**570**	**3400**
Dibenzo(a,h)anthracene	**1.2 J**	5 U	**2500**	4.9 U	**21**	**81**	**350**
Fluoranthene	**45**	**53**	**90000**	**8.7**	**570**	**950**	**11000**
Fluorene	**8.9**	**12**	**26000**	**3.6 J**	**91**	**230**	**1800**
Indeno(1,2,3-c,d)pyrene	**9.1**	**11**	**22000**	**2 J**	**160**	**610**	**3200**
Naphthalene	**27**	**22**	**91000**	**35**	**23**	**63**	**120**
Phenanthrene	**61**	**79**	**170000**	**20**	**560**	**760**	**2700**
Pyrene	**58**	**62**	**99000**	**11**	**690**	**1200**	**14000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**20 JT**	**20 T**	**41000 T**	**5.6 JT**	**300 T**	**990 T**	**5200 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	GS-02	GS-03	GS-10	GS-11	GS-12	LW2-C252	LW2-C258
Sample Name:	GS-02-S (9-11)	GS-03-S (9-11)	GS-10-S (9-11)	GS-11-S (9-11)A	GS-12-S (9-11)	LW2-C252-D	LW2-C258-D
Sample Date:	12/27/2006	12/18/2006	1/2/2007	1/5/2007	1/10/2007	9/23/2004	9/23/2004
Depth Interval:	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	252 - 297 cm	276 - 304 cm
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	**39**	--
Dibenzofuran	**1.3 J**	**2.1 J**	**3900**	**0.71 J**	**17**	**21**	**190**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	1.9 U	--
Aroclor 1221	--	--	--	--	--	1.9 U	--
Aroclor 1232	--	--	--	--	--	1.9 U	--
Aroclor 1242	--	--	--	--	--	1.9 U	--
Aroclor 1248	--	--	--	--	--	1.9 U	--
Aroclor 1254	--	--	--	--	--	8.1 U	--
Aroclor 1260	--	--	--	--	--	**13**	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	**24 T**	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.64 U	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	1 U	--
Endrin ketone	--	--	--	--	--	0.47 U	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	0.76 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	**9.7 NJT**	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	**3.4 JT**	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	1.6 UT	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	LW2-C263	LW2-C264	LW2-C269	LW2-C273	LW2-C276	LW2-C278	LW2-C283
Sample Name:	LW2-C263-D	LW2-C264-D	LW2-C269-D	LW2-C273-D	LW2-C276-D	LW2-C278-D	LW2-C283-D
Sample Date:	10/1/2004	9/23/2004	10/28/2004	10/20/2004	9/22/2004	10/19/2004	11/8/2004
Depth Interval:	277 - 376 cm	220 - 290 cm	272 - 395 cm	274 - 355 cm	268 - 319 cm	288 - 350 cm	258 - 380 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	**143 T**	--	--	--	--	**53.4**	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	0.15 U	0.12 U	--	0.14 U	0.12 U	0.11 U	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	0.34 U	0.26 U	--	0.33 U	0.28 U	0.26 U	--
Benzene	**7.3**	**0.16 J**	--	0.067 U	**6.7**	**0.11 J**	--
Ethylbenzene	**640**	0.096 U	--	0.13 U	**1.8**	0.096 U	--
Naphthalene	--	--	--	--	--	--	--
o-Xylene	**8**	0.11 U	--	0.13 U	**1.7**	0.11 U	--
Toluene	1.3 U	0.21 U	--	0.26 U	**1.2**	0.21 U	--
Trichloroethene (TCE)	0.11 U	**0.53 J**	--	0.11 U	**0.71**	**0.76 J**	--
Vinyl chloride	0.15 U	0.12 U	--	0.15 U	0.13 U	0.12 U	--
LWG RA Total Xylene (Calculated U = 1/2)	**12 T**	0.18 UT	--	0.23 UT	**3.3 T**	0.18 UT	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**30000**	**3.6**	--	**220**	**80**	**8.1**	--
Acenaphthene	**37000**	**32**	--	**3900**	**250**	**35**	--
Acenaphthylene	**1700**	**4.8**	--	**290**	**51**	**5.5**	--
Anthracene	**36000**	**11**	--	**5300**	**110**	**22**	--
Benzo(a)anthracene	**26000**	**38**	--	**5000**	**94**	**24**	--
Benzo(a)pyrene	**30000**	**76**	--	**9000**	**140**	**34**	--
Benzo(b)fluoranthene	**17000**	**44**	--	**5100**	**80**	**29**	--
Benzo(g,h,i)perylene	**22000**	**87**	--	**9600**	**120**	**33**	--
Benzo(k)fluoranthene	**18000**	**36**	--	**4600**	**73**	**9.6**	--
Chrysene	**34000**	**54**	--	**7200**	**130**	**27**	--
Dibenzo(a,h)anthracene	**2400**	**6.1**	--	**540**	**12**	**4.7**	--
Fluoranthene	**55000**	**170**	--	**25000**	**350**	**71**	--
Fluorene	**22000**	**13**	--	**2100**	**130**	**17**	--
Indeno(1,2,3-c,d)pyrene	**20000**	**66**	--	**7000**	**100**	**34**	--
Naphthalene	**7900**	**40**	--	**840**	**580**	**13**	--
Phenanthrene	**90000**	**210 J**	--	**24000**	**640**	**120**	--
Pyrene	**65000**	**260**	--	**32000**	**420**	**90**	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**39000 T**	**97 T**	--	**11000 T**	**180 T**	**48 T**	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	LW2-C263	LW2-C264	LW2-C269	LW2-C273	LW2-C276	LW2-C278	LW2-C283
Sample Name:	LW2-C263-D	LW2-C264-D	LW2-C269-D	LW2-C273-D	LW2-C276-D	LW2-C278-D	LW2-C283-D
Sample Date:	10/1/2004	9/23/2004	10/28/2004	10/20/2004	9/22/2004	10/19/2004	11/8/2004
Depth Interval:	277 - 376 cm	220 - 290 cm	272 - 395 cm	274 - 355 cm	268 - 319 cm	288 - 350 cm	258 - 380 cm
Semivolatile Organics (µg/kg)							
Carbazole	**4200**	1.8 U	--	**77 J**	**67 J**	**3.6 J**	1.8 U
Dibenzofuran	**2600**	**1.1 J**	--	**150**	**19**	**2.5**	--
PCB Aroclors (µg/kg)							
Aroclor 1016	3.68 U	1.5 U	4.6 U	--	--	1.35 U	--
Aroclor 1221	7.36 U	1.5 U	4.6 U	--	--	2.7 U	--
Aroclor 1232	6.15 U	1.5 U	4.6 U	--	--	2.26 U	--
Aroclor 1242	3.74 U	1.5 U	4.6 U	--	--	1.37 U	--
Aroclor 1248	4.79 U	1.5 U	4.6 U	--	--	1.76 U	--
Aroclor 1254	7.36 U	1.5 U	180 U	--	--	0.82 U	--
Aroclor 1260	2.87 U	1.5 U	47 U	--	--	1.05 U	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	7.36 UT	1.5 UT	180 UT	--	--	2.7 UT	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	0.498 U	0.11 U	1.7 U	0.48 U	0.54 U	0.0361 U	--
beta-Hexachlorocyclohexane (BHC)	**7.87 NJ**	0.17 U	2.6 U	0.49 U	0.83 U	0.0365 U	--
Endrin ketone	0.438 U	0.076 U	7 U	0.81 U	0.39 U	0.0318 U	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.14 U	0.21 U	4.2 U	0.81 U	0.64 U	0.0824 U	--
LWG RA Sum DDD (Calculated U = 1/2)	**251 JNT**	0.2 UT	**220 JT**	**1.7 NJT**	**1.6 JT**	**0.145 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	**10.7 NJT**	0.097 UT	8.9 UT	1.7 UT	0.39 UT	0.0488 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	**26.4 JT**	0.19 UT	**34 JT**	1.1 UT	0.97 UT	**0.303 NJT**	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**3300 J**	--	--	--	--	9.6 U	--
Residual Range Hydrocarbons	**3000 J**	--	--	--	--	**17 J**	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	LW2-C284	LW2-C288	LW2-C289	LW2-C294	LW2-C301	LW2-C302	LW2-C305
Sample Name:	LW2-C284-E	LW2-C288-D	LW2-C289-E	LW2-C294-D	LW2-C301-D	LW2-C302-D	LW2-C305-D1
Sample Date:	9/22/2004	10/20/2004	10/19/2004	10/19/2004	11/8/2004	9/22/2004	10/19/2004
Depth Interval:	292 - 353 cm	274 - 389 cm	249 - 336 cm	272 - 376 cm	231 - 358 cm	288 - 348 cm	220 - 330 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	--	101	49.5	83.6	56.2	--	58.9
Volatile Organics (µg/kg)							
1,1-Dichloroethene	0.12 U	0.14 U	0.11 U	0.13 U	760 U	940 U	0.11 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	0.26 U	0.31 U	0.26 U	0.29 U	890 U	1100 U	0.26 U
Benzene	1.6	0.19 J	0.11 U	0.058 U	58000	33000	0.17 J
Ethylbenzene	0.7 J	0.3 J	0.094 U	0.11 U	22000	32000	0.095 U
Naphthalene	47 J	--	0.47 UJ	--	--	--	--
o-Xylene	0.96	0.88	0.11 U	0.12 U	14000	9800	0.1 U
Toluene	0.36 J	0.25 U	0.2 U	0.23 U	35000	11000	0.2 U
Trichloroethene (TCE)	1.4	0.14 J	0.5 J	0.093 U	1200 U	1500 U	0.69 J
Vinyl chloride	0.12 U	0.14 U	0.12 U	0.13 U	1400 U	1700 U	0.12 U
LWG RA Total Xylene (Calculated U = 1/2)	1.8 JT	1.7 JT	0.18 UT	0.2 UT	46000 T	29000 T	0.18 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	3.4	1100	1.2 J	130	750000 J	1400000	74
Acenaphthene	15	12000	1.2 J	590	230000 J	1800000	540
Acenaphthylene	0.75 J	1200	1.2 J	97	430000 J	530000	49
Anthracene	2.1	13000	3.4	450	310000 J	640000	500
Benzo(a)anthracene	2.9	14000	5.8	800	180000 J	310000	740
Benzo(a)pyrene	3.4	23000	6.6	1400	220000 J	370000	930 J
Benzo(b)fluoranthene	2.2	19000	5.3	1100	170000 J	230000	780 J
Benzo(g,h,i)perylene	2.7	22000	5.7	1500	140000 J	290000	840 J
Benzo(k)fluoranthene	1.8 J	6100	2 J	360	86000 J	220000	260 J
Chrysene	3.5	17000	6.9	990	240000 J	430000	850
Dibenzo(a,h)anthracene	0.41 U	1500	0.94 J	150 J	24000 J	24000	90 J
Fluoranthene	8.7	56000	17	2900	790000 J	1700000	2900
Fluorene	2.1	5000	1.5 J	220	270000 J	740000	360
Indeno(1,2,3-c,d)pyrene	1.8 J	17000	5.6	1300	120000 J	270000	810 J
Naphthalene	--	2400	--	600	3800000 J	9200000	200
Phenanthrene	12	62000	19	2400	1900000 J	4100000	3800
Pyrene	12	74000	22	3800	970000 J	2000000	3600
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	4.3 JT	30000 T	9.2 JT	1900 JT	290000 JT	480000 T	1300 JT

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	LW2-C284	LW2-C288	LW2-C289	LW2-C294	LW2-C301	LW2-C302	LW2-C305
Sample Name:	LW2-C284-E	LW2-C288-D	LW2-C289-E	LW2-C294-D	LW2-C301-D	LW2-C302-D	LW2-C305-D1
Sample Date:	9/22/2004	10/20/2004	10/19/2004	10/19/2004	11/8/2004	9/22/2004	10/19/2004
Depth Interval:	292 - 353 cm	274 - 389 cm	249 - 336 cm	272 - 376 cm	231 - 358 cm	288 - 348 cm	220 - 330 cm
Semivolatile Organics (µg/kg)							
Carbazole	--	**530**	1.8 U	**23 J**	**94000**	**220000**	35 U
Dibenzofuran	**0.37 J**	**400 J**	**0.32 J**	**25**	**49000 J**	**100000**	**36**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	1.67 U	--	1.49 U	1.29 U	89 U	1.33 U
Aroclor 1221	--	3.09 U	--	2.77 U	2.39 U	260 U	2.47 U
Aroclor 1232	--	2.79 U	--	2.5 U	2.16 U	240 U	2.23 U
Aroclor 1242	--	1.7 U	--	1.52 U	1.31 U	110 U	1.35 U
Aroclor 1248	--	2.18 U	--	1.95 U	1.68 U	81 U	1.74 U
Aroclor 1254	--	1.01 U	--	0.907 U	0.785 U	79 U	0.809 U
Aroclor 1260	--	1.3 U	--	1.16 U	1.01 U	64 U	1.04 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	3.1 UT	--	2.8 UT	2.39 UT	260 UT	2.47 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	0.219 U	--	0.407 U	0.345 UJ	16 U	0.035 U
beta-Hexachlorocyclohexane (BHC)	--	**0.907 NJ**	--	0.412 U	**23.6**	41 U	**0.438 NJ**
Endrin ketone	--	0.193 U	--	0.358 U	0.304 U	220 U	**0.528 NJ**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	0.5 U	--	0.93 U	**6.62 NJ**	40 U	0.0799 U
LWG RA Sum DDD (Calculated U = 1/2)	--	**1.63 NJT**	--	**3.58 NJT**	**198 NJT**	**360 JT**	**3.8 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	0.296 UT	--	0.551 UT	**74.1 NJT**	89 UT	**0.463 JT**
LWG RA Sum DDT (Calculated U = 1/2)	--	0.365 UJT	--	0.679 UJT	**103 NJT**	250 UT	**7.57 JT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	**1900 J**	9.4 U	**270 J**	**30000 J**	--	**110 J**
Residual Range Hydrocarbons	--	**2900 J**	**14 J**	**530 J**	**14000 J**	--	**140 J**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	LW2-C521	LW2-C525	LW2-C527	LW2-C528	LW3-C658	LW3-C662	WLCGSJ06GS04
Sample Name:	LW2-C521-E	LW2-C525-D	LW2-C527-D	LW2-C528-D	LW3-C658-D	LW3-C662-E	WLCGSJ06GS04S911
Sample Date:	10/19/2004	10/26/2005	10/26/2005	10/26/2005	12/14/2007	1/17/2008	12/12/2006
Depth Interval:	280 - 315 cm	236 - 341 cm	250 - 352 cm	274 - 386 cm	273 - 371 cm	256 - 327 cm	274.3 - 335.3 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	**2.1 J**
Metals (mg/kg)							
Zinc	**50.6**	**195**	--	--	**42.2**	**81.2**	**60.4**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	0.11 U	0.57 U	--	--	--	--	1.4 U
1,2-Dichloroethene, cis-	--	--	--	--	--	--	1.4 U
1,2-Dichloroethene, trans-	0.25 U	1.4 U	--	--	--	--	1.4 U
Benzene	**0.52 J**	**190**	--	--	--	--	1.4 U
Ethylbenzene	0.2 U	**2200**	--	--	--	--	1.4 U
Naphthalene	**540 J**	**510000**	--	--	--	--	1.4 U
o-Xylene	0.24 U	**300**	--	--	--	--	1.4 U
Toluene	0.39 U	**150**	--	--	--	--	1.4 U
Trichloroethene (TCE)	**0.25 J**	0.43 U	--	--	--	--	1.4 U
Vinyl chloride	0.12 U	0.59 U	--	--	--	--	1.4 U
LWG RA Total Xylene (Calculated U = 1/2)	0.29 UT	**690 T**	--	--	--	--	2.8 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**74**	**31000**	--	**1400**	0.39 U	**27000**	5 U
Acenaphthene	**270**	**19000**	--	**3800**	0.23 U	**13000**	**0.28 J**
Acenaphthylene	**170**	**3600**	--	**310**	0.24 U	**26000**	**0.46 J**
Anthracene	**470**	**26000**	--	**4300**	0.47 U	**26000**	**0.62 J**
Benzo(a)anthracene	**470**	**32000**	--	**3200**	0.48 U	**19000**	**3.2 J**
Benzo(a)pyrene	**620**	**44000**	--	**3600**	0.14 U	**26000**	**3.5 J**
Benzo(b)fluoranthene	**480**	**28000**	--	**2200**	0.25 U	**25000**	**3.2 J**
Benzo(g,h,i)perylene	**470**	**32000**	--	**3000**	0.64 U	**24000**	5 U
Benzo(k)fluoranthene	**160**	**23000**	--	**2200**	0.15 U	**7400**	**2.4 J**
Chrysene	**480**	**41000**	--	**4300**	0.25 U	**25000**	**4.3 J**
Dibenzo(a,h)anthracene	**66**	**3700**	--	**290**	0.28 U	**2500**	5 U
Fluoranthene	**1600**	**120000**	--	**12000**	0.61 U	**79000**	**11**
Fluorene	**300**	**20000**	--	**3400**	0.5 U	**18000**	**0.41 J**
Indeno(1,2,3-c,d)pyrene	**500**	**32000**	--	**2600**	0.16 U	**21000**	5 U
Naphthalene	--	--	--	**880**	0.37 U	**150000**	--
Phenanthrene	**2400**	**160000**	--	**12000**	0.75 U	**120000**	5 U
Pyrene	**2000**	**130000**	--	**13000**	0.37 U	**83000**	**14**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**830 T**	**57000 T**	--	**4700 T**	0.28 UT	**35000 T**	**6.9 JT**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	LW2-C521	LW2-C525	LW2-C527	LW2-C528	LW3-C658	LW3-C662	WLCGSJ06GS04
Sample Name:	LW2-C521-E	LW2-C525-D	LW2-C527-D	LW2-C528-D	LW3-C658-D	LW3-C662-E	WLCGSJ06GS04S911
Sample Date:	10/19/2004	10/26/2005	10/26/2005	10/26/2005	12/14/2007	1/17/2008	12/12/2006
Depth Interval:	280 - 315 cm	236 - 341 cm	250 - 352 cm	274 - 386 cm	273 - 371 cm	256 - 327 cm	274.3 - 335.3 cm
Semivolatile Organics (µg/kg)							
Carbazole	**120**	**4700**	--	--	1.3 U	**6000**	--
Dibenzofuran	**36**	**3100**	--	**430**	0.59 U	**2700**	5 U
PCB Aroclors (µg/kg)							
Aroclor 1016	--	43 U	--	18 U	1 U	3.7 U	--
Aroclor 1221	--	28 U	--	80 U	1 U	8.2 U	--
Aroclor 1232	--	250 U	--	71 U	1 U	16 U	--
Aroclor 1242	--	74 U	--	18 U	1 U	8.1 U	--
Aroclor 1248	--	41 U	--	23 U	1 U	2.6 U	--
Aroclor 1254	--	41 U	--	65 U	1 U	5.2 U	--
Aroclor 1260	--	43 U	--	**83**	1 U	2.8 U	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	250 UT	--	**220 T**	1 UT	16 UT	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	25 U	49 U	13 U	0.097 U	2 U	--
beta-Hexachlorocyclohexane (BHC)	--	6 U	56 U	15 U	1.2 U	2.8 U	--
Endrin ketone	--	**6.6 J**	16 U	3.9 U	0.2 U	5.7 U	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	25 U	100 U	7.2 U	0.062 U	9 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	14 UT	**150 NJT**	**540 T**	0.16 UT	**21 T**	--
LWG RA Sum DDE (Calculated U = 1/2)	--	28 UT	570 UT	**170 NJT**	0.046 UT	**4.3 JT**	--
LWG RA Sum DDT (Calculated U = 1/2)	--	20 UT	**110 NJT**	**190 T**	0.24 UT	**10 JT**	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**40 J**	**4400 J**	**1900 J**	**960 J**	1.3 U	**1250 JT**	--
Residual Range Hydrocarbons	**34 J**	**5400 J**	**1800 J**	**1200 J**	**3.1 J**	**1500 JT**	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	WLCGSJ06GS05	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS08	WLCGSJ06GS09	WLCMRD08SDDA17SB	WLCMRD08SDDB20SB
Sample Name:	WLCGSJ06GS05S911	WLCGSJ06GS06S911	WLCGSJ06GS07S911	WLCGSJ06GS08S89	WLCGSJ06GS09S911	WLCMRD08DA17-4	WLCMRD08DB20-4
Sample Date:	10/25/2006	1/17/2007	10/16/2006	10/25/2006	10/9/2006	4/20/2008	4/19/2008
Depth Interval:	274.3 - 335.3 cm	274.3 - 335.3 cm	274.3 - 335.3 cm	243.8 - 274.3 cm	274.3 - 335.3 cm	274.32 - 365.76 cm	243.84 - 335.28 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**0.3**	**0.8**	**2.2**	**0.21**	**1.1**	**0.27 J**	**2.54**
Metals (mg/kg)							
Zinc	**--**	**65.3**	**--**	**66.1**	**--**	**58.6**	**195**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.6 U	1.6 U	400 U	1.5 U	58 U	**--**	**--**
1,2-Dichloroethene, cis-	1.6 U	1.6 U	400 U	1.5 U	58 U	**--**	**--**
1,2-Dichloroethene, trans-	1.6 U	1.6 U	400 U	1.5 U	58 U	**--**	**--**
Benzene	**3.6**	**18**	**150 J**	**3.6**	**150**	**--**	**--**
Ethylbenzene	**88**	**49**	**130 J**	**17**	**800**	**--**	**--**
Naphthalene	**--**	**--**	**--**	**--**	**--**	**--**	**--**
o-Xylene	**64**	**21**	**220 J**	**8.9**	**340**	**--**	**--**
Toluene	**2.7**	**1.5 J**	400 U	**0.6 J**	**20 J**	**--**	**--**
Trichloroethene (TCE)	1.6 U	1.6 U	400 U	1.5 U	58 U	**--**	**--**
Vinyl chloride	1.6 U	1.6 U	400 U	1.5 U	58 U	**--**	**--**
LWG RA Total Xylene (Calculated U = 1/2)	**110 T**	**36 T**	**490 JT**	**23 T**	**490 T**	**--**	**--**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**7300**	**3400**	**49000**	**200**	**35000**	**5.1**	**1200**
Acenaphthene	**8000**	**4300**	**32000**	**170**	**50000**	**28**	**1100**
Acenaphthylene	**890**	**470**	**110000**	**2.1 J**	**2400**	**0.92 J**	**160**
Anthracene	**6400**	**2900**	**99000**	**17**	**25000**	**10**	**1800**
Benzo(a)anthracene	**5300**	**3500**	**68000**	**12**	**17000**	**11**	**1800**
Benzo(a)pyrene	**6200**	**4400**	**85000**	**15**	**22000**	**16**	**2000**
Benzo(b)fluoranthene	**3400**	**2800**	**49000**	**9.3**	**12000**	**15**	**1900**
Benzo(g,h,i)perylene	**4800**	**2900**	**58000**	**9.3**	**14000**	**17**	**1700**
Benzo(k)fluoranthene	**3500**	**2300**	**48000**	**7.6**	**12000**	**5.2**	**590**
Chrysene	**6900**	**4300**	**83000**	**15**	**22000**	**16**	**2300**
Dibenzo(a,h)anthracene	**520**	**360**	**6000**	**1.1 J**	**1500**	**1.7 J**	**290**
Fluoranthene	**20000**	**11000**	**260000**	**52**	**66000**	**43**	**4400**
Fluorene	**5500**	**2700**	**67000**	**45**	**24000**	**7.3**	**1200**
Indeno(1,2,3-c,d)pyrene	**4300**	**2900**	**54000**	**9.5**	**13000**	**15**	**1600**
Naphthalene	**4100**	**4400**	**150000**	**830**	**43000**	**12**	**440**
Phenanthrene	**40000**	**16000**	**460000**	**140**	**130000**	**61**	**8500**
Pyrene	**24000**	**14000**	**280000**	**57**	**74000**	**56**	**5600**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**8100 T**	**5700 T**	**110000 T**	**19 JT**	**28000 T**	**22 JT**	**2800 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	WLCGSJ06GS05	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS08	WLCGSJ06GS09	WLCMRD08SDDA17SB	WLCMRD08SDDB20SB
Sample Name:	WLCGSJ06GS05S911	WLCGSJ06GS06S911	WLCGSJ06GS07S911	WLCGSJ06GS08S89	WLCGSJ06GS09S911	WLCMRD08DA17-4	WLCMRD08DB20-4
Sample Date:	10/25/2006	1/17/2007	10/16/2006	10/25/2006	10/9/2006	4/20/2008	4/19/2008
Depth Interval:	274.3 - 335.3 cm	274.3 - 335.3 cm	274.3 - 335.3 cm	243.8 - 274.3 cm	274.3 - 335.3 cm	274.32 - 365.76 cm	243.84 - 335.28 cm
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	**2.6 J**	**340**
Dibenzofuran	**860**	**440**	**8600**	**8**	**3700**	**1.3 J**	**190**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	2.5 U	2.9 U
Aroclor 1221	--	--	--	--	--	5 U	5.8 U
Aroclor 1232	--	--	--	--	--	2.5 U	2.9 U
Aroclor 1242	--	--	--	--	--	2.5 U	26 U
Aroclor 1248	--	--	--	--	--	2.5 U	2.9 U
Aroclor 1254	--	--	--	--	--	2.5 U	**100 J**
Aroclor 1260	--	--	--	--	--	2.5 U	**64 J**
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	5 UT	**190 JT**
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.2 U	**0.7 J**
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.2 U	1.2 U
Endrin ketone	--	--	--	--	--	0.2 U	1.3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	0.2 U	2.7 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	0.2 UT	**58 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	0.2 UT	**32 JT**
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	0.2 UT	**13 T**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	14 U	**730**
Residual Range Hydrocarbons	--	--	--	--	--	140 U	**780**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	WLCMRD08SDDB22SB	WLCMRD08SDDC24SB	WLCMRD08SDDC25SB	WLCMRD08SDUD1SB	WLCMRD08SDUD26SB	WLCMRD08SDUD27SB	WLCMRD08SDUD2SB
Sample Name:	WLCMRD08DB22-4	WLCMRD08DC24-3	WLCMRD08DC25-4	WLCMRD08UD1-3	WLCMRD08UD26-3	WLCMRD08UD27-3	WLCMRD08UD2-3
Sample Date:	4/19/2008	4/19/2008	4/19/2008	4/15/2008	4/13/2008	4/13/2008	4/15/2008
Depth Interval:	243.84 - 335.28 cm	304.8 - 365.76 cm	243.84 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm
Conventional Parameters (mg/kg)							
Cyanide, total	15.2	1410	423	0.23 J	0.26 J	0.27 J	1.51 J
Metals (mg/kg)							
Zinc	202	265	239	71.2	82.8	80	89.1
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	--	--	7.7 U	7.1 U	6.7 U	6.8 U
1,2-Dichloroethene, cis-	--	--	--	7.7 U	7.1 U	6.7 U	6.8 U
1,2-Dichloroethene, trans-	--	--	--	7.7 U	7.1 U	6.7 U	6.8 U
Benzene	--	--	--	7.7 U	7.1 U	6.7 U	6.8 U
Ethylbenzene	--	--	--	7.7 U	7.1 U	6.7 U	1 J
Naphthalene	--	--	--	--	--	--	--
o-Xylene	--	--	--	7.7 U	7.1 U	6.7 U	0.95 J
Toluene	--	--	--	0.46 J	7.1 U	6.7 U	9.6
Trichloroethene (TCE)	--	--	--	7.7 U	7.1 U	6.7 U	1.5 J
Vinyl chloride	--	--	--	7.7 U	7.1 U	6.7 U	6.8 U
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	7.7 UT	7.1 UT	6.7 UT	4.2 JT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	710	16000	2000	0.66 J	6.7	9.5	1.4 J
Acenaphthene	860	6500	2600	6.5	39	120	2.4 J
Acenaphthylene	160	3500	1200	1.9 U	5.7	20	0.6 J
Anthracene	1000	18000	4100	3.6	48	130	2.6
Benzo(a)anthracene	2300	34000	15000	4.5	120	310	7.1
Benzo(a)pyrene	2900	36000	19000	6.3	150	630	5.5
Benzo(b)fluoranthene	3300	44000	21000	5.4	140	500	9.5
Benzo(g,h,i)perylene	2900	36000	20000	5.8	100	710	7.6
Benzo(k)fluoranthene	1100	20000	6900	1.3 J	49	150	3
Chrysene	2900	46000	19000	5.6	130	370	9
Dibenzo(a,h)anthracene	450	7700	3000	0.59 J	14	43	0.87 J
Fluoranthene	5700	110000	35000	14	270	1400	21
Fluorene	650	11000	2600	2.2	25	43	1.9 J
Indeno(1,2,3-c,d)pyrene	2900	36000	20000	5.1	110	600	7.2
Naphthalene	280	42000	7400	1.4 J	15	62	12
Phenanthrene	4800	100000	27000	15	200	910	17
Pyrene	6500	140000	40000	20	330	1700	27
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	4200 T	55000 T	28000 T	8.4 JT	200 T	820 T	8.8 JT

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	WLCMRD08SDDB22SB	WLCMRD08SDDC24SB	WLCMRD08SDDC25SB	WLCMRD08SDUD1SB	WLCMRD08SDUD26SB	WLCMRD08SDUD27SB	WLCMRD08SDUD2SB
Sample Name:	WLCMRD08DB22-4	WLCMRD08DC24-3	WLCMRD08DC25-4	WLCMRD08UD1-3	WLCMRD08UD26-3	WLCMRD08UD27-3	WLCMRD08UD2-3
Sample Date:	4/19/2008	4/19/2008	4/19/2008	4/15/2008	4/13/2008	4/13/2008	4/15/2008
Depth Interval:	243.84 - 335.28 cm	304.8 - 365.76 cm	243.84 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm
Semivolatile Organics (µg/kg)							
Carbazole	**250**	**4600**	**1600**	7.4 U	**1.6 J**	**1.9 J**	9.9 U
Dibenzofuran	**210**	**1700**	**660**	**0.61 J**	**6.1**	**7.2**	**0.82 J**
PCB Aroclors (µg/kg)							
Aroclor 1016	2.4 U	32 U	22 U	1.9 U	2.2 U	2.5 U	2.5 U
Aroclor 1221	4.8 U	230 U	120 U	3.7 U	4.3 U	4.9 U	5 U
Aroclor 1232	2.4 U	42 U	39 U	1.9 U	2.2 U	2.5 U	2.5 U
Aroclor 1242	36 U	23 U	25 U	1.9 U	2.2 U	2.5 U	2.5 U
Aroclor 1248	2.4 U	5.7 U	2.7 U	1.9 U	2.2 U	2.5 U	2.5 U
Aroclor 1254	**110**	15 U	**100**	1.9 U	2.2 U	2.5 U	2.5 U
Aroclor 1260	**64**	19 U	**34**	1.9 U	2.2 U	2.5 U	2.5 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**200 T**	230 UT	**240 T**	3.7 UT	4.3 UT	4.9 UT	5 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	0.96 U	9.1 U	11 U	0.15 U	0.17 U	0.2 U	0.2 U
beta-Hexachlorocyclohexane (BHC)	0.96 U	9.1 U	4.4 U	0.15 U	0.17 U	0.2 U	0.2 U
Endrin ketone	1.6 U	**51 J**	**16 J**	0.15 U	0.17 U	0.2 U	0.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**12 J**	50 U	40 U	0.15 U	0.17 U	0.2 U	0.2 U
LWG RA Sum DDD (Calculated U = 1/2)	**64 JT**	**200 JT**	**75 T**	0.15 UT	0.2 UT	0.2 UT	0.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	**18 JT**	68 UT	5.3 UT	0.15 UT	0.17 UT	0.2 UT	0.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	**10 T**	30 UT	23 UT	0.2 UT	0.17 UT	0.2 UT	0.2 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**480**	**2400**	**1100**	15 U	**7.4 J**	**31**	**2.8 J**
Residual Range Hydrocarbons	**700**	**2100**	**1400**	**8 J**	**14 J**	**56 J**	**9.3 J**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP28	WLCSLH01GP30	DGS-03SC	DGS-06SC
Sample Name:	WLCSLH01GP25S11	WLCSLH01GP26S8	WLCSLH01GP27S10	WLCSLH01GP28S10	WLCSLH01GP30S8	DGS-03SC-1215.3-101005	DGS-06SC-1216-101007
Sample Date:	9/28/2004	10/4/2004	10/7/2004	10/13/2004	10/22/2004	10/5/2010	10/7/2010
Depth Interval:	335.3 - 350.5 cm	243.8 - 259 cm	304.8 - 320 cm	304.8 - 320 cm	243.8 - 259 cm	365.76 - 466.34 cm	365.76 - 487.68 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	**0.464**	0.135 U
Metals (mg/kg)							
Zinc	--	--	--	--	--	**49 J**	**54**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	16.4 U	17.5 U	15.1 U	15.8 U	18 U	1.2 U	1.2 U
1,2-Dichloroethene, cis-	16.4 U	17.5 U	15.1 U	15.8 U	18 U	1.2 U	1.2 U
1,2-Dichloroethene, trans-	16.4 U	17.5 U	15.1 U	15.8 U	18 U	1.2 U	1.2 U
Benzene	**350**	**15500**	**23**	**156**	18 U	1.2 U	1.2 U
Ethylbenzene	**1590**	**26000**	**214**	**5750**	18 U	1.2 U	1.2 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	**581**	**7790**	**98.6**	**3270**	18 U	1.2 U	1.2 U
Toluene	**137**	**8760**	**20.6**	**21.1**	18 U	1.2 U	1.2 U
Trichloroethene (TCE)	16.4 U	17.5 U	15.1 U	15.8 U	18 U	1.2 U	1.2 U
Vinyl chloride	16.4 U	17.5 U	15.1 U	15.8 U	18 U	1.2 U	1.2 U
LWG RA Total Xylene (Calculated U = 1/2)	**745 T**	**8560 T**	**236 T**	**3400 T**	36 UT	1.2 UT	1.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**96300**	**369000**	**18200**	**328000**	**148**	65 U	66 U
Acenaphthene	**153000**	**3010000**	**37900**	**172000**	**2890**	65 U	66 U
Acenaphthylene	**3520**	**120000**	**2090**	**15600**	**207**	65 U	66 U
Anthracene	**59900**	**1310000**	**15000**	**152000**	**1550**	65 U	66 U
Benzo(a)anthracene	**34500**	**772000**	**13900**	**89800**	**1280**	65 U	66 U
Benzo(a)pyrene	**41900**	**1010000**	**18200**	**88300**	**1040**	65 U	66 U
Benzo(b)fluoranthene	**35400**	**850000**	**15000**	**79500**	**855**	--	--
Benzo(g,h,i)perylene	**27100**	**580000**	**11200**	**51700**	**858**	65 U	66 U
Benzo(k)fluoranthene	**11300**	**278000**	**4750**	**24600**	**331**	--	--
Chrysene	**32000**	**743000**	**12500**	**89800**	**1450**	65 U	66 U
Dibenzo(a,h)anthracene	**5090**	**88000**	**1850**	**10000**	**152**	65 U	66 U
Fluoranthene	**137000**	**2580000**	**54200**	**288000**	**3110**	65 U	66 U
Fluorene	**81700**	**1490000**	**19200**	**123000**	**1830**	65 U	66 U
Indeno(1,2,3-c,d)pyrene	**21700**	**462000**	**8760**	**39200**	**635**	65 U	66 U
Naphthalene	**679000**	**16600000**	**92000**	**524000**	**529**	65 U	66 U
Phenanthrene	**300000**	**5710000**	**94200**	**708000**	**4400**	65 U	66 U
Pyrene	**143000**	**2860000**	**57500**	**343000**	**3350**	65 U	66 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**56000 T**	**1300000 T**	**24000 T**	**120000 T**	**1470 T**	65 UT	66 UT

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP28	WLCSLH01GP30	DGS-03SC	DGS-06SC
Sample Name:	WLCSLH01GP25S11	WLCSLH01GP26S8	WLCSLH01GP27S10	WLCSLH01GP28S10	WLCSLH01GP30S8	DGS-03SC-1215.3-101005	DGS-06SC-1216-101007
Sample Date:	9/28/2004	10/4/2004	10/7/2004	10/13/2004	10/22/2004	10/5/2010	10/7/2010
Depth Interval:	335.3 - 350.5 cm	243.8 - 259 cm	304.8 - 320 cm	304.8 - 320 cm	243.8 - 259 cm	365.76 - 466.34 cm	365.76 - 487.68 cm
Semivolatile Organics (µg/kg)							
Carbazole	**9570**	**42300**	**3270**	**44700**	**518**	65 U	66 U
Dibenzofuran	**4380**	**27100**	**1670**	**17300**	**1040**	65 U	66 U
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	33 U	33 U
Aroclor 1221	--	--	--	--	--	33 U	33 U
Aroclor 1232	--	--	--	--	--	33 U	33 U
Aroclor 1242	--	--	--	--	--	33 U	33 U
Aroclor 1248	--	--	--	--	--	33 U	33 U
Aroclor 1254	--	--	--	--	--	33 U	33 U
Aroclor 1260	--	--	--	--	--	33 U	33 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	33 UT	33 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	1.6 U	1.6 U
Endrin ketone	--	--	--	--	--	3.3 U	3.3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	1.6 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	3.3 UT	3.3 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	3.3 UT	3.3 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	3.3 UT	3.3 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	6.6 U	6.6 U
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	DGS-07SC	DGS-11SC	DGS-13SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-25SC
Sample Name:	DGS-07SC-1213.4-101012	DGS-11SC-1216-101006	DGS-13SC-1216-101005	S-19SC-1214.7-101	GS-20SC-1213.7-1010	S-22SC-1213.3-101	GS-23SC-1214.4-10100	S-25SC-1214.5-101
Sample Date:	10/12/2010	10/6/2010	10/5/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/7/2010
Depth Interval:	365.76 - 408.43 cm	365.76 - 487.68 cm	365.76 - 487.68 cm	365.76 - 448.06 cm	365.76 - 417.58 cm	365.76 - 405.38 cm	365.76 - 438.91 cm	365.76 - 441.96 cm
Conventional Parameters (mg/kg)								
Cyanide, total	**1.39**	0.116 U	**0.202**	0.128 U	0.122 U	**0.302**	0.129 U	0.128 U
Metals (mg/kg)								
Zinc	**159**	**49**	**56 J**	**46**	**55**	**97**	**48**	**50**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	120 UJ	1.1 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.1 U
1,2-Dichloroethene, cis-	120 U	1.1 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.1 U
1,2-Dichloroethene, trans-	120 U	1.1 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.1 U
Benzene	**420**	**1.6**	1.3 U	**19**	1.2 U	1.6 U	1.3 U	1.1 U
Ethylbenzene	**1800**	1.1 UJ	1.3 U	**1.4**	1.2 U	1.6 U	1.3 U	1.1 U
Naphthalene	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
o-Xylene	**760**	1.1 UJ	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.1 U
Toluene	120 U	1.1 UJ	1.3 U	**2.4**	1.2 U	1.6 U	1.3 U	1.1 U
Trichloroethene (TCE)	120 U	1.1 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.1 U
Vinyl chloride	120 U	1.1 U	1.3 U	1.2 U	1.2 U	1.6 U	1.3 U	1.1 U
LWG RA Total Xylene (Calculated U = 1/2)	**1200 T**	1.1 UJT	1.3 UT	1.2 UT	1.2 UT	**3 T**	1.3 UT	1.1 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	**82000**	62 U	61 U	61 U	65 U	**250**	63 U	66 U
Acenaphthene	**71000**	62 U	61 U	**250**	65 U	**3100**	63 U	66 U
Acenaphthylene	**1600**	62 U	61 U	61 U	65 U	**260**	63 U	66 U
Anthracene	**66000**	62 U	61 U	**110**	65 U	**3800**	63 U	66 U
Benzo(a)anthracene	**47000**	62 U	61 U	61 U	65 U	**4900**	63 U	66 U
Benzo(a)pyrene	**59000**	62 U	61 U	61 U	65 U	**7800**	63 U	66 U
Benzo(b)fluoranthene	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Benzo(g,h,i)perylene	**15000**	62 U	61 U	61 U	65 U	**3600**	63 U	66 U
Benzo(k)fluoranthene	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Chrysene	**53000**	62 U	61 U	61 U	65 U	**6100**	63 U	66 U
Dibenzo(a,h)anthracene	**720**	62 U	61 U	61 U	65 U	180 U	63 U	66 U
Fluoranthene	**170000**	62 U	61 U	**200**	65 U	**18000**	63 U	66 U
Fluorene	**44000**	62 U	61 U	**150**	65 U	**1200**	63 U	66 U
Indeno(1,2,3-c,d)pyrene	**13000**	62 U	61 U	61 U	65 U	**2800**	63 U	66 U
Naphthalene	**160000**	**74**	61 U	61 U	65 U	**720**	63 U	66 U
Phenanthrene	**270000**	**70**	61 U	**930**	65 U	**17000**	63 U	66 U
Pyrene	**220000**	62 U	61 U	**210**	65 UJ	**24000**	63 UJ	66 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**72000 T**	62 UT	61 UT	61 UT	65 UT	**9600 T**	63 UT	66 UT

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	DGS-07SC	DGS-11SC	DGS-13SC	DGS-19SC	DGS-20SC	DGS-22SC	DGS-23SC	DGS-25SC
Sample Name:	DGS-07SC-1213.4-101012	DGS-11SC-1216-101006	DGS-13SC-1216-101005	S-19SC-1214.7-101	GS-20SC-1213.7-1010	S-22SC-1213.3-101	GS-23SC-1214.4-10100	S-25SC-1214.5-101
Sample Date:	10/12/2010	10/6/2010	10/5/2010	10/6/2010	10/8/2010	10/12/2010	10/8/2010	10/7/2010
Depth Interval:	365.76 - 408.43 cm	365.76 - 487.68 cm	365.76 - 487.68 cm	365.76 - 448.06 cm	365.76 - 417.58 cm	365.76 - 405.38 cm	365.76 - 438.91 cm	365.76 - 441.96 cm
Semivolatile Organics (µg/kg)								
Carbazole	**3200**	62 U	61 U	61 U	65 U	180 U	63 U	66 U
Dibenzofuran	**4600**	62 U	61 U	61 U	65 U	180 U	63 U	66 U
PCB Aroclors (µg/kg)								
Aroclor 1016	33 U	31 U	32 U	31 U	33 U	32 U	32 U	32 U
Aroclor 1221	33 UJ	31 U	32 U	31 U	33 U	32 UJ	32 U	32 U
Aroclor 1232	33 U	31 U	32 U	31 U	33 U	32 U	32 U	32 U
Aroclor 1242	33 U	31 U	32 U	31 U	33 U	32 U	32 U	32 U
Aroclor 1248	33 U	31 U	32 U	31 U	33 U	32 U	32 U	32 U
Aroclor 1254	41 U	31 U	32 U	31 U	33 U	32 U	32 U	32 U
Aroclor 1260	**66**	31 U	32 U	31 U	33 U	32 U	32 U	32 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**170 JT**	31 UT	32 UT	31 UT	33 UT	32 UJT	32 UT	32 UT
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
alpha-Hexachlorocyclohexane (BHC)	8 U	1.6 U	1.6 U	1.5 U	1.6 U	8 U	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	8 U	1.6 U	1.6 U	1.5 U	1.6 U	8 U	1.6 U	1.6 U
Endrin ketone	16 U	3.2 U	3.3 U	3.1 U	3.3 U	16 U	3.2 U	3.3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8 U	1.6 U	1.6 U	1.5 U	1.6 U	8 U	1.6 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	3.2 UT	3.3 UT	3.1 UT	3.3 UT	16 UT	3.2 UT	3.3 UT
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	3.2 UT	3.3 UT	3.1 UT	3.3 UT	16 UT	3.2 UT	3.3 UT
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	3.2 UT	3.3 UT	3.1 UT	3.3 UT	16 UT	3.2 UT	3.3 UT
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	**3400 J**	5.9 U	6.9 U	6.2 U	6.6 U	**440 J**	7 U	6.6 U
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	DGS-30SC	DGS-31SC	DGS-32SC	DGS-37SC	GSM-14	LW2-C283	LW2-C301	LW2-C301
Sample Name:	GS-30SC-1213.9-1010	S-31SC-1215.5-101	GS-32SC-1213.6-1010	S-37SC-1216-1010	M-14SO-12.5-17.5-1010	LW2-C283-E	LW2-C301-E	LW2-C301-G
Sample Date:	10/6/2010	10/11/2010	10/11/2010	10/11/2010	10/15/2010	11/8/2004	11/8/2004	11/8/2004
Depth Interval:	365.76 - 423.67 cm	365.76 - 472.44 cm	365.76 - 414.53 cm	365.76 - 487.68 cm	381 - 533.4 cm	380 - 430 cm	358 - 398 cm	428 - 516 cm
Conventional Parameters (mg/kg)								
Cyanide, total	0.121 U	0.12 U	**0.216**	**1.42**	0.143 U	--	--	--
Metals (mg/kg)								
Zinc	**45**	**47**	**47**	**177**	**66**	**58.1**	**52.2**	**114**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	1.2 U	1.2 U	1.2 U	1.6 U	1.4 U	0.12 U	3600 U	0.13 U
1,2-Dichloroethene, cis-	1.2 U	1.2 U	1.2 U	1.6 U	1.4 U	--	--	--
1,2-Dichloroethene, trans-	1.2 U	1.2 U	1.2 U	1.6 U	1.4 U	0.27 U	4200 U	0.3 U
Benzene	**5.8**	1.2 U	1.2 U	1.6 U	1.4 U	**0.45 J**	**270000**	**28000**
Ethylbenzene	1.2 U	1.2 U	1.2 U	1.6 U	1.4 U	0.098 U	**110000**	**9900**
Naphthalene	--	--	--	--	--	--	**11000000**	**1000000**
o-Xylene	1.2 U	1.2 U	1.2 U	1.6 U	1.4 U	0.11 U	**80000**	**7400**
Toluene	1.2 U	1.2 U	1.2 U	1.6 U	1.4 U	0.21 U	**190000**	**8800**
Trichloroethene (TCE)	1.2 U	1.2 U	1.2 U	1.6 U	1.4 U	0.086 U	5700 U	0.096 U
Vinyl chloride	1.2 U	1.2 U	1.2 U	1.6 U	1.4 U	0.12 U	6400 U	0.14 U
LWG RA Total Xylene (Calculated U = 1/2)	1.2 UT	1.2 UT	1.2 UT	1.6 UT	1.4 UT	0.18 UT	**280000 T**	**27000 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	63 U	61 U	65 U	**2100**	60 U	**14 J**	**1200000 J**	**58000 J**
Acenaphthene	63 U	61 U	65 U	**4300**	60 U	**7.7 J**	**260000 J**	**66000 J**
Acenaphthylene	63 U	61 U	65 U	**370**	60 U	**5.3 J**	**1500000 J**	**56000 J**
Anthracene	63 U	61 U	65 U	**7700**	60 U	**17 J**	**730000 J**	**56000 J**
Benzo(a)anthracene	63 U	61 U	65 U	**10000**	60 U	**33 J**	**440000 J**	**46000 J**
Benzo(a)pyrene	63 U	61 U	65 U	**16000**	60 U	**26 J**	**470000 J**	**71000 J**
Benzo(b)fluoranthene	--	--	--	--	--	**27 J**	**440000 J**	**60000 J**
Benzo(g,h,i)perylene	63 U	61 UJ	65 UJ	**14000 J**	60 U	**13 J**	**280000 J**	**55000 J**
Benzo(k)fluoranthene	--	--	--	--	--	**15 J**	**180000 J**	**18000 J**
Chrysene	63 U	61 U	65 U	**14000**	60 U	**31 J**	**490000 J**	**59000 J**
Dibenzo(a,h)anthracene	63 U	61 U	65 U	**2400**	60 U	**4 J**	**37000 J**	**4300 J**
Fluoranthene	63 U	61 U	65 U	**34000**	60 U	**43 J**	**1800000 J**	**250000 J**
Fluorene	63 U	61 U	65 U	**3800**	60 U	**4.7 J**	**730000 J**	**52000 J**
Indeno(1,2,3-c,d)pyrene	63 U	61 U	65 U	**9300**	60 U	**12 J**	**280000 J**	**49000 J**
Naphthalene	63 U	61 U	65 U	**450**	60 U	**83 J**	--	--
Phenanthrene	63 U	61 U	65 U	**48000**	60 U	**29 J**	**3900000 J**	**460000 J**
Pyrene	63 U	61 U	65 U	**50000 J**	60 U	**60 J**	**2200000 J**	**320000 J**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	63 UT	61 UT	65 UT	**22000 T**	60 UT	**37 JT**	**630000 JT**	**91000 JT**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	DGS-30SC	DGS-31SC	DGS-32SC	DGS-37SC	GSM-14	LW2-C283	LW2-C301	LW2-C301
Sample Name:	GS-30SC-1213.9-1010	S-31SC-1215.5-101	GS-32SC-1213.6-1010	S-37SC-1216-1010	M-14SO-12.5-17.5-1010	LW2-C283-E	LW2-C301-E	LW2-C301-G
Sample Date:	10/6/2010	10/11/2010	10/11/2010	10/11/2010	10/15/2010	11/8/2004	11/8/2004	11/8/2004
Depth Interval:	365.76 - 423.67 cm	365.76 - 472.44 cm	365.76 - 414.53 cm	365.76 - 487.68 cm	381 - 533.4 cm	380 - 430 cm	358 - 398 cm	428 - 516 cm
Semivolatile Organics (µg/kg)								
Carbazole	63 U	61 U	65 U	310 U	60 U	**2.4 J**	**210000**	**10000**
Dibenzofuran	63 U	61 U	65 U	**420**	60 U	**2.5 J**	**100000 J**	**6300 J**
PCB Aroclors (µg/kg)								
Aroclor 1016	30 U	33 U	32 U	32 U	32 U	1.35 UJ	6.8 U	1.56 U
Aroclor 1221	30 U	33 UJ	32 UJ	32 UJ	32 UJ	2.5 UJ	12.6 U	2.89 U
Aroclor 1232	30 U	33 U	32 U	48 U	32 U	2.26 UJ	11.4 U	2.61 U
Aroclor 1242	30 U	33 U	32 U	32 U	32 U	1.37 UJ	6.92 U	1.59 U
Aroclor 1248	30 U	33 U	32 U	32 U	32 U	1.76 UJ	8.87 U	2.03 U
Aroclor 1254	30 U	33 U	32 U	**47**	32 U	0.821 UJ	4.13 U	0.948 U
Aroclor 1260	30 U	33 U	32 U	**44**	32 U	1.05 UJ	5.3 U	1.22 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	30 UT	33 UJT	32 UJT	**180 JT**	32 UJT	2.5 UJT	13 UT	2.89 UT
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
alpha-Hexachlorocyclohexane (BHC)	1.5 U	1.6 U	1.7 U	7.9 U	1.6 U	0.0361 U	12.4 U	0.81 U
beta-Hexachlorocyclohexane (BHC)	1.5 U	1.6 U	1.7 U	7.9 U	1.6 U	**1.06 J**	12.6 U	0.819 U
Endrin ketone	3 U	3.2 U	3.3 U	16 U	3.2 U	0.0318 U	**263 NJ**	0.713 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.5 U	1.6 U	1.7 U	7.9 U	1.6 U	0.0825 U	28.4 U	1.85 U
LWG RA Sum DDD (Calculated U = 1/2)	3 UT	3.2 UT	3.3 UT	16 UT	3.2 UT	0.0521 UT	**580 NJT**	**43.7 NJT**
LWG RA Sum DDE (Calculated U = 1/2)	3 UT	3.2 UT	3.3 UT	16 UT	3.2 UT	0.0488 UT	16.8 UT	**16.9 JT**
LWG RA Sum DDT (Calculated U = 1/2)	3 UT	3.2 UT	3.3 UT	16 UT	3.2 UT	0.0602 UJT	**649 JT**	**62 JT**
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	6.2 U	6.1 UJ	6.6 UJ	**1100 J**	7.1 U	14 UT	**89000 J**	**3700 J**
Residual Range Hydrocarbons	--	--	--	--	--	**13.5 JT**	**68000 J**	**2400 J**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	LW2-C311	LW2-C525	LW2-C527	LW2-C528	WLCGSG07GSB2	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSC5
Sample Name:	LW2-C311-E	LW2-C525-E	LW2-C527-E	LW2-C528-F	WLCGSG07GSB2S131	WLCGSG07GSB5S1315	WLCGSG07GSB7S131	LCGSG07GSC5S13
Sample Date:	11/9/2004	10/26/2005	10/26/2005	10/26/2005	9/21/2007	9/21/2007	8/30/2007	9/20/2007
Depth Interval:	398 - 533 cm	341 - 427 cm	352 - 482 cm	451 - 491 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm
Conventional Parameters (mg/kg)								
Cyanide, total	--	--	--	--	0.19 J	0.2 J	1.2	0.14 J
Metals (mg/kg)								
Zinc	89.8	50.2	135	46.9	61.7	68.4	81.6	50.5
Volatile Organics (µg/kg)								
1,1-Dichloroethene	0.13 U	0.12 U	0.15 U	0.11 U	0.076 U	0.079 U	1300 U	0.072 U
1,2-Dichloroethene, cis-	--	--	--	--	0.14 U	0.14 U	1300 U	0.13 U
1,2-Dichloroethene, trans-	0.3 U	0.26 U	0.35 U	0.26 U	0.12 U	0.12 U	1500 U	0.11 U
Benzene	0.48 J	0.053 U	6	0.053 U	0.11 U	0.11 U	3400 J	0.1 U
Ethylbenzene	0.11 U	0.096 U	100	0.096 U	0.087 U	0.52 J	42000	0.082 U
Naphthalene	--	--	40000	--	--	--	3500000	0.18 U
o-Xylene	0.23 U	0.11 U	1.7	0.11 U	0.076 U	0.079 U	24000	0.072 U
Toluene	0.24 U	0.21 U	3.2	0.21 U	0.42 J	0.37 J	3900 J	0.83 J
Trichloroethene (TCE)	0.096 U	0.084 U	0.12 U	0.083 U	0.093 U	0.097 U	2000 U	0.089 U
Vinyl chloride	0.14 U	0.12 U	0.16 U	0.12 U	0.13 U	0.14 U	2300 U	0.12 U
LWG RA Total Xylene (Calculated U = 1/2)	0.23 UT	0.18 UT	1.8 T	0.18 UT	0.2 UT	0.21 UT	83000 T	0.19 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	48 J	37	4100	6.6	60	43	240000	0.91 J
Acenaphthene	110 J	350	3200	52	480	91	220000	0.44 J
Acenaphthylene	63 J	40	400	3.1	62	6.2	97000	0.31 U
Anthracene	170 J	370	2500	31	260	50	170000	0.6 U
Benzo(a)anthracene	740 J	550	3000	38	1200	46	140000	0.61 U
Benzo(a)pyrene	1300 J	800	3700	44	1900	65	150000	0.18 U
Benzo(b)fluoranthene	1000 J	470	2900	31	1700	58	150000	0.32 U
Benzo(g,h,i)perylene	1400 J	660	4100	39	1800	64	110000	0.81 U
Benzo(k)fluoranthene	300 J	420	2600	27	490	20	38000	0.19 U
Chrysene	860 J	700	4300	52	1400	52	130000	0.32 U
Dibenzo(a,h)anthracene	98 J	63	370	3.1 U	180	7.9	11000	0.36 U
Fluoranthene	2200 J	2300	11000	150	5300	180	530000	0.77 U
Fluorene	67 J	250	2700	24	270	37	150000	0.63 U
Indeno(1,2,3-c,d)pyrene	1000 J	630	3900	35	1600	58	110000	0.21 U
Naphthalene	290 J	340	--	12	380 J	160 J	--	--
Phenanthrene	1100 J	2600	16000	53	4100	280	1000000	1.2 J
Pyrene	3000 J	2900	13000	180	6000	200	620000	0.66 J
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1700 JT	1000 T	5100 T	56 T	2500 T	89 T	200000 T	0.36 UT

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	LW2-C311	LW2-C525	LW2-C527	LW2-C528	WLCGSG07GSB2	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSC5
Sample Name:	LW2-C311-E	LW2-C525-E	LW2-C527-E	LW2-C528-F	WLCGSG07GSB2S131	WLCGSG07GSB5S1315	WLCGSG07GSB7S131	LCGSG07GSC5S13
Sample Date:	11/9/2004	10/26/2005	10/26/2005	10/26/2005	9/21/2007	9/21/2007	8/30/2007	9/20/2007
Depth Interval:	398 - 533 cm	341 - 427 cm	352 - 482 cm	451 - 491 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm
Semivolatile Organics (µg/kg)								
Carbazole	**18 J**	**22**	**640**	**4.3 J**	--	--	--	--
Dibenzofuran	**11 J**	**24**	**350**	2.6 U	**22**	**5.1**	**23000**	0.75 U
PCB Aroclors (µg/kg)								
Aroclor 1016	1.54 U	1.5 U	29 U	1.5 U	--	--	--	--
Aroclor 1221	2.85 U	1.5 U	10 U	4 U	--	--	--	--
Aroclor 1232	2.57 U	1.5 U	57 U	2.9 U	--	--	--	--
Aroclor 1242	1.56 U	1.5 U	36 U	1.7 U	--	--	--	--
Aroclor 1248	2 U	1.5 U	21 U	1.5 U	--	--	--	--
Aroclor 1254	0.935 U	1.5 U	230 U	1.5 U	--	--	--	--
Aroclor 1260	1.2 U	1.5 U	**160**	2.3 U	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	2.9 UT	1.5 UT	**360 T**	4 UT	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
alpha-Hexachlorocyclohexane (BHC)	0.407 U	0.53 U	6.3 U	0.11 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	**0.86 J**	0.81 U	4.4 U	0.17 U	--	--	--	--
Endrin ketone	0.359 U	1.4 U	4 U	0.075 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.931 U	1.6 U	11 U	0.13 U	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	0.587 UT	1 UT	**830 T**	**8.7 NJT**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	0.551 UT	**1.3 T**	**110 NJT**	**0.66 T**	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	0.679 UJT	1.1 UT	**180 T**	0.55 UT	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	**365 JT**	**74 J**	**1600 J**	**9.1 JT**	--	--	**13000**	--
Residual Range Hydrocarbons	**715 JT**	**130 J**	**2600 J**	23 UT	--	--	**8000**	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	VLCGSG07GSC	CMRD08SDDA1	VLCMRD08SDDA18S	WLCMRD08SDDC23SB	VLCMRD08SDDC23S	WLCMRD08SDDC24SB	WLCSLH01GP26	WLCSLH01GP27
Sample Name:	CGSG07GSC7S	LCMRD08DA18	WLCMRD08DA18-4	WLCMRD08DC23-3	WLCMRD08DC23-4	WLCMRD08DC24-4	WLCSLH01GP26S13	WLCSLH01GP27S15
Sample Date:	9/19/2007	4/20/2008	4/20/2008	4/20/2008	4/20/2008	4/19/2008	10/4/2004	10/7/2004
Depth Interval:	396.2 - 457.2 cm	35.28 - 396.24 c	396.24 - 487.68 cm	365.76 - 426.72 cm	426.72 - 518.16 cm	365.76 - 457.2 cm	396.2 - 411.4 cm	457.2 - 472.4 cm
Conventional Parameters (mg/kg)								
Cyanide, total	**0.1 J**	**0.1 J**	**0.13 J**	**15.6**	**9.3**	**271**	**--**	**--**
Metals (mg/kg)								
Zinc	**46.3**	**59.4**	**60.6**	**180**	**165**	**205**	**--**	**--**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	0.078 U	**--**	**--**	**--**	**--**	**--**	16 U	13.3 U
1,2-Dichloroethene, cis-	0.14 U	**--**	**--**	**--**	**--**	**--**	16 U	13.3 U
1,2-Dichloroethene, trans-	0.12 U	**--**	**--**	**--**	**--**	**--**	16 U	13.3 U
Benzene	**2.1**	**--**	**--**	**--**	**--**	**--**	**3500**	13.3 U
Ethylbenzene	**6.5**	**--**	**--**	**--**	**--**	**--**	**2620**	1330 U
Naphthalene	**940 J**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
o-Xylene	**2.3**	**--**	**--**	**--**	**--**	**--**	**615**	1330 U
Toluene	**2.2**	**--**	**--**	**--**	**--**	**--**	**852**	1330 U
Trichloroethene (TCE)	0.096 U	**--**	**--**	**--**	**--**	**--**	16 U	13.3 U
Vinyl chloride	0.13 U	**--**	**--**	**--**	**--**	**--**	16 U	13.3 U
LWG RA Total Xylene (Calculated U = 1/2)	**4.9 T**	**--**	**--**	**--**	**--**	**--**	**1170 T**	2670 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	**13**	**1.7 J**	**1.4 J**	**12000**	**1800**	**30000**	**376000**	**454**
Acenaphthene	**31**	**5.8**	**27**	**5600**	**2300**	**28000**	**341000**	**720**
Acenaphthylene	**4.7 J**	**0.51 J**	2.5 U	**500**	**180**	**1700**	**73000**	**25.8**
Anthracene	**46**	**3.6**	**1 J**	**13000**	**2200**	**22000**	**166000**	**328**
Benzo(a)anthracene	**43**	**7.8**	**0.9 J**	**4400**	**2400**	**18000**	**116000**	**199**
Benzo(a)pyrene	**50**	**11**	**0.54 J**	**3100**	**2600**	**18000**	**184000**	**226**
Benzo(b)fluoranthene	**45**	**10**	**0.6 J**	**2900**	**2700**	**22000**	**157000**	**194**
Benzo(g,h,i)perylene	**42**	**13**	2.5 U	**2300**	**2100**	**19000**	**123000**	**177**
Benzo(k)fluoranthene	**15**	**3.5**	2.5 U	**910**	**870**	**6800**	**50600**	**51.6**
Chrysene	**50**	**11**	**0.77 J**	**5300**	**3200**	**24000**	**135000**	**236**
Dibenzo(a,h)anthracene	**5.6**	**1.4 J**	2.5 U	**410**	**420**	**3200**	**15200**	**18.7**
Fluoranthene	**160**	**41**	**2.6**	**14000**	**9500**	**61000**	**438000**	**768**
Fluorene	**25**	**2.8**	**1.3 J**	**8300**	**1500**	**22000**	**172000**	**303**
Indeno(1,2,3-c,d)pyrene	**40**	**12**	**0.56 J**	**2100**	**2100**	**18000**	**94800**	**133**
Naphthalene	**--**	**1.9 J**	**0.61 J**	**1000**	**1400**	**56000**	**1070000**	**2780**
Phenanthrene	**280**	**48**	**12**	**64000**	**12000**	**120000**	**683000**	**1630**
Pyrene	**160**	**50**	**2.9**	**22000**	**11000**	**76000**	**502000**	**798**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**69 T**	**15 JT**	**2 JT**	**4500 T**	**3800 T**	**27000 T**	**237000 T**	**298 T**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	VLCGSG07GSC	CMRD08SDDA1	VLCMRD08SDDA18S	WLCMRD08SDDC23SB	VLCMRD08SDDC23S	WLCMRD08SDDC24SB	WLCSLH01GP26	WLCSLH01GP27
Sample Name:	CGSG07GSC7S	LCMRD08DA18	WLCMRD08DA18-4	WLCMRD08DC23-3	WLCMRD08DC23-4	WLCMRD08DC24-4	WLCSLH01GP26S13	WLCSLH01GP27S15
Sample Date:	9/19/2007	4/20/2008	4/20/2008	4/20/2008	4/20/2008	4/19/2008	10/4/2004	10/7/2004
Depth Interval:	396.2 - 457.2 cm	35.28 - 396.24 c	396.24 - 487.68 cm	365.76 - 426.72 cm	426.72 - 518.16 cm	365.76 - 457.2 cm	396.2 - 411.4 cm	457.2 - 472.4 cm
Semivolatile Organics (µg/kg)								
Carbazole	--	**9.9 J**	**1.7 J**	**960**	**180**	**2700**	**39900**	88.9 U
Dibenzofuran	**3 J**	0 U	2.5 U	**1400**	**210**	**3700**	**30200**	88.9 U
PCB Aroclors (µg/kg)								
Aroclor 1016	--	2.5 U	2.5 U	8.5 U	110 U	48 U	--	--
Aroclor 1221	--	5 U	5 U	4.9 U	53 U	28 U	--	--
Aroclor 1232	--	2.5 U	2.5 U	8.4 U	44 U	170 U	--	--
Aroclor 1242	--	2.5 U	2.5 U	77 U	180 U	51 U	--	--
Aroclor 1248	--	2.5 U	2.5 U	2.5 U	25 U	5.5 U	--	--
Aroclor 1254	--	2.5 U	2.5 U	56 U	1300 U	89 U	--	--
Aroclor 1260	--	2.5 U	2.5 U	**34**	43 U	**65**	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	5 UT	5 UT	**120 T**	1300 UT	**270 T**	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
alpha-Hexachlorocyclohexane (BHC)	--	0.2 U	0.2 U	**1.9 J**	0.98 U	8.8 U	--	--
beta-Hexachlorocyclohexane (BHC)	--	0.2 U	0.2 U	0.98 U	0.98 U	8.8 U	--	--
Endrin ketone	--	0.2 U	0.34 U	0.98 U	0.98 U	**18**	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	0.2 U	0.2 U	3.1 U	1.9 U	49 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	**0.2 JT**	0.2 UT	**25 JT**	**350 T**	**220 JT**	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	0.2 UT	0.2 UT	**20 JT**	**43 JT**	8.8 UT	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	0.2 UT	0.2 UT	3.7 UT	**190 T**	46 UT	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	14 U	**2.1 J**	**810**	**530**	**2100**	--	--
Residual Range Hydrocarbons	--	140 U	**27 J**	**540**	**800**	**1400**	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP31	DGS-06SC	DGS-11SC	DGS-13SC
Sample Name:	WLCSLH01GP28S15	WLCSLH01GP29S12	WLCSLH01GP30S1	WLCSLH01GP31S12	DGS-06SC-1616.6-10100	DGS-11SC-1617.5-101006	DGS-13SC-1617-101005
Sample Date:	10/13/2004	10/19/2004	10/22/2004	10/26/2004	10/7/2010	10/6/2010	10/5/2010
Depth Interval:	457.2 - 472.4 cm	365.8 - 381 cm	396.2 - 411.4 cm	365.8 - 381 cm	487.68 - 505.97 cm	487.68 - 533.4 cm	487.68 - 518.16 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	0.152 U	0.131 U	**0.133**
Metals (mg/kg)							
Zinc	--	--	--	--	**61**	**54**	**47 J**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	17.3 U	12 U	15.2 U	12.4 U	1.4 U	1.3 U	1.1 U
1,2-Dichloroethene, cis-	17.3 U	12 U	15.2 U	**129**	1.4 U	1.3 U	1.1 U
1,2-Dichloroethene, trans-	17.3 U	12 U	15.2 U	12.4 U	1.4 U	1.3 U	1.1 U
Benzene	17.3 U	12 U	15.2 U	12.4 U	1.4 U	**19**	1.1 U
Ethylbenzene	17.3 U	**139**	15.2 U	**258**	1.4 U	**2.8**	1.1 U
Naphthalene	--	**14200**	--	**88000**	--	--	--
o-Xylene	17.3 U	**41.8**	15.2 U	**160**	1.4 U	1.3 U	1.1 U
Toluene	17.3 U	12 U	15.2 U	**15**	1.4 U	**3.9**	1.1 U
Trichloroethene (TCE)	17.3 U	12 U	15.2 U	12.4 U	1.4 U	1.3 U	1.1 U
Vinyl chloride	17.3 U	12 U	15.2 U	12.4 U	1.4 U	1.3 U	1.1 U
LWG RA Total Xylene (Calculated U = 1/2)	34.6 UT	**111 T**	30.4 UT	**290 T**	1.4 UT	**2.7 T**	1.1 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**16300**	**1880**	**117**	**22900**	60 U	61 U	64 U
Acenaphthene	**23800**	**2970**	**3370**	**28700**	60 U	61 U	64 U
Acenaphthylene	**1320**	**196**	**277**	**1200**	60 U	61 U	64 U
Anthracene	**21000**	**1490**	**2230**	**12000**	60 U	61 U	64 U
Benzo(a)anthracene	**19200**	**1230**	**1850**	**7320**	60 U	61 U	64 U
Benzo(a)pyrene	**20900**	**1430**	**1400**	**7410**	60 U	61 U	64 U
Benzo(b)fluoranthene	**16300**	**1090**	**1580**	**5850**	--	--	--
Benzo(g,h,i)perylene	**17000**	**1380**	**1020**	**6570**	60 U	61 U	64 U
Benzo(k)fluoranthene	**6590**	**419**	**1790**	**2370**	--	--	--
Chrysene	**19900**	**1340**	**1920**	**9150**	60 U	61 U	64 U
Dibenzo(a,h)anthracene	**1930**	**200**	**191**	**1080**	60 U	61 U	64 U
Fluoranthene	**56600**	**2960**	**3940**	**27700**	60 U	61 U	64 U
Fluorene	**15100**	**1540**	**2550**	**11900**	60 U	61 U	64 U
Indeno(1,2,3-c,d)pyrene	**12500**	**904**	**403**	**4720**	60 U	61 U	64 U
Naphthalene	**1020**	--	**221**	--	60 U	61 U	64 U
Phenanthrene	**85900**	**8550**	**3760**	**50400**	60 U	61 U	64 U
Pyrene	**59800**	**3320**	**3770**	**28600**	60 U	61 U	64 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**27700 T**	**2000 T**	**2000 T**	**10300 T**	60 UT	61 UT	64 UT

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP31	DGS-06SC	DGS-11SC	DGS-13SC
Sample Name:	WLCSLH01GP28S15	WLCSLH01GP29S12	WLCSLH01GP30S1	WLCSLH01GP31S12	DGS-06SC-1616.6-10100	DGS-11SC-1617.5-10100	DGS-13SC-1617-101005
Sample Date:	10/13/2004	10/19/2004	10/22/2004	10/26/2004	10/7/2010	10/6/2010	10/5/2010
Depth Interval:	457.2 - 472.4 cm	365.8 - 381 cm	396.2 - 411.4 cm	365.8 - 381 cm	487.68 - 505.97 cm	487.68 - 533.4 cm	487.68 - 518.16 cm
Semivolatile Organics (µg/kg)							
Carbazole	**1940**	**480**	**833**	**2750**	60 U	61 U	64 U
Dibenzofuran	**1570**	**277**	**1410**	**2270**	60 U	61 U	64 U
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	32 U	30 U	32 U
Aroclor 1221	--	--	--	--	32 U	30 U	32 U
Aroclor 1232	--	--	--	--	32 U	30 U	32 U
Aroclor 1242	--	--	--	--	32 U	30 U	32 U
Aroclor 1248	--	--	--	--	32 U	30 U	32 U
Aroclor 1254	--	--	--	--	32 U	30 U	32 U
Aroclor 1260	--	--	--	--	32 U	30 U	32 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	32 UT	30 UT	32 UT
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	1.6 U	1.5 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	1.6 U	1.5 U	1.6 U
Endrin ketone	--	--	--	--	3.2 U	3 U	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	1.6 U	1.5 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	3.2 UT	3 UT	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	3.2 UT	3 UT	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	3.2 UT	3 UT	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	7.6 U	6.7 U	6.4 U
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	DGS-37SC	LW2-C269	WLCGSG04RAA11	WLCGSG04RAA12	WLCGSG04RAA14	WLCGSG04RAA17	LCMRD08SDUD1S	WLCMRD08SDUD26SB
Sample Name:	DGS-37SC-1619-101011	LW2-C269-F	/LCGSG04RAA11SD132	/LCGSG04RAA12SD182	CGSG04RAA14SD1	LCGSG04RAA17SD14	WLCMRD08UD1-4	WLCMRD08UD26-4
Sample Date:	10/11/2010	10/28/2004	7/22/2004	7/20/2004	7/20/2004	7/22/2004	4/15/2008	4/13/2008
Depth Interval:	487.68 - 579.12 cm	509 - 541 cm	396.24 - 609.6 cm	548.64 - 609.6 cm	426.72 - 609.6 cm	426.72 - 609.6 cm	365.76 - 609.6 cm	365.76 - 609.6 cm
Conventional Parameters (mg/kg)								
Cyanide, total	**0.299**	**--**	0.2 UJT	**0.09 J**	**0.06 J**	**0.3 J**	270 UJ	**0.25 J**
Metals (mg/kg)								
Zinc	**131**	**112**	**51.7 T**	**65.1**	**42.4**	**57.6**	**65.4**	**69.7**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	1.6 U	0.14 U	**--**	8 U	7 U	7.9 U	7.2 U	7.1 U
1,2-Dichloroethene, cis-	1.6 U	**--**	**--**	8 U	7 U	7.9 U	7.2 U	7.1 U
1,2-Dichloroethene, trans-	1.6 U	0.31 U	**--**	8 U	7 U	7.9 U	7.2 U	7.1 U
Benzene	1.6 U	**2.7**	**1.3 JT**	8 U	**3.6 J**	7.9 U	7.2 U	7.1 U
Ethylbenzene	1.6 U	**7.9**	7.5 UT	8 U	**1.5 J**	7.9 U	7.2 U	7.1 U
Naphthalene	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
o-Xylene	1.6 U	**2.2**	7.5 UT	**1.5 J**	7 U	7.9 U	7.2 U	7.1 U
Toluene	1.6 U	**0.38 J**	7.5 UT	8 U	7 U	7.9 U	**1.1 J**	7.1 U
Trichloroethene (TCE)	1.6 U	0.11 U	**--**	8 U	7 U	7.9 U	7.2 U	7.1 U
Vinyl chloride	1.6 U	0.14 U	**--**	8 U	7 U	7.9 U	7.2 UJ	7.1 U
LWG RA Total Xylene (Calculated U = 1/2)	1.6 UT	**2.7 T**	7.5 UT	**4.4 JT**	7 UT	7.9 UT	**3.8 JT**	7.1 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	310 U	**2900**	**645 T**	**2300**	**39**	**160**	**0.76 J**	**0.77 J**
Acenaphthene	**1600**	**11000**	**1750 T**	**14000**	**150**	**120000**	**20**	**14**
Acenaphthylene	310 U	**570**	**245 T**	**640 J**	**12**	**57**	2.4 U	**0.26 J**
Anthracene	**2000**	**12000**	**980 T**	**9600**	**56**	**56000**	**0.95 J**	**0.85 J**
Benzo(a)anthracene	**3000**	**10000**	**1010 T**	**7900**	**42**	**78000**	**0.87 J**	**2.7**
Benzo(a)pyrene	**4200**	**16000**	**1950 T**	**11000**	**60**	**130000**	2.4 U	**2.4 J**
Benzo(b)fluoranthene	**--**	**14000**	**1150 T**	**9900**	**53**	**110000**	**0.84 J**	**3**
Benzo(g,h,i)perylene	**3700 J**	**14000**	**2400 T**	**11000**	**56**	**130000**	2.4 U	**1.8 J**
Benzo(k)fluoranthene	**--**	**4400**	**1000 T**	**2900**	**16**	**260**	2.4 U	**0.86 J**
Chrysene	**3800**	**13000**	**1400 T**	**10000**	**80**	**93000**	**0.61 J**	**2.7**
Dibenzo(a,h)anthracene	**740**	**1200**	**104 T**	**860 J**	**5.4 J**	**100**	2.4 U	2.5 U
Fluoranthene	**8900**	**46000**	**5300 T**	**33000**	**150**	**310000**	**1.8 J**	**4.6**
Fluorene	**940**	**5900**	**630 T**	**5600**	**45**	**300**	**0.53 J**	**0.87 J**
Indeno(1,2,3-c,d)pyrene	**2600**	**12000**	**1950 T**	**8900**	**47**	**110000**	**0.48 J**	2.5 U
Naphthalene	310 U	**2200**	**2150 T**	**2000**	**220**	**93000**	**2.2 J**	**1.5 J**
Phenanthrene	**10000**	**64000**	**4700 T**	**44000**	**260**	**320000**	**10**	**4.3**
Pyrene	**12000**	**56000**	**6800 T**	**39000**	**170**	**380000**	**2.1 J**	**5.7**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**5900 T**	**21000 T**	**2500 T**	**15000 JT**	**80 JT**	**160000 T**	**2.6 JT**	**4.4 JT**

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	DGS-37SC	LW2-C269	WLCGSG04RAA11	WLCGSG04RAA12	WLCGSG04RAA14	WLCGSG04RAA17	LCMRD08SDUD1S	WLCMRD08SDUD26SB
Sample Name:	DGS-37SC-1619-101011	LW2-C269-F	/LCGSG04RAA11SD132	/LCGSG04RAA12SD182	CGSG04RAA14SD1	LCGSG04RAA17SD14	WLCMRD08UD1-4	WLCMRD08UD26-4
Sample Date:	10/11/2010	10/28/2004	7/22/2004	7/20/2004	7/20/2004	7/22/2004	4/15/2008	4/13/2008
Depth Interval:	487.68 - 579.12 cm	509 - 541 cm	396.24 - 609.6 cm	548.64 - 609.6 cm	426.72 - 609.6 cm	426.72 - 609.6 cm	365.76 - 609.6 cm	365.76 - 609.6 cm
Semivolatile Organics (µg/kg)								
Carbazole	310 U	**1100 J**	--	--	--	--	9.5 U	**3.2 J**
Dibenzofuran	310 U	**500**	**80.5 T**	**370 J**	**5.4 J**	**25**	**0.73 J**	2.5 U
PCB Aroclors (µg/kg)								
Aroclor 1016	32 U	1.6 U	--	--	--	--	2.4 U	2.5 U
Aroclor 1221	32 UJ	2.95 U	--	--	--	--	4.8 U	5 U
Aroclor 1232	32 U	2.67 U	--	--	--	--	2.4 U	2.5 U
Aroclor 1242	32 U	1.62 U	--	--	--	--	2.4 U	2.5 U
Aroclor 1248	32 U	2.08 U	--	--	--	--	2.4 U	2.5 U
Aroclor 1254	32 U	0.969 U	--	--	--	--	2.4 U	2.5 U
Aroclor 1260	32 U	1.24 U	--	--	--	--	2.4 U	2.5 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UJT	3 UT	--	--	--	--	4.8 UT	5 UT
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
alpha-Hexachlorocyclohexane (BHC)	8 U	**0.295 J**	--	--	--	--	0.2 U	0.2 U
beta-Hexachlorocyclohexane (BHC)	8 U	**3.53 NJ**	--	--	--	--	0.2 U	0.2 U
Endrin ketone	16 U	0.184 U	--	--	--	--	0.2 U	0.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8 U	0.478 U	--	--	--	--	0.2 U	0.2 U
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	**5.1 NJT**	--	--	--	--	0.2 UT	0.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	**4.4 JNT**	--	--	--	--	0.2 UT	0.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	**9.64 NJT**	--	--	--	--	0.2 UT	0.2 UT
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	**360 J**	**1700 J**	**175 T**	**510**	24 U	**180**	15 U	14 U
Residual Range Hydrocarbons	--	**2100 J**	**320 T**	**760**	**49 J**	**370**	150 U	140 U

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	LCMRD08SDUD27	WLCMRD08SDUD2SB	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP32
Sample Name:	WLCMRD08UD27-4	WLCMRD08UD2-4	WLCSLH01GP25S1	WLCSLH01GP26S18	WLCSLH01GP29S1	WLCSLH01GP30S18	WLCSLH01GP31S1	WLCSLH01GP32S16
Sample Date:	4/13/2008	4/15/2008	9/28/2004	10/4/2004	10/19/2004	10/22/2004	10/26/2004	10/27/2004
Depth Interval:	365.76 - 609.6 cm	365.76 - 609.6 cm	487.7 - 502.9 cm	548.6 - 563.8 cm	518.2 - 533.4 cm	548.6 - 563.8 cm	518.2 - 533.4 cm	487.7 - 502.9 cm
Conventional Parameters (mg/kg)								
Cyanide, total	**0.22 J**	**0.11 J**	--	--	--	--	--	--
Metals (mg/kg)								
Zinc	**61.8**	**73.7**	--	--	--	--	--	--
Volatile Organics (µg/kg)								
1,1-Dichloroethene	7.2 U	7.3 U	168 U	16.7 U	12 U	13.5 U	13.3 U	13.4 U
1,2-Dichloroethene, cis-	7.2 U	7.3 U	168 U	16.7 U	12 U	13.5 U	13.3 U	13.4 U
1,2-Dichloroethene, trans-	7.2 U	7.3 U	168 U	16.7 U	12 U	13.5 U	13.3 U	13.4 U
Benzene	7.2 U	7.3 U	**5730**	**246**	12 U	13.5 U	13.3 U	13.4 U
Ethylbenzene	7.2 U	7.3 U	**18500**	**196**	12 U	13.5 U	13.3 U	13.4 U
Naphthalene	--	--	--	--	**674**	--	**1430**	--
o-Xylene	7.2 U	7.3 U	**1070**	**52.7**	12 U	13.5 U	13.3 U	13.4 U
Toluene	7.2 U	**2.7 J**	**697**	**103**	12 U	13.5 U	13.3 U	13.4 U
Trichloroethene (TCE)	7.2 U	**0.5 J**	168 U	16.7 U	12 U	13.5 U	13.3 U	13.4 U
Vinyl chloride	7.2 U	7.3 U	168 U	16.7 U	12 U	13.5 U	13.3 U	13.4 U
LWG RA Total Xylene (Calculated U = 1/2)	7.2 UT	**4.1 JT**	**2090 T**	**104 T**	24 UT	27 UT	26.6 UT	26.7 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	**0.51 J**	**0.4 J**	**321000**	**9010**	**293**	**450**	88.7 U	89.1 U
Acenaphthene	**11**	**3.1**	**650000**	**15200**	**405**	**233**	**48.8**	8.91 U
Acenaphthylene	2.5 U	2.4 U	**17700**	**25400**	8.04 U	8.99 U	8.87 U	8.91 U
Anthracene	**0.62 J**	2.4 U	**234000**	**42500**	**32.1**	8.99 U	**13.3**	8.91 U
Benzo(a)anthracene	**1.8 J**	2.4 U	**169000**	**37900**	**143**	8.99 U	**9.75**	8.91 U
Benzo(a)pyrene	**2.2 J**	2.4 U	**237000**	**60600**	**147**	8.99 U	**11.5**	8.91 U
Benzo(b)fluoranthene	**2.6**	2.4 U	**198000**	**53300**	**122**	8.99 U	**9.75**	8.91 U
Benzo(g,h,i)perylene	**2.8**	2.4 U	**174000**	**33500**	**155**	8.99 U	8.87 U	8.91 U
Benzo(k)fluoranthene	**0.85 J**	2.4 U	**40600**	**14200**	8.04 U	8.99 U	8.87 U	8.91 U
Chrysene	2.5 U	2.4 U	**151000**	**33600**	**155**	8.99 U	8.87 U	8.91 U
Dibenzo(a,h)anthracene	2.5 U	2.4 U	**20000**	**5260**	8.04 U	8.99 U	8.87 U	8.91 U
Fluoranthene	**5.8**	**0.62 J**	**663000**	**148000**	**607**	8.99 U	**37.2**	**102**
Fluorene	**0.93 J**	2.4 U	**245000**	**31800**	**196**	8.99 U	**25.7**	8.91 U
Indeno(1,2,3-c,d)pyrene	2.5 U	2.4 U	**128000**	**26500**	**87.6**	8.99 U	8.87 U	8.91 U
Naphthalene	**2 J**	**2.7**	**2310000**	**334000**	--	**2820**	--	8.91 U
Phenanthrene	**3.7**	2.4 U	**1230000**	**214000**	**1170**	**114**	**127**	**196**
Pyrene	**7.2**	**0.53 J**	**744000**	**160000**	**737**	8.99 U	**31.9**	**127**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**4 JT**	2.4 UT	**310000 T**	**77800 T**	**186 T**	8.99 UT	**18.4 T**	8.91 UT

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Analysis Matrix:	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	LCMRD08SDUD27	WLCMRD08SDUD2SB	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP32
Sample Name:	WLCMRD08UD27-4	WLCMRD08UD2-4	WLCSLH01GP25S1	WLCSLH01GP26S18	WLCSLH01GP29S1	WLCSLH01GP30S18	WLCSLH01GP31S1	WLCSLH01GP32S16
Sample Date:	4/13/2008	4/15/2008	9/28/2004	10/4/2004	10/19/2004	10/22/2004	10/26/2004	10/27/2004
Depth Interval:	365.76 - 609.6 cm	365.76 - 609.6 cm	487.7 - 502.9 cm	548.6 - 563.8 cm	518.2 - 533.4 cm	548.6 - 563.8 cm	518.2 - 533.4 cm	487.7 - 502.9 cm
Semivolatile Organics (µg/kg)								
Carbazole	9.7 U	9.6 U	**32300**	**2180**	80.3 U	89.9 U	88.7 U	89 U
Dibenzofuran	2.5 U	2.4 U	**21200**	**1180**	80.4 U	89.9 U	88.7 U	89.1 U
PCB Aroclors (µg/kg)								
Aroclor 1016	2.5 U	2.5 U	--	--	--	--	--	--
Aroclor 1221	5 U	4.9 U	--	--	--	--	--	--
Aroclor 1232	2.5 U	2.5 U	--	--	--	--	--	--
Aroclor 1242	2.5 U	2.5 U	--	--	--	--	--	--
Aroclor 1248	2.5 U	2.5 U	--	--	--	--	--	--
Aroclor 1254	2.5 U	2.5 U	--	--	--	--	--	--
Aroclor 1260	2.5 U	2.5 U	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	5 UT	4.9 UT	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
alpha-Hexachlorocyclohexane (BHC)	0.2 U	0.2 U	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.2 U	0.2 U	--	--	--	--	--	--
Endrin ketone	0.2 U	0.2 U	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.2 U	0.2 U	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	0.2 UT	0.2 UT	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	0.2 UT	0.2 UT	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	0.2 UT	0.2 UT	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	14 U	15 U	--	--	--	--	--	--
Residual Range Hydrocarbons	140 U	**6.6 J**	--	--	--	--	--	--

Table 3-17
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Human Health

Notes:

Detected concentration is greater than 1 screening level
Detected concentration is greater than 2 screening levels
Detected concentration is greater than 3 screening levels
Detected concentration is greater than 4 screening levels
Detected concentration is greater than 5 screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation.
-- = Results not reported or not applicable
N = Normal Field Sample
R = Rejected

Acronyms:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BaPEq = benzo[a]pyrene equivalents
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
PCB = polychlorinated biphenyl
NA = not applicable
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-03SC	DGS-03SC	DGS-06SC	DGS-06SC	DGS-07SC	DGS-07SC
Sample Name:	DGS-03SC-0104-101005	DGS-03SC-0104-101005	DGS-06SC-0104-101007	DGS-06SC-0104-101007	DGS-07SC-0104-101012	DGS-07SC-0104-101012
Sample Date:	10/5/2010	10/5/2010	10/7/2010	10/7/2010	10/12/2010	10/12/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm
Metals (mg/kg)						
Zinc	**307 J**	--	**70**	--	**220**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	**14000**	--	**7200**	--	**40000**	--
LWG RA Total HPAH (Calculated U = 1/2)	**130000 T**	--	**67000 T**	--	**370000 T**	--
LWG RA Total PAH (Calculated U = 1/2)	**180000 T**	--	**90000 T**	--	**620000 T**	--
Semivolatile Organics (µg/kg)						
Carbazole	**900**	--	620 U	--	**3400**	--
Dibenzofuran	**670**	--	620 U	--	**2800**	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**200 T**	--	32 UT	--	**410 JT**	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	16 U	--	16 U	--	**33 J**	--
2,4'-DDE (o,p'-DDE)	16 U	--	16 U	--	34 U	--
2,4'-DDT (o,p'-DDT)	16 U	--	16 U	--	34 U	--
4,4'-DDD (p,p'-DDD)	16 U	--	16 U	--	**130**	--
4,4'-DDE (p,p'-DDE)	**17**	--	16 U	--	**52**	--
4,4'-DDT (p,p'-DDT)	**25**	--	16 U	--	34 U	--
beta-Hexachlorocyclohexane (BHC)	8 U	--	8.2 U	--	91 U	--
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	--	16 UT	--	**160 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	**25 T**	--	16 UT	--	**69 T**	--
LWG RA Sum DDT (Calculated U = 1/2)	**33 T**	--	16 UT	--	34 UT	--
LWG RA Total DDx (Calculated U = 1/2)	**74 T**	--	16 UT	--	**270 JT**	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**380**	--	**160**	--	**4700 J**	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**1.588457388**	--	**1.347219435**	--	**7.371087947**
pMax	--	**0.804342672**	--	**0.635428926**	--	**0.999017739**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-08SC	DGS-08SC	DGS-11SC	DGS-11SC	DGS-13SC	DGS-13SC
Sample Name:	DGS-08SC-0104-101007	DGS-08SC-0104-101007	DGS-11SC-0104-101006	DGS-11SC-0104-101006	DGS-13SC-0104-101005	DGS-13SC-0104-101005
Sample Date:	10/7/2010	10/7/2010	10/6/2010	10/6/2010	10/5/2010	10/5/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm
Metals (mg/kg)						
Zinc	56	--	122	--	107 J	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	13000	--	58000	--	3500	--
LWG RA Total HPAH (Calculated U = 1/2)	160000 T	--	680000 T	--	40000 T	--
LWG RA Total PAH (Calculated U = 1/2)	310000 T	--	2000000 T	--	72000 T	--
Semivolatile Organics (µg/kg)						
Carbazole	4000	--	15000	--	920	--
Dibenzofuran	1600	--	8200	--	890	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	120 UT	--	140 T	--	31 UT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	65 U	--	16 U	--	16 U	--
2,4'-DDE (o,p'-DDE)	65 U	--	16 U	--	16 U	--
2,4'-DDT (o,p'-DDT)	65 U	--	16 U	--	16 U	--
4,4'-DDD (p,p'-DDD)	65 U	--	16 U	--	16 U	--
4,4'-DDE (p,p'-DDE)	65 U	--	8.3 J	--	6.4 J	--
4,4'-DDT (p,p'-DDT)	65 U	--	16 U	--	16 U	--
beta-Hexachlorocyclohexane (BHC)	32 U	--	18 U	--	7.9 U	--
LWG RA Sum DDD (Calculated U = 1/2)	65 UT	--	16 UT	--	16 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	65 UT	--	16 JT	--	14 JT	--
LWG RA Sum DDT (Calculated U = 1/2)	65 UT	--	16 UT	--	16 UT	--
LWG RA Total DDx (Calculated U = 1/2)	65 UT	--	48 JT	--	46 JT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	410	--	2200	--	250	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	7.295400326	--	41.20971549	--	1.415279077
pMax	--	0.887360461	--	0.998450323	--	0.655119949

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-18SC	DGS-18SC	DGS-18SC	DGS-18SC	DGS-18SC	DGS-18SC
Sample Name:	DGS-18SC-004.5-101008	DGS-18SC-0104-101008	DGS-18SC-015.5-101008	DGS-18SC-004.5-101008	DGS-18SC-0104-101008	DGS-18SC-015.5-101008
Sample Date:	10/8/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010	10/8/2010
Depth Interval:	0 - 137.16 cm	30.48 - 121.92 cm	30.48 - 167.64 cm	0 - 137.16 cm	30.48 - 121.92 cm	30.48 - 167.64 cm
Metals (mg/kg)						
Zinc	53	54	51	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	2200	9500	2100	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	28000 T	99000 JT	28000 T	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	66000 T	170000 JT	67000 T	--	--	--
Semivolatile Organics (µg/kg)						
Carbazole	240	890	190	--	--	--
Dibenzofuran	510	910	550	--	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	31 UT	31 UT	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.3 U	3.2 U	31 U	--	--	--
2,4'-DDE (o,p'-DDE)	3.3 U	3.2 U	31 U	--	--	--
2,4'-DDT (o,p'-DDT)	3.3 U	3.2 U	31 U	--	--	--
4,4'-DDD (p,p'-DDD)	3.3 U	3.2 U	31 U	--	--	--
4,4'-DDE (p,p'-DDE)	3.3 U	3.2 U	31 U	--	--	--
4,4'-DDT (p,p'-DDT)	3.3 U	3.2 U	31 U	--	--	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	16 U	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	3.3 UT	3.2 UT	31 UT	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	3.3 UT	3.2 UT	31 UT	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	3.3 UT	3.2 UT	31 UT	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	3.3 UT	3.2 UT	31 UT	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	330	81	300	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	--	--	2.681645991	3.227407475	2.462760886
pMax	--	--	--	0.682734278	0.798909223	0.682734278

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-19SC	DGS-19SC	DGS-20SC	DGS-20SC	DGS-22SC	DGS-22SC
Sample Name:	DGS-19SC-0104-101006	DGS-19SC-0104-101006	DGS-20SC-0104-101008	DGS-20SC-0104-101008	DGS-22SC-0104-101012	DGS-22SC-1.92.9-101012
Sample Date:	10/6/2010	10/6/2010	10/8/2010	10/8/2010	10/12/2010	10/12/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	57.91 - 88.39 cm
Metals (mg/kg)						
Zinc	149	--	55	--	140	133
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	82000	--	62 U	--	37000	60000
LWG RA Total HPAH (Calculated U = 1/2)	930000 T	--	310 JT	--	370000 T	660000 T
LWG RA Total PAH (Calculated U = 1/2)	4500000 T	--	530 JT	--	580000 T	990000 T
Semivolatile Organics (µg/kg)						
Carbazole	19000	--	62 U	--	1600	4600
Dibenzofuran	14000	--	62 U	--	1300	3200
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	230 T	--	32 UT	--	33 UJT	32 UT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	16 U	--	3.3 U	--	16 U	32 U
2,4'-DDE (o,p'-DDE)	16 U	--	3.3 U	--	16 U	32 U
2,4'-DDT (o,p'-DDT)	16 U	--	3.3 U	--	16 U	32 U
4,4'-DDD (p,p'-DDD)	16 U	--	3.3 U	--	16 U	32 U
4,4'-DDE (p,p'-DDE)	13 J	--	3.3 U	--	16 U	32 U
4,4'-DDT (p,p'-DDT)	16 U	--	3.3 U	--	16 U	32 U
beta-Hexachlorocyclohexane (BHC)	8.2 U	--	1.6 U	--	15 U	16 U
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	--	3.3 UT	--	16 UT	32 UT
LWG RA Sum DDE (Calculated U = 1/2)	21 JT	--	3.3 UT	--	16 UT	32 UT
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	--	3.3 UT	--	16 UT	32 UT
LWG RA Total DDx (Calculated U = 1/2)	53 JT	--	3.3 UT	--	16 UT	32 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	2700	--	6.9 U	--	1200 J	1800
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	107.9026909	--	0.037367615	--	--
pMax	--	0.999846359	--	0.002284796	--	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-22SC	DGS-22SC	DGS-23SC	DGS-23SC	DGS-24SC	DGS-24SC
Sample Name:	DGS-22SC-0104-101012	DGS-22SC-1.92.9-101012	DGS-23SC-0104-101008	DGS-23SC-0104-101008	DGS-24SC-0104-101012	DGS-24SC-0104-101012
Sample Date:	10/12/2010	10/12/2010	10/8/2010	10/8/2010	10/12/2010	10/12/2010
Depth Interval:	30.48 - 121.92 cm	57.91 - 88.39 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm
Metals (mg/kg)						
Zinc	--	--	**49**	--	**94**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	--	64 U	--	**9000**	--
LWG RA Total HPAH (Calculated U = 1/2)	--	--	64 UJT	--	**120000 T**	--
LWG RA Total PAH (Calculated U = 1/2)	--	--	**630 JT**	--	**230000 T**	--
Semivolatile Organics (µg/kg)						
Carbazole	--	--	64 U	--	**1200**	--
Dibenzofuran	--	--	64 U	--	**1600**	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	33 UT	--	32 UJT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	3.3 U	--	16 U	--
2,4'-DDE (o,p'-DDE)	--	--	3.3 U	--	16 U	--
2,4'-DDT (o,p'-DDT)	--	--	3.3 U	--	16 U	--
4,4'-DDD (p,p'-DDD)	--	--	3.3 U	--	**23 J**	--
4,4'-DDE (p,p'-DDE)	--	--	3.3 U	--	16 U	--
4,4'-DDT (p,p'-DDT)	--	--	3.3 U	--	16 U	--
beta-Hexachlorocyclohexane (BHC)	--	--	1.6 U	--	8 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	3.3 UT	--	**31 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	3.3 UT	--	16 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	3.3 UT	--	16 UT	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	3.3 UT	--	**63 JT**	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	7 U	--	**260 J**	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	**8.807560659**	**13.53581446**	--	**0.085903622**	--	**4.589539199**
pMax	**0.94745931**	**0.940851453**	--	**0.035618126**	--	**0.971349014**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-25SC	DGS-25SC	DGS-26SC	DGS-26SC	DGS-26SC	DGS-26SC
Sample Name:	DGS-25SC-0104-101007	DGS-25SC-0104-101007	DGS-26SC-0104-101011	DGS-26SC-015.4-101011	DGS-26SC-0104-101011	DGS-26SC-015.4-101011
Sample Date:	10/7/2010	10/7/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 164.59 cm	30.48 - 121.92 cm	30.48 - 164.59 cm
Metals (mg/kg)						
Zinc	**45**	--	**45**	**45**	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	64 U	--	**6000**	**8000**	--	--
LWG RA Total HPAH (Calculated U = 1/2)	64 UT	--	**58000 T**	**96000 T**	--	--
LWG RA Total PAH (Calculated U = 1/2)	64 UT	--	**130000 T**	**210000 T**	--	--
Semivolatile Organics (µg/kg)						
Carbazole	64 U	--	**1100**	**1300**	--	--
Dibenzofuran	64 U	--	**1100**	**1600**	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 UT	--	33 UJT	33 UT	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	--	16 U	33 U	--	--
2,4'-DDE (o,p'-DDE)	3.2 U	--	16 U	33 U	--	--
2,4'-DDT (o,p'-DDT)	3.2 U	--	16 U	33 U	--	--
4,4'-DDD (p,p'-DDD)	3.2 U	--	16 U	33 U	--	--
4,4'-DDE (p,p'-DDE)	3.2 U	--	16 U	33 U	--	--
4,4'-DDT (p,p'-DDT)	3.2 U	--	16 U	33 U	--	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	--	8.2 U	16 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	--	16 UT	33 UT	--	--
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	--	16 UT	33 UT	--	--
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	--	16 UT	33 UT	--	--
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	--	16 UT	33 UT	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6.3 U	--	**260**	**370**	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.070683664**	--	--	**4.737891244**	**6.996235254**
pMax	--	**0.001042668**	--	--	**0.7785622**	**0.808250455**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-28SC	DGS-28SC	DGS-30SC	DGS-30SC	DGS-31SC	DGS-31SC
Sample Name:	DGS-28SC-0104-101007	DGS-28SC-0104-101007	DGS-30SC-0104-101006	DGS-30SC-0104-101006	DGS-31SC-0104-101011	DGS-31SC-011.9-101011
Sample Date:	10/7/2010	10/7/2010	10/6/2010	10/6/2010	10/11/2010	10/11/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 57.912 cm
Metals (mg/kg)						
Zinc	**46**	--	**49**	--	**94**	**121**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	59 U	--	**73**	--	**6700**	**7100**
LWG RA Total HPAH (Calculated U = 1/2)	59 UT	--	**650 T**	--	**80000 T**	**99000 JT**
LWG RA Total PAH (Calculated U = 1/2)	59 UT	--	**4500 T**	--	**160000 T**	**200000 JT**
Semivolatile Organics (µg/kg)						
Carbazole	59 U	--	59 U	--	**1100**	**2900**
Dibenzofuran	59 U	--	59 U	--	**1200**	**1700**
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	49 UT	--	32 UT	--	33 UJT	32 UT
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.3 U	--	3.2 U	--	17 U	32 U
2,4'-DDE (o,p'-DDE)	3.3 U	--	3.2 U	--	17 U	32 U
2,4'-DDT (o,p'-DDT)	3.3 U	--	3.2 U	--	17 U	32 U
4,4'-DDD (p,p'-DDD)	3.3 U	--	3.2 U	--	**24**	32 U
4,4'-DDE (p,p'-DDE)	3.3 U	--	3.2 U	--	17 U	32 U
4,4'-DDT (p,p'-DDT)	3.3 U	--	3.2 U	--	17 U	32 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	--	1.6 U	--	8.3 U	16 U
LWG RA Sum DDD (Calculated U = 1/2)	3.3 UT	--	3.2 UT	--	**33 T**	32 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.3 UT	--	3.2 UT	--	17 UT	32 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.3 UT	--	3.2 UT	--	17 UT	32 UT
LWG RA Total DDx (Calculated U = 1/2)	3.3 UT	--	3.2 UT	--	**67 T**	32 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6.1 U	--	6 U	--	**400**	**640**
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.070371921**	--	**0.311738046**	--	--
pMax	--	**0.001191145**	--	**0.131438424**	--	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-31SC	DGS-31SC	DGS-32SC	DGS-32SC	DGS-32SC	DGS-32SC
Sample Name:	DGS-31SC-0104-101011	DGS-31SC-011.9-101011	DGS-32SC-0104-101011	DGS-32SC-2.83.8-101011	DGS-32SC-0104-101011	DGS-32SC-2.83.8-101011
Sample Date:	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth Interval:	30.48 - 121.92 cm	30.48 - 57.912 cm	30.48 - 121.92 cm	85.34 - 115.82 cm	30.48 - 121.92 cm	85.34 - 115.82 cm
Metals (mg/kg)						
Zinc	--	--	199	157	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	--	28000	28000	--	--
LWG RA Total HPAH (Calculated U = 1/2)	--	--	370000 T	380000 T	--	--
LWG RA Total PAH (Calculated U = 1/2)	--	--	840000 T	860000 T	--	--
Semivolatile Organics (µg/kg)						
Carbazole	--	--	11000	14000	--	--
Dibenzofuran	--	--	7100	5900	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	490 JT	64 UT	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	31 U	32 U	--	--
2,4'-DDE (o,p'-DDE)	--	--	31 U	32 U	--	--
2,4'-DDT (o,p'-DDT)	--	--	31 U	32 U	--	--
4,4'-DDD (p,p'-DDD)	--	--	120 J	71	--	--
4,4'-DDE (p,p'-DDE)	--	--	31 U	32 U	--	--
4,4'-DDT (p,p'-DDT)	--	--	31 U	32 U	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	58 U	16 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	140 JT	87 T	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	31 UT	32 UT	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	31 UT	32 UT	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	200 JT	150 T	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	2400	3700	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	3.132019252	5.985350425	--	--	18.40064215	23.12848269
pMax	0.81113919	0.859034726	--	--	0.999019842	0.964054243

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	DGS-36SC	DGS-36SC	DGS-37SC	DGS-37SC	GSM-14	GTC-03	GTC-03
Sample Name:	DGS-36SC-0104-101012	DGS-36SC-0104-101012	DGS-37SC-0104-101011	DGS-37SC-0104-101011	GSM-14SO-0-5-101015	GTC-03SC-090113	GTC-03SC-090113
Sample Date:	10/12/2010	10/12/2010	10/11/2010	10/11/2010	10/15/2010	1/13/2009	1/13/2009
Depth Interval:	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	30.48 - 121.92 cm	0 - 152.4 cm	54.86 - 134.11 cm	54.86 - 134.11 cm
Metals (mg/kg)							
Zinc	**110**	--	**249**	--	**77**	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	**6000**	--	**1200**	--	**270**	**6300**	--
LWG RA Total HPAH (Calculated U = 1/2)	**85000 T**	--	**16000 T**	--	**1500 T**	**73000 T**	--
LWG RA Total PAH (Calculated U = 1/2)	**100000 T**	--	**25000 T**	--	**1800 T**	**140000 T**	--
Semivolatile Organics (µg/kg)							
Carbazole	**460**	--	200 U	--	60 U	--	--
Dibenzofuran	**470**	--	**720**	--	60 U	1300 U	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 UJT	--	410 UJT	--	31 UJT	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	15 U	--	**37 J**	--	3.2 U	--	--
2,4'-DDE (o,p'-DDE)	15 U	--	16 U	--	3.2 U	--	--
2,4'-DDT (o,p'-DDT)	15 U	--	16 U	--	3.2 U	--	--
4,4'-DDD (p,p'-DDD)	15 U	--	**110**	--	3.2 U	--	--
4,4'-DDE (p,p'-DDE)	15 U	--	**37**	--	3.2 U	--	--
4,4'-DDT (p,p'-DDT)	15 U	--	**74**	--	3.2 U	--	--
beta-Hexachlorocyclohexane (BHC)	40 U	--	26 U	--	1.6 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	15 UT	--	**150 JT**	--	3.2 UT	--	--
LWG RA Sum DDE (Calculated U = 1/2)	15 UT	--	**45 T**	--	3.2 UT	--	--
LWG RA Sum DDT (Calculated U = 1/2)	15 UT	--	**82 T**	--	3.2 UT	--	--
LWG RA Total DDx (Calculated U = 1/2)	15 UT	--	**270 JT**	--	3.2 UT	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**230 J**	--	**220**	--	6 U	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	**0.920613821**	--	**0.614534521**	**0.047726266**	--	**8.695494956**
pMax	--	**0.713495375**	--	**0.579627053**	**0.002237284**	--	**0.740937308**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	GTC-05	GTC-05	GTC-07	GTC-07	GTC-08	GTC-08	LW2-C252	LW2-C252	LW2-C255	LW2-C255
Sample Name:	GTC-05SC-090114	GTC-05SC-090114	GTC-07SC-090113	GTC-07SC-090113	GTC-08SC-090113	GTC-08SC-090113	LW2-C252-B	LW2-C252-B	LW2-C255-B	LW2-C255-B
Sample Date:	1/14/2009	1/14/2009	1/13/2009	1/13/2009	1/13/2009	1/13/2009	9/23/2004	9/23/2004	10/27/2004	10/27/2004
Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 164.59 cm	0 - 164.59 cm	0 - 73.15 cm	0 - 73.15 cm	30 - 154 cm	30 - 154 cm	30 - 152 cm	30 - 152 cm
Metals (mg/kg)										
Zinc	--	--	--	--	--	--	62.4	--	46	--
Polycyclic Aromatic Hydrocarbons (µg/kg)										
Benzo(a)pyrene	45000	--	23000	--	17000	--	1600	--	0.96 J	--
LWG RA Total HPAH (Calculated U = 1/2)	560000 T	--	280000 T	--	220000 T	--	14000 T	--	8.9 JT	--
LWG RA Total PAH (Calculated U = 1/2)	900000 JT	--	1000000 T	--	480000 JT	--	18000 JT	--	13 JT	--
Semivolatile Organics (µg/kg)										
Carbazole	--	--	--	--	--	--	11	--	1.7 U	--
Dibenzofuran	2600	--	5300	--	3000	--	21	--	0.28 U	--
PCB Aroclors (µg/kg)										
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	2.4 UT	--	2.33 UT	--
PCB Congeners (µg/kg)										
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	3.69 J	--	0.0321 U	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	0.178 UJ	--	0.295 J	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	0.236 UJ	--	0.0451 UJ	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	19.1 NJ	--	0.0481 U	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	1.7 NJ	--	0.0451 U	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	5.54 NJ	--	0.0556 UJ	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	4.16 NJ	--	0.0338 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	22.8 JNT	--	0.0481 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	1.8 NJT	--	0.318 JT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	5.66 NJT	--	0.0556 UJT	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	30 JNT	--	0.408 JT	--
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	--	--	--	--	--	--	13.9 JT	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	27 UT	--	--	--
CALC										
Benthic MQ	--	30.61726305	--	66.82445187	--	24.09697455	--	0.183991827	--	0.045205636
pMax	--	0.932243755	--	0.918074194	--	0.900851646	--	0.332399126	--	0.003709106

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C258	LW2-C258	LW2-C263	LW2-C263	LW2-C264	LW2-C264	LW2-C269	LW2-C269	LW2-C270	LW2-C270	LW2-C272	LW2-C272
Sample Name:	LW2-C258-B	LW2-C258-B	LW2-C263-B	LW2-C263-B	LW2-C264-B	LW2-C264-B	LW2-C269-B	LW2-C269-B	LW2-C270-B	LW2-C270-B	LW2-C272-B	LW2-C272-B
Sample Date:	9/23/2004	9/23/2004	10/1/2004	10/1/2004	9/23/2004	9/23/2004	10/28/2004	10/28/2004	9/21/2004	9/21/2004	9/22/2004	9/22/2004
Depth Interval:	30 - 153 cm	30 - 153 cm	30 - 152 cm	30 - 152 cm	30 - 156 cm	30 - 156 cm	30 - 151 cm	30 - 151 cm	30 - 87 cm	30 - 87 cm	30 - 152 cm	30 - 152 cm
Metals (mg/kg)												
Zinc	55.1 T	--	191	--	162	--	146	--	181	--	49.3	--
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)pyrene	25000	--	10000	--	110000	--	4800	--	41000	--	7	--
LWG RA Total HPAH (Calculated U = 1/2)	250000 T	--	170000 T	--	1000000 T	--	44000 T	--	430000 T	--	87 JT	--
LWG RA Total PAH (Calculated U = 1/2)	270000 T	--	290000 T	--	1400000 T	--	63000 T	--	590000 T	--	110 JT	--
Semivolatile Organics (µg/kg)												
Carbazole	110 J	--	1100	--	6900	--	450	--	3300	--	1.7 U	--
Dibenzofuran	92	--	1100	--	3200	--	130	--	1900	--	0.69 J	--
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	2.51 UT	--	220 T	--	32 UJT	--	42.6 T	--	184 UJT	--	2.5 UJT	--
PCB Congeners (µg/kg)												
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	0.176 U	--	50.7 NJ	--	34.5 J	--	74.1 J	--	65.5 NJ	--	0.0319 U	--
2,4'-DDE (o,p'-DDE)	0.186 U	--	32.8 NJ	--	34.8 NJ	--	0.262 U	--	1.27 U	--	0.041 J	--
2,4'-DDT (o,p'-DDT)	2.52 NJ	--	15.2	--	11 NJ	--	9.03 J	--	8.85 NJ	--	0.0448 U	--
4,4'-DDD (p,p'-DDD)	3.66 J	--	345 J	--	71.2 J	--	283 J	--	163 J	--	0.129 J	--
4,4'-DDE (p,p'-DDE)	0.247 U	--	16.6 NJ	--	15.7 NJ	--	34.5 NJ	--	27.6	--	0.0448 U	--
4,4'-DDT (p,p'-DDT)	3.44 NJ	--	21.4 J	--	12.8 J	--	223 J	--	19.9 NJ	--	0.0552 U	--
beta-Hexachlorocyclohexane (BHC)	2.78 NJ	--	51.8 NJ	--	0.233 U	--	0.259 U	--	13.9 NJ	--	0.471 NJ	--
LWG RA Sum DDD (Calculated U = 1/2)	3.75 JT	--	396 JNT	--	106 JT	--	357 JT	--	229 JNT	--	0.145 JT	--
LWG RA Sum DDE (Calculated U = 1/2)	0.247 UT	--	49.4 NJT	--	50.5 NJT	--	34.6 NJT	--	28.2 T	--	0.063 JT	--
LWG RA Sum DDT (Calculated U = 1/2)	5.96 NJT	--	36.6 JT	--	24 JNT	--	232 JT	--	28.8 NJT	--	0.0552 UT	--
LWG RA Total DDx (Calculated U = 1/2)	9.92 JNT	--	482 JNT	--	180 JNT	--	624 JNT	--	285 JNT	--	0.26 JT	--
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Hydrocarbons	200 JT	--	1700 J	--	4800 J	--	860 J	--	3000 J	--	14 UT	--
Residual Range Hydrocarbons	365 JT	--	1800 J	--	5500 J	--	1400 J	--	3900 J	--	8.7 UT	--
CALC												
Benthic MQ	--	0.526170867	--	3.360162522	--	8.523997112	--	0.964024235	--	4.375135347	--	0.02295194
pMax	--	0.752430456	--	0.974562313	--	0.998264358	--	0.918223113	--	0.916432537	--	0.039534946

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C273	LW2-C273	LW2-C276	LW2-C276	LW2-C278	LW2-C278	LW2-C283	LW2-C283	LW2-C284	LW2-C284	LW2-C288	LW2-C288
Sample Name:	LW2-C273-B	LW2-C273-B	LW2-C276-B	LW2-C276-B	LW2-C278-B	LW2-C278-B	LW2-C283-B	LW2-C283-B	LW2-C284-B	LW2-C284-B	LW2-C288-B	LW2-C288-B
Sample Date:	10/20/2004	10/20/2004	9/22/2004	9/22/2004	10/19/2004	10/19/2004	11/8/2004	11/8/2004	9/22/2004	9/22/2004	10/20/2004	10/20/2004
Depth Interval:	30 - 153 cm	30 - 153 cm	30 - 153 cm	30 - 153 cm	30 - 152 cm	30 - 152 cm	30 - 151 cm	30 - 151 cm	30 - 104 cm	30 - 104 cm	30 - 153 cm	30 - 153 cm
Metals (mg/kg)												
Zinc	136	--	235	--	155	--	142	--	242	--	164	--
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)pyrene	140000	--	14000	--	17000	--	31000 J	--	22000	--	76000	--
LWG RA Total HPAH (Calculated U = 1/2)	1700000 T	--	150000 T	--	170000 T	--	480000 JT	--	300000 T	--	960000 T	--
LWG RA Total PAH (Calculated U = 1/2)	2500000 T	--	240000 T	--	260000 T	--	1000000 JT	--	590000 T	--	1500000 T	--
Semivolatile Organics (µg/kg)												
Carbazole	13000	--	2700	--	1500	--	5400	--	8000	--	8300	--
Dibenzofuran	4700	--	1500	--	1300	--	8000 J	--	10000	--	4600	--
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	3.6 UJT	--	267 JT	--	66 JT	--	144 JT	--	130 JT	--	67 JT	--
PCB Congeners (µg/kg)												
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	0.504 U	--	13 J	--	10.2 J	--	83.6 J	--	7.83 J	--	10	--
2,4'-DDE (o,p'-DDE)	0.535 U	--	9.53 NJ	--	10.1 NJ	--	35.4 J	--	12.6 NJ	--	17.4 NJ	--
2,4'-DDT (o,p'-DDT)	22.4 NJ	--	5.65 NJ	--	7.51 J	--	10.2 J	--	7.78 NJ	--	17.9 NJ	--
4,4'-DDD (p,p'-DDD)	23.3	--	78.8 J	--	51.4 J	--	504 NJ	--	35.1 NJ	--	44.8 J	--
4,4'-DDE (p,p'-DDE)	2.02	--	12.2 NJ	--	11.8 J	--	54.9 NJ	--	8.97 NJ	--	13.6	--
4,4'-DDT (p,p'-DDT)	30.2 NJ	--	8.73 J	--	9.56 J	--	72.2 J	--	10.7 J	--	8.88 NJ	--
beta-Hexachlorocyclohexane (BHC)	13.1 NJ	--	6.39 J	--	8.97 NJ	--	21.7 J	--	0.254 U	--	17.9 NJ	--
LWG RA Sum DDD (Calculated U = 1/2)	23.6 T	--	92 JT	--	61.6 JT	--	588 JNT	--	42.9 JNT	--	55 JT	--
LWG RA Sum DDE (Calculated U = 1/2)	2.29 T	--	21.7 NJT	--	21.9 JNT	--	90.3 JNT	--	21.6 NJT	--	31 NJT	--
LWG RA Sum DDT (Calculated U = 1/2)	52.6 NJT	--	14.4 JNT	--	17.1 JT	--	82.4 JT	--	18.5 JNT	--	26.8 NJT	--
LWG RA Total DDx (Calculated U = 1/2)	78.4 NJT	--	130 JNT	--	101 JNT	--	760 JNT	--	83 JNT	--	110 JNT	--
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Hydrocarbons	4400 J	--	1500 J	--	2850 JT	--	4800 J	--	3100 J	--	5000 J	--
Residual Range Hydrocarbons	6000 J	--	1700 J	--	3250 JT	--	2500 J	--	2300 J	--	5700 J	--
CALC												
Benthic MQ	--	17.70362447	--	0.717061881	--	0.680584327	--	13.20561291	--	4.115577211	--	2.231665227
pMax	--	0.997435701	--	0.842865039	--	0.832083987	--	0.999604568	--	0.939453561	--	0.954879306

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C289	LW2-C289	LW2-C294	LW2-C294	LW2-C299	LW2-C299	LW2-C300-2	LW2-C300-2	LW2-C301	LW2-C301	LW2-C302	LW2-C302
Sample Name:	LW2-C289-B	LW2-C289-B	LW2-C294-B	LW2-C294-B	LW2-C299-B	LW2-C299-B	LW2-C300-B	LW2-C300-B	LW2-C301-B	LW2-C301-B	LW2-C302-B	LW2-C302-B
Sample Date:	10/19/2004	10/19/2004	10/19/2004	10/19/2004	9/22/2004	9/22/2004	10/27/2004	10/27/2004	11/8/2004	11/8/2004	9/22/2004	9/22/2004
Depth Interval:	30 - 155 cm	30 - 155 cm	30 - 152 cm	30 - 152 cm	30 - 104 cm	30 - 104 cm	30 - 152 cm	30 - 152 cm	30 - 153 cm	30 - 153 cm	32 - 198 cm	32 - 198 cm
Metals (mg/kg)												
Zinc	170	--	122	--	200	--	208	--	156	--	222	--
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)pyrene	21000	--	260000	--	44000	--	63	--	150000 J	--	28000 J	--
LWG RA Total HPAH (Calculated U = 1/2)	270000 T	--	3100000 T	--	530000 T	--	570 T	--	2400000 JT	--	380000 JT	--
LWG RA Total PAH (Calculated U = 1/2)	520000 T	--	6100000 T	--	1200000 T	--	710 T	--	7200000 JT	--	830000 JT	--
Semivolatile Organics (µg/kg)												
Carbazole	2700	--	41000	--	15000	--	4.8 U	--	100000	--	13000	--
Dibenzofuran	3800	--	36000	--	9500	--	1.5 U	--	50000 J	--	5000 J	--
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	47 JT	--	--	--	210 JT	--	10 UJT	--	--	--
PCB Congeners (µg/kg)												
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	230 JT	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	0.00634 JT	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	--	--	83.1 NJ	--	--	--	5.8 U	--	107 J	--	108 J	--
2,4'-DDE (o,p'-DDE)	--	--	33.1 NJ	--	--	--	1.3 U	--	69.7 J	--	43.4 NJ	--
2,4'-DDT (o,p'-DDT)	--	--	3.85 NJ	--	--	--	4.5	--	58.6 J	--	1.5 U	--
4,4'-DDD (p,p'-DDD)	--	--	408 J	--	--	--	5.6	--	341 NJ	--	369	--
4,4'-DDE (p,p'-DDE)	--	--	7.41 J	--	--	--	6.8	--	59.5 NJ	--	58.8	--
4,4'-DDT (p,p'-DDT)	--	--	20 J	--	--	--	5.7 J	--	68.3 J	--	41.7 J	--
beta-Hexachlorocyclohexane (BHC)	--	--	25.6 J	--	--	--	1.2 U	--	4.6 U	--	1.12 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	491 JNT	--	--	--	8.5 T	--	448 JNT	--	477 JT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	40.5 JNT	--	--	--	7.5 T	--	129 JNT	--	102 NJT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	24 JNT	--	--	--	10 JT	--	127 JT	--	42 JT	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	560 JNT	--	--	--	26 JT	--	704 JNT	--	620 JNT	--
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Hydrocarbons	7100 J	--	30000 J	--	5200 J	--	250 J	--	30000 J	--	5000 J	--
Residual Range Hydrocarbons	5100 J	--	17000 J	--	2700 J	--	640 J	--	14000 J	--	3500 J	--
CALC												
Benthic MQ	--	10.01117392	--	12.10533021	--	26.57396572	--	0.162400025	--	125.4555159	--	11.19970141
pMax	--	0.998095391	--	0.987130034	--	0.999795051	--	0.620316275	--	0.999958172	--	0.998758922

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C305	LW2-C305	LW2-C311	LW2-C311	LW2-C312	LW2-C312	LW2-C521	LW2-C521	LW2-C525	LW2-C525	LW2-C527	LW2-C527
Sample Name:	LW2-C305-B1	LW2-C305-B1	LW2-C311-B	LW2-C311-B	LW2-C312-B	LW2-C312-B	LW2-C521-B	LW2-C521-B	LW2-C525-B	LW2-C525-B	LW2-C527-B	LW2-C527-B
Sample Date:	10/19/2004	10/19/2004	11/9/2004	11/9/2004	10/19/2005	10/19/2005	10/19/2004	10/19/2004	10/26/2005	10/26/2005	10/26/2005	10/26/2005
Depth Interval:	30 - 160 cm	30 - 160 cm	30 - 153 cm	30 - 153 cm	30 - 152 cm	30 - 152 cm	30 - 99 cm	30 - 99 cm	30 - 127 cm	30 - 127 cm	30 - 152 cm	30 - 152 cm
Metals (mg/kg)												
Zinc	190	--	167	--	82.3	--	200	--	159	--	107	--
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)pyrene	14000	--	12000 J	--	540	--	8200	--	5900	--	1000	--
LWG RA Total HPAH (Calculated U = 1/2)	170000 T	--	150000 JT	--	6700 T	--	97000 T	--	61000 T	--	9800 T	--
LWG RA Total PAH (Calculated U = 1/2)	340000 T	--	240000 JT	--	9600 T	--	190000 T	--	95000 T	--	11000 T	--
Semivolatile Organics (µg/kg)												
Carbazole	5200	--	280	--	3.7 U	--	2800	--	590	--	64	--
Dibenzofuran	2200	--	640 J	--	23	--	2300	--	320	--	24	--
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	190 JT	--	34 JT	--	19 UT	--	550 T	--	220 JT	--	70 JT	--
PCB Congeners (µg/kg)												
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	32.8 J	--	46.4 NJ	--	7.1	--	23	--	37	--	11 U	--
2,4'-DDE (o,p'-DDE)	14.1 NJ	--	3.4 J	--	0.18 U	--	9.5 U	--	2 U	--	1.9 U	--
2,4'-DDT (o,p'-DDT)	13 NJ	--	2.29 NJ	--	13	--	17 U	--	16 U	--	2.8 U	--
4,4'-DDD (p,p'-DDD)	206 J	--	157 NJ	--	12	--	25	--	84	--	18	--
4,4'-DDE (p,p'-DDE)	13.8	--	7.01 J	--	1.8 J	--	2.2 U	--	20 NJ	--	7.8 U	--
4,4'-DDT (p,p'-DDT)	35.4 J	--	28.7 J	--	270 J	--	7.7 U	--	170	--	6.9 J	--
beta-Hexachlorocyclohexane (BHC)	12.9 NJ	--	5.22 NJ	--	0.38	--	4.4	--	2.3 U	--	2.4 U	--
LWG RA Sum DDD (Calculated U = 1/2)	239 JT	--	203 NJT	--	19 T	--	48 T	--	120 T	--	24 T	--
LWG RA Sum DDE (Calculated U = 1/2)	27.9 NJT	--	10 JT	--	1.9 JT	--	9.5 UT	--	21 NJT	--	7.8 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	48 JNT	--	31 JNT	--	280 JT	--	17 UT	--	180 T	--	8.3 JT	--
LWG RA Total DDx (Calculated U = 1/2)	320 JNT	--	240 JNT	--	300 JT	--	66 T	--	320 NJT	--	37 JT	--
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Hydrocarbons	3900 J	--	2600 J	--	110 J	--	3400 J	--	1200 J	--	160 J	--
Residual Range Hydrocarbons	2900 J	--	2300 J	--	190 J	--	2000 J	--	1800 J	--	540 J	--
CALC												
Benthic MQ	--	3.845103631	--	2.056885445	--	0.120227446	--	2.98794586	--	0.963679494	--	0.11643738
pMax	--	0.990806529	--	0.935056877	--	0.211390815	--	0.990907619	--	0.931792647	--	0.466919644

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	LW2-C528	LW2-C528	LW3-C658	LW3-C658	LW3-C662	LW3-C662	PCM-02Y1E2	PCM-02Y1E2	PCM-03Y1E2	PCM-03Y1E2
Sample Name:	LW2-C528-B	LW2-C528-B	LW3-C658-B	LW3-C658-B	LW3-C662-B	LW3-C662-B	PCM-02SC-071107	PCM-02SC-071107	PCM-03SC-071106	PCM-03SC-071106
Sample Date:	10/26/2005	10/26/2005	12/14/2007	12/14/2007	1/17/2008	1/17/2008	11/7/2007	11/7/2007	11/6/2007	11/6/2007
Depth Interval:	30 - 152 cm	30 - 152 cm	30 - 151 cm	30 - 151 cm	30 - 82 cm	30 - 82 cm	0 - 36.576 cm	0 - 36.576 cm	0 - 42.672 cm	0 - 42.672 cm
Metals (mg/kg)										
Zinc	128 T	--	41.1	--	166	--	--	19.3	--	23.4
Polycyclic Aromatic Hydrocarbons (µg/kg)										
Benzo(a)pyrene	1100	--	0.14 U	--	70000	--	--	500	--	960 J
LWG RA Total HPAH (Calculated U = 1/2)	11000 T	--	2.2 JT	--	3400000 T	--	--	5700 T	--	11000 JT
LWG RA Total PAH (Calculated U = 1/2)	13000 T	--	3.7 JT	--	8900000 T	--	--	9300 T	--	15000 JT
Semivolatile Organics (µg/kg)										
Carbazole	62	--	1.3 U	--	27000	--	--	--	--	--
Dibenzofuran	27	--	0.59 U	--	11000	--	--	29	--	--
PCB Aroclors (µg/kg)										
LWG RA Total PCB Aroclors (Calculated U = 1/2)	63 JT	--	1.3 UT	--	110 JNT	--	--	20 UT	--	21 UT
PCB Congeners (µg/kg)										
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	4.2 NJ	--	0.16 U	--	99	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	0.95 U	--	0.067 J	--	23 U	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	0.26 U	--	0.061 U	--	43 U	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	8.9	--	0.073 U	--	280	--	--	0.5 J	--	0.81 UJ
4,4'-DDE (p,p'-DDE)	5.4	--	0.027 U	--	110 J	--	--	1 U	--	0.81 UJ
4,4'-DDT (p,p'-DDT)	13	--	0.18 U	--	9 U	--	--	1 U	--	0.81 UJ
beta-Hexachlorocyclohexane (BHC)	1.4 NJ	--	0.14 U	--	13 U	--	--	1 U	--	0.85 UJ
LWG RA Sum DDD (Calculated U = 1/2)	13 NJT	--	0.16 UT	--	380 T	--	--	0.5 JT	--	0.81 UJT
LWG RA Sum DDE (Calculated U = 1/2)	5.9 T	--	0.081 JT	--	120 JT	--	--	1 UT	--	0.81 UJT
LWG RA Sum DDT (Calculated U = 1/2)	13 T	--	0.18 UT	--	43 UT	--	--	1 UT	--	0.81 UJT
LWG RA Total DDx (Calculated U = 1/2)	32 NJT	--	0.32 JT	--	530 JT	--	--	1.5 JT	--	0.81 UJT
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	220 J	--	2.1 J	--	10000 J	--	--	11 J	--	430
Residual Range Hydrocarbons	690 J	--	11 U	--	7200 J	--	--	9.9 J	--	330
CALC										
Benthic MQ	--	0.11320081	--	0.026163561	--	124.0462466	0.223428044	--	0.22738089	--
pMax	--	0.590697755	--	0.001342471	--	0.999732828	0.294272637	--	0.393432162	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	PCM-04Y1E2	PCM-04Y1E2	PCM-05Y1E2	PCM-05Y1E2	PCM-06Y1E2	PCM-06Y1E2	PCM-07Y0E1b	PCM-07Y0E1b
Sample Name:	PCM-04SC-071107	PCM-04SC-071107	PCM-05SC-071107	PCM-05SC-071107	PCM-06SC-071106	PCM-06SC-071106	PCM-07SC-060427	PCM-07SC-060427
Sample Date:	11/7/2007	11/7/2007	11/7/2007	11/7/2007	11/6/2007	11/6/2007	4/28/2006	4/28/2006
Depth Interval:	0 - 21.34 cm	0 - 21.34 cm	0 - 15.24 cm	0 - 15.24 cm	0 - 57.912 cm	0 - 57.912 cm	3.048 - 15.24 cm	3.048 - 15.24 cm
Metals (mg/kg)								
Zinc	--	26.6	--	22.2	--	24.3	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	2200	--	1500	--	1000	--	--
LWG RA Total HPAH (Calculated U = 1/2)	--	26000 T	--	18000 T	--	13000 T	--	14000 T
LWG RA Total PAH (Calculated U = 1/2)	--	44000 T	--	28000 T	--	20000 T	--	26000 T
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Dibenzofuran	--	170	--	100	--	--	--	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	20 UT	--	20 UT	--	20 UT	--	20 UT
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	0.68 J	--	1.6	--	0.8 J	--	--
4,4'-DDE (p,p'-DDE)	--	1 U	--	0.99 U	--	1 UJ	--	--
4,4'-DDT (p,p'-DDT)	--	1 U	--	0.99 U	--	0.32 J	--	--
beta-Hexachlorocyclohexane (BHC)	--	1 U	--	0.99 U	--	1 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	0.68 JT	--	1.6 T	--	0.8 JT	--	1.1 T
LWG RA Sum DDE (Calculated U = 1/2)	--	1 UT	--	0.99 UT	--	1 UJT	--	1 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	1 UT	--	0.99 UT	--	0.32 JT	--	0.8 JT
LWG RA Total DDx (Calculated U = 1/2)	--	1.7 JT	--	2.6 T	--	1.6 JT	--	2.4 JT
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	140	--	81	--	56	--	--
Residual Range Hydrocarbons	--	130	--	85 J	--	60 J	--	--
CALC								
Benthic MQ	1.104330929	--	0.686964199	--	0.402877781	--	0.757414028	--
pMax	0.553974505	--	0.514769644	--	0.463134385	--	0.017485943	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	PCM-08Y1E2	PCM-08Y1E2	PCM-09Y1E2	PCM-09Y1E2	PCM-10Y1E2	PCM-10Y1E2	PCM-18Y0E3	PCM-18Y0E3
Sample Name:	PCM-08SC-071108	PCM-08SC-071108	PCM-09SC-071105	PCM-09SC-071105	PCM-10SC-071105	PCM-10SC-071105	PCM-18SC-061205	PCM-18SC-061205
Sample Date:	11/8/2007	11/8/2007	11/5/2007	11/5/2007	11/5/2007	11/5/2007	12/5/2006	12/5/2006
Depth Interval:	0 - 42.672 cm	0 - 42.672 cm	0 - 51.816 cm	0 - 51.816 cm	0 - 15.24 cm	0 - 15.24 cm	0 - 12.8 cm	0 - 12.8 cm
Metals (mg/kg)								
Zinc	--	**28**	--	**22 J**	--	**24.4 J**	--	**23.3**
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	**2400**	--	**1400**	--	**280**	--	**300**
LWG RA Total HPAH (Calculated U = 1/2)	--	**29000 T**	--	**18000 T**	--	**3500 T**	--	**3700 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**46000 T**	--	**28000 T**	--	**4100 JT**	--	**6000 T**
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	**91**	--	**11**	--	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	20 UT	--	20 UT	--	20 UT	--	20 UT
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	**0.43 J**	--	1 U	--	1 U	--	1 U
4,4'-DDE (p,p'-DDE)	--	0.99 U	--	1 U	--	1 U	--	1 U
4,4'-DDT (p,p'-DDT)	--	0.99 U	--	1 U	--	1 U	--	1 U
beta-Hexachlorocyclohexane (BHC)	--	0.99 U	--	1 U	--	1 U	--	1 U
LWG RA Sum DDD (Calculated U = 1/2)	--	**0.43 JT**	--	1 UT	--	1 UT	--	1 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	0.99 UT	--	1 UT	--	1 UT	--	1 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	0.99 UT	--	1 UT	--	1 UT	--	1 UT
LWG RA Total DDx (Calculated U = 1/2)	--	**1.4 JT**	--	1 UT	--	1 UT	--	1 UT
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	**140**	--	**74**	--	**19**	--	**12 J**
Residual Range Hydrocarbons	--	**120 J**	--	**64 J**	--	**23 J**	--	**13 J**
CALC								
Benthic MQ	**1.266391667**	--	**0.865570233**	--	**0.067120436**	--	**0.254245109**	--
pMax	**0.620641653**	--	**0.499581164**	--	**0.177780544**	--	**0.290085312**	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	PCM-21Y1E2	PCM-21Y1E2	RAA-PD01	RAA-PD01	RAA-PD02	RAA-PD02	RAA-PD03	RAA-PD03
Sample Name:	PCM-21SC-071106	PCM-21SC-071106	RAA-PD01-051019	RAA-PD01-051019	RAA-PD02-051019	RAA-PD02-051019	RAA-PD03-051019	RAA-PD03-051019
Sample Date:	11/6/2007	11/6/2007	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
Depth Interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm
Metals (mg/kg)								
Zinc	--	**27.1**	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	**5000**	--	--	--	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	--	**70000 T**	--	**220000 T**	--	**600000 T**	--	**450000 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**110000 T**	--	**590000 T**	--	**990000 T**	--	**1200000 T**
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	20 UT	--	200 UT	--	200 UT	--	200 UT
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	**1.4**	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	1 UJ	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	1 U	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	1 U	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	**1.4 T**	--	**19 JT**	--	**130 JT**	--	50 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	1 UJT	--	10 UT	--	50 UT	--	50 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	1 UT	--	10 UT	--	50 UJT	--	50 UT
LWG RA Total DDx (Calculated U = 1/2)	--	**2.4 JT**	--	**29 JT**	--	**180 JT**	--	50 UT
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	**350**	--	--	--	--	--	--
Residual Range Hydrocarbons	--	**270**	--	--	--	--	--	--
CALC								
Benthic MQ	**3.106101218**	--	**31.03647918**	--	**32.97742343**	--	**91.80173392**	--
pMax	**0.772110008**	--	**0.914861148**	--	**0.770866489**	--	**0.927136176**	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	RAA-PD04	RAA-PD04	RAA-PD05	RAA-PD05	RAA-PD06	RAA-PD06	RAA-PD07	RAA-PD07	RAA-PD08
Sample Name:	RAA-PD04-051019	RAA-PD04-051019	RAA-PD05-051019	RAA-PD05-051019	RAA-PD06-051019	RAA-PD06-051019	RAA-PD07-051019	RAA-PD07-051019	RAA-PD08-051019
Sample Date:	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
Depth Interval:	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm
Metals (mg/kg)									
Zinc	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)									
Benzo(a)pyrene	--	--	--	--	--	--	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	--	**230000 T**	--	**880000 T**	--	**230000 T**	--	**220000 T**	--
LWG RA Total PAH (Calculated U = 1/2)	--	**530000 T**	--	**2300000 T**	--	**550000 T**	--	**480000 T**	--
Semivolatile Organics (µg/kg)									
Carbazole	--	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	200 UT	--	200 UT	--	200 UT	--	200 UT	--
PCB Congeners (µg/kg)									
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)									
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	100 UT	--	160 UT	--	**170 JT**	--	50 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	**140 JT**	--	150 UT	--	**51 JT**	--	68 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	100 UT	--	100 UT	--	**22 JT**	--	50 UT	--
LWG RA Total DDx (Calculated U = 1/2)	--	**240 JT**	--	160 UT	--	**240 JT**	--	68 UT	--
Total Petroleum Hydrocarbons (mg/kg)									
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--	--
CALC									
Benthic MQ	**25.22076025**	--	**176.068348**	--	**16.56498755**	--	**32.73247163**	--	**51.59151959**
pMax	**0.832337507**	--	**0.972596506**	--	**0.935796712**	--	**0.932481016**	--	**0.977971887**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	RAA-PD08	RAA-PD09	RAA-PD09	RAA-PD10	RAA-PD10	RAA-PD11	RAA-PD11	RAA-PD12	RAA-PD12
Sample Name:	RAA-PD08-051019	RAA-PD09-051019	RAA-PD09-051019	RAA-PD10-051019	RAA-PD10-051019	RAA-PD11-051019	RAA-PD11-051019	RAA-PD12-051019	RAA-PD12-051019
Sample Date:	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
Depth Interval:	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm
Metals (mg/kg)									
Zinc	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)									
Benzo(a)pyrene	--	--	--	--	--	--	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	**690000 T**	--	**1700000 T**	--	**140000 T**	--	**270000 T**	--	**2600000 T**
LWG RA Total PAH (Calculated U = 1/2)	**1500000 T**	--	**4700000 T**	--	**270000 T**	--	**580000 T**	--	**9400000 JT**
Semivolatile Organics (µg/kg)									
Carbazole	--	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	200 UT	--	200 UT	--	200 UT	--	200 UT	--	200 UT
PCB Congeners (µg/kg)									
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)									
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**130 JT**	--	**150 T**	--	**110 JT**	--	--	--	**150 JT**
LWG RA Sum DDE (Calculated U = 1/2)	50 UT	--	**45 JT**	--	58 UT	--	--	--	100 UT
LWG RA Sum DDT (Calculated U = 1/2)	**17 JT**	--	50 UT	--	50 UT	--	--	--	100 UT
LWG RA Total DDx (Calculated U = 1/2)	**170 JT**	--	**220 JT**	--	**160 JT**	--	--	--	**250 JT**
Total Petroleum Hydrocarbons (mg/kg)									
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--	--
CALC									
Benthic MQ	--	**188.7193445**	--	**11.03842254**	--	**39.03180958**	--	**573.4096209**	--
pMax	--	**0.945389955**	--	**0.783243759**	--	**0.895380844**	--	**0.989301237**	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	RAA-PD13	RAA-PD13	RAA-PD14	RAA-PD14	RAA-PD15	RAA-PD15	WLCDRD05PG050	WLCDRD05VC050
Sample Name:	RAA-PD13-051019	RAA-PD13-051019	RAA-PD14-051019	RAA-PD14-051019	RAA-PD15-051019	RAA-PD15-051019	WLCDRD05PG05050	WLCDRD05VC05050
Sample Date:	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	5/27/2005	5/5/2005
Depth Interval:	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 30 cm	0 - 140 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	99.4 J	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	--	--	--	--	--	8400	--
LWG RA Total HPAH (Calculated U = 1/2)	--	660000 T	--	250000 T	--	150000 T	81000 T	--
LWG RA Total PAH (Calculated U = 1/2)	--	1500000 T	--	590000 T	--	300000 T	120000 T	--
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	220 J	--
Dibenzofuran	--	--	--	--	--	--	240	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	200 UT	--	640 T	--	200 UT	46 T	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	16 J	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	1 U	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	3.6 U	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	26 J	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	12 J	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	34 J	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.2 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	59 T	--	96 JT	--	90 T	42 JT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	10 UT	--	50 UT	--	15 T	13 JT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	10 UT	--	50 UT	--	10 UT	36 JT	--
LWG RA Total DDx (Calculated U = 1/2)	--	69 T	--	150 JT	--	110 T	90 JT	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	840 J	--
Residual Range Hydrocarbons	--	--	--	--	--	--	1300 J	--
CALC								
Benthic MQ	69.637354	--	23.05065155	--	9.879922308	--	--	3.640684236
pMax	0.967549718	--	0.951290251	--	0.867951601	--	--	0.948335637

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCDRD05VC050	WLCDRD05VC052	WLCDRD05VC052	WLCDRD05VC054	WLCDRD05VC054	WLCGSD01AN0101	WLCGSD01AN0101
Sample Name:	WLCDRD05VC05050	WLCDRD05VC05252	WLCDRD05VC05252	WLCDRD05VC05454	WLCDRD05VC05454	WLCGSD01AN0101_10-20	WLCGSD01AN0101_30-40
Sample Date:	5/5/2005	5/5/2005	5/5/2005	5/5/2005	5/5/2005	4/10/2001	4/10/2001
Depth Interval:	0 - 140 cm	0 - 88 cm	0 - 88 cm	0 - 201 cm	0 - 201 cm	10 - 20 cm	30 - 40 cm
Metals (mg/kg)							
Zinc	161 J	--	129 J	--	146 J	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	32000	--	26000	--	1900	--	--
LWG RA Total HPAH (Calculated U = 1/2)	400000 T	--	310000 T	--	31000 T	--	--
LWG RA Total PAH (Calculated U = 1/2)	980000 T	--	790000 T	--	72000 T	--	--
Semivolatile Organics (µg/kg)							
Carbazole	9500	--	7000	--	1500	--	--
Dibenzofuran	12000	--	6300	--	3300	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	230 T	--	380 T	--	200 T	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	38 U	--	36 U	--	28 U	--	--
2,4'-DDE (o,p'-DDE)	11 U	--	15 U	--	13 U	--	--
2,4'-DDT (o,p'-DDT)	17 U	--	27 U	--	10 U	--	--
4,4'-DDD (p,p'-DDD)	46 J	--	30	--	32	--	--
4,4'-DDE (p,p'-DDE)	10 U	--	10 U	--	25 U	--	--
4,4'-DDT (p,p'-DDT)	27	--	1.6 U	--	1.8 U	--	--
beta-Hexachlorocyclohexane (BHC)	9.8 U	--	8.6 U	--	9.5 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	65 JT	--	48 T	--	46 T	--	--
LWG RA Sum DDE (Calculated U = 1/2)	11 UT	--	15 UT	--	25 UT	--	--
LWG RA Sum DDT (Calculated U = 1/2)	35 T	--	27 UT	--	10 UT	--	--
LWG RA Total DDx (Calculated U = 1/2)	110 JT	--	75 T	--	71 T	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	6000 J	--	2900 J	--	710 J	--	--
Residual Range Hydrocarbons	3600 J	--	2100 J	--	740 J	--	--
CALC							
Benthic MQ	--	10.92896956	--	1.658767254	--	15.81631178	8.348884948
pMax	--	0.998664154	--	0.886151061	--	0.900851646	0.820483049

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSD01AN0101	WLCGSD01AN0101	WLCGSD01AN0102	WLCGSD01AN0102	WLCGSD01AN0102	WLCGSD01AN0102
Sample Name:	WLCGSD01AN0101_10-20	WLCGSD01AN0101_30-40	WLCGSD01AN0102_10-20	WLCGSD01AN0102_30-40	WLCGSD01AN0102_10-20	WLCGSD01AN0102_30-40
Sample Date:	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/10/2001
Depth Interval:	10 - 20 cm	30 - 40 cm	10 - 20 cm	30 - 40 cm	10 - 20 cm	30 - 40 cm
Metals (mg/kg)						
Zinc	136 J	142 J	--	--	91 J	131 J
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	20000	10000	--	--	66000	19000
LWG RA Total HPAH (Calculated U = 1/2)	250000 T	120000 T	--	--	820000 T	260000 T
LWG RA Total PAH (Calculated U = 1/2)	400000 JT	200000 JT	--	--	1600000 JT	460000 JT
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	--	82.88514186	22.101744	--	--
pMax	--	--	0.957176003	0.900851646	--	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSD01AN0103	WLCGSD01AN0103	WLCGSD01AN0103	WLCGSD01AN0103	WLCGSD01AN0105	WLCGSD01AN0105
Sample Name:	WLCGSD01AN0103_10-20	WLCGSD01AN0103_30-40	WLCGSD01AN0103_10-20	WLCGSD01AN0103_30-40	WLCGSD01AN0105_10-20	WLCGSD01AN0105_30-40
Sample Date:	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/10/2001
Depth Interval:	10 - 20 cm	30 - 40 cm	10 - 20 cm	30 - 40 cm	10 - 20 cm	30 - 40 cm
Metals (mg/kg)						
Zinc	--	--	222 J	174 J	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	--	58000	130000	--	--
LWG RA Total HPAH (Calculated U = 1/2)	--	--	760000 T	1900000 JT	--	--
LWG RA Total PAH (Calculated U = 1/2)	--	--	1400000 JT	6200000 JT	--	--
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	66.18322401	449.8165102	--	--	0.025544908	0.026351754
pMax	0.95997226	0.982909238	--	--	0.007702795	0.001849233

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSD01AN0105	WLCGSD01AN0105	WLCGSD01AN0205	WLCGSD01AN0205	WLCGSD01AN0205	WLCGSD01AN0205
Sample Name:	WLCGSD01AN0105_10-20	WLCGSD01AN0105_30-40	WLCGSD01AN0205_10-20	WLCGSD01AN0205_30-40	WLCGSD01AN0205_10-20	WLCGSD01AN0205_30-40
Sample Date:	4/10/2001	4/10/2001	4/11/2001	4/11/2001	4/11/2001	4/11/2001
Depth Interval:	10 - 20 cm	30 - 40 cm	10 - 20 cm	30 - 40 cm	10 - 20 cm	30 - 40 cm
Metals (mg/kg)						
Zinc	**42.6 J**	**48.3 J**	--	--	**44.8 J**	**37 J**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	**3 J**	3 U	--	--	3 U	3 U
LWG RA Total HPAH (Calculated U = 1/2)	**36 JT**	**25 JT**	--	--	**48 JT**	3 UT
LWG RA Total PAH (Calculated U = 1/2)	**61 JT**	**35 JT**	--	--	**54 JT**	3 UT
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	--	**0.033025**	**0.065436686**	--	--
pMax	--	--	**0.002022281**	**0.00144339**	--	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB5	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB7
Sample Name:	WLCGSG07GSB2S02	WLCGSG07GSB2S02	WLCGSG07GSB5S02	WLCGSG07GSB5S02	WLCGSG07GSB7S02	WLCGSG07GSB7SC071011	WLCGSG07GSB7S02
Sample Date:	9/21/2007	9/21/2007	9/21/2007	9/21/2007	8/30/2007	10/11/2007	8/30/2007
Depth Interval:	0 - 60.96 cm	0 - 60.96 cm	0 - 60.96 cm	0 - 60.96 cm	0 - 60.96 cm	24.38 - 39.62 cm	0 - 60.96 cm
Metals (mg/kg)							
Zinc	--	93.7	--	94.5	--	--	120
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	18000	--	37000	--	--	7800
LWG RA Total HPAH (Calculated U = 1/2)	--	200000 T	--	500000 T	--	--	73000 T
LWG RA Total PAH (Calculated U = 1/2)	--	270000 JT	--	1100000 T	--	--	130000 T
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	--	730	--	6300	--	--	630
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	700
Residual Range Hydrocarbons	--	--	--	--	--	--	1100
CALC							
Benthic MQ	2.739134716	--	19.71187137	--	1.886139569	37.85572364	--
pMax	0.828794347	--	0.999524694	--	0.82584673	0.997668395	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSG07GSB7	WLCGSG07GSC2	WLCGSG07GSC2	WLCGSG07GSC5	WLCGSG07GSC5	WLCGSG07GSC7	WLCGSG07GSC7
Sample Name:	WLCGSG07GSB7SC071011	WLCGSG07GSC2S02	WLCGSG07GSC2S02	WLCGSG07GSC5S02	WLCGSG07GSC5S02	WLCGSG07GSC7S02	WLCGSG07GSC7SC071011
Sample Date:	10/11/2007	9/21/2007	9/21/2007	9/20/2007	9/20/2007	9/19/2007	10/11/2007
Depth Interval:	24.38 - 39.62 cm	0 - 60.96 cm	0 - 60.96 cm	0 - 60.96 cm	0 - 60.96 cm	0 - 60.96 cm	42.67 - 57.91 cm
Metals (mg/kg)							
Zinc	--	--	73.2	--	54.2	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	33000 J	--	36000	--	110	--	--
LWG RA Total HPAH (Calculated U = 1/2)	410000 JT	--	470000 T	--	1200 T	--	--
LWG RA Total PAH (Calculated U = 1/2)	860000 JT	--	950000 T	--	1700 JT	--	--
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	--	--	6100	--	2.1 J	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	15.54855178	--	0.051758761	--	98.20746533	753.6430237
pMax	--	0.99057634	--	0.080920963	--	0.999765436	0.999817863

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSD2	WLCGSG07GSD2	WLCGSG07GSD4	WLCGSG07GSD4	WLCGSG07GSD5
Sample Name:	WLCGSG07GSC7S02	WLCGSG07GSC7SC071011	WLCGSG07GSD2S02	WLCGSG07GSD2S02	WLCGSG07GSD4S02	WLCGSG07GSD4S02	WLCGSG07GSD5SC071011
Sample Date:	9/19/2007	10/11/2007	9/20/2007	9/20/2007	9/20/2007	9/20/2007	10/11/2007
Depth Interval:	0 - 60.96 cm	42.67 - 57.91 cm	0 - 60.96 cm	0 - 60.96 cm	0 - 60.96 cm	0 - 60.96 cm	45.72 - 60.96 cm
Metals (mg/kg)							
Zinc	99.7	--	--	50.7	--	48	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	100000	280000 J	--	28	--	5.2	--
LWG RA Total HPAH (Calculated U = 1/2)	1300000 T	3300000 JT	--	330 JT	--	64 JT	--
LWG RA Total PAH (Calculated U = 1/2)	4500000 JT	12000000 JT	--	470 JT	--	92 JT	--
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	26000	--	--	1 J	--	0.81 U	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	--	0.061307441	--	0.038807466	--	1.021526574
pMax	--	--	0.044226524	--	0.012232274	--	0.449323075

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCGSG07GSD5	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS08	WLCGSJ06GS08	WLCMRD08SDDA17SB	WLCMRD08SDDA17SB
Sample Name:	WLCGSG07GSD5SC071011	WLCGSJ06GS05S34	WLCGSJ06GS05S34	WLCGSJ06GS08S34	WLCGSJ06GS08S34	WLCMRD08DA17-2	WLCMRD08DA17-2
Sample Date:	10/11/2007	10/24/2006	10/24/2006	10/25/2006	10/25/2006	4/20/2008	4/20/2008
Depth Interval:	45.72 - 60.96 cm	91.44 - 121.9 cm	91.44 - 121.9 cm	91.44 - 121.9 cm	91.44 - 121.9 cm	30.48 - 213 cm	30.48 - 213 cm
Metals (mg/kg)							
Zinc	--	--	--	--	66.9	--	228
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	630 J	--	77000	--	26	--	19000
LWG RA Total HPAH (Calculated U = 1/2)	9300 JT	--	810000 T	--	280 JT	--	210000 T
LWG RA Total PAH (Calculated U = 1/2)	21000 JT	--	1200000 T	--	340 JT	--	310000 T
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	2200
Dibenzofuran	--	--	6700	--	3.2 J	--	880
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	20 UT
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	11 J
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	1 U
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	2.7
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	35 J
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	1.4 U
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	8
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.2 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	46 JT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	1.4 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	11 T
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	58 JT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	1000
Residual Range Hydrocarbons	--	--	--	--	--	--	740
CALC							
Benthic MQ	--	25.3957817	--	0.046226142	--	3.050369559	--
pMax	--	0.938945124	--	0.133452573	--	0.851513923	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCMRD08SDUD1SB	WLCMRD08SDUD1SB	WLCMRD08SDUD26SB	WLCMRD08SDUD26SB	WLCMRD08SDUD27SB	WLCMRD08SDUD27SB	WLCMRD08SDUD2SB
Sample Name:	WLCMRD08UD1-2	WLCMRD08UD1-2	WLCMRD08UD26-2	WLCMRD08UD26-2	WLCMRD08UD27-2	WLCMRD08UD27-2	WLCMRD08UD2-2
Sample Date:	4/15/2008	4/15/2008	4/13/2008	4/13/2008	4/13/2008	4/13/2008	4/15/2008
Depth Interval:	30.48 - 182.88 cm	30.48 - 182.88 cm	30.48 - 182.88 cm	30.48 - 182.88 cm	30.48 - 182.88 cm	30.48 - 182.88 cm	30.48 - 182.88 cm
Metals (mg/kg)							
Zinc	--	96.3	--	151	--	154	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	2400	--	1200	--	18000	--
LWG RA Total HPAH (Calculated U = 1/2)	--	25000 T	--	13000 T	--	200000 T	--
LWG RA Total PAH (Calculated U = 1/2)	--	34000 T	--	18000 T	--	280000 T	--
Semivolatile Organics (µg/kg)							
Carbazole	--	190	--	93	--	690	--
Dibenzofuran	--	70	--	180	--	870	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	3.9 UT	--	15 UT	--	24 UT	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	0.37 U	--	2.6	--	15	--
2,4'-DDE (o,p'-DDE)	--	0.17	--	1.1 J	--	2 U	--
2,4'-DDT (o,p'-DDT)	--	0.23 J	--	1.1 U	--	3.9 U	--
4,4'-DDD (p,p'-DDD)	--	1.3 J	--	6.8	--	29	--
4,4'-DDE (p,p'-DDE)	--	0.3	--	4 J	--	6.5 U	--
4,4'-DDT (p,p'-DDT)	--	0.2 U	--	2.4	--	3.7 U	--
beta-Hexachlorocyclohexane (BHC)	--	0.49 U	--	0.2 U	--	2 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	1.5 JT	--	9.4 T	--	44 T	--
LWG RA Sum DDE (Calculated U = 1/2)	--	0.47 T	--	5.1 JT	--	6.5 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	0.33 JT	--	3 T	--	3.9 UT	--
LWG RA Total DDx (Calculated U = 1/2)	--	2.3 JT	--	17 JT	--	52 T	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	78	--	110	--	590	--
Residual Range Hydrocarbons	--	120 J	--	190	--	680	--
CALC							
Benthic MQ	0.262191128	--	0.221278487	--	2.69349977	--	0.035561807
pMax	0.528808316	--	0.290085312	--	0.86836835	--	0.216496

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCMRD08SDUD2SB	WLCMRI02CS001	WLCMRI02CS001	WLCMRI02CS002	WLCMRI02CS002	WLCSLH01GP25	WLCSLH01GP25
Sample Name:	WLCMRD08UD2-2	WLCMRI02CS001CS001	WLCMRI02CS001CS001	WLCMRI02CS002CS002	WLCMRI02CS002CS002	WLCSLH01GP25S1	WLCSLH01GP25S1
Sample Date:	4/15/2008	9/10/2002	9/10/2002	9/10/2002	9/10/2002	9/30/2004	9/30/2004
Depth Interval:	30.48 - 182.88 cm	0 - 91.44 cm	0 - 91.44 cm	0 - 91.44 cm	0 - 91.44 cm	30.48 - 45.72 cm	30.48 - 45.72 cm
Metals (mg/kg)							
Zinc	**88.1**	--	**162**	--	**136**	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	**37**	--	**12000**	--	**1900**	--	**740**
LWG RA Total HPAH (Calculated U = 1/2)	**430 T**	--	**150000 T**	--	**26000 T**	--	**5300 T**
LWG RA Total PAH (Calculated U = 1/2)	**530 JT**	--	**250000 T**	--	**37000 T**	--	**5900 T**
Semivolatile Organics (µg/kg)							
Carbazole	**5.7 J**	--	**1000**	--	**190**	--	87.4 U
Dibenzofuran	**2.2 J**	--	**980**	--	**180**	--	87.4 U
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	5 UT	--	39 UT	--	39 UT	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	0.2 U	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	0.2 U	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	0.2 U	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	**0.087 J**	--	**57**	--	**14**	--	--
4,4'-DDE (p,p'-DDE)	0.2 U	--	**8.8 J**	--	**4.6**	--	--
4,4'-DDT (p,p'-DDT)	**0.27**	--	**27**	--	**5.3**	--	--
beta-Hexachlorocyclohexane (BHC)	0.2 U	--	0.98 U	--	0.98 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**0.19 JT**	--	**57 T**	--	**14 T**	--	--
LWG RA Sum DDE (Calculated U = 1/2)	0.2 UT	--	**8.8 JT**	--	**4.6 T**	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**0.37 T**	--	**27 T**	--	**5.3 T**	--	--
LWG RA Total DDx (Calculated U = 1/2)	**0.76 JT**	--	**93 JT**	--	**24 T**	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	16 U	--	**2100 JT**	--	**130 J**	--	--
Residual Range Hydrocarbons	**7.3 J**	--	--	--	--	--	--
CALC							
Benthic MQ	--	**3.011292494**	--	**0.398609735**	--	**0.0737829**	--
pMax	--	**0.979280377**	--	**0.924557214**	--	**0.129609746**	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP29
Sample Name:	WLCSLH01GP26S1	WLCSLH01GP26S1	WLCSLH01GP27S1	WLCSLH01GP27S1	WLCSLH01GP28S1	WLCSLH01GP28S1	WLCSLH01GP29S1	WLCSLH01GP29S1
Sample Date:	10/5/2004	10/5/2004	10/8/2004	10/8/2004	10/13/2004	10/13/2004	10/20/2004	10/20/2004
Depth Interval:	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	**59700**	--	**6810**	--	**92.2**	--	**43.5**
LWG RA Total HPAH (Calculated U = 1/2)	--	**690000 T**	--	**66000 T**	--	**710 T**	--	**317 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**1400000 T**	--	**100000 T**	--	**830 T**	--	**2530 T**
Semivolatile Organics (µg/kg)								
Carbazole	--	**861**	--	145 U	--	87.4 U	--	**647**
Dibenzofuran	--	**1100**	--	145 U	--	87.4 U	--	174 U
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	**44.79663994**	--	**4.415664565**	--	**0.015348291**	--	**0.263582764**	--
pMax	**0.971656428**	--	**0.794075854**	--	**0.011788124**	--	**0.913684426**	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet	B:_0-4_feet
System Location Code:	WLCSLH01GP30	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP32	WLCSLH01GP32	WR-WSI98SD072	WR-WSI98SD072
Sample Name:	WLCSLH01GP30S1	WLCSLH01GP30S1	WLCSLH01GP31S1	WLCSLH01GP31S1	WLCSLH01GP32S1	WLCSLH01GP32S1	WR-WSI98SD0720000A	WR-WSI98SD0720000A
Sample Date:	10/22/2004	10/22/2004	10/26/2004	10/26/2004	10/28/2004	10/28/2004	10/16/1997	10/16/1997
Depth Interval:	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	30.48 - 45.72 cm	0 - 90 cm	0 - 90 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	145
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	92.9	--	416	--	107	--	660
LWG RA Total HPAH (Calculated U = 1/2)	--	800 T	--	3480 T	--	1160 T	--	19000 T
LWG RA Total PAH (Calculated U = 1/2)	--	1100 T	--	8680 T	--	11400 T	--	51000 T
Semivolatile Organics (µg/kg)								
Carbazole	--	160 U	--	733	--	147 U	--	660
Dibenzofuran	--	160 U	--	148 U	--	147 U	--	3600
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	140 JT
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	16
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	5.5
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	17
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	0.94 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	16 T
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	5.5 T
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	17 T
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	39 T
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	0.0380971	--	0.525249662	--	1.292160025	--	1.516048046	--
pMax	0.089550902	--	0.941682142	--	0.46883572	--	0.838373988	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-03SC	DGS-03SC	DGS-06SC	DGS-06SC	DGS-07SC	DGS-07SC
Sample Name:	DGS-03SC-0408-101005	DGS-03SC-0408-101005	DGS-06SC-0408-101007	DGS-06SC-0408-101007	DGS-07SC-0408-101012	DGS-07SC-0408-101012
Sample Date:	10/5/2010	10/5/2010	10/7/2010	10/7/2010	10/12/2010	10/12/2010
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
Metals (mg/kg)						
Zinc	**98 J**	--	**50**	--	**172**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	**5000**	--	**350**	--	**28000**	--
LWG RA Total HPAH (Calculated U = 1/2)	**71000 T**	--	**4100 T**	--	**280000 T**	--
LWG RA Total PAH (Calculated U = 1/2)	**120000 T**	--	**5900 T**	--	**480000 T**	--
Semivolatile Organics (µg/kg)						
Carbazole	**900**	--	64 U	--	**4000**	--
Dibenzofuran	**620**	--	64 U	--	**1800**	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 UT	--	33 UT	--	**230 JT**	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	16 U	--	3.3 U	--	**62**	--
2,4'-DDE (o,p'-DDE)	16 U	--	3.3 U	--	32 U	--
2,4'-DDT (o,p'-DDT)	16 U	--	3.3 U	--	32 U	--
4,4'-DDD (p,p'-DDD)	16 U	--	3.3 U	--	**360**	--
4,4'-DDE (p,p'-DDE)	**7.4 J**	--	3.3 U	--	**48**	--
4,4'-DDT (p,p'-DDT)	**240**	--	3.3 U	--	**34**	--
beta-Hexachlorocyclohexane (BHC)	7.8 U	--	1.6 U	--	45 U	--
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	--	3.3 UT	--	**420 T**	--
LWG RA Sum DDE (Calculated U = 1/2)	**15 JT**	--	3.3 UT	--	**64 T**	--
LWG RA Sum DDT (Calculated U = 1/2)	**250 T**	--	3.3 UT	--	**50 T**	--
LWG RA Total DDx (Calculated U = 1/2)	**280 JT**	--	3.3 UT	--	**540 T**	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**320**	--	**7.7**	--	**2400 J**	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**1.667898141**	--	**0.186999995**	--	**5.625044378**
pMax	--	**0.78086114**	--	**0.243388705**	--	**0.99772888**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-08SC	DGS-08SC	DGS-11SC	DGS-11SC	DGS-11SC	DGS-11SC
Sample Name:	DGS-08SC-0408-101007	DGS-08SC-0408-101007	DGS-11SC-0408-101006	DGS-11SC-1.58.2-101006	DGS-11SC-0408-101006	DGS-11SC-1.58.2-101006
Sample Date:	10/7/2010	10/7/2010	10/6/2010	10/6/2010	10/6/2010	10/6/2010
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	45.72 - 249.94 cm	121.92 - 243.84 cm	45.72 - 249.94 cm
Metals (mg/kg)						
Zinc	65	--	51	67	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	44000	--	52000	74000	--	--
LWG RA Total HPAH (Calculated U = 1/2)	520000 T	--	640000 T	860000 T	--	--
LWG RA Total PAH (Calculated U = 1/2)	1800000 T	--	2000000 T	2300000 T	--	--
Semivolatile Organics (µg/kg)						
Carbazole	7000	--	15000	19000	--	--
Dibenzofuran	8600	--	7000	9400	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	33 UT	--	32 UT	31 UT	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	16 U	--	16 U	32 U	--	--
2,4'-DDE (o,p'-DDE)	16 U	--	16 U	32 U	--	--
2,4'-DDT (o,p'-DDT)	16 U	--	16 U	32 U	--	--
4,4'-DDD (p,p'-DDD)	16 U	--	16 U	32 U	--	--
4,4'-DDE (p,p'-DDE)	16 U	--	16 U	32 U	--	--
4,4'-DDT (p,p'-DDT)	16 U	--	16 U	32 U	--	--
beta-Hexachlorocyclohexane (BHC)	16 U	--	8 U	16 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	--	16 UT	32 UT	--	--
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	--	16 UT	32 UT	--	--
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	--	16 UT	32 UT	--	--
LWG RA Total DDx (Calculated U = 1/2)	16 UT	--	16 UT	32 UT	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	2800	--	2300	2600	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	53.54598642	--	--	77.50159712	80.63901826
pMax	--	0.998625923	--	--	0.993540024	0.973084523

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-13SC	DGS-13SC	DGS-18SC	DGS-18SC	DGS-19SC	DGS-19SC
Sample Name:	DGS-13SC-0408-101005	DGS-13SC-0408-101005	DGS-18SC-0408-101008	DGS-18SC-0408-101008	DGS-19SC-0408-101006	DGS-19SC-0408-101006
Sample Date:	10/5/2010	10/5/2010	10/8/2010	10/8/2010	10/6/2010	10/6/2010
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
Metals (mg/kg)						
Zinc	**50 J**	--	**51**	--	**62**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	62 U	--	**2700**	--	**84000**	--
LWG RA Total HPAH (Calculated U = 1/2)	62 UT	--	**34000 JT**	--	**950000 T**	--
LWG RA Total PAH (Calculated U = 1/2)	**3000 JT**	--	**84000 JT**	--	**3900000 T**	--
Semivolatile Organics (µg/kg)						
Carbazole	**330 J**	--	310 U	--	**19000**	--
Dibenzofuran	62 U	--	**700**	--	**13000**	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 UT	--	32 UT	--	32 UT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.1 U	--	16 U	--	16 U	--
2,4'-DDE (o,p'-DDE)	3.1 U	--	16 U	--	16 U	--
2,4'-DDT (o,p'-DDT)	3.1 U	--	16 U	--	16 U	--
4,4'-DDD (p,p'-DDD)	3.1 U	--	16 U	--	16 U	--
4,4'-DDE (p,p'-DDE)	3.1 U	--	16 U	--	16 U	--
4,4'-DDT (p,p'-DDT)	3.1 U	--	16 U	--	16 U	--
beta-Hexachlorocyclohexane (BHC)	1.5 U	--	8.2 U	--	8.2 U	--
LWG RA Sum DDD (Calculated U = 1/2)	3.1 UT	--	16 UT	--	16 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	3.1 UT	--	16 UT	--	16 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	3.1 UT	--	16 UT	--	16 UT	--
LWG RA Total DDx (Calculated U = 1/2)	3.1 UT	--	16 UT	--	16 UT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	7 U	--	**340**	--	**2900**	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.275205959**	--	**4.035212345**	--	**117.6312643**
pMax	--	**0.407149417**	--	**0.752430456**	--	**0.998758922**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-20SC	DGS-20SC	DGS-22SC	DGS-22SC	DGS-23SC	DGS-23SC
Sample Name:	DGS-20SC-0408-101008	DGS-20SC-0408-101008	DGS-22SC-0408-101012	DGS-22SC-0408-101012	DGS-23SC-0408-101008	DGS-23SC-0408-101008
Sample Date:	10/8/2010	10/8/2010	10/12/2010	10/12/2010	10/8/2010	10/8/2010
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
Metals (mg/kg)						
Zinc	**47**	--	**110**	--	**47**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	61 U	--	**20000**	--	61 U	--
LWG RA Total HPAH (Calculated U = 1/2)	61 UJT	--	**220000 T**	--	61 UJT	--
LWG RA Total PAH (Calculated U = 1/2)	**570 JT**	--	**320000 T**	--	61 UJT	--
Semivolatile Organics (µg/kg)						
Carbazole	61 U	--	**530**	--	61 U	--
Dibenzofuran	61 U	--	**570**	--	61 U	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 UT	--	32 UJT	--	31 UT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	--	16 U	--	3.1 U	--
2,4'-DDE (o,p'-DDE)	3.2 U	--	16 U	--	3.1 U	--
2,4'-DDT (o,p'-DDT)	3.2 U	--	16 U	--	3.1 U	--
4,4'-DDD (p,p'-DDD)	3.2 U	--	16 U	--	3.1 U	--
4,4'-DDE (p,p'-DDE)	3.2 U	--	16 U	--	3.1 U	--
4,4'-DDT (p,p'-DDT)	3.2 U	--	16 U	--	3.1 U	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	--	8 U	--	1.6 U	--
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	--	16 UT	--	3.1 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	--	16 UT	--	3.1 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	--	16 UT	--	3.1 UT	--
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	--	16 UT	--	3.1 UT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6.7 U	--	**730 J**	--	6.7 U	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.091917198**	--	**4.117403856**	--	**0.081689009**
pMax	--	**0.009026493**	--	**0.923325626**	--	**0.001232792**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-24SC	DGS-24SC	DGS-25SC	DGS-25SC	DGS-26SC	DGS-26SC
Sample Name:	DGS-24SC-0408-101012	DGS-24SC-0408-101012	DGS-25SC-0408-101007	DGS-25SC-0408-101007	DGS-26SC-0408-101011	DGS-26SC-0408-101011
Sample Date:	10/12/2010	10/12/2010	10/7/2010	10/7/2010	10/11/2010	10/11/2010
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
Metals (mg/kg)						
Zinc	**134**	--	**45**	--	**47**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	**160000**	--	62 U	--	**5000**	--
LWG RA Total HPAH (Calculated U = 1/2)	**1900000 T**	--	62 UJT	--	**49000 T**	--
LWG RA Total PAH (Calculated U = 1/2)	**7100000 T**	--	**720 JT**	--	**120000 T**	--
Semivolatile Organics (µg/kg)						
Carbazole	**28000**	--	62 U	--	**1000**	--
Dibenzofuran	**17000**	--	62 U	--	**970**	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**240 JT**	--	32 UT	--	32 UJT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	44 U	--	3.3 U	--	16 U	--
2,4'-DDE (o,p'-DDE)	44 U	--	3.3 U	--	16 U	--
2,4'-DDT (o,p'-DDT)	44 U	--	3.3 U	--	16 U	--
4,4'-DDD (p,p'-DDD)	**160**	--	3.3 U	--	16 U	--
4,4'-DDE (p,p'-DDE)	44 U	--	3.3 U	--	16 U	--
4,4'-DDT (p,p'-DDT)	44 U	--	3.3 U	--	16 U	--
beta-Hexachlorocyclohexane (BHC)	22 U	--	1.6 U	--	7.9 U	--
LWG RA Sum DDD (Calculated U = 1/2)	**180 T**	--	3.3 UT	--	16 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	44 UT	--	3.3 UT	--	16 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	44 UT	--	3.3 UT	--	16 UT	--
LWG RA Total DDx (Calculated U = 1/2)	**270 T**	--	3.3 UT	--	16 UT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**5100 J**	--	6.2 U	--	**210**	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**159.4875015**	--	**0.119852761**	--	**3.604464544**
pMax	--	**0.999869116**	--	**0.001143042**	--	**0.760277602**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-28SC	DGS-28SC	DGS-30SC	DGS-30SC	DGS-31SC	DGS-31SC
Sample Name:	DGS-28SC-0408-101007	DGS-28SC-0408-101007	DGS-30SC-0408-101006	DGS-30SC-0408-101006	DGS-31SC-0408-101011	DGS-31SC-0408-101011
Sample Date:	10/7/2010	10/7/2010	10/6/2010	10/6/2010	10/11/2010	10/11/2010
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm
Metals (mg/kg)						
Zinc	**43**	--	**46**	--	**50**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	63 U	--	60 U	--	**380**	--
LWG RA Total HPAH (Calculated U = 1/2)	63 UT	--	60 UT	--	**3500 T**	--
LWG RA Total PAH (Calculated U = 1/2)	63 UT	--	**710 T**	--	**4000 T**	--
Semivolatile Organics (µg/kg)						
Carbazole	63 U	--	60 U	--	62 U	--
Dibenzofuran	63 U	--	60 U	--	62 U	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	33 UT	--	32 UT	--	31 UJT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.3 U	--	3.2 U	--	3.2 U	--
2,4'-DDE (o,p'-DDE)	3.3 U	--	3.2 U	--	3.2 U	--
2,4'-DDT (o,p'-DDT)	3.3 U	--	3.2 U	--	3.2 U	--
4,4'-DDD (p,p'-DDD)	3.3 U	--	3.2 U	--	3.2 U	--
4,4'-DDE (p,p'-DDE)	3.3 U	--	3.2 U	--	3.2 U	--
4,4'-DDT (p,p'-DDT)	3.3 U	--	3.2 U	--	3.2 U	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	--	1.6 U	--	1.6 U	--
LWG RA Sum DDD (Calculated U = 1/2)	3.3 UT	--	3.2 UT	--	3.2 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	3.3 UT	--	3.2 UT	--	3.2 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	3.3 UT	--	3.2 UT	--	3.2 UT	--
LWG RA Total DDx (Calculated U = 1/2)	3.3 UT	--	3.2 UT	--	3.2 UT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	5.7 U	--	6 U	--	6.7 U	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.067155312**	--	**0.11496192**	--	**0.081658457**
pMax	--	**0.000855909**	--	**0.000987406**	--	**0.010533946**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	DGS-32SC	DGS-32SC	DGS-36SC	DGS-36SC	DGS-37SC	DGS-37SC	GS-01
Sample Name:	DGS-32SC-0408-101011	DGS-32SC-0408-101011	DGS-36SC-0408-101012	DGS-36SC-0408-101012	DGS-37SC-0408-101011	DGS-37SC-0408-101011	GS-01-S (4-6)
Sample Date:	10/11/2010	10/11/2010	10/12/2010	10/12/2010	10/11/2010	10/11/2010	12/21/2006
Depth Interval:	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 243.84 cm	121.92 - 182.88 cm
Metals (mg/kg)							
Zinc	165	--	93	--	181	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	44000	--	6300	--	2300	--	100
LWG RA Total HPAH (Calculated U = 1/2)	660000 T	--	58000 T	--	27000 JT	--	1400 T
LWG RA Total PAH (Calculated U = 1/2)	1600000 T	--	83000 T	--	43000 JT	--	1900 T
Semivolatile Organics (µg/kg)							
Carbazole	22000	--	380	--	190 U	--	--
Dibenzofuran	8800	--	230	--	270	--	6.5
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	330 JT	--	32 UJT	--	160 UJT	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	110 J	--	16 U	--	36	--	--
2,4'-DDE (o,p'-DDE)	32 U	--	16 U	--	16 U	--	--
2,4'-DDT (o,p'-DDT)	32 U	--	16 U	--	16 U	--	--
4,4'-DDD (p,p'-DDD)	320 J	--	16 U	--	120	--	--
4,4'-DDE (p,p'-DDE)	120 U	--	16 U	--	32 J	--	--
4,4'-DDT (p,p'-DDT)	32 U	--	16 U	--	28 J	--	--
beta-Hexachlorocyclohexane (BHC)	16 U	--	12 U	--	8.1 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	430 JT	--	16 UT	--	160 T	--	--
LWG RA Sum DDE (Calculated U = 1/2)	120 UT	--	16 UT	--	40 JT	--	--
LWG RA Sum DDT (Calculated U = 1/2)	32 UT	--	16 UT	--	36 JT	--	--
LWG RA Total DDx (Calculated U = 1/2)	540 JT	--	16 UT	--	230 JT	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	4300	--	170 J	--	170 J	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	30.04026948	--	1.341394014	--	0.741371448	--
pMax	--	0.999671273	--	0.701244323	--	0.669279751	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	GS-01	GS-02	GS-02	GS-03	GS-03	GS-10	GS-10	GS-11
Sample Name:	GS-01-S (4-6)	GS-02-S (4-6)	GS-02-S (4-6)	GS-03-S (4-6)	GS-03-S (4-6)	GS-10-S (4-6)	GS-10-S (4-6)	GS-11-S (4-6)
Sample Date:	12/21/2006	12/27/2006	12/27/2006	12/18/2006	12/18/2006	1/2/2007	1/2/2007	1/5/2007
Depth Interval:	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm
Metals (mg/kg)								
Zinc	--	72.7	--	--	--	107	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	8.7	--	12000	--	370000	--	54000
LWG RA Total HPAH (Calculated U = 1/2)	--	120 JT	--	150000 T	--	4500000 T	--	730000 T
LWG RA Total PAH (Calculated U = 1/2)	--	180 JT	--	240000 T	--	17000000 T	--	1800000 T
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Dibenzofuran	--	0.75 J	--	860	--	78000	--	7700
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	0.180144762	--	0.444712765	--	5.906433536	--	374.5394714	--
pMax	0.323735339	--	0.491547333	--	0.827663314	--	0.988993983	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	GS-11	GS-12	GS-12	GTC-10	GTC-10	LW2-C252	LW2-C252	LW2-C255	LW2-C255	LW2-C258
Sample Name:	GS-11-S (4-6)	GS-12-S (4-6)	GS-12-S (4-6)	GTC-10SC-090113	GTC-10SC-090113	LW2-C252-C	LW2-C252-C	LW2-C255-C	LW2-C255-C	LW2-C258-C
Sample Date:	1/5/2007	1/10/2007	1/10/2007	1/14/2009	1/14/2009	9/23/2004	9/23/2004	10/27/2004	10/27/2004	9/23/2004
Depth Interval:	121.92 - 182.88 cm	121.92 - 182.88 cm	121.92 - 182.88 cm	118.87 - 234.7 cm	118.87 - 234.7 cm	154 - 252 cm	154 - 252 cm	152 - 238 cm	152 - 238 cm	153 - 276 cm
Metals (mg/kg)										
Zinc	--	63.8	--	--	--	68.8	--	43.5	--	66.7
Polycyclic Aromatic Hydrocarbons (µg/kg)										
Benzo(a)pyrene	--	2.8 J	--	50000	--	530	--	0.29 U	--	19000
LWG RA Total HPAH (Calculated U = 1/2)	--	35 JT	--	740000 T	--	5200 T	--	0.62 UT	--	210000 T
LWG RA Total PAH (Calculated U = 1/2)	--	52 JT	--	2300000 T	--	7200 T	--	1.7 UT	--	290000 T
Semivolatile Organics (µg/kg)										
Carbazole	--	--	--	--	--	15	--	1.7 U	--	810
Dibenzofuran	--	0.36 J	--	10000	--	22	--	0.22 U	--	1000
PCB Aroclors (µg/kg)										
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	30.2 JT	--	2.2 UT	--	8.56 JT
PCB Congeners (µg/kg)										
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	11.9 J	--	0.165 NJ	--	0.17 UJ
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	0.455 U	--	0.473 NJ	--	0.18 UJ
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	22.3 NJ	--	0.0424 UJ	--	4.18 NJ
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	60.6 J	--	0.253 NJ	--	7.6 NJ
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	6.57 J	--	0.0424 U	--	0.238 UJ
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	6.44 NJ	--	0.113 J	--	7.1 NJ
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.45 U	--	0.575 NJ	--	3.25 J
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	72.5 JT	--	0.418 NJT	--	7.7 NJT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	6.8 JT	--	0.494 NJT	--	0.24 UJT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	28.7 NJT	--	0.134 JT	--	11 NJT
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	108 JNT	--	1.05 JNT	--	19 NJT
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	--	--	--	--	--	120 J	--	--	--	910 J
Residual Range Hydrocarbons	--	--	--	--	--	420 J	--	--	--	1000 J
CALC										
Benthic MQ	59.14637619	--	0.068746897	--	141.62507	--	0.113348636	--	0.026365017	--
pMax	0.961724759	--	0.060042052	--	0.964747233	--	0.243388705	--	0.006162199	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C258	LW2-C263	LW2-C263	LW2-C264	LW2-C264	LW2-C269	LW2-C269	LW2-C270	LW2-C270	LW2-C270	LW2-C270	LW2-C272
Sample Name:	LW2-C258-C	LW2-C263-C	LW2-C263-C	LW2-C264-C	LW2-C264-C	LW2-C269-C	LW2-C269-C	LW2-C270-C	LW2-C270-D	LW2-C270-D	LW2-C270-C	LW2-C272-C
Sample Date:	9/23/2004	10/1/2004	10/1/2004	9/23/2004	9/23/2004	10/28/2004	10/28/2004	9/21/2004	9/21/2004	9/21/2004	9/21/2004	9/22/2004
Depth Interval:	153 - 276 cm	152 - 277 cm	152 - 277 cm	156 - 220 cm	156 - 220 cm	151 - 272 cm	151 - 272 cm	87 - 182 cm	182 - 272 cm	182 - 272 cm	87 - 182 cm	152 - 260 cm
Metals (mg/kg)												
Zinc	--	--	--	109	--	134	--	149	44.3	--	--	43.4
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)pyrene	--	--	--	54000	--	4300	--	18000	580	--	--	150
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	490000 T	--	60000 T	--	200000 T	5700 T	--	--	1100 T
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	570000 JT	--	120000 T	--	290000 T	8300 T	--	--	1200 JT
Semivolatile Organics (µg/kg)												
Carbazole	--	--	--	5700	--	1200	--	2800	14 J	--	--	1.6 U
Dibenzofuran	--	--	--	1900	--	560	--	1300	37	--	--	0.47 J
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	56 JT	--	240 JT	--	23.7 UJT	--	--	--	2.3 UJT
PCB Congeners (µg/kg)												
LWG RA Total PCB Congener (Calculated U = 1/2)	--	55 JT	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	0.00827 JT	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	--	--	--	4.78 J	--	42.9 J	--	56.3 NJ	1.1 U	--	--	0.0297 U
2,4'-DDE (o,p'-DDE)	--	--	--	0.208 U	--	4.58 NJ	--	18.8 NJ	0.52 U	--	--	0.051 J
2,4'-DDT (o,p'-DDT)	--	--	--	0.275 UJ	--	1.05 NJ	--	1.53 U	0.36 U	--	--	0.0417 U
4,4'-DDD (p,p'-DDD)	--	--	--	22.1 NJ	--	162 J	--	155 J	1.4 J	--	--	0.0445 U
4,4'-DDE (p,p'-DDE)	--	--	--	4.36 NJ	--	25.3 NJ	--	19.8	0.17 J	--	--	0.0417 U
4,4'-DDT (p,p'-DDT)	--	--	--	1.67 NJ	--	25.2 J	--	164	0.2 U	--	--	0.094
beta-Hexachlorocyclohexane (BHC)	--	--	--	5.57 J	--	0.241 U	--	9.95 NJ	0.2 U	--	--	0.0312 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	26.9 JNT	--	205 JT	--	211 JNT	2 JT	--	--	0.0445 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	4.46 NJT	--	29.9 NJT	--	38.6 NJT	0.43 JT	--	--	0.072 JT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	1.81 NJT	--	26.3 JNT	--	165 T	0.36 UT	--	--	0.11 T
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	33.2 JNT	--	261 JNT	--	415 JNT	2.7 JT	--	--	0.22 JT
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Hydrocarbons	--	--	--	1300 J	--	1500 J	--	2000 J	--	--	--	13 U
Residual Range Hydrocarbons	--	--	--	3200 J	--	1400 J	--	2400 J	--	--	--	8 U
CALC												
Benthic MQ	2.026108021	--	0.039285714	--	2.24269842	--	1.723845747	--	--	0.121272778	2.394269647	--
pMax	0.851513923	--	0.053392829	--	0.925259694	--	0.989523826	--	--	0.221675765	0.913881588	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C272	LW2-C273	LW2-C273	LW2-C276	LW2-C276	LW2-C278	LW2-C278	LW2-C283	LW2-C283	LW2-C284	LW2-C284	LW2-C284
Sample Name:	LW2-C272-C	LW2-C273-C	LW2-C273-C	LW2-C276-C	LW2-C276-C	LW2-C278-C	LW2-C278-C	LW2-C283-C	LW2-C283-C	LW2-C284-C	LW2-C284-D	LW2-C284-C
Sample Date:	9/22/2004	10/20/2004	10/20/2004	9/22/2004	9/22/2004	10/19/2004	10/19/2004	11/8/2004	11/8/2004	9/22/2004	9/22/2004	9/22/2004
Depth Interval:	152 - 260 cm	153 - 274 cm	153 - 274 cm	153 - 268 cm	153 - 268 cm	152 - 288 cm	152 - 288 cm	151 - 258 cm	151 - 258 cm	104 - 183 cm	183 - 292 cm	104 - 183 cm
Metals (mg/kg)												
Zinc	--	93.1	--	83.6	--	132	--	103 T	--	142	53.5	--
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)pyrene	--	49000	--	260000	--	33000	--	25000 J	--	340000	3000	--
LWG RA Total HPAH (Calculated U = 1/2)	--	560000 T	--	3300000 T	--	370000 T	--	330000 JT	--	4400000 T	39000 T	--
LWG RA Total PAH (Calculated U = 1/2)	--	870000 T	--	11000000 T	--	780000 T	--	580000 JT	--	13000000 T	64000 T	--
Semivolatile Organics (µg/kg)												
Carbazole	--	2600	--	98000	--	7200	--	2800	--	130000	1000	--
Dibenzofuran	--	1300	--	47000	--	5000	--	2000 J	--	55000	280	--
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	3.1 UT	--	2.8 UJT	--	78.1 JT	--	2.93 UT	--	6.2 UJT	2.5 UT	--
PCB Congeners (µg/kg)												
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	--	0.421 U	--	38.5 J	--	19 NJ	--	46.3 J	--	37.2 NJ	0.175 U	--
2,4'-DDE (o,p'-DDE)	--	7.72 NJ	--	0.987 U	--	8.4 NJ	--	0.852 U	--	1.09 U	0.185 U	--
2,4'-DDT (o,p'-DDT)	--	19.4 NJ	--	58.8 NJ	--	0.6 UJ	--	8.75 J	--	93.8 NJ	1.21 NJ	--
4,4'-DDD (p,p'-DDD)	--	0.63 U	--	99.1 NJ	--	130 J	--	98.2 NJ	--	156 NJ	2.15 NJ	--
4,4'-DDE (p,p'-DDE)	--	2.02 NJ	--	14.9 NJ	--	9.54 J	--	3.9 NJ	--	22.1 NJ	0.245 U	--
4,4'-DDT (p,p'-DDT)	--	25.8 NJ	--	76.6 J	--	7.04 J	--	15.6 J	--	90.7 NJ	1.27 J	--
beta-Hexachlorocyclohexane (BHC)	--	0.442 U	--	43.4 J	--	12.1 NJ	--	0.843 U	--	45.8 J	0.734 NJ	--
LWG RA Sum DDD (Calculated U = 1/2)	--	0.63 UT	--	138 JNT	--	150 JNT	--	145 JNT	--	193 NJT	2.24 NJT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	9.74 NJT	--	15.4 NJT	--	18 JNT	--	4.3 NJT	--	22.6 NJT	0.245 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	45.2 NJT	--	135 JNT	--	7.3 JT	--	24.4 JT	--	185 NJT	2.48 JNT	--
LWG RA Total DDx (Calculated U = 1/2)	--	55 NJT	--	288 JNT	--	170 JNT	--	170 JNT	--	400 NJT	4.93 JNT	--
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Hydrocarbons	--	4900 J	--	29000 J	--	5200 J	--	4200 J	--	38000 J	140 J	--
Residual Range Hydrocarbons	--	6000 J	--	15000 J	--	3500 J	--	3700 J	--	20000 J	110 J	--
CALC												
Benthic MQ	0.020043848	--	8.724372317	--	19.18321437	--	2.450814449	--	6.393920219	--	--	24.20843316
pMax	0.034601055	--	0.99226323	--	0.994470119	--	0.933320779	--	0.996301876	--	--	0.9957996

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C284	LW2-C288	LW2-C288	LW2-C289	LW2-C289	LW2-C294	LW2-C294	LW2-C299	LW2-C299	LW2-C300-2	LW2-C300-2	LW2-C300-2
Sample Name:	LW2-C284-D	LW2-C288-C	LW2-C288-C	LW2-C289-C	LW2-C289-C	LW2-C294-C	LW2-C294-C	LW2-C299-C	LW2-C299-C	LW2-C300-C	LW2-C300-D	LW2-C300-C
Sample Date:	9/22/2004	10/20/2004	10/20/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	9/22/2004	9/22/2004	10/27/2004	10/27/2004	10/27/2004
Depth Interval:	183 - 292 cm	153 - 274 cm	153 - 274 cm	155 - 206 cm	155 - 206 cm	152 - 272 cm	152 - 272 cm	104 - 230 cm	104 - 230 cm	152 - 204 cm	204 - 278 cm	152 - 204 cm
Metals (mg/kg)												
Zinc	--	124	--	184	--	128	--	891	--	190	77.9	--
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)pyrene	--	29000	--	21000	--	24000	--	85000	--	220	580	--
LWG RA Total HPAH (Calculated U = 1/2)	--	340000 T	--	240000 T	--	290000 T	--	1100000 T	--	2700 T	7000 T	--
LWG RA Total PAH (Calculated U = 1/2)	--	530000 T	--	440000 T	--	450000 T	--	3700000 T	--	3800 T	12000 T	--
Semivolatile Organics (µg/kg)												
Carbazole	--	3100	--	4900	--	3400	--	30000	--	7.7 J	9.4 J	--
Dibenzofuran	--	1300	--	2800	--	1700	--	17000	--	9.1	21	--
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	3.3 UT	--	--	--	3.18 UT	--	580 UT	--	--	53 NJT	--
PCB Congeners (µg/kg)												
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	--	0.452 U	--	--	--	0.441 U	--	62 U	--	--	5.8 U	--
2,4'-DDE (o,p'-DDE)	--	0.48 U	--	--	--	5.29 NJ	--	24 U	--	--	2.1 U	--
2,4'-DDT (o,p'-DDT)	--	13.1 NJ	--	--	--	6.71 NJ	--	39 U	--	--	3.5	--
4,4'-DDD (p,p'-DDD)	--	17.6 J	--	--	--	10.6 J	--	24 J	--	--	4.1 J	--
4,4'-DDE (p,p'-DDE)	--	1.92 NJ	--	--	--	0.619 U	--	9 U	--	--	0.72 J	--
4,4'-DDT (p,p'-DDT)	--	17.3 J	--	--	--	14.9 NJ	--	42 NJ	--	--	2.5 U	--
beta-Hexachlorocyclohexane (BHC)	--	0.474 U	--	--	--	6.92 J	--	16 U	--	--	2.6 NJ	--
LWG RA Sum DDD (Calculated U = 1/2)	--	17.8 JT	--	--	--	10.8 JT	--	55 JT	--	--	7 JT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	2.2 NJT	--	--	--	5.6 NJT	--	24 UT	--	--	1.8 JT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	30.4 JNT	--	--	--	21.6 NJT	--	62 NJT	--	--	4.8 T	--
LWG RA Total DDx (Calculated U = 1/2)	--	50 JNT	--	--	--	38 JNT	--	130 JNT	--	--	14 JT	--
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Hydrocarbons	--	3800 J	--	4600 J	--	2850 JT	--	8400 J	--	300 J	110 J	--
Residual Range Hydrocarbons	--	4900 J	--	3800 J	--	3400 JT	--	3300 J	--	670 J	160 J	--
CALC												
Benthic MQ	0.172050497	--	0.803607693	--	7.550410973	--	0.917886476	--	74.28571	--	--	0.138452185
pMax	0.670047522	--	0.903825547	--	0.990652972	--	0.900851646	--	0.9970668	--	--	0.359631757

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C300-2	LW2-C301	LW2-C301	LW2-C302	LW2-C302	LW2-C305	LW2-C305	LW2-C311	LW2-C311	LW2-C312	LW2-C312	LW2-C521
Sample Name:	LW2-C300-D	LW2-C301-C	LW2-C301-C	LW2-C302-C	LW2-C302-C	LW2-C305-C1	LW2-C305-C1	LW2-C311-C	LW2-C311-C	LW2-C312-C	LW2-C312-C	LW2-C521-C
Sample Date:	10/27/2004	11/8/2004	11/8/2004	9/22/2004	9/22/2004	10/19/2004	10/19/2004	11/9/2004	11/9/2004	10/19/2005	10/19/2005	10/19/2004
Depth Interval:	204 - 278 cm	153 - 231 cm	153 - 231 cm	198 - 288 cm	198 - 288 cm	160 - 220 cm	160 - 220 cm	153 - 276 cm	153 - 276 cm	152 - 245 cm	152 - 245 cm	99 - 182 cm
Metals (mg/kg)												
Zinc	--	67.9	--	47.7	--	65.4	--	153	--	51.3	--	103
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)pyrene	--	690000 J	--	940000	--	1100 J	--	2100 J	--	2.7	--	220000
LWG RA Total HPAH (Calculated U = 1/2)	--	10000000 JT	--	13000000 T	--	13000 JT	--	23000 JT	--	23 JT	--	2700000 T
LWG RA Total PAH (Calculated U = 1/2)	--	23000000 JT	--	53000000 T	--	20000 JT	--	32000 JT	--	44 JT	--	8900000 T
Semivolatile Organics (µg/kg)												
Carbazole	--	520000	--	490000	--	140 J	--	37 J	--	1.7 U	--	69000
Dibenzofuran	--	190000 J	--	230000	--	67	--	48 J	--	0.59 J	--	33000
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	26 UT	--	--	--	2.8 UT	--	3.3 UT	--	1.4 UT	--	--
PCB Congeners (µg/kg)												
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	33 JT	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	0.013 JT	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	--	134 J	--	62.7 J	--	15.4 J	--	0.452 U	--	0.4 U	--	13 U
2,4'-DDE (o,p'-DDE)	--	15.3 U	--	7.78 U	--	1.53 J	--	0.957 NJ	--	0.07 U	--	6.4 U
2,4'-DDT (o,p'-DDT)	--	280 J	--	233 NJ	--	815 J	--	1.42 NJ	--	0.057 U	--	16 J
4,4'-DDD (p,p'-DDD)	--	972 NJ	--	717 J	--	68.4 J	--	3.08 J	--	0.52	--	30 NJ
4,4'-DDE (p,p'-DDE)	--	101 NJ	--	48.5 J	--	12.1 J	--	3.55 NJ	--	0.054 NJ	--	3 U
4,4'-DDT (p,p'-DDT)	--	830 J	--	286 NJ	--	1060 J	--	0.783 UJ	--	0.49 NJ	--	2.3 U
beta-Hexachlorocyclohexane (BHC)	--	15.1 U	--	318 NJ	--	1.53	--	2.17 J	--	0.79 U	--	1.7 U
LWG RA Sum DDD (Calculated U = 1/2)	--	1110 JNT	--	780 JT	--	83.8 JT	--	3.31 JT	--	0.72 T	--	36 NJT
LWG RA Sum DDE (Calculated U = 1/2)	--	109 NJT	--	52.4 JT	--	13.6 JT	--	4.51 NJT	--	0.089 NJT	--	6.4 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	1100 JT	--	519 NJT	--	1870 JT	--	1.81 NJT	--	0.52 NJT	--	17 JT
LWG RA Total DDx (Calculated U = 1/2)	--	2300 JNT	--	1350 JNT	--	1970 JT	--	9.62 JNT	--	1.3 NJT	--	58 JNT
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Hydrocarbons	--	190000 J	--	130000 J	--	210 J	--	870 J	--	4.3 UT	--	23000 J
Residual Range Hydrocarbons	--	110000 J	--	44000 J	--	230 J	--	1300 J	--	4 UT	--	11000 J
CALC												
Benthic MQ	0.138049505	--	343.1326292	--	797.7778304	--	0.262665569	--	0.431170921	--	0.025153396	--
pMax	0.285820168	--	0.999955102	--	0.999974012	--	0.587674899	--	0.760871712	--	0.003372388	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW2-C521	LW2-C521	LW2-C521	LW2-C525	LW2-C525	LW2-C527	LW2-C527	LW2-C528	LW2-C528	LW3-C658	LW3-C658	LW3-C662
Sample Name:	LW2-C521-D	LW2-C521-D	LW2-C521-C	LW2-C525-C	LW2-C525-C	LW2-C527-C	LW2-C527-C	LW2-C528-C	LW2-C528-C	LW3-C658-C	LW3-C658-C	LW3-C662-C
Sample Date:	10/19/2004	10/19/2004	10/19/2004	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	12/14/2007	12/14/2007	1/17/2008
Depth Interval:	182 - 280 cm	182 - 280 cm	99 - 182 cm	127 - 236 cm	127 - 236 cm	152 - 250 cm	152 - 250 cm	152 - 274 cm	152 - 274 cm	151 - 273 cm	151 - 273 cm	82 - 181 cm
Metals (mg/kg)												
Zinc	--	--	--	139	--	213	--	181	--	37.3	--	114
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)pyrene	26000	--	--	4400	--	2000	--	2200	--	0.25 J	--	570000
LWG RA Total HPAH (Calculated U = 1/2)	290000 T	--	--	43000 T	--	20000 T	--	24000 T	--	2.9 JT	--	7000000 T
LWG RA Total PAH (Calculated U = 1/2)	800000 T	--	--	64000 T	--	24000 T	--	31000 T	--	4.9 JT	--	29000000 T
Semivolatile Organics (µg/kg)												
Carbazole	6700	--	--	810	--	170	--	210	--	1.3 U	--	210000
Dibenzofuran	3800	--	--	150	--	78	--	170	--	0.59 U	--	140000
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	10 UT	--	--	210 T	--	160 T	--	300 T	--	1.3 UT	--	120 JT
PCB Congeners (µg/kg)												
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	13 U	--	--	32	--	9.7 U	--	65 J	--	0.16 U	--	380
2,4'-DDE (o,p'-DDE)	5.5 U	--	--	24 NJ	--	1.1 U	--	9.2 U	--	0.046 U	--	66 U
2,4'-DDT (o,p'-DDT)	5.7 U	--	--	15 U	--	3.4 U	--	7.5 U	--	0.061 U	--	150
4,4'-DDD (p,p'-DDD)	4.3 U	--	--	68	--	22	--	62 J	--	0.073 U	--	1300 J
4,4'-DDE (p,p'-DDE)	2 U	--	--	27 NJ	--	8.4	--	11 U	--	0.027 U	--	500 J
4,4'-DDT (p,p'-DDT)	1.8 U	--	--	5.1 U	--	9	--	5.4 U	--	0.18 U	--	35 U
beta-Hexachlorocyclohexane (BHC)	2 U	--	--	2.1 U	--	9.1	--	4.6 U	--	0.14 U	--	46 U
LWG RA Sum DDD (Calculated U = 1/2)	13 UT	--	--	100 T	--	27 T	--	130 JT	--	0.16 UT	--	1700 JT
LWG RA Sum DDE (Calculated U = 1/2)	5.5 UT	--	--	51 NJT	--	9 T	--	11 UT	--	0.046 UT	--	530 JT
LWG RA Sum DDT (Calculated U = 1/2)	5.7 UT	--	--	15 UT	--	11 T	--	7.5 UT	--	0.18 UT	--	170 T
LWG RA Total DDx (Calculated U = 1/2)	13 UT	--	--	160 NJT	--	47 T	--	140 JT	--	0.18 UT	--	2400 JT
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Hydrocarbons	--	--	--	990 J	--	520 J	--	670 J	--	1.6 U	--	110000 J
Residual Range Hydrocarbons	--	--	--	1500 J	--	1300 J	--	1300 J	--	5.9 U	--	37000 J
CALC												
Benthic MQ	--	28.20522774	174.1144645	--	0.723938319	--	0.250402798	--	0.601085883	--	0.024550616	--
pMax	--	0.928804763	0.999725169	--	0.854554568	--	0.700319562	--	0.888631874	--	0.002620009	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	LW3-C662	LW3-C662	LW3-C662	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB5	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSB7
Sample Name:	LW3-C662-D	LW3-C662-D	LW3-C662-C	WLCGSG07GSB2S57	WLCGSG07GSB2S57	WLCGSG07GSB5S57	WLCGSG07GSB5S57	WLCGSG07GSB7S57	WLCGSG07GSB7S57
Sample Date:	1/17/2008	1/17/2008	1/17/2008	9/21/2007	9/21/2007	9/21/2007	9/21/2007	8/30/2007	8/30/2007
Depth Interval:	181 - 256 cm	181 - 256 cm	82 - 181 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm
Metals (mg/kg)									
Zinc	56.5	--	--	--	209	--	110	--	182
Polycyclic Aromatic Hydrocarbons (µg/kg)									
Benzo(a)pyrene	64000	--	--	--	16000	--	19000	--	140000 J
LWG RA Total HPAH (Calculated U = 1/2)	820000 T	--	--	--	150000 T	--	220000 T	--	1900000 JT
LWG RA Total PAH (Calculated U = 1/2)	2100000 JT	--	--	--	190000 JT	--	300000 JT	--	5400000 JT
Semivolatile Organics (µg/kg)									
Carbazole	24000 J	--	--	--	--	--	--	--	--
Dibenzofuran	9400	--	--	--	680	--	470	--	26000 J
PCB Aroclors (µg/kg)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	10 UJT	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)									
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)									
2,4'-DDD (o,p'-DDD)	59 NJ	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	8.2 U	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	6.1 U	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	52 U	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	16 U	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	18 U	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	14 U	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	85 NJT	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	18 UT	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	110 NJT	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)									
Diesel Range Hydrocarbons	7700 J	--	--	--	--	--	--	--	64000
Residual Range Hydrocarbons	3700 J	--	--	--	--	--	--	--	25000
CALC									
Benthic MQ	--	41.8599882	474.9168401	2.411765454	--	2.974537081	--	110.1966115	--
pMax	--	0.978463233	0.99998945	0.897134678	--	0.951075159	--	0.999871147	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	WLCGSG07GSC2	WLCGSG07GSC2	WLCGSG07GSC5	WLCGSG07GSC5	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSD2
Sample Name:	WLCGSG07GSC2S57	WLCGSG07GSC2S57	WLCGSG07GSC5S57	WLCGSG07GSC5S57	WLCGSG07GSC7S57	WLCGSG07GSC7S57	WLCGSG07GSD2S57
Sample Date:	9/21/2007	9/21/2007	9/20/2007	9/20/2007	9/19/2007	9/19/2007	9/20/2007
Depth Interval:	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm
Metals (mg/kg)							
Zinc	--	49.4	--	48.2	--	78	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	10000	--	9.1	--	71000	--
LWG RA Total HPAH (Calculated U = 1/2)	--	130000 T	--	150 JT	--	950000 T	--
LWG RA Total PAH (Calculated U = 1/2)	--	170000 T	--	210 JT	--	2300000 T	--
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	--	150	--	0.76 U	--	17000	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	1.250831526	--	0.029104459	--	42.69736657	--	0.024862233
pMax	0.746841908	--	0.019907895	--	0.999331474	--	0.011225993

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	#N/A	C:_4-8_feet	C:_4-8_feet
System Location Code:	WLCGSG07GSD2	WLCGSG07GSD4	WLCGSG07GSD4	WLCGSJ06GS04	WLCGSJ06GS04	#N/A	WLCGSJ06GS06	WLCGSJ06GS06
Sample Name:	WLCGSG07GSD2S57	WLCGSG07GSD4S57	WLCGSG07GSD4S57	WLCGSJ06GS04S46	WLCGSJ06GS04S46	#N/A	WLCGSJ06GS06S46	WLCGSJ06GS06S46
Sample Date:	9/20/2007	9/20/2007	9/20/2007	12/12/2006	12/12/2006	#N/A	1/17/2007	1/17/2007
Depth Interval:	152.4 - 213.4 cm	152.4 - 213.4 cm	152.4 - 213.4 cm	121.9 - 182.9 cm	121.9 - 182.9 cm	#N/A	121.9 - 182.9 cm	121.9 - 182.9 cm
Metals (mg/kg)								
Zinc	**38.8**	--	**48.4**	--	**70.4**	--	--	**66.2 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	**4.1 J**	--	**2.3 J**	--	**170**	--	--	**12000 T**
LWG RA Total HPAH (Calculated U = 1/2)	**54 JT**	--	**29 JT**	--	**2300 T**	--	--	**130000 T**
LWG RA Total PAH (Calculated U = 1/2)	**81 JT**	--	**42 JT**	--	**2300 JT**	--	--	**240000 T**
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Dibenzofuran	0.71 U	--	0.71 U	--	5 U	--	--	**1700 T**
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	--	**0.031044553**	--	**0.096460977**	--	--	**3.740557372**	--
pMax	--	**0.00556596**	--	**0.024519107**	--	--	**0.816616529**	--

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Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	#N/A	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	WLCGSJ06GS07	WLCGSJ06GS07	#N/A	WLCGSJ06GS09	WLCGSJ06GS09	WLCMRD08SDDA17SB	WLCMRD08SDDA17SB	WLCMRD08SDDB20SB
Sample Name:	WLCGSJ06GS07S46	WLCGSJ06GS07S46	#N/A	WLCGSJ06GS09S46	WLCGSJ06GS09S46	WLCMRD08DA17-3	WLCMRD08DA17-3	WLCMRD08DB20-3
Sample Date:	10/16/2006	10/16/2006	#N/A	10/5/2006	10/5/2006	4/20/2008	4/20/2008	4/19/2008
Depth Interval:	121.9 - 182.9 cm	121.9 - 182.9 cm	#N/A	121.9 - 182.9 cm	121.9 - 182.9 cm	213 - 274.32 cm	213 - 274.32 cm	182.88 - 243.84 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	63.1	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	290000	--	--	15000	--	46	--
LWG RA Total HPAH (Calculated U = 1/2)	--	3700000 T	--	--	170000 T	--	520 T	--
LWG RA Total PAH (Calculated U = 1/2)	--	11000000 T	--	--	350000 T	--	740 JT	--
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	11	--
Dibenzofuran	--	64000	--	--	2400	--	1.2 J	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	5 UT	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	0.18 J	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	0.2 U	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	0.2 U	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	0.47 J	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	0.2 U	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	0.2 U	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	0.2 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	0.65 JT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	0.2 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	0.2 UT	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	1.1 JT	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	14 U	--
Residual Range Hydrocarbons	--	--	--	--	--	--	140 U	--
CALC								
Benthic MQ	416.9979266	--	--	10.18687371	--	0.034179438	--	0.299199437
pMax	0.999986393	--	--	0.949153279	--	0.051610331	--	0.483845293

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Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet
System Location Code:	WLCMRD08SDDB20SB	WLCMRD08SDDB22SB	WLCMRD08SDDB22SB	WLCMRD08SDDC25SB	WLCMRD08SDDC25SB	WLCSLH01GP25	WLCSLH01GP25
Sample Name:	WLCMRD08DB20-3	WLCMRD08DB22-3	WLCMRD08DB22-3	WLCMRD08DC25-3	WLCMRD08DC25-3	WLCSLH01GP25S6	WLCSLH01GP25S6
Sample Date:	4/19/2008	4/19/2008	4/19/2008	4/19/2008	4/19/2008	9/28/2004	9/28/2004
Depth Interval:	182.88 - 243.84 cm	182.88 - 243.84 cm	182.88 - 243.84 cm	152.4 - 243.84 cm	152.4 - 243.84 cm	182.9 - 198.1 cm	182.9 - 198.1 cm
Metals (mg/kg)							
Zinc	191	--	223	--	298	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	2100	--	3900	--	8600	--	11400
LWG RA Total HPAH (Calculated U = 1/2)	21000 T	--	45000 T	--	94000 T	--	130000 T
LWG RA Total PAH (Calculated U = 1/2)	26000 T	--	56000 T	--	110000 T	--	270000 T
Semivolatile Organics (µg/kg)							
Carbazole	140	--	380	--	1100	--	8460
Dibenzofuran	180	--	240	--	290	--	2080
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	200 T	--	240 JT	--	98 JT	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	15	--	33 J	--	50 J	--	--
2,4'-DDE (o,p'-DDE)	2.6 U	--	1.3 U	--	2.2 U	--	--
2,4'-DDT (o,p'-DDT)	8.4 U	--	4.8 U	--	2.2 U	--	--
4,4'-DDD (p,p'-DDD)	32	--	49	--	31 J	--	--
4,4'-DDE (p,p'-DDE)	16	--	17 J	--	4.5 J	--	--
4,4'-DDT (p,p'-DDT)	7.7	--	62	--	6.7 U	--	--
beta-Hexachlorocyclohexane (BHC)	1.2 U	--	4.5 U	--	2.2 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	47 T	--	82 JT	--	81 JT	--	--
LWG RA Sum DDE (Calculated U = 1/2)	17 T	--	18 JT	--	5.6 JT	--	--
LWG RA Sum DDT (Calculated U = 1/2)	12 T	--	64 T	--	6.7 UT	--	--
LWG RA Total DDx (Calculated U = 1/2)	76 T	--	160 JT	--	91 JT	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	310	--	620	--	770	--	--
Residual Range Hydrocarbons	510	--	940	--	1200	--	--
CALC							
Benthic MQ	--	0.431336381	--	0.834879604	--	10.95932198	--
pMax	--	0.701524122	--	0.690317468	--	0.942489641	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	C:_4-8_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP32	WLCSLH01GP32	DGS-03SC	DGS-03SC
Sample Name:	WLCSLH01GP28S5	WLCSLH01GP28S5	WLCSLH01GP31S7	WLCSLH01GP31S7	WLCSLH01GP32S6	WLCSLH01GP32S6	DGS-03SC-0812-101005	DGS-03SC-0812-101005
Sample Date:	10/13/2004	10/13/2004	10/26/2004	10/26/2004	10/27/2004	10/27/2004	10/5/2010	10/5/2010
Depth Interval:	152.4 - 167.6 cm	152.4 - 167.6 cm	213.4 - 228.6 cm	213.4 - 228.6 cm	182.9 - 198.1 cm	182.9 - 198.1 cm	243.84 - 365.76 cm	243.84 - 365.76 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	53 J	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	978	--	76300	--	27200	110	--
LWG RA Total HPAH (Calculated U = 1/2)	--	11200 T	--	974000 T	--	330000 T	1100 T	--
LWG RA Total PAH (Calculated U = 1/2)	--	19100 T	--	3700000 T	--	780000 T	1700 T	--
Semivolatile Organics (µg/kg)								
Carbazole	--	147	--	33900	--	5130	62 U	--
Dibenzofuran	--	622	--	20500	--	1920	62 U	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	32 UT	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	3.2 U	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	3.2 U	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	3.2 U	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	3.2 U	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	3.2 U	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	3.2 U	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.6 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	3.2 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	3.2 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	3.2 UT	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	3.2 UT	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	6.8 U	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	0.865868958	--	190.5862815	--	30.49810748	--	--	0.100900755
pMax	0.507328996	--	0.98454049	--	0.940759435	--	--	0.091219417

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-06SC	DGS-06SC	DGS-07SC	DGS-07SC	DGS-08SC	DGS-08SC
Sample Name:	DGS-06SC-0812-101007	DGS-06SC-0812-101007	DGS-07SC-0812-101012	DGS-07SC-0812-101012	DGS-08SC-089.3-101007	DGS-08SC-089.3-101007
Sample Date:	10/7/2010	10/7/2010	10/12/2010	10/12/2010	10/7/2010	10/7/2010
Depth Interval:	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 283.46 cm	243.84 - 283.46 cm
Metals (mg/kg)						
Zinc	**48**	--	**153**	--	**47**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	63 U	--	**56000**	--	62 U	--
LWG RA Total HPAH (Calculated U = 1/2)	**480 T**	--	**690000 T**	--	62 UT	--
LWG RA Total PAH (Calculated U = 1/2)	**790 T**	--	**1500000 T**	--	62 UT	--
Semivolatile Organics (µg/kg)						
Carbazole	63 U	--	**6100**	--	62 U	--
Dibenzofuran	63 U	--	**5800**	--	62 U	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	--	**250 JT**	--	33 UT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.3 U	--	**99**	--	3.3 U	--
2,4'-DDE (o,p'-DDE)	3.3 U	--	32 U	--	3.3 U	--
2,4'-DDT (o,p'-DDT)	3.3 U	--	32 U	--	3.3 U	--
4,4'-DDD (p,p'-DDD)	3.3 U	--	**400**	--	3.3 U	--
4,4'-DDE (p,p'-DDE)	3.3 U	--	**45**	--	3.3 U	--
4,4'-DDT (p,p'-DDT)	3.3 U	--	**67**	--	3.3 U	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	--	58 U	--	1.6 U	--
LWG RA Sum DDD (Calculated U = 1/2)	3.3 UT	--	**500 T**	--	3.3 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	3.3 UT	--	**61 T**	--	3.3 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	3.3 UT	--	**83 T**	--	3.3 UT	--
LWG RA Total DDx (Calculated U = 1/2)	3.3 UT	--	**640 T**	--	3.3 UT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6.5 U	--	**4000 J**	--	6.6 U	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.061951464**	--	**19.52989654**	--	**0.076856504**
pMax	--	**0.008237216**	--	**0.999670497**	--	**0.001042668**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-11SC	DGS-11SC	DGS-13SC	DGS-13SC	DGS-18SC	DGS-18SC
Sample Name:	DGS-11SC-0812-101006	DGS-11SC-0812-101006	DGS-13SC-0812-101005	DGS-13SC-0812-101005	DGS-18SC-089.6-101008	DGS-18SC-089.6-101008
Sample Date:	10/6/2010	10/6/2010	10/5/2010	10/5/2010	10/8/2010	10/8/2010
Depth Interval:	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 292.61 cm	243.84 - 292.61 cm
Metals (mg/kg)						
Zinc	**51**	--	**47 J**	--	**46**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	**8600**	--	65 U	--	65 U	--
LWG RA Total HPAH (Calculated U = 1/2)	**91000 T**	--	65 UT	--	65 UJT	--
LWG RA Total PAH (Calculated U = 1/2)	**190000 T**	--	65 UT	--	65 UJT	--
Semivolatile Organics (µg/kg)						
Carbazole	**1100**	--	65 U	--	65 U	--
Dibenzofuran	**670**	--	65 U	--	65 U	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	--	32 UT	--	33 UT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	16 U	--	3.3 U	--	3.2 U	--
2,4'-DDE (o,p'-DDE)	16 U	--	3.3 U	--	3.2 U	--
2,4'-DDT (o,p'-DDT)	16 U	--	3.3 U	--	3.2 U	--
4,4'-DDD (p,p'-DDD)	16 U	--	3.3 U	--	3.2 U	--
4,4'-DDE (p,p'-DDE)	16 U	--	3.3 U	--	3.2 U	--
4,4'-DDT (p,p'-DDT)	16 U	--	3.3 U	--	3.2 U	--
beta-Hexachlorocyclohexane (BHC)	7.9 U	--	1.6 U	--	1.6 U	--
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	--	3.3 UT	--	3.2 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	--	3.3 UT	--	3.2 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	--	3.3 UT	--	3.2 UT	--
LWG RA Total DDx (Calculated U = 1/2)	16 UT	--	3.3 UT	--	3.2 UT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**250**	--	6.5 U	--	6.5 U	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**5.815715788**	--	**0.077449624**	--	**0.073537165**
pMax	--	**0.797244571**	--	**0.011209144**	--	**0.001143042**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-19SC	DGS-19SC	DGS-20SC	DGS-20SC	DGS-22SC	DGS-22SC
Sample Name:	DGS-19SC-0812-101006	DGS-19SC-0812-101006	DGS-20SC-0812-101008	DGS-20SC-0812-101008	DGS-22SC-0812-101012	DGS-22SC-0812-101012
Sample Date:	10/6/2010	10/6/2010	10/8/2010	10/8/2010	10/12/2010	10/12/2010
Depth Interval:	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm
Metals (mg/kg)						
Zinc	**48**	--	**46**	--	**104**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	**2100**	--	61 U	--	**12000**	--
LWG RA Total HPAH (Calculated U = 1/2)	**24000 T**	--	61 UJT	--	**120000 JT**	--
LWG RA Total PAH (Calculated U = 1/2)	**54000 JT**	--	61 UJT	--	**160000 JT**	--
Semivolatile Organics (µg/kg)						
Carbazole	65 UJ	--	61 U	--	370 U	--
Dibenzofuran	**380**	--	61 U	--	370 U	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	33 UT	--	31 UT	--	32 UJT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	--	3.1 U	--	16 U	--
2,4'-DDE (o,p'-DDE)	3.2 U	--	3.1 U	--	16 U	--
2,4'-DDT (o,p'-DDT)	3.2 U	--	3.1 U	--	16 U	--
4,4'-DDD (p,p'-DDD)	3.2 U	--	3.1 U	--	16 U	--
4,4'-DDE (p,p'-DDE)	3.2 U	--	3.1 U	--	16 U	--
4,4'-DDT (p,p'-DDT)	3.2 U	--	3.1 U	--	16 U	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	--	1.6 U	--	8 U	--
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	--	3.1 UT	--	16 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	--	3.1 UT	--	16 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	--	3.1 UT	--	16 UT	--
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	--	3.1 UT	--	16 UT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**140**	--	6.3 U	--	**530 J**	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**2.411345767**	--	**0.071624709**	--	**2.501192699**
pMax	--	**0.655119949**	--	**0.00102871**	--	**0.782625927**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-23SC	DGS-23SC	DGS-24SC	DGS-24SC	DGS-24SC	DGS-24SC
Sample Name:	DGS-23SC-0812-101008	DGS-23SC-0812-101008	DGS-24SC-0811.3-101012	DGS-24SC-6.710.7-101012	DGS-24SC-6.710.7-101012	DGS-24SC-0811.3-101012
Sample Date:	10/8/2010	10/8/2010	10/12/2010	10/12/2010	10/12/2010	10/12/2010
Depth Interval:	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 344.42 cm	204.22 - 326.14 cm	204.22 - 326.14 cm	243.84 - 344.42 cm
Metals (mg/kg)						
Zinc	**45**	--	**71**	**68**	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	65 U	--	**130000**	**230000**	--	--
LWG RA Total HPAH (Calculated U = 1/2)	65 UJT	--	**1500000 T**	**2900000 T**	--	--
LWG RA Total PAH (Calculated U = 1/2)	65 UJT	--	**6200000 T**	**11000000 T**	--	--
Semivolatile Organics (µg/kg)						
Carbazole	65 U	--	**30000**	**49000**	--	--
Dibenzofuran	65 U	--	**19000**	**30000**	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	33 UT	--	43 UJT	32 UT	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.3 U	--	44 U	320 U	--	--
2,4'-DDE (o,p'-DDE)	3.3 U	--	44 U	320 U	--	--
2,4'-DDT (o,p'-DDT)	3.3 U	--	44 U	320 U	--	--
4,4'-DDD (p,p'-DDD)	3.3 U	--	44 U	320 U	--	--
4,4'-DDE (p,p'-DDE)	3.3 U	--	44 U	320 U	--	--
4,4'-DDT (p,p'-DDT)	3.3 U	--	44 U	320 U	--	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	--	22 U	160 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	3.3 UT	--	44 UT	320 UT	--	--
LWG RA Sum DDE (Calculated U = 1/2)	3.3 UT	--	44 UT	320 UT	--	--
LWG RA Sum DDT (Calculated U = 1/2)	3.3 UT	--	44 UT	320 UT	--	--
LWG RA Total DDx (Calculated U = 1/2)	3.3 UT	--	44 UT	320 UT	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6.5 U	--	**4000 J**	**10000**	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.074084735**	--	--	**412.5389544**	**189.9622074**
pMax	--	**0.000987406**	--	--	**0.989166447**	**0.999798609**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-25SC	DGS-25SC	DGS-26SC	DGS-26SC	DGS-28SC	DGS-28SC
Sample Name:	DGS-25SC-0812-101007	DGS-25SC-0812-101007	DGS-26SC-0811.3-101011	DGS-26SC-0811.3-101011	DGS-28SC-0809-101007	DGS-28SC-0809-101007
Sample Date:	10/7/2010	10/7/2010	10/11/2010	10/11/2010	10/7/2010	10/7/2010
Depth Interval:	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 344.42 cm	243.84 - 344.42 cm	243.84 - 274.32 cm	243.84 - 274.32 cm
Metals (mg/kg)						
Zinc	**46**	--	**45**	--	**47**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	63 U	--	65 U	--	61 U	--
LWG RA Total HPAH (Calculated U = 1/2)	63 UT	--	65 UJT	--	61 UT	--
LWG RA Total PAH (Calculated U = 1/2)	63 UT	--	**660 JT**	--	61 UT	--
Semivolatile Organics (µg/kg)						
Carbazole	63 U	--	65 U	--	61 U	--
Dibenzofuran	63 U	--	65 U	--	61 U	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	--	32 UJT	--	33 UT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	--	3.2 U	--	3.3 U	--
2,4'-DDE (o,p'-DDE)	3.2 U	--	3.2 U	--	3.3 U	--
2,4'-DDT (o,p'-DDT)	3.2 U	--	3.2 U	--	3.3 U	--
4,4'-DDD (p,p'-DDD)	3.2 U	--	3.2 U	--	3.3 U	--
4,4'-DDE (p,p'-DDE)	3.2 U	--	3.2 U	--	3.3 U	--
4,4'-DDT (p,p'-DDT)	3.2 U	--	3.2 U	--	3.3 U	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	--	1.6 U	--	1.6 U	--
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	--	3.2 UT	--	3.3 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	--	3.2 UT	--	3.3 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	--	3.2 UT	--	3.3 UT	--
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	--	3.2 UT	--	3.3 UT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	5.6 U	--	6.5 UJ	--	6.2 U	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.066159617**	--	**0.107253871**	--	**0.128826527**
pMax	--	**0.001042668**	--	**0.021462238**	--	**0.012113161**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	DGS-30SC	DGS-30SC	DGS-31SC	DGS-31SC	DGS-32SC	DGS-32SC
Sample Name:	DGS-30SC-0812-101006	DGS-30SC-0812-101006	DGS-31SC-0812-101011	DGS-31SC-0812-101011	DGS-32SC-0812-101011	DGS-32SC-0812-101011
Sample Date:	10/6/2010	10/6/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth Interval:	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm
Metals (mg/kg)						
Zinc	**44**	--	**47**	--	**89**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	64 U	--	64 U	--	**6400**	--
LWG RA Total HPAH (Calculated U = 1/2)	64 UT	--	64 UJT	--	**73000 JT**	--
LWG RA Total PAH (Calculated U = 1/2)	**610 T**	--	64 UJT	--	**140000 JT**	--
Semivolatile Organics (µg/kg)						
Carbazole	64 U	--	64 U	--	**1300**	--
Dibenzofuran	64 U	--	64 U	--	**620**	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	30 UT	--	31 UJT	--	31 UJT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3 U	--	3.1 U	--	16 U	--
2,4'-DDE (o,p'-DDE)	3 U	--	3.1 U	--	16 U	--
2,4'-DDT (o,p'-DDT)	3 U	--	3.1 U	--	16 U	--
4,4'-DDD (p,p'-DDD)	3 U	--	3.1 U	--	16 U	--
4,4'-DDE (p,p'-DDE)	3 U	--	3.1 U	--	16 U	--
4,4'-DDT (p,p'-DDT)	3 U	--	3.1 U	--	16 U	--
beta-Hexachlorocyclohexane (BHC)	1.5 U	--	1.6 U	--	7.7 U	--
LWG RA Sum DDD (Calculated U = 1/2)	3 UT	--	3.1 UT	--	16 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	3 UT	--	3.1 UT	--	16 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	3 UT	--	3.1 UT	--	16 UT	--
LWG RA Total DDx (Calculated U = 1/2)	3 UT	--	3.1 UT	--	16 UT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	5.8 U	--	5.9 UJ	--	**640 J**	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.1014921**	--	**0.078523765**	--	**2.886934424**
pMax	--	**0.005471413**	--	**0.00102871**	--	**0.97027687**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	#N/A	D:_8-12_feet
System Location Code:	DGS-36SC	DGS-36SC	DGS-37SC	DGS-37SC	GS-01	GS-01	#N/A	GS-02
Sample Name:	DGS-36SC-0810-101012	DGS-36SC-0810-101012	DGS-37SC-0812-101011	DGS-37SC-0812-101011	GS-01-S (9-11)	GS-01-S (9-11)	#N/A	GS-02-S (9-11)
Sample Date:	10/12/2010	10/12/2010	10/11/2010	10/11/2010	12/21/2006	12/21/2006	#N/A	12/27/2006
Depth Interval:	243.84 - 304.8 cm	243.84 - 304.8 cm	243.84 - 365.76 cm	243.84 - 365.76 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	#N/A	274.32 - 335.28 cm
Metals (mg/kg)								
Zinc	**69**	--	**151**	--	--	--	--	**69.9**
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	**100**	--	**10000**	--	**0.53 J**	--	--	**15**
LWG RA Total HPAH (Calculated U = 1/2)	**1100 T**	--	**130000 JT**	--	**14 JT**	--	--	**190 JT**
LWG RA Total PAH (Calculated U = 1/2)	**2900 T**	--	**240000 JT**	--	**27 JT**	--	--	**310 JT**
Semivolatile Organics (µg/kg)								
Carbazole	58 U	--	**1400**	--	--	--	--	--
Dibenzofuran	58 U	--	**1300**	--	5 U	--	--	**1.3 J**
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UJT	--	**240 JT**	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	3.2 U	--	**460**	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	3.2 U	--	16 U	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	3.2 U	--	16 U	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	3.2 U	--	**1100**	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	3.2 U	--	200 U	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	3.2 U	--	**430**	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	--	8.3 U	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	--	**1600 T**	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	--	200 UT	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	--	**440 T**	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	--	**2100 T**	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	7.3 UJ	--	**980 J**	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	--	**0.194119925**	--	**3.965097927**	--	**0.213393874**	--	--
pMax	--	**0.512766609**	--	**0.995140728**	--	**0.33829909**	--	--

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Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	GS-02	GS-03	GS-03	GS-10	GS-10	GS-11	GS-11	GS-12
Sample Name:	GS-02-S (9-11)	GS-03-S (9-11)	GS-03-S (9-11)	GS-10-S (9-11)	GS-10-S (9-11)	GS-11-S (9-11)A	GS-11-S (9-11)A	GS-12-S (9-11)
Sample Date:	12/27/2006	12/18/2006	12/18/2006	1/2/2007	1/2/2007	1/5/2007	1/5/2007	1/10/2007
Depth Interval:	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm	274.32 - 335.28 cm
Metals (mg/kg)								
Zinc	--	--	--	112	--	--	--	62.6
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	14	--	32000	--	2.5 J	--	230
LWG RA Total HPAH (Calculated U = 1/2)	--	210 T	--	360000 T	--	39 JT	--	2600 T
LWG RA Total PAH (Calculated U = 1/2)	--	360 JT	--	760000 T	--	120 JT	--	3500 T
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Dibenzofuran	--	2.1 J	--	3900	--	0.71 J	--	17
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	0.933722981	--	0.200001086	--	13.14414773	--	0.142904087	--
pMax	0.992985773	--	0.26151658	--	0.998055841	--	0.161849542	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	GS-12	LW2-C252	LW2-C252	LW2-C258	LW2-C258	LW2-C263	LW2-C263	LW2-C264	LW2-C264	LW2-C269	LW2-C269
Sample Name:	GS-12-S (9-11)	LW2-C252-D	LW2-C252-D	LW2-C258-D	LW2-C258-D	LW2-C263-D	LW2-C263-D	LW2-C264-D	LW2-C264-D	LW2-C269-D	LW2-C269-D
Sample Date:	1/10/2007	9/23/2004	9/23/2004	9/23/2004	9/23/2004	10/1/2004	10/1/2004	9/23/2004	9/23/2004	10/28/2004	10/28/2004
Depth Interval:	274.32 - 335.28 cm	252 - 297 cm	252 - 297 cm	276 - 304 cm	276 - 304 cm	277 - 376 cm	277 - 376 cm	220 - 290 cm	220 - 290 cm	272 - 395 cm	272 - 395 cm
Metals (mg/kg)											
Zinc	--	--	--	--	--	**143 T**	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)											
Benzo(a)pyrene	--	**750**	--	**4000**	--	**30000**	--	**76**	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	--	**6200 T**	--	**47000 T**	--	**290000 T**	--	**840 T**	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	--	**8100 T**	--	**57000 T**	--	**510000 T**	--	**1200 JT**	--	--	--
Semivolatile Organics (µg/kg)											
Carbazole	--	**39**	--	--	--	**4200**	--	1.8 U	--	--	--
Dibenzofuran	--	**21**	--	**190**	--	**2600**	--	**1.1 J**	--	--	--
PCB Aroclors (µg/kg)											
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	**24 T**	--	--	--	7.36 UT	--	1.5 UT	--	180 UT	--
PCB Congeners (µg/kg)											
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)											
2,4'-DDD (o,p'-DDD)	--	**3.9 NJ**	--	--	--	**74.4 NJ**	--	0.2 U	--	**99**	--
2,4'-DDE (o,p'-DDE)	--	0.47 U	--	--	--	0.509 U	--	0.097 U	--	8.9 U	--
2,4'-DDT (o,p'-DDT)	--	1.6 U	--	--	--	**1.47 J**	--	0.061 U	--	11 U	--
4,4'-DDD (p,p'-DDD)	--	**5.8**	--	--	--	**177 J**	--	0.14 U	--	**120 J**	--
4,4'-DDE (p,p'-DDE)	--	**3.2 J**	--	--	--	**10.4 NJ**	--	0.058 U	--	5 U	--
4,4'-DDT (p,p'-DDT)	--	1.5 U	--	--	--	**24.9 J**	--	0.19 U	--	**28 J**	--
beta-Hexachlorocyclohexane (BHC)	--	1 U	--	--	--	**7.87 NJ**	--	0.17 U	--	2.6 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	**9.7 NJT**	--	--	--	**251 JNT**	--	0.2 UT	--	**220 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	--	**3.4 JT**	--	--	--	**10.7 NJT**	--	0.097 UT	--	8.9 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	1.6 UT	--	--	--	**26.4 JT**	--	0.19 UT	--	**34 JT**	--
LWG RA Total DDx (Calculated U = 1/2)	--	**15 JNT**	--	--	--	**288 JNT**	--	0.2 UT	--	**260 JT**	--
Total Petroleum Hydrocarbons (mg/kg)											
Diesel Range Hydrocarbons	--	--	--	--	--	**3300 J**	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	**3000 J**	--	--	--	--	--
CALC											
Benthic MQ	**0.11648124**	--	**0.095252858**	--	**1.082458381**	--	**5.671130596**	--	**0.027084308**	--	**0.415134316**
pMax	**0.148095756**	--	**0.220199518**	--	**0.620641653**	--	**0.998083573**	--	**0.027541396**	--	**0.450062991**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	LW2-C273	LW2-C273	LW2-C276	LW2-C276	LW2-C278	LW2-C278	LW2-C283	LW2-C283	LW2-C284	LW2-C284	LW2-C288	LW2-C288
Sample Name:	LW2-C273-D	LW2-C273-D	LW2-C276-D	LW2-C276-D	LW2-C278-D	LW2-C278-D	LW2-C283-D	LW2-C283-D	LW2-C284-E	LW2-C284-E	LW2-C288-D	LW2-C288-D
Sample Date:	10/20/2004	10/20/2004	9/22/2004	9/22/2004	10/19/2004	10/19/2004	11/8/2004	11/8/2004	9/22/2004	9/22/2004	10/20/2004	10/20/2004
Depth Interval:	274 - 355 cm	274 - 355 cm	268 - 319 cm	268 - 319 cm	288 - 350 cm	288 - 350 cm	258 - 380 cm	258 - 380 cm	292 - 353 cm	292 - 353 cm	274 - 389 cm	274 - 389 cm
Metals (mg/kg)												
Zinc	--	--	--	--	53.4	--	--	--	--	--	101	--
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)pyrene	9000	--	140	--	34	--	--	--	3.4	--	23000	--
LWG RA Total HPAH (Calculated U = 1/2)	110000 T	--	1500 T	--	360 T	--	--	--	39 JT	--	250000 T	--
LWG RA Total PAH (Calculated U = 1/2)	140000 T	--	3400 T	--	580 T	--	--	--	75 JT	--	350000 T	--
Semivolatile Organics (µg/kg)												
Carbazole	77 J	--	67 J	--	3.6 J	--	1.8 U	--	--	--	530	--
Dibenzofuran	150	--	19	--	2.5	--	--	--	0.37 J	--	400 J	--
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	2.7 UT	--	--	--	--	--	3.1 UT	--
PCB Congeners (µg/kg)												
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	0.81 U	--	0.92 U	--	0.0347 U	--	--	--	--	--	0.211 U	--
2,4'-DDE (o,p'-DDE)	1.7 U	--	0.39 U	--	0.0369 U	--	--	--	--	--	0.224 U	--
2,4'-DDT (o,p'-DDT)	1.1 U	--	0.31 U	--	0.273 NJ	--	--	--	--	--	0.296 UJ	--
4,4'-DDD (p,p'-DDD)	1.3 NJ	--	1.1 J	--	0.128 J	--	--	--	--	--	1.52 NJ	--
4,4'-DDE (p,p'-DDE)	0.81 U	--	0.3 U	--	0.0488 U	--	--	--	--	--	0.296 U	--
4,4'-DDT (p,p'-DDT)	0.57 U	--	0.97 U	--	0.0601 UJ	--	--	--	--	--	0.365 UJ	--
beta-Hexachlorocyclohexane (BHC)	0.49 U	--	0.83 U	--	0.0365 U	--	--	--	--	--	0.907 NJ	--
LWG RA Sum DDD (Calculated U = 1/2)	1.7 NJT	--	1.6 JT	--	0.145 JT	--	--	--	--	--	1.63 NJT	--
LWG RA Sum DDE (Calculated U = 1/2)	1.7 UT	--	0.39 UT	--	0.0488 UT	--	--	--	--	--	0.296 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	1.1 UT	--	0.97 UT	--	0.303 NJT	--	--	--	--	--	0.365 UJT	--
LWG RA Total DDx (Calculated U = 1/2)	3.8 NJT	--	2.5 JT	--	0.491 JNT	--	--	--	--	--	2.22 NJT	--
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Hydrocarbons	--	--	--	--	9.6 U	--	--	--	--	--	1900 J	--
Residual Range Hydrocarbons	--	--	--	--	17 J	--	--	--	--	--	2900 J	--
CALC												
Benthic MQ	--	1.741125639	--	0.033260142	--	0.029386424	--	0.033048878	--	0.000841871	--	0.315910504
pMax	--	0.755114581	--	0.139922078	--	0.045743768	--	--	--	0.007991159	--	0.859034726

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	LW2-C289	LW2-C289	LW2-C294	LW2-C294	LW2-C301	LW2-C301	LW2-C302	LW2-C302	LW2-C305	LW2-C305	LW2-C521	LW2-C521
Sample Name:	LW2-C289-E	LW2-C289-E	LW2-C294-D	LW2-C294-D	LW2-C301-D	LW2-C301-D	LW2-C302-D	LW2-C302-D	LW2-C305-D1	LW2-C305-D1	LW2-C521-E	LW2-C521-E
Sample Date:	10/19/2004	10/19/2004	10/19/2004	10/19/2004	11/8/2004	11/8/2004	9/22/2004	9/22/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004
Depth Interval:	249 - 336 cm	249 - 336 cm	272 - 376 cm	272 - 376 cm	231 - 358 cm	231 - 358 cm	288 - 348 cm	288 - 348 cm	220 - 330 cm	220 - 330 cm	280 - 315 cm	280 - 315 cm
Metals (mg/kg)												
Zinc	**49.5**	--	**83.6**	--	**56.2**	--	--	--	**58.9**	--	**50.6**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)pyrene	**6.6**	--	**1400**	--	**220000 J**	--	**370000**	--	**930 J**	--	**620**	--
LWG RA Total HPAH (Calculated U = 1/2)	**78 JT**	--	**14000 JT**	--	**2900000 JT**	--	**5800000 T**	--	**12000 JT**	--	**6800 T**	--
LWG RA Total PAH (Calculated U = 1/2)	**110 JT**	--	**19000 JT**	--	**11000000 JT**	--	**24000000 T**	--	**17000 JT**	--	**11000 T**	--
Semivolatile Organics (µg/kg)												
Carbazole	1.8 U	--	**23 J**	--	**94000**	--	**220000**	--	35 U	--	**120**	--
Dibenzofuran	**0.32 J**	--	**25**	--	**49000 J**	--	**100000**	--	**36**	--	**36**	--
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	2.8 UT	--	2.39 UT	--	260 UT	--	2.47 UT	--	--	--
PCB Congeners (µg/kg)												
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	--	--	0.392 U	--	**15.1 NJ**	--	200 U	--	**0.98 J**	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	0.416 U	--	**67.6 NJ**	--	89 U	--	0.0357 U	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	0.551 UJ	--	0.467 UJ	--	250 U	--	**0.764 J**	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	**3.38 NJ**	--	**183 NJ**	--	**260 J**	--	**2.8 J**	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	0.551 U	--	**6.45 NJ**	--	8.5 U	--	**0.445 J**	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	0.679 UJ	--	**103 NJ**	--	28 U	--	**6.81 J**	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	0.412 U	--	**23.6**	--	41 U	--	**0.438 NJ**	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	**3.58 NJT**	--	**198 NJT**	--	**360 JT**	--	**3.8 JT**	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	0.551 UT	--	**74.1 NJT**	--	89 UT	--	**0.463 JT**	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	0.679 UJT	--	**103 NJT**	--	250 UT	--	**7.57 JT**	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	**4.67 NJT**	--	**375 NJT**	--	**550 JT**	--	**12 JT**	--	--	--
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Hydrocarbons	9.4 U	--	**270 J**	--	**30000 J**	--	--	--	**110 J**	--	**40 J**	--
Residual Range Hydrocarbons	**14 J**	--	**530 J**	--	**14000 J**	--	--	--	**140 J**	--	**34 J**	--
CALC												
Benthic MQ	--	**0.020733392**	--	**0.173277681**	--	**166.7412559**	--	**965.9604341**	--	**0.169792218**	--	**0.180749533**
pMax	--	**0.011480385**	--	**0.32161629**	--	**0.995192158**	--	**0.999983737**	--	**0.339312233**	--	**0.328861568**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	#N/A
System Location Code:	LW2-C525	LW2-C525	LW2-C527	LW2-C527	LW2-C528	LW2-C528	LW3-C658	LW3-C658	LW3-C662	LW3-C662	WLCGSJ06GS04	#N/A
Sample Name:	LW2-C525-D	LW2-C525-D	LW2-C527-D	LW2-C527-D	LW2-C528-D	LW2-C528-D	LW3-C658-D	LW3-C658-D	LW3-C662-E	LW3-C662-E	WLCGSJ06GS04S911	#N/A
Sample Date:	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	12/14/2007	12/14/2007	1/17/2008	1/17/2008	12/12/2006	#N/A
Depth Interval:	236 - 341 cm	236 - 341 cm	250 - 352 cm	250 - 352 cm	274 - 386 cm	274 - 386 cm	273 - 371 cm	273 - 371 cm	256 - 327 cm	256 - 327 cm	274.3 - 335.3 cm	#N/A
Metals (mg/kg)												
Zinc	195	--	--	--	--	--	42.2	--	81.2	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)												
Benzo(a)pyrene	44000	--	--	--	3600	--	0.14 U	--	26000	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	490000 T	--	--	--	46000 T	--	0.64 UT	--	310000 T	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	750000 T	--	--	--	72000 T	--	0.75 UT	--	690000 T	--	--	--
Semivolatile Organics (µg/kg)												
Carbazole	4700	--	--	--	--	--	1.3 U	--	6000	--	--	--
Dibenzofuran	3100	--	--	--	430	--	0.59 U	--	2700	--	--	--
PCB Aroclors (µg/kg)												
LWG RA Total PCB Aroclors (Calculated U = 1/2)	250 UT	--	--	--	220 T	--	1 UT	--	16 UT	--	--	--
PCB Congeners (µg/kg)												
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	10 U	--	100 U	--	130 U	--	0.16 U	--	8.1	--	--	--
2,4'-DDE (o,p'-DDE)	28 U	--	570 U	--	25 U	--	0.046 U	--	1.6 J	--	--	--
2,4'-DDT (o,p'-DDT)	20 U	--	100 U	--	6.7 U	--	0.061 U	--	8.6 J	--	--	--
4,4'-DDD (p,p'-DDD)	14 U	--	100 NJ	--	480	--	0.073 U	--	25 U	--	--	--
4,4'-DDE (p,p'-DDE)	2.2 U	--	340 U	--	160 NJ	--	0.027 U	--	5.4 U	--	--	--
4,4'-DDT (p,p'-DDT)	7 U	--	62 NJ	--	190	--	0.24 U	--	3.6 U	--	--	--
beta-Hexachlorocyclohexane (BHC)	6 U	--	56 U	--	15 U	--	1.2 U	--	2.8 U	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	14 UT	--	150 NJT	--	540 T	--	0.16 UT	--	21 T	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	28 UT	--	570 UT	--	170 NJT	--	0.046 UT	--	4.3 JT	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	20 UT	--	110 NJT	--	190 T	--	0.24 UT	--	10 JT	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	28 UT	--	720 NJT	--	910 NJT	--	0.24 UT	--	35 JT	--	--	--
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Hydrocarbons	4400 J	--	1900 J	--	960 J	--	1.3 U	--	1250 JT	--	--	--
Residual Range Hydrocarbons	5400 J	--	1800 J	--	1200 J	--	3.1 J	--	1500 JT	--	--	--
CALC												
Benthic MQ	--	8.085928152	--	0.243145863	--	1.37483115	--	0.054931216	--	9.969304828	0.081793158	--
pMax	--	0.996038622	--	0.308424348	--	0.724586901	--	0.001199887	--	0.996899097	0.003408897	--

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Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	WLCGSJ06GS04	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS07
Sample Name:	WLCGSJ06GS04S911	WLCGSJ06GS05S911	WLCGSJ06GS05S911	WLCGSJ06GS06S911	WLCGSJ06GS06S911	WLCGSJ06GS07S911	WLCGSJ06GS07S911
Sample Date:	12/12/2006	10/25/2006	10/25/2006	1/17/2007	1/17/2007	10/16/2006	10/16/2006
Depth Interval:	274.3 - 335.3 cm	274.3 - 335.3 cm	274.3 - 335.3 cm	274.3 - 335.3 cm	274.3 - 335.3 cm	274.3 - 335.3 cm	274.3 - 335.3 cm
Metals (mg/kg)							
Zinc	60.4	--	--	--	65.3	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	3.5 J	--	6200	--	4400	--	85000
LWG RA Total HPAH (Calculated U = 1/2)	49 JT	--	79000 T	--	48000 T	--	990000 T
LWG RA Total PAH (Calculated U = 1/2)	56 JT	--	150000 T	--	83000 T	--	2000000 T
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	5 U	--	860	--	440	--	8600
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	4.058695873	--	1.180502681	--	52.90660179	--
pMax	--	0.780616702	--	0.661114371	--	0.966061238	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS09	WLCGSJ06GS09	WLCMRD08SDDA17SB	WLCMRD08SDDA17SB	WLCMRD08SDDB20SB
Sample Name:	WLCGSJ06GS08S89	WLCGSJ06GS08S89	WLCGSJ06GS09S911	WLCGSJ06GS09S911	WLCMRD08DA17-4	WLCMRD08DA17-4	WLCMRD08DB20-4
Sample Date:	10/25/2006	10/25/2006	10/9/2006	10/9/2006	4/20/2008	4/20/2008	4/19/2008
Depth Interval:	243.8 - 274.3 cm	243.8 - 274.3 cm	274.3 - 335.3 cm	274.3 - 335.3 cm	274.32 - 365.76 cm	274.32 - 365.76 cm	243.84 - 335.28 cm
Metals (mg/kg)							
Zinc	--	66.1	--	--	--	58.6	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	15	--	22000	--	16	--
LWG RA Total HPAH (Calculated U = 1/2)	--	190 JT	--	250000 T	--	200 JT	--
LWG RA Total PAH (Calculated U = 1/2)	--	1600 JT	--	560000 T	--	320 JT	--
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	2.6 J	--
Dibenzofuran	--	8	--	3700	--	1.3 J	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	5 UT	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	0.2 U	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	0.2 U	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	0.2 U	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	0.2 U	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	0.2 U	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	0.2 U	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	0.2 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	0.2 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	0.2 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	0.2 UT	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	0.2 UT	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	14 U	--
Residual Range Hydrocarbons	--	--	--	--	--	140 U	--
CALC							
Benthic MQ	0.090896283	--	17.31990943	--	0.03860934	--	0.508200183
pMax	0.037919625	--	0.909189508	--	0.025668176	--	0.875738638

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	WLCMRD08SDDB20SB	WLCMRD08SDDB22SB	WLCMRD08SDDB22SB	WLCMRD08SDDC24SB	WLCMRD08SDDC24SB	WLCMRD08SDDC25SB	WLCMRD08SDDC25SB
Sample Name:	WLCMRD08DB20-4	WLCMRD08DB22-4	WLCMRD08DB22-4	WLCMRD08DC24-3	WLCMRD08DC24-3	WLCMRD08DC25-4	WLCMRD08DC25-4
Sample Date:	4/19/2008	4/19/2008	4/19/2008	4/19/2008	4/19/2008	4/19/2008	4/19/2008
Depth Interval:	243.84 - 335.28 cm	243.84 - 335.28 cm	243.84 - 335.28 cm	304.8 - 365.76 cm	304.8 - 365.76 cm	243.84 - 365.76 cm	243.84 - 365.76 cm
Metals (mg/kg)							
Zinc	195	--	202	--	265	--	239
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	2000	--	2900	--	36000	--	19000
LWG RA Total HPAH (Calculated U = 1/2)	22000 T	--	31000 T	--	510000 T	--	200000 T
LWG RA Total PAH (Calculated U = 1/2)	37000 T	--	39000 T	--	710000 T	--	250000 T
Semivolatile Organics (µg/kg)							
Carbazole	340	--	250	--	4600	--	1600
Dibenzofuran	190	--	210	--	1700	--	660
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	190 JT	--	200 T	--	230 UT	--	240 T
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	16	--	21 J	--	140 J	--	41 U
2,4'-DDE (o,p'-DDE)	6.5 U	--	2.9 U	--	68 U	--	4.4 U
2,4'-DDT (o,p'-DDT)	7 U	--	7	--	9.1 U	--	4.4 U
4,4'-DDD (p,p'-DDD)	42	--	43	--	65 J	--	55
4,4'-DDE (p,p'-DDE)	29 J	--	17 J	--	9.1 U	--	5.3 U
4,4'-DDT (p,p'-DDT)	9.5	--	6.7 U	--	30 U	--	23 U
beta-Hexachlorocyclohexane (BHC)	1.2 U	--	0.96 U	--	9.1 U	--	4.4 U
LWG RA Sum DDD (Calculated U = 1/2)	58 T	--	64 JT	--	200 JT	--	75 T
LWG RA Sum DDE (Calculated U = 1/2)	32 JT	--	18 JT	--	68 UT	--	5.3 UT
LWG RA Sum DDT (Calculated U = 1/2)	13 T	--	10 T	--	30 UT	--	23 UT
LWG RA Total DDx (Calculated U = 1/2)	100 JT	--	93 JT	--	260 JT	--	94 T
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	730	--	480	--	2400	--	1100
Residual Range Hydrocarbons	780	--	700	--	2100	--	1400
CALC							
Benthic MQ	--	0.336216491	--	6.713943167	--	1.683927885	--
pMax	--	0.80326993	--	0.982161259	--	0.901432818	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	WLCMRD08SDUD1SB	WLCMRD08SDUD1SB	WLCMRD08SDUD26SB	WLCMRD08SDUD26SB	WLCMRD08SDUD27SB	WLCMRD08SDUD27SB	WLCMRD08SDUD2SB
Sample Name:	WLCMRD08UD1-3	WLCMRD08UD1-3	WLCMRD08UD26-3	WLCMRD08UD26-3	WLCMRD08UD27-3	WLCMRD08UD27-3	WLCMRD08UD2-3
Sample Date:	4/15/2008	4/15/2008	4/13/2008	4/13/2008	4/13/2008	4/13/2008	4/15/2008
Depth Interval:	182.88 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm	182.88 - 365.76 cm
Metals (mg/kg)							
Zinc	--	**71.2**	--	**82.8**	--	**80**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	**6.3**	--	**150**	--	**630**	--
LWG RA Total HPAH (Calculated U = 1/2)	--	**69 JT**	--	**1400 T**	--	**6400 T**	--
LWG RA Total PAH (Calculated U = 1/2)	--	**99 JT**	--	**1800 T**	--	**7700 T**	--
Semivolatile Organics (µg/kg)							
Carbazole	--	7.4 U	--	**1.6 J**	--	**1.9 J**	--
Dibenzofuran	--	**0.61 J**	--	**6.1**	--	**7.2**	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	3.7 UT	--	4.3 UT	--	4.9 UT	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	0.15 U	--	0.2 U	--	0.2 U	--
2,4'-DDE (o,p'-DDE)	--	0.15 U	--	0.17 U	--	0.2 U	--
2,4'-DDT (o,p'-DDT)	--	0.15 U	--	0.17 U	--	0.2 U	--
4,4'-DDD (p,p'-DDD)	--	0.15 U	--	0.18 U	--	0.2 U	--
4,4'-DDE (p,p'-DDE)	--	0.15 U	--	0.17 U	--	0.2 U	--
4,4'-DDT (p,p'-DDT)	--	0.2 U	--	0.17 U	--	0.2 U	--
beta-Hexachlorocyclohexane (BHC)	--	0.15 U	--	0.17 U	--	0.2 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	0.15 UT	--	0.2 UT	--	0.2 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	0.15 UT	--	0.17 UT	--	0.2 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	0.2 UT	--	0.17 UT	--	0.2 UT	--
LWG RA Total DDx (Calculated U = 1/2)	--	0.2 UT	--	0.2 UT	--	0.2 UT	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	15 U	--	**7.4 J**	--	**31**	--
Residual Range Hydrocarbons	--	**8 J**	--	**14 J**	--	**56 J**	--
CALC							
Benthic MQ	**0.040337813**	--	**0.056274917**	--	**0.102457559**	--	**0.052404568**
pMax	**0.268446528**	--	**0.333790832**	--	**0.157093746**	--	**0.454407585**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet
System Location Code:	WLCMRD08SDUD2SB	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP28
Sample Name:	WLCMRD08UD2-3	WLCSLH01GP25S11	WLCSLH01GP25S11	WLCSLH01GP26S8	WLCSLH01GP26S8	WLCSLH01GP27S10	WLCSLH01GP27S10	WLCSLH01GP28S10
Sample Date:	4/15/2008	9/28/2004	9/28/2004	10/4/2004	10/4/2004	10/7/2004	10/7/2004	10/13/2004
Depth Interval:	182.88 - 365.76 cm	335.3 - 350.5 cm	335.3 - 350.5 cm	243.8 - 259 cm	243.8 - 259 cm	304.8 - 320 cm	304.8 - 320 cm	304.8 - 320 cm
Metals (mg/kg)								
Zinc	**89.1**	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	**5.5**	--	**41900**	--	**1010000**	--	**18200**	--
LWG RA Total HPAH (Calculated U = 1/2)	**98 JT**	--	**490000 T**	--	**10000000 T**	--	**200000 T**	--
LWG RA Total PAH (Calculated U = 1/2)	**140 JT**	--	**1900000 T**	--	**39000000 T**	--	**480000 T**	--
Semivolatile Organics (µg/kg)								
Carbazole	9.9 U	--	**9570**	--	**42300**	--	**3270**	--
Dibenzofuran	**0.82 J**	--	**4380**	--	**27100**	--	**1670**	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	5 UT	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	0.2 U	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	0.2 U	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	0.2 U	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	0.2 U	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	0.2 U	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	0.2 U	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.2 U	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	0.2 UT	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	0.2 UT	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	0.2 UT	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	0.2 UT	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	**2.8 J**	--	--	--	--	--	--	--
Residual Range Hydrocarbons	**9.3 J**	--	--	--	--	--	--	--
CALC								
Benthic MQ	--	**91.28154398**	--	**1840.363044**	--	**15.66826257**	--	**140.8895032**
pMax	--	**0.951070028**	--	**0.995079995**	--	**0.871685313**	--	**0.988160426**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	D:_8-12_feet	D:_8-12_feet	D:_8-12_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	WLCSLH01GP28	WLCSLH01GP30	WLCSLH01GP30	DGS-03SC	DGS-03SC	DGS-06SC	DGS-06SC
Sample Name:	WLCSLH01GP28S10	WLCSLH01GP30S8	WLCSLH01GP30S8	DGS-03SC-1215.3-101005	DGS-03SC-1215.3-101005	DGS-06SC-1216-101007	DGS-06SC-1216-101007
Sample Date:	10/13/2004	10/22/2004	10/22/2004	10/5/2010	10/5/2010	10/7/2010	10/7/2010
Depth Interval:	304.8 - 320 cm	243.8 - 259 cm	243.8 - 259 cm	365.76 - 466.34 cm	365.76 - 466.34 cm	365.76 - 487.68 cm	365.76 - 487.68 cm
Metals (mg/kg)							
Zinc	--	--	--	**49 J**	--	**54**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	**88300**	--	**1040**	65 U	--	66 U	--
LWG RA Total HPAH (Calculated U = 1/2)	**1100000 T**	--	**13100 T**	65 UT	--	66 UT	--
LWG RA Total PAH (Calculated U = 1/2)	**3100000 T**	--	**25000 T**	65 UT	--	66 UT	--
Semivolatile Organics (µg/kg)							
Carbazole	**44700**	--	**518**	65 U	--	66 U	--
Dibenzofuran	**17300**	--	**1040**	65 U	--	66 U	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	33 UT	--	33 UT	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	3.3 U	--	3.3 U	--
2,4'-DDE (o,p'-DDE)	--	--	--	3.3 U	--	3.3 U	--
2,4'-DDT (o,p'-DDT)	--	--	--	3.3 U	--	3.3 U	--
4,4'-DDD (p,p'-DDD)	--	--	--	3.3 U	--	3.3 U	--
4,4'-DDE (p,p'-DDE)	--	--	--	3.3 U	--	3.3 U	--
4,4'-DDT (p,p'-DDT)	--	--	--	3.3 U	--	3.3 U	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	1.6 U	--	1.6 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	3.3 UT	--	3.3 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	3.3 UT	--	3.3 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	3.3 UT	--	3.3 UT	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	3.3 UT	--	3.3 UT	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	6.6 U	--	6.6 U	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	**1.39510651**	--	--	**0.086839072**	--	**0.10826601**
pMax	--	**0.548011089**	--	--	**0.003426864**	--	**0.002054672**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	DGS-07SC	DGS-07SC	DGS-11SC	DGS-11SC	DGS-13SC	DGS-13SC
Sample Name:	DGS-07SC-1213.4-101012	DGS-07SC-1213.4-101012	DGS-11SC-1216-101006	DGS-11SC-1216-101006	DGS-13SC-1216-101005	DGS-13SC-1216-101005
Sample Date:	10/12/2010	10/12/2010	10/6/2010	10/6/2010	10/5/2010	10/5/2010
Depth Interval:	365.76 - 408.43 cm	365.76 - 408.43 cm	365.76 - 487.68 cm	365.76 - 487.68 cm	365.76 - 487.68 cm	365.76 - 487.68 cm
Metals (mg/kg)						
Zinc	**159**	--	**49**	--	**56 J**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	**59000**	--	62 U	--	61 U	--
LWG RA Total HPAH (Calculated U = 1/2)	**640000 T**	--	62 UT	--	61 UT	--
LWG RA Total PAH (Calculated U = 1/2)	**1300000 T**	--	**580 T**	--	61 UT	--
Semivolatile Organics (µg/kg)						
Carbazole	**3200**	--	62 U	--	61 U	--
Dibenzofuran	**4600**	--	62 U	--	61 U	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	**170 JT**	--	31 UT	--	32 UT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	16 U	--	3.2 U	--	3.3 U	--
2,4'-DDE (o,p'-DDE)	16 U	--	3.2 U	--	3.3 U	--
2,4'-DDT (o,p'-DDT)	16 U	--	3.2 U	--	3.3 U	--
4,4'-DDD (p,p'-DDD)	16 U	--	3.2 U	--	3.3 U	--
4,4'-DDE (p,p'-DDE)	16 U	--	3.2 U	--	3.3 U	--
4,4'-DDT (p,p'-DDT)	16 U	--	3.2 U	--	3.3 U	--
beta-Hexachlorocyclohexane (BHC)	8 U	--	1.6 U	--	1.6 U	--
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	--	3.2 UT	--	3.3 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	--	3.2 UT	--	3.3 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	--	3.2 UT	--	3.3 UT	--
LWG RA Total DDx (Calculated U = 1/2)	16 UT	--	3.2 UT	--	3.3 UT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	**3400 J**	--	5.9 U	--	6.9 U	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**21.90587459**	--	**0.096010209**	--	**0.123377643**
pMax	--	**0.999610901**	--	**0.006560608**	--	**0.01027358**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	DGS-19SC	DGS-19SC	DGS-20SC	DGS-20SC	DGS-22SC	DGS-22SC
Sample Name:	DGS-19SC-1214.7-101006	DGS-19SC-1214.7-101006	DGS-20SC-1213.7-101008	DGS-20SC-1213.7-101008	DGS-22SC-1213.3-101012	DGS-22SC-1213.3-101012
Sample Date:	10/6/2010	10/6/2010	10/8/2010	10/8/2010	10/12/2010	10/12/2010
Depth Interval:	365.76 - 448.06 cm	365.76 - 448.06 cm	365.76 - 417.58 cm	365.76 - 417.58 cm	365.76 - 405.38 cm	365.76 - 405.38 cm
Metals (mg/kg)						
Zinc	**46**	--	**55**	--	**97**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	61 U	--	65 U	--	**7800**	--
LWG RA Total HPAH (Calculated U = 1/2)	**620 T**	--	65 UJT	--	**76000 T**	--
LWG RA Total PAH (Calculated U = 1/2)	**2200 T**	--	65 UJT	--	**100000 T**	--
Semivolatile Organics (µg/kg)						
Carbazole	61 U	--	65 U	--	180 U	--
Dibenzofuran	61 U	--	65 U	--	180 U	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	31 UT	--	33 UT	--	32 UJT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.1 U	--	3.3 U	--	16 U	--
2,4'-DDE (o,p'-DDE)	3.1 U	--	3.3 U	--	16 U	--
2,4'-DDT (o,p'-DDT)	3.1 U	--	3.3 U	--	16 U	--
4,4'-DDD (p,p'-DDD)	3.1 U	--	3.3 U	--	16 U	--
4,4'-DDE (p,p'-DDE)	3.1 U	--	3.3 U	--	16 U	--
4,4'-DDT (p,p'-DDT)	3.1 U	--	3.3 U	--	16 U	--
beta-Hexachlorocyclohexane (BHC)	1.5 U	--	1.6 U	--	8 U	--
LWG RA Sum DDD (Calculated U = 1/2)	3.1 UT	--	3.3 UT	--	16 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	3.1 UT	--	3.3 UT	--	16 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	3.1 UT	--	3.3 UT	--	16 UT	--
LWG RA Total DDx (Calculated U = 1/2)	3.1 UT	--	3.3 UT	--	16 UT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6.2 U	--	6.6 U	--	**440 J**	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.184484713**	--	**0.080865877**	--	**1.641972048**
pMax	--	**0.139922078**	--	**0.001113888**	--	**0.705468816**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	DGS-23SC	DGS-23SC	DGS-25SC	DGS-25SC	DGS-30SC	DGS-30SC
Sample Name:	DGS-23SC-1214.4-101008	DGS-23SC-1214.4-101008	DGS-25SC-1214.5-101007	DGS-25SC-1214.5-101007	DGS-30SC-1213.9-101006	DGS-30SC-1213.9-101006
Sample Date:	10/8/2010	10/8/2010	10/7/2010	10/7/2010	10/6/2010	10/6/2010
Depth Interval:	365.76 - 438.91 cm	365.76 - 438.91 cm	365.76 - 441.96 cm	365.76 - 441.96 cm	365.76 - 423.67 cm	365.76 - 423.67 cm
Metals (mg/kg)						
Zinc	**48**	--	**50**	--	**45**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	63 U	--	66 U	--	63 U	--
LWG RA Total HPAH (Calculated U = 1/2)	63 UJT	--	66 UT	--	63 UT	--
LWG RA Total PAH (Calculated U = 1/2)	63 UJT	--	66 UT	--	63 UT	--
Semivolatile Organics (µg/kg)						
Carbazole	63 U	--	66 U	--	63 U	--
Dibenzofuran	63 U	--	66 U	--	63 U	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	--	32 UT	--	30 UT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	--	3.3 U	--	3 U	--
2,4'-DDE (o,p'-DDE)	3.2 U	--	3.3 U	--	3 U	--
2,4'-DDT (o,p'-DDT)	3.2 U	--	3.3 U	--	3 U	--
4,4'-DDD (p,p'-DDD)	3.2 U	--	3.3 U	--	3 U	--
4,4'-DDE (p,p'-DDE)	3.2 U	--	3.3 U	--	3 U	--
4,4'-DDT (p,p'-DDT)	3.2 U	--	3.3 U	--	3 U	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	--	1.6 U	--	1.5 U	--
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	--	3.3 UT	--	3 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	--	3.3 UT	--	3 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	--	3.3 UT	--	3 UT	--
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	--	3.3 UT	--	3 UT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	7 U	--	6.6 U	--	6.2 U	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.092679637**	--	**0.091771867**	--	**0.085453187**
pMax	--	**0.001341837**	--	**0.001341837**	--	**0.001197269**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	DGS-31SC	DGS-31SC	DGS-32SC	DGS-32SC	DGS-37SC	DGS-37SC
Sample Name:	DGS-31SC-1215.5-101011	DGS-31SC-1215.5-101011	DGS-32SC-1213.6-101011	DGS-32SC-1213.6-101011	DGS-37SC-1216-101011	DGS-37SC-1216-101011
Sample Date:	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010	10/11/2010
Depth Interval:	365.76 - 472.44 cm	365.76 - 472.44 cm	365.76 - 414.53 cm	365.76 - 414.53 cm	365.76 - 487.68 cm	365.76 - 487.68 cm
Metals (mg/kg)						
Zinc	**47**	--	**47**	--	**177**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	61 U	--	65 U	--	**16000**	--
LWG RA Total HPAH (Calculated U = 1/2)	61 UJT	--	65 UJT	--	**170000 JT**	--
LWG RA Total PAH (Calculated U = 1/2)	61 UJT	--	65 UJT	--	**230000 JT**	--
Semivolatile Organics (µg/kg)						
Carbazole	61 U	--	65 U	--	310 U	--
Dibenzofuran	61 U	--	65 U	--	**420**	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	33 UJT	--	32 UJT	--	**180 JT**	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	--	3.3 U	--	16 U	--
2,4'-DDE (o,p'-DDE)	3.2 U	--	3.3 U	--	16 U	--
2,4'-DDT (o,p'-DDT)	3.2 U	--	3.3 U	--	16 U	--
4,4'-DDD (p,p'-DDD)	3.2 U	--	3.3 U	--	16 U	--
4,4'-DDE (p,p'-DDE)	3.2 U	--	3.3 U	--	16 U	--
4,4'-DDT (p,p'-DDT)	3.2 U	--	3.3 U	--	16 U	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	--	1.7 U	--	7.9 U	--
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	--	3.3 UT	--	16 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	--	3.3 UT	--	16 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	--	3.3 UT	--	16 UT	--
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	--	3.3 UT	--	16 UT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	6.1 UJ	--	6.6 UJ	--	**1100 J**	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.07480043**	--	**0.09223433**	--	**2.585896163**
pMax	--	**0.003309007**	--	**0.008318508**	--	**0.949226275**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	GSM-14	LW2-C283	LW2-C283	LW2-C301	LW2-C301	LW2-C301	LW2-C301	LW2-C311	LW2-C311	LW2-C525
Sample Name:	GSM-14SO-12.5-17.5-101015	LW2-C283-E	LW2-C283-E	LW2-C301-E	LW2-C301-G	LW2-C301-E	LW2-C301-G	LW2-C311-E	LW2-C311-E	LW2-C525-E
Sample Date:	10/15/2010	11/8/2004	11/8/2004	11/8/2004	11/8/2004	11/8/2004	11/8/2004	11/9/2004	11/9/2004	10/26/2005
Depth Interval:	381 - 533.4 cm	380 - 430 cm	380 - 430 cm	358 - 398 cm	428 - 516 cm	358 - 398 cm	428 - 516 cm	398 - 533 cm	398 - 533 cm	341 - 427 cm
Metals (mg/kg)										
Zinc	66	58.1	--	52.2	114	--	--	89.8	--	50.2
Polycyclic Aromatic Hydrocarbons (µg/kg)										
Benzo(a)pyrene	60 U	26 J	--	470000 J	71000 J	--	--	1300 J	--	800
LWG RA Total HPAH (Calculated U = 1/2)	60 UT	260 JT	--	6600000 JT	930000 JT	--	--	12000 JT	--	9500 T
LWG RA Total PAH (Calculated U = 1/2)	60 UT	420 JT	--	15000000 JT	1700000 JT	--	--	14000 JT	--	13000 T
Semivolatile Organics (µg/kg)										
Carbazole	60 U	2.4 J	--	210000	10000	--	--	18 J	--	22
Dibenzofuran	60 U	2.5 J	--	100000 J	6300 J	--	--	11 J	--	24
PCB Aroclors (µg/kg)										
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UJT	2.5 UJT	--	13 UT	2.89 UT	--	--	2.9 UT	--	1.5 UT
PCB Congeners (µg/kg)										
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	3.2 U	0.0348 U	--	12 U	0.779 U	--	--	0.392 U	--	1 U
2,4'-DDE (o,p'-DDE)	3.2 U	0.0369 U	--	12.7 U	16.4 J	--	--	0.417 U	--	1.1
2,4'-DDT (o,p'-DDT)	3.2 U	0.0488 UJ	--	203 J	1.09 UJ	--	--	0.551 UJ	--	1.1 U
4,4'-DDD (p,p'-DDD)	3.2 U	0.0521 U	--	571 NJ	43.3 NJ	--	--	0.587 U	--	0.57 U
4,4'-DDE (p,p'-DDE)	3.2 U	0.0488 U	--	16.8 U	1.09 U	--	--	0.551 U	--	0.3 U
4,4'-DDT (p,p'-DDT)	3.2 U	0.0602 UJ	--	446 J	61.5 J	--	--	0.679 UJ	--	0.95 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.06 J	--	12.6 U	0.819 U	--	--	0.86 J	--	0.81 U
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	0.0521 UT	--	580 NJT	43.7 NJT	--	--	0.587 UT	--	1 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	0.0488 UT	--	16.8 UT	16.9 JT	--	--	0.551 UT	--	1.3 T
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	0.0602 UJT	--	649 JT	62 JT	--	--	0.679 UJT	--	1.1 UT
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	0.0602 UJT	--	1200 JNT	123 JNT	--	--	0.679 UJT	--	3.1 T
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	7.1 U	14 UT	--	89000 J	3700 J	--	--	365 JT	--	74 J
Residual Range Hydrocarbons	--	13.5 JT	--	68000 J	2400 J	--	--	715 JT	--	130 J
CALC										
Benthic MQ	0.11261368	--	0.040289798	--	--	229.0955679	19.72809153	--	0.228449443	--
pMax	0.004593976	--	0.038904501	--	--	0.997367909	0.999035026	--	0.528102264	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	LW2-C525	LW2-C527	LW2-C527	LW2-C528	LW2-C528	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB5	WLCGSG07GSB5
Sample Name:	LW2-C525-E	LW2-C527-E	LW2-C527-E	LW2-C528-F	LW2-C528-F	WLCGSG07GSB2S1315	WLCGSG07GSB2S1315	WLCGSG07GSB5S1315	WLCGSG07GSB5S1315
Sample Date:	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	9/21/2007	9/21/2007	9/21/2007	9/21/2007
Depth Interval:	341 - 427 cm	352 - 482 cm	352 - 482 cm	451 - 491 cm	451 - 491 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm
Metals (mg/kg)									
Zinc	--	135	--	46.9	--	--	61.7	--	68.4
Polycyclic Aromatic Hydrocarbons (µg/kg)									
Benzo(a)pyrene	--	3700	--	44	--	--	1900	--	65
LWG RA Total HPAH (Calculated U = 1/2)	--	49000 T	--	600 T	--	--	22000 T	--	750 T
LWG RA Total PAH (Calculated U = 1/2)	--	78000 T	--	780 T	--	--	27000 JT	--	1400 JT
Semivolatile Organics (µg/kg)									
Carbazole	--	640	--	4.3 J	--	--	--	--	--
Dibenzofuran	--	350	--	2.6 U	--	--	22	--	5.1
PCB Aroclors (µg/kg)									
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	360 T	--	4 UT	--	--	--	--	--
PCB Congeners (µg/kg)									
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)									
2,4'-DDD (o,p'-DDD)	--	200	--	4.1 NJ	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	50	--	0.075 U	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	47 U	--	0.55 U	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	630	--	4.6	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	57 NJ	--	0.62	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	160	--	0.19 U	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	4.4 U	--	0.17 U	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	830 T	--	8.7 NJT	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	110 NJT	--	0.66 T	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	180 T	--	0.55 UT	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	1100 NJT	--	9.7 NJT	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)									
Diesel Range Hydrocarbons	--	1600 J	--	9.1 JT	--	--	--	--	--
Residual Range Hydrocarbons	--	2600 J	--	23 UT	--	--	--	--	--
CALC									
Benthic MQ	0.157206415	--	1.071287452	--	0.037512634	0.267659691	--	0.10662196	--
pMax	0.290085312	--	0.96940796	--	0.058552131	0.238150974	--	0.321285161	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSC5	WLCGSG07GSC5	WLCGSG07GSC7	WLCGSG07GSC7	WLCMRD08SDDA18SB
Sample Name:	WLCGSG07GSB7S1315	WLCGSG07GSB7S1315	WLCGSG07GSC5S1315	WLCGSG07GSC5S1315	WLCGSG07GSC7S1315	WLCGSG07GSC7S1315	WLCMRD08DA18-3
Sample Date:	8/30/2007	8/30/2007	9/20/2007	9/20/2007	9/19/2007	9/19/2007	4/20/2008
Depth Interval:	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	396.2 - 457.2 cm	335.28 - 396.24 cm
Metals (mg/kg)							
Zinc	--	81.6	--	50.5	--	46.3	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	150000	--	0.18 U	--	50	--
LWG RA Total HPAH (Calculated U = 1/2)	--	2000000 T	--	2.5 JT	--	610 T	--
LWG RA Total PAH (Calculated U = 1/2)	--	3900000 T	--	5.9 JT	--	1000 JT	--
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	--	23000	--	0.75 U	--	3 J	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	13000	--	--	--	--	--
Residual Range Hydrocarbons	--	8000	--	--	--	--	--
CALC							
Benthic MQ	62.22847509	--	0.02482629	--	0.063931053	--	0.054540034
pMax	0.999582721	--	0.002483429	--	0.077424442	--	0.021778173

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	WLCMRD08SDDA18SB	WLCMRD08SDDA18SB	WLCMRD08SDDA18SB	WLCMRD08SDDC23SB	WLCMRD08SDDC23SB	WLCMRD08SDDC23SB	WLCMRD08SDDC23SB
Sample Name:	WLCMRD08DA18-4	WLCMRD08DA18-3	WLCMRD08DA18-4	WLCMRD08DC23-3	WLCMRD08DC23-4	WLCMRD08DC23-3	WLCMRD08DC23-4
Sample Date:	4/20/2008	4/20/2008	4/20/2008	4/20/2008	4/20/2008	4/20/2008	4/20/2008
Depth Interval:	396.24 - 487.68 cm	335.28 - 396.24 cm	396.24 - 487.68 cm	365.76 - 426.72 cm	426.72 - 518.16 cm	365.76 - 426.72 cm	426.72 - 518.16 cm
Metals (mg/kg)							
Zinc	--	**59.4**	**60.6**	--	--	**180**	**165**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	**11**	**0.54 J**	--	--	**3100**	**2600**
LWG RA Total HPAH (Calculated U = 1/2)	--	**160 JT**	**13 JT**	--	--	**57000 T**	**37000 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**230 JT**	**57 JT**	--	--	**160000 T**	**58000 T**
Semivolatile Organics (µg/kg)							
Carbazole	--	**9.9 J**	**1.7 J**	--	--	**960**	**180**
Dibenzofuran	--	0 U	2.5 U	--	--	**1400**	**210**
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	5 UT	5 UT	--	--	**120 T**	1300 UT
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	0.2 U	0.2 U	--	--	**5.5 J**	**3.9**
2,4'-DDE (o,p'-DDE)	--	0.2 U	0.2 U	--	--	2.1 U	**30 J**
2,4'-DDT (o,p'-DDT)	--	0.2 U	0.2 U	--	--	3.7 U	11 U
4,4'-DDD (p,p'-DDD)	--	**0.1 J**	0.2 U	--	--	**19**	**350**
4,4'-DDE (p,p'-DDE)	--	0.2 U	0.2 U	--	--	**19 J**	25 U
4,4'-DDT (p,p'-DDT)	--	0.2 U	0.2 U	--	--	1.8 U	**180**
beta-Hexachlorocyclohexane (BHC)	--	0.2 U	0.2 U	--	--	0.98 U	0.98 U
LWG RA Sum DDD (Calculated U = 1/2)	--	**0.2 JT**	0.2 UT	--	--	**25 JT**	**350 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	0.2 UT	0.2 UT	--	--	**20 JT**	**43 JT**
LWG RA Sum DDT (Calculated U = 1/2)	--	0.2 UT	0.2 UT	--	--	3.7 UT	**190 T**
LWG RA Total DDx (Calculated U = 1/2)	--	**0.6 JT**	0.2 UT	--	--	**47 JT**	**580 JT**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	14 U	**2.1 J**	--	--	**810**	**530**
Residual Range Hydrocarbons	--	140 U	**27 J**	--	--	**540**	**800**
CALC							
Benthic MQ	**0.030357607**	--	--	**2.881167226**	**0.934080172**	--	--
pMax	**0.018212675**	--	--	**0.99113058**	**0.902603457**	--	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	WLCMRD08SDDC24SB	WLCMRD08SDDC24SB	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP28
Sample Name:	WLCMRD08DC24-4	WLCMRD08DC24-4	WLCSLH01GP26S13	WLCSLH01GP26S13	WLCSLH01GP27S15	WLCSLH01GP27S15	WLCSLH01GP28S15
Sample Date:	4/19/2008	4/19/2008	10/4/2004	10/4/2004	10/7/2004	10/7/2004	10/13/2004
Depth Interval:	365.76 - 457.2 cm	365.76 - 457.2 cm	396.2 - 411.4 cm	396.2 - 411.4 cm	457.2 - 472.4 cm	457.2 - 472.4 cm	457.2 - 472.4 cm
Metals (mg/kg)							
Zinc	--	205	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	18000	--	184000	--	226	--
LWG RA Total HPAH (Calculated U = 1/2)	--	270000 T	--	1820000 T	--	2800 T	--
LWG RA Total PAH (Calculated U = 1/2)	--	550000 T	--	4700000 T	--	9000 T	--
Semivolatile Organics (µg/kg)							
Carbazole	--	2700	--	39900	--	88.9 U	--
Dibenzofuran	--	3700	--	30200	--	88.9 U	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	270 T	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	120 J	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	8.8 U	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	29 U	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	100	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	8.8 U	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	46 U	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	8.8 U	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	220 JT	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	8.8 UT	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	46 UT	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	270 JT	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	2100	--	--	--	--	--
Residual Range Hydrocarbons	--	1400	--	--	--	--	--
CALC							
Benthic MQ	8.335231514	--	203.1754133	--	0.779070618	--	11.17011518
pMax	0.995586212	--	0.986787752	--	0.271613968	--	0.897652007

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet	E:_12-16_feet
System Location Code:	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP31
Sample Name:	WLCSLH01GP28S15	WLCSLH01GP29S12	WLCSLH01GP29S12	WLCSLH01GP30S13	WLCSLH01GP30S13	WLCSLH01GP31S12	WLCSLH01GP31S12
Sample Date:	10/13/2004	10/19/2004	10/19/2004	10/22/2004	10/22/2004	10/26/2004	10/26/2004
Depth Interval:	457.2 - 472.4 cm	365.8 - 381 cm	365.8 - 381 cm	396.2 - 411.4 cm	396.2 - 411.4 cm	365.8 - 381 cm	365.8 - 381 cm
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	20900	--	1430	--	1400	--	7410
LWG RA Total HPAH (Calculated U = 1/2)	230000 T	--	14000 T	--	18000 T	--	101000 T
LWG RA Total PAH (Calculated U = 1/2)	400000 T	--	31000 T	--	30000 T	--	230000 T
Semivolatile Organics (µg/kg)							
Carbazole	1940	--	480	--	833	--	2750
Dibenzofuran	1570	--	277	--	1410	--	2270
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	1.246275834	--	1.667140798	--	9.722605972	--
pMax	--	0.540576628	--	0.629416953	--	0.851513923	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	DGS-06SC	DGS-06SC	DGS-11SC	DGS-11SC	DGS-13SC	DGS-13SC
Sample Name:	DGS-06SC-1616.6-101007	DGS-06SC-1616.6-101007	DGS-11SC-1617.5-101006	DGS-11SC-1617.5-101006	DGS-13SC-1617-101005	DGS-13SC-1617-101005
Sample Date:	10/7/2010	10/7/2010	10/6/2010	10/6/2010	10/5/2010	10/5/2010
Depth Interval:	487.68 - 505.97 cm	487.68 - 505.97 cm	487.68 - 533.4 cm	487.68 - 533.4 cm	487.68 - 518.16 cm	487.68 - 518.16 cm
Metals (mg/kg)						
Zinc	**61**	--	**54**	--	**47 J**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	60 U	--	61 U	--	64 U	--
LWG RA Total HPAH (Calculated U = 1/2)	60 UT	--	61 UT	--	64 UT	--
LWG RA Total PAH (Calculated U = 1/2)	60 UT	--	61 UT	--	64 UT	--
Semivolatile Organics (µg/kg)						
Carbazole	60 U	--	61 U	--	64 U	--
Dibenzofuran	60 U	--	61 U	--	64 U	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	--	30 UT	--	32 UT	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	3.2 U	--	3 U	--	3.2 U	--
2,4'-DDE (o,p'-DDE)	3.2 U	--	3 U	--	3.2 U	--
2,4'-DDT (o,p'-DDT)	3.2 U	--	3 U	--	3.2 U	--
4,4'-DDD (p,p'-DDD)	3.2 U	--	3 U	--	3.2 U	--
4,4'-DDE (p,p'-DDE)	3.2 U	--	3 U	--	3.2 U	--
4,4'-DDT (p,p'-DDT)	3.2 U	--	3 U	--	3.2 U	--
beta-Hexachlorocyclohexane (BHC)	1.6 U	--	1.5 U	--	1.6 U	--
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	--	3 UT	--	3.2 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	--	3 UT	--	3.2 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	--	3 UT	--	3.2 UT	--
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	--	3 UT	--	3.2 UT	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	7.6 U	--	6.7 U	--	6.4 U	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	**0.111050378**	--	**0.107520038**	--	**0.078972556**
pMax	--	**0.318837175**	--	**0.002034988**	--	**0.016795862**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	F:_16-20_feet	F:_16-20_feet	#N/A	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	DGS-37SC	DGS-37SC	#N/A	LW2-C269	LW2-C269	WLCGSG04RAA11	WLCGSG04RAA11
Sample Name:	DGS-37SC-1619-101011	DGS-37SC-1619-101011	#N/A	LW2-C269-F	LW2-C269-F	WLCGSG04RAA11SD1320	WLCGSG04RAA11SD1320
Sample Date:	10/11/2010	10/11/2010	#N/A	10/28/2004	10/28/2004	7/22/2004	7/22/2004
Depth Interval:	487.68 - 579.12 cm	487.68 - 579.12 cm	#N/A	509 - 541 cm	509 - 541 cm	396.24 - 609.6 cm	396.24 - 609.6 cm
Metals (mg/kg)							
Zinc	131	--	--	112	--	--	51.7 T
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	4200	--	--	16000	--	--	1950 T
LWG RA Total HPAH (Calculated U = 1/2)	43000 JT	--	--	190000 T	--	--	23000 T
LWG RA Total PAH (Calculated U = 1/2)	58000 JT	--	--	290000 T	--	--	34000 T
Semivolatile Organics (µg/kg)							
Carbazole	310 U	--	--	1100 J	--	--	--
Dibenzofuran	310 U	--	--	500	--	--	80.5 T
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UJT	--	--	3 UT	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	16 U	--	--	1.72 NJ	--	--	--
2,4'-DDE (o,p'-DDE)	16 U	--	--	2.77 J	--	--	--
2,4'-DDT (o,p'-DDT)	16 U	--	--	2.49 NJ	--	--	--
4,4'-DDD (p,p'-DDD)	16 U	--	--	3.38 NJ	--	--	--
4,4'-DDE (p,p'-DDE)	16 U	--	--	1.6 NJ	--	--	--
4,4'-DDT (p,p'-DDT)	16 U	--	--	7.15 NJ	--	--	--
beta-Hexachlorocyclohexane (BHC)	8 U	--	--	3.53 NJ	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	16 UT	--	--	5.1 NJT	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	--	--	4.4 JNT	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	16 UT	--	--	9.64 NJT	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	16 UT	--	--	19 JNT	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	360 J	--	--	1700 J	--	--	175 T
Residual Range Hydrocarbons	--	--	--	2100 J	--	--	320 T
CALC							
Benthic MQ	--	1.041234267	--	--	2.425546776	0.120352485	--
pMax	--	0.687653544	--	--	0.951243905	0.461218409	--

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Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	#N/A
System Location Code:	WLCGSG04RAA12	WLCGSG04RAA12	WLCGSG04RAA14	WLCGSG04RAA14	WLCGSG04RAA17	WLCGSG04RAA17	#N/A
Sample Name:	WLCGSG04RAA12SD1820	WLCGSG04RAA12SD1820	WLCGSG04RAA14SD1420	WLCGSG04RAA14SD1420	WLCGSG04RAA17SD1420	WLCGSG04RAA17SD1420	#N/A
Sample Date:	7/20/2004	7/20/2004	7/20/2004	7/20/2004	7/22/2004	7/22/2004	#N/A
Depth Interval:	548.64 - 609.6 cm	548.64 - 609.6 cm	426.72 - 609.6 cm	426.72 - 609.6 cm	426.72 - 609.6 cm	426.72 - 609.6 cm	#N/A
Metals (mg/kg)							
Zinc	--	65.1	--	42.4	--	57.6	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	11000	--	60	--	130000	--
LWG RA Total HPAH (Calculated U = 1/2)	--	130000 JT	--	680 JT	--	1300000 T	--
LWG RA Total PAH (Calculated U = 1/2)	--	210000 JT	--	1500 JT	--	1900000 T	--
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	--	370 J	--	5.4 J	--	25	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	510	--	24 U	--	180	--
Residual Range Hydrocarbons	--	760	--	49 J	--	370	--
CALC							
Benthic MQ	0.390491504	--	0.050543738	--	27.48272573	--	--
pMax	0.828794347	--	0.088788517	--	0.982085413	--	--

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Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	WLCMRD08SDUD1SB	WLCMRD08SDUD1SB	WLCMRD08SDUD26SB	WLCMRD08SDUD26SB	WLCMRD08SDUD27SB	WLCMRD08SDUD27SB	WLCMRD08SDUD2SB
Sample Name:	WLCMRD08UD1-4	WLCMRD08UD1-4	WLCMRD08UD26-4	WLCMRD08UD26-4	WLCMRD08UD27-4	WLCMRD08UD27-4	WLCMRD08UD2-4
Sample Date:	4/15/2008	4/15/2008	4/13/2008	4/13/2008	4/13/2008	4/13/2008	4/15/2008
Depth Interval:	365.76 - 609.6 cm	365.76 - 609.6 cm	365.76 - 609.6 cm	365.76 - 609.6 cm	365.76 - 609.6 cm	365.76 - 609.6 cm	365.76 - 609.6 cm
Metals (mg/kg)							
Zinc	--	**65.4**	--	**69.7**	--	**61.8**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	2.4 U	--	**2.4 J**	--	**2.2 J**	--
LWG RA Total HPAH (Calculated U = 1/2)	--	**11 JT**	--	**26 JT**	--	**27 JT**	--
LWG RA Total PAH (Calculated U = 1/2)	--	**47 JT**	--	**49 JT**	--	**47 JT**	--
Semivolatile Organics (µg/kg)							
Carbazole	--	9.5 U	--	**3.2 J**	--	9.7 U	--
Dibenzofuran	--	**0.73 J**	--	2.5 U	--	2.5 U	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	4.8 UT	--	5 UT	--	5 UT	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	0.2 U	--	0.2 U	--	0.2 U	--
2,4'-DDE (o,p'-DDE)	--	0.2 U	--	0.2 U	--	0.2 U	--
2,4'-DDT (o,p'-DDT)	--	0.2 U	--	0.2 U	--	0.2 U	--
4,4'-DDD (p,p'-DDD)	--	0.2 U	--	0.2 U	--	0.2 U	--
4,4'-DDE (p,p'-DDE)	--	0.2 U	--	0.2 U	--	0.2 U	--
4,4'-DDT (p,p'-DDT)	--	0.2 U	--	0.2 U	--	0.2 U	--
beta-Hexachlorocyclohexane (BHC)	--	0.2 U	--	0.2 U	--	0.2 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	0.2 UT	--	0.2 UT	--	0.2 UT	--
LWG RA Sum DDE (Calculated U = 1/2)	--	0.2 UT	--	0.2 UT	--	0.2 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	0.2 UT	--	0.2 UT	--	0.2 UT	--
LWG RA Total DDx (Calculated U = 1/2)	--	0.2 UT	--	0.2 UT	--	0.2 UT	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	15 U	--	14 U	--	14 U	--
Residual Range Hydrocarbons	--	150 U	--	140 U	--	140 U	--
CALC							
Benthic MQ	**0.767856062**	--	**0.033899102**	--	**0.036799311**	--	**0.100707439**
pMax	**0.99542813**	--	**0.211433219**	--	**0.079506866**	--	**0.315298886**

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	WLCMRD08SDUD2SB	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP29	WLCSLH01GP29
Sample Name:	WLCMRD08UD2-4	WLCSLH01GP25S16	WLCSLH01GP25S16	WLCSLH01GP26S18	WLCSLH01GP26S18	WLCSLH01GP29S17	WLCSLH01GP29S17
Sample Date:	4/15/2008	9/28/2004	9/28/2004	10/4/2004	10/4/2004	10/19/2004	10/19/2004
Depth Interval:	365.76 - 609.6 cm	487.7 - 502.9 cm	487.7 - 502.9 cm	548.6 - 563.8 cm	548.6 - 563.8 cm	518.2 - 533.4 cm	518.2 - 533.4 cm
Metals (mg/kg)							
Zinc	**73.7**	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	2.4 U	--	**237000**	--	**60600**	--	**147**
LWG RA Total HPAH (Calculated U = 1/2)	**11 JT**	--	**2500000 T**	--	**570000 T**	--	**2160 T**
LWG RA Total PAH (Calculated U = 1/2)	**22 JT**	--	**7500000 T**	--	**1200000 T**	--	**4260 T**
Semivolatile Organics (µg/kg)							
Carbazole	9.6 U	--	**32300**	--	**2180**	--	80.3 U
Dibenzofuran	2.4 U	--	**21200**	--	**1180**	--	80.4 U
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	4.9 UT	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	0.2 U	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	0.2 U	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	0.2 U	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	0.2 U	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	0.2 U	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	0.2 U	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.2 U	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	0.2 UT	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	0.2 UT	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	0.2 UT	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	0.2 UT	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	15 U	--	--	--	--	--	--
Residual Range Hydrocarbons	**6.6 J**	--	--	--	--	--	--
CALC							
Benthic MQ	--	**329.2209691**	--	**43.17099786**	--	**0.264608323**	--
pMax	--	**0.983804142**	--	**0.937417879**	--	**0.060028624**	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Analysis Matrix	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet	F:_16-20_feet
System Location Code:	WLCSLH01GP30	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP32	WLCSLH01GP32
Sample Name:	WLCSLH01GP30S18	WLCSLH01GP30S18	WLCSLH01GP31S17	WLCSLH01GP31S17	WLCSLH01GP32S16	WLCSLH01GP32S16
Sample Date:	10/22/2004	10/22/2004	10/26/2004	10/26/2004	10/27/2004	10/27/2004
Depth Interval:	548.6 - 563.8 cm	548.6 - 563.8 cm	518.2 - 533.4 cm	518.2 - 533.4 cm	487.7 - 502.9 cm	487.7 - 502.9 cm
Metals (mg/kg)						
Zinc	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	8.99 U	--	**11.5**	--	8.91 U
LWG RA Total HPAH (Calculated U = 1/2)	--	8.99 UT	--	**122 T**	--	**265 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**3700 T**	--	**386 T**	--	**527 T**
Semivolatile Organics (µg/kg)						
Carbazole	--	89.9 U	--	88.7 U	--	89 U
Dibenzofuran	--	89.9 U	--	88.7 U	--	89.1 U
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	**0.902769231**	--	**0.033175**	--	**0.033135722**	--
pMax	--	--	**0.031676763**	--	--	--

Table 3-18
Existing Data Screening Table – Sub-surface Sediment (Category B-F) Ecological

Notes:

	Detected concentration is greater than 1 screening level
	Detected concentration is greater than 2 screening levels
	Detected concentration is greater than 3 screening levels
	Detected concentration is greater than 4 screening levels
	Detected concentration is greater than 5 screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation.
-- = Results not reported or not applicable
N = Normal Field Sample
R = Rejected
NA = Not applicable, calculation based on sample and associated field duplicate

Acronyms:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low-molecular-weight PAH
LWG = Lower Willamette Group
PCB = polychlorinated biphenyl
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient
TPH = Total Petroleum Hydrocarbons

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GP27	GS-01	GS-01	GS-02	GS-02	GS-03	GS-03	GS-03
Sample Name:	GP27-P	GS-01-S (20-23)	GS-01-S (45-48)	GS-02-S (20-23)	GS-02-S (45-48)	GS-03-S (120-122)	GS-03-S (20-23)	GS-03-S (45-48)
Sample Date:	10/8/2004	12/21/2006	12/26/2006	12/27/2006	12/28/2006	12/19/2006	12/18/2006	12/19/2006
Depth Interval:	2478.02 - 2478.02 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	3657.6 - 3718.56 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm
Conventional Parameters (mg/kg)								
Cyanide, total	--	**1.5 J**	0.3 U	**0.2 J**	**0.4**	0.3 UJ	**0.5 J**	**2.9 J**
Metals (mg/kg)								
Zinc	--	--	--	**70.4**	**58.4**	--	--	--
Volatile Organics (µg/kg)								
1,1-Dichloroethene	--	1.4 U	1.3 U	1.5 U	1.1 U	1.1 U	1.4 U	1.3 U
1,2-Dichloroethene, cis-	1000 U	1.4 U	1.3 U	1.5 U	1.1 U	1.1 U	1.4 U	1.3 U
1,2-Dichloroethene, trans-	--	1.4 U	1.3 U	1.5 U	1.1 U	1.1 U	1.4 U	1.3 U
Benzene	**1700**	**0.34 J**	1.3 U	1.5 U	1.1 U	**0.12 J**	**0.2 J**	**0.11 J**
Ethylbenzene	**12300**	1.4 U	1.3 U	1.5 U	1.1 U	1.1 U	**0.12 J**	1.3 U
Naphthalene	**986000**	--	--	--	--	--	--	--
o-Xylene	**4280**	1.4 U	1.3 U	1.5 U	1.1 U	1.1 U	1.4 U	1.3 U
Toluene	1000 U	1.4 U	1.3 U	1.5 U	1.1 U	1.1 U	1.4 U	1.3 U
Trichloroethene (TCE)	1000 U	1.4 U	1.3 U	1.5 U	1.1 U	1.1 U	1.4 U	1.3 U
Vinyl chloride	1000 U	1.4 U	1.3 U	1.5 U	1.1 U	1.1 U	1.4 U	1.3 U
LWG RA Total Xylene (Calculated U = 1/2)	**9230 T**	2.7 UT	1.3 UT	1.5 UT	1.1 UT	2.1 UT	2.7 UT	2.5 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	**36900**	**0.68 J**	5.1 U	5.1 U	5 U	5 U	5 U	4.9 U
Acenaphthene	**44900**	**1.3 J**	5.1 U	**1.9 J**	5 U	5 U	**0.47 J**	4.9 U
Acenaphthylene	**1870**	5 U	5.1 U	**1.5 J**	5 U	5 U	5 U	4.9 U
Anthracene	**19400**	**0.91 J**	5.1 U	**6.4**	**2.7 J**	5 U	5 U	4.9 U
Benzo(a)anthracene	**12100**	**2.1 J**	5.1 U	**6.3**	**7.5**	5 U	**1.8 J**	4.9 U
Benzo(a)pyrene	**13900**	**1.7 J**	5.1 U	**7.7**	**6.2**	5 U	**1.3 J**	4.9 U
Benzo(b)fluoranthene	**10600**	**1.8 J**	5.1 U	**5.9**	**6.6**	5 U	**1.3 J**	4.9 U
Benzo(g,h,i)perylene	**13200**	**2.7 J**	5.1 U	**5.9**	**5.2**	5 U	**1.3 J**	4.9 U
Benzo(k)fluoranthene	**5260**	**1.3 J**	5.1 U	**5.3**	**6.8**	5 U	**1.1 J**	4.9 U
Chrysene	**14200**	**2.2 J**	5.1 U	**8.5**	**7.1**	5 U	**1.9 J**	4.9 U
Dibenzo(a,h)anthracene	**1770**	5 U	5.1 U	**0.72 J**	**6.1**	5 U	5 U	4.9 U
Fluoranthene	**44500**	**4.4 J**	5.1 U	**22**	**6**	5 U	**2.7 J**	4.9 U
Fluorene	**18300**	**0.59 J**	5.1 U	**3.5 J**	**0.49 J**	5 U	5 U	4.9 U
Indeno(1,2,3-c,d)pyrene	**7340**	**1.8 J**	5.1 U	**5.3**	**4.5 J**	5 U	**1.2 J**	4.9 U
Naphthalene	**88400**	5 U	5.1 U	**8.5**	5 U	5 U	5 U	4.9 U
Phenanthrene	**81000**	**5.5**	5.1 U	**28**	**3.3 J**	5 U	**3.5 J**	4.9 U
Pyrene	**49500**	**5.4**	5.1 U	**28**	**6.8**	5 U	**3.6 J**	4.9 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**18700 T**	**4.8 JT**	5.1 UT	**10 JT**	**14 JT**	5 UT	**4.2 JT**	4.9 UT
Semivolatile Organics (µg/kg)								
Carbazole	**5070**	--	--	--	--	--	--	--
Dibenzofuran	**2910**	**0.3 J**	5.1 U	**0.61 J**	5 U	5 U	5 U	4.9 U
PCB Aroclors (µg/kg)								
Aroclor 1016	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GP27	GS-01	GS-01	GS-02	GS-02	GS-03	GS-03	GS-03
Sample Name:	GP27-P	GS-01-S (20-23)	GS-01-S (45-48)	GS-02-S (20-23)	GS-02-S (45-48)	GS-03-S (120-122)	GS-03-S (20-23)	GS-03-S (45-48)
Sample Date:	10/8/2004	12/21/2006	12/26/2006	12/27/2006	12/28/2006	12/19/2006	12/18/2006	12/19/2006
Depth Interval:	2478.02 - 2478.02 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	3657.6 - 3718.56 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GS-03	GS-10	GS-10	GS-10	GS-11	GS-11	GS-11	GS-11
Sample Name:	GS-03-S (95-98)	GS-10-S (20-23)	GS-10-S (45-48)	GS-10-S (95-98)	GS-11-S (120-123)	GS-11-S (145-148)	GS-11-S (170-173)	GS-11-S (20-23)A
Sample Date:	12/19/2006	1/2/2007	1/2/2007	1/3/2007	1/8/2007	1/8/2007	1/8/2007	1/5/2007
Depth Interval:	2895.6 - 2987.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	3657.6 - 3749.04 cm	4419.6 - 4511.04 cm	5181.6 - 5273.04 cm	609.6 - 701.04 cm
Conventional Parameters (mg/kg)								
Cyanide, total	0.3 UJ	**0.12 J**	0.3 U	**0.24 J**	0.3 UJ	0.3 UJ	0.3 UJ	0.3 U
Metals (mg/kg)								
Zinc	--	**62.2**	**49.9**	**53.6**	--	--	--	--
Volatile Organics (µg/kg)								
1,1-Dichloroethene	1.1 U	70 U	1.3 U	60 U	1.2 U	1.1 U	1.1 U	1.4 U
1,2-Dichloroethene, cis-	1.1 U	70 U	**6.1**	**2200**	1.2 U	1.1 U	1.1 U	1.4 U
1,2-Dichloroethene, trans-	1.1 U	70 U	1.3 U	60 U	1.2 U	1.1 U	1.1 U	1.4 U
Benzene	**0.14 J**	**36 J**	1.3 U	**63**	1.2 U	1.1 U	1.1 U	1.4 U
Ethylbenzene	1.1 U	**260**	1.3 U	60 U	1.2 U	1.1 U	1.1 U	1.4 U
Naphthalene	--	--	--	--	--	--	--	--
o-Xylene	1.1 U	**88**	1.3 U	60 U	1.2 U	1.1 U	1.1 U	1.4 U
Toluene	1.1 U	70 U	1.3 U	60 U	1.2 U	1.1 U	1.1 U	1.4 U
Trichloroethene (TCE)	1.1 U	70 U	1.3 U	**1600**	1.2 U	1.1 U	1.1 U	1.4 U
Vinyl chloride	1.1 U	70 U	1.3 U	**160**	1.2 U	1.1 U	1.1 U	1.4 U
LWG RA Total Xylene (Calculated U = 1/2)	2.1 UT	**230 T**	1.3 UT	60 UT	1.2 UT	1.1 UT	1.1 UT	1.4 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	5 U	**270**	4.9 U	**7.5**	4.7 U	4.9 U	4.9 U	**8.1**
Acenaphthene	5 U	**460**	**2.5 J**	**3.4 J**	4.7 U	4.9 U	4.9 U	**12**
Acenaphthylene	5 U	**23**	4.9 U	5 U	4.7 U	4.9 U	4.9 U	**1 J**
Anthracene	5 U	**270**	**0.91 J**	**0.35 J**	4.7 U	**0.3 J**	4.9 U	**7.6**
Benzo(a)anthracene	5 U	**240**	**0.51 J**	**0.33 J**	4.7 U	**0.22 J**	4.9 U	**8.8**
Benzo(a)pyrene	5 U	**280**	**0.86 J**	5 U	4.7 U	**0.31 J**	4.9 U	**8.3**
Benzo(b)fluoranthene	5 U	**190**	4.9 U	5 U	4.7 U	4.9 U	4.9 U	**5.5**
Benzo(g,h,i)perylene	5 U	**240**	**1.3 J**	**0.61 J**	4.7 U	**0.34 J**	4.9 U	**6.8**
Benzo(k)fluoranthene	5 U	**160**	**0.58 J**	5 U	4.7 U	4.9 U	4.9 U	**6.4**
Chrysene	5 U	**320**	**1.1 J**	5 U	4.7 U	4.9 U	4.9 U	**11**
Dibenzo(a,h)anthracene	5 U	**26**	4.9 U	5 U	4.7 U	4.9 U	4.9 U	5 U
Fluoranthene	5 U	**870**	**2.2 J**	**1.2 J**	**0.51 J**	**1.2 J**	**0.54 J**	**28**
Fluorene	5 U	**260**	**0.98 J**	**1.1 J**	**0.45 J**	**0.38 J**	4.9 U	**6.6**
Indeno(1,2,3-c,d)pyrene	5 U	**220**	4.9 U	5 U	4.7 U	4.9 U	4.9 U	**5.9**
Naphthalene	5 U	**760**	19 U	**38**	6 U	5.9 U	6.5 U	16 U
Phenanthrene	5 U	**1600**	**4 J**	**3 J**	**1.5 J**	**2.3 J**	**1 J**	**55**
Pyrene	5 U	**1100**	**2.3 J**	**1.2 J**	**0.49 J**	**1.2 J**	4.9 U	**34**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	5 UT	**370 T**	**3.9 JT**	**5.6 JT**	4.7 UT	**3.3 JT**	4.9 UT	**13 T**
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Dibenzofuran	5 U	**36**	**0.31 J**	**0.4 J**	**0.24 J**	4.9 U	4.9 U	**0.89 J**
PCB Aroclors (µg/kg)								
Aroclor 1016	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GS-03	GS-10	GS-10	GS-10	GS-11	GS-11	GS-11	GS-11
Sample Name:	GS-03-S (95-98)	GS-10-S (20-23)	GS-10-S (45-48)	GS-10-S (95-98)	GS-11-S (120-123)	GS-11-S (145-148)	GS-11-S (170-173)	GS-11-S (20-23)A
Sample Date:	12/19/2006	1/2/2007	1/2/2007	1/3/2007	1/8/2007	1/8/2007	1/8/2007	1/5/2007
Depth Interval:	2895.6 - 2987.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	3657.6 - 3749.04 cm	4419.6 - 4511.04 cm	5181.6 - 5273.04 cm	609.6 - 701.04 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GS-11	GS-11	GS-12	GS-12	GS-12	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS04
Sample Name:	GS-11-S (45-48)	GS-11-S (95-98)	GS-12-S (20-23)	GS-12-S (45-48)	GS-12-S (95-98)	WLCGSJ06GS04S2427	WLCGSJ06GS04S4548	WLCGSJ06GS04S6970
Sample Date:	1/5/2007	1/8/2007	1/10/2007	1/10/2007	1/11/2007	12/12/2006	12/13/2006	12/13/2006
Depth Interval:	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	731.5 - 823 cm	1372 - 1463 cm	2103 - 2134 cm
Conventional Parameters (mg/kg)								
Cyanide, total	**0.1 J**	**0.14 J**	0.3 UJ	0.3 UJ	0.3 UJ	**0.1 J**	0.3 UJ	--
Metals (mg/kg)								
Zinc	--	--	**56.9**	**49**	**49.2**	**74**	**49.6**	--
Volatile Organics (µg/kg)								
1,1-Dichloroethene	1.2 U	1.3 U	1.4 U	61 U	1.2 U	1.3 U	1.2 U	--
1,2-Dichloroethene, cis-	1.2 U	**100**	1.4 U	**700**	1.2 U	1.3 U	1.2 U	--
1,2-Dichloroethene, trans-	1.2 U	1.3 U	1.4 U	61 U	1.2 U	1.3 U	1.2 U	--
Benzene	1.2 U	1.3 U	1.4 U	**24 J**	1.2 U	1.3 U	1.2 U	--
Ethylbenzene	1.2 U	1.3 U	1.4 U	61 U	1.2 U	1.3 U	1.2 U	--
Naphthalene	--	--	--	--	--	1.3 U	1.2 U	--
o-Xylene	1.2 U	1.3 U	1.4 U	61 U	1.2 U	1.3 U	1.2 U	--
Toluene	1.2 U	1.3 U	1.4 U	61 U	1.2 U	1.3 U	1.2 U	--
Trichloroethene (TCE)	1.2 U	1.3 U	1.4 U	61 U	1.2 U	1.3 U	1.2 U	--
Vinyl chloride	1.2 U	**8.9**	**0.63 J**	61 U	1.2 U	1.3 U	1.2 U	--
LWG RA Total Xylene (Calculated U = 1/2)	1.2 UT	1.3 UT	1.4 UT	61 UT	1.2 UT	2.5 UT	2.4 UT	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	5 U	5 U	5 U	4.9 U	3.1 U	5 U	5 U	340 U
Acenaphthene	5 U	5 U	**3.2 J**	4.9 U	3.1 U	**4.4 J**	**0.33 J**	340 U
Acenaphthylene	5 U	5 U	**0.55 J**	**0.29 J**	3.1 U	5 U	5 U	340 U
Anthracene	5 U	5 U	**2.4 J**	**0.65 J**	3.1 U	5 U	5 U	340 U
Benzo(a)anthracene	5 U	5 U	**4 J**	**2.2 J**	3.1 U	5 U	5 U	340 U
Benzo(a)pyrene	5 U	5 U	**4.5 J**	**1 J**	3.1 U	5 U	5 U	340 U
Benzo(b)fluoranthene	5 U	5 U	**3.2 J**	**5.9**	3.1 U	5 U	5 U	340 U
Benzo(g,h,i)perylene	5 U	5 U	**4.3 J**	**1.4 J**	3.1 U	5 U	5 U	-- R
Benzo(k)fluoranthene	5 U	5 U	**3.1 J**	**2.7 J**	3.1 U	5 U	5 U	340 U
Chrysene	5 U	5 U	**5.1**	**3.5 J**	3.1 U	5 U	5 U	340 U
Dibenzo(a,h)anthracene	5 U	5 U	5 U	4.9 U	3.1 U	5 U	5 U	340 U
Fluoranthene	**0.73 J**	**0.6 J**	**11**	**2.5 J**	3.1 U	5 U	**4.5 J**	340 U
Fluorene	**0.26 J**	5 U	**1.9 J**	**0.39 J**	3.1 U	5 U	5 U	340 U
Indeno(1,2,3-c,d)pyrene	5 U	5 U	**3.2 J**	**1.5 J**	3.1 U	5 U	5 U	340 U
Naphthalene	5.1 U	7.2 U	5.3 U	4.9 U	3.1 U	--	--	340 U
Phenanthrene	**1.2 J**	**1.1 J**	**13**	**2.9 J**	**0.54 J**	5 U	5 U	340 U
Pyrene	**0.54 J**	**0.56 J**	**13**	**3 J**	3.1 U	5 U	**5.4**	340 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	5 UT	5 UT	**8.1 JT**	**4.4 JT**	3.1 UT	5 UT	5 UT	340 UT
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Dibenzofuran	5 U	5 U	**0.44 J**	**0.36 J**	3.1 U	5 U	5 U	340 U
PCB Aroclors (µg/kg)								
Aroclor 1016	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GS-11	GS-11	GS-12	GS-12	GS-12	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS04
Sample Name:	GS-11-S (45-48)	GS-11-S (95-98)	GS-12-S (20-23)	GS-12-S (45-48)	GS-12-S (95-98)	WLCGSJ06GS04S2427	WLCGSJ06GS04S4548	WLCGSJ06GS04S6970
Sample Date:	1/5/2007	1/8/2007	1/10/2007	1/10/2007	1/11/2007	12/12/2006	12/13/2006	12/13/2006
Depth Interval:	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	731.5 - 823 cm	1372 - 1463 cm	2103 - 2134 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS04	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05
Sample Name:	WLCGSJ06GS04S9598	WLCGSJ06GS05S120123	WLCGSJ06GS05S145148	WLCGSJ06GS05S170173	WLCGSJ06GS05S2022	WLCGSJ06GS05S4548	WLCGSJ06GS05S9598
Sample Date:	12/13/2006	10/27/2006	10/27/2006	10/30/2006	10/25/2006	10/25/2006	10/26/2006
Depth Interval:	2896 - 2987 cm	3658 - 3749 cm	4420 - 4511 cm	5182 - 5273 cm	609.6 - 670.6 cm	1372 - 1463 cm	2896 - 2987 cm
Conventional Parameters (mg/kg)							
Cyanide, total	0.3 UJ	0.22 U	0.22 U	0.17 U	**0.15 J**	**0.07 J**	0.25 U
Metals (mg/kg)							
Zinc	**50.7**	--	--	--	--	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.1 U	1.2 U	1.4 U	1.3 U	1.5 U	1.4 U	1.3 U
1,2-Dichloroethene, cis-	1.1 U	1.2 U	1.4 U	1.3 U	1.5 U	1.4 U	1.3 U
1,2-Dichloroethene, trans-	1.1 U	1.2 U	1.4 U	1.3 U	1.5 U	1.4 U	1.3 U
Benzene	1.1 U	1.2 U	1.4 U	1.3 U	1.5 U	1.4 U	1.3 U
Ethylbenzene	1.1 U	1.2 U	1.4 U	1.3 U	**1.1 J**	1.4 U	1.3 U
Naphthalene	1.1 U	--	--	--	--	--	--
o-Xylene	1.1 U	1.2 U	1.4 U	1.3 U	**0.56 J**	1.4 U	1.3 U
Toluene	1.1 U	**0.17 J**	1.4 U	1.3 U	1.5 U	**0.16 J**	**0.21 J**
Trichloroethene (TCE)	1.1 U	1.2 U	1.4 U	1.3 U	1.5 U	1.4 U	1.3 U
Vinyl chloride	1.1 U	1.2 U	1.4 U	1.3 U	1.5 U	1.4 U	1.3 U
LWG RA Total Xylene (Calculated U = 1/2)	2.2 UT	2.4 UT	2.7 UT	2.5 UT	**1 JT**	**1 JT**	2.6 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	5 U	**0.74 J**	**0.66 J**	**0.7 J**	**24**	**1 J**	**0.79 J**
Acenaphthene	5 U	5 U	5 U	5 U	**29**	**0.42 J**	**0.24 J**
Acenaphthylene	5 U	5 U	5 U	5 U	**4.5 J**	5 U	5 U
Anthracene	5 U	5 U	5 U	5 U	**33**	**0.39 J**	5 U
Benzo(a)anthracene	5 U	5 U	5 U	5 U	**36**	**0.44 J**	**0.33 J**
Benzo(a)pyrene	5 U	5 U	5 U	5 U	**46**	**0.61 J**	**0.47 J**
Benzo(b)fluoranthene	5 U	5 U	5 U	5 U	**27**	5 U	5 U
Benzo(g,h,i)perylene	5 U	5 U	5 U	5 U	**26**	**0.59 J**	**0.47 J**
Benzo(k)fluoranthene	5 U	5 U	5 U	5 U	**24**	5 U	5 U
Chrysene	5 U	5 U	5 U	5 U	**49**	**0.61 J**	5 U
Dibenzo(a,h)anthracene	5 U	5 U	5 U	5 U	**2.9 J**	5 U	5 U
Fluoranthene	5 U	5 U	5 U	**0.56 J**	**120**	**1.7 J**	**1.1 J**
Fluorene	5 U	5 U	5 U	5 U	**21**	**0.3 J**	5 U
Indeno(1,2,3-c,d)pyrene	5 U	5 U	5 U	5 U	**24**	**0.66 J**	5 U
Naphthalene	--	5 U	5 U	5 U	**22**	5 U	5 U
Phenanthrene	5 U	**0.46 J**	5 U	**0.75 J**	**180**	**2.5 J**	**0.86 J**
Pyrene	5 U	5 U	5 U	5 U	**150**	**1.6 J**	**1.2 J**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	5 UT	5 UT	5 UT	5 UT	**58 JT**	**3.5 JT**	**3.5 JT**
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	5 U	5 U	5 U	5 U	**3.5 J**	5 U	5 U
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS04	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05
Sample Name:	WLCGSJ06GS04S9598	WLCGSJ06GS05S120123	WLCGSJ06GS05S145148	WLCGSJ06GS05S170173	WLCGSJ06GS05S2022	WLCGSJ06GS05S4548	WLCGSJ06GS05S9598
Sample Date:	12/13/2006	10/27/2006	10/27/2006	10/30/2006	10/25/2006	10/25/2006	10/26/2006
Depth Interval:	2896 - 2987 cm	3658 - 3749 cm	4420 - 4511 cm	5182 - 5273 cm	609.6 - 670.6 cm	1372 - 1463 cm	2896 - 2987 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07
Sample Name:	WLCGSJ06GS06S2023	WLCGSJ06GS06S4144	WLCGSJ06GS06S6569	WLCGSJ06GS06S9598	WLCGSJ06GS07S123127	WLCGSJ06GS07S145148	WLCGSJ06GS07S170173
Sample Date:	1/17/2007	1/17/2007	1/17/2007	1/17/2007	10/18/2006	10/18/2006	10/19/2006
Depth Interval:	609.6 - 701 cm	1250 - 1341 cm	1981 - 2103 cm	2896 - 2987 cm	3749 - 3871 cm	4420 - 4511 cm	5182 - 5273 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**0.3**	**0.12 JT**	**0.12 J**	**0.2 J**	**0.04 J**	0.3 U	0.2 U
Metals (mg/kg)							
Zinc	**68**	**58.1 T**	**48.4**	**44.3**	--	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.4 U	1.4 UT	1.3 U	1.2 U	1.4 U	1.4 U	1.2 U
1,2-Dichloroethene, cis-	1.4 U	1.4 UT	1.3 U	1.2 U	1.4 U	1.4 U	1.2 U
1,2-Dichloroethene, trans-	1.4 U	1.4 UT	1.3 U	1.2 U	1.4 U	1.4 U	1.2 U
Benzene	**2.3**	**5.6 T**	1.3 U	1.2 U	1.4 U	1.4 U	1.2 U
Ethylbenzene	**2.7**	**5 T**	1.3 U	1.2 U	1.4 U	1.4 U	1.2 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	**1.5**	**3.6 T**	1.3 U	1.2 U	1.4 U	1.4 U	1.2 U
Toluene	1.4 U	1.4 UT	1.3 U	1.2 U	1.4 U	1.4 U	1.2 U
Trichloroethene (TCE)	1.4 U	1.4 UT	1.3 U	1.2 U	1.4 U	1.4 U	1.2 U
Vinyl chloride	1.4 U	1.4 UT	1.3 U	1.2 U	1.4 U	1.4 U	1.2 U
LWG RA Total Xylene (Calculated U = 1/2)	**2.6 JT**	**9.3 T**	1.3 UT	1.2 UT	2.8 UT	2.7 UT	2.4 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**1700**	**4.1 JT**	4.9 U	5 U	3.5 U	3.2 U	2.9 U
Acenaphthene	**1300**	**8.6 T**	4.9 UJ	**0.23 J**	**0.67 J**	3.2 U	2.9 U
Acenaphthylene	**190**	5 UT	4.9 U	5 U	3.5 U	3.2 U	2.9 U
Anthracene	**1100**	5 UT	4.9 U	5 U	**0.75 J**	3.2 U	2.9 U
Benzo(a)anthracene	**1900**	**0.31 JT**	4.9 U	5 U	**0.91 J**	3.2 U	**0.21 J**
Benzo(a)pyrene	**2200**	**0.38 JT**	4.9 U	5 U	**0.65 J**	3.2 U	**0.26 J**
Benzo(b)fluoranthene	**1300**	5 UT	4.9 U	5 U	3.5 U	3.2 U	2.9 U
Benzo(g,h,i)perylene	**1600**	5 UT	4.9 U	5 U	**0.76 J**	3.2 U	**0.35 J**
Benzo(k)fluoranthene	**1200**	5 UT	4.9 U	5 U	**0.58 J**	3.2 U	2.9 U
Chrysene	**2300**	5 UT	4.9 U	5 U	**1.1 J**	3.2 U	2.9 U
Dibenzo(a,h)anthracene	**180**	5 UT	4.9 U	5 U	3.5 U	3.2 U	2.9 U
Fluoranthene	**5500**	5 UT	4.9 U	5 U	**2.6 J**	3.2 U	**0.91 J**
Fluorene	**860**	**1.4 JT**	4.9 U	5 U	**0.66 J**	3.2 U	**0.23 J**
Indeno(1,2,3-c,d)pyrene	**1300**	**0.58 JT**	4.9 U	5 U	**0.58 J**	3.2 U	2.9 U
Naphthalene	**370**	**270 T**	4.9 U	5 U	3.5 U	3.2 U	2.9 U
Phenanthrene	**5600**	5 UT	4.9 U	5 U	**4.8**	**0.46 J**	**1.5 J**
Pyrene	**7200**	**1.2 JT**	4.9 UJ	**0.57 J**	**3 J**	3.2 U	**1 J**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**2800 T**	**3.2 JT**	4.9 UT	5 UT	**2.7 JT**	3.2 UT	**2 JT**
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	**130**	**1.2 JT**	4.9 U	**0.24 J**	3.5 U	3.2 U	2.9 U
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07
Sample Name:	WLCGSJ06GS06S2023	WLCGSJ06GS06S4144	WLCGSJ06GS06S6569	WLCGSJ06GS06S9598	WLCGSJ06GS07S123127	WLCGSJ06GS07S145148	WLCGSJ06GS07S170173
Sample Date:	1/17/2007	1/17/2007	1/17/2007	1/17/2007	10/18/2006	10/18/2006	10/19/2006
Depth Interval:	609.6 - 701 cm	1250 - 1341 cm	1981 - 2103 cm	2896 - 2987 cm	3749 - 3871 cm	4420 - 4511 cm	5182 - 5273 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS09
Sample Name:	WLCGSJ06GS07S2327	WLCGSJ06GS07S4852	WLCGSJ06GS07S98102	WLCGSJ06GS08S2023	WLCGSJ06GS8S4345	WLCGSJ06GS8S9598	WLCGSJ06GS09S123127
Sample Date:	10/17/2006	10/17/2006	10/18/2006	10/25/2006	10/26/2006	10/26/2006	10/12/2006
Depth Interval:	701 - 823 cm	1463 - 1585 cm	2987 - 3109 cm	609.6 - 701 cm	1311 - 1372 cm	2896 - 2987 cm	3749 - 3871 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**1.5**	**0.5**	0.3 U	**0.03 J**	**0.25**	**0.22 J**	0.3 U
Metals (mg/kg)							
Zinc	--	--	--	**70**	**57.6**	**59**	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	770 U	1.5 U	1.3 U	1.4 U	1.3 U	1.2 U	1.6 U
1,2-Dichloroethene, cis-	770 U	1.5 U	1.3 U	1.4 U	1.3 U	1.2 U	1.6 U
1,2-Dichloroethene, trans-	770 U	1.5 U	1.3 U	1.4 U	1.3 UJ	1.2 U	1.6 U
Benzene	**590 J**	**140**	1.3 U	**4.2**	1.3 UJ	1.2 U	1.6 U
Ethylbenzene	**3500**	**6**	1.3 U	**18**	1.3 UJ	1.2 U	1.6 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	**2100**	**1.5 J**	1.3 U	**8.6**	1.3 UJ	**0.39 J**	1.6 U
Toluene	**210 J**	1.5 U	1.3 U	**0.56 J**	**0.24 J**	**0.21 J**	1.6 U
Trichloroethene (TCE)	770 U	1.5 U	1.3 U	1.4 U	1.3 UJ	1.2 U	1.6 U
Vinyl chloride	770 U	1.5 U	1.3 U	1.4 U	1.3 UJ	1.2 U	1.6 U
LWG RA Total Xylene (Calculated U = 1/2)	**5600 T**	**3.2 JT**	2.5 UT	**19 T**	2.6 UJT	**0.98 JT**	3.1 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**190000**	**51**	3.3 U	**18**	**1.7 J**	**0.88 J**	5 U
Acenaphthene	**120000**	**48**	**1.3 J**	**23**	**0.9 J**	4.9 U	**0.81 J**
Acenaphthylene	**48000**	**7.9**	**0.77 J**	**1.4 J**	5 U	4.9 U	**0.37 J**
Anthracene	**110000**	**46**	**3.9**	**13**	**0.62 J**	4.9 U	**0.9 J**
Benzo(a)anthracene	**90000**	**36**	**3.5**	**13**	**0.4 J**	4.9 U	**1.7 J**
Benzo(a)pyrene	**100000**	**42**	**3.6**	**17**	**0.49 J**	4.9 U	**1.8 J**
Benzo(b)fluoranthene	**56000**	**26**	**2.5 J**	**9.9**	5 U	4.9 U	**1.4 J**
Benzo(g,h,i)perylene	**65000**	**34**	**3.3**	**13**	**0.47 J**	**0.4 J**	**2.1 J**
Benzo(k)fluoranthene	**52000**	**25**	**2.4 J**	**9.6**	5 U	4.9 U	**1.2 J**
Chrysene	**110000**	**50**	**4.7**	**16**	**0.77 J**	4.9 U	**2.1 J**
Dibenzo(a,h)anthracene	**7100**	**3.5 J**	3.3 U	**1.4 J**	5 U	4.9 U	**0.39 J**
Fluoranthene	**320000**	**130**	**13**	**48**	**1.4 J**	4.9 U	**4.8 J**
Fluorene	**95000**	**36**	**1.6 J**	**12**	**0.46 J**	4.9 U	**0.6 J**
Indeno(1,2,3-c,d)pyrene	**60000**	**29**	**2.4 J**	**13**	**0.4 J**	4.9 U	**1.7 J**
Naphthalene	**370000**	**110**	3.3 U	**68**	**10**	**4 J**	5 U
Phenanthrene	**590000**	**230**	**20**	**74**	**2.5 J**	**0.74 J**	**5.4**
Pyrene	**360000**	**150**	**16**	**53**	**1.4 J**	**0.58 J**	**5.5**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**130000 T**	**55 JT**	**6.1 JT**	**22 JT**	**3.3 JT**	4.9 UT	**2.7 JT**
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	**14000**	**6.1**	**0.28 J**	**1.7 J**	5 U	4.9 U	5 U
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS09
Sample Name:	WLCGSJ06GS07S2327	WLCGSJ06GS07S4852	WLCGSJ06GS07S98102	WLCGSJ06GS08S2023	WLCGSJ06GS8S4345	WLCGSJ06GS8S9598	WLCGSJ06GS09S123127
Sample Date:	10/17/2006	10/17/2006	10/18/2006	10/25/2006	10/26/2006	10/26/2006	10/12/2006
Depth Interval:	701 - 823 cm	1463 - 1585 cm	2987 - 3109 cm	609.6 - 701 cm	1311 - 1372 cm	2896 - 2987 cm	3749 - 3871 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCSLH01GP25	WLCSLH01GP25
Sample Name:	WLCGSJ06GS09S148152	WLCGSJ06GS09S173177	WLCGSJ06GS09S2327	WLCGSJ06GS09S4852	WLCGSJ06GS09S98102	WLCSLH01GP25S146	WLCSLH01GP25S21
Sample Date:	10/13/2006	10/13/2006	10/9/2006	10/10/2006	10/12/2006	9/30/2004	9/28/2004
Depth Interval:	4511 - 4633 cm	5273 - 5395 cm	701 - 823 cm	1463 - 1585 cm	2987 - 3109 cm	4450 - 4465 cm	640.1 - 655.3 cm
Conventional Parameters (mg/kg)							
Cyanide, total	**0.05 J**	**0.04 J**	**0.5**	**0.3**	**0.1 J**	--	--
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	1.4 U	0.87 UJ	64 U	1.5 U	1.4 U	12.1 U	16 U
1,2-Dichloroethene, cis-	1.4 U	0.87 U	64 U	1.5 U	1.4 U	12.1 U	16 U
1,2-Dichloroethene, trans-	1.4 U	0.87 UJ	64 U	1.5 U	1.4 U	12.1 U	16 U
Benzene	1.4 U	0.87 UJ	**27 J**	1.5 U	**280**	12.1 U	**845**
Ethylbenzene	1.4 U	0.87 UJ	**85**	**1.9**	**37**	12.1 U	**1060**
Naphthalene	--	--	--	--	--	**251**	**675000**
o-Xylene	1.4 U	0.87 UJ	**37 J**	**1.3 J**	**29**	12.1 U	**357**
Toluene	1.4 U	**0.33 J**	64 U	**0.25 J**	**0.59 J**	12.1 U	160 U
Trichloroethene (TCE)	1.4 U	0.87 UJ	64 U	1.5 U	1.4 U	12.1 U	16 U
Vinyl chloride	1.4 U	0.87 UJ	64 U	1.5 U	1.4 U	12.1 U	16 U
LWG RA Total Xylene (Calculated U = 1/2)	2.7 UT	1.8 UJT	**69 JT**	**2.2 JT**	**57 T**	24.2 UT	**517 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	5 U	5 U	**18000**	**200**	**25**	--	**38500**
Acenaphthene	5 U	**0.55 J**	**26000**	**370**	**13**	--	**45800**
Acenaphthylene	5 U	**1.6 J**	**1500**	**24**	**0.86 J**	--	**1570**
Anthracene	5 U	**2.6 J**	**12000**	**210**	**2.6 J**	--	**25200**
Benzo(a)anthracene	5 U	**7.9**	**8800**	**160**	**2.5 J**	--	**23000**
Benzo(a)pyrene	**0.34 J**	**8.4**	**11000**	**200**	**2 J**	--	**29500**
Benzo(b)fluoranthene	5 U	**6.8**	**6500**	**120**	**1.8 J**	--	**22500**
Benzo(g,h,i)perylene	**1.1 J**	**10**	**7800**	**140**	**2.4 J**	--	**35300**
Benzo(k)fluoranthene	5 U	**6.2**	**6100**	**110**	**1.2 J**	--	**4660**
Chrysene	5 U	**12**	**11000**	**200**	**2.9 J**	--	**25300**
Dibenzo(a,h)anthracene	5 U	**0.98 J**	**790**	**15**	5 U	--	**1920**
Fluoranthene	**0.75 J**	**27**	**35000**	**630**	**9.5**	--	**52800**
Fluorene	5 U	**0.55 J**	**12000**	**200**	**3.8 J**	--	**22600**
Indeno(1,2,3-c,d)pyrene	**0.56 J**	**8**	**7100**	**130**	**1.7 J**	--	**24700**
Naphthalene	5 U	5 U	**11000**	**160**	**240**	--	--
Phenanthrene	**0.95 J**	**18**	**67000**	**1200**	**19**	--	**154000**
Pyrene	**0.68 J**	**34**	**40000**	**700**	**11**	--	**99700**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**3.4 JT**	**12 JT**	**14000 T**	**260 T**	**5.1 JT**	--	**39000 T**
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	**7700**
Dibenzofuran	5 U	**0.24 J**	**1900**	**29**	**1.1 J**	--	**3060**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCSLH01GP25	WLCSLH01GP25
Sample Name:	WLCGSJ06GS09S148152	WLCGSJ06GS09S173177	WLCGSJ06GS09S2327	WLCGSJ06GS09S4852	WLCGSJ06GS09S98102	WLCSLH01GP25S146	WLCSLH01GP25S21
Sample Date:	10/13/2006	10/13/2006	10/9/2006	10/10/2006	10/12/2006	9/30/2004	9/28/2004
Depth Interval:	4511 - 4633 cm	5273 - 5395 cm	701 - 823 cm	1463 - 1585 cm	2987 - 3109 cm	4450 - 4465 cm	640.1 - 655.3 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP26
Sample Name:	WLCSLH01GP25S26	WLCSLH01GP25S31	WLCSLH01GP25S36	WLCSLH01GP25S41	WLCSLH01GP25S91	WLCSLH01GP26S118	WLCSLH01GP26S23
Sample Date:	9/28/2004	9/28/2004	9/28/2004	9/28/2004	9/29/2004	10/5/2004	10/4/2004
Depth Interval:	792.5 - 807.7 cm	944.9 - 960.1 cm	1097 - 1112 cm	1250 - 1265 cm	2774 - 2789 cm	3597 - 3612 cm	701 - 716.2 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	15.9 U	16.8 U	14.5 U	14.5 U	14.4 U	13.8 U	13.6 U
1,2-Dichloroethene, cis-	15.9 U	16.8 U	14.5 U	**19.6**	**1920**	13.8 U	13.6 U
1,2-Dichloroethene, trans-	15.9 U	16.8 U	14.5 U	14.5 U	14.4 U	13.8 U	13.6 U
Benzene	15.9 U	16.8 U	14.5 U	14.5 U	**64.4**	13.8 U	13.6 U
Ethylbenzene	159 U	16.8 U	14.5 U	14.5 U	14.4 U	13.8 U	13.6 U
Naphthalene	--	--	--	--	14.4 U	**435**	--
o-Xylene	159 U	16.8 U	14.5 U	14.5 U	14.4 U	13.8 U	13.6 U
Toluene	159 U	16.8 U	14.5 U	14.5 U	14.4 U	13.8 U	13.6 U
Trichloroethene (TCE)	15.9 U	16.8 U	14.5 U	14.5 U	**392**	13.8 U	13.6 U
Vinyl chloride	15.9 U	16.8 U	14.5 U	14.5 U	**54.8**	13.8 U	13.6 U
LWG RA Total Xylene (Calculated U = 1/2)	319 UT	33.6 UT	28.9 UT	29.1 UT	28.7 UT	27.6 UT	27.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**205**	**611**	96.5 U	96.9 U	--	92.1 U	**950**
Acenaphthene	**1300**	**5590**	**14.5**	9.69 U	--	9.21 U	**1230**
Acenaphthylene	**129**	**1850**	9.64 U	9.69 U	--	9.21 U	**527**
Anthracene	**1120**	**5230**	9.64 U	9.69 U	--	9.21 U	**732**
Benzo(a)anthracene	**1280**	**7560**	**37.6**	9.69 U	--	**15.7**	**727**
Benzo(a)pyrene	**1670**	**13200**	**106**	9.69 U	--	**49.7**	**959**
Benzo(b)fluoranthene	**1510**	**10800**	**57.8**	9.69 U	--	**42.4**	**806**
Benzo(g,h,i)perylene	**1330**	**13900**	**161**	9.69 U	--	**38.7**	**1060**
Benzo(k)fluoranthene	**459**	**2000**	**16.4**	9.69 U	--	**12.9**	**233**
Chrysene	**1440**	**7410**	**37.6**	9.69 U	--	**16.6**	**825**
Dibenzo(a,h)anthracene	**217**	**1040**	9.64 U	9.69 U	--	9.21 U	**132**
Fluoranthene	**3150**	**28000**	**288**	9.69 U	--	9.21 U	**2510**
Fluorene	**822**	**3040**	9.64 U	9.69 U	--	9.21 U	**665**
Indeno(1,2,3-c,d)pyrene	**1040**	**7810**	**57.8**	9.69 U	--	**28.5**	**721**
Naphthalene	**484**	**2750**	**171**	**10.7**	--	--	**3520**
Phenanthrene	**4410**	**27900**	**297**	9.69 U	--	9.21 U	**2880**
Pyrene	**3370**	**31400**	**385**	9.69 U	--	9.21 U	**2560**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**2280 T**	**17000 T**	**126 T**	9.69 UT	--	**63.1 T**	**1320 T**
Semivolatile Organics (µg/kg)							
Carbazole	106 U	**129**	96.5 U	96.9 U	--	92.1 U	**193**
Dibenzofuran	106 U	**265**	96.5 U	96.9 U	--	92.1 U	**99.9**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP26
Sample Name:	WLCSLH01GP25S26	WLCSLH01GP25S31	WLCSLH01GP25S36	WLCSLH01GP25S41	WLCSLH01GP25S91	WLCSLH01GP26S118	WLCSLH01GP26S23
Sample Date:	9/28/2004	9/28/2004	9/28/2004	9/28/2004	9/29/2004	10/5/2004	10/4/2004
Depth Interval:	792.5 - 807.7 cm	944.9 - 960.1 cm	1097 - 1112 cm	1250 - 1265 cm	2774 - 2789 cm	3597 - 3612 cm	701 - 716.2 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27
Sample Name:	WLCSLH01GP26S28	WLCSLH01GP26S58	WLCSLH01GP26S63	WLCSLH01GP26S83	WLCSLH01GP27S100	WLCSLH01GP27S20	WLCSLH01GP27S25
Sample Date:	10/4/2004	10/4/2004	10/4/2004	10/4/2004	10/11/2004	10/7/2004	10/7/2004
Depth Interval:	853.4 - 868.6 cm	1768 - 1783 cm	1920 - 1935 cm	2530 - 2545 cm	3048 - 3063 cm	609.6 - 624.8 cm	762 - 777.2 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	13.9 U	13.5 U	--	13.2 U	--	13.1 U	13.1 U
1,2-Dichloroethene, cis-	13.9 U	13.5 U	--	13.2 U	--	13.1 U	13.1 U
1,2-Dichloroethene, trans-	13.9 U	13.5 U	--	13.2 U	--	13.1 U	13.1 U
Benzene	13.9 U	13.5 U	--	13.2 U	--	13.1 U	13.1 U
Ethylbenzene	13.9 U	13.5 U	--	13.2 U	--	13.1 U	1310 U
Naphthalene	--	**457**	--	--	--	**93.9**	--
o-Xylene	13.9 U	13.5 U	--	13.2 U	--	13.1 U	1310 U
Toluene	13.9 U	13.5 U	--	13.2 U	--	13.1 U	1310 U
Trichloroethene (TCE)	13.9 U	13.5 U	--	13.2 U	--	13.1 U	13.1 U
Vinyl chloride	13.9 U	13.5 U	--	13.2 U	--	13.1 U	13.1 U
LWG RA Total Xylene (Calculated U = 1/2)	27.7 UT	27.1 UT	--	26.4 UT	--	26.1 UT	2620 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	92.5 U	**99.2**	89.5 U	88 U	84.1 U	87.2 U	87.5 U
Acenaphthene	**161**	**163**	8.95 U	**19.3**	8.41 U	**15.7**	**14.9**
Acenaphthylene	**98**	**16.2**	8.95 U	**15.8**	8.41 U	8.72 U	8.75 U
Anthracene	**134**	**107**	8.95 U	**26.4**	8.41 U	8.72 U	8.75 U
Benzo(a)anthracene	**186**	**52.3**	8.95 U	**25.5**	**16**	8.72 U	8.75 U
Benzo(a)pyrene	**317**	**101**	8.95 U	**27.3**	**16**	8.72 U	8.75 U
Benzo(b)fluoranthene	**257**	**60.4**	8.95 U	**27.3**	**16.8**	8.72 U	8.75 U
Benzo(g,h,i)perylene	**429**	**122**	8.95 U	**22**	**14.3**	8.72 U	8.75 U
Benzo(k)fluoranthene	**37**	**19.8**	8.95 U	**24.6**	**15.1**	8.72 U	8.75 U
Chrysene	**223**	**109**	8.95 U	**22**	**13.5**	8.72 U	8.75 U
Dibenzo(a,h)anthracene	**15.7**	9.03 U	8.95 U	**25.5**	**15.1**	8.72 U	8.75 U
Fluoranthene	**468**	**324**	**16.1**	**33.4**	**11.8**	**13.9**	**14.9**
Fluorene	**95.7**	**93.4**	8.95 U	**24.6**	8.41 U	8.72 U	8.75 U
Indeno(1,2,3-c,d)pyrene	**263**	**35.2**	8.95 U	**23.7**	**15.1**	8.72 U	8.75 U
Naphthalene	**466**	--	**12.5**	**22**	8.41 U	--	**77**
Phenanthrene	**656**	**615**	**27.7**	**29.9**	8.41 U	**25.3**	**24.5**
Pyrene	**928**	**396**	**16.1**	**29.9**	**11.8**	**13.1**	**13.1**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**404 T**	**121 T**	8.95 UT	**60.7 T**	**36.1 T**	8.72 UT	8.75 UT
Semivolatile Organics (µg/kg)							
Carbazole	92.5 U	90.2 U	89.5 U	88 U	84.1 U	87.2 U	87.5 U
Dibenzofuran	92.5 U	90.3 U	89.5 U	88 U	84.1 U	87.2 U	87.5 U
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27
Sample Name:	WLCSLH01GP26S28	WLCSLH01GP26S58	WLCSLH01GP26S63	WLCSLH01GP26S83	WLCSLH01GP27S100	WLCSLH01GP27S20	WLCSLH01GP27S25
Sample Date:	10/4/2004	10/4/2004	10/4/2004	10/4/2004	10/11/2004	10/7/2004	10/7/2004
Depth Interval:	853.4 - 868.6 cm	1768 - 1783 cm	1920 - 1935 cm	2530 - 2545 cm	3048 - 3063 cm	609.6 - 624.8 cm	762 - 777.2 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP28
Sample Name:	WLCSLH01GP27S30	WLCSLH01GP27S35	WLCSLH01GP27S40	WLCSLH01GP27S45	WLCSLH01GP27S50	WLCSLH01GP27S55	WLCSLH01GP27S60	WLCSLH01GP28S20
Sample Date:	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/13/2004
Depth Interval:	914.4 - 929.6 cm	1067 - 1082 cm	1219 - 1234 cm	1372 - 1387 cm	1524 - 1539 cm	1676 - 1691 cm	1829 - 1844 cm	609.6 - 624.8 cm
Conventional Parameters (mg/kg)								
Cyanide, total	--	--	--	--	--	--	--	--
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Volatile Organics (µg/kg)								
1,1-Dichloroethene	13.3 U	1470 U	15.8 U	151 U	14.8 U	14.5 U	--	17.5 U
1,2-Dichloroethene, cis-	13.3 U	1470 U	15.8 U	151 U	14.8 U	14.5 U	--	17.5 U
1,2-Dichloroethene, trans-	13.3 U	1470 U	15.8 U	151 U	14.8 U	14.5 U	--	17.5 U
Benzene	13.3 U	1470 U	15.8 U	**14.5**	14.8 U	14.5 U	--	17.5 U
Ethylbenzene	1330 U	1470 U	1580 U	1510 U	148 U	145 U	--	17.5 U
Naphthalene	--	--	--	--	--	**46**	--	--
o-Xylene	1330 U	1470 U	1580 U	1510 U	148 U	145 U	--	17.5 U
Toluene	1330 U	1470 U	1580 U	1510 U	148 U	145 U	--	17.5 U
Trichloroethene (TCE)	13.3 U	1470 U	15.8 U	151 U	14.8 U	14.5 U	--	17.5 U
Vinyl chloride	13.3 U	1470 U	15.8 U	151 U	14.8 U	14.5 U	--	17.5 U
LWG RA Total Xylene (Calculated U = 1/2)	2660 UT	2950 UT	3160 UT	3010 UT	295 UT	290 UT	--	35.1 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	88.6 U	98.2 U	106 U	100 U	98.5 U	96.8 U	87.4 U	**3610**
Acenaphthene	8.86 U	9.82 U	10.6 U	10 U	9.85 U	9.68 U	**10.5**	**11400**
Acenaphthylene	8.86 U	9.82 U	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**560**
Anthracene	8.86 U	9.82 U	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**11700**
Benzo(a)anthracene	8.86 U	9.82 U	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**10800**
Benzo(a)pyrene	**9.74**	9.82 U	10.6 U	10 U	**107**	9.68 U	8.74 U	**17100**
Benzo(b)fluoranthene	**10.6**	9.82 U	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**14700**
Benzo(g,h,i)perylene	8.86 U	9.82 U	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**12700**
Benzo(k)fluoranthene	8.86 U	9.82 U	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**4570**
Chrysene	8.86 U	9.82 U	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**11800**
Dibenzo(a,h)anthracene	8.86 U	9.82 U	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**1610**
Fluoranthene	**21.2**	9.82 U	**153**	**11**	9.85 U	9.68 U	**10.5**	**42700**
Fluorene	8.86 U	9.82 U	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**10300**
Indeno(1,2,3-c,d)pyrene	8.86 U	9.82 U	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**8210**
Naphthalene	**161**	9.82 U	**166**	**21.1**	**19.7**	--	**52.4**	**614**
Phenanthrene	**22.1**	9.82 U	**328**	**18.1**	9.85 U	9.68 U	**21**	**63000**
Pyrene	**23**	9.82 U	**193**	**11**	9.85 U	9.68 U	**10.5**	**41300**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**16.2 T**	9.82 UT	10.6 UT	10 UT	**113 T**	9.68 UT	8.74 UT	**22100 T**
Semivolatile Organics (µg/kg)								
Carbazole	88.5 U	98.2 U	105 U	100 U	98.5 U	96.8 U	87.4 U	**730**
Dibenzofuran	88.6 U	98.2 U	106 U	100 U	98.5 U	96.8 U	87.4 U	**864**
PCB Aroclors (µg/kg)								
Aroclor 1016	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP28
Sample Name:	WLCSLH01GP27S30	WLCSLH01GP27S35	WLCSLH01GP27S40	WLCSLH01GP27S45	WLCSLH01GP27S50	WLCSLH01GP27S55	WLCSLH01GP27S60	WLCSLH01GP28S20
Sample Date:	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/13/2004
Depth Interval:	914.4 - 929.6 cm	1067 - 1082 cm	1219 - 1234 cm	1372 - 1387 cm	1524 - 1539 cm	1676 - 1691 cm	1829 - 1844 cm	609.6 - 624.8 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29
Sample Name:	WLCSLH01GP28S25	WLCSLH01GP28S30	WLCSLH01GP28S35	WLCSLH01GP29S27	WLCSLH01GP29S32	WLCSLH01GP29S37	WLCSLH01GP29S42
Sample Date:	10/13/2004	10/13/2004	10/13/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004
Depth Interval:	762 - 777.2 cm	914.4 - 929.6 cm	1067 - 1082 cm	823 - 838.2 cm	975.4 - 990.6 cm	1128 - 1143 cm	1280 - 1295 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	16.2 U	16.6 U	14.6 U	13.2 U	12.6 U	13.9 U	13.4 U
1,2-Dichloroethene, cis-	16.2 U	16.6 U	14.6 U	13.2 U	12.6 U	13.9 U	13.4 U
1,2-Dichloroethene, trans-	16.2 U	16.6 U	14.6 U	13.2 U	12.6 U	13.9 U	13.4 U
Benzene	16.2 U	16.6 U	14.6 U	13.2 U	12.6 U	13.9 U	13.4 U
Ethylbenzene	16.2 U	16.6 U	14.6 U	13.2 U	12.6 U	13.9 U	13.4 U
Naphthalene	--	--	--	**184**	--	--	**84.5**
o-Xylene	16.2 U	16.6 U	14.6 U	13.2 U	12.6 U	13.9 U	13.4 U
Toluene	16.2 U	16.6 U	14.6 U	13.2 U	12.6 U	13.9 U	13.4 U
Trichloroethene (TCE)	16.2 U	16.6 U	14.6 U	13.2 U	12.6 U	13.9 U	13.4 U
Vinyl chloride	16.2 U	16.6 U	14.6 U	13.2 U	12.6 U	13.9 U	13.4 U
LWG RA Total Xylene (Calculated U = 1/2)	32.4 UT	33.1 UT	29.2 UT	26.4 UT	25.2 UT	27.9 UT	26.8 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**1320**	**746**	97.2 U	88 U	83.9 U	92.9 U	89.3 U
Acenaphthene	**3930**	**1670**	9.72 U	**45.7**	**164**	9.29 U	**51.8**
Acenaphthylene	**454**	**789**	9.72 U	8.8 U	**9.22**	9.29 U	8.93 U
Anthracene	**6470**	**1600**	9.72 U	**10.6**	**64.6**	9.29 U	**17**
Benzo(a)anthracene	**8000**	**5410**	9.72 U	**12.3**	**48.6**	9.29 U	**17**
Benzo(a)pyrene	**12200**	**11100**	9.72 U	**14.1**	**85.5**	9.29 U	**19.6**
Benzo(b)fluoranthene	**10800**	**9700**	9.72 U	**13.2**	**50.3**	9.29 U	**17**
Benzo(g,h,i)perylene	**8370**	**7570**	9.72 U	**9.67**	**85.1**	9.29 U	**12.5**
Benzo(k)fluoranthene	**3300**	**2780**	9.72 U	8.8 U	**15.9**	9.29 U	8.93 U
Chrysene	**7290**	**5380**	9.72 U	**11.4**	**96.9**	9.29 U	**16.1**
Dibenzo(a,h)anthracene	**1180**	**839**	9.72 U	8.8 U	8.39 U	9.29 U	8.93 U
Fluoranthene	**27300**	**18500**	9.72 U	**99.8**	**314**	9.29 U	**63.4**
Fluorene	**3340**	**937**	9.72 U	**20.2**	**84.7**	9.29 U	**25.9**
Indeno(1,2,3-c,d)pyrene	**6360**	**5530**	9.72 U	8.8 U	**24.3**	9.29 U	8.93 U
Naphthalene	**345**	**662**	9.72 U	--	**152**	**41.8**	--
Phenanthrene	**27900**	**8600**	9.72 U	**162**	**541**	**12.1**	**129**
Pyrene	**28200**	**21600**	**17.5**	**120**	**382**	9.29 U	**96.8**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**16000 T**	**14000 T**	9.72 UT	**22 T**	**102 T**	9.29 UT	**28 T**
Semivolatile Organics (µg/kg)							
Carbazole	**249**	**169**	97.2 U	88 U	83.9 U	92.9 U	89.3 U
Dibenzofuran	**335**	110 U	97.2 U	88 U	83.9 U	92.9 U	89.3 U
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29
Sample Name:	WLCSLH01GP28S25	WLCSLH01GP28S30	WLCSLH01GP28S35	WLCSLH01GP29S27	WLCSLH01GP29S32	WLCSLH01GP29S37	WLCSLH01GP29S42
Sample Date:	10/13/2004	10/13/2004	10/13/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004
Depth Interval:	762 - 777.2 cm	914.4 - 929.6 cm	1067 - 1082 cm	823 - 838.2 cm	975.4 - 990.6 cm	1128 - 1143 cm	1280 - 1295 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29
Sample Name:	WLCSLH01GP29S47	WLCSLH01GP29S52	WLCSLH01GP29S57	WLCSLH01GP29S62	WLCSLH01GP29S67	WLCSLH01GP29S72	WLCSLH01GP29S77
Sample Date:	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004
Depth Interval:	1433 - 1448 cm	1585 - 1600 cm	1737 - 1752 cm	1890 - 1905 cm	2042 - 2057 cm	2195 - 2210 cm	2347 - 2362 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	13.6 U	14.9 U	15.6 U	15.5 U	12.8 U	12.6 U	14.4 U
1,2-Dichloroethene, cis-	13.6 U	14.9 U	15.6 U	15.5 U	**16.9**	**170**	**147**
1,2-Dichloroethene, trans-	13.6 U	14.9 U	15.6 U	15.5 U	12.8 U	12.6 U	14.4 U
Benzene	13.6 U	14.9 U	15.6 U	15.5 U	12.8 U	12.6 U	14.4 U
Ethylbenzene	13.6 U	14.9 U	15.6 U	15.5 U	12.8 U	12.6 U	14.4 U
Naphthalene	--	--	--	--	**195**	**295**	--
o-Xylene	13.6 U	14.9 U	15.6 U	15.5 U	12.8 U	12.6 U	14.4 U
Toluene	13.6 U	14.9 U	15.6 U	15.5 U	12.8 U	12.6 U	14.4 U
Trichloroethene (TCE)	13.6 U	14.9 U	15.6 U	15.5 U	12.8 U	12.6 U	14.4 U
Vinyl chloride	13.6 U	14.9 U	15.6 U	**51.7**	12.8 U	12.6 U	**48.8**
LWG RA Total Xylene (Calculated U = 1/2)	27.3 UT	29.8 UT	31.2 UT	31 UT	25.7 UT	25.3 UT	28.7 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	91 U	99.4 U	104 U	103 U	85.6 U	84.2 U	95.8 U
Acenaphthene	9.1 U	9.94 U	6.67 U	6.67 U	**56.5**	**13.5**	**21.1**
Acenaphthylene	9.1 U	9.94 U	6.67 U	6.67 U	8.56 U	8.42 U	9.58 U
Anthracene	9.1 U	9.94 U	6.67 U	6.67 U	**15.4**	8.42 U	9.58 U
Benzo(a)anthracene	9.1 U	9.94 U	6.67 U	6.67 U	**17.1**	8.42 U	9.58 U
Benzo(a)pyrene	9.1 U	9.94 U	104 U	103 U	**19.7**	8.42 U	9.58 U
Benzo(b)fluoranthene	9.1 U	9.94 U	6.67 U	6.67 U	**16.3**	8.42 U	9.58 U
Benzo(g,h,i)perylene	9.1 U	9.94 U	6.67 U	6.67 U	**13.7**	8.42 U	9.58 U
Benzo(k)fluoranthene	9.1 U	9.94 U	6.67 U	6.67 U	8.56 U	8.42 U	9.58 U
Chrysene	9.1 U	9.94 U	6.67 U	6.67 U	**17.1**	8.42 U	9.58 U
Dibenzo(a,h)anthracene	9.1 U	9.94 U	6.67 U	6.67 U	8.56 U	8.42 U	9.58 U
Fluoranthene	9.1 U	9.94 U	6.67 U	6.67 U	**74.5**	**31.1**	**97.2**
Fluorene	9.1 U	9.94 U	6.67 U	6.67 U	**28.2**	**10.1**	9.58 U
Indeno(1,2,3-c,d)pyrene	9.1 U	9.94 U	6.67 U	6.67 U	**10.3**	8.42 U	9.58 U
Naphthalene	9.1 U	**52.7**	6.67 U	**115**	--	--	**334**
Phenanthrene	9.1 U	**14.9**	6.67 U	**8.67**	**149**	**63.1**	**195**
Pyrene	9.1 U	9.94 U	6.67 U	6.67 U	**89.9**	**32**	**107**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	9.1 UT	9.94 UT	104 UT	103 UT	**28.4 T**	8.42 UT	9.58 UT
Semivolatile Organics (µg/kg)							
Carbazole	91 U	99.4 U	104 U	103 U	85.6 U	84.2 U	95.8 U
Dibenzofuran	91 U	99.4 U	104 U	103 U	85.6 U	84.2 U	95.8 U
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29
Sample Name:	WLCSLH01GP29S47	WLCSLH01GP29S52	WLCSLH01GP29S57	WLCSLH01GP29S62	WLCSLH01GP29S67	WLCSLH01GP29S72	WLCSLH01GP29S77
Sample Date:	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004
Depth Interval:	1433 - 1448 cm	1585 - 1600 cm	1737 - 1752 cm	1890 - 1905 cm	2042 - 2057 cm	2195 - 2210 cm	2347 - 2362 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	H:_Long_Composite
System Location Code:	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP32	DGS-07SC
Sample Name:	WLCSLH01GP30S23	WLCSLH01GP31S22	WLCSLH01GP31S27	WLCSLH01GP31S32	WLCSLH01GP31S37	WLCSLH01GP32S21	DGS-07SC-0113.4-101012
Sample Date:	10/22/2004	10/26/2004	10/26/2004	10/26/2004	10/26/2004	10/27/2004	10/12/2010
Depth Interval:	701 - 716.2 cm	670.6 - 685.8 cm	823 - 838.2 cm	975.4 - 990.6 cm	1128 - 1143 cm	640.1 - 655.3 cm	30.48 - 408.43 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	**67**
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	**155**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	13.5 U	13.1 U	13.2 U	12.4 U	13 U	14.5 U	**-- R**
1,2-Dichloroethene, cis-	**127**	13.1 U	13.2 U	12.4 U	13 U	14.5 U	**-- R**
1,2-Dichloroethene, trans-	13.5 U	13.1 U	13.2 U	12.4 U	13 U	14.5 U	**-- R**
Benzene	13.5 U	13.1 U	13.2 U	12.4 U	13 U	14.5 U	**130 J**
Ethylbenzene	13.5 U	13.1 U	13.2 U	12.4 U	13 U	14.5 U	**3400 J**
Naphthalene	--	**19**	--	**15.5**	--	--	--
o-Xylene	13.5 U	13.1 U	13.2 U	12.4 U	13 U	14.5 U	**580 J**
Toluene	13.5 U	13.1 U	13.2 U	12.4 U	13 U	14.5 U	**25 J**
Trichloroethene (TCE)	13.5 U	13.1 U	13.2 U	12.4 U	13 U	14.5 U	**-- R**
Vinyl chloride	**14.7**	13.1 U	13.2 U	12.4 U	13 U	14.5 U	**-- R**
LWG RA Total Xylene (Calculated U = 1/2)	27 UT	26.1 UT	26.3 UT	24.9 UT	26 UT	29 UT	**860 JT**
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**111**	87.2 U	87.8 U	83 U	87 U	104 U	**48000**
Acenaphthene	8.99 U	**16.6**	8.78 U	**9.95**	**14.8**	10.4 U	**46000**
Acenaphthylene	8.99 U	8.72 U	8.78 U	8.3 U	8.7 U	10.4 U	**1800**
Anthracene	8.99 U	8.72 U	8.78 U	8.3 U	**9.56**	10.4 U	**35000**
Benzo(a)anthracene	8.99 U	8.72 U	8.78 U	8.3 U	**11.3**	10.4 U	**34000**
Benzo(a)pyrene	8.99 U	8.72 U	8.78 U	8.3 U	**14.8**	10.4 U	**39000**
Benzo(b)fluoranthene	8.99 U	8.72 U	8.78 U	8.3 U	**13**	10.4 U	--
Benzo(g,h,i)perylene	8.99 U	8.72 U	8.78 U	8.3 U	**11.3**	10.4 U	**17000**
Benzo(k)fluoranthene	8.99 U	8.72 U	8.78 U	8.3 U	8.7 U	10.4 U	--
Chrysene	8.99 U	8.72 U	8.78 U	8.3 U	**11.3**	10.4 U	**39000**
Dibenzo(a,h)anthracene	8.99 U	8.72 U	8.78 U	8.3 U	8.7 U	10.4 U	**1000**
Fluoranthene	8.99 U	**19.2**	8.78 U	**11.6**	**38.2**	10.4 U	**120000**
Fluorene	8.99 U	**9.59**	8.78 U	8.3 U	**9.56**	10.4 U	**30000**
Indeno(1,2,3-c,d)pyrene	8.99 U	8.72 U	8.78 U	8.3 U	8.7 U	10.4 U	**15000**
Naphthalene	**539**	--	8.78 U	--	**28.7**	10.4 U	**87000**
Phenanthrene	**164**	**34**	8.78 U	**21.6**	**61.7**	**195**	**220000**
Pyrene	**102**	**17.4**	8.78 U	**10.8**	**34.8**	**122**	**130000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	8.99 UT	8.72 UT	8.78 UT	8.3 UT	**22 T**	10.4 UT	**50000 T**
Semivolatile Organics (µg/kg)							
Carbazole	89.9 U	87.2 U	87.7 U	82.9 U	86.9 U	104 U	**6000**
Dibenzofuran	89.9 U	87.2 U	87.8 U	83 U	87 U	104 U	**4500**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	32 U
Aroclor 1221	--	--	--	--	--	--	32 U
Aroclor 1232	--	--	--	--	--	--	32 U
Aroclor 1242	--	--	--	--	--	--	32 U
Aroclor 1248	--	--	--	--	--	--	32 U
Aroclor 1254	--	--	--	--	--	--	32 U
Aroclor 1260	--	--	--	--	--	--	**38**

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	H:_Long_Composite
System Location Code:	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP32	DGS-07SC
Sample Name:	WLCSLH01GP30S23	WLCSLH01GP31S22	WLCSLH01GP31S27	WLCSLH01GP31S32	WLCSLH01GP31S37	WLCSLH01GP32S21	DGS-07SC-0113.4-101012
Sample Date:	10/22/2004	10/26/2004	10/26/2004	10/26/2004	10/26/2004	10/27/2004	10/12/2010
Depth Interval:	701 - 716.2 cm	670.6 - 685.8 cm	823 - 838.2 cm	975.4 - 990.6 cm	1128 - 1143 cm	640.1 - 655.3 cm	30.48 - 408.43 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	**130 T**
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	16 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	16 U
Endrin ketone	--	--	--	--	--	--	33 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	16 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	**240 JT**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	33 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	33 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	**3300**
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	GTC-04	GTC-04	GTC-06	GTC-06	GTC-09	GTC-09	LWM-C11
Sample Name:	GTC-04SC-090113RE	GTC-04SC-090114	GTC-06SC-090113RE	GTC-06SC-090114	GTC-09SC-090113RE	GTC-09SC-090114	LWM-METCS11
Sample Date:	1/14/2009	1/14/2009	1/14/2009	1/14/2009	1/14/2009	1/14/2009	8/28/2008
Depth Interval:	0 - 374.9 cm	0 - 374.9 cm	0 - 362.71 cm	0 - 362.71 cm	100.58 - 426.72 cm	100.58 - 426.72 cm	0 - 386 cm
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	4.43 JT
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	122 J
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	--	460 U	--	390 U	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	460 U	--	390 U	--	--
Benzene	330	570 U	1600	--	770	--	--
Ethylbenzene	760	570 U	4300	--	10000	--	--
Naphthalene	--	--	5600000	--	1100000	--	--
o-Xylene	470	570 U	1600	--	3200	--	--
Toluene	180 U	570 U	880	--	390 U	--	--
Trichloroethene (TCE)	--	--	460 U	--	390 U	--	--
Vinyl chloride	--	--	460 U	--	390 U	--	--
LWG RA Total Xylene (Calculated U = 1/2)	690 T	570 UT	4500 T	--	6600 T	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	18000	--	750000	--	250000	680000
Acenaphthene	--	66000	--	750000	--	290000	460000
Acenaphthylene	--	970 J	--	14000	--	3500	160000
Anthracene	--	50000	--	380000	--	110000	210000
Benzo(a)anthracene	--	42000	--	240000	--	73000	160000
Benzo(a)pyrene	--	57000	--	290000	--	79000	200000
Benzo(b)fluoranthene	--	37000	--	160000	--	50000	120000
Benzo(g,h,i)perylene	--	36000	--	160000	--	41000	71000 J
Benzo(k)fluoranthene	--	26000	--	180000	--	45000	69000 J
Chrysene	--	50000	--	300000	--	85000	210000
Dibenzo(a,h)anthracene	--	4600	--	26000	--	7600	19000 J
Fluoranthene	--	180000	--	980000	--	280000	550000
Fluorene	--	26000	--	360000	--	110000	260000
Indeno(1,2,3-c,d)pyrene	--	26000	--	120000	--	32000	63000 J
Naphthalene	--	38000	--	3100000	--	850000	3200000
Phenanthrene	--	270000	--	2400000	--	700000	1200000
Pyrene	--	260000	--	1400000	--	380000	730000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	72000 T	--	370000 T	--	100000 T	250000 JT
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	67000
Dibenzofuran	--	2500	--	50000	--	14000	32000 J
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	9.8 U
Aroclor 1221	--	--	--	--	--	--	9.8 U
Aroclor 1232	--	--	--	--	--	--	9.8 U
Aroclor 1242	--	--	--	--	--	--	37 U
Aroclor 1248	--	--	--	--	--	--	9.8 U
Aroclor 1254	--	--	--	--	--	--	120 U
Aroclor 1260	--	--	--	--	--	--	24 U

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	GTC-04	GTC-04	GTC-06	GTC-06	GTC-09	GTC-09	LWM-C11
Sample Name:	GTC-04SC-090113RE	GTC-04SC-090114	GTC-06SC-090113RE	GTC-06SC-090114	GTC-09SC-090113RE	GTC-09SC-090114	LWM-METCS11
Sample Date:	1/14/2009	1/14/2009	1/14/2009	1/14/2009	1/14/2009	1/14/2009	8/28/2008
Depth Interval:	0 - 374.9 cm	0 - 374.9 cm	0 - 362.71 cm	0 - 362.71 cm	100.58 - 426.72 cm	100.58 - 426.72 cm	0 - 386 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	**0.207 J**
PCB-081	--	--	--	--	--	--	0.0601 U
PCB-105	--	--	--	--	--	--	**0.836**
PCB-114	--	--	--	--	--	--	**0.0867 J**
PCB-123	--	--	--	--	--	--	0.118 U
PCB-126	--	--	--	--	--	--	0.0746 U
PCB-156	--	--	--	--	--	--	**0.341**
PCB-157	--	--	--	--	--	--	**0.0885 J**
PCB-167	--	--	--	--	--	--	**0.154 J**
PCB-169	--	--	--	--	--	--	0.0836 U
PCB-189	--	--	--	--	--	--	**0.0962 J**
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	**95 JT**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	**0.00506 JT**
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	49 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	49 U
Endrin ketone	--	--	--	--	--	--	99 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	49 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	99 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	99 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	99 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	**18000 J**
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	LWM-TCLP11A	LWM-TCLP11B	LWM-TCLP11C	WLCDRD05VC056	WLCGSG04RAA02	WLCGSG04RAA04
Sample Name:	LWM-TCLPC11A	LWM-TCLPC11B	LWM-TCLPC11C	WLCDRD05VC05656	WLCGSG04RAA02SD1019	WLCGSG04RAA04SD062
Sample Date:	8/27/2008	8/27/2008	8/28/2008	5/4/2005	7/20/2004	7/21/2004
Depth Interval:	0 - 322 cm	0 - 363 cm	0 - 325 cm	0 - 265 cm	304.8 - 579.12 cm	182.88 - 609.6 cm
Conventional Parameters (mg/kg)						
Cyanide, total	--	--	--	--	**0.08 J**	--
Metals (mg/kg)						
Zinc	--	--	--	**110 J**	**64.1**	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	1.6 U	5400 U	86 U	--	8.1 U	--
1,2-Dichloroethene, cis-	--	--	--	--	8.1 U	--
1,2-Dichloroethene, trans-	--	--	--	--	8.1 U	--
Benzene	1.6 U	**180000**	**210**	--	**290**	**2.2 J**
Ethylbenzene	--	--	--	--	**53**	7.8 U
Naphthalene	--	--	--	--	--	--
o-Xylene	--	--	--	--	**13**	7.8 U
Toluene	--	--	--	--	**3.2 J**	7.8 U
Trichloroethene (TCE)	1.6 U	5400 U	86 U	--	8.1 U	--
Vinyl chloride	1.6 U	5400 U	86 U	--	8.1 U	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	**38 T**	7.8 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	--	--	--	**130**	**65000**	--
Acenaphthene	--	--	--	**780**	**200000**	--
Acenaphthylene	--	--	--	**87**	**9900**	--
Anthracene	--	--	--	**1100**	**95000**	--
Benzo(a)anthracene	--	--	--	**1300**	**89000**	--
Benzo(a)pyrene	--	--	--	**1900**	**130000**	--
Benzo(b)fluoranthene	--	--	--	**1100**	**110000**	--
Benzo(g,h,i)perylene	--	--	--	**1700**	**120000**	--
Benzo(k)fluoranthene	--	--	--	**910**	**36000**	--
Chrysene	--	--	--	**1600**	**110000**	--
Dibenzo(a,h)anthracene	--	--	--	**160**	**12000**	--
Fluoranthene	--	--	--	**4800**	**330000**	--
Fluorene	--	--	--	**700**	**60000**	--
Indeno(1,2,3-c,d)pyrene	--	--	--	**1500**	**100000**	--
Naphthalene	--	--	--	**200**	**640000**	--
Phenanthrene	--	--	--	**5900**	**440000**	--
Pyrene	--	--	--	**5800**	**400000**	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	--	--	**2500 T**	**170000 T**	--
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	**30**	--	--
Dibenzofuran	--	--	--	**79**	**5600**	--
PCB Aroclors (µg/kg)						
Aroclor 1016	--	--	--	32 U	--	--
Aroclor 1221	--	--	--	53 U	--	--
Aroclor 1232	--	--	--	59 U	--	--
Aroclor 1242	--	--	--	43 U	--	--
Aroclor 1248	--	--	--	30 U	--	--
Aroclor 1254	--	--	--	720 U	--	--
Aroclor 1260	--	--	--	68 U	--	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	LWM-TCLP11A	LWM-TCLP11B	LWM-TCLP11C	WLCDRD05VC056	WLCGSG04RAA02	WLCGSG04RAA04
Sample Name:	LWM-TCLPC11A	LWM-TCLPC11B	LWM-TCLPC11C	WLCDRD05VC05656	WLCGSG04RAA02SD1019	WLCGSG04RAA04SD062
Sample Date:	8/27/2008	8/27/2008	8/28/2008	5/4/2005	7/20/2004	7/21/2004
Depth Interval:	0 - 322 cm	0 - 363 cm	0 - 325 cm	0 - 265 cm	304.8 - 579.12 cm	182.88 - 609.6 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	720 UT	--	--
PCB Congeners (µg/kg)						
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
alpha-Hexachlorocyclohexane (BHC)	--	--	--	0.27 U	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	0.86 U	--	--
Endrin ketone	--	--	--	1 U	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	16 U	160 U	160 U	0.85 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	**1100 T**	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	160 UT	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	**510 T**	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	**540 J**	**8800**	--
Residual Range Hydrocarbons	--	--	--	**1000 J**	**8100**	--

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	WLCGSG04RAA05	WLCGSG04RAA08	WLCGSG04RAA17	WLCMRD08SDDA18SB
Sample Name:	WLCGSG04RAA05SD1020	WLCGSG04RAA08SD072	WLCGSG04RAA17SD0010	WLCMRD08DA18-2
Sample Date:	7/22/2004	7/21/2004	7/22/2004	4/20/2008
Depth Interval:	304.8 - 609.6 cm	213.36 - 609.6 cm	0 - 304.8 cm	30.48 - 335.28 cm
Conventional Parameters (mg/kg)				
Cyanide, total	0.2 UJ	**0.04 J**	**0.14 J**	**1.83 J**
Metals (mg/kg)				
Zinc	**51.3**	**43.3**	**64.5**	**165**
Volatile Organics (µg/kg)				
1,1-Dichloroethene	--	--	800 U	--
1,2-Dichloroethene, cis-	--	--	800 U	--
1,2-Dichloroethene, trans-	--	--	800 U	--
Benzene	--	**2.9 J**	800 U	--
Ethylbenzene	--	7.4 U	**1600**	--
Naphthalene	--	--	--	--
o-Xylene	--	7.4 U	**330 J**	--
Toluene	--	**1.9 J**	800 U	--
Trichloroethene (TCE)	--	--	800 U	--
Vinyl chloride	--	--	800 U	--
LWG RA Total Xylene (Calculated U = 1/2)	--	7.4 UT	**730 JT**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)				
2-Methylnaphthalene	**260**	**140**	**11000**	**4400**
Acenaphthene	**1000**	**200**	**61000**	**5400**
Acenaphthylene	**120**	**90**	**3400**	**270**
Anthracene	**780**	**140**	**32000**	**4200**
Benzo(a)anthracene	**940**	**140**	**29000**	**3700**
Benzo(a)pyrene	**1800**	**200**	**43000**	**5000**
Benzo(b)fluoranthene	**1100**	**120**	**37000**	**4100**
Benzo(g,h,i)perylene	**2000**	**160**	**38000**	**4200**
Benzo(k)fluoranthene	**980**	**110**	**10000**	**1400**
Chrysene	**1300**	**160**	**35000**	**4600**
Dibenzo(a,h)anthracene	**110**	**17**	**4100**	**520**
Fluoranthene	**4500**	**410**	**120000**	**12000**
Fluorene	**360**	**120**	**20000**	**3500**
Indeno(1,2,3-c,d)pyrene	**1700**	**160**	**31000**	**4000**
Naphthalene	**1100**	**650**	**96000**	**1400**
Phenanthrene	**4000**	**640**	**150000**	**20000**
Pyrene	**5700**	**480**	**140000**	**15000**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**2300 T**	**260 T**	**57000 T**	**6700 T**
Semivolatile Organics (µg/kg)				
Carbazole	--	--	--	**470**
Dibenzofuran	**36**	**18**	**1800**	**500**
PCB Aroclors (µg/kg)				
Aroclor 1016	--	--	--	2.5 U
Aroclor 1221	--	--	--	4.9 U
Aroclor 1232	--	--	--	2.5 U
Aroclor 1242	--	--	--	13 U
Aroclor 1248	--	--	--	2.5 U
Aroclor 1254	--	--	--	50 U
Aroclor 1260	--	--	--	**48 J**

Table 3-19
Existing Data Screening Table - Sub-surface Sediment (Category G and H) Human Health

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	WLCGSG04RAA05	WLCGSG04RAA08	WLCGSG04RAA17	WLCMRD08SDDA18SB
Sample Name:	WLCGSG04RAA05SD1020	WLCGSG04RAA08SD072	WLCGSG04RAA17SD0010	WLCMRD08DA18-2
Sample Date:	7/22/2004	7/21/2004	7/22/2004	4/20/2008
Depth Interval:	304.8 - 609.6 cm	213.36 - 609.6 cm	0 - 304.8 cm	30.48 - 335.28 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	**88 JT**
PCB Congeners (µg/kg)				
PCB-077	--	--	--	--
PCB-081	--	--	--	--
PCB-105	--	--	--	--
PCB-114	--	--	--	--
PCB-123	--	--	--	--
PCB-126	--	--	--	--
PCB-156	--	--	--	--
PCB-157	--	--	--	--
PCB-167	--	--	--	--
PCB-169	--	--	--	--
PCB-189	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--
Pesticides (µg/kg)				
alpha-Hexachlorocyclohexane (BHC)	--	--	--	**0.58 J**
beta-Hexachlorocyclohexane (BHC)	--	--	--	1 U
Endrin ketone	--	--	--	1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	**2.4 J**
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	**190 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	13 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	**56 T**
Total Petroleum Hydrocarbons (mg/kg)				
Diesel Range Hydrocarbons	**190**	**17 J**	**3400**	**900**
Residual Range Hydrocarbons	**420**	**39 J**	**3600**	**870**

Table 3-19
Existing Data Screening Table - Sub-surface (Category G H) Human Health

Notes:

Detected concentration is greater than 1 screening level

Detected concentration is greater than 2 screening levels

Detected concentration is greater than 3 screening levels

Detected concentration is greater than 4 screening levels

Detected concentration is greater than 5 screening levels

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R = Rejected

T = Result is the value of a total or calculation

-- = Results not reported or not applicable

N = Normal Field Sample

Acronyms:

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

BaPEq = benzo[a]pyrene equivalents

BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)

cPAH = carcinogenic PAH

cm = centimeters

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

HPAH = high molecular weight polycyclic aromatic hydrocarbon

LWG = Lower Willamette Group

MQ = mean quotient

NA = not applicable

PAH = polycyclic aromatic hydrocarbon

PCB = polychlorinated biphenyls

RA = Portland Harbor Site risk assessment

TEQ = toxic equivalents quotient

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GP27	GP27	GS-01	GS-01	GS-01	GS-01	GS-02	GS-02
Sample Name:	GP27-P	GP27-P	GS-01-S (20-23)	GS-01-S (45-48)	GS-01-S (45-48)	GS-01-S (20-23)	GS-02-S (20-23)	GS-02-S (45-48)
Sample Date:	10/8/2004	38268	12/21/2006	12/26/2006	39077.37847	39072.67014	12/27/2006	12/28/2006
Depth Interval:	2478.02 - 2478.02 cm	2478.02 - 2478.02 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	1371.6 - 1463.04 cm	609.6 - 701.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	**70.4**	**58.4**
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	**13900**	--	**1.7 J**	5.1 U	--	--	**7.7**	**6.2**
LWG RA Total HPAH (Calculated U = 1/2)	**172000 T**	--	**26 JT**	5.1 UT	--	--	**96 JT**	**63 JT**
LWG RA Total PAH (Calculated U = 1/2)	**460000 T**	--	**40 JT**	5.1 UT	--	--	**150 JT**	**79 JT**
Semivolatile Organics (µg/kg)								
Carbazole	**5070**	--	--	--	--	--	--	--
Dibenzofuran	**2910**	--	**0.3 J**	5.1 U	--	--	**0.61 J**	5 U
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	--	**20.35051393**	--	--	**0.101552446**	**0.212030872**	--	--
pMax	--	**0.908534119**	--	--	--	**0.389938576**	--	--

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GS-02	GS-02	GS-03	GS-03	GS-03	GS-03	GS-03	GS-03
Sample Name:	GS-02-S (45-48)	GS-02-S (20-23)	GS-03-S (120-122)	GS-03-S (20-23)	GS-03-S (45-48)	GS-03-S (95-98)	GS-03-S (45-48)	GS-03-S (95-98)
Sample Date:	39079.36806	39078.64583	12/19/2006	12/18/2006	12/19/2006	12/19/2006	39070.42361	39070.57986
Depth Interval:	1371.6 - 1463.04 cm	609.6 - 701.04 cm	3657.6 - 3718.56 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	--	5 U	**1.3 J**	4.9 U	5 U	--	--
LWG RA Total HPAH (Calculated U = 1/2)	--	--	5 UT	**19 JT**	4.9 UT	5 UT	--	--
LWG RA Total PAH (Calculated U = 1/2)	--	--	5 UT	**35 JT**	4.9 UT	5 UT	--	--
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	5 U	5 U	4.9 U	5 U	--	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	**0.066435629**	**0.257393572**	--	--	--	--	**0.374452996**	**0.01737013**
pMax	**0.014430978**	**0.440466643**	--	--	--	--	**0.198133792**	**0.028494938**

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GS-03	GS-10	GS-10	GS-10	GS-10	GS-10	GS-10	GS-11
Sample Name:	GS-03-S (20-23)	GS-10-S (20-23)	GS-10-S (45-48)	GS-10-S (95-98)	GS-10-S (45-48)	GS-10-S (95-98)	GS-10-S (20-23)	GS-11-S (120-123)
Sample Date:	39069.75347	1/2/2007	1/2/2007	1/3/2007	39084.63194	39085.40625	39084.58333	1/8/2007
Depth Interval:	609.6 - 701.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	609.6 - 701.04 cm	3657.6 - 3749.04 cm
Metals (mg/kg)								
Zinc	--	**62.2**	**49.9**	**53.6**	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	**280**	**0.86 J**	5 U	--	--	--	4.7 U
LWG RA Total HPAH (Calculated U = 1/2)	--	**3600 T**	**16 JT**	**18 JT**	--	--	--	**20 JT**
LWG RA Total PAH (Calculated U = 1/2)	--	**7300 T**	**39 JT**	**74 JT**	--	--	--	**34 JT**
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Dibenzofuran	--	**36**	**0.31 J**	**0.4 J**	--	--	--	**0.24 J**
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	**0.283270219**	--	--	--	**0.040410878**	**0.070652823**	**0.21005555**	--
pMax	**0.356555222**	--	--	--	**0.004251157**	**0.048380059**	**0.379327269**	--

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GS-11	GS-11	GS-11	GS-11	GS-11	GS-11	GS-11	GS-11
Sample Name:	GS-11-S (145-148)	GS-11-S (170-173)	GS-11-S (20-23)A	GS-11-S (45-48)	GS-11-S (95-98)	GS-11-S (45-48)	GS-11-S (95-98)	GS-11-S (120-123)
Sample Date:	1/8/2007	1/8/2007	1/5/2007	1/5/2007	1/8/2007	39087.5	39090.38542	39090.45486
Depth Interval:	4419.6 - 4511.04 cm	5181.6 - 5273.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	3657.6 - 3749.04 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	**0.31 J**	4.9 U	**8.3**	5 U	5 U	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	**16 JT**	**23 JT**	**120 T**	**21 JT**	**21 JT**	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	**29 JT**	**39 JT**	**220 JT**	**35 JT**	**38 JT**	--	--	--
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Dibenzofuran	4.9 U	4.9 U	**0.89 J**	5 U	5 U	--	--	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	--	--	--	--	--	**0.038271917**	**0.011562031**	**0.005362766**
pMax	--	--	--	--	--	--	**0.043728538**	**0.028494938**

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GS-11	GS-11	GS-11	GS-12	GS-12	GS-12	GS-12	GS-12
Sample Name:	GS-11-S (145-148)	GS-11-S (170-173)	GS-11-S (20-23)A	GS-12-S (20-23)	GS-12-S (45-48)	GS-12-S (95-98)	GS-12-S (45-48)	GS-12-S (95-98)
Sample Date:	39090.53819	39090.63542	39087.39583	1/10/2007	1/10/2007	1/11/2007	39092.58681	39093.4375
Depth Interval:	4419.6 - 4511.04 cm	5181.6 - 5273.04 cm	609.6 - 701.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm
Metals (mg/kg)								
Zinc	--	--	--	**56.9**	**49**	**49.2**	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	--	--	**4.5 J**	**1 J**	3.1 U	--	--
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	**54 JT**	**26 JT**	3.1 UT	--	--
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	**80 JT**	**38 JT**	**25 JT**	--	--
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	**0.44 J**	**0.36 J**	3.1 U	--	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	**0.005435622**	**0.007136712**	**0.018164385**	--	--	--	**0.051665304**	**0.058133747**
pMax	**0.022811649**	**0.028494938**	**0.020941436**	--	--	--	**0.003295932**	**0.001859276**

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GS-12	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS04
Sample Name:	GS-12-S (20-23)	WLCGSJ06GS04S4548	WLCGSJ06GS04S9598	WLCGSJ06GS04S2427	WLCGSJ06GS04S2427	WLCGSJ06GS04S4548	WLCGSJ06GS04S6970
Sample Date:	39092	39064	39064	39063	12/12/2006	12/13/2006	12/13/2006
Depth Interval:	609.6 - 701.04 cm	1372 - 1463 cm	2896 - 2987 cm	731.5 - 823 cm	731.5 - 823 cm	1372 - 1463 cm	2103 - 2134 cm
Metals (mg/kg)							
Zinc	--	--	--	--	**74**	**49.6**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	--	--	--	5 U	5 U	340 U
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	--	5 UT	**30 JT**	340 UT
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	--	**42 JT**	**43 JT**	340 UT
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	5 U	5 U	340 U
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	**0.061798582**	**0.044522412**	**0.077075261**	**0.060264185**	--	--	--
pMax	**0.069538073**	**0.001819205**	**0.001859276**	**0.002864098**	--	--	--

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS04	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05
Sample Name:	WLCGSJ06GS04S9598	WLCGSJ06GS05S4548	WLCGSJ06GS05S9598	WLCGSJ06GS05S120123	WLCGSJ06GS05S145148	WLCGSJ06GS05S170173	WLCGSJ06GS05S2022
Sample Date:	12/13/2006	39015	39016	39017	39017	39020	39015
Depth Interval:	2896 - 2987 cm	1372 - 1463 cm	2896 - 2987 cm	3658 - 3749 cm	4420 - 4511 cm	5182 - 5273 cm	609.6 - 670.6 cm
Metals (mg/kg)							
Zinc	**50.7**	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	5 U	--	--	--	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	5 UT	--	--	--	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	5 UT	--	--	--	--	--	--
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	5 U	--	--	--	--	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	**0.056718378**	**0.004387025**	**0.006821672**	**0.004012308**	**0.001769234**	**0.057841537**
pMax	--	**0.013977421**	**0.018764663**	**0.018764663**	--	--	**0.061224213**

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS06
Sample Name:	WLCGSJ06GS05S120123	WLCGSJ06GS05S145148	WLCGSJ06GS05S170173	WLCGSJ06GS05S2022	WLCGSJ06GS05S4548	WLCGSJ06GS05S9598	WLCGSJ06GS06S4144
Sample Date:	10/27/2006	10/27/2006	10/30/2006	10/25/2006	10/25/2006	10/26/2006	39099
Depth Interval:	3658 - 3749 cm	4420 - 4511 cm	5182 - 5273 cm	609.6 - 670.6 cm	1372 - 1463 cm	2896 - 2987 cm	1250 - 1341 cm
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	5 U	5 U	5 U	**46**	**0.61 J**	**0.47 J**	--
LWG RA Total HPAH (Calculated U = 1/2)	5 UT	5 UT	**23 JT**	**500 JT**	**14 JT**	**16 JT**	--
LWG RA Total PAH (Calculated U = 1/2)	**39 JT**	**41 JT**	**37 JT**	**820 JT**	**23 JT**	**28 JT**	--
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	5 U	5 U	5 U	**3.5 J**	5 U	5 U	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	--	--	--	--	--	**0.075326977**
pMax	--	--	--	--	--	--	**0.451219249**

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06
Sample Name:	WLCGSJ06GS06S6569	WLCGSJ06GS06S9598	WLCGSJ06GS06S2023	WLCGSJ06GS06S2023	WLCGSJ06GS06S4144	WLCGSJ06GS06S6569	WLCGSJ06GS06S9598
Sample Date:	39099	39099	39099	1/17/2007	1/17/2007	1/17/2007	1/17/2007
Depth Interval:	1981 - 2103 cm	2896 - 2987 cm	609.6 - 701 cm	609.6 - 701 cm	1250 - 1341 cm	1981 - 2103 cm	2896 - 2987 cm
Metals (mg/kg)							
Zinc	--	--	--	68	58.1 T	48.4	44.3
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	--	--	2200	0.38 JT	4.9 U	5 U
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	25000 T	17 JT	4.9 UJT	23 JT
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	36000 T	310 JT	4.9 UJT	38 JT
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	130	1.2 JT	4.9 U	0.24 J
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	0.046164538	0.03302119	0.444955779	--	--	--	--
pMax	0.00224266	0.001879414	0.868043542	--	--	--	--

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07
Sample Name:	WLCGSJ06GS07S4852	WLCGSJ06GS07S98102	WLCGSJ06GS07S123127	WLCGSJ06GS07S145148	WLCGSJ06GS07S170173	WLCGSJ06GS07S2327
Sample Date:	39007	39008	39008	39008	39009	39007
Depth Interval:	1463 - 1585 cm	2987 - 3109 cm	3749 - 3871 cm	4420 - 4511 cm	5182 - 5273 cm	701 - 823 cm
Metals (mg/kg)						
Zinc	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	--	--	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	--	--	--
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	**0.121572146**	**0.002824922**	**0.004868726**	**0.020795242**	**0.001134471**	**81.98648182**
pMax	**0.201689263**	**0.012724739**	**0.020818521**	**0.052869407**	--	**0.968588406**

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS08
Sample Name:	WLCGSJ06GS07S123127	WLCGSJ06GS07S145148	WLCGSJ06GS07S170173	WLCGSJ06GS07S2327	WLCGSJ06GS07S4852	WLCGSJ06GS07S98102	WLCGSJ06GS8S4345
Sample Date:	10/18/2006	10/18/2006	10/19/2006	10/17/2006	10/17/2006	10/18/2006	39016
Depth Interval:	3749 - 3871 cm	4420 - 4511 cm	5182 - 5273 cm	701 - 823 cm	1463 - 1585 cm	2987 - 3109 cm	1311 - 1372 cm
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	**0.65 J**	3.2 U	**0.26 J**	**100000**	**42**	**3.6**	--
LWG RA Total HPAH (Calculated U = 1/2)	**14 JT**	3.2 UT	**9.98 JT**	**1200000 T**	**530 JT**	**53 JT**	--
LWG RA Total PAH (Calculated U = 1/2)	**26 JT**	**26 JT**	**19 JT**	**2700000 T**	**1100 JT**	**84 JT**	--
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	3.5 U	3.2 U	2.9 U	**14000**	**6.1**	**0.28 J**	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	--	--	--	--	--	**0.059422687**
pMax	--	--	--	--	--	--	**0.032083782**

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS09	WLCGSJ06GS09
Sample Name:	WLCGSJ06GS8S9598	WLCGSJ06GS08S2023	WLCGSJ06GS08S2023	WLCGSJ06GS8S4345	WLCGSJ06GS8S9598	WLCGSJ06GS09S4852	WLCGSJ06GS09S98102
Sample Date:	39016	39015	10/25/2006	10/26/2006	10/26/2006	39000	39002
Depth Interval:	2896 - 2987 cm	609.6 - 701 cm	609.6 - 701 cm	1311 - 1372 cm	2896 - 2987 cm	1463 - 1585 cm	2987 - 3109 cm
Metals (mg/kg)							
Zinc	--	--	**70**	**57.6**	**59**	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	--	**17**	**0.49 J**	4.9 U	--	--
LWG RA Total HPAH (Calculated U = 1/2)	--	--	**190 JT**	**13 JT**	**21 JT**	--	--
LWG RA Total PAH (Calculated U = 1/2)	--	--	**400 JT**	**32 JT**	**36 JT**	--	--
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	--	--	**1.7 J**	5 U	4.9 U	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	**0.043164697**	**0.079145984**	--	--	--	**0.176365295**	**0.021181861**
pMax	**0.033828227**	**0.907364418**	--	--	--	**0.209988252**	**0.013977421**

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09
Sample Name:	WLCGSJ06GS09S123127	WLCGSJ06GS09S148152	WLCGSJ06GS09S173177	WLCGSJ06GS09S2327	WLCGSJ06GS09S123127	WLCGSJ06GS09S148152
Sample Date:	39002	39003	39003	38999	10/12/2006	10/13/2006
Depth Interval:	3749 - 3871 cm	4511 - 4633 cm	5273 - 5395 cm	701 - 823 cm	3749 - 3871 cm	4511 - 4633 cm
Metals (mg/kg)						
Zinc	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	--	--	--	**1.8 J**	**0.34 J**
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	--	**23 JT**	**16 JT**
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	--	**36 JT**	**32 JT**
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	5 U	5 U
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	**0.001643849**	**0.002015788**	**0.003484107**	**8.466087405**	--	--
pMax	**0.004215791**	--	**0.012824044**	**0.989958561**	--	--

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25
Sample Name:	WLCGSJ06GS09S173177	WLCGSJ06GS09S2327	WLCGSJ06GS09S4852	WLCGSJ06GS09S98102	WLCSLH01GP25S36	WLCSLH01GP25S41	WLCSLH01GP25S21
Sample Date:	10/13/2006	10/9/2006	10/10/2006	10/12/2006	38258.55208	38258.55903	38258.53125
Depth Interval:	5273 - 5395 cm	701 - 823 cm	1463 - 1585 cm	2987 - 3109 cm	1097 - 1112 cm	1250 - 1265 cm	640.1 - 655.3 cm
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	8.4	11000	200	2 J	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	120 JT	130000 T	2400 T	38 JT	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	150 JT	280000 T	4800 T	340 JT	--	--	--
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	0.24 J	1900	29	1.1 J	--	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	--	--	--	0.069027081	0.020914154	20.59501193
pMax	--	--	--	--	--	--	0.937292313

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25
Sample Name:	WLCSLH01GP25S26	WLCSLH01GP25S31	WLCSLH01GP25S146	WLCSLH01GP25S21	WLCSLH01GP25S26	WLCSLH01GP25S31	WLCSLH01GP25S36	WLCSLH01GP25S41
Sample Date:	38258.53819	38258.54167	9/30/2004	9/28/2004	9/28/2004	9/28/2004	9/28/2004	9/28/2004
Depth Interval:	792.5 - 807.7 cm	944.9 - 960.1 cm	4450 - 4465 cm	640.1 - 655.3 cm	792.5 - 807.7 cm	944.9 - 960.1 cm	1097 - 1112 cm	1250 - 1265 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	--	--	**29500**	**1670**	**13200**	**106**	9.69 U
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	**320000 T**	**15500 T**	**120000 T**	**1150 T**	9.69 UT
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	**610000 T**	**24000 T**	**170000 T**	**1700 T**	**132 T**
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	**7700**	106 U	**129**	96.5 U	96.9 U
Dibenzofuran	--	--	--	**3060**	106 U	**265**	96.5 U	96.9 U
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	**1.075102459**	**3.145179312**	--	--	--	--	--	--
pMax	**0.486489027**	**0.753243151**	--	--	--	--	--	--

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26
Sample Name:	WLCSLH01GP25S91	WLCSLH01GP26S58	WLCSLH01GP26S63	WLCSLH01GP26S83	WLCSLH01GP26S118	WLCSLH01GP26S23	WLCSLH01GP26S28	WLCSLH01GP26S118
Sample Date:	9/29/2004	38264.59375	38264.61111	38264.69444	38265.61458	38264.49306	38264.50347	10/5/2004
Depth Interval:	2774 - 2789 cm	1768 - 1783 cm	1920 - 1935 cm	2530 - 2545 cm	3597 - 3612 cm	701 - 716.2 cm	853.4 - 868.6 cm	3597 - 3612 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	--	--	--	--	--	--	**49.7**
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	--	--	--	--	**218 T**
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	--	--	--	--	**287 T**
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	92.1 U
Dibenzofuran	--	--	--	--	--	--	--	92.1 U
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	--	**0.137403846**	**0.012955561**	**0.02272639**	**0.000262535**	**0.767215036**	**0.21001715**	--
pMax	--	**0.137414629**	--	**0.052180659**	--	**0.4068599**	**0.158945459**	--

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27
Sample Name:	WLCSLH01GP26S23	WLCSLH01GP26S28	WLCSLH01GP26S58	WLCSLH01GP26S63	WLCSLH01GP26S83	WLCSLH01GP27S40	WLCSLH01GP27S45	WLCSLH01GP27S50
Sample Date:	10/4/2004	10/4/2004	10/4/2004	10/4/2004	10/4/2004	38268.44792	38268.5	38268.57986
Depth Interval:	701 - 716.2 cm	853.4 - 868.6 cm	1768 - 1783 cm	1920 - 1935 cm	2530 - 2545 cm	1219 - 1234 cm	1372 - 1387 cm	1524 - 1539 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	**959**	**317**	**101**	8.95 U	**27.3**	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	**10500 T**	**3120 T**	**1220 T**	**68 T**	**261 T**	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	**21000 T**	**4780 T**	**2320 T**	**171 T**	**440 T**	--	--	--
Semivolatile Organics (µg/kg)								
Carbazole	**193**	92.5 U	90.2 U	89.5 U	88 U	--	--	--
Dibenzofuran	**99.9**	92.5 U	90.3 U	89.5 U	88 U	--	--	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	--	--	--	--	--	**0.071452093**	**0.013829641**	**0.011826924**
pMax	--	--	--	--	--	--	--	--

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27
Sample Name:	WLCSLH01GP27S60	WLCSLH01GP27S100	WLCSLH01GP27S20	WLCSLH01GP27S25	WLCSLH01GP27S30	WLCSLH01GP27S100	WLCSLH01GP27S20	WLCSLH01GP27S25
Sample Date:	38268.63542	38271.54861	38267.70833	38267.72222	38268.38542	10/11/2004	10/7/2004	10/7/2004
Depth Interval:	1829 - 1844 cm	3048 - 3063 cm	609.6 - 624.8 cm	762 - 777.2 cm	914.4 - 929.6 cm	3048 - 3063 cm	609.6 - 624.8 cm	762 - 777.2 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	--	--	--	--	**16**	8.72 U	8.75 U
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	--	--	**146 T**	**61.9 T**	**63 T**
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	--	--	**213 T**	**160 T**	**236 T**
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	84.1 U	87.2 U	87.5 U
Dibenzofuran	--	--	--	--	--	84.1 U	87.2 U	87.5 U
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	**0.017712951**	**0.000175826**	**0.01228735**	**0.021729474**	**0.030774086**	--	--	--
pMax	--	--	--	--	--	--	--	--

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP28
Sample Name:	WLCSLH01GP27S30	WLCSLH01GP27S35	WLCSLH01GP27S40	WLCSLH01GP27S45	WLCSLH01GP27S50	WLCSLH01GP27S55	WLCSLH01GP27S60	WLCSLH01GP28S35
Sample Date:	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/8/2004	38273.42708
Depth Interval:	914.4 - 929.6 cm	1067 - 1082 cm	1219 - 1234 cm	1372 - 1387 cm	1524 - 1539 cm	1676 - 1691 cm	1829 - 1844 cm	1067 - 1082 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	**9.74**	9.82 U	10.6 U	10 U	**107**	9.68 U	8.74 U	--
LWG RA Total HPAH (Calculated U = 1/2)	**91.1 T**	9.82 UT	**388 T**	**62 T**	**151 T**	9.68 UT	**56 T**	--
LWG RA Total PAH (Calculated U = 1/2)	**336 T**	98.2 UT	**957 T**	**170 T**	**245 T**	96.8 UT	**197 T**	--
Semivolatile Organics (µg/kg)								
Carbazole	88.5 U	98.2 U	105 U	100 U	98.5 U	96.8 U	87.4 U	--
Dibenzofuran	88.6 U	98.2 U	106 U	100 U	98.5 U	96.8 U	87.4 U	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	--	--	--	--	--	--	--	**7.37E-05**
pMax	--	--	--	--	--	--	--	--

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP29
Sample Name:	WLCSLH01GP28S20	WLCSLH01GP28S25	WLCSLH01GP28S30	WLCSLH01GP28S20	WLCSLH01GP28S25	WLCSLH01GP28S30	WLCSLH01GP28S35	WLCSLH01GP29S37
Sample Date:	38273.39583	38273.41667	38273.42014	10/13/2004	10/13/2004	10/13/2004	10/13/2004	38279.47569
Depth Interval:	609.6 - 624.8 cm	762 - 777.2 cm	914.4 - 929.6 cm	609.6 - 624.8 cm	762 - 777.2 cm	914.4 - 929.6 cm	1067 - 1082 cm	1128 - 1143 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	--	--	**17100**	**12200**	**11100**	9.72 U	--
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	**165000 T**	**110000 T**	**88000 T**	**61.2 T**	--
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	**270000 T**	**160000 T**	**100000 T**	**139 T**	--
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	**730**	**249**	**169**	97.2 U	--
Dibenzofuran	--	--	--	**864**	**335**	110 U	97.2 U	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	**6.876993971**	**2.992321963**	**1.309734592**	--	--	--	--	**0.029841538**
pMax	**0.849067058**	**0.782027818**	**0.553974505**	--	--	--	--	--

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29
Sample Name:	WLCSLH01GP29S42	WLCSLH01GP29S52	WLCSLH01GP29S62	WLCSLH01GP29S67	WLCSLH01GP29S72	WLCSLH01GP29S77	WLCSLH01GP29S27	WLCSLH01GP29S32
Sample Date:	38279.5	38279.55556	38279.59028	38279.60764	38279.63194	38279.65278	38279.44444	38279.46528
Depth Interval:	1280 - 1295 cm	1585 - 1600 cm	1890 - 1905 cm	2042 - 2057 cm	2195 - 2210 cm	2347 - 2362 cm	823 - 838.2 cm	975.4 - 990.6 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)pyrene	--	--	--	--	--	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--
CALC								
Benthic MQ	**0.034384149**	**0.034355385**	**0.047395385**	**0.037274619**	**0.01723598**	**0.076881706**	**0.03653616**	**0.133576072**
pMax	**0.037919625**	**--**	**--**	**0.035274738**	**--**	**--**	**0.026798107**	**0.097964252**

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29
Sample Name:	WLCSLH01GP29S27	WLCSLH01GP29S32	WLCSLH01GP29S37	WLCSLH01GP29S42	WLCSLH01GP29S47	WLCSLH01GP29S52	WLCSLH01GP29S57
Sample Date:	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004
Depth Interval:	823 - 838.2 cm	975.4 - 990.6 cm	1128 - 1143 cm	1280 - 1295 cm	1433 - 1448 cm	1585 - 1600 cm	1737 - 1752 cm
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	**14.1**	**85.5**	9.29 U	**19.6**	9.1 U	9.94 U	104 U
LWG RA Total HPAH (Calculated U = 1/2)	**290 T**	**1110 T**	9.29 UT	**256 T**	9.1 UT	9.94 UT	104 UT
LWG RA Total PAH (Calculated U = 1/2)	**580 T**	**2160 T**	**165 T**	**529 T**	91 UT	**187 T**	104 UT
Semivolatile Organics (µg/kg)							
Carbazole	88 U	83.9 U	92.9 U	89.3 U	91 U	99.4 U	104 U
Dibenzofuran	88 U	83.9 U	92.9 U	89.3 U	91 U	99.4 U	104 U
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	--	--	--	--	--	--
pMax	--	--	--	--	--	--	--

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP30	WLCSLH01GP31
Sample Name:	WLCSLH01GP29S62	WLCSLH01GP29S67	WLCSLH01GP29S72	WLCSLH01GP29S77	WLCSLH01GP30S23	WLCSLH01GP30S23	WLCSLH01GP31S3
Sample Date:	10/19/2004	10/19/2004	10/19/2004	10/19/2004	38282.39931	10/22/2004	38286.48958
Depth Interval:	1890 - 1905 cm	2042 - 2057 cm	2195 - 2210 cm	2347 - 2362 cm	701 - 716.2 cm	701 - 716.2 cm	1128 - 1143 cm
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	103 U	**19.7**	8.42 U	9.58 U	--	8.99 U	--
LWG RA Total HPAH (Calculated U = 1/2)	103 UT	**267 T**	**96.8 T**	**243 T**	--	**142 T**	--
LWG RA Total PAH (Calculated U = 1/2)	**270 T**	**563 T**	**234 T**	**855 T**	--	**974 T**	--
Semivolatile Organics (µg/kg)							
Carbazole	103 U	85.6 U	84.2 U	95.8 U	--	89.9 U	--
Dibenzofuran	103 U	85.6 U	84.2 U	95.8 U	--	89.9 U	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	--	--	--	--	**0.104405504**	--	**0.021405706**
pMax	--	--	--	--	--	--	**0.024827475**

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP32
Sample Name:	WLCSLH01GP31S22	WLCSLH01GP31S32	WLCSLH01GP31S22	WLCSLH01GP31S27	WLCSLH01GP31S32	WLCSLH01GP31S37	WLCSLH01GP32S21
Sample Date:	38286.44792	38286.46875	10/26/2004	10/26/2004	10/26/2004	10/26/2004	38287.70486
Depth Interval:	670.6 - 685.8 cm	975.4 - 990.6 cm	670.6 - 685.8 cm	823 - 838.2 cm	975.4 - 990.6 cm	1128 - 1143 cm	640.1 - 655.3 cm
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	--	8.72 U	8.78 U	8.3 U	**14.8**	--
LWG RA Total HPAH (Calculated U = 1/2)	--	--	**71.5 T**	8.78 UT	**56 T**	**150 T**	--
LWG RA Total PAH (Calculated U = 1/2)	--	--	**184 T**	87.8 UT	**140 T**	**320 T**	--
Semivolatile Organics (µg/kg)							
Carbazole	--	--	87.2 U	87.7 U	82.9 U	86.9 U	--
Dibenzofuran	--	--	87.2 U	87.8 U	83 U	87 U	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	**0.014211515**	**0.010816797**	--	--	--	--	**0.034331762**
pMax	--	--	--	--	--	--	--

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	G:_>20_feet	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	WLCSLH01GP32	DGS-07SC	DGS-07SC	GTC-04	GTC-04	GTC-04
Sample Name:	WLCSLH01GP32S21	DGS-07SC-0113.4-101012	DGS-07SC-0113.4-101012	GTC-04SC-090113RE	GTC-04SC-090114	GTC-04SC-090113RE
Sample Date:	10/27/2004	10/12/2010	40463.65625	1/14/2009	1/14/2009	39827.6875
Depth Interval:	640.1 - 655.3 cm	30.48 - 408.43 cm	30.48 - 408.43 cm	0 - 374.9 cm	0 - 374.9 cm	0 - 374.9 cm
Metals (mg/kg)						
Zinc	--	155	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	10.4 U	39000	--	--	57000	--
LWG RA Total HPAH (Calculated U = 1/2)	169 T	440000 T	--	--	720000 T	--
LWG RA Total PAH (Calculated U = 1/2)	442 T	910000 T	--	--	1200000 JT	--
Semivolatile Organics (µg/kg)						
Carbazole	104 U	6000	--	--	--	--
Dibenzofuran	104 U	4500	--	--	2500	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	130 T	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	77 J	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	33 U	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	33 U	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	160 J	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	33 U	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	33 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	16 U	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	240 JT	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	33 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	33 UT	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	300 JT	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	3300	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	--	17.60499706	--	--	41.47231416
pMax	--	--	0.928191803	--	--	0.944277673

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	GTC-06	GTC-06	GTC-06	GTC-09	GTC-09	GTC-09
Sample Name:	GTC-06SC-090113RE	GTC-06SC-090114	GTC-06SC-090113RE	GTC-09SC-090113RE	GTC-09SC-090114	GTC-09SC-090113RE
Sample Date:	1/14/2009	1/14/2009	39827.5	1/14/2009	1/14/2009	39827.64583
Depth Interval:	0 - 362.71 cm	0 - 362.71 cm	0 - 362.71 cm	100.58 - 426.72 cm	100.58 - 426.72 cm	100.58 - 426.72 cm
Metals (mg/kg)						
Zinc	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	290000	--	--	79000	--
LWG RA Total HPAH (Calculated U = 1/2)	--	3900000 T	--	--	1100000 T	--
LWG RA Total PAH (Calculated U = 1/2)	--	12000000 T	--	--	3400000 T	--
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	--
Dibenzofuran	--	50000	--	--	14000	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	--	691.4876871	--	--	203.3161741
pMax	--	--	0.987505305	--	--	0.968588406

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	LWM-C11	LWM-C11	LWM-TCLP11A	LWM-TCLP11A	LWM-TCLP11B	LWM-TCLP11B
Sample Name:	LWM-METCS11	LWM-METCS11	LWM-TCLPC11A	LWM-TCLPC11A	LWM-TCLPC11B	LWM-TCLPC11B
Sample Date:	8/28/2008	39688.47917	8/27/2008	39687.60417	8/27/2008	39687.45833
Depth Interval:	0 - 386 cm	0 - 386 cm	0 - 322 cm	0 - 322 cm	0 - 363 cm	0 - 363 cm
Metals (mg/kg)						
Zinc	122 J	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	200000	--	--	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	2200000 JT	--	--	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	8400000 JT	--	--	--	--	--
Semivolatile Organics (µg/kg)						
Carbazole	67000	--	--	--	--	--
Dibenzofuran	32000 J	--	--	--	--	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	95 JT	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	0.00506 JT	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	99 U	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	99 U	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	99 U	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	99 U	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	99 U	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	99 U	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	49 U	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	99 UT	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	99 UT	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	99 UT	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	99 UT	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	18000 J	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	--	174.3197043	--	0.174020978	--	0.398462746
pMax	--	0.999902318	--	0.024619355	--	0.05971623

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	LWM-TCLP11C	LWM-TCLP11C	WLCDRD05VC056	WLCDRD05VC056	WLCGSG04RAA02	WLCGSG04RAA02
Sample Name:	LWM-TCLPC11C	LWM-TCLPC11C	WLCDRD05VC05656	WLCDRD05VC05656	WLCGSG04RAA02SD1019	WLCGSG04RAA02SD101
Sample Date:	8/28/2008	39688.58333	38476	5/4/2005	38188	7/20/2004
Depth Interval:	0 - 325 cm	0 - 325 cm	0 - 265 cm	0 - 265 cm	304.8 - 579.12 cm	304.8 - 579.12 cm
Metals (mg/kg)						
Zinc	--	--	--	110 J	--	64.1
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	--	--	1900	--	130000
LWG RA Total HPAH (Calculated U = 1/2)	--	--	--	21000 T	--	1400000 T
LWG RA Total PAH (Calculated U = 1/2)	--	--	--	30000 T	--	2900000 T
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	30	--	--
Dibenzofuran	--	--	--	79	--	5600
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	720 UT	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	390	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	4.8 U	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	18	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	680	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	160 U	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	490	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	0.86 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	1100 T	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	160 UT	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	510 T	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	1700 T	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	540 J	--	8800
Residual Range Hydrocarbons	--	--	--	1000 J	--	8100
CALC						
Benthic MQ	--	0.416122004	0.821996657	--	5.147609495	--
pMax	--	0.01250306	0.903408081	--	0.965019462	--

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	WLCGSG04RAA04	WLCGSG04RAA05	WLCGSG04RAA05	WLCGSG04RAA08	WLCGSG04RAA08	WLCGSG04RAA17
Sample Name:	WLCGSG04RAA04SD0620	WLCGSG04RAA05SD1020	WLCGSG04RAA05SD1020	WLCGSG04RAA08SD0720	WLCGSG04RAA08SD0720	WLCGSG04RAA17SD0010
Sample Date:	7/21/2004	38190	7/22/2004	38189	7/21/2004	38190
Depth Interval:	182.88 - 609.6 cm	304.8 - 609.6 cm	304.8 - 609.6 cm	213.36 - 609.6 cm	213.36 - 609.6 cm	0 - 304.8 cm
Metals (mg/kg)						
Zinc	--	--	51.3	--	43.3	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	--	1800	--	200	--
LWG RA Total HPAH (Calculated U = 1/2)	--	--	20000 T	--	2000 T	--
LWG RA Total PAH (Calculated U = 1/2)	--	--	28000 T	--	3900 T	--
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	--
Dibenzofuran	--	--	36	--	18	--
PCB Aroclors (µg/kg)						
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	190	--	17 J	--
Residual Range Hydrocarbons	--	--	420	--	39 J	--
CALC						
Benthic MQ	--	0.08167268	--	0.061206517	--	28.12795717
pMax	--	0.41854718	--	0.163441822	--	0.987297753

Table 3-20
Existing Data Screening Table - Sub-surface (Category G H) Ecological

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	WLCGSG04RAA17	WLCMRD08SDDA18SB	WLCMRD08SDDA18SB
Sample Name:	WLCGSG04RAA17SD0010	WLCMRD08DA18-2	WLCMRD08DA18-2
Sample Date:	7/22/2004	39558.48611	4/20/2008
Depth Interval:	0 - 304.8 cm	30.48 - 335.28 cm	30.48 - 335.28 cm
Metals (mg/kg)			
Zinc	**64.5**	--	**165**
Polycyclic Aromatic Hydrocarbons (µg/kg)			
Benzo(a)pyrene	**43000**	--	**5000**
LWG RA Total HPAH (Calculated U = 1/2)	**490000 T**	--	**55000 T**
LWG RA Total PAH (Calculated U = 1/2)	**860000 T**	--	**94000 T**
Semivolatile Organics (µg/kg)			
Carbazole	--	--	**470**
Dibenzofuran	**1800**	--	**500**
PCB Aroclors (µg/kg)			
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	**88 JT**
PCB Congeners (µg/kg)			
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--
Pesticides (µg/kg)			
2,4'-DDD (o,p'-DDD)	--	--	**46**
2,4'-DDE (o,p'-DDE)	--	--	7.2 U
2,4'-DDT (o,p'-DDT)	--	--	5.3 U
4,4'-DDD (p,p'-DDD)	--	--	**140**
4,4'-DDE (p,p'-DDE)	--	--	13 U
4,4'-DDT (p,p'-DDT)	--	--	**53**
beta-Hexachlorocyclohexane (BHC)	--	--	1 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	**190 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	13 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	**56 T**
LWG RA Total DDx (Calculated U = 1/2)	--	--	**250 T**
Total Petroleum Hydrocarbons (mg/kg)			
Diesel Range Hydrocarbons	**3400**	--	**900**
Residual Range Hydrocarbons	**3600**	--	**870**
CALC			
Benthic MQ	--	**1.085778096**	--
pMax	--	**0.968074473**	--

Table 3-20
Existing Data Screening Table - Sub-surface Sediment (Category G H) Ecological

Notes:

Detected concentration is greater than 1 screening level

Detected concentration is greater than 2 screening levels

Detected concentration is greater than 3 screening levels

Detected concentration is greater than 4 screening levels

Detected concentration is greater than 5 screening levels

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R = Rejected

T = Result is the value of a total or calculation

-- = Results not reported or not applicable

N = Normal Field Sample

NA = Not applicable, calculation based on sample and associated field duplicate

Acronyms:

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

BaPEq = benzo[a]pyrene equivalents

BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)

cPAH = carcinogenic PAH

cm = centimeters

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

HPAH = high molecular weight polycyclic aromatic hydrocarbon

LWG = Lower Willamette Group

MQ = mean quotient

PAH = polycyclic aromatic hydrocarbon

PCB = polychlorinated biphenyls

RA = Portland Harbor Site risk assessment

TEQ = toxic equivalents quotient

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GP27	GS-01	GS-01	GS-02	GS-02	GS-03	GS-03	GS-03
Sample Name:	GP27-P	GS-01-S (20-23)	GS-01-S (45-48)	GS-02-S (20-23)	GS-02-S (45-48)	GS-03-S (120-122)	GS-03-S (20-23)	GS-03-S (45-48)
Sample Date:	10/8/2004	12/21/2006	12/26/2006	12/27/2006	12/28/2006	12/19/2006	12/18/2006	12/19/2006
Depth Interval:	2478.02 - 2478.02 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	3657.6 - 3718.56 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm
Metals (mg/kg)								
Zinc	--	--	--	70.4	58.4	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	12100	2.1 J	5.1 U	6.3	7.5	5 U	1.8 J	4.9 U
Benzo(a)pyrene	13900	1.7 J	5.1 U	7.7	6.2	5 U	1.3 J	4.9 U
Benzo(b)fluoranthene	10600	1.8 J	5.1 U	5.9	6.6	5 U	1.3 J	4.9 U
Benzo(k)fluoranthene	5260	1.3 J	5.1 U	5.3	6.8	5 U	1.1 J	4.9 U
Chrysene	14200	2.2 J	5.1 U	8.5	7.1	5 U	1.9 J	4.9 U
Dibenzo(a,h)anthracene	1770	5 U	5.1 U	0.72 J	6.1	5 U	5 U	4.9 U
Indeno(1,2,3-c,d)pyrene	7340	1.8 J	5.1 U	5.3	4.5 J	5 U	1.2 J	4.9 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	18700 T	4.8 JT	5.1 UT	10 JT	14 JT	5 UT	4.2 JT	4.9 UT
LWG RA Total LPAH (Calculated U = 1/2)	290000 T	14 JT	5.1 UT	52 JT	16 JT	5 UT	16 JT	4.9 UT
LWG RA Total PAH (Calculated U = 1/2)	460000 T	40 JT	5.1 UT	150 JT	79 JT	5 UT	35 JT	4.9 UT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	1210 T	0.32 JT	2.6 UT	0.69 T	2.3 T	2.5 UT	0.27 JT	0.89 UT
Benzo(a)pyrene	1390 T	0.26 JT	2.6 UT	0.85 T	1.9 T	2.5 UT	0.2 JT	0.89 UT
Benzo(b)fluoranthene	1060 T	0.27 JT	2.6 UT	0.65 T	2.1 T	2.5 UT	0.2 JT	0.89 UT
Benzo(k)fluoranthene	526 T	0.2 JT	2.6 UT	0.58 T	2.1 T	2.5 UT	0.17 JT	0.89 UT
Chrysene	1420 T	0.33 JT	2.6 UT	0.93 T	2.2 T	2.5 UT	0.29 JT	0.89 UT
Dibenzo(a,h)anthracene	177 T	0.76 UT	2.6 UT	0.079 JT	1.9 T	2.5 UT	0.76 UT	0.89 UT
Indeno(1,2,3-c,d)pyrene	734 T	0.27 JT	2.6 UT	0.58 T	1.4 JT	2.5 UT	0.18 JT	0.89 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1870 T	0.73 JT	2.6 UT	1.1 JT	4.4 JT	2.5 UT	0.65 JT	0.89 UT
LWG RA Total LPAH (Calculated U = 1/2)	29000 T	2.1 JT	2.6 UT	5.8 JT	5.2 JT	2.5 UT	2.5 JT	0.89 UT
LWG RA Total PAH (Calculated U = 1/2)	46000 T	6 JT	2.6 UT	16 JT	25 JT	2.5 UT	5.4 JT	0.89 UT
Semivolatile Organics (µg/kg)								
Carbazole	5070	--	--	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)								
Carbazole	507 T	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GP27	GS-01	GS-01	GS-02	GS-02	GS-03	GS-03	GS-03
Sample Name:	GP27-P	GS-01-S (20-23)	GS-01-S (45-48)	GS-02-S (20-23)	GS-02-S (45-48)	GS-03-S (120-122)	GS-03-S (20-23)	GS-03-S (45-48)
Sample Date:	10/8/2004	12/21/2006	12/26/2006	12/27/2006	12/28/2006	12/19/2006	12/18/2006	12/19/2006
Depth Interval:	2478.02 - 2478.02 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	3657.6 - 3718.56 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GS-03	GS-10	GS-10	GS-10	GS-11	GS-11	GS-11	GS-11
Sample Name:	GS-03-S (95-98)	GS-10-S (20-23)	GS-10-S (45-48)	GS-10-S (95-98)	GS-11-S (120-123)	GS-11-S (145-148)	GS-11-S (170-173)	GS-11-S (20-23)A
Sample Date:	12/19/2006	1/2/2007	1/2/2007	1/3/2007	1/8/2007	1/8/2007	1/8/2007	1/5/2007
Depth Interval:	2895.6 - 2987.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	3657.6 - 3749.04 cm	4419.6 - 4511.04 cm	5181.6 - 5273.04 cm	609.6 - 701.04 cm
Metals (mg/kg)								
Zinc	--	62.2	49.9	53.6	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	5 U	240	0.51 J	0.33 J	4.7 U	0.22 J	4.9 U	8.8
Benzo(a)pyrene	5 U	280	0.86 J	5 U	4.7 U	0.31 J	4.9 U	8.3
Benzo(b)fluoranthene	5 U	190	4.9 U	5 U	4.7 U	4.9 U	4.9 U	5.5
Benzo(k)fluoranthene	5 U	160	0.58 J	5 U	4.7 U	4.9 U	4.9 U	6.4
Chrysene	5 U	320	1.1 J	5 U	4.7 U	4.9 U	4.9 U	11
Dibenzo(a,h)anthracene	5 U	26	4.9 U	5 U	4.7 U	4.9 U	4.9 U	5 U
Indeno(1,2,3-c,d)pyrene	5 U	220	4.9 U	5 U	4.7 U	4.9 U	4.9 U	5.9
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	5 UT	370 T	3.9 JT	5.6 JT	4.7 UT	3.3 JT	4.9 UT	13 T
LWG RA Total LPAH (Calculated U = 1/2)	5 UT	3600 T	23 JT	56 JT	14 JT	13 JT	16 JT	98 JT
LWG RA Total PAH (Calculated U = 1/2)	5 UT	7300 T	39 JT	74 JT	34 JT	29 JT	39 JT	220 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	2.5 UT	25 T	0.26 JT	0.049 JT	1.1 UT	0.088 JT	1 UT	4.4 T
Benzo(a)pyrene	2.5 UT	29 T	0.43 JT	0.75 UT	1.1 UT	0.12 JT	1 UT	4.2 T
Benzo(b)fluoranthene	2.5 UT	20 T	2.5 UT	0.75 UT	1.1 UT	2 UT	1 UT	2.8 T
Benzo(k)fluoranthene	2.5 UT	17 T	0.29 JT	0.75 UT	1.1 UT	2 UT	1 UT	3.2 T
Chrysene	2.5 UT	33 T	0.55 JT	0.75 UT	1.1 UT	2 UT	1 UT	5.5 T
Dibenzo(a,h)anthracene	2.5 UT	2.7 T	2.5 UT	0.75 UT	1.1 UT	2 UT	1 UT	2.5 UT
Indeno(1,2,3-c,d)pyrene	2.5 UT	23 T	2.5 UT	0.75 UT	1.1 UT	2 UT	1 UT	3 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2.5 UT	39 T	2 JT	0.83 JT	1.1 UT	1.3 JT	1 UT	6.5 T
LWG RA Total LPAH (Calculated U = 1/2)	2.5 UT	380 T	11 JT	8.3 JT	3.4 JT	5.4 JT	3.4 JT	50 JT
LWG RA Total PAH (Calculated U = 1/2)	2.5 UT	760 T	20 JT	11 JT	8 JT	12 JT	8 JT	110 JT
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)								
Carbazole	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GS-03	GS-10	GS-10	GS-10	GS-11	GS-11	GS-11	GS-11
Sample Name:	GS-03-S (95-98)	GS-10-S (20-23)	GS-10-S (45-48)	GS-10-S (95-98)	GS-11-S (120-123)	GS-11-S (145-148)	GS-11-S (170-173)	GS-11-S (20-23)A
Sample Date:	12/19/2006	1/2/2007	1/2/2007	1/3/2007	1/8/2007	1/8/2007	1/8/2007	1/5/2007
Depth Interval:	2895.6 - 2987.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	3657.6 - 3749.04 cm	4419.6 - 4511.04 cm	5181.6 - 5273.04 cm	609.6 - 701.04 cm
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GS-11	GS-11	GS-12	GS-12	GS-12	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS04
Sample Name:	GS-11-S (45-48)	GS-11-S (95-98)	GS-12-S (20-23)	GS-12-S (45-48)	GS-12-S (95-98)	WLCGSJ06GS04S2427	WLCGSJ06GS04S4548	WLCGSJ06GS04S6970
Sample Date:	1/5/2007	1/8/2007	1/10/2007	1/10/2007	1/11/2007	12/12/2006	12/13/2006	12/13/2006
Depth Interval:	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	731.5 - 823 cm	1372 - 1463 cm	2103 - 2134 cm
Metals (mg/kg)								
Zinc	--	--	56.9	49	49.2	74	49.6	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	5 U	5 U	**4 J**	**2.2 J**	3.1 U	5 U	5 U	340 U
Benzo(a)pyrene	5 U	5 U	**4.5 J**	**1 J**	3.1 U	5 U	5 U	340 U
Benzo(b)fluoranthene	5 U	5 U	**3.2 J**	**5.9**	3.1 U	5 U	5 U	340 U
Benzo(k)fluoranthene	5 U	5 U	**3.1 J**	**2.7 J**	3.1 U	5 U	5 U	340 U
Chrysene	5 U	5 U	**5.1**	**3.5 J**	3.1 U	5 U	5 U	340 U
Dibenzo(a,h)anthracene	5 U	5 U	5 U	4.9 U	3.1 U	5 U	5 U	340 U
Indeno(1,2,3-c,d)pyrene	5 U	5 U	**3.2 J**	**1.5 J**	3.1 U	5 U	5 U	340 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	5 UT	5 UT	**8.1 JT**	**4.4 JT**	3.1 UT	5 UT	5 UT	340 UT
LWG RA Total LPAH (Calculated U = 1/2)	**14 JT**	**17 JT**	**26 JT**	**12 JT**	**9.8 JT**	**17 JT**	**13 JT**	340 UT
LWG RA Total PAH (Calculated U = 1/2)	**35 JT**	**38 JT**	**80 JT**	**38 JT**	**25 JT**	**42 JT**	**43 JT**	340 UT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	2.5 UT	0.79 UT	**0.6 JT**	**0.61 JT**	1.6 UT	2 UT	3 UT	34 UT
Benzo(a)pyrene	2.5 UT	0.79 UT	**0.67 JT**	**0.28 JT**	1.6 UT	2 UT	3 UT	34 UT
Benzo(b)fluoranthene	2.5 UT	0.79 UT	**0.48 JT**	**1.6 T**	1.6 UT	2 UT	3 UT	34 UT
Benzo(k)fluoranthene	2.5 UT	0.79 UT	**0.46 JT**	**0.75 JT**	1.6 UT	2 UT	3 UT	34 UT
Chrysene	2.5 UT	0.79 UT	**0.76 T**	**0.97 JT**	1.6 UT	2 UT	3 UT	34 UT
Dibenzo(a,h)anthracene	2.5 UT	0.79 UT	0.75 UT	1.4 UT	1.6 UT	2 UT	3 UT	34 UT
Indeno(1,2,3-c,d)pyrene	2.5 UT	0.79 UT	**0.48 JT**	**0.42 JT**	1.6 UT	2 UT	3 UT	34 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2.5 UT	0.79 UT	**1.2 JT**	**1.3 JT**	1.6 UT	2 UT	3 UT	34 UT
LWG RA Total LPAH (Calculated U = 1/2)	**7 JT**	**2.7 JT**	**3.9 JT**	**3.3 JT**	**5.1 JT**	**6.5 JT**	**7.7 JT**	34 UT
LWG RA Total PAH (Calculated U = 1/2)	**18 JT**	**6 JT**	**12 JT**	**11 JT**	**13 JT**	**16 JT**	**25 JT**	34 UT
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)								
Carbazole	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	GS-11	GS-11	GS-12	GS-12	GS-12	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS04
Sample Name:	GS-11-S (45-48)	GS-11-S (95-98)	GS-12-S (20-23)	GS-12-S (45-48)	GS-12-S (95-98)	WLCGSJ06GS04S2427	WLCGSJ06GS04S4548	WLCGSJ06GS04S6970
Sample Date:	1/5/2007	1/8/2007	1/10/2007	1/10/2007	1/11/2007	12/12/2006	12/13/2006	12/13/2006
Depth Interval:	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	609.6 - 701.04 cm	1371.6 - 1463.04 cm	2895.6 - 2987.04 cm	731.5 - 823 cm	1372 - 1463 cm	2103 - 2134 cm
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS04	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05
Sample Name:	WLCGSJ06GS04S9598	WLCGSJ06GS05S120123	WLCGSJ06GS05S145148	WLCGSJ06GS05S170173	WLCGSJ06GS05S2022	WLCGSJ06GS05S4548	WLCGSJ06GS05S9598
Sample Date:	12/13/2006	10/27/2006	10/27/2006	10/30/2006	10/25/2006	10/25/2006	10/26/2006
Depth Interval:	2896 - 2987 cm	3658 - 3749 cm	4420 - 4511 cm	5182 - 5273 cm	609.6 - 670.6 cm	1372 - 1463 cm	2896 - 2987 cm
Metals (mg/kg)							
Zinc	**50.7**	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	5 U	5 U	5 U	5 U	**36**	**0.44 J**	**0.33 J**
Benzo(a)pyrene	5 U	5 U	5 U	5 U	**46**	**0.61 J**	**0.47 J**
Benzo(b)fluoranthene	5 U	5 U	5 U	5 U	**27**	5 U	5 U
Benzo(k)fluoranthene	5 U	5 U	5 U	5 U	**24**	5 U	5 U
Chrysene	5 U	5 U	5 U	5 U	**49**	**0.61 J**	5 U
Dibenzo(a,h)anthracene	5 U	5 U	5 U	5 U	**2.9 J**	5 U	5 U
Indeno(1,2,3-c,d)pyrene	5 U	5 U	5 U	5 U	**24**	**0.66 J**	5 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	5 UT	5 UT	5 UT	5 UT	**58 JT**	**3.5 JT**	**3.5 JT**
LWG RA Total LPAH (Calculated U = 1/2)	5 UT	**14 JT**	**16 JT**	**14 JT**	**310 JT**	**9.6 JT**	**12 JT**
LWG RA Total PAH (Calculated U = 1/2)	5 UT	**39 JT**	**41 JT**	**37 JT**	**820 JT**	**23 JT**	**28 JT**
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	3 UT	3 UT	3 UT	3 UT	**18 T**	**0.044 JT**	**0.17 JT**
Benzo(a)pyrene	3 UT	3 UT	3 UT	3 UT	**23 T**	**0.061 JT**	**0.24 JT**
Benzo(b)fluoranthene	3 UT	3 UT	3 UT	3 UT	**14 T**	0.5 UT	3 UT
Benzo(k)fluoranthene	3 UT	3 UT	3 UT	3 UT	**12 T**	0.5 UT	3 UT
Chrysene	3 UT	3 UT	3 UT	3 UT	**25 T**	**0.061 JT**	3 UT
Dibenzo(a,h)anthracene	3 UT	3 UT	3 UT	3 UT	**1.5 JT**	0.5 UT	3 UT
Indeno(1,2,3-c,d)pyrene	3 UT	3 UT	3 UT	3 UT	**12 T**	**0.066 JT**	3 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	3 UT	3 UT	3 UT	3 UT	**29 JT**	**0.35 JT**	**2.1 JT**
LWG RA Total LPAH (Calculated U = 1/2)	3 UT	**8.1 JT**	**9.3 JT**	**8.3 JT**	**160 JT**	**0.96 JT**	**7 JT**
LWG RA Total PAH (Calculated U = 1/2)	3 UT	**23 JT**	**24 JT**	**22 JT**	**410 JT**	**2.3 JT**	**16 JT**
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)							
Carbazole	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS04	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05
Sample Name:	WLCGSJ06GS04S9598	WLCGSJ06GS05S120123	WLCGSJ06GS05S145148	WLCGSJ06GS05S170173	WLCGSJ06GS05S2022	WLCGSJ06GS05S4548	WLCGSJ06GS05S9598
Sample Date:	12/13/2006	10/27/2006	10/27/2006	10/30/2006	10/25/2006	10/25/2006	10/26/2006
Depth Interval:	2896 - 2987 cm	3658 - 3749 cm	4420 - 4511 cm	5182 - 5273 cm	609.6 - 670.6 cm	1372 - 1463 cm	2896 - 2987 cm
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07
Sample Name:	WLCGSJ06GS06S2023	WLCGSJ06GS06S4144	WLCGSJ06GS06S6569	WLCGSJ06GS06S9598	WLCGSJ06GS07S123127	WLCGSJ06GS07S145148	WLCGSJ06GS07S170173
Sample Date:	1/17/2007	1/17/2007	1/17/2007	1/17/2007	10/18/2006	10/18/2006	10/19/2006
Depth Interval:	609.6 - 701 cm	1250 - 1341 cm	1981 - 2103 cm	2896 - 2987 cm	3749 - 3871 cm	4420 - 4511 cm	5182 - 5273 cm
Metals (mg/kg)							
Zinc	68	58.1 T	48.4	44.3	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	1900	0.31 JT	4.9 U	5 U	0.91 J	3.2 U	0.21 J
Benzo(a)pyrene	2200	0.38 JT	4.9 U	5 U	0.65 J	3.2 U	0.26 J
Benzo(b)fluoranthene	1300	5 UT	4.9 U	5 U	3.5 U	3.2 U	2.9 U
Benzo(k)fluoranthene	1200	5 UT	4.9 U	5 U	0.58 J	3.2 U	2.9 U
Chrysene	2300	5 UT	4.9 U	5 U	1.1 J	3.2 U	2.9 U
Dibenzo(a,h)anthracene	180	5 UT	4.9 U	5 U	3.5 U	3.2 U	2.9 U
Indeno(1,2,3-c,d)pyrene	1300	0.58 JT	4.9 U	5 U	0.58 J	3.2 U	2.9 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2800 T	3.2 JT	4.9 UT	5 UT	2.7 JT	3.2 UT	2 JT
LWG RA Total LPAH (Calculated U = 1/2)	11000 T	290 JT	4.9 UJT	15 JT	12 JT	10 JT	9 JT
LWG RA Total PAH (Calculated U = 1/2)	36000 T	310 JT	4.9 UJT	38 JT	26 JT	26 JT	19 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	270 T	0.083 JT	2.5 UT	3 UT	0.46 JT	1.6 UT	0.11 JT
Benzo(a)pyrene	310 T	0.1 JT	2.5 UT	3 UT	0.33 JT	1.6 UT	0.13 JT
Benzo(b)fluoranthene	180 T	1 UT	2.5 UT	3 UT	1.8 UT	1.6 UT	1.5 UT
Benzo(k)fluoranthene	170 T	1 UT	2.5 UT	3 UT	0.29 JT	1.6 UT	1.5 UT
Chrysene	320 T	1 UT	2.5 UT	3 UT	0.55 JT	1.6 UT	1.5 UT
Dibenzo(a,h)anthracene	25 T	1 UT	2.5 UT	3 UT	1.8 UT	1.6 UT	1.5 UT
Indeno(1,2,3-c,d)pyrene	180 T	0.15 JT	2.5 UT	3 UT	0.29 JT	1.6 UT	1.5 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	400 T	0.68 JT	2.5 UT	3 UT	1.4 JT	1.6 UT	1 JT
LWG RA Total LPAH (Calculated U = 1/2)	1600 T	77 JT	2.5 UJT	9.1 JT	6.2 JT	5 JT	4.6 JT
LWG RA Total PAH (Calculated U = 1/2)	5000 T	81 JT	2.5 UJT	23 JT	14 JT	13 JT	9.8 JT
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)							
Carbazole	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07
Sample Name:	WLCGSJ06GS06S2023	WLCGSJ06GS06S4144	WLCGSJ06GS06S6569	WLCGSJ06GS06S9598	WLCGSJ06GS07S123127	WLCGSJ06GS07S145148	WLCGSJ06GS07S170173
Sample Date:	1/17/2007	1/17/2007	1/17/2007	1/17/2007	10/18/2006	10/18/2006	10/19/2006
Depth Interval:	609.6 - 701 cm	1250 - 1341 cm	1981 - 2103 cm	2896 - 2987 cm	3749 - 3871 cm	4420 - 4511 cm	5182 - 5273 cm
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS09
Sample Name:	WLCGSJ06GS07S2327	WLCGSJ06GS07S4852	WLCGSJ06GS07S98102	WLCGSJ06GS08S2023	WLCGSJ06GS8S4345	WLCGSJ06GS8S9598	WLCGSJ06GS09S123127
Sample Date:	10/17/2006	10/17/2006	10/18/2006	10/25/2006	10/26/2006	10/26/2006	10/12/2006
Depth Interval:	701 - 823 cm	1463 - 1585 cm	2987 - 3109 cm	609.6 - 701 cm	1311 - 1372 cm	2896 - 2987 cm	3749 - 3871 cm
Metals (mg/kg)							
Zinc	--	--	--	70	57.6	59	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	90000	36	3.5	13	0.4 J	4.9 U	1.7 J
Benzo(a)pyrene	100000	42	3.6	17	0.49 J	4.9 U	1.8 J
Benzo(b)fluoranthene	56000	26	2.5 J	9.9	5 U	4.9 U	1.4 J
Benzo(k)fluoranthene	52000	25	2.4 J	9.6	5 U	4.9 U	1.2 J
Chrysene	110000	50	4.7	16	0.77 J	4.9 U	2.1 J
Dibenzo(a,h)anthracene	7100	3.5 J	3.3 U	1.4 J	5 U	4.9 U	0.39 J
Indeno(1,2,3-c,d)pyrene	60000	29	2.4 J	13	0.4 J	4.9 U	1.7 J
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	130000 T	55 JT	6.1 JT	22 JT	3.3 JT	4.9 UT	2.7 JT
LWG RA Total LPAH (Calculated U = 1/2)	1500000 T	530 T	31 JT	210 JT	19 JT	15 JT	13 JT
LWG RA Total PAH (Calculated U = 1/2)	2700000 T	1100 JT	84 JT	400 JT	32 JT	36 JT	36 JT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	2000 T	5.2 T	1.8 T	6.5 T	0.06 JT	0.66 UT	0.85 JT
Benzo(a)pyrene	2000 T	6.1 T	1.8 T	8.5 T	0.079 JT	0.66 UT	0.9 JT
Benzo(b)fluoranthene	1100 T	3.8 T	1.3 JT	5 T	0.8 UT	0.66 UT	0.7 JT
Benzo(k)fluoranthene	1000 T	3.6 T	1.2 JT	4.8 T	0.8 UT	0.66 UT	0.6 JT
Chrysene	2100 T	7 T	2.4 T	8 T	0.12 JT	0.66 UT	1.1 JT
Dibenzo(a,h)anthracene	140 T	0.51 JT	1.7 UT	0.7 JT	0.8 UT	0.66 UT	0.2 JT
Indeno(1,2,3-c,d)pyrene	1000 T	4.2 T	1.2 JT	6.5 T	0.06 JT	0.66 UT	0.85 JT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2600 T	8 JT	3.1 JT	11 JT	0.54 JT	0.66 UT	1.3 JT
LWG RA Total LPAH (Calculated U = 1/2)	29000 T	76 T	16 JT	110 JT	3.3 JT	2 JT	7.1 JT
LWG RA Total PAH (Calculated U = 1/2)	53000 T	150 JT	42 JT	200 JT	5.4 JT	4.8 JT	19 JT
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)							
Carbazole	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS09
Sample Name:	WLCGSJ06GS07S2327	WLCGSJ06GS07S4852	WLCGSJ06GS07S98102	WLCGSJ06GS08S2023	WLCGSJ06GS8S4345	WLCGSJ06GS8S9598	WLCGSJ06GS09S123127
Sample Date:	10/17/2006	10/17/2006	10/18/2006	10/25/2006	10/26/2006	10/26/2006	10/12/2006
Depth Interval:	701 - 823 cm	1463 - 1585 cm	2987 - 3109 cm	609.6 - 701 cm	1311 - 1372 cm	2896 - 2987 cm	3749 - 3871 cm
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCSLH01GP25	WLCSLH01GP25
Sample Name:	WLCGSJ06GS09S148152	WLCGSJ06GS09S173177	WLCGSJ06GS09S2327	WLCGSJ06GS09S4852	WLCGSJ06GS09S98102	WLCSLH01GP25S146	WLCSLH01GP25S21
Sample Date:	10/13/2006	10/13/2006	10/9/2006	10/10/2006	10/12/2006	9/30/2004	9/28/2004
Depth Interval:	4511 - 4633 cm	5273 - 5395 cm	701 - 823 cm	1463 - 1585 cm	2987 - 3109 cm	4450 - 4465 cm	640.1 - 655.3 cm
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	5 U	7.9	8800	160	2.5 J	--	23000
Benzo(a)pyrene	0.34 J	8.4	11000	200	2 J	--	29500
Benzo(b)fluoranthene	5 U	6.8	6500	120	1.8 J	--	22500
Benzo(k)fluoranthene	5 U	6.2	6100	110	1.2 J	--	4660
Chrysene	5 U	12	11000	200	2.9 J	--	25300
Dibenzo(a,h)anthracene	5 U	0.98 J	790	15	5 U	--	1920
Indeno(1,2,3-c,d)pyrene	0.56 J	8	7100	130	1.7 J	--	24700
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	3.4 JT	12 JT	14000 T	260 T	5.1 JT	--	39000 T
LWG RA Total LPAH (Calculated U = 1/2)	16 JT	28 JT	150000 T	2400 T	300 JT	--	288000 T
LWG RA Total PAH (Calculated U = 1/2)	32 JT	150 JT	280000 T	4800 T	340 JT	--	610000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	3 UT	4 T	530 T	76 T	1.3 JT	--	2300 T
Benzo(a)pyrene	0.17 JT	4.2 T	660 T	100 T	1 JT	--	2950 T
Benzo(b)fluoranthene	3 UT	3.4 T	390 T	57 T	0.9 JT	--	2250 T
Benzo(k)fluoranthene	3 UT	3.1 T	370 T	52 T	0.6 JT	--	466 T
Chrysene	3 UT	6 T	660 T	100 T	1.5 JT	--	2530 T
Dibenzo(a,h)anthracene	3 UT	0.49 JT	47 T	7.1 T	3 UT	--	192 T
Indeno(1,2,3-c,d)pyrene	0.28 JT	4 T	430 T	62 T	0.85 JT	--	2470 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2 JT	5.9 JT	850 T	130 T	2.8 JT	--	3900 T
LWG RA Total LPAH (Calculated U = 1/2)	9.5 JT	15 JT	8900 T	1100 T	150 JT	--	28800 T
LWG RA Total PAH (Calculated U = 1/2)	19 JT	76 JT	17000 T	2300 T	170 JT	--	61000 T
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	7700
Semivolatile Organics (mg/kg-OC)							
Carbazole	--	--	--	--	--	--	770 T
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCSLH01GP25	WLCSLH01GP25
Sample Name:	WLCGSJ06GS09S148152	WLCGSJ06GS09S173177	WLCGSJ06GS09S2327	WLCGSJ06GS09S4852	WLCGSJ06GS09S98102	WLCSLH01GP25S146	WLCSLH01GP25S21
Sample Date:	10/13/2006	10/13/2006	10/9/2006	10/10/2006	10/12/2006	9/30/2004	9/28/2004
Depth Interval:	4511 - 4633 cm	5273 - 5395 cm	701 - 823 cm	1463 - 1585 cm	2987 - 3109 cm	4450 - 4465 cm	640.1 - 655.3 cm
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26
Sample Name:	WLCSLH01GP25S26	WLCSLH01GP25S31	WLCSLH01GP25S36	WLCSLH01GP25S41	WLCSLH01GP25S91	WLCSLH01GP26S118	WLCSLH01GP26S23	WLCSLH01GP26S28
Sample Date:	9/28/2004	9/28/2004	9/28/2004	9/28/2004	9/29/2004	10/5/2004	10/4/2004	10/4/2004
Depth Interval:	792.5 - 807.7 cm	944.9 - 960.1 cm	1097 - 1112 cm	1250 - 1265 cm	2774 - 2789 cm	3597 - 3612 cm	701 - 716.2 cm	853.4 - 868.6 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	**1280**	**7560**	**37.6**	9.69 U	--	**15.7**	**727**	**186**
Benzo(a)pyrene	**1670**	**13200**	**106**	9.69 U	--	**49.7**	**959**	**317**
Benzo(b)fluoranthene	**1510**	**10800**	**57.8**	9.69 U	--	**42.4**	**806**	**257**
Benzo(k)fluoranthene	**459**	**2000**	**16.4**	9.69 U	--	**12.9**	**233**	**37**
Chrysene	**1440**	**7410**	**37.6**	9.69 U	--	**16.6**	**825**	**223**
Dibenzo(a,h)anthracene	**217**	**1040**	9.64 U	9.69 U	--	9.21 U	**132**	**15.7**
Indeno(1,2,3-c,d)pyrene	**1040**	**7810**	**57.8**	9.69 U	--	**28.5**	**721**	**263**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**2280 T**	**17000 T**	**126 T**	9.69 UT	--	**63.1 T**	**1320 T**	**404 T**
LWG RA Total LPAH (Calculated U = 1/2)	**8500 T**	**47000 T**	**545 T**	**83.4 T**	--	92.1 UT	**11000 T**	**1660 T**
LWG RA Total PAH (Calculated U = 1/2)	**24000 T**	**170000 T**	**1700 T**	**132 T**	--	**287 T**	**21000 T**	**4780 T**
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	**128 T**	**756 T**	**3.76 T**	0.969 UT	--	**1.57 T**	**72.7 T**	**18.6 T**
Benzo(a)pyrene	**167 T**	**1320 T**	**10.6 T**	0.969 UT	--	**4.97 T**	**95.9 T**	**31.7 T**
Benzo(b)fluoranthene	**151 T**	**1080 T**	**5.78 T**	0.969 UT	--	**4.24 T**	**80.6 T**	**25.7 T**
Benzo(k)fluoranthene	**45.9 T**	**200 T**	**1.64 T**	0.969 UT	--	**1.29 T**	**23.3 T**	**3.7 T**
Chrysene	**144 T**	**741 T**	**3.76 T**	0.969 UT	--	**1.66 T**	**82.5 T**	**22.3 T**
Dibenzo(a,h)anthracene	**21.7 T**	**104 T**	0.964 UT	0.969 UT	--	0.921 UT	**13.2 T**	**1.57 T**
Indeno(1,2,3-c,d)pyrene	**104 T**	**781 T**	**5.78 T**	0.969 UT	--	**2.85 T**	**72.1 T**	**26.3 T**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**228 T**	**1700 T**	**12.6 T**	0.969 UT	--	**6.31 T**	**132 T**	**40.4 T**
LWG RA Total LPAH (Calculated U = 1/2)	**850 T**	**4700 T**	**54.5 T**	**8.34 T**	--	9.21 UT	**1100 T**	**166 T**
LWG RA Total PAH (Calculated U = 1/2)	**2400 T**	**17000 T**	**170 T**	**13.2 T**	--	**28.7 T**	**2100 T**	**478 T**
Semivolatile Organics (µg/kg)								
Carbazole	106 U	**129**	96.5 U	96.9 U	--	92.1 U	**193**	92.5 U
Semivolatile Organics (mg/kg-OC)								
Carbazole	10.6 UT	**12.9 T**	9.65 UT	9.69 UT	--	9.21 UT	**19.3 T**	9.25 UT
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26
Sample Name:	WLCSLH01GP25S26	WLCSLH01GP25S31	WLCSLH01GP25S36	WLCSLH01GP25S41	WLCSLH01GP25S91	WLCSLH01GP26S118	WLCSLH01GP26S23	WLCSLH01GP26S28
Sample Date:	9/28/2004	9/28/2004	9/28/2004	9/28/2004	9/29/2004	10/5/2004	10/4/2004	10/4/2004
Depth Interval:	792.5 - 807.7 cm	944.9 - 960.1 cm	1097 - 1112 cm	1250 - 1265 cm	2774 - 2789 cm	3597 - 3612 cm	701 - 716.2 cm	853.4 - 868.6 cm
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27
Sample Name:	WLCSLH01GP26S58	WLCSLH01GP26S63	WLCSLH01GP26S83	WLCSLH01GP27S100	WLCSLH01GP27S20	WLCSLH01GP27S25	WLCSLH01GP27S30	WLCSLH01GP27S35
Sample Date:	10/4/2004	10/4/2004	10/4/2004	10/11/2004	10/7/2004	10/7/2004	10/8/2004	10/8/2004
Depth Interval:	1768 - 1783 cm	1920 - 1935 cm	2530 - 2545 cm	3048 - 3063 cm	609.6 - 624.8 cm	762 - 777.2 cm	914.4 - 929.6 cm	1067 - 1082 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	**52.3**	8.95 U	**25.5**	**16**	8.72 U	8.75 U	8.86 U	9.82 U
Benzo(a)pyrene	**101**	8.95 U	**27.3**	**16**	8.72 U	8.75 U	**9.74**	9.82 U
Benzo(b)fluoranthene	**60.4**	8.95 U	**27.3**	**16.8**	8.72 U	8.75 U	**10.6**	9.82 U
Benzo(k)fluoranthene	**19.8**	8.95 U	**24.6**	**15.1**	8.72 U	8.75 U	8.86 U	9.82 U
Chrysene	**109**	8.95 U	**22**	**13.5**	8.72 U	8.75 U	8.86 U	9.82 U
Dibenzo(a,h)anthracene	9.03 U	8.95 U	**25.5**	**15.1**	8.72 U	8.75 U	8.86 U	9.82 U
Indeno(1,2,3-c,d)pyrene	**35.2**	8.95 U	**23.7**	**15.1**	8.72 U	8.75 U	8.86 U	9.82 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**121 T**	8.95 UT	**60.7 T**	**36.1 T**	8.72 UT	8.75 UT	**16.2 T**	9.82 UT
LWG RA Total LPAH (Calculated U = 1/2)	**1090 T**	**103 T**	**180 T**	84.1 UT	**97.7 T**	**173 T**	**245 T**	98.2 UT
LWG RA Total PAH (Calculated U = 1/2)	**2320 T**	**171 T**	**440 T**	**213 T**	**160 T**	**236 T**	**336 T**	98.2 UT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	**5.23 T**	0.895 UT	**2.55 T**	**1.6 T**	0.872 UT	0.875 UT	0.886 UT	0.982 UT
Benzo(a)pyrene	**10.1 T**	0.895 UT	**2.73 T**	**1.6 T**	0.872 UT	0.875 UT	**0.974 T**	0.982 UT
Benzo(b)fluoranthene	**6.04 T**	0.895 UT	**2.73 T**	**1.68 T**	0.872 UT	0.875 UT	**1.06 T**	0.982 UT
Benzo(k)fluoranthene	**1.98 T**	0.895 UT	**2.46 T**	**1.51 T**	0.872 UT	0.875 UT	0.886 UT	0.982 UT
Chrysene	**10.9 T**	0.895 UT	**2.2 T**	**1.35 T**	0.872 UT	0.875 UT	0.886 UT	0.982 UT
Dibenzo(a,h)anthracene	0.903 UT	0.895 UT	**2.55 T**	**1.51 T**	0.872 UT	0.875 UT	0.886 UT	0.982 UT
Indeno(1,2,3-c,d)pyrene	**3.52 T**	0.895 UT	**2.37 T**	**1.51 T**	0.872 UT	0.875 UT	0.886 UT	0.982 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**12.1 T**	0.895 UT	**6.07 T**	**3.61 T**	0.872 UT	0.875 UT	**1.62 T**	0.982 UT
LWG RA Total LPAH (Calculated U = 1/2)	**109 T**	**10.3 T**	**18 T**	8.41 UT	**9.77 T**	**17.3 T**	**24.5 T**	9.82 UT
LWG RA Total PAH (Calculated U = 1/2)	**232 T**	**17.1 T**	**44 T**	**21.3 T**	**16 T**	**23.6 T**	**33.6 T**	9.82 UT
Semivolatile Organics (µg/kg)								
Carbazole	90.2 U	89.5 U	88 U	84.1 U	87.2 U	87.5 U	88.5 U	98.2 U
Semivolatile Organics (mg/kg-OC)								
Carbazole	9.02 UT	8.95 UT	8.8 UT	8.41 UT	8.72 UT	8.75 UT	8.85 UT	9.82 UT
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27
Sample Name:	WLCSLH01GP26S58	WLCSLH01GP26S63	WLCSLH01GP26S83	WLCSLH01GP27S100	WLCSLH01GP27S20	WLCSLH01GP27S25	WLCSLH01GP27S30	WLCSLH01GP27S35
Sample Date:	10/4/2004	10/4/2004	10/4/2004	10/11/2004	10/7/2004	10/7/2004	10/8/2004	10/8/2004
Depth Interval:	1768 - 1783 cm	1920 - 1935 cm	2530 - 2545 cm	3048 - 3063 cm	609.6 - 624.8 cm	762 - 777.2 cm	914.4 - 929.6 cm	1067 - 1082 cm
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP28
Sample Name:	WLCSLH01GP27S40	WLCSLH01GP27S45	WLCSLH01GP27S50	WLCSLH01GP27S55	WLCSLH01GP27S60	WLCSLH01GP28S20	WLCSLH01GP28S25	WLCSLH01GP28S30
Sample Date:	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/13/2004	10/13/2004	10/13/2004
Depth Interval:	1219 - 1234 cm	1372 - 1387 cm	1524 - 1539 cm	1676 - 1691 cm	1829 - 1844 cm	609.6 - 624.8 cm	762 - 777.2 cm	914.4 - 929.6 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**10800**	**8000**	**5410**
Benzo(a)pyrene	10.6 U	10 U	**107**	9.68 U	8.74 U	**17100**	**12200**	**11100**
Benzo(b)fluoranthene	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**14700**	**10800**	**9700**
Benzo(k)fluoranthene	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**4570**	**3300**	**2780**
Chrysene	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**11800**	**7290**	**5380**
Dibenzo(a,h)anthracene	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**1610**	**1180**	**839**
Indeno(1,2,3-c,d)pyrene	10.6 U	10 U	9.85 U	9.68 U	8.74 U	**8210**	**6360**	**5530**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	10.6 UT	10 UT	**113 T**	9.68 UT	8.74 UT	**22100 T**	**16000 T**	**14000 T**
LWG RA Total LPAH (Calculated U = 1/2)	**568 T**	**110 T**	**93.6 T**	96.8 UT	**141 T**	**100000 T**	**43800 T**	**15000 T**
LWG RA Total PAH (Calculated U = 1/2)	**957 T**	**170 T**	**245 T**	96.8 UT	**197 T**	**270000 T**	**160000 T**	**100000 T**
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	1.06 UT	1 UT	0.985 UT	0.968 UT	0.874 UT	**1080 T**	**800 T**	**541 T**
Benzo(a)pyrene	1.06 UT	1 UT	**10.7 T**	0.968 UT	0.874 UT	**1710 T**	**1220 T**	**1110 T**
Benzo(b)fluoranthene	1.06 UT	1 UT	0.985 UT	0.968 UT	0.874 UT	**1470 T**	**1080 T**	**970 T**
Benzo(k)fluoranthene	1.06 UT	1 UT	0.985 UT	0.968 UT	0.874 UT	**457 T**	**330 T**	**278 T**
Chrysene	1.06 UT	1 UT	0.985 UT	0.968 UT	0.874 UT	**1180 T**	**729 T**	**538 T**
Dibenzo(a,h)anthracene	1.06 UT	1 UT	0.985 UT	0.968 UT	0.874 UT	**161 T**	**118 T**	**83.9 T**
Indeno(1,2,3-c,d)pyrene	1.06 UT	1 UT	0.985 UT	0.968 UT	0.874 UT	**821 T**	**636 T**	**553 T**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	1.06 UT	1 UT	**11.3 T**	0.968 UT	0.874 UT	**2210 T**	**1600 T**	**1400 T**
LWG RA Total LPAH (Calculated U = 1/2)	**56.8 T**	**11 T**	**9.36 T**	9.68 UT	**14.1 T**	**10000 T**	**4380 T**	**1500 T**
LWG RA Total PAH (Calculated U = 1/2)	**95.7 T**	**17 T**	**24.5 T**	9.68 UT	**19.7 T**	**27000 T**	**16000 T**	**10000 T**
Semivolatile Organics (µg/kg)								
Carbazole	105 U	100 U	98.5 U	96.8 U	87.4 U	**730**	**249**	**169**
Semivolatile Organics (mg/kg-OC)								
Carbazole	10.5 UT	10 UT	9.85 UT	9.68 UT	8.74 UT	**73 T**	**24.9 T**	**16.9 T**
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP28
Sample Name:	WLCSLH01GP27S40	WLCSLH01GP27S45	WLCSLH01GP27S50	WLCSLH01GP27S55	WLCSLH01GP27S60	WLCSLH01GP28S20	WLCSLH01GP28S25	WLCSLH01GP28S30
Sample Date:	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/8/2004	10/13/2004	10/13/2004	10/13/2004
Depth Interval:	1219 - 1234 cm	1372 - 1387 cm	1524 - 1539 cm	1676 - 1691 cm	1829 - 1844 cm	609.6 - 624.8 cm	762 - 777.2 cm	914.4 - 929.6 cm
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29
Sample Name:	WLCSLH01GP28S35	WLCSLH01GP29S27	WLCSLH01GP29S32	WLCSLH01GP29S37	WLCSLH01GP29S42	WLCSLH01GP29S47	WLCSLH01GP29S52	WLCSLH01GP29S57
Sample Date:	10/13/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004
Depth Interval:	1067 - 1082 cm	823 - 838.2 cm	975.4 - 990.6 cm	1128 - 1143 cm	1280 - 1295 cm	1433 - 1448 cm	1585 - 1600 cm	1737 - 1752 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	9.72 U	**12.3**	**48.6**	9.29 U	**17**	9.1 U	9.94 U	6.67 U
Benzo(a)pyrene	9.72 U	**14.1**	**85.5**	9.29 U	**19.6**	9.1 U	9.94 U	104 U
Benzo(b)fluoranthene	9.72 U	**13.2**	**50.3**	9.29 U	**17**	9.1 U	9.94 U	6.67 U
Benzo(k)fluoranthene	9.72 U	8.8 U	**15.9**	9.29 U	8.93 U	9.1 U	9.94 U	6.67 U
Chrysene	9.72 U	**11.4**	**96.9**	9.29 U	**16.1**	9.1 U	9.94 U	6.67 U
Dibenzo(a,h)anthracene	9.72 U	8.8 U	8.39 U	9.29 U	8.93 U	9.1 U	9.94 U	6.67 U
Indeno(1,2,3-c,d)pyrene	9.72 U	8.8 U	**24.3**	9.29 U	8.93 U	9.1 U	9.94 U	6.67 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	9.72 UT	**22 T**	**102 T**	9.29 UT	**28 T**	9.1 UT	9.94 UT	104 UT
LWG RA Total LPAH (Calculated U = 1/2)	97.2 UT	**290 T**	**1060 T**	**119 T**	**273 T**	91 UT	**137 T**	104 UT
LWG RA Total PAH (Calculated U = 1/2)	**139 T**	**580 T**	**2160 T**	**165 T**	**529 T**	91 UT	**187 T**	104 UT
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	0.972 UT	**1.23 T**	**4.86 T**	0.929 UT	**1.7 T**	0.91 UT	0.994 UT	0.667 UT
Benzo(a)pyrene	0.972 UT	**1.41 T**	**8.55 T**	0.929 UT	**1.96 T**	0.91 UT	0.994 UT	10.4 UT
Benzo(b)fluoranthene	0.972 UT	**1.32 T**	**5.03 T**	0.929 UT	**1.7 T**	0.91 UT	0.994 UT	0.667 UT
Benzo(k)fluoranthene	0.972 UT	0.88 UT	**1.59 T**	0.929 UT	0.893 UT	0.91 UT	0.994 UT	0.667 UT
Chrysene	0.972 UT	**1.14 T**	**9.69 T**	0.929 UT	**1.61 T**	0.91 UT	0.994 UT	0.667 UT
Dibenzo(a,h)anthracene	0.972 UT	0.88 UT	0.839 UT	0.929 UT	0.893 UT	0.91 UT	0.994 UT	0.667 UT
Indeno(1,2,3-c,d)pyrene	0.972 UT	0.88 UT	**2.43 T**	0.929 UT	0.893 UT	0.91 UT	0.994 UT	0.667 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	0.972 UT	**2.2 T**	**10.2 T**	0.929 UT	**2.8 T**	0.91 UT	0.994 UT	10.4 UT
LWG RA Total LPAH (Calculated U = 1/2)	9.72 UT	**29 T**	**106 T**	**11.9 T**	**27.3 T**	9.1 UT	**13.7 T**	10.4 UT
LWG RA Total PAH (Calculated U = 1/2)	**13.9 T**	**58 T**	**216 T**	**16.5 T**	**52.9 T**	9.1 UT	**18.7 T**	10.4 UT
Semivolatile Organics (µg/kg)								
Carbazole	97.2 U	88 U	83.9 U	92.9 U	89.3 U	91 U	99.4 U	104 U
Semivolatile Organics (mg/kg-OC)								
Carbazole	9.72 UT	8.8 UT	8.39 UT	9.29 UT	8.93 UT	9.1 UT	9.94 UT	10.4 UT
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29
Sample Name:	WLCSLH01GP28S35	WLCSLH01GP29S27	WLCSLH01GP29S32	WLCSLH01GP29S37	WLCSLH01GP29S42	WLCSLH01GP29S47	WLCSLH01GP29S52	WLCSLH01GP29S57
Sample Date:	10/13/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/19/2004
Depth Interval:	1067 - 1082 cm	823 - 838.2 cm	975.4 - 990.6 cm	1128 - 1143 cm	1280 - 1295 cm	1433 - 1448 cm	1585 - 1600 cm	1737 - 1752 cm
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP31
Sample Name:	WLCSLH01GP29S62	WLCSLH01GP29S67	WLCSLH01GP29S72	WLCSLH01GP29S77	WLCSLH01GP30S23	WLCSLH01GP31S22	WLCSLH01GP31S27	WLCSLH01GP31S32
Sample Date:	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/22/2004	10/26/2004	10/26/2004	10/26/2004
Depth Interval:	1890 - 1905 cm	2042 - 2057 cm	2195 - 2210 cm	2347 - 2362 cm	701 - 716.2 cm	670.6 - 685.8 cm	823 - 838.2 cm	975.4 - 990.6 cm
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	6.67 U	**17.1**	8.42 U	9.58 U	8.99 U	8.72 U	8.78 U	8.3 U
Benzo(a)pyrene	103 U	**19.7**	8.42 U	9.58 U	8.99 U	8.72 U	8.78 U	8.3 U
Benzo(b)fluoranthene	6.67 U	**16.3**	8.42 U	9.58 U	8.99 U	8.72 U	8.78 U	8.3 U
Benzo(k)fluoranthene	6.67 U	8.56 U	8.42 U	9.58 U	8.99 U	8.72 U	8.78 U	8.3 U
Chrysene	6.67 U	**17.1**	8.42 U	9.58 U	8.99 U	8.72 U	8.78 U	8.3 U
Dibenzo(a,h)anthracene	6.67 U	8.56 U	8.42 U	9.58 U	8.99 U	8.72 U	8.78 U	8.3 U
Indeno(1,2,3-c,d)pyrene	6.67 U	**10.3**	8.42 U	9.58 U	8.99 U	8.72 U	8.78 U	8.3 U
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	103 UT	**28.4 T**	8.42 UT	9.58 UT	8.99 UT	8.72 UT	8.78 UT	8.3 UT
LWG RA Total LPAH (Calculated U = 1/2)	**189 T**	**296 T**	**137 T**	**612 T**	**832 T**	**113 T**	87.8 UT	**86 T**
LWG RA Total PAH (Calculated U = 1/2)	**270 T**	**563 T**	**234 T**	**855 T**	**974 T**	**184 T**	87.8 UT	**140 T**
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	0.667 UT	**1.71 T**	0.842 UT	0.958 UT	0.899 UT	0.872 UT	0.878 UT	0.83 UT
Benzo(a)pyrene	10.3 UT	**1.97 T**	0.842 UT	0.958 UT	0.899 UT	0.872 UT	0.878 UT	0.83 UT
Benzo(b)fluoranthene	0.667 UT	**1.63 T**	0.842 UT	0.958 UT	0.899 UT	0.872 UT	0.878 UT	0.83 UT
Benzo(k)fluoranthene	0.667 UT	0.856 UT	0.842 UT	0.958 UT	0.899 UT	0.872 UT	0.878 UT	0.83 UT
Chrysene	0.667 UT	**1.71 T**	0.842 UT	0.958 UT	0.899 UT	0.872 UT	0.878 UT	0.83 UT
Dibenzo(a,h)anthracene	0.667 UT	0.856 UT	0.842 UT	0.958 UT	0.899 UT	0.872 UT	0.878 UT	0.83 UT
Indeno(1,2,3-c,d)pyrene	0.667 UT	**1.03 T**	0.842 UT	0.958 UT	0.899 UT	0.872 UT	0.878 UT	0.83 UT
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	10.3 UT	**2.84 T**	0.842 UT	0.958 UT	0.899 UT	0.872 UT	0.878 UT	0.83 UT
LWG RA Total LPAH (Calculated U = 1/2)	**18.9 T**	**29.6 T**	**13.7 T**	**61.2 T**	**83.2 T**	**11.3 T**	8.78 UT	**8.6 T**
LWG RA Total PAH (Calculated U = 1/2)	**27 T**	**56.3 T**	**23.4 T**	**85.5 T**	**97.4 T**	**18.4 T**	8.78 UT	**14 T**
Semivolatile Organics (µg/kg)								
Carbazole	103 U	85.6 U	84.2 U	95.8 U	89.9 U	87.2 U	87.7 U	82.9 U
Semivolatile Organics (mg/kg-OC)								
Carbazole	10.3 UT	8.56 UT	8.42 UT	9.58 UT	8.99 UT	8.72 UT	8.77 UT	8.29 UT
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet	G:_>20_feet
System Location Code:	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP31
Sample Name:	WLCSLH01GP29S62	WLCSLH01GP29S67	WLCSLH01GP29S72	WLCSLH01GP29S77	WLCSLH01GP30S23	WLCSLH01GP31S22	WLCSLH01GP31S27	WLCSLH01GP31S32
Sample Date:	10/19/2004	10/19/2004	10/19/2004	10/19/2004	10/22/2004	10/26/2004	10/26/2004	10/26/2004
Depth Interval:	1890 - 1905 cm	2042 - 2057 cm	2195 - 2210 cm	2347 - 2362 cm	701 - 716.2 cm	670.6 - 685.8 cm	823 - 838.2 cm	975.4 - 990.6 cm
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	WLCSLH01GP31	WLCSLH01GP32	DGS-07SC	GTC-04	GTC-04	GTC-06	GTC-06
Sample Name:	WLCSLH01GP31S37	WLCSLH01GP32S21	DGS-07SC-0113.4-101012	GTC-04SC-090113RE	GTC-04SC-090114	GTC-06SC-090113RE	GTC-06SC-090114
Sample Date:	10/26/2004	10/27/2004	10/12/2010	1/14/2009	1/14/2009	1/14/2009	1/14/2009
Depth Interval:	1128 - 1143 cm	640.1 - 655.3 cm	30.48 - 408.43 cm	0 - 374.9 cm	0 - 374.9 cm	0 - 362.71 cm	0 - 362.71 cm
Metals (mg/kg)							
Zinc	--	--	155	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)anthracene	11.3	10.4 U	34000	--	42000	--	240000
Benzo(a)pyrene	14.8	10.4 U	39000	--	57000	--	290000
Benzo(b)fluoranthene	13	10.4 U	--	--	37000	--	160000
Benzo(k)fluoranthene	8.7 U	10.4 U	--	--	26000	--	180000
Chrysene	11.3	10.4 U	39000	--	50000	--	300000
Dibenzo(a,h)anthracene	8.7 U	10.4 U	1000	--	4600	--	26000
Indeno(1,2,3-c,d)pyrene	8.7 U	10.4 U	15000	--	26000	--	120000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	22 T	10.4 UT	50000 T	--	72000 T	--	370000 T
LWG RA Total LPAH (Calculated U = 1/2)	170 T	273 T	470000 T	--	470000 JT	--	7800000 T
LWG RA Total PAH (Calculated U = 1/2)	320 T	442 T	910000 T	--	1200000 JT	--	12000000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)							
Benzo(a)anthracene	1.13 T	1.04 UT	3400 T	--	4200 T	--	24000 T
Benzo(a)pyrene	1.48 T	1.04 UT	3900 T	--	5700 T	--	29000 T
Benzo(b)fluoranthene	1.3 T	1.04 UT	--	--	3700 T	--	16000 T
Benzo(k)fluoranthene	0.87 UT	1.04 UT	--	--	2600 T	--	18000 T
Chrysene	1.13 T	1.04 UT	3900 T	--	5000 T	--	30000 T
Dibenzo(a,h)anthracene	0.87 UT	1.04 UT	100 T	--	460 T	--	2600 T
Indeno(1,2,3-c,d)pyrene	0.87 UT	1.04 UT	1500 T	--	2600 T	--	12000 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	2.2 T	1.04 UT	5000 T	--	7200 T	--	37000 T
LWG RA Total LPAH (Calculated U = 1/2)	17 T	27.3 T	47000 T	--	47000 JT	--	780000 T
LWG RA Total PAH (Calculated U = 1/2)	32 T	44.2 T	91000 T	--	120000 JT	--	1200000 T
Semivolatile Organics (µg/kg)							
Carbazole	86.9 U	104 U	6000	--	--	--	--
Semivolatile Organics (mg/kg-OC)							
Carbazole	8.69 UT	10.4 UT	600 T	--	--	--	--
PCB Aroclors (µg/kg)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	130 T	--	--	--	--
PCB Aroclors (mg/kg-OC)							
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	13 T	--	--	--	--
PCB Congeners (µg/kg)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)							
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	G:_>20_feet	G:_>20_feet	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	WLCSLH01GP31	WLCSLH01GP32	DGS-07SC	GTC-04	GTC-04	GTC-06	GTC-06
Sample Name:	WLCSLH01GP31S37	WLCSLH01GP32S21	DGS-07SC-0113.4-101012	GTC-04SC-090113RE	GTC-04SC-090114	GTC-06SC-090113RE	GTC-06SC-090114
Sample Date:	10/26/2004	10/27/2004	10/12/2010	1/14/2009	1/14/2009	1/14/2009	1/14/2009
Depth Interval:	1128 - 1143 cm	640.1 - 655.3 cm	30.48 - 408.43 cm	0 - 374.9 cm	0 - 374.9 cm	0 - 362.71 cm	0 - 362.71 cm
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
4,4'-DDD (p,p'-DDD)	--	--	**160 J**	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	33 U	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	33 U	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	16 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	16 U	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	16 UJ	--	--	--	--
Endrin ketone	--	--	33 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	16 U	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	**240 JT**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	33 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	33 UT	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	**300 JT**	--	--	--	--
Pesticides (mg/kg-OC)							
4,4'-DDD (p,p'-DDD)	--	--	**16 JT**	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	3.3 UT	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	3.3 UT	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	1.6 UT	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	1.6 UT	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	1.6 UJT	--	--	--	--
Endrin ketone	--	--	3.3 UT	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	**24 JT**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	3.3 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	3.3 UT	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	**30 JT**	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	GTC-09	GTC-09	LWM-C11	LWM-TCLP11A	LWM-TCLP11B	LWM-TCLP11C	WLCDRD05VC056	WLCGSG04RAA02
Sample Name:	GTC-09SC-090113RE	GTC-09SC-090114	LWM-METCS11	LWM-TCLPC11A	LWM-TCLPC11B	LWM-TCLPC11C	WLCDRD05VC05656	WLCGSG04RAA02SD1019
Sample Date:	1/14/2009	1/14/2009	8/28/2008	8/27/2008	8/27/2008	8/28/2008	5/4/2005	7/20/2004
Depth Interval:	100.58 - 426.72 cm	100.58 - 426.72 cm	0 - 386 cm	0 - 322 cm	0 - 363 cm	0 - 325 cm	0 - 265 cm	304.8 - 579.12 cm
Metals (mg/kg)								
Zinc	--	--	122 J	--	--	--	110 J	64.1
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	--	73000	160000	--	--	--	1300	89000
Benzo(a)pyrene	--	79000	200000	--	--	--	1900	130000
Benzo(b)fluoranthene	--	50000	120000	--	--	--	1100	110000
Benzo(k)fluoranthene	--	45000	69000 J	--	--	--	910	36000
Chrysene	--	85000	210000	--	--	--	1600	110000
Dibenzo(a,h)anthracene	--	7600	19000 J	--	--	--	160	12000
Indeno(1,2,3-c,d)pyrene	--	32000	63000 J	--	--	--	1500	100000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	100000 T	250000 JT	--	--	--	2500 T	170000 T
LWG RA Total LPAH (Calculated U = 1/2)	--	2300000 T	6200000 T	--	--	--	8900 T	1500000 T
LWG RA Total PAH (Calculated U = 1/2)	--	3400000 T	8400000 JT	--	--	--	30000 T	2900000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	--	7300 T	1500 T	--	--	--	51 T	870 T
Benzo(a)pyrene	--	7900 T	2000 T	--	--	--	75 T	1300 T
Benzo(b)fluoranthene	--	5000 T	1100 T	--	--	--	43 T	1100 T
Benzo(k)fluoranthene	--	4500 T	650 JT	--	--	--	36 T	350 T
Chrysene	--	8500 T	2000 T	--	--	--	63 T	1100 T
Dibenzo(a,h)anthracene	--	760 T	180 JT	--	--	--	6.3 T	120 T
Indeno(1,2,3-c,d)pyrene	--	3200 T	590 JT	--	--	--	59 T	1000 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	10000 T	2500 JT	--	--	--	97 T	1700 T
LWG RA Total LPAH (Calculated U = 1/2)	--	230000 T	58000 T	--	--	--	350 T	15000 T
LWG RA Total PAH (Calculated U = 1/2)	--	340000 T	78000 JT	--	--	--	1200 T	29000 T
Semivolatile Organics (µg/kg)								
Carbazole	--	--	67000	--	--	--	30	--
Semivolatile Organics (mg/kg-OC)								
Carbazole	--	--	630 T	--	--	--	1 T	--
PCB Aroclors (µg/kg)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	720 UT	--
PCB Aroclors (mg/kg-OC)								
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	28 UT	--
PCB Congeners (µg/kg)								
PCB-077	--	--	0.207 J	--	--	--	--	--
PCB-081	--	--	0.0601 U	--	--	--	--	--
PCB-105	--	--	0.836	--	--	--	--	--
PCB-126	--	--	0.0746 U	--	--	--	--	--
PCB-156	--	--	0.341	--	--	--	--	--
PCB-157	--	--	0.0885 J	--	--	--	--	--
PCB-169	--	--	0.0836 U	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	95 JT	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	0.00506 JT	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
PCB-077	--	--	0.00195 JT	--	--	--	--	--
PCB-081	--	--	0.000567 UT	--	--	--	--	--
PCB-105	--	--	0.00789 T	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	GTC-09	GTC-09	LWM-C11	LWM-TCLP11A	LWM-TCLP11B	LWM-TCLP11C	WLCDRD05VC056	WLCGSG04RAA02
Sample Name:	GTC-09SC-090113RE	GTC-09SC-090114	LWM-METCS11	LWM-TCLPC11A	LWM-TCLPC11B	LWM-TCLPC11C	WLCDRD05VC05656	WLCGSG04RAA02SD1019
Sample Date:	1/14/2009	1/14/2009	8/28/2008	8/27/2008	8/27/2008	8/28/2008	5/4/2005	7/20/2004
Depth Interval:	100.58 - 426.72 cm	100.58 - 426.72 cm	0 - 386 cm	0 - 322 cm	0 - 363 cm	0 - 325 cm	0 - 265 cm	304.8 - 579.12 cm
PCB-126	--	--	0.000704 UT	--	--	--	--	--
PCB-156	--	--	**0.00322 T**	--	--	--	--	--
PCB-157	--	--	**0.000835 JT**	--	--	--	--	--
PCB-169	--	--	0.000789 UT	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	**0.89 JT**	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	**4.78E-05 JT**	--	--	--	--	--
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	--	--	99 U	--	--	--	**680**	--
4,4'-DDE (p,p'-DDE)	--	--	99 U	--	--	--	160 U	--
4,4'-DDT (p,p'-DDT)	--	--	99 U	--	--	--	**490**	--
alpha-Hexachlorocyclohexane (BHC)	--	--	49 U	--	--	--	0.27 U	--
beta-Hexachlorocyclohexane (BHC)	--	--	49 U	--	--	--	0.86 U	--
delta-Hexachlorocyclohexane (BHC)	--	--	49 U	--	--	--	1 U	--
Endrin ketone	--	--	99 U	--	--	--	1 U	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	49 U	16 U	160 U	160 U	0.85 U	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	99 UT	--	--	--	**1100 T**	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	99 UT	--	--	--	160 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	99 UT	--	--	--	**510 T**	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	99 UT	--	--	--	**1700 T**	--
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	--	--	0.93 UT	--	--	--	**27 T**	--
4,4'-DDE (p,p'-DDE)	--	--	0.93 UT	--	--	--	6.3 UT	--
4,4'-DDT (p,p'-DDT)	--	--	0.93 UT	--	--	--	**19 T**	--
alpha-Hexachlorocyclohexane (BHC)	--	--	0.46 UT	--	--	--	0.011 UT	--
beta-Hexachlorocyclohexane (BHC)	--	--	0.46 UT	--	--	--	0.034 UT	--
delta-Hexachlorocyclohexane (BHC)	--	--	0.46 UT	--	--	--	0.04 UT	--
Endrin ketone	--	--	0.93 UT	--	--	--	0.04 UT	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	0.93 UT	--	--	--	**42 T**	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	0.93 UT	--	--	--	6.3 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	0.93 UT	--	--	--	**20 T**	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	0.93 UT	--	--	--	**65 T**	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	WLCGSG04RAA04	WLCGSG04RAA05	WLCGSG04RAA08	WLCGSG04RAA17	WLCMRD08SDDA18SB
Sample Name:	WLCGSG04RAA04SD0620	WLCGSG04RAA05SD1020	WLCGSG04RAA08SD0720	WLCGSG04RAA17SD0010	WLCMRD08DA18-2
Sample Date:	7/21/2004	7/22/2004	7/21/2004	7/22/2004	4/20/2008
Depth Interval:	182.88 - 609.6 cm	304.8 - 609.6 cm	213.36 - 609.6 cm	0 - 304.8 cm	30.48 - 335.28 cm
Metals (mg/kg)					
Zinc	--	51.3	43.3	64.5	165
Polycyclic Aromatic Hydrocarbons (µg/kg)					
Benzo(a)anthracene	--	940	140	29000	3700
Benzo(a)pyrene	--	1800	200	43000	5000
Benzo(b)fluoranthene	--	1100	120	37000	4100
Benzo(k)fluoranthene	--	980	110	10000	1400
Chrysene	--	1300	160	35000	4600
Dibenzo(a,h)anthracene	--	110	17	4100	520
Indeno(1,2,3-c,d)pyrene	--	1700	160	31000	4000
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	2300 T	260 T	57000 T	6700 T
LWG RA Total LPAH (Calculated U = 1/2)	--	7600 T	2000 T	370000 T	39000 T
LWG RA Total PAH (Calculated U = 1/2)	--	28000 T	3900 T	860000 T	94000 T
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)					
Benzo(a)anthracene	--	58 T	17 T	490 T	110 T
Benzo(a)pyrene	--	110 T	20 T	730 T	200 T
Benzo(b)fluoranthene	--	67 T	14 T	630 T	130 T
Benzo(k)fluoranthene	--	60 T	13 T	200 T	43 T
Chrysene	--	80 T	19 T	600 T	140 T
Dibenzo(a,h)anthracene	--	6.7 T	2 T	70 T	16 T
Indeno(1,2,3-c,d)pyrene	--	100 T	19 T	530 T	100 T
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	140 T	27 T	970 T	250 T
LWG RA Total LPAH (Calculated U = 1/2)	--	420 T	230 T	6300 T	1200 T
LWG RA Total PAH (Calculated U = 1/2)	--	1600 T	460 T	15000 T	2900 T
Semivolatile Organics (µg/kg)					
Carbazole	--	--	--	--	470
Semivolatile Organics (mg/kg-OC)					
Carbazole	--	--	--	--	15 T
PCB Aroclors (µg/kg)					
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	88 JT
PCB Aroclors (mg/kg-OC)					
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	3 JT
PCB Congeners (µg/kg)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-169	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (mg/kg-OC)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--

Table 3-21
Existing Data Screening Table - Sub-surface Sediments (Category G H) Background

Analysis Matrix:	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite	H:_Long_Composite
System Location Code:	WLCGSG04RAA04	WLCGSG04RAA05	WLCGSG04RAA08	WLCGSG04RAA17	WLCMRD08SDDA18SB
Sample Name:	WLCGSG04RAA04SD0620	WLCGSG04RAA05SD1020	WLCGSG04RAA08SD0720	WLCGSG04RAA17SD0010	WLCMRD08DA18-2
Sample Date:	7/21/2004	7/22/2004	7/21/2004	7/22/2004	4/20/2008
Depth Interval:	182.88 - 609.6 cm	304.8 - 609.6 cm	213.36 - 609.6 cm	0 - 304.8 cm	30.48 - 335.28 cm
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-169	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/kg)					
4,4'-DDD (p,p'-DDD)	--	--	--	--	**140**
4,4'-DDE (p,p'-DDE)	--	--	--	--	13 U
4,4'-DDT (p,p'-DDT)	--	--	--	--	**53**
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	**0.58 J**
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	1 U
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	**0.58 J**
Endrin ketone	--	--	--	--	1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	**2.4 J**
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	**190 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	13 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	**56 T**
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	**250 T**
Pesticides (mg/kg-OC)					
4,4'-DDD (p,p'-DDD)	--	--	--	--	**4.3 T**
4,4'-DDE (p,p'-DDE)	--	--	--	--	0.4 UT
4,4'-DDT (p,p'-DDT)	--	--	--	--	**1.6 T**
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	**0.018 JT**
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	0.03 UT
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	**0.018 JT**
Endrin ketone	--	--	--	--	0.03 UT
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	**5.7 T**
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	0.4 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	**1.7 T**
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	**7.7 T**

Table 3-21
Existing Data Screening Table - Sub-surface Sediment (Category G H) Background

Notes:
Detected concentration is greater than 1 screening level

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation
-- = Results not reported or not applicable
N = Normal Field Sample

Acronyms:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BaPEq = benzo[a]pyrene equivalents
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LWG = Lower Willamette Group
MQ = mean quotient
NA = not applicable
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyls
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-22
Existing Data Screening Table – Sediment Trap Human Health

Location Name:	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005
Sample Name:	LW3-ST1005-1	LW3-ST-2005	LW3-ST3005	LW3-ST4-005	NA	NA	NA
Sample Date:	1/30/2007	4/30/2007	8/8/2007	11/13/2007	1/30/2007	4/30/2007	8/8/2007
Depth Interval:	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	--	--	--	--	--
Metals (mg/kg)							
Zinc	**111 T**	127 NULL	--	166 NULL	--	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	0.24 UT	0.17 U	0.2 U	0.096 U	--	--	--
1,2-Dichloroethene, cis-	0.28 UT	0.3 U	0.35 U	0.17 U	--	--	--
1,2-Dichloroethene, trans-	0.17 UT	0.25 U	0.29 U	0.15 U	--	--	--
Benzene	0.13 UT	0.24 U	0.28 U	0.14 U	--	--	--
Ethylbenzene	0.15 UT	0.2 U	0.23 U	0.11 U	--	--	--
Naphthalene	--	--	0.48 U	--	--	--	--
o-Xylene	0.17 UT	0.17 U	0.2 U	0.096 U	--	--	--
Toluene	**51 T**	2600 NULL	10 NULL	0.22 U	--	--	--
Trichloroethene (TCE)	0.24 UT	0.21 U	0.24 U	0.12 U	--	--	--
Vinyl chloride	0.41 UT	0.28 U	0.33 U	0.16 U	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.32 UT	0.45 UT	0.52 UT	0.26 UT	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	**21 T**	21 NULL	--	57 NULL	--	--	--
Acenaphthene	**54 T**	56 NULL	--	120 NULL	--	--	--
Acenaphthylene	**22 T**	19 NULL	--	60 NULL	--	--	--
Anthracene	**91 T**	100 NULL	--	260 NULL	--	--	--
Benzo(a)anthracene	**260 T**	290 NULL	--	760 NULL	--	--	--
Benzo(a)pyrene	**350 T**	440 NULL	--	1100 NULL	--	--	--
Benzo(b)fluoranthene	**230 T**	360 NULL	--	1100 NULL	--	--	--
Benzo(g,h,i)perylene	**270 T**	370 NULL	--	890 NULL	--	--	--
Benzo(k)fluoranthene	**190 T**	130 NULL	--	340 NULL	--	--	--
Chrysene	**330 T**	370 NULL	--	940 NULL	--	--	--
Dibenzo(a,h)anthracene	**32 T**	50 NULL	--	110 NULL	--	--	--
Fluoranthene	**570 T**	530 NULL	--	1500 NULL	--	--	--
Fluorene	**39 T**	30 NULL	--	86 NULL	--	--	--
Indeno(1,2,3-c,d)pyrene	**250 T**	330 NULL	--	830 NULL	--	--	--
Naphthalene	**55 T**	58 NULL	--	120 NULL	--	--	--
Phenanthrene	**380 T**	300 NULL	--	830 NULL	--	--	--
Pyrene	**850 T**	660 NULL	--	1600 NULL	--	--	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**460 T**	**590 T**	--	**1500 T**	--	--	--
Semivolatile Organics (µg/kg)							
Carbazole	**14 JT**	23 NULL	--	84 NULL	--	--	--
Dibenzofuran	**7.6 T**	6 NULL	--	20 NULL	--	--	--
PCB Aroclors (µg/kg)							
Aroclor 1016	4.9 UT	5 U	--	2.4 U	--	--	--
Aroclor 1221	4.9 UT	5 U	--	2.4 U	--	--	--
Aroclor 1232	4.9 UT	5 U	--	2.4 U	--	--	--
Aroclor 1242	4.9 UT	**7.7 J**	--	7.8 U	--	--	--
Aroclor 1248	4.9 UT	5 U	--	2.4 U	--	--	--
Aroclor 1254	5.9 UT	13 NULL	--	8.3 U	--	--	--
Aroclor 1260	5.5 UT	**5.9 J**	--	21 NULL	--	--	--

Table 3-22
Existing Data Screening Table – Sediment Trap Human Health

Location Name:	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005
Sample Name:	LW3-ST1005-1	LW3-ST-2005	LW3-ST3005	LW3-ST4-005	NA	NA	NA
Sample Date:	1/30/2007	4/30/2007	8/8/2007	11/13/2007	1/30/2007	4/30/2007	8/8/2007
Depth Interval:	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	**11 JT**	**11 JT**	**21 JT**	**25 JT**	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**3.20E-04 JT**	**3.20E-04 T**	**5.04E-04 JT**	**5.90E-04 JT**	--	--	--
PCB-077	**0.0243 T**	0.0215 NULL	0.0483 NULL	0.0506 NULL	--	--	--
PCB-081	**0.00103 JT**	0.00089 U	0.00763 U	**0.0024 J**	--	--	--
PCB-105	**0.143 T**	0.131 NULL	0.255 NULL	0.313 NULL	--	--	--
PCB-114	**0.00906 T**	0.00693 NULL	0.0162 NULL	0.0175 NULL	--	--	--
PCB-123	**0.0069 T**	0.0076 NULL	0.0143 UJ	0.0139 NULL	--	--	--
PCB-126	**0.003 T**	0.00304 NULL	0.00767 U	0.00547 NULL	--	--	--
PCB-156	**0.0479 T**	0.0474 NULL	0.115 NULL	0.108 NULL	--	--	--
PCB-157	**0.0111 T**	0.0101 NULL	0.0225 UJ	0.0228 NULL	--	--	--
PCB-167	**0.0211 T**	0.0205 NULL	0.0407 NULL	0.0449 NULL	--	--	--
PCB-169	0.000473 UT	0.000517 U	0.00674 U	0.00147 U	--	--	--
PCB-189	**0.00554 T**	0.00739 NULL	0.0176 NULL	0.0164 NULL	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	0.75 UT	0.77 U	--	0.17 U	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.9 UT	0.89 U	--	0.69 NULL	--	--	--
Endrin ketone	0.24 UT	0.25 U	--	0.43 U	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.44 UT	0.99 U	--	0.55 U	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**3.7 JT**	**3.3 JT**	--	**18 T**	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**2.3 T**	**2.7 T**	--	**5.9 JNT**	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**2.4 JT**	**3.1 JT**	--	**10 T**	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**65 JT**	**100 J**	--	**160 J**	--	--	--
Residual Range Hydrocarbons	**590 JT**	**600 J**	--	**730 J**	--	--	--

Table 3-22
Existing Data Screening Table – Sediment Trap Human Health

Location Name:	LW3-ST005	RAA-STBD	RAA-STBD	RAA-STBM	RAA-STBM	RAA-STBU	RAA-STBU
Sample Name:	NA	NA	RAA-STBD-050817	NA	RAA-STBM-050818	NA	RAA-STBU-050817
Sample Date:	11/13/2007	8/17/2005	8/17/2005	8/18/2005	8/18/2005	8/17/2005	8/17/2005
Depth Interval:	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
Conventional Parameters (mg/kg)							
Cyanide, total	--	--	19.8 NULL	--	2.5 NULL	--	1 U
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/kg)							
1,1-Dichloroethene	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	--	--	130 NULL	--	220 NULL	--	17 NULL
Acenaphthene	--	--	270 NULL	--	490 NULL	--	30 NULL
Acenaphthylene	--	--	150 NULL	--	440 NULL	--	26 NULL
Anthracene	--	--	690 NULL	--	1100 NULL	--	75 NULL
Benzo(a)anthracene	--	--	1400 NULL	--	3700 NULL	--	170 NULL
Benzo(a)pyrene	--	--	2200 NULL	--	6100 NULL	--	270 NULL
Benzo(b)fluoranthene	--	--	1400 NULL	--	4200 NULL	--	200 NULL
Benzo(g,h,i)perylene	--	--	1900 NULL	--	5300 NULL	--	260 NULL
Benzo(k)fluoranthene	--	--	1100 NULL	--	3000 NULL	--	150 NULL
Chrysene	--	--	1900 NULL	--	4600 NULL	--	250 NULL
Dibenzo(a,h)anthracene	--	--	250 NULL	--	650 NULL	--	31 NULL
Fluoranthene	--	--	2400 NULL	--	6400 NULL	--	320 NULL
Fluorene	--	--	180 NULL	--	310 NULL	--	21 NULL
Indeno(1,2,3-c,d)pyrene	--	--	1600 NULL	--	4900 NULL	--	210 NULL
Naphthalene	--	--	270 NULL	--	630 NULL	--	50 NULL
Phenanthrene	--	--	1600 NULL	--	3500 NULL	--	180 NULL
Pyrene	--	--	3100 NULL	--	8000 NULL	--	400 NULL
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	--	**2900 T**	--	**8100 T**	--	**360 T**
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	--	--	28 NULL	--	62 NULL	--	**6.7 J**
PCB Aroclors (µg/kg)							
Aroclor 1016	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--

Table 3-22
Existing Data Screening Table – Sediment Trap Human Health

Location Name:	LW3-ST005	RAA-STBD	RAA-STBD	RAA-STBM	RAA-STBM	RAA-STBU	RAA-STBU
Sample Name:	NA	NA	RAA-STBD-050817	NA	RAA-STBM-050818	NA	RAA-STBU-050817
Sample Date:	11/13/2007	8/17/2005	8/17/2005	8/18/2005	8/18/2005	8/17/2005	8/17/2005
Depth Interval:	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
PCB-077	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--	--
Pesticides (µg/kg)							
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-22
Existing Data Screening Table – Sediment Trap Human Health

Location Name:	RAA-STPD	RAA-STPD	RAA-STPM	RAA-STPM	RAA-STPU	RAA-STPU
Sample Name:	NA	RAA-STPD-051108	NA	RAA-STPM-051108	NA	RAA-STPU-051108
Sample Date:	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005
Depth Interval:	NULL	NULL	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
Conventional Parameters (mg/kg)						
Cyanide, total	--	32.7 NULL	--	6.7 NULL	--	1.30E+00 NULL
Metals (mg/kg)						
Zinc	--	--	--	--	--	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	--	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--	--
Benzene	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--
Toluene	--	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	--	2600 NULL	--	4700 NULL	--	620 NULL
Acenaphthene	--	7400 NULL	--	16000 NULL	--	1300 NULL
Acenaphthylene	--	2900 NULL	--	5000 NULL	--	1100 NULL
Anthracene	--	14000 NULL	--	38000 NULL	--	3500 NULL
Benzo(a)anthracene	--	39000 NULL	--	43000 NULL	--	7300 NULL
Benzo(a)pyrene	--	53000 NULL	--	60000 NULL	--	12000 NULL
Benzo(b)fluoranthene	--	33000 NULL	--	38000 NULL	--	7200 NULL
Benzo(g,h,i)perylene	--	37000 NULL	--	40000 NULL	--	9200 NULL
Benzo(k)fluoranthene	--	30000 NULL	--	30000 NULL	--	6400 NULL
Chrysene	--	48000 NULL	--	55000 NULL	--	8600 NULL
Dibenzo(a,h)anthracene	--	4200 NULL	--	3900 NULL	--	880 NULL
Fluoranthene	--	78000 NULL	--	140000 NULL	--	18000 NULL
Fluorene	--	4200 NULL	--	10000 NULL	--	710 NULL
Indeno(1,2,3-c,d)pyrene	--	35000 NULL	--	39000 NULL	--	8100 NULL
Naphthalene	--	6000 NULL	--	11000 NULL	--	2600 NULL
Phenanthrene	--	47000 NULL	--	92000 NULL	--	8000 NULL
Pyrene	--	110000 NULL	--	190000 NULL	--	26000 NULL
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	**68000 T**	--	**76000 T**	--	**15000 T**
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	--
Dibenzofuran	--	630 NULL	--	1200 NULL	--	**97 J**
PCB Aroclors (µg/kg)						
Aroclor 1016	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--

Table 3-22
Existing Data Screening Table – Sediment Trap Human Health

Location Name:	RAA-STPD	RAA-STPD	RAA-STPM	RAA-STPM	RAA-STPU	RAA-STPU
Sample Name:	NA	RAA-STPD-051108	NA	RAA-STPM-051108	NA	RAA-STPU-051108
Sample Date:	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005
Depth Interval:	NULL	NULL	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
PCB-077	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--
PCB-114	--	--	--	--	--	--
PCB-123	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--
PCB-167	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--
PCB-189	--	--	--	--	--	--
Pesticides (µg/kg)						
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-22
Existing Data Screening Table – Sediment Trap Human Health

Notes:

	Detected concentration is greater than one screening level
	Detected concentration is greater than two screening levels
	Detected concentration is greater than three screening levels
	Detected concentration is greater than four screening levels
	Detected concentration is greater than five screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
T = Result is the value of a total or calculation.
-- = Results not reported or not applicable
N = Normal Field Sample

Acronymns
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BaPEq = Benzo(a)pyrene equivalent
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
LWG = Lower Willamette Group
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyl
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-23
Existing Data Screening Table – Sediment Trap Ecological

Location Name:	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005
Sample Name:	LW3-ST1005-1	LW3-ST-2005	LW3-ST3005	LW3-ST4-005	NA	NA	NA
Sample Date:	1/30/2007	4/30/2007	8/8/2007	11/13/2007	1/30/2007	4/30/2007	8/8/2007
Depth Interval:	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
Metals (mg/kg)							
Zinc	**111 T**	127 NULL	--	166 NULL	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	**350 T**	440 NULL	--	1100 NULL	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	**3300 T**	**3500 T**	--	**9200 T**	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	**4.00E+03 T**	**4.10E+03 T**	--	**11000 T**	--	--	--
Semivolatile Organics (µg/kg)							
Carbazole	**14 JT**	23 NULL	--	84 NULL	--	--	--
Dibenzofuran	**7.6 T**	6 NULL	--	20 NULL	--	--	--
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	**11 JT**	**11 JT**	**21 JT**	**25 JT**	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**3.20E-04 JT**	**3.20E-04 T**	**5.04E-04 JT**	**5.90E-04 JT**	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	2.6 UT	**0.83 J**	--	5.2 NULL	--	--	--
2,4'-DDE (o,p'-DDE)	0.67 UT	0.68 U	--	**0.91 NJ**	--	--	--
2,4'-DDT (o,p'-DDT)	0.69 UT	**0.73 J**	--	2.2 U	--	--	--
4,4'-DDD (p,p'-DDD)	**2.4 JT**	2.5 NULL	--	13 NULL	--	--	--
4,4'-DDE (p,p'-DDE)	**2 T**	2.4 NULL	--	**5 J**	--	--	--
4,4'-DDT (p,p'-DDT)	**2.1 JT**	**2.4 J**	--	9 NULL	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.9 UT	0.89 U	--	0.69 NULL	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**3.7 JT**	**3.3 JT**	--	**18 T**	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**2.3 T**	**2.7 T**	--	**5.9 JNT**	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**2.4 JT**	**3.1 JT**	--	**10 T**	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**8.50E+00 JT**	**9.20E+00 JT**	--	**3.40E+01 JNT**	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	**65 JT**	**100 J**	--	**160 J**	--	--	--
Residual Range Hydrocarbons	**590 JT**	**600 J**	--	**730 J**	--	--	--
CALC							
Benthic MQ	--	--	--	--	**0.30159783723 NA**	**0.13139609581 NA**	**0.015 NA**
pMAX	--	--	--	--	**0.6182578488 NA**	**0.29840620963 NA**	--

Table 3-23
Existing Data Screening Table – Sediment Trap Ecological

Location Name:	LW3-ST005	RAA-STBD	RAA-STBD	RAA-STBM	RAA-STBM	RAA-STBU	RAA-STBU
Sample Name:	NA	NA	RAA-STBD-050817	NA	RAA-STBM-050818	NA	RAA-STBU-050817
Sample Date:	11/13/2007	8/17/2005	8/17/2005	8/18/2005	8/18/2005	8/17/2005	8/17/2005
Depth Interval:	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
Metals (mg/kg)							
Zinc	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)							
Benzo(a)pyrene	--	--	2200 NULL	--	6100 NULL	--	270 NULL
LWG RA Total HPAH (Calculated U = 1/2)	--	--	**17000 T**	--	**47000 T**	--	**2300 T**
LWG RA Total PAH (Calculated U = 1/2)	--	--	**21000 T**	--	**54000 T**	--	**2700 T**
Semivolatile Organics (µg/kg)							
Carbazole	--	--	--	--	--	--	--
Dibenzofuran	--	--	28 NULL	--	62 NULL	--	**6.7 J**
PCB Congeners (µg/kg)							
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--
CALC							
Benthic MQ	**0.12496883631 NA**	**0.30390683321 NA**	--	**0.62594187361 NA**	--	**0.039440747712 NA**	--
pMAX	**0.31534026815 NA**	**0.39608036076 NA**	--	**0.48307214512 NA**	--	**0.10844558957 NA**	--

Table 3-23
Existing Data Screening Table – Sediment Trap Ecological

Location Name:	RAA-STPD	RAA-STPD	RAA-STPM	RAA-STPM	RAA-STPU	RAA-STPU
Sample Name:	NA	RAA-STPD-051108	NA	RAA-STPM-051108	NA	RAA-STPU-051108
Sample Date:	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005
Depth Interval:	NULL	NULL	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
Metals (mg/kg)						
Zinc	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
Benzo(a)pyrene	--	53000 NULL	--	60000 NULL	--	12000 NULL
LWG RA Total HPAH (Calculated U = 1/2)	--	**470000 T**	--	**640000 T**	--	**100000 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**550000 T**	--	**820000 T**	--	**120000 T**
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	--
Dibenzofuran	--	630 NULL	--	1200 NULL	--	**97 J**
PCB Congeners (µg/kg)						
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--
CALC						
Benthic MQ	**7.6880287998 NA**	--	**16.213199235 NA**	--	**1.6183272016 NA**	--
pMAX	**0.93265121093 NA**	--	**0.9759807481 NA**	--	**0.7618224356 NA**	--

Table 3-23
Existing Data Screening Table – Sediment Trap Ecological

Notes:

Detected concentration is greater than one screening level

Detected concentration is greater than two screening levels

Detected concentration is greater than three screening levels

Detected concentration is greater than four screening levels

Detected concentration is greater than five screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
T = Result is the value of a total or calculation.
-- = Results not reported or not applicable

Acronymns
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LWG = Lower Willamette Group
MQ = mean quotient
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyl
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-24
Existing Data Screening Table – Sediment Trap Background

Location Name:	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005
Sample Name:	LW3-ST1005-1	LW3-ST-2005	LW3-ST3005	LW3-ST4-005	NA	NA	NA	NA
Sample Date:	1/30/2007	4/30/2007	8/8/2007	11/13/2007	1/30/2007	4/30/2007	8/8/2007	11/13/2007
Depth Interval:	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
Metals (mg/kg)								
Zinc	**111 T**	127 NULL	--	166 NULL	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	**260 T**	290 NULL	--	760 NULL	--	--	--	--
Benzo(a)pyrene	**350 T**	440 NULL	--	1100 NULL	--	--	--	--
Benzo(b)fluoranthene	**230 T**	360 NULL	--	1100 NULL	--	--	--	--
Benzo(k)fluoranthene	**190 T**	130 NULL	--	340 NULL	--	--	--	--
Chrysene	**330 T**	370 NULL	--	940 NULL	--	--	--	--
Dibenzo(a,h)anthracene	**32 T**	50 NULL	--	110 NULL	--	--	--	--
Indeno(1,2,3-c,d)pyrene	**250 T**	330 NULL	--	830 NULL	--	--	--	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**460 T**	**590 T**	--	**1500 T**	--	--	--	--
LWG RA Total LPAH (Calculated U = 1/2)	**660 T**	**580 T**	--	**1500 T**	--	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	**4.00E+03 T**	**4.10E+03 T**	--	**11000 T**	--	--	--	--
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	**8.6 T**	**9.5 T**	--	**28 T**	--	--	--	--
Benzo(a)pyrene	**12 T**	**14 T**	--	**40 T**	--	--	--	--
Benzo(b)fluoranthene	**7.6 T**	**12 T**	--	**40 T**	--	--	--	--
Benzo(k)fluoranthene	**6.3 T**	**4.2 T**	--	**13 T**	--	--	--	--
Chrysene	**11 T**	**12 T**	--	**35 T**	--	--	--	--
Dibenzo(a,h)anthracene	**1.1 T**	**2 T**	--	**4 T**	--	--	--	--
Indeno(1,2,3-c,d)pyrene	**8.3 T**	**11 T**	--	**31 T**	--	--	--	--
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	**16 T**	**19 T**	--	**54 T**	--	--	--	--
LWG RA Total LPAH (Calculated U = 1/2)	**22 T**	**19 T**	--	**57 T**	--	--	--	--
LWG RA Total PAH (Calculated U = 1/2)	**130 T**	**130 T**	--	**390 T**	--	--	--	--
Semivolatile Organics (µg/kg)								
Carbazole	**14 JT**	23 NULL	--	84 NULL	--	--	--	--
Semivolatile Organics (mg/kg-OC)								
Carbazole	**0.46 JT**	**0.75 T**	--	**3.1 T**	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	**11 JT**	**11 JT**	**21 JT**	**25 JT**	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**3.20E-04 JT**	**3.20E-04 T**	**5.04E-04 JT**	**5.90E-04 JT**	--	--	--	--
PCB-077	**0.0243 T**	0.0215 NULL	0.0483 NULL	0.0506 NULL	--	--	--	--
PCB-081	**0.00103 JT**	0.00089 U	0.00763 U	**0.0024 J**	--	--	--	--
PCB-105	**0.143 T**	0.131 NULL	0.255 NULL	0.313 NULL	--	--	--	--
PCB-126	**0.003 T**	0.00304 NULL	0.00767 U	0.00547 NULL	--	--	--	--
PCB-156	**0.0479 T**	0.0474 NULL	0.115 NULL	0.108 NULL	--	--	--	--
PCB-157	**0.0111 T**	0.0101 NULL	0.0225 UJ	0.0228 NULL	--	--	--	--
PCB-169	0.000473 UT	0.000517 U	0.00674 U	0.00147 U	--	--	--	--
PCB Congeners (mg/kg-OC)								
LWG RA Total PCB Congener (Calculated U = 1/2)	**0.35 JT**	**0.37 JT**	**2.1 JT**	**0.93 JT**	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**1.10E-05 JT**	**1.00E-05 T**	**5.04E-05 JT**	**2.20E-05 JT**	--	--	--	--
PCB-077	**8.05E-04 T**	**7.03E-04 T**	**0.00483 T**	**0.00186 T**	--	--	--	--
PCB-081	**3.41E-05 JT**	2.90E-05 UT	0.000763 UT	**8.80E-05 JT**	--	--	--	--
PCB-105	**0.00474 T**	**0.00428 T**	**0.0255 T**	**0.0115 T**	--	--	--	--
PCB-126	**1.00E-04 T**	**9.93E-05 T**	0.000767 UT	**0.000201 T**	--	--	--	--
PCB-156	**0.00159 T**	**0.00155 T**	**0.0115 T**	**0.00397 T**	--	--	--	--
PCB-157	**0.000368 T**	**0.00033 T**	0.00225 UJT	**0.000838 T**	--	--	--	--
PCB-169	1.57E-05 UT	1.69E-05 UT	0.000674 UT	5.40E-05 UT	--	--	--	--

Table 3-24
Existing Data Screening Table – Sediment Trap Background

Location Name:	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005	LW3-ST005
Sample Name:	LW3-ST1005-1	LW3-ST-2005	LW3-ST3005	LW3-ST4-005	NA	NA	NA	NA
Sample Date:	1/30/2007	4/30/2007	8/8/2007	11/13/2007	1/30/2007	4/30/2007	8/8/2007	11/13/2007
Depth Interval:	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	**2.4 JT**	2.5 NULL	--	13 NULL	--	--	--	--
4,4'-DDE (p,p'-DDE)	**2 T**	2.4 NULL	--	**5 J**	--	--	--	--
4,4'-DDT (p,p'-DDT)	**2.1 JT**	**2.4 J**	--	9 NULL	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.75 UT	0.77 U	--	0.17 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.9 UT	0.89 U	--	0.69 NULL	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.18 UT	**0.37 NJ**	--	0.19 U	--	--	--	--
Endrin ketone	0.24 UT	0.25 U	--	0.43 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.44 UT	0.99 U	--	0.55 U	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**3.7 JT**	**3.3 JT**	--	**18 T**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**2.3 T**	**2.7 T**	--	**5.9 JNT**	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**2.4 JT**	**3.1 JT**	--	**10 T**	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**8.50E+00 JT**	**9.20E+00 JT**	--	**3.40E+01 JNT**	--	--	--	--
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	**0.079 JT**	**0.082 T**	--	**0.48 T**	--	--	--	--
4,4'-DDE (p,p'-DDE)	**0.07 T**	**0.078 T**	--	**0.18 JT**	--	--	--	--
4,4'-DDT (p,p'-DDT)	**0.07 JT**	**0.078 JT**	--	**0.33 T**	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.025 UT	0.025 UT	--	0.0063 UT	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.03 UT	0.029 UT	--	**0.025 T**	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.006 UT	**0.012 NJT**	--	0.007 UT	--	--	--	--
Endrin ketone	0.0079 UT	0.0082 UT	--	0.016 UT	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**0.12 JT**	**0.11 JT**	--	**0.67 T**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**0.081 T**	**0.089 T**	--	**0.21 JNT**	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**0.082 JT**	**0.1 JT**	--	**0.37 T**	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**0.28 JT**	**0.3 JT**	--	**1.3 JNT**	--	--	--	--

Table 3-24
Existing Data Screening Table – Sediment Trap Background

Location Name:	RAA-STBD	RAA-STBD	RAA-STBM	RAA-STBM	RAA-STBU	RAA-STBU	RAA-STPD	RAA-STPD
Sample Name:	NA	RAA-STBD-050817	NA	RAA-STBM-050818	NA	RAA-STBU-050817	NA	RAA-STPD-051108
Sample Date:	8/17/2005	8/17/2005	8/18/2005	8/18/2005	8/17/2005	8/17/2005	11/8/2005	11/8/2005
Depth Interval:	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
Metals (mg/kg)								
Zinc	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)								
Benzo(a)anthracene	--	1400 NULL	--	3700 NULL	--	170 NULL	--	39000 NULL
Benzo(a)pyrene	--	2200 NULL	--	6100 NULL	--	270 NULL	--	53000 NULL
Benzo(b)fluoranthene	--	1400 NULL	--	4200 NULL	--	200 NULL	--	33000 NULL
Benzo(k)fluoranthene	--	1100 NULL	--	3000 NULL	--	150 NULL	--	30000 NULL
Chrysene	--	1900 NULL	--	4600 NULL	--	250 NULL	--	48000 NULL
Dibenzo(a,h)anthracene	--	250 NULL	--	650 NULL	--	31 NULL	--	4200 NULL
Indeno(1,2,3-c,d)pyrene	--	1600 NULL	--	4900 NULL	--	210 NULL	--	35000 NULL
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	**2900 T**	--	**8100 T**	--	**360 T**	--	**68000 T**
LWG RA Total LPAH (Calculated U = 1/2)	--	**3300 T**	--	**6700 T**	--	**400 T**	--	**84000 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**21000 T**	--	**54000 T**	--	**2700 T**	--	**550000 T**
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)								
Benzo(a)anthracene	--	**39 T**	--	**100 T**	--	**5 T**	--	**670 T**
Benzo(a)pyrene	--	**61 T**	--	**170 T**	--	**7.9 T**	--	**910 T**
Benzo(b)fluoranthene	--	**39 T**	--	**120 T**	--	**6 T**	--	**570 T**
Benzo(k)fluoranthene	--	**31 T**	--	**80 T**	--	**4.4 T**	--	**500 T**
Chrysene	--	**53 T**	--	**130 T**	--	**7.3 T**	--	**820 T**
Dibenzo(a,h)anthracene	--	**6.9 T**	--	**18 T**	--	**0.904 T**	--	**72 T**
Indeno(1,2,3-c,d)pyrene	--	**44 T**	--	**140 T**	--	**6.1 T**	--	**600 T**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	**80 T**	--	**220 T**	--	**11 T**	--	**1200 T**
LWG RA Total LPAH (Calculated U = 1/2)	--	**91 T**	--	**190 T**	--	**12 T**	--	**1400 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**570 T**	--	**1500 T**	--	**76 T**	--	**9400 T**
Semivolatile Organics (µg/kg)								
Carbazole	--	--	--	--	--	--	--	--
Semivolatile Organics (mg/kg-OC)								
Carbazole	--	--	--	--	--	--	--	--
PCB Congeners (µg/kg)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--
PCB Congeners (mg/kg-OC)								
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--	--	--	--
PCB-077	--	--	--	--	--	--	--	--
PCB-081	--	--	--	--	--	--	--	--
PCB-105	--	--	--	--	--	--	--	--
PCB-126	--	--	--	--	--	--	--	--
PCB-156	--	--	--	--	--	--	--	--
PCB-157	--	--	--	--	--	--	--	--
PCB-169	--	--	--	--	--	--	--	--

Table 3-24
Existing Data Screening Table – Sediment Trap Background

Location Name:	RAA-STBD	RAA-STBD	RAA-STBM	RAA-STBM	RAA-STBU	RAA-STBU	RAA-STPD	RAA-STPD
Sample Name:	NA	RAA-STBD-050817	NA	RAA-STBM-050818	NA	RAA-STBU-050817	NA	RAA-STPD-051108
Sample Date:	8/17/2005	8/17/2005	8/18/2005	8/18/2005	8/17/2005	8/17/2005	11/8/2005	11/8/2005
Depth Interval:	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
Pesticides (µg/kg)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--
Pesticides (mg/kg-OC)								
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--

Table 3-24
Existing Data Screening Table – Sediment Trap Background

Location Name:	RAA-STPM	RAA-STPM	RAA-STPU	RAA-STPU
Sample Name:	NA	RAA-STPM-051108	NA	RAA-STPU-051108
Sample Date:	11/8/2005	11/8/2005	11/8/2005	11/8/2005
Depth Interval:	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
Metals (mg/kg)				
Zinc	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)				
Benzo(a)anthracene	--	43000 NULL	--	7300 NULL
Benzo(a)pyrene	--	60000 NULL	--	12000 NULL
Benzo(b)fluoranthene	--	38000 NULL	--	7200 NULL
Benzo(k)fluoranthene	--	30000 NULL	--	6400 NULL
Chrysene	--	55000 NULL	--	8600 NULL
Dibenzo(a,h)anthracene	--	3900 NULL	--	880 NULL
Indeno(1,2,3-c,d)pyrene	--	39000 NULL	--	8100 NULL
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	**76000 T**	--	**15000 T**
LWG RA Total LPAH (Calculated U = 1/2)	--	**180000 T**	--	**18000 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**820000 T**	--	**120000 T**
Polycyclic Aromatic Hydrocarbons (mg/kg-OC)				
Benzo(a)anthracene	--	**720 T**	--	**210 T**
Benzo(a)pyrene	--	**1000 T**	--	**340 T**
Benzo(b)fluoranthene	--	**630 T**	--	**210 T**
Benzo(k)fluoranthene	--	**500 T**	--	**180 T**
Chrysene	--	**920 T**	--	**250 T**
Dibenzo(a,h)anthracene	--	**65 T**	--	**25 T**
Indeno(1,2,3-c,d)pyrene	--	**650 T**	--	**230 T**
LWG RA Total cPAH/BaPEq TEQ (EPA 1993) (Calculated U = 1/2)	--	**1300 T**	--	**430 T**
LWG RA Total LPAH (Calculated U = 1/2)	--	**2900 T**	--	**480 T**
LWG RA Total PAH (Calculated U = 1/2)	--	**14000 T**	--	**3400 T**
Semivolatile Organics (µg/kg)				
Carbazole	--	--	--	--
Semivolatile Organics (mg/kg-OC)				
Carbazole	--	--	--	--
PCB Congeners (µg/kg)				
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--
PCB-077	--	--	--	--
PCB-081	--	--	--	--
PCB-105	--	--	--	--
PCB-126	--	--	--	--
PCB-156	--	--	--	--
PCB-157	--	--	--	--
PCB-169	--	--	--	--
PCB Congeners (mg/kg-OC)				
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--
PCB-077	--	--	--	--
PCB-081	--	--	--	--
PCB-105	--	--	--	--
PCB-126	--	--	--	--
PCB-156	--	--	--	--
PCB-157	--	--	--	--
PCB-169	--	--	--	--

Table 3-24
Existing Data Screening Table – Sediment Trap Background

Location Name:	RAA-STPM	RAA-STPM	RAA-STPU	RAA-STPU
Sample Name:	NA	RAA-STPM-051108	NA	RAA-STPU-051108
Sample Date:	11/8/2005	11/8/2005	11/8/2005	11/8/2005
Depth Interval:	NULL	NULL	NULL	NULL
Analysis Matrix:	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP	Gasco RM6-6.7_TRAP
Pesticides (µg/kg)				
4,4'-DDD (p,p'-DDD)	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--
Endrin ketone	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--
Pesticides (mg/kg-OC)				
4,4'-DDD (p,p'-DDD)	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--
Endrin ketone	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--

Table 3-24
Existing Data Screening Table – Sediment Trap Background

Notes:
Detected concentration is greater than one screening level

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
T = Result is the value of a total or calculation.
-- = Results not reported or not applicable

Acronymns
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BaPEq = Benzo(a)pyrene equivalent
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
LWG = Lower Willamette Group
LPAH = low molecular weight polycyclic aromatic hydrocarbon
OC = organic carbon normalized
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyl
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-25
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	B-29	B-31	B-53	B-54	B-56	GS-04-A-PG	GSM-07	GSM-08	GSM-14
Sample Name:	950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013	2708-040601-001	LWG2-PG-GS4A	GSM-07SO-0-5-100927	GSM-08SO-0-5-100928	GSM-14SO-0-5-101015
Sample Date:	9/22/1995	9/25/1995	6/7/2004	6/8/2004	6/1/2004	12/1/2005	9/27/2010	9/28/2010	10/15/2010
Depth Interval:	0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm	76.2 - 106.68 cm	0 - 26 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Conventional Parameters (mg/kg)									
Cyanide, total	--	**0.59**	--	--	0.435 U	**2.4 J**	**0.274**	0.124 U	**0.286**
Metals (mg/kg)									
Zinc	--	--	--	--	--	**113**	**158 J**	**85 J**	**77**
Volatile Organics (µg/kg)									
1,1-Dichloroethene	--	--	--	--	--	0.58 U	1.2 U	1.5 U	1 U
1,2-Dichloroethene, cis-	--	--	--	--	--	0.44 U	1.2 U	1.5 U	1 U
1,2-Dichloroethene, trans-	--	--	--	--	--	1.4 U	1.2 U	1.5 U	1 U
Benzene	--	300 U	50 U	50 U	50 U	**16**	1.2 U	1.5 U	1 U
Ethylbenzene	--	300 U	50 U	50 U	50 U	**220**	1.2 U	1.5 U	1 U
o-Xylene	--	--	--	--	--	**170**	1.2 U	1.5 U	1 U
Toluene	--	300 U	50 U	50 U	50 U	11 U	1.2 U	1.5 U	1 U
Trichloroethene (TCE)	--	--	--	--	--	0.44 U	1.2 U	1.5 U	1 U
Vinyl chloride	--	--	--	--	--	0.6 U	1.2 U	1.5 U	1 U
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--	**260 T**	1.2 UT	1.5 UT	1 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)									
2-Methylnaphthalene	--	--	--	--	--	**22000**	62 U	**140**	60 U
Acenaphthene	**400**	**110**	670 U	168 U	13.4 U	**59000**	62 U	**100**	60 U
Acenaphthylene	**7300**	**1300**	**745**	168 U	13.4 U	**5400**	62 U	63 U	**62**
Anthracene	**3300**	**590**	**996**	168 U	13.4 U	**37000**	62 U	**82**	60 U
Benzo(a)anthracene	**10500**	**2100**	**4210**	**240**	13.4 U	**52000**	**190**	**89**	**100**
Benzo(a)pyrene	**32500**	**4800**	**6820**	**323**	13.4 U	**85000**	**350**	**100**	**270**
Benzo(b)fluoranthene	**31700**	**5400**	**4970**	**303**	13.4 U	**48000**	--	--	--
Benzo(g,h,i)perylene	**41800**	**6800**	**5480**	**306**	**14**	**65000**	**460**	**87**	**170**
Benzo(k)fluoranthene	**11600**	**1800**	**4210**	**211**	13.4 U	**46000**	--	--	--
Chrysene	**19300**	**3000**	**5320**	**330**	13.4 U	**59000**	**300**	**110**	**150**
Dibenzo(a,h)anthracene	**4800**	**980**	**1040**	168 U	13.4 U	**6100**	62 U	63 U	60 U
Fluoranthene	**9400**	**1600**	**6430**	**370**	13.4 U	**160000**	**290**	**170**	**130**
Fluorene	**470**	**58**	670 U	168 U	13.4 U	**30000**	62 U	**67**	60 U
Indeno(1,2,3-c,d)pyrene	**28400**	**4900**	**4010**	**233**	13.4 U	**63000**	**290**	63 U	**140**
LWG RA Total HPAH (Calculated U = 1/2)	**210000 T**	**35000 T**	**52000 T**	**2900 T**	**74 T**	**790000 T**	**2800 T**	**1000 T**	**1500 T**
LWG RA Total LPAH (Calculated U = 1/2)	**17000 T**	**3100 T**	**5400 T**	**710 T**	13.4 UT	**350000 T**	**510 T**	**1100 T**	**240 T**
Naphthalene	**2400**	**300**	670 U	168 U	13.4 U	**15000**	**160**	**220**	60 U
Phenanthrene	**3400**	**710**	**2690**	**290**	13.4 U	**180000**	**200**	**410**	60 U
Pyrene	**22800**	**3700**	**9700**	**454**	13.4 U	**210000**	**490**	**260**	**190**
Semivolatile Organics (µg/kg)									
Carbazole	--	--	--	--	--	**650**	62 U	63 U	60 U
Dibenzofuran	--	--	--	--	--	**3600**	62 U	63 U	60 U
PCB Aroclors (µg/kg)									
Aroclor 1016	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1221	--	--	--	--	--	--	33 U	30 U	31 UJ
Aroclor 1232	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1242	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1248	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1254	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1260	--	--	--	--	--	--	33 U	30 U	31 U

Table 3-25
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	**B-29**	**B-31**	**B-53**	**B-54**	**B-56**	**GS-04-A-PG**	**GSM-07**	**GSM-08**	**GSM-14**
Sample Name:	**950922-B29-01**	**950925-B31-01**	**2708-040607-011**	**2708-040608-013**	**2708-040601-001**	**LWG2-PG-GS4A**	**GSM-07SO-0-5-100927**	**GSM-08SO-0-5-100928**	**GSM-14SO-0-5-101015**
Sample Date:	**9/22/1995**	**9/25/1995**	**6/7/2004**	**6/8/2004**	**6/1/2004**	**12/1/2005**	**9/27/2010**	**9/28/2010**	**10/15/2010**
Depth Interval:	**0 - 6.096 cm**	**0 - 6.1 cm**	**76.2 - 91.44 cm**	**60.96 - 76.2 cm**	**76.2 - 106.68 cm**	**0 - 26 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	33 UT	30 UT	31 UJT
Pesticides (µg/kg)									
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	3.3 U	3.1 U	3.2 U
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	3.3 U	3.1 U	3.2 U
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	**5.6 J**	3.1 UJ	3.2 U
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.6 U	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.6 U	1.6 U	1.6 U
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.6 U	1.6 U	1.6 UJ
Endrin ketone	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	1.6 UJ	1.6 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	3.3 UJT	3.1 UJT	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	3.3 UT	3.1 UT	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	**7.3 JT**	3.1 UJT	3.2 UT
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	**14 JT**	3.1 UJT	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)									
Diesel Range Hydrocarbons	--	--	--	--	--	**10000 J**	**42**	6.3 U	6 U
Residual Range Hydrocarbons	--	--	--	--	--	**13000 J**	--	--	--

Table 3-25
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-01	GST-02	GST-03	GST-04	GST-05	GST-06	GST-09	GST-11
Sample Name:	GST-01SO-0-5-101001	GST-02SO-0-5-101004	GST-03SO-0-5-101005	GST-04SO-0-5-101006	GST-05SO-0-5-101005	GST-06SO-0-5-101007	GST-09SO-0-5-101008	GST-11SO-0-5-101011
Sample Date:	10/1/2010	10/4/2010	10/5/2010	10/6/2010	10/5/2010	10/7/2010	10/8/2010	10/11/2010
Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Conventional Parameters (mg/kg)								
Cyanide, total	**0.341**	**0.222**	**3.57**	**5.76 J**	**1.37 J**	**1.46 J**	0.11 U	0.105 U
Metals (mg/kg)								
Zinc	**96 J**	**78 J**	**103 J**	**102**	**108**	**232**	**90**	**51**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	--
1,2-Dichloroethene, cis-	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
1,2-Dichloroethene, trans-	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
Benzene	1.1 U	1.2 U	**44**	**2.2**	1.1 U	1.1 U	1 U	0.9 U
Ethylbenzene	1.1 U	1.2 U	**34**	1 U	1.1 U	1.1 U	1 U	0.9 U
o-Xylene	1.1 U	1.2 U	**40**	1 U	1.1 U	1.1 U	1 U	0.9 U
Toluene	1.1 U	1.2 U	**30**	1 U	1.1 U	1.1 U	1 U	0.9 U
Trichloroethene (TCE)	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
Vinyl chloride	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
LWG RA Total Xylene (Calculated U = 1/2)	1.1 UT	1.2 UT	**95 T**	1 UT	1.1 UT	1.1 UT	1 UT	0.9 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	60 U	65 U	**65000**	**480**	**1900**	**400**	**120**	59 U
Acenaphthene	60 U	65 U	**33000**	310 U	**1300**	**110**	61 U	59 U
Acenaphthylene	60 U	65 U	**100000**	**2000**	**6200**	**920**	**340**	59 U
Anthracene	60 U	65 U	**120000**	**910**	**4300**	**450**	**300**	59 U
Benzo(a)anthracene	60 U	**93**	**310000**	**3600**	**15000**	**2800**	**2000 J**	59 U
Benzo(a)pyrene	60 U	**150**	**410000**	**10000**	**43000**	**5500**	**3700 J**	**66**
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	60 U	**130**	**340000**	**13000 J**	**52000**	**7100**	**4700 J**	**94**
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	60 U	**120**	**400000**	**6000**	**24000**	**4800**	**2400 J**	59 U
Dibenzo(a,h)anthracene	60 U	65 U	**100000**	**2300**	**9200**	**1300**	**890**	59 U
Fluoranthene	60 U	**140**	**610000**	**3700**	**19000**	**2800**	**3400 J**	59 U
Fluorene	60 U	65 U	**79000**	310 U	**1400**	**96**	**89**	59 U
Indeno(1,2,3-c,d)pyrene	60 U	**91**	**230000**	**8300**	**34000**	**4000**	**3100**	59 U
LWG RA Total HPAH (Calculated U = 1/2)	60 UT	**1100 T**	**3800000 T**	**64000 JT**	**280000 T**	**44000 T**	**30000 JT**	**450 JT**
LWG RA Total LPAH (Calculated U = 1/2)	60 UT	**300 T**	**1400000 T**	**8500 T**	**35000 T**	**4700 T**	**2600 JT**	59 UT
Naphthalene	60 U	65 U	**220000**	**1800**	**6700**	**1600**	**400**	59 U
Phenanthrene	60 U	**110**	**760000**	**3000**	**13000**	**1100**	**1300 J**	59 U
Pyrene	60 U	**190**	**1000000**	**5300**	**42000**	**7200**	**6400**	**63 J**
Semivolatile Organics (µg/kg)								
Carbazole	60 U	65 U	**25000**	310 U	**330**	**84**	**87**	59 U
Dibenzofuran	60 U	65 U	**8600**	310 U	**240**	64 U	61 U	59 U
PCB Aroclors (µg/kg)								
Aroclor 1016	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1221	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1232	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1242	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1248	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1254	32 U	31 U	**58**	32 U	32 U	31 U	31 U	31 U
Aroclor 1260	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U

Table 3-25
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-01	GST-02	GST-03	GST-04	GST-05	GST-06	GST-09	GST-11
Sample Name:	GST-01SO-0-5-101001	GST-02SO-0-5-101004	GST-03SO-0-5-101005	GST-04SO-0-5-101006	GST-05SO-0-5-101005	GST-06SO-0-5-101007	GST-09SO-0-5-101008	GST-11SO-0-5-101011
Sample Date:	10/1/2010	10/4/2010	10/5/2010	10/6/2010	10/5/2010	10/7/2010	10/8/2010	10/11/2010
Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	31 UT	**150 T**	32 UT	32 UT	31 UT	31 UT	31 UT
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
2,4'-DDE (o,p'-DDE)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
2,4'-DDT (o,p'-DDT)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDD (p,p'-DDD)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDE (p,p'-DDE)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDT (p,p'-DDT)	3.2 U	3.1 U	50 U	16 U	16 U	16 U	16 U	**7.8**
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
delta-Hexachlorocyclohexane (BHC)	1.6 UJ	1.6 UJ	16 UJ	8 U	7.9 U	7.9 U	7.9 U	1.5 U
Endrin ketone	3.2 U	3.1 U	**84 J**	16 U	16 U	16 U	16 U	3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	3.1 UT	32 UT	16 UT	16 UT	16 UT	16 UT	3 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	3.1 UT	32 UT	16 UT	16 UT	16 UT	16 UT	3 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	3.1 UT	50 UT	16 UT	16 UT	16 UT	16 UT	**9.3 T**
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	3.1 UT	50 UT	16 UT	16 UT	16 UT	16 UT	**15 T**
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	6 U	5.9 U	**6000**	**270**	**570**	**57**	27 U	5.3 U
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--

Table 3-25
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-13	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	MW-04-101	MW-04-57	RAA-PD01	RAA-PD02	SS-1
Sample Name:	GST-13SO-0-5-101012	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	981014-M4-01	951030-M4-01	RAA-PD01-051019	RAA-PD02-051019	981112-SS-01
Sample Date:	10/12/2010	10/29/2004	8/30/2004	10/14/2002	10/11/2002	10/14/1998	10/30/1995	10/19/2005	10/19/2005	11/12/1998
Depth Interval:	0 - 152.4 cm	0 - 22 cm	0 - 27 cm	0 - 15 cm	0 - 15 cm	45.72 - 60.96 cm	0 - 6.1 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 6.096 cm
Conventional Parameters (mg/kg)										
Cyanide, total	**2.31**	--	--	--	--	--	**0.8**	--	--	**0.68**
Metals (mg/kg)										
Zinc	**75**	**127**	**183**	**81**	**65**	--	--	--	--	--
Volatile Organics (µg/kg)										
1,1-Dichloroethene	--	0.13 U	0.17 U	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	1 U	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	1 U	0.3 U	0.38 U	--	--	--	--	--	--	--
Benzene	1 U	**1.4**	**3.8**	--	--	25 U	--	--	--	--
Ethylbenzene	1 U	**0.25 J**	**7.1**	--	--	25 U	--	--	--	--
o-Xylene	1 U	**0.38 J**	**5.7**	--	--	--	--	--	--	--
Toluene	1 U	0.24 U	**4.5**	--	--	25 U	--	--	--	--
Trichloroethene (TCE)	1 U	0.096 U	0.13 U	--	--	--	--	--	--	--
Vinyl chloride	1 U	0.14 U	0.17 U	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	1 UT	**0.89 JT**	**11 T**	--	--	--	--	**3300 T**	**1500 JT**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)										
2-Methylnaphthalene	**70**	**250**	**17000**	**2200**	19 U	--	--	--	--	--
Acenaphthene	63 U	**3300**	**89000**	**3600**	19 U	**1100**	5000 U	--	--	50 U
Acenaphthylene	**190**	**1400**	**11000**	**5000**	**71**	**25100**	**4400**	--	--	**64**
Anthracene	**160**	**6700**	**78000**	**8000**	**33**	**7900**	**2600**	--	--	50 U
Benzo(a)anthracene	**820**	**12000**	**110000**	**29000 T**	**140 T**	**67800**	**10000**	--	--	**210**
Benzo(a)pyrene	**2200**	**17000**	**140000**	**41000 T**	**320 T**	**183000**	**28000**	--	--	**440**
Benzo(b)fluoranthene	--	**16000**	**130000**	**31000 T**	**250 T**	**209000**	**26000**	--	--	**460**
Benzo(g,h,i)perylene	**2100**	**15000**	**100000**	**36000 T**	**270 T**	1000 U	**35000**	--	--	**500**
Benzo(k)fluoranthene	--	**5900**	**42000**	**24000 T**	**220 T**	**49900**	**10000**	--	--	**140**
Chrysene	**1300**	**16000**	**120000**	**38000 T**	**230 T**	**82100**	**15000**	--	--	**230**
Dibenzo(a,h)anthracene	**390**	**2200**	**12000**	**9500 JT**	**59 T**	**21100**	**4000**	--	--	**68**
Fluoranthene	**1000**	**32000**	**340000**	**68000**	**250**	**53200**	**12000**	--	--	**290**
Fluorene	63 U	**2100**	**41000**	**3600**	19 U	**1500**	5000 U	--	--	50 U
Indeno(1,2,3-c,d)pyrene	**1400**	**13000**	**100000**	**31000 T**	**260 T**	**110000**	**21000**	--	--	**350**
LWG RA Total HPAH (Calculated U = 1/2)	**13000 T**	**170000 T**	**1500000 T**	**390000 JT**	**2300 T**	**920000 T**	**180000 T**	**220000 T**	**600000 T**	**3100 T**
LWG RA Total LPAH (Calculated U = 1/2)	**1000 T**	**23000 T**	**590000 T**	**76000 T**	**210 T**	**55000 T**	**17000 T**	**370000 T**	**390000 T**	**260 T**
Naphthalene	**180**	**1200**	**38000**	**7000**	**23**	**6100**	**1700**	--	--	50 U
Phenanthrene	**370**	**8300**	**320000**	**47000**	**51**	**13600**	**3400**	--	--	**100**
Pyrene	**1600**	**38000**	**420000**	**80000**	**280**	**145000**	**22000**	--	--	**370**
Semivolatile Organics (µg/kg)										
Carbazole	63 U	**590 J**	**8500**	**2800 T**	**6.5 T**	--	--	--	--	--
Dibenzofuran	63 U	**210**	**5400**	**560 T**	**4.9 T**	--	--	--	--	--
PCB Aroclors (µg/kg)										
Aroclor 1016	32 U	1.34 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1221	32 U	2.69 UJ	3.81 UJ	7.7 U	7.7 U	--	--	--	--	--
Aroclor 1232	32 U	2.25 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1242	32 U	1.37 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1248	32 U	1.75 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1254	32 U	0.816 U	3.81 UJ	**29**	3.8 U	--	--	--	--	--
Aroclor 1260	32 U	1.05 U	3.81 UJ	25 U	3.8 U	--	--	--	--	--

Table 3-25
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-13	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	MW-04-101	MW-04-57	RAA-PD01	RAA-PD02	SS-1
Sample Name:	GST-13SO-0-5-101012	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	981014-M4-01	951030-M4-01	RAA-PD01-051019	RAA-PD02-051019	981112-SS-01
Sample Date:	10/12/2010	10/29/2004	8/30/2004	10/14/2002	10/11/2002	10/14/1998	10/30/1995	10/19/2005	10/19/2005	11/12/1998
Depth Interval:	0 - 152.4 cm	0 - 22 cm	0 - 27 cm	0 - 15 cm	0 - 15 cm	45.72 - 60.96 cm	0 - 6.1 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 6.096 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	2.69 UJT	3.81 UJT	**53 T**	7.7 UT	--	--	200 UT	200 UT	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	**36**	**17.3 NJ**	**114 J**	7.7 U	0.64 U	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	16 U	0.365 U	**24.5 NJ**	200 U	9.2 U	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	16 U	**5.83 J**	0.345 UJ	7.7 U	0.38 U	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	**100**	**22.1 NJ**	**330 J**	9 U	**1.5**	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	16 U	**9.76 NJ**	**31.9 J**	7.7 U	1.2 U	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	**16 J**	**17.9 J**	**60.3 NJ**	12 U	1.1 U	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	8 U	0.357 U	0.255 UJ	3.9 U	0.19 U	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	8 U	**20.3 J**	**13.6 J**	42 U	0.19 U	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	8 U	0.764 U	**3.03 NJ**	3.9 U	0.19 U	--	--	--	--	--
Endrin ketone	16 U	0.314 U	0.224 UJ	20 U	0.71 U	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8 U	0.816 U	0.582 UJ	3.9 U	0.19 U	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**140 T**	**39.4 NJT**	**440 JT**	9 UT	**1.8 T**	--	--	**19 JT**	**130 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	**9.94 NJT**	**56.4 JNT**	200 UT	9.2 UT	--	--	10 UT	50 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	**24 JT**	**23.7 JT**	**60.5 NJT**	12 UT	1.1 UT	--	--	10 UT	50 UJT	--
LWG RA Total DDx (Calculated U = 1/2)	**180 JT**	**73.1 JNT**	**560 JNT**	200 UT	**7.8 T**	--	--	**29 JT**	**180 JT**	--
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	**42**	**940 J**	**14000 J**	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	**1700 J**	**17000 J**	--	--	--	--	--	--	--

Table 3-25
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	SS-10	SS-11	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9
Sample Name:	981112-SS-10	981112-SS-11	981112-SS-02	981112-SS-03	981112-SS-04	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-08	981112-SS-09
Sample Date:	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998
Depth Interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
Conventional Parameters (mg/kg)										
Cyanide, total	**41**	0.5 U	0.5 U	**0.58**	0.5 U	**1.3**	**0.58**	**13**	0.5 U	**56**
Metals (mg/kg)										
Zinc	--	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/kg)										
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)										
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--
Acenaphthene	**140**	50 U	50 U	**100**	**83**	**590**	50 U	**640**	50 U	**380**
Acenaphthylene	**310**	50 U	**200**	**1900**	**500**	**11100**	**78**	**2800**	50 U	**190**
Anthracene	**360**	50 U	**80**	50 U	**250**	**2000**	50 U	**1300**	50 U	**1300**
Benzo(a)anthracene	**2600**	**61**	**790**	**4700**	**1300**	**21900**	**130**	**12800**	50 U	**3700**
Benzo(a)pyrene	50 U	**130**	**1500**	**14100**	**2900**	**69100**	**360**	**23700**	50 U	**3400**
Benzo(b)fluoranthene	**5800**	**140**	**1500**	**14200**	**3100**	**60900**	**370**	**25000**	50 U	**6600**
Benzo(g,h,i)perylene	**3100**	**150**	**1600**	**14400**	**3100**	**69900**	**550**	**22200**	50 U	**2500**
Benzo(k)fluoranthene	**1600**	50 U	**470**	**3500**	**880**	**17000**	**110**	**6900**	50 U	**1700**
Chrysene	**3500**	**66**	**930**	**6200**	**1700**	**29700**	**150**	**14300**	50 U	**4300**
Dibenzo(a,h)anthracene	**520**	50 U	**220**	**1500**	**490**	**9400**	**62**	**1900**	50 U	**500**
Fluoranthene	**5000**	**75**	**1200**	**3400**	**1400**	**16100**	**150**	**15000**	50 U	**10000**
Fluorene	**120**	50 U	50 U	**130**	**59**	**610**	50 U	**410**	50 U	**390**
Indeno(1,2,3-c,d)pyrene	**2500**	**100**	**1200**	**10300**	**2400**	**47300**	**350**	**23700**	50 U	**2200**
LWG RA Total HPAH (Calculated U = 1/2)	**31000 T**	**870 T**	**11000 T**	**81000 T**	**19000 T**	**370000 T**	**2400 T**	**170000 T**	50 UT	**46000 T**
LWG RA Total LPAH (Calculated U = 1/2)	**3900 T**	50 UT	**640 T**	**4000 T**	**1700 T**	**24000 T**	**240 T**	**14000 T**	50 UT	**9800 T**
Naphthalene	**230**	50 U	**88**	**900**	**230**	**5000**	50 U	**1800**	50 U	**550**
Phenanthrene	**2700**	50 U	**220**	**970**	**610**	**4700**	**58**	**6900**	50 U	**7000**
Pyrene	**6800**	**99**	**1600**	**8500**	**2200**	**33200**	**200**	**24200**	50 U	**10800**
Semivolatile Organics (µg/kg)										
Carbazole	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)										
Aroclor 1016	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	--	--	--

Table 3-25
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	SS-10	SS-11	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9
Sample Name:	981112-SS-10	981112-SS-11	981112-SS-02	981112-SS-03	981112-SS-04	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-08	981112-SS-09
Sample Date:	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998
Depth Interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--

Table 3-25
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Human Health

Notes:

	Detected concentration is greater than 1 screening level
	Detected concentration is greater than 2 screening levels
	Detected concentration is greater than 3 screening levels
	Detected concentration is greater than 4 screening levels
	Detected concentration is greater than 5 screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation
-- = Results not reported or not applicable
N = Normal Field Sample

Acronyms:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low molecular weight polycyclic aromatic hydrocarbon
LWG = Lower Willamette Group
MQ = mean quotient
NA = not applicable
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyls
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-26
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	B-29	B-31	B-53	B-54	B-56	GS-04-A-PG	GSM-07	GSM-08	GSM-14
Sample Name:	950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013	2708-040601-001	LWG2-PG-GS4A	GSM-07SO-0-5-100927	GSM-08SO-0-5-100928	GSM-14SO-0-5-101015
Sample Date:	9/22/1995	9/25/1995	6/7/2004	6/8/2004	6/1/2004	12/1/2005	9/27/2010	9/28/2010	10/15/2010
Depth Interval:	0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm	76.2 - 106.68 cm	0 - 26 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Conventional Parameters (mg/kg)									
Cyanide, total	--	**0.59**	--	--	0.435 U	**2.4 J**	**0.274**	0.124 U	**0.286**
Metals (mg/kg)									
Zinc	--	--	--	--	--	**113**	**158 J**	**85 J**	**77**
Volatile Organics (µg/kg)									
1,1-Dichloroethene	--	--	--	--	--	0.58 U	1.2 U	1.5 U	1 U
1,2-Dichloroethene, cis-	--	--	--	--	--	0.44 U	1.2 U	1.5 U	1 U
1,2-Dichloroethene, trans-	--	--	--	--	--	1.4 U	1.2 U	1.5 U	1 U
Benzene	--	300 U	50 U	50 U	50 U	**16**	1.2 U	1.5 U	1 U
Ethylbenzene	--	300 U	50 U	50 U	50 U	**220**	1.2 U	1.5 U	1 U
o-Xylene	--	--	--	--	--	**170**	1.2 U	1.5 U	1 U
Toluene	--	300 U	50 U	50 U	50 U	11 U	1.2 U	1.5 U	1 U
Trichloroethene (TCE)	--	--	--	--	--	0.44 U	1.2 U	1.5 U	1 U
Vinyl chloride	--	--	--	--	--	0.6 U	1.2 U	1.5 U	1 U
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--	**260 T**	1.2 UT	1.5 UT	1 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)									
2-Methylnaphthalene	--	--	--	--	--	**22000**	62 U	**140**	60 U
Acenaphthene	**400**	**110**	670 U	168 U	13.4 U	**59000**	62 U	**100**	60 U
Acenaphthylene	**7300**	**1300**	**745**	168 U	13.4 U	**5400**	62 U	63 U	**62**
Anthracene	**3300**	**590**	**996**	168 U	13.4 U	**37000**	62 U	**82**	60 U
Benzo(a)anthracene	**10500**	**2100**	**4210**	**240**	13.4 U	**52000**	**190**	**89**	**100**
Benzo(a)pyrene	**32500**	**4800**	**6820**	**323**	13.4 U	**85000**	**350**	**100**	**270**
Benzo(b)fluoranthene	**31700**	**5400**	**4970**	**303**	13.4 U	**48000**	--	--	--
Benzo(g,h,i)perylene	**41800**	**6800**	**5480**	**306**	**14**	**65000**	**460**	**87**	**170**
Benzo(k)fluoranthene	**11600**	**1800**	**4210**	**211**	13.4 U	**46000**	--	--	--
Chrysene	**19300**	**3000**	**5320**	**330**	13.4 U	**59000**	**300**	**110**	**150**
Dibenzo(a,h)anthracene	**4800**	**980**	**1040**	168 U	13.4 U	**6100**	62 U	63 U	60 U
Fluoranthene	**9400**	**1600**	**6430**	**370**	13.4 U	**160000**	**290**	**170**	**130**
Fluorene	**470**	**58**	670 U	168 U	13.4 U	**30000**	62 U	**67**	60 U
Indeno(1,2,3-c,d)pyrene	**28400**	**4900**	**4010**	**233**	13.4 U	**63000**	**290**	63 U	**140**
LWG RA Total HPAH (Calculated U = 1/2)	**210000 T**	**35000 T**	**52000 T**	**2900 T**	**74 T**	**790000 T**	**2800 T**	**1000 T**	**1500 T**
LWG RA Total LPAH (Calculated U = 1/2)	**17000 T**	**3100 T**	**5400 T**	**710 T**	13.4 UT	**350000 T**	**510 T**	**1100 T**	**240 T**
Naphthalene	**2400**	**300**	670 U	168 U	13.4 U	**15000**	**160**	**220**	60 U
Phenanthrene	**3400**	**710**	**2690**	**290**	13.4 U	**180000**	**200**	**410**	60 U
Pyrene	**22800**	**3700**	**9700**	**454**	13.4 U	**210000**	**490**	**260**	**190**
Semivolatile Organics (µg/kg)									
Carbazole	--	--	--	--	--	**650**	62 U	63 U	60 U
Dibenzofuran	--	--	--	--	--	**3600**	62 U	63 U	60 U
PCB Aroclors (µg/kg)									
Aroclor 1016	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1221	--	--	--	--	--	--	33 U	30 U	31 UJ
Aroclor 1232	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1242	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1248	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1254	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1260	--	--	--	--	--	--	33 U	30 U	31 U

Table 3-26
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	B-29	B-31	B-53	B-54	B-56	GS-04-A-PG	GSM-07	GSM-08	GSM-14
Sample Name:	950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013	2708-040601-001	LWG2-PG-GS4A	GSM-07SO-0-5-100927	GSM-08SO-0-5-100928	GSM-14SO-0-5-101015
Sample Date:	9/22/1995	9/25/1995	6/7/2004	6/8/2004	6/1/2004	12/1/2005	9/27/2010	9/28/2010	10/15/2010
Depth Interval:	0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm	76.2 - 106.68 cm	0 - 26 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	33 UT	30 UT	31 UJT
Pesticides (µg/kg)									
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	3.3 U	3.1 U	3.2 U
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	3.3 U	3.1 U	3.2 U
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	**5.6 J**	3.1 UJ	3.2 U
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.6 U	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.6 U	1.6 U	1.6 U
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.6 U	1.6 U	1.6 UJ
Endrin ketone	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	1.6 UJ	1.6 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	3.3 UJT	3.1 UJT	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	3.3 UT	3.1 UT	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	**7.3 JT**	3.1 UJT	3.2 UT
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	**14 JT**	3.1 UJT	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)									
Diesel Range Hydrocarbons	--	--	--	--	--	**10000 J**	**42**	6.3 U	6 U
Residual Range Hydrocarbons	--	--	--	--	--	**13000 J**	--	--	--

Table 3-26
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-01	GST-02	GST-03	GST-04	GST-05	GST-06	GST-09	GST-11
Sample Name:	GST-01SO-0-5-101001	GST-02SO-0-5-101004	GST-03SO-0-5-101005	GST-04SO-0-5-101006	GST-05SO-0-5-101005	GST-06SO-0-5-101007	GST-09SO-0-5-101008	GST-11SO-0-5-101011
Sample Date:	10/1/2010	10/4/2010	10/5/2010	10/6/2010	10/5/2010	10/7/2010	10/8/2010	10/11/2010
Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Conventional Parameters (mg/kg)								
Cyanide, total	**0.341**	**0.222**	**3.57**	**5.76 J**	**1.37 J**	**1.46 J**	0.11 U	0.105 U
Metals (mg/kg)								
Zinc	**96 J**	**78 J**	**103 J**	**102**	**108**	**232**	**90**	**51**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	--
1,2-Dichloroethene, cis-	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
1,2-Dichloroethene, trans-	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
Benzene	1.1 U	1.2 U	**44**	**2.2**	1.1 U	1.1 U	1 U	0.9 U
Ethylbenzene	1.1 U	1.2 U	**34**	1 U	1.1 U	1.1 U	1 U	0.9 U
o-Xylene	1.1 U	1.2 U	**40**	1 U	1.1 U	1.1 U	1 U	0.9 U
Toluene	1.1 U	1.2 U	**30**	1 U	1.1 U	1.1 U	1 U	0.9 U
Trichloroethene (TCE)	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
Vinyl chloride	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
LWG RA Total Xylene (Calculated U = 1/2)	1.1 UT	1.2 UT	**95 T**	1 UT	1.1 UT	1.1 UT	1 UT	0.9 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	60 U	65 U	**65000**	**480**	**1900**	**400**	**120**	59 U
Acenaphthene	60 U	65 U	**33000**	310 U	**1300**	**110**	61 U	59 U
Acenaphthylene	60 U	65 U	**100000**	**2000**	**6200**	**920**	**340**	59 U
Anthracene	60 U	65 U	**120000**	**910**	**4300**	**450**	**300**	59 U
Benzo(a)anthracene	60 U	**93**	**310000**	**3600**	**15000**	**2800**	**2000 J**	59 U
Benzo(a)pyrene	60 U	**150**	**410000**	**10000**	**43000**	**5500**	**3700 J**	**66**
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	60 U	**130**	**340000**	**13000 J**	**52000**	**7100**	**4700 J**	**94**
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	60 U	**120**	**400000**	**6000**	**24000**	**4800**	**2400 J**	59 U
Dibenzo(a,h)anthracene	60 U	65 U	**100000**	**2300**	**9200**	**1300**	**890**	59 U
Fluoranthene	60 U	**140**	**610000**	**3700**	**19000**	**2800**	**3400 J**	59 U
Fluorene	60 U	65 U	**79000**	310 U	**1400**	**96**	**89**	59 U
Indeno(1,2,3-c,d)pyrene	60 U	**91**	**230000**	**8300**	**34000**	**4000**	**3100**	59 U
LWG RA Total HPAH (Calculated U = 1/2)	60 UT	**1100 T**	**3800000 T**	**64000 JT**	**280000 T**	**44000 T**	**30000 JT**	**450 JT**
LWG RA Total LPAH (Calculated U = 1/2)	60 UT	**300 T**	**1400000 T**	**8500 T**	**35000 T**	**4700 T**	**2600 JT**	59 UT
Naphthalene	60 U	65 U	**220000**	**1800**	**6700**	**1600**	**400**	59 U
Phenanthrene	60 U	**110**	**760000**	**3000**	**13000**	**1100**	**1300 J**	59 U
Pyrene	60 U	**190**	**1000000**	**5300**	**42000**	**7200**	**6400**	**63 J**
Semivolatile Organics (µg/kg)								
Carbazole	60 U	65 U	**25000**	310 U	**330**	**84**	**87**	59 U
Dibenzofuran	60 U	65 U	**8600**	310 U	**240**	64 U	61 U	59 U
PCB Aroclors (µg/kg)								
Aroclor 1016	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1221	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1232	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1242	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1248	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1254	32 U	31 U	**58**	32 U	32 U	31 U	31 U	31 U
Aroclor 1260	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U

Table 3-26
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-01	GST-02	GST-03	GST-04	GST-05	GST-06	GST-09	GST-11
Sample Name:	GST-01SO-0-5-101001	GST-02SO-0-5-101004	GST-03SO-0-5-101005	GST-04SO-0-5-101006	GST-05SO-0-5-101005	GST-06SO-0-5-101007	GST-09SO-0-5-101008	GST-11SO-0-5-101011
Sample Date:	10/1/2010	10/4/2010	10/5/2010	10/6/2010	10/5/2010	10/7/2010	10/8/2010	10/11/2010
Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	31 UT	**150 T**	32 UT	32 UT	31 UT	31 UT	31 UT
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
2,4'-DDE (o,p'-DDE)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
2,4'-DDT (o,p'-DDT)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDD (p,p'-DDD)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDE (p,p'-DDE)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDT (p,p'-DDT)	3.2 U	3.1 U	50 U	16 U	16 U	16 U	16 U	**7.8**
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
delta-Hexachlorocyclohexane (BHC)	1.6 UJ	1.6 UJ	16 UJ	8 U	7.9 U	7.9 U	7.9 U	1.5 U
Endrin ketone	3.2 U	3.1 U	**84 J**	16 U	16 U	16 U	16 U	3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	3.1 UT	32 UT	16 UT	16 UT	16 UT	16 UT	3 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	3.1 UT	32 UT	16 UT	16 UT	16 UT	16 UT	3 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	3.1 UT	50 UT	16 UT	16 UT	16 UT	16 UT	**9.3 T**
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	3.1 UT	50 UT	16 UT	16 UT	16 UT	16 UT	**15 T**
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	6 U	5.9 U	**6000**	**270**	**570**	**57**	27 U	5.3 U
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--

Table 3-26
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-13	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	MW-04-101	MW-04-57	RAA-PD01	RAA-PD02	SS-1
Sample Name:	GST-13SO-0-5-101012	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	981014-M4-01	951030-M4-01	RAA-PD01-051019	RAA-PD02-051019	981112-SS-01
Sample Date:	10/12/2010	10/29/2004	8/30/2004	10/14/2002	10/11/2002	10/14/1998	10/30/1995	10/19/2005	10/19/2005	11/12/1998
Depth Interval:	0 - 152.4 cm	0 - 22 cm	0 - 27 cm	0 - 15 cm	0 - 15 cm	45.72 - 60.96 cm	0 - 6.1 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 6.096 cm
Conventional Parameters (mg/kg)										
Cyanide, total	**2.31**	--	--	--	--	--	**0.8**	--	--	**0.68**
Metals (mg/kg)										
Zinc	**75**	**127**	**183**	**81**	**65**	--	--	--	--	--
Volatile Organics (µg/kg)										
1,1-Dichloroethene	--	0.13 U	0.17 U	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	1 U	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	1 U	0.3 U	0.38 U	--	--	--	--	--	--	--
Benzene	1 U	**1.4**	**3.8**	--	--	25 U	--	--	--	--
Ethylbenzene	1 U	**0.25 J**	**7.1**	--	--	25 U	--	--	--	--
o-Xylene	1 U	**0.38 J**	**5.7**	--	--	--	--	--	--	--
Toluene	1 U	0.24 U	**4.5**	--	--	25 U	--	--	--	--
Trichloroethene (TCE)	1 U	0.096 U	0.13 U	--	--	--	--	--	--	--
Vinyl chloride	1 U	0.14 U	0.17 U	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	1 UT	**0.89 JT**	**11 T**	--	--	--	--	**3300 T**	**1500 JT**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)										
2-Methylnaphthalene	**70**	**250**	**17000**	**2200**	19 U	--	--	--	--	--
Acenaphthene	63 U	**3300**	**89000**	**3600**	19 U	**1100**	5000 U	--	--	50 U
Acenaphthylene	**190**	**1400**	**11000**	**5000**	**71**	**25100**	**4400**	--	--	**64**
Anthracene	**160**	**6700**	**78000**	**8000**	**33**	**7900**	**2600**	--	--	50 U
Benzo(a)anthracene	**820**	**12000**	**110000**	**29000 T**	**140 T**	**67800**	**10000**	--	--	**210**
Benzo(a)pyrene	**2200**	**17000**	**140000**	**41000 T**	**320 T**	**183000**	**28000**	--	--	**440**
Benzo(b)fluoranthene	--	**16000**	**130000**	**31000 T**	**250 T**	**209000**	**26000**	--	--	**460**
Benzo(g,h,i)perylene	**2100**	**15000**	**100000**	**36000 T**	**270 T**	1000 U	**35000**	--	--	**500**
Benzo(k)fluoranthene	--	**5900**	**42000**	**24000 T**	**220 T**	**49900**	**10000**	--	--	**140**
Chrysene	**1300**	**16000**	**120000**	**38000 T**	**230 T**	**82100**	**15000**	--	--	**230**
Dibenzo(a,h)anthracene	**390**	**2200**	**12000**	**9500 JT**	**59 T**	**21100**	**4000**	--	--	**68**
Fluoranthene	**1000**	**32000**	**340000**	**68000**	**250**	**53200**	**12000**	--	--	**290**
Fluorene	63 U	**2100**	**41000**	**3600**	19 U	**1500**	5000 U	--	--	50 U
Indeno(1,2,3-c,d)pyrene	**1400**	**13000**	**100000**	**31000 T**	**260 T**	**110000**	**21000**	--	--	**350**
LWG RA Total HPAH (Calculated U = 1/2)	**13000 T**	**170000 T**	**1500000 T**	**390000 JT**	**2300 T**	**920000 T**	**180000 T**	**220000 T**	**600000 T**	**3100 T**
LWG RA Total LPAH (Calculated U = 1/2)	**1000 T**	**23000 T**	**590000 T**	**76000 T**	**210 T**	**55000 T**	**17000 T**	**370000 T**	**390000 T**	**260 T**
Naphthalene	**180**	**1200**	**38000**	**7000**	**23**	**6100**	**1700**	--	--	50 U
Phenanthrene	**370**	**8300**	**320000**	**47000**	**51**	**13600**	**3400**	--	--	**100**
Pyrene	**1600**	**38000**	**420000**	**80000**	**280**	**145000**	**22000**	--	--	**370**
Semivolatile Organics (µg/kg)										
Carbazole	63 U	**590 J**	**8500**	**2800 T**	**6.5 T**	--	--	--	--	--
Dibenzofuran	63 U	**210**	**5400**	**560 T**	**4.9 T**	--	--	--	--	--
PCB Aroclors (µg/kg)										
Aroclor 1016	32 U	1.34 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1221	32 U	2.69 UJ	3.81 UJ	7.7 U	7.7 U	--	--	--	--	--
Aroclor 1232	32 U	2.25 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1242	32 U	1.37 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1248	32 U	1.75 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1254	32 U	0.816 U	3.81 UJ	**29**	3.8 U	--	--	--	--	--
Aroclor 1260	32 U	1.05 U	3.81 UJ	25 U	3.8 U	--	--	--	--	--

Table 3-26
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-13	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	MW-04-101	MW-04-57	RAA-PD01	RAA-PD02	SS-1
Sample Name:	GST-13SO-0-5-101012	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	981014-M4-01	951030-M4-01	RAA-PD01-051019	RAA-PD02-051019	981112-SS-01
Sample Date:	10/12/2010	10/29/2004	8/30/2004	10/14/2002	10/11/2002	10/14/1998	10/30/1995	10/19/2005	10/19/2005	11/12/1998
Depth Interval:	0 - 152.4 cm	0 - 22 cm	0 - 27 cm	0 - 15 cm	0 - 15 cm	45.72 - 60.96 cm	0 - 6.1 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 6.096 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	2.69 UJT	3.81 UJT	**53 T**	7.7 UT	--	--	200 UT	200 UT	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	**36**	**17.3 NJ**	**114 J**	7.7 U	0.64 U	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	16 U	0.365 U	**24.5 NJ**	200 U	9.2 U	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	16 U	**5.83 J**	0.345 UJ	7.7 U	0.38 U	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	**100**	**22.1 NJ**	**330 J**	9 U	**1.5**	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	16 U	**9.76 NJ**	**31.9 J**	7.7 U	1.2 U	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	**16 J**	**17.9 J**	**60.3 NJ**	12 U	1.1 U	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	8 U	0.357 U	0.255 UJ	3.9 U	0.19 U	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	8 U	**20.3 J**	**13.6 J**	42 U	0.19 U	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	8 U	0.764 U	**3.03 NJ**	3.9 U	0.19 U	--	--	--	--	--
Endrin ketone	16 U	0.314 U	0.224 UJ	20 U	0.71 U	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8 U	0.816 U	0.582 UJ	3.9 U	0.19 U	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**140 T**	**39.4 NJT**	**440 JT**	9 UT	**1.8 T**	--	--	**19 JT**	**130 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	**9.94 NJT**	**56.4 JNT**	200 UT	9.2 UT	--	--	10 UT	50 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	**24 JT**	**23.7 JT**	**60.5 NJT**	12 UT	1.1 UT	--	--	10 UT	50 UJT	--
LWG RA Total DDx (Calculated U = 1/2)	**180 JT**	**73.1 JNT**	**560 JNT**	200 UT	**7.8 T**	--	--	**29 JT**	**180 JT**	--
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	**42**	**940 J**	**14000 J**	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	**1700 J**	**17000 J**	--	--	--	--	--	--	--

Table 3-26
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	SS-10	SS-11	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9
Sample Name:	981112-SS-10	981112-SS-11	981112-SS-02	981112-SS-03	981112-SS-04	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-08	981112-SS-09
Sample Date:	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998
Depth Interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
Conventional Parameters (mg/kg)										
Cyanide, total	**41**	0.5 U	0.5 U	**0.58**	0.5 U	**1.3**	**0.58**	**13**	0.5 U	**56**
Metals (mg/kg)										
Zinc	--	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/kg)										
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	--	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)										
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--
Acenaphthene	**140**	50 U	50 U	**100**	**83**	**590**	50 U	**640**	50 U	**380**
Acenaphthylene	**310**	50 U	**200**	**1900**	**500**	**11100**	**78**	**2800**	50 U	**190**
Anthracene	**360**	50 U	**80**	50 U	**250**	**2000**	50 U	**1300**	50 U	**1300**
Benzo(a)anthracene	**2600**	**61**	**790**	**4700**	**1300**	**21900**	**130**	**12800**	50 U	**3700**
Benzo(a)pyrene	50 U	**130**	**1500**	**14100**	**2900**	**69100**	**360**	**23700**	50 U	**3400**
Benzo(b)fluoranthene	**5800**	**140**	**1500**	**14200**	**3100**	**60900**	**370**	**25000**	50 U	**6600**
Benzo(g,h,i)perylene	**3100**	**150**	**1600**	**14400**	**3100**	**69900**	**550**	**22200**	50 U	**2500**
Benzo(k)fluoranthene	**1600**	50 U	**470**	**3500**	**880**	**17000**	**110**	**6900**	50 U	**1700**
Chrysene	**3500**	**66**	**930**	**6200**	**1700**	**29700**	**150**	**14300**	50 U	**4300**
Dibenzo(a,h)anthracene	**520**	50 U	**220**	**1500**	**490**	**9400**	**62**	**1900**	50 U	**500**
Fluoranthene	**5000**	**75**	**1200**	**3400**	**1400**	**16100**	**150**	**15000**	50 U	**10000**
Fluorene	**120**	50 U	50 U	**130**	**59**	**610**	50 U	**410**	50 U	**390**
Indeno(1,2,3-c,d)pyrene	**2500**	**100**	**1200**	**10300**	**2400**	**47300**	**350**	**23700**	50 U	**2200**
LWG RA Total HPAH (Calculated U = 1/2)	**31000 T**	**870 T**	**11000 T**	**81000 T**	**19000 T**	**370000 T**	**2400 T**	**170000 T**	50 UT	**46000 T**
LWG RA Total LPAH (Calculated U = 1/2)	**3900 T**	50 UT	**640 T**	**4000 T**	**1700 T**	**24000 T**	**240 T**	**14000 T**	50 UT	**9800 T**
Naphthalene	**230**	50 U	**88**	**900**	**230**	**5000**	50 U	**1800**	50 U	**550**
Phenanthrene	**2700**	50 U	**220**	**970**	**610**	**4700**	**58**	**6900**	50 U	**7000**
Pyrene	**6800**	**99**	**1600**	**8500**	**2200**	**33200**	**200**	**24200**	50 U	**10800**
Semivolatile Organics (µg/kg)										
Carbazole	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)										
Aroclor 1016	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	--	--	--

Table 3-26
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	SS-10	SS-11	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9
Sample Name:	981112-SS-10	981112-SS-11	981112-SS-02	981112-SS-03	981112-SS-04	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-08	981112-SS-09
Sample Date:	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998
Depth Interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--

Table 3-26
Existing Data Screening Table - Riverbank Soils (0-3.5 foot) Ecological

Notes:

Detected concentration is greater than 1 screening level
Detected concentration is greater than 2 screening levels
Detected concentration is greater than 3 screening levels
Detected concentration is greater than 4 screening levels
Detected concentration is greater than 5 screening levels
Detected concentration is greater than 6 screening levels
Detected concentration is greater than 7 screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation
-- = Results not reported or not applicable
N = Normal Field Sample

Acronyms:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low molecular weight polycyclic aromatic hydrocarbon
LWG = Lower Willamette Group
MQ = mean quotient
NA = not applicable
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyls
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	B-29	B-31	B-53	B-54	B-56	GS-04-A-PG	GSM-07	GSM-08	GSM-14
Sample Name:	950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013	2708-040601-001	LWG2-PG-GS4A	GSM-07SO-0-5-100927	GSM-08SO-0-5-100928	GSM-14SO-0-5-101015
Sample Date:	9/22/1995	9/25/1995	6/7/2004	6/8/2004	6/1/2004	12/1/2005	9/27/2010	9/28/2010	10/15/2010
Depth Interval:	0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm	76.2 - 106.68 cm	0 - 26 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Conventional Parameters (mg/kg)									
Cyanide, total	--	**0.59**	--	--	0.435 U	**2.4 J**	**0.274**	0.124 U	**0.286**
Metals (mg/kg)									
Zinc	--	--	--	--	--	**113**	**158 J**	**85 J**	**77**
Volatile Organics (µg/kg)									
1,1-Dichloroethene	--	--	--	--	--	0.58 U	1.2 U	1.5 U	1 U
1,2-Dichloroethene, cis-	--	--	--	--	--	0.44 U	1.2 U	1.5 U	1 U
1,2-Dichloroethene, trans-	--	--	--	--	--	1.4 U	1.2 U	1.5 U	1 U
Benzene	--	300 U	50 U	50 U	50 U	**16**	1.2 U	1.5 U	1 U
Ethylbenzene	--	300 U	50 U	50 U	50 U	**220**	1.2 U	1.5 U	1 U
Naphthalene	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	**170**	1.2 U	1.5 U	1 U
Toluene	--	300 U	50 U	50 U	50 U	11 U	1.2 U	1.5 U	1 U
Trichloroethene (TCE)	--	--	--	--	--	0.44 U	1.2 U	1.5 U	1 U
Vinyl chloride	--	--	--	--	--	0.6 U	1.2 U	1.5 U	1 U
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--	**260 T**	1.2 UT	1.5 UT	1 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)									
2-Methylnaphthalene	--	--	--	--	--	**22000**	62 U	**140**	60 U
Acenaphthene	**400**	**110**	670 U	168 U	13.4 U	**59000**	62 U	**100**	60 U
Acenaphthylene	**7300**	**1300**	**745**	168 U	13.4 U	**5400**	62 U	63 U	**62**
Anthracene	**3300**	**590**	**996**	168 U	13.4 U	**37000**	62 U	**82**	60 U
Benzo(a)anthracene	**10500**	**2100**	**4210**	**240**	13.4 U	**52000**	**190**	**89**	**100**
Benzo(a)pyrene	**32500**	**4800**	**6820**	**323**	13.4 U	**85000**	**350**	**100**	**270**
Benzo(b)fluoranthene	**31700**	**5400**	**4970**	**303**	13.4 U	**48000**	--	--	--
Benzo(g,h,i)perylene	**41800**	**6800**	**5480**	**306**	**14**	**65000**	**460**	**87**	**170**
Benzo(k)fluoranthene	**11600**	**1800**	**4210**	**211**	13.4 U	**46000**	--	--	--
Chrysene	**19300**	**3000**	**5320**	**330**	13.4 U	**59000**	**300**	**110**	**150**
Dibenzo(a,h)anthracene	**4800**	**980**	**1040**	168 U	13.4 U	**6100**	62 U	63 U	60 U
Fluoranthene	**9400**	**1600**	**6430**	**370**	13.4 U	**160000**	**290**	**170**	**130**
Fluorene	**470**	**58**	670 U	168 U	13.4 U	**30000**	62 U	**67**	60 U
Indeno(1,2,3-c,d)pyrene	**28400**	**4900**	**4010**	**233**	13.4 U	**63000**	**290**	63 U	**140**
LWG RA Total HPAH (Calculated U = 1/2)	**210000 T**	**35000 T**	**52000 T**	**2900 T**	**74 T**	**790000 T**	**2800 T**	**1000 T**	**1500 T**
LWG RA Total LPAH (Calculated U = 1/2)	**17000 T**	**3100 T**	**5400 T**	**710 T**	13.4 UT	**350000 T**	**510 T**	**1100 T**	**240 T**
Naphthalene	**2400**	**300**	670 U	168 U	13.4 U	**15000**	**160**	**220**	60 U
Phenanthrene	**3400**	**710**	**2690**	**290**	13.4 U	**180000**	**200**	**410**	60 U
Pyrene	**22800**	**3700**	**9700**	**454**	13.4 U	**210000**	**490**	**260**	**190**
Semivolatile Organics (µg/kg)									
Carbazole	--	--	--	--	--	**650**	62 U	63 U	60 U
Dibenzofuran	--	--	--	--	--	**3600**	62 U	63 U	60 U
PCB Aroclors (µg/kg)									
Aroclor 1016	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1221	--	--	--	--	--	--	33 U	30 U	31 UJ
Aroclor 1232	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1242	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1248	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1254	--	--	--	--	--	--	33 U	30 U	31 U

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	B-29	B-31	B-53	B-54	B-56	GS-04-A-PG	GSM-07	GSM-08	GSM-14
Sample Name:	950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013	2708-040601-001	LWG2-PG-GS4A	GSM-07SO-0-5-100927	GSM-08SO-0-5-100928	GSM-14SO-0-5-101015
Sample Date:	9/22/1995	9/25/1995	6/7/2004	6/8/2004	6/1/2004	12/1/2005	9/27/2010	9/28/2010	10/15/2010
Depth Interval:	0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm	76.2 - 106.68 cm	0 - 26 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Aroclor 1260	--	--	--	--	--	--	33 U	30 U	31 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	33 UT	30 UT	31 UJT
Pesticides (µg/kg)									
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	3.3 U	3.1 U	3.2 U
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	3.3 U	3.1 U	3.2 U
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	**5.6 J**	3.1 UJ	3.2 U
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.6 U	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.6 U	1.6 U	1.6 U
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.6 U	1.6 U	1.6 UJ
Endrin ketone	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	1.6 UJ	1.6 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	3.3 UJT	3.1 UJT	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	3.3 UT	3.1 UT	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	**7.3 JT**	3.1 UJT	3.2 UT
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	**14 JT**	3.1 UJT	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)									
Diesel Range Hydrocarbons	--	--	--	--	--	**10000 J**	**42**	6.3 U	6 U
Residual Range Hydrocarbons	--	--	--	--	--	**13000 J**	--	--	--

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-01	GST-02	GST-03	GST-04	GST-05	GST-06	GST-09	GST-11
Sample Name:	GST-01SO-0-5-101001	GST-02SO-0-5-101004	GST-03SO-0-5-101005	GST-04SO-0-5-101006	GST-05SO-0-5-101005	GST-06SO-0-5-101007	GST-09SO-0-5-101008	GST-11SO-0-5-101011
Sample Date:	10/1/2010	10/4/2010	10/5/2010	10/6/2010	10/5/2010	10/7/2010	10/8/2010	10/11/2010
Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Conventional Parameters (mg/kg)								
Cyanide, total	**0.341**	**0.222**	**3.57**	**5.76 J**	**1.37 J**	**1.46 J**	0.11 U	0.105 U
Metals (mg/kg)								
Zinc	**96 J**	**78 J**	**103 J**	**102**	**108**	**232**	**90**	**51**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	--
1,2-Dichloroethene, cis-	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
1,2-Dichloroethene, trans-	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
Benzene	1.1 U	1.2 U	**44**	**2.2**	1.1 U	1.1 U	1 U	0.9 U
Ethylbenzene	1.1 U	1.2 U	**34**	1 U	1.1 U	1.1 U	1 U	0.9 U
Naphthalene	--	--	--	--	--	--	--	--
o-Xylene	1.1 U	1.2 U	**40**	1 U	1.1 U	1.1 U	1 U	0.9 U
Toluene	1.1 U	1.2 U	**30**	1 U	1.1 U	1.1 U	1 U	0.9 U
Trichloroethene (TCE)	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
Vinyl chloride	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
LWG RA Total Xylene (Calculated U = 1/2)	1.1 UT	1.2 UT	**95 T**	1 UT	1.1 UT	1.1 UT	1 UT	0.9 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	60 U	65 U	**65000**	**480**	**1900**	**400**	**120**	59 U
Acenaphthene	60 U	65 U	**33000**	310 U	**1300**	**110**	61 U	59 U
Acenaphthylene	60 U	65 U	**100000**	**2000**	**6200**	**920**	**340**	59 U
Anthracene	60 U	65 U	**120000**	**910**	**4300**	**450**	**300**	59 U
Benzo(a)anthracene	60 U	**93**	**310000**	**3600**	**15000**	**2800**	**2000 J**	59 U
Benzo(a)pyrene	60 U	**150**	**410000**	**10000**	**43000**	**5500**	**3700 J**	**66**
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	60 U	**130**	**340000**	**13000 J**	**52000**	**7100**	**4700 J**	**94**
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	60 U	**120**	**400000**	**6000**	**24000**	**4800**	**2400 J**	59 U
Dibenzo(a,h)anthracene	60 U	65 U	**100000**	**2300**	**9200**	**1300**	**890**	59 U
Fluoranthene	60 U	**140**	**610000**	**3700**	**19000**	**2800**	**3400 J**	59 U
Fluorene	60 U	65 U	**79000**	310 U	**1400**	**96**	**89**	59 U
Indeno(1,2,3-c,d)pyrene	60 U	**91**	**230000**	**8300**	**34000**	**4000**	**3100**	59 U
LWG RA Total HPAH (Calculated U = 1/2)	60 UT	**1100 T**	**3800000 T**	**64000 JT**	**280000 T**	**44000 T**	**30000 JT**	**450 JT**
LWG RA Total LPAH (Calculated U = 1/2)	60 UT	**300 T**	**1400000 T**	**8500 T**	**35000 T**	**4700 T**	**2600 JT**	59 UT
Naphthalene	60 U	65 U	**220000**	**1800**	**6700**	**1600**	**400**	59 U
Phenanthrene	60 U	**110**	**760000**	**3000**	**13000**	**1100**	**1300 J**	59 U
Pyrene	60 U	**190**	**1000000**	**5300**	**42000**	**7200**	**6400**	**63 J**
Semivolatile Organics (µg/kg)								
Carbazole	60 U	65 U	**25000**	310 U	**330**	**84**	**87**	59 U
Dibenzofuran	60 U	65 U	**8600**	310 U	**240**	64 U	61 U	59 U
PCB Aroclors (µg/kg)								
Aroclor 1016	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1221	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1232	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1242	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1248	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1254	32 U	31 U	**58**	32 U	32 U	31 U	31 U	31 U

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	**GST-01**	**GST-02**	**GST-03**	**GST-04**	**GST-05**	**GST-06**	**GST-09**	**GST-11**
Sample Name:	**GST-01SO-0-5-101001**	**GST-02SO-0-5-101004**	**GST-03SO-0-5-101005**	**GST-04SO-0-5-101006**	**GST-05SO-0-5-101005**	**GST-06SO-0-5-101007**	**GST-09SO-0-5-101008**	**GST-11SO-0-5-101011**
Sample Date:	**10/1/2010**	**10/4/2010**	**10/5/2010**	**10/6/2010**	**10/5/2010**	**10/7/2010**	**10/8/2010**	**10/11/2010**
Depth Interval:	**0 - 152.4 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**
Aroclor 1260	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	31 UT	**150 T**	32 UT	32 UT	31 UT	31 UT	31 UT
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
2,4'-DDE (o,p'-DDE)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
2,4'-DDT (o,p'-DDT)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDD (p,p'-DDD)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDE (p,p'-DDE)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDT (p,p'-DDT)	3.2 U	3.1 U	50 U	16 U	16 U	16 U	16 U	**7.8**
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
delta-Hexachlorocyclohexane (BHC)	1.6 UJ	1.6 UJ	16 UJ	8 U	7.9 U	7.9 U	7.9 U	1.5 U
Endrin ketone	3.2 U	3.1 U	**84 J**	16 U	16 U	16 U	16 U	3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	3.1 UT	32 UT	16 UT	16 UT	16 UT	16 UT	3 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	3.1 UT	32 UT	16 UT	16 UT	16 UT	16 UT	3 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	3.1 UT	50 UT	16 UT	16 UT	16 UT	16 UT	**9.3 T**
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	3.1 UT	50 UT	16 UT	16 UT	16 UT	16 UT	**15 T**
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	6 U	5.9 U	**6000**	**270**	**570**	**57**	27 U	5.3 U
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-13	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	MW-04-101	MW-04-57	RAA-PD01	RAA-PD02	SS-1
Sample Name:	GST-13SO-0-5-101012	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	981014-M4-01	951030-M4-01	RAA-PD01-051019	RAA-PD02-051019	981112-SS-01
Sample Date:	10/12/2010	10/29/2004	8/30/2004	10/14/2002	10/11/2002	10/14/1998	10/30/1995	10/19/2005	10/19/2005	11/12/1998
Depth Interval:	0 - 152.4 cm	0 - 22 cm	0 - 27 cm	0 - 15 cm	0 - 15 cm	45.72 - 60.96 cm	0 - 6.1 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 6.096 cm
Conventional Parameters (mg/kg)										
Cyanide, total	**2.31**	--	--	--	--	--	**0.8**	--	--	**0.68**
Metals (mg/kg)										
Zinc	**75**	**127**	**183**	**81**	**65**	--	--	--	--	--
Volatile Organics (µg/kg)										
1,1-Dichloroethene	--	0.13 U	0.17 U	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	1 U	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	1 U	0.3 U	0.38 U	--	--	--	--	--	--	--
Benzene	1 U	**1.4**	**3.8**	--	--	25 U	--	--	--	--
Ethylbenzene	1 U	**0.25 J**	**7.1**	--	--	25 U	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--
o-Xylene	1 U	**0.38 J**	**5.7**	--	--	--	--	--	--	--
Toluene	1 U	0.24 U	**4.5**	--	--	25 U	--	--	--	--
Trichloroethene (TCE)	1 U	0.096 U	0.13 U	--	--	--	--	--	--	--
Vinyl chloride	1 U	0.14 U	0.17 U	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	1 UT	**0.89 JT**	**11 T**	--	--	--	--	**3300 T**	**1500 JT**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)										
2-Methylnaphthalene	**70**	**250**	**17000**	**2200**	19 U	--	--	--	--	--
Acenaphthene	63 U	**3300**	**89000**	**3600**	19 U	**1100**	5000 U	--	--	50 U
Acenaphthylene	**190**	**1400**	**11000**	**5000**	**71**	**25100**	**4400**	--	--	**64**
Anthracene	**160**	**6700**	**78000**	**8000**	**33**	**7900**	**2600**	--	--	50 U
Benzo(a)anthracene	**820**	**12000**	**110000**	**29000 T**	**140 T**	**67800**	**10000**	--	--	**210**
Benzo(a)pyrene	**2200**	**17000**	**140000**	**41000 T**	**320 T**	**183000**	**28000**	--	--	**440**
Benzo(b)fluoranthene	--	**16000**	**130000**	**31000 T**	**250 T**	**209000**	**26000**	--	--	**460**
Benzo(g,h,i)perylene	**2100**	**15000**	**100000**	**36000 T**	**270 T**	1000 U	**35000**	--	--	**500**
Benzo(k)fluoranthene	--	**5900**	**42000**	**24000 T**	**220 T**	**49900**	**10000**	--	--	**140**
Chrysene	**1300**	**16000**	**120000**	**38000 T**	**230 T**	**82100**	**15000**	--	--	**230**
Dibenzo(a,h)anthracene	**390**	**2200**	**12000**	**9500 JT**	**59 T**	**21100**	**4000**	--	--	**68**
Fluoranthene	**1000**	**32000**	**340000**	**68000**	**250**	**53200**	**12000**	--	--	**290**
Fluorene	63 U	**2100**	**41000**	**3600**	19 U	**1500**	5000 U	--	--	50 U
Indeno(1,2,3-c,d)pyrene	**1400**	**13000**	**100000**	**31000 T**	**260 T**	**110000**	**21000**	--	--	**350**
LWG RA Total HPAH (Calculated U = 1/2)	**13000 T**	**170000 T**	**1500000 T**	**390000 JT**	**2300 T**	**920000 T**	**180000 T**	**220000 T**	**600000 T**	**3100 T**
LWG RA Total LPAH (Calculated U = 1/2)	**1000 T**	**23000 T**	**590000 T**	**76000 T**	**210 T**	**55000 T**	**17000 T**	**370000 T**	**390000 T**	**260 T**
Naphthalene	**180**	**1200**	**38000**	**7000**	**23**	**6100**	**1700**	--	--	50 U
Phenanthrene	**370**	**8300**	**320000**	**47000**	**51**	**13600**	**3400**	--	--	**100**
Pyrene	**1600**	**38000**	**420000**	**80000**	**280**	**145000**	**22000**	--	--	**370**
Semivolatile Organics (µg/kg)										
Carbazole	63 U	**590 J**	**8500**	**2800 T**	**6.5 T**	--	--	--	--	--
Dibenzofuran	63 U	**210**	**5400**	**560 T**	**4.9 T**	--	--	--	--	--
PCB Aroclors (µg/kg)										
Aroclor 1016	32 U	1.34 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1221	32 U	2.69 UJ	3.81 UJ	7.7 U	7.7 U	--	--	--	--	--
Aroclor 1232	32 U	2.25 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1242	32 U	1.37 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1248	32 U	1.75 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1254	32 U	0.816 U	3.81 UJ	**29**	3.8 U	--	--	--	--	--

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-13	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	MW-04-101	MW-04-57	RAA-PD01	RAA-PD02	SS-1
Sample Name:	GST-13SO-0-5-101012	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	981014-M4-01	951030-M4-01	RAA-PD01-051019	RAA-PD02-051019	981112-SS-01
Sample Date:	10/12/2010	10/29/2004	8/30/2004	10/14/2002	10/11/2002	10/14/1998	10/30/1995	10/19/2005	10/19/2005	11/12/1998
Depth Interval:	0 - 152.4 cm	0 - 22 cm	0 - 27 cm	0 - 15 cm	0 - 15 cm	45.72 - 60.96 cm	0 - 6.1 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 6.096 cm
Aroclor 1260	32 U	1.05 U	3.81 UJ	25 U	3.8 U	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	2.69 UJT	3.81 UJT	**53 T**	7.7 UT	--	--	200 UT	200 UT	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	**36**	**17.3 NJ**	**114 J**	7.7 U	0.64 U	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	16 U	0.365 U	**24.5 NJ**	200 U	9.2 U	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	16 U	**5.83 J**	0.345 UJ	7.7 U	0.38 U	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	**100**	**22.1 NJ**	**330 J**	9 U	**1.5**	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	16 U	**9.76 NJ**	**31.9 J**	7.7 U	1.2 U	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	**16 J**	**17.9 J**	**60.3 NJ**	12 U	1.1 U	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	8 U	0.357 U	0.255 UJ	3.9 U	0.19 U	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	8 U	**20.3 J**	**13.6 J**	42 U	0.19 U	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	8 U	0.764 U	**3.03 NJ**	3.9 U	0.19 U	--	--	--	--	--
Endrin ketone	16 U	0.314 U	0.224 UJ	20 U	0.71 U	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8 U	0.816 U	0.582 UJ	3.9 U	0.19 U	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**140 T**	**39.4 NJT**	**440 JT**	9 UT	**1.8 T**	--	--	**19 JT**	**130 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	**9.94 NJT**	**56.4 JNT**	200 UT	9.2 UT	--	--	10 UT	50 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	**24 JT**	**23.7 JT**	**60.5 NJT**	12 UT	1.1 UT	--	--	10 UT	50 UJT	--
LWG RA Total DDx (Calculated U = 1/2)	**180 JT**	**73.1 JNT**	**560 JNT**	200 UT	**7.8 T**	--	--	**29 JT**	**180 JT**	--
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	**42**	**940 J**	**14000 J**	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	**1700 J**	**17000 J**	--	--	--	--	--	--	--

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	3.5-12 soil	3.5-12 soil
System Location Code:	SS-10	SS-11	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	B-08	B-54
Sample Name:	981112-SS-10	981112-SS-11	981112-SS-02	981112-SS-03	981112-SS-04	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-08	981112-SS-09	950918-B8-04	2708-040608-014
Sample Date:	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	9/18/1995	6/8/2004
Depth Interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	289.56 - 304.8 cm	228.6 - 243.84 cm
Conventional Parameters (mg/kg)												
Cyanide, total	**41**	0.5 U	0.5 U	**0.58**	0.5 U	**1.3**	**0.58**	**13**	0.5 U	**56**	--	--
Metals (mg/kg)												
Zinc	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/kg)												
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--	--	50 U
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	50 U
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--	--	--	50 U
Trichloroethene (TCE)	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)												
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	**140**	50 U	50 U	**100**	**83**	**590**	50 U	**640**	50 U	**380**	**480**	3350 U
Acenaphthylene	**310**	50 U	**200**	**1900**	**500**	**11100**	**78**	**2800**	50 U	**190**	**4000**	3350 U
Anthracene	**360**	50 U	**80**	50 U	**250**	**2000**	50 U	**1300**	50 U	**1300**	**2800**	3350 U
Benzo(a)anthracene	**2600**	**61**	**790**	**4700**	**1300**	**21900**	**130**	**12800**	50 U	**3700**	**18000**	**15700**
Benzo(a)pyrene	50 U	**130**	**1500**	**14100**	**2900**	**69100**	**360**	**23700**	50 U	**3400**	**47000**	**22100**
Benzo(b)fluoranthene	**5800**	**140**	**1500**	**14200**	**3100**	**60900**	**370**	**25000**	50 U	**6600**	**40000**	**20900**
Benzo(g,h,i)perylene	**3100**	**150**	**1600**	**14400**	**3100**	**69900**	**550**	**22200**	50 U	**2500**	**58000**	**24200**
Benzo(k)fluoranthene	**1600**	50 U	**470**	**3500**	**880**	**17000**	**110**	**6900**	50 U	**1700**	**12000**	**11800**
Chrysene	**3500**	**66**	**930**	**6200**	**1700**	**29700**	**150**	**14300**	50 U	**4300**	**24000**	**20400**
Dibenzo(a,h)anthracene	**520**	50 U	**220**	**1500**	**490**	**9400**	**62**	**1900**	50 U	**500**	**6000**	3350 U
Fluoranthene	**5000**	**75**	**1200**	**3400**	**1400**	**16100**	**150**	**15000**	50 U	**10000**	**26000**	**56800**
Fluorene	**120**	50 U	50 U	**130**	**59**	**610**	50 U	**410**	50 U	**390**	**710**	3350 U
Indeno(1,2,3-c,d)pyrene	**2500**	**100**	**1200**	**10300**	**2400**	**47300**	**350**	**23700**	50 U	**2200**	**38000**	**16400**
LWG RA Total HPAH (Calculated U = 1/2)	**31000 T**	**870 T**	**11000 T**	**81000 T**	**19000 T**	**370000 T**	**2400 T**	**170000 T**	50 UT	**46000 T**	**320000 T**	**252000 T**
LWG RA Total LPAH (Calculated U = 1/2)	**3900 T**	50 UT	**640 T**	**4000 T**	**1700 T**	**24000 T**	**240 T**	**14000 T**	50 UT	**9800 T**	**17000 T**	**26600 T**
Naphthalene	**230**	50 U	**88**	**900**	**230**	**5000**	50 U	**1800**	50 U	**550**	**2300**	3350 U
Phenanthrene	**2700**	50 U	**220**	**970**	**610**	**4700**	**58**	**6900**	50 U	**7000**	**7200**	**18200**
Pyrene	**6800**	**99**	**1600**	**8500**	**2200**	**33200**	**200**	**24200**	50 U	**10800**	**52000**	**62100**
Semivolatile Organics (µg/kg)												
Carbazole	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)												
Aroclor 1016	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	3.5-12 soil	3.5-12 soil
System Location Code:	SS-10	SS-11	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	B-08	B-54
Sample Name:	981112-SS-10	981112-SS-11	981112-SS-02	981112-SS-03	981112-SS-04	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-08	981112-SS-09	950918-B8-04	2708-040608-014
Sample Date:	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	9/18/1995	6/8/2004
Depth Interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	289.56 - 304.8 cm	228.6 - 243.84 cm
Aroclor 1260	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	B-56	GP-04	GP-07	GS-01	GS-01	GS-02	GS-02	GS-03	GS-03	GS-10
Sample Name:	2708-040601-003	GP4-S-7.5	GP7-S-9.0	GS-01-S (4-6)	GS-01-S (9-11)	GS-02-S (4-6)	GS-02-S (9-11)	GS-03-S (4-6)	GS-03-S (9-11)	GS-10-S (4-6)
Sample Date:	6/1/2004	9/26/2002	10/2/2002	12/21/2006	12/21/2006	12/27/2006	12/27/2006	12/18/2006	12/18/2006	1/2/2007
Depth Interval:	335.28 - 365.76 cm	167.64 - 228.6 cm	213.36 - 274.32 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm
Conventional Parameters (mg/kg)										
Cyanide, total	0.379 U	--	--	**0.6 J**	**0.2 J**	**0.2 J**	**0.6**	**26.9 J**	**0.4 J**	**0.8 J**
Metals (mg/kg)										
Zinc	--	--	--	--	--	**72.7**	**69.9**	--	--	**107**
Volatile Organics (µg/kg)										
1,1-Dichloroethene	--	--	--	1.4 U	1.4 U	1.6 U	1.6 U	81 U	1.4 U	8600 U
1,2-Dichloroethene, cis-	--	15000 U	--	1.4 U	1.4 U	1.6 U	1.6 U	81 U	1.4 U	8600 U
1,2-Dichloroethene, trans-	--	--	--	1.4 U	1.4 U	1.6 U	1.6 U	81 U	1.4 U	8600 U
Benzene	50 U	15000 U	--	**0.31 J**	**0.17 J**	1.6 U	1.6 U	81 U	**0.2 J**	**28000**
Ethylbenzene	50 U	15000 U	--	**0.33 J**	1.4 U	1.6 U	1.6 U	**66 J**	**0.38 J**	**69000**
Naphthalene	--	**1500000 J**	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	1.4 U	1.4 U	1.6 U	1.6 U	**18 J**	1.4 U	**21000**
Toluene	50 U	15000 U	--	1.4 U	1.4 U	1.6 U	1.6 U	81 U	1.4 U	**3800 J**
Trichloroethene (TCE)	--	1200 U	--	1.4 U	1.4 U	1.6 U	1.6 U	81 U	1.4 U	8600 U
Vinyl chloride	--	--	--	1.4 U	1.4 U	1.6 U	1.6 U	81 U	1.4 U	8600 U
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	2.8 UT	2.7 UT	1.6 UT	1.6 UT	**58 JT**	**0.9 JT**	**65000 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)										
2-Methylnaphthalene	--	**82000**	**120**	**9.7**	**0.55 J**	4.9 U	**5.4**	**1300**	**5.4**	**1600000**
Acenaphthene	13.4 U	**120000**	**18**	**24**	5 U	**2.1 J**	**4.8 J**	**8800**	**14**	**1300000**
Acenaphthylene	13.4 U	**12000**	**490**	**11**	5 U	**1.4 J**	**2.3 J**	**540**	**1.1 J**	**21000**
Anthracene	13.4 U	**110000**	**380**	**43**	5 U	**6.2**	**12**	**9500**	**12**	**450000**
Benzo(a)anthracene	**23.1**	**72000**	**1400**	**88**	**0.46 J**	**8.7**	**13**	**9900**	**13**	**290000**
Benzo(a)pyrene	**35.1**	**78000**	**2100**	**100**	**0.53 J**	**8.7**	**15**	**12000**	**14**	**370000**
Benzo(b)fluoranthene	**31.4**	**45000**	**1300**	**90**	5 U	**6.2**	**11**	**8000**	**11**	**180000**
Benzo(g,h,i)perylene	**37**	**47000**	**2500**	**120**	**0.8 J**	**6.1**	**9.7**	**9800**	**14**	**180000**
Benzo(k)fluoranthene	**24.7**	**45000**	**1200**	**73**	5 U	**7.1**	**10**	**7100**	**11**	**140000**
Chrysene	**30.7**	**79000**	**1700**	**130**	**0.79 J**	**12**	**18**	**13000**	**20**	**380000**
Dibenzo(a,h)anthracene	13.4 U	**5700**	**270**	**9.5**	5 U	**0.81 J**	**1.2 J**	**1000**	5 U	**27000**
Fluoranthene	**41.7**	**250000**	**2500**	**320**	**1.6 J**	**28**	**45**	**39000**	**53**	**1400000**
Fluorene	13.4 U	**77000**	**3.2**	**31**	**0.35 J**	**4.1 J**	**8.9**	**7200**	**12**	**580000**
Indeno(1,2,3-c,d)pyrene	**25.5**	**48000**	**2100**	**97**	**0.54 J**	**5.6**	**9.1**	**8100**	**11**	**180000**
LWG RA Total HPAH (Calculated U = 1/2)	**320 T**	**960000 T**	**17000 T**	**1400 T**	**14 JT**	**120 JT**	**190 JT**	**150000 T**	**210 T**	**4500000 T**
LWG RA Total LPAH (Calculated U = 1/2)	**72.2 T**	**820000 T**	**1800 T**	**470 T**	**13 JT**	**62 JT**	**120 JT**	**85000 T**	**150 JT**	**12000000 T**
Naphthalene	13.4 U	--	**380**	**33**	5 U	**8.8**	**27**	**5500**	**22**	**5700000**
Phenanthrene	**38.7**	**420000**	**370**	**320**	**1.9 J**	**37**	**61**	**52000**	**79**	**2800000**
Pyrene	**69**	**290000**	**1800**	**370**	**1.8 J**	**38**	**58**	**44000**	**62**	**1400000**
Semivolatile Organics (µg/kg)										
Carbazole	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	--	**9200**	**14**	**6.5**	5 U	**0.75 J**	**1.3 J**	**860**	**2.1 J**	**78000**
PCB Aroclors (µg/kg)										
Aroclor 1016	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	--

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	B-56	GP-04	GP-07	GS-01	GS-01	GS-02	GS-02	GS-03	GS-03	GS-10
Sample Name:	2708-040601-003	GP4-S-7.5	GP7-S-9.0	GS-01-S (4-6)	GS-01-S (9-11)	GS-02-S (4-6)	GS-02-S (9-11)	GS-03-S (4-6)	GS-03-S (9-11)	GS-10-S (4-6)
Sample Date:	6/1/2004	9/26/2002	10/2/2002	12/21/2006	12/21/2006	12/27/2006	12/27/2006	12/18/2006	12/18/2006	1/2/2007
Depth Interval:	335.28 - 365.76 cm	167.64 - 228.6 cm	213.36 - 274.32 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm
Aroclor 1260	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	GS-10	GS-11	GS-11	GS-12	GS-12	MW-04-101	MW-04-101	P-03	P-04	P-05
Sample Name:	GS-10-S (9-11)	GS-11-S (4-6)	GS-11-S (9-11)A	GS-12-S (4-6)	GS-12-S (9-11)	981014-M4-02	981014-M4-03	5237-010820-152	5237-010810-79	5237-010813-91
Sample Date:	1/2/2007	1/5/2007	1/5/2007	1/10/2007	1/10/2007	10/14/1998	10/14/1998	8/20/2001	8/10/2001	8/13/2001
Depth Interval:	274.32 - 335.28 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	167.64 - 182.88 cm	304.8 - 320.04 cm	198.12 - 198.12 cm	304.8 - 304.8 cm	198.12 - 198.12 cm
Conventional Parameters (mg/kg)										
Cyanide, total	**0.4 J**	**2.2 J**	**0.06 J**	0.3 UJ	**0.09 J**	--	0.02 U	0.02 U	--	--
Metals (mg/kg)										
Zinc	**112**	--	--	**63.8**	**62.6**	--	--	**42.6**	--	--
Volatile Organics (µg/kg)										
1,1-Dichloroethene	1800 U	150 U	1.5 U	1.4 U	1.5 UJ	--	--	--	--	--
1,2-Dichloroethene, cis-	1800 U	150 U	1.5 U	1.4 U	1.5 UJ	--	--	--	--	--
1,2-Dichloroethene, trans-	1800 U	150 U	1.5 U	1.4 U	1.5 UJ	--	--	--	--	--
Benzene	**3600**	**270**	1.5 U	1.4 U	1.5 UJ	25 U	25 U	--	--	--
Ethylbenzene	**13000**	**4300**	**6.9**	1.4 U	1.5 UJ	25 U	25 U	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--
o-Xylene	**3800**	**1600**	**2.7**	1.4 U	1.5 UJ	--	--	--	--	--
Toluene	**470 J**	**45 J**	1.5 U	1.4 U	1.5 UJ	25 U	25 U	--	--	--
Trichloroethene (TCE)	1800 U	150 U	1.5 U	1.4 U	1.5 UJ	--	--	--	--	--
Vinyl chloride	1800 U	150 U	1.5 U	1.4 U	1.5 UJ	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	**11000 T**	**2100 T**	**4 JT**	1.4 UT	1.5 UJT	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)										
2-Methylnaphthalene	**31000**	**110000**	**10**	5 U	**9.6**	--	--	--	--	--
Acenaphthene	**50000**	**120000**	**8.9**	**1.3 J**	**140**	50 U	50 U	--	--	--
Acenaphthylene	**1500**	**5000**	**0.48 J**	**0.37 J**	**18**	50 U	50 U	--	--	--
Anthracene	**28000**	**84000**	**3.1 J**	**1.2 J**	**120**	50 U	50 U	--	--	--
Benzo(a)anthracene	**23000**	**59000**	**2.8 J**	**2.6 J**	**190**	50 U	**130**	--	--	--
Benzo(a)pyrene	**32000**	**54000**	**2.5 J**	**2.8 J**	**230**	**100**	**230**	--	--	--
Benzo(b)fluoranthene	**20000**	**29000**	**1.8 J**	**2.3 J**	**150**	**100**	**250**	--	--	--
Benzo(g,h,i)perylene	**25000**	**33000**	**2.2 J**	**2.7 J**	**190**	50 U	50 U	--	--	--
Benzo(k)fluoranthene	**16000**	**28000**	**1.6 J**	**1.8 J**	**130**	50 U	50 U	--	--	--
Chrysene	**30000**	**73000**	**3.5 J**	**3.5 J**	**250**	**57**	**160**	--	--	--
Dibenzo(a,h)anthracene	**2500**	**4400**	4.9 U	5 U	**21**	50 U	50 U	--	--	--
Fluoranthene	**90000**	**190000**	**8.7**	**6.9**	**570**	50 U	**210**	--	--	--
Fluorene	**26000**	**66000**	**3.6 J**	**0.84 J**	**91**	50 U	50 U	--	--	--
Indeno(1,2,3-c,d)pyrene	**22000**	**33000**	**2 J**	**2.2 J**	**160**	50 U	50 U	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	**360000 T**	**730000 T**	**39 JT**	**35 JT**	**2600 T**	**520 T**	**1500 T**	--	--	--
LWG RA Total LPAH (Calculated U = 1/2)	**400000 T**	**1100000 T**	**81 JT**	**16 JT**	**960 T**	50 UT	50 UT	--	--	--
Naphthalene	**91000**	**270000**	**35**	7.7 U	**23**	50 U	50 U	--	--	--
Phenanthrene	**170000**	**400000**	**20**	**6.4**	**560**	50 U	50 U	--	--	--
Pyrene	**99000**	**230000**	**11**	**7.8**	**690**	**110**	**460**	--	--	--
Semivolatile Organics (µg/kg)										
Carbazole	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	**3900**	**7700**	**0.71 J**	**0.36 J**	**17**	--	--	--	--	--
PCB Aroclors (µg/kg)										
Aroclor 1016	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	--

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	GS-10	GS-11	GS-11	GS-12	GS-12	MW-04-101	MW-04-101	P-03	P-04	P-05
Sample Name:	GS-10-S (9-11)	GS-11-S (4-6)	GS-11-S (9-11)A	GS-12-S (4-6)	GS-12-S (9-11)	981014-M4-02	981014-M4-03	5237-010820-152	5237-010810-79	5237-010813-91
Sample Date:	1/2/2007	1/5/2007	1/5/2007	1/10/2007	1/10/2007	10/14/1998	10/14/1998	8/20/2001	8/10/2001	8/13/2001
Depth Interval:	274.32 - 335.28 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	167.64 - 182.88 cm	304.8 - 320.04 cm	198.12 - 198.12 cm	304.8 - 304.8 cm	198.12 - 198.12 cm
Aroclor 1260	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	22 U	**37.4**	21.7 U
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	P-05	RAA-20	WLCGSG04RAA17	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS06	WLCGSJ06GS06
Sample Name:	5237-010813-92	RAA-20SD-0506	WLCGSG04RAA17SD0010	WLCGSJ06GS04S46	WLCGSJ06GS04S911	WLCGSJ06GS05S34	WLCGSJ06GS05S911	WLCGSJ06GS06S46	WLCGSJ06GS06S911
Sample Date:	8/13/2001	7/22/2004	7/22/2004	12/12/2006	12/12/2006	10/24/2006	10/25/2006	1/17/2007	1/17/2007
Depth Interval:	289.56 - 289.56 cm	152.4 - 182.88 cm	0 - 304.8 cm	121.9 - 182.9 cm	274.3 - 335.3 cm	91.44 - 121.9 cm	274.3 - 335.3 cm	121.9 - 182.9 cm	274.3 - 335.3 cm
Conventional Parameters (mg/kg)									
Cyanide, total	8780	--	0.14 J	0.3 J	2.1 J	10.7 J	0.3	1.4 T	0.8
Metals (mg/kg)									
Zinc	38.7	--	64.5	70.4	60.4	--	--	66.2 T	65.3
Volatile Organics (µg/kg)									
1,1-Dichloroethene	--	--	800 U	1.7 U	1.4 U	430 U	1.6 U	1.2 UT	1.6 U
1,2-Dichloroethene, cis-	100 U	--	800 U	1.7 U	1.4 U	430 U	1.6 U	1.2 UT	1.6 U
1,2-Dichloroethene, trans-	--	--	800 U	1.7 U	1.4 U	430 U	1.6 U	1.2 UT	1.6 U
Benzene	100 U	400	800 U	1.7 U	1.4 U	430 U	3.6	19 T	18
Ethylbenzene	1380	1300	1600	1.7 UJ	1.4 U	1900	88	26 T	49
Naphthalene	--	--	--	1.7 UJ	1.4 U	--	--	--	--
o-Xylene	--	700	330 J	1.7 UJ	1.4 U	1200	64	10 T	21
Toluene	150	100 J	800 U	1.7 U	1.4 U	430 U	2.7	1.6 T	1.5 J
Trichloroethene (TCE)	100 U	--	800 U	1.7 U	1.4 U	430 U	1.6 U	1.2 UT	1.6 U
Vinyl chloride	120 U	--	800 U	1.7 U	1.4 U	430 U	1.6 U	1.2 UT	1.6 U
LWG RA Total Xylene (Calculated U = 1/2)	--	1300 T	730 JT	3.4 UJT	2.8 UT	2100 T	110 T	17 T	36 T
Polycyclic Aromatic Hydrocarbons (µg/kg)									
2-Methylnaphthalene	553000	--	11000	5 U	5 U	16000	7300	10000 T	3400
Acenaphthene	463000	--	61000	4.3 J	0.28 J	62000	8000	15000 T	4300
Acenaphthylene	36000	--	3400	9.9	0.46 J	5700	890	960 T	470
Anthracene	322000	--	32000	9.4	0.62 J	44000	6400	8600 T	2900
Benzo(a)anthracene	207000	--	29000	160	3.2 J	58000	5300	9100 T	3500
Benzo(a)pyrene	205000	--	43000	170	3.5 J	77000	6200	12000 T	4400
Benzo(b)fluoranthene	103000	--	37000	130	3.2 J	48000	3400	7900 T	2800
Benzo(g,h,i)perylene	149000	--	38000	130	5 U	53000	4800	8600 T	2900
Benzo(k)fluoranthene	103000	--	10000	120	2.4 J	40000	3500	5400 T	2300
Chrysene	245000	--	35000	210	4.3 J	69000	6900	11000 T	4300
Dibenzo(a,h)anthracene	24200	--	4100	16	5 U	6300	520	1000 T	360
Fluoranthene	655000	--	120000	560	11	190000	20000	31000 T	11000
Fluorene	307000	--	20000	5.9	0.41 J	39000	5500	8800 T	2700
Indeno(1,2,3-c,d)pyrene	83200	--	31000	110	5 U	51000	4300	7900 T	2900
LWG RA Total HPAH (Calculated U = 1/2)	2550000 T	--	490000 T	2300 T	49 JT	810000 T	79000 T	130000 T	48000 T
LWG RA Total LPAH (Calculated U = 1/2)	3700000 T	--	370000 T	50 JT	6.8 JT	430000 T	72000 T	110000 T	34000 T
Naphthalene	905000	--	96000	--	--	15000	4100	10000 T	4400
Phenanthrene	1120000	--	150000	18	5 U	250000	40000	53000 T	16000
Pyrene	772000	--	140000	660	14	220000	24000	38000 T	14000
Semivolatile Organics (µg/kg)									
Carbazole	68700	--	--	--	--	--	--	--	--
Dibenzofuran	40000	--	1800	5 U	5 U	6700	860	1700 T	440
PCB Aroclors (µg/kg)									
Aroclor 1016	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	P-05	RAA-20	WLCGSG04RAA17	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS06	WLCGSJ06GS06
Sample Name:	5237-010813-92	RAA-20SD-0506	WLCGSG04RAA17SD0010	WLCGSJ06GS04S46	WLCGSJ06GS04S911	WLCGSJ06GS05S34	WLCGSJ06GS05S911	WLCGSJ06GS06S46	WLCGSJ06GS06S911
Sample Date:	8/13/2001	7/22/2004	7/22/2004	12/12/2006	12/12/2006	10/24/2006	10/25/2006	1/17/2007	1/17/2007
Depth Interval:	289.56 - 289.56 cm	152.4 - 182.88 cm	0 - 304.8 cm	121.9 - 182.9 cm	274.3 - 335.3 cm	91.44 - 121.9 cm	274.3 - 335.3 cm	121.9 - 182.9 cm	274.3 - 335.3 cm
Aroclor 1260	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)									
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)									
Diesel Range Hydrocarbons	**14000**	--	**3400**	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	**3600**	--	--	--	--	--	--

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS09	WLCGSJ06GS09
Sample Name:	WLCGSJ06GS07S46	WLCGSJ06GS07S911	WLCGSJ06GS08S34	WLCGSJ06GS08S89	WLCGSJ06GS09S46	WLCGSJ06GS09S911
Sample Date:	10/16/2006	10/16/2006	10/25/2006	10/25/2006	10/5/2006	10/9/2006
Depth Interval:	121.9 - 182.9 cm	274.3 - 335.3 cm	91.44 - 121.9 cm	243.8 - 274.3 cm	121.9 - 182.9 cm	274.3 - 335.3 cm
Conventional Parameters (mg/kg)						
Cyanide, total	**4.7**	**2.2**	**0.34**	**0.21**	0.2 UJ	**1.1**
Metals (mg/kg)						
Zinc	--	--	**66.9**	**66.1**	--	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	2300 U	400 U	1.2 U	1.5 U	69 U	58 U
1,2-Dichloroethene, cis-	2300 U	400 U	1.2 U	1.5 U	69 U	58 U
1,2-Dichloroethene, trans-	2300 U	400 U	1.2 U	1.5 U	69 U	58 U
Benzene	**3000**	**150 J**	1.2 U	**3.6**	69 U	**150**
Ethylbenzene	**14000**	**130 J**	1.2 U	**17**	**56 J**	**800**
Naphthalene	--	--	--	--	--	--
o-Xylene	**9000**	**220 J**	1.2 U	**8.9**	**30 J**	**340**
Toluene	**1200 J**	400 U	**0.14 J**	**0.6 J**	69 U	**20 J**
Trichloroethene (TCE)	2300 U	400 U	1.2 U	1.5 U	69 U	58 U
Vinyl chloride	2300 U	400 U	1.2 U	1.5 U	69 U	58 U
LWG RA Total Xylene (Calculated U = 1/2)	**25000 T**	**490 JT**	2.4 UT	**23 T**	**65 JT**	**490 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	**1400000**	**49000**	**0.53 J**	**200**	**21000**	**35000**
Acenaphthene	**550000**	**32000**	**12**	**170**	**31000**	**50000**
Acenaphthylene	**42000**	**110000**	**1.2 J**	**2.1 J**	**2000**	**2400**
Anthracene	**490000**	**99000**	**5.8**	**17**	**17000**	**25000**
Benzo(a)anthracene	**300000**	**68000**	**20**	**12**	**12000**	**17000**
Benzo(a)pyrene	**290000**	**85000**	**26**	**15**	**15000**	**22000**
Benzo(b)fluoranthene	**160000**	**49000**	**23**	**9.3**	**8700**	**12000**
Benzo(g,h,i)perylene	**170000**	**58000**	**25**	**9.3**	**10000**	**14000**
Benzo(k)fluoranthene	**150000**	**48000**	**17**	**7.6**	**8400**	**12000**
Chrysene	**350000**	**83000**	**32**	**15**	**15000**	**22000**
Dibenzo(a,h)anthracene	**20000**	**6000**	**3.4 J**	**1.1 J**	**1000**	**1500**
Fluoranthene	**920000**	**260000**	**44**	**52**	**44000**	**66000**
Fluorene	**390000**	**67000**	**12**	**45**	**15000**	**24000**
Indeno(1,2,3-c,d)pyrene	**160000**	**54000**	**23**	**9.5**	**9600**	**13000**
LWG RA Total HPAH (Calculated U = 1/2)	**3700000 T**	**990000 T**	**280 JT**	**190 JT**	**170000 T**	**250000 T**
LWG RA Total LPAH (Calculated U = 1/2)	**7700000 T**	**970000 T**	**60 JT**	**1400 JT**	**180000 T**	**310000 T**
Naphthalene	**2500000**	**150000**	4.9 U	**830**	**5000**	**43000**
Phenanthrene	**2300000**	**460000**	**26**	**140**	**85000**	**130000**
Pyrene	**1200000**	**280000**	**65**	**57**	**49000**	**74000**
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	--
Dibenzofuran	**64000**	**8600**	**3.2 J**	**8**	**2400**	**3700**
PCB Aroclors (µg/kg)						
Aroclor 1016	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS09	WLCGSJ06GS09
Sample Name:	WLCGSJ06GS07S46	WLCGSJ06GS07S911	WLCGSJ06GS08S34	WLCGSJ06GS08S89	WLCGSJ06GS09S46	WLCGSJ06GS09S911
Sample Date:	10/16/2006	10/16/2006	10/25/2006	10/25/2006	10/5/2006	10/9/2006
Depth Interval:	121.9 - 182.9 cm	274.3 - 335.3 cm	91.44 - 121.9 cm	243.8 - 274.3 cm	121.9 - 182.9 cm	274.3 - 335.3 cm
Aroclor 1260	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-27
Existing Data Screening Table - Riverbank Soils (0-12 foot) Human Health

Notes:

	Detected concentration is greater than 1 screening level
	Detected concentration is greater than 2 screening levels
	Detected concentration is greater than 3 screening levels
	Detected concentration is greater than 4 screening levels
	Detected concentration is greater than 5 screening levels
	Detected concentration is greater than 6 screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation
-- = Results not reported or not applicable
N = Normal Field Sample

Acronyms:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low molecular weight polycyclic aromatic hydrocarbon
LWG = Lower Willamette Group
MQ = mean quotient
NA = not applicable
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyls
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	B-29	B-31	B-53	B-54	B-56	GS-04-A-PG	GSM-07	GSM-08	GSM-14
Sample Name:	950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013	2708-040601-001	LWG2-PG-GS4A	GSM-07SO-0-5-100927	GSM-08SO-0-5-100928	GSM-14SO-0-5-101015
Sample Date:	9/22/1995	9/25/1995	6/7/2004	6/8/2004	6/1/2004	12/1/2005	9/27/2010	9/28/2010	10/15/2010
Depth Interval:	0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm	76.2 - 106.68 cm	0 - 26 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Conventional Parameters (mg/kg)									
Cyanide, total	--	**0.59**	--	--	0.435 U	**2.4 J**	**0.274**	0.124 U	**0.286**
Metals (mg/kg)									
Zinc	--	--	--	--	--	**113**	**158 J**	**85 J**	**77**
Volatile Organics (µg/kg)									
1,1-Dichloroethene	--	--	--	--	--	0.58 U	1.2 U	1.5 U	1 U
1,2-Dichloroethene, cis-	--	--	--	--	--	0.44 U	1.2 U	1.5 U	1 U
1,2-Dichloroethene, trans-	--	--	--	--	--	1.4 U	1.2 U	1.5 U	1 U
Benzene	--	300 U	50 U	50 U	50 U	**16**	1.2 U	1.5 U	1 U
Ethylbenzene	--	300 U	50 U	50 U	50 U	**220**	1.2 U	1.5 U	1 U
Naphthalene	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	**170**	1.2 U	1.5 U	1 U
Toluene	--	300 U	50 U	50 U	50 U	11 U	1.2 U	1.5 U	1 U
Trichloroethene (TCE)	--	--	--	--	--	0.44 U	1.2 U	1.5 U	1 U
Vinyl chloride	--	--	--	--	--	0.6 U	1.2 U	1.5 U	1 U
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--	**260 T**	1.2 UT	1.5 UT	1 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)									
2-Methylnaphthalene	--	--	--	--	--	**22000**	62 U	**140**	60 U
Acenaphthene	**400**	**110**	670 U	168 U	13.4 U	**59000**	62 U	**100**	60 U
Acenaphthylene	**7300**	**1300**	**745**	168 U	13.4 U	**5400**	62 U	63 U	**62**
Anthracene	**3300**	**590**	**996**	168 U	13.4 U	**37000**	62 U	**82**	60 U
Benzo(a)anthracene	**10500**	**2100**	**4210**	**240**	13.4 U	**52000**	**190**	**89**	**100**
Benzo(a)pyrene	**32500**	**4800**	**6820**	**323**	13.4 U	**85000**	**350**	**100**	**270**
Benzo(b)fluoranthene	**31700**	**5400**	**4970**	**303**	13.4 U	**48000**	--	--	--
Benzo(g,h,i)perylene	**41800**	**6800**	**5480**	**306**	**14**	**65000**	**460**	**87**	**170**
Benzo(k)fluoranthene	**11600**	**1800**	**4210**	**211**	13.4 U	**46000**	--	--	--
Chrysene	**19300**	**3000**	**5320**	**330**	13.4 U	**59000**	**300**	**110**	**150**
Dibenzo(a,h)anthracene	**4800**	**980**	**1040**	168 U	13.4 U	**6100**	62 U	63 U	60 U
Fluoranthene	**9400**	**1600**	**6430**	**370**	13.4 U	**160000**	**290**	**170**	**130**
Fluorene	**470**	**58**	670 U	168 U	13.4 U	**30000**	62 U	**67**	60 U
Indeno(1,2,3-c,d)pyrene	**28400**	**4900**	**4010**	**233**	13.4 U	**63000**	**290**	63 U	**140**
LWG RA Total HPAH (Calculated U = 1/2)	**210000 T**	**35000 T**	**52000 T**	**2900 T**	**74 T**	**790000 T**	**2800 T**	**1000 T**	**1500 T**
LWG RA Total LPAH (Calculated U = 1/2)	**17000 T**	**3100 T**	**5400 T**	**710 T**	13.4 UT	**350000 T**	**510 T**	**1100 T**	**240 T**
Naphthalene	**2400**	**300**	670 U	168 U	13.4 U	**15000**	**160**	**220**	60 U
Phenanthrene	**3400**	**710**	**2690**	**290**	13.4 U	**180000**	**200**	**410**	60 U
Pyrene	**22800**	**3700**	**9700**	**454**	13.4 U	**210000**	**490**	**260**	**190**
Semivolatile Organics (µg/kg)									
Carbazole	--	--	--	--	--	**650**	62 U	63 U	60 U
Dibenzofuran	--	--	--	--	--	**3600**	62 U	63 U	60 U
PCB Aroclors (µg/kg)									
Aroclor 1016	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1221	--	--	--	--	--	--	33 U	30 U	31 UJ
Aroclor 1232	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1242	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1248	--	--	--	--	--	--	33 U	30 U	31 U
Aroclor 1254	--	--	--	--	--	--	33 U	30 U	31 U

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	B-29	B-31	B-53	B-54	B-56	GS-04-A-PG	GSM-07	GSM-08	GSM-14
Sample Name:	950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013	2708-040601-001	LWG2-PG-GS4A	GSM-07SO-0-5-100927	GSM-08SO-0-5-100928	GSM-14SO-0-5-101015
Sample Date:	9/22/1995	9/25/1995	6/7/2004	6/8/2004	6/1/2004	12/1/2005	9/27/2010	9/28/2010	10/15/2010
Depth Interval:	0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm	76.2 - 106.68 cm	0 - 26 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Aroclor 1260	--	--	--	--	--	--	33 U	30 U	31 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	33 UT	30 UT	31 UJT
Pesticides (µg/kg)									
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	3.3 U	3.1 U	3.2 U
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	3.3 U	3.1 U	3.2 U
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	**5.6 J**	3.1 UJ	3.2 U
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.6 U	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.6 U	1.6 U	1.6 U
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	1.6 U	1.6 U	1.6 UJ
Endrin ketone	--	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	1.6 UJ	1.6 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	3.3 UJT	3.1 UJT	3.2 UT
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	3.3 UT	3.1 UT	3.2 UT
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	**7.3 JT**	3.1 UJT	3.2 UT
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	**14 JT**	3.1 UJT	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)									
Diesel Range Hydrocarbons	--	--	--	--	--	**10000 J**	**42**	6.3 U	6 U
Residual Range Hydrocarbons	--	--	--	--	--	**13000 J**	--	--	--

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-01	GST-02	GST-03	GST-04	GST-05	GST-06	GST-09	GST-11
Sample Name:	GST-01SO-0-5-101001	GST-02SO-0-5-101004	GST-03SO-0-5-101005	GST-04SO-0-5-101006	GST-05SO-0-5-101005	GST-06SO-0-5-101007	GST-09SO-0-5-101008	GST-11SO-0-5-101011
Sample Date:	10/1/2010	10/4/2010	10/5/2010	10/6/2010	10/5/2010	10/7/2010	10/8/2010	10/11/2010
Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Conventional Parameters (mg/kg)								
Cyanide, total	**0.341**	**0.222**	**3.57**	**5.76 J**	**1.37 J**	**1.46 J**	0.11 U	0.105 U
Metals (mg/kg)								
Zinc	**96 J**	**78 J**	**103 J**	**102**	**108**	**232**	**90**	**51**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	--
1,2-Dichloroethene, cis-	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
1,2-Dichloroethene, trans-	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
Benzene	1.1 U	1.2 U	**44**	**2.2**	1.1 U	1.1 U	1 U	0.9 U
Ethylbenzene	1.1 U	1.2 U	**34**	1 U	1.1 U	1.1 U	1 U	0.9 U
Naphthalene	--	--	--	--	--	--	--	--
o-Xylene	1.1 U	1.2 U	**40**	1 U	1.1 U	1.1 U	1 U	0.9 U
Toluene	1.1 U	1.2 U	**30**	1 U	1.1 U	1.1 U	1 U	0.9 U
Trichloroethene (TCE)	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
Vinyl chloride	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
LWG RA Total Xylene (Calculated U = 1/2)	1.1 UT	1.2 UT	**95 T**	1 UT	1.1 UT	1.1 UT	1 UT	0.9 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	60 U	65 U	**65000**	**480**	**1900**	**400**	**120**	59 U
Acenaphthene	60 U	65 U	**33000**	310 U	**1300**	**110**	61 U	59 U
Acenaphthylene	60 U	65 U	**100000**	**2000**	**6200**	**920**	**340**	59 U
Anthracene	60 U	65 U	**120000**	**910**	**4300**	**450**	**300**	59 U
Benzo(a)anthracene	60 U	**93**	**310000**	**3600**	**15000**	**2800**	**2000 J**	59 U
Benzo(a)pyrene	60 U	**150**	**410000**	**10000**	**43000**	**5500**	**3700 J**	**66**
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	60 U	**130**	**340000**	**13000 J**	**52000**	**7100**	**4700 J**	**94**
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	60 U	**120**	**400000**	**6000**	**24000**	**4800**	**2400 J**	59 U
Dibenzo(a,h)anthracene	60 U	65 U	**100000**	**2300**	**9200**	**1300**	**890**	59 U
Fluoranthene	60 U	**140**	**610000**	**3700**	**19000**	**2800**	**3400 J**	59 U
Fluorene	60 U	65 U	**79000**	310 U	**1400**	**96**	**89**	59 U
Indeno(1,2,3-c,d)pyrene	60 U	**91**	**230000**	**8300**	**34000**	**4000**	**3100**	59 U
LWG RA Total HPAH (Calculated U = 1/2)	60 UT	**1100 T**	**3800000 T**	**64000 JT**	**280000 T**	**44000 T**	**30000 JT**	**450 JT**
LWG RA Total LPAH (Calculated U = 1/2)	60 UT	**300 T**	**1400000 T**	**8500 T**	**35000 T**	**4700 T**	**2600 JT**	59 UT
Naphthalene	60 U	65 U	**220000**	**1800**	**6700**	**1600**	**400**	59 U
Phenanthrene	60 U	**110**	**760000**	**3000**	**13000**	**1100**	**1300 J**	59 U
Pyrene	60 U	**190**	**1000000**	**5300**	**42000**	**7200**	**6400**	**63 J**
Semivolatile Organics (µg/kg)								
Carbazole	60 U	65 U	**25000**	310 U	**330**	**84**	**87**	59 U
Dibenzofuran	60 U	65 U	**8600**	310 U	**240**	64 U	61 U	59 U
PCB Aroclors (µg/kg)								
Aroclor 1016	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1221	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1232	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1242	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1248	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1254	32 U	31 U	**58**	32 U	32 U	31 U	31 U	31 U

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-01	GST-02	GST-03	GST-04	GST-05	GST-06	GST-09	GST-11
Sample Name:	GST-01SO-0-5-101001	GST-02SO-0-5-101004	GST-03SO-0-5-101005	GST-04SO-0-5-101006	GST-05SO-0-5-101005	GST-06SO-0-5-101007	GST-09SO-0-5-101008	GST-11SO-0-5-101011
Sample Date:	10/1/2010	10/4/2010	10/5/2010	10/6/2010	10/5/2010	10/7/2010	10/8/2010	10/11/2010
Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Aroclor 1260	32 U	31 U	32 U	32 U	32 U	31 U	31 U	31 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	31 UT	**150 T**	32 UT	32 UT	31 UT	31 UT	31 UT
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
2,4'-DDE (o,p'-DDE)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
2,4'-DDT (o,p'-DDT)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDD (p,p'-DDD)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDE (p,p'-DDE)	3.2 U	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDT (p,p'-DDT)	3.2 U	3.1 U	50 U	16 U	16 U	16 U	16 U	**7.8**
alpha-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
beta-Hexachlorocyclohexane (BHC)	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
delta-Hexachlorocyclohexane (BHC)	1.6 UJ	1.6 UJ	16 UJ	8 U	7.9 U	7.9 U	7.9 U	1.5 U
Endrin ketone	3.2 U	3.1 U	**84 J**	16 U	16 U	16 U	16 U	3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
LWG RA Sum DDD (Calculated U = 1/2)	3.2 UT	3.1 UT	32 UT	16 UT	16 UT	16 UT	16 UT	3 UT
LWG RA Sum DDE (Calculated U = 1/2)	3.2 UT	3.1 UT	32 UT	16 UT	16 UT	16 UT	16 UT	3 UT
LWG RA Sum DDT (Calculated U = 1/2)	3.2 UT	3.1 UT	50 UT	16 UT	16 UT	16 UT	16 UT	**9.3 T**
LWG RA Total DDx (Calculated U = 1/2)	3.2 UT	3.1 UT	50 UT	16 UT	16 UT	16 UT	16 UT	**15 T**
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	6 U	5.9 U	**6000**	**270**	**570**	**57**	27 U	5.3 U
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-13	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	MW-04-101	MW-04-57	RAA-PD01	RAA-PD02	SS-1
Sample Name:	GST-13SO-0-5-101012	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	981014-M4-01	951030-M4-01	RAA-PD01-051019	RAA-PD02-051019	981112-SS-01
Sample Date:	10/12/2010	10/29/2004	8/30/2004	10/14/2002	10/11/2002	10/14/1998	10/30/1995	10/19/2005	10/19/2005	11/12/1998
Depth Interval:	0 - 152.4 cm	0 - 22 cm	0 - 27 cm	0 - 15 cm	0 - 15 cm	45.72 - 60.96 cm	0 - 6.1 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 6.096 cm
Conventional Parameters (mg/kg)										
Cyanide, total	**2.31**	--	--	--	--	--	**0.8**	--	--	**0.68**
Metals (mg/kg)										
Zinc	**75**	**127**	**183**	**81**	**65**	--	--	--	--	--
Volatile Organics (µg/kg)										
1,1-Dichloroethene	--	0.13 U	0.17 U	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	1 U	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	1 U	0.3 U	0.38 U	--	--	--	--	--	--	--
Benzene	1 U	**1.4**	**3.8**	--	--	25 U	--	--	--	--
Ethylbenzene	1 U	**0.25 J**	**7.1**	--	--	25 U	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--
o-Xylene	1 U	**0.38 J**	**5.7**	--	--	--	--	--	--	--
Toluene	1 U	0.24 U	**4.5**	--	--	25 U	--	--	--	--
Trichloroethene (TCE)	1 U	0.096 U	0.13 U	--	--	--	--	--	--	--
Vinyl chloride	1 U	0.14 U	0.17 U	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	1 UT	**0.89 JT**	**11 T**	--	--	--	--	**3300 T**	**1500 JT**	--
Polycyclic Aromatic Hydrocarbons (µg/kg)										
2-Methylnaphthalene	**70**	**250**	**17000**	**2200**	19 U	--	--	--	--	--
Acenaphthene	63 U	**3300**	**89000**	**3600**	19 U	**1100**	5000 U	--	--	50 U
Acenaphthylene	**190**	**1400**	**11000**	**5000**	**71**	**25100**	**4400**	--	--	**64**
Anthracene	**160**	**6700**	**78000**	**8000**	**33**	**7900**	**2600**	--	--	50 U
Benzo(a)anthracene	**820**	**12000**	**110000**	**29000 T**	**140 T**	**67800**	**10000**	--	--	**210**
Benzo(a)pyrene	**2200**	**17000**	**140000**	**41000 T**	**320 T**	**183000**	**28000**	--	--	**440**
Benzo(b)fluoranthene	--	**16000**	**130000**	**31000 T**	**250 T**	**209000**	**26000**	--	--	**460**
Benzo(g,h,i)perylene	**2100**	**15000**	**100000**	**36000 T**	**270 T**	1000 U	**35000**	--	--	**500**
Benzo(k)fluoranthene	--	**5900**	**42000**	**24000 T**	**220 T**	**49900**	**10000**	--	--	**140**
Chrysene	**1300**	**16000**	**120000**	**38000 T**	**230 T**	**82100**	**15000**	--	--	**230**
Dibenzo(a,h)anthracene	**390**	**2200**	**12000**	**9500 JT**	**59 T**	**21100**	**4000**	--	--	**68**
Fluoranthene	**1000**	**32000**	**340000**	**68000**	**250**	**53200**	**12000**	--	--	**290**
Fluorene	63 U	**2100**	**41000**	**3600**	19 U	**1500**	5000 U	--	--	50 U
Indeno(1,2,3-c,d)pyrene	**1400**	**13000**	**100000**	**31000 T**	**260 T**	**110000**	**21000**	--	--	**350**
LWG RA Total HPAH (Calculated U = 1/2)	**13000 T**	**170000 T**	**1500000 T**	**390000 JT**	**2300 T**	**920000 T**	**180000 T**	**220000 T**	**600000 T**	**3100 T**
LWG RA Total LPAH (Calculated U = 1/2)	**1000 T**	**23000 T**	**590000 T**	**76000 T**	**210 T**	**55000 T**	**17000 T**	**370000 T**	**390000 T**	**260 T**
Naphthalene	**180**	**1200**	**38000**	**7000**	**23**	**6100**	**1700**	--	--	50 U
Phenanthrene	**370**	**8300**	**320000**	**47000**	**51**	**13600**	**3400**	--	--	**100**
Pyrene	**1600**	**38000**	**420000**	**80000**	**280**	**145000**	**22000**	--	--	**370**
Semivolatile Organics (µg/kg)										
Carbazole	63 U	**590 J**	**8500**	**2800 T**	**6.5 T**	--	--	--	--	--
Dibenzofuran	63 U	**210**	**5400**	**560 T**	**4.9 T**	--	--	--	--	--
PCB Aroclors (µg/kg)										
Aroclor 1016	32 U	1.34 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1221	32 U	2.69 UJ	3.81 UJ	7.7 U	7.7 U	--	--	--	--	--
Aroclor 1232	32 U	2.25 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1242	32 U	1.37 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1248	32 U	1.75 U	3.81 UJ	3.9 U	3.8 U	--	--	--	--	--
Aroclor 1254	32 U	0.816 U	3.81 UJ	**29**	3.8 U	--	--	--	--	--

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
System Location Code:	GST-13	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	MW-04-101	MW-04-57	RAA-PD01	RAA-PD02	SS-1
Sample Name:	GST-13SO-0-5-101012	LW2-G274	LW2-G283	LWG0106B025SDS015C00	LWG0106B029SDS015C00	981014-M4-01	951030-M4-01	RAA-PD01-051019	RAA-PD02-051019	981112-SS-01
Sample Date:	10/12/2010	10/29/2004	8/30/2004	10/14/2002	10/11/2002	10/14/1998	10/30/1995	10/19/2005	10/19/2005	11/12/1998
Depth Interval:	0 - 152.4 cm	0 - 22 cm	0 - 27 cm	0 - 15 cm	0 - 15 cm	45.72 - 60.96 cm	0 - 6.1 cm	0 - 9.14 cm	0 - 9.14 cm	0 - 6.096 cm
Aroclor 1260	32 U	1.05 U	3.81 UJ	25 U	3.8 U	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	32 UT	2.69 UJT	3.81 UJT	**53 T**	7.7 UT	--	--	200 UT	200 UT	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	**36**	**17.3 NJ**	**114 J**	7.7 U	0.64 U	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	16 U	0.365 U	**24.5 NJ**	200 U	9.2 U	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	16 U	**5.83 J**	0.345 UJ	7.7 U	0.38 U	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	**100**	**22.1 NJ**	**330 J**	9 U	**1.5**	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	16 U	**9.76 NJ**	**31.9 J**	7.7 U	1.2 U	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	**16 J**	**17.9 J**	**60.3 NJ**	12 U	1.1 U	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	8 U	0.357 U	0.255 UJ	3.9 U	0.19 U	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	8 U	**20.3 J**	**13.6 J**	42 U	0.19 U	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	8 U	0.764 U	**3.03 NJ**	3.9 U	0.19 U	--	--	--	--	--
Endrin ketone	16 U	0.314 U	0.224 UJ	20 U	0.71 U	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	8 U	0.816 U	0.582 UJ	3.9 U	0.19 U	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**140 T**	**39.4 NJT**	**440 JT**	9 UT	**1.8 T**	--	--	**19 JT**	**130 JT**	--
LWG RA Sum DDE (Calculated U = 1/2)	16 UT	**9.94 NJT**	**56.4 JNT**	200 UT	9.2 UT	--	--	10 UT	50 UT	--
LWG RA Sum DDT (Calculated U = 1/2)	**24 JT**	**23.7 JT**	**60.5 NJT**	12 UT	1.1 UT	--	--	10 UT	50 UJT	--
LWG RA Total DDx (Calculated U = 1/2)	**180 JT**	**73.1 JNT**	**560 JNT**	200 UT	**7.8 T**	--	--	**29 JT**	**180 JT**	--
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	**42**	**940 J**	**14000 J**	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	**1700 J**	**17000 J**	--	--	--	--	--	--	--

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	3.5-12 soil	3.5-12 soil
System Location Code:	SS-10	SS-11	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	B-08	B-54
Sample Name:	981112-SS-10	981112-SS-11	981112-SS-02	981112-SS-03	981112-SS-04	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-08	981112-SS-09	950918-B8-04	2708-040608-014
Sample Date:	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	9/18/1995	6/8/2004
Depth Interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	289.56 - 304.8 cm	228.6 - 243.84 cm
Conventional Parameters (mg/kg)												
Cyanide, total	**41**	0.5 U	0.5 U	**0.58**	0.5 U	**1.3**	**0.58**	**13**	0.5 U	**56**	--	--
Metals (mg/kg)												
Zinc	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/kg)												
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	--	--	--	--	--	--	--	--	--	--	--	50 U
Ethylbenzene	--	--	--	--	--	--	--	--	--	--	--	50 U
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	--	--	--	--	--	--	--	--	--	--	--	50 U
Trichloroethene (TCE)	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)												
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	**140**	50 U	50 U	**100**	**83**	**590**	50 U	**640**	50 U	**380**	**480**	3350 U
Acenaphthylene	**310**	50 U	**200**	**1900**	**500**	**11100**	**78**	**2800**	50 U	**190**	**4000**	3350 U
Anthracene	**360**	50 U	**80**	50 U	**250**	**2000**	50 U	**1300**	50 U	**1300**	**2800**	3350 U
Benzo(a)anthracene	**2600**	**61**	**790**	**4700**	**1300**	**21900**	**130**	**12800**	50 U	**3700**	**18000**	**15700**
Benzo(a)pyrene	50 U	**130**	**1500**	**14100**	**2900**	**69100**	**360**	**23700**	50 U	**3400**	**47000**	**22100**
Benzo(b)fluoranthene	**5800**	**140**	**1500**	**14200**	**3100**	**60900**	**370**	**25000**	50 U	**6600**	**40000**	**20900**
Benzo(g,h,i)perylene	**3100**	**150**	**1600**	**14400**	**3100**	**69900**	**550**	**22200**	50 U	**2500**	**58000**	**24200**
Benzo(k)fluoranthene	**1600**	50 U	**470**	**3500**	**880**	**17000**	**110**	**6900**	50 U	**1700**	**12000**	**11800**
Chrysene	**3500**	**66**	**930**	**6200**	**1700**	**29700**	**150**	**14300**	50 U	**4300**	**24000**	**20400**
Dibenzo(a,h)anthracene	**520**	50 U	**220**	**1500**	**490**	**9400**	**62**	**1900**	50 U	**500**	**6000**	3350 U
Fluoranthene	**5000**	**75**	**1200**	**3400**	**1400**	**16100**	**150**	**15000**	50 U	**10000**	**26000**	**56800**
Fluorene	**120**	50 U	50 U	**130**	**59**	**610**	50 U	**410**	50 U	**390**	**710**	3350 U
Indeno(1,2,3-c,d)pyrene	**2500**	**100**	**1200**	**10300**	**2400**	**47300**	**350**	**23700**	50 U	**2200**	**38000**	**16400**
LWG RA Total HPAH (Calculated U = 1/2)	**31000 T**	**870 T**	**11000 T**	**81000 T**	**19000 T**	**370000 T**	**2400 T**	**170000 T**	50 UT	**46000 T**	**320000 T**	**252000 T**
LWG RA Total LPAH (Calculated U = 1/2)	**3900 T**	50 UT	**640 T**	**4000 T**	**1700 T**	**24000 T**	**240 T**	**14000 T**	50 UT	**9800 T**	**17000 T**	**26600 T**
Naphthalene	**230**	50 U	**88**	**900**	**230**	**5000**	50 U	**1800**	50 U	**550**	**2300**	3350 U
Phenanthrene	**2700**	50 U	**220**	**970**	**610**	**4700**	**58**	**6900**	50 U	**7000**	**7200**	**18200**
Pyrene	**6800**	**99**	**1600**	**8500**	**2200**	**33200**	**200**	**24200**	50 U	**10800**	**52000**	**62100**
Semivolatile Organics (µg/kg)												
Carbazole	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)												
Aroclor 1016	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	3.5-12 soil	3.5-12 soil
System Location Code:	SS-10	SS-11	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	B-08	B-54
Sample Name:	981112-SS-10	981112-SS-11	981112-SS-02	981112-SS-03	981112-SS-04	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-08	981112-SS-09	950918-B8-04	2708-040608-014
Sample Date:	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	9/18/1995	6/8/2004
Depth Interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	289.56 - 304.8 cm	228.6 - 243.84 cm
Aroclor 1260	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)												
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)												
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	B-56	GP-04	GP-07	GS-01	GS-01	GS-02	GS-02	GS-03	GS-03	GS-10
Sample Name:	2708-040601-003	GP4-S-7.5	GP7-S-9.0	GS-01-S (4-6)	GS-01-S (9-11)	GS-02-S (4-6)	GS-02-S (9-11)	GS-03-S (4-6)	GS-03-S (9-11)	GS-10-S (4-6)
Sample Date:	6/1/2004	9/26/2002	10/2/2002	12/21/2006	12/21/2006	12/27/2006	12/27/2006	12/18/2006	12/18/2006	1/2/2007
Depth Interval:	335.28 - 365.76 cm	167.64 - 228.6 cm	213.36 - 274.32 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm
Conventional Parameters (mg/kg)										
Cyanide, total	0.379 U	--	--	**0.6 J**	**0.2 J**	**0.2 J**	**0.6**	**26.9 J**	**0.4 J**	**0.8 J**
Metals (mg/kg)										
Zinc	--	--	--	--	--	**72.7**	**69.9**	--	--	**107**
Volatile Organics (µg/kg)										
1,1-Dichloroethene	--	--	--	1.4 U	1.4 U	1.6 U	1.6 U	81 U	1.4 U	8600 U
1,2-Dichloroethene, cis-	--	15000 U	--	1.4 U	1.4 U	1.6 U	1.6 U	81 U	1.4 U	8600 U
1,2-Dichloroethene, trans-	--	--	--	1.4 U	1.4 U	1.6 U	1.6 U	81 U	1.4 U	8600 U
Benzene	50 U	15000 U	--	**0.31 J**	**0.17 J**	1.6 U	1.6 U	81 U	**0.2 J**	**28000**
Ethylbenzene	50 U	15000 U	--	**0.33 J**	1.4 U	1.6 U	1.6 U	**66 J**	**0.38 J**	**69000**
Naphthalene	--	**1500000 J**	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	1.4 U	1.4 U	1.6 U	1.6 U	**18 J**	1.4 U	**21000**
Toluene	50 U	15000 U	--	1.4 U	1.4 U	1.6 U	1.6 U	81 U	1.4 U	**3800 J**
Trichloroethene (TCE)	--	1200 U	--	1.4 U	1.4 U	1.6 U	1.6 U	81 U	1.4 U	8600 U
Vinyl chloride	--	--	--	1.4 U	1.4 U	1.6 U	1.6 U	81 U	1.4 U	8600 U
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	2.8 UT	2.7 UT	1.6 UT	1.6 UT	**58 JT**	**0.9 JT**	**65000 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)										
2-Methylnaphthalene	--	**82000**	**120**	**9.7**	**0.55 J**	4.9 U	**5.4**	**1300**	**5.4**	**1600000**
Acenaphthene	13.4 U	**120000**	**18**	**24**	5 U	**2.1 J**	**4.8 J**	**8800**	**14**	**1300000**
Acenaphthylene	13.4 U	**12000**	**490**	**11**	5 U	**1.4 J**	**2.3 J**	**540**	**1.1 J**	**21000**
Anthracene	13.4 U	**110000**	**380**	**43**	5 U	**6.2**	**12**	**9500**	**12**	**450000**
Benzo(a)anthracene	**23.1**	**72000**	**1400**	**88**	**0.46 J**	**8.7**	**13**	**9900**	**13**	**290000**
Benzo(a)pyrene	**35.1**	**78000**	**2100**	**100**	**0.53 J**	**8.7**	**15**	**12000**	**14**	**370000**
Benzo(b)fluoranthene	**31.4**	**45000**	**1300**	**90**	5 U	**6.2**	**11**	**8000**	**11**	**180000**
Benzo(g,h,i)perylene	**37**	**47000**	**2500**	**120**	**0.8 J**	**6.1**	**9.7**	**9800**	**14**	**180000**
Benzo(k)fluoranthene	**24.7**	**45000**	**1200**	**73**	5 U	**7.1**	**10**	**7100**	**11**	**140000**
Chrysene	**30.7**	**79000**	**1700**	**130**	**0.79 J**	**12**	**18**	**13000**	**20**	**380000**
Dibenzo(a,h)anthracene	13.4 U	**5700**	**270**	**9.5**	5 U	**0.81 J**	**1.2 J**	**1000**	5 U	**27000**
Fluoranthene	**41.7**	**250000**	**2500**	**320**	**1.6 J**	**28**	**45**	**39000**	**53**	**1400000**
Fluorene	13.4 U	**77000**	**3.2**	**31**	**0.35 J**	**4.1 J**	**8.9**	**7200**	**12**	**580000**
Indeno(1,2,3-c,d)pyrene	**25.5**	**48000**	**2100**	**97**	**0.54 J**	**5.6**	**9.1**	**8100**	**11**	**180000**
LWG RA Total HPAH (Calculated U = 1/2)	**320 T**	**960000 T**	**17000 T**	**1400 T**	**14 JT**	**120 JT**	**190 JT**	**150000 T**	**210 T**	**4500000 T**
LWG RA Total LPAH (Calculated U = 1/2)	**72.2 T**	**820000 T**	**1800 T**	**470 T**	**13 JT**	**62 JT**	**120 JT**	**85000 T**	**150 JT**	**12000000 T**
Naphthalene	13.4 U	--	**380**	**33**	5 U	**8.8**	**27**	**5500**	**22**	**5700000**
Phenanthrene	**38.7**	**420000**	**370**	**320**	**1.9 J**	**37**	**61**	**52000**	**79**	**2800000**
Pyrene	**69**	**290000**	**1800**	**370**	**1.8 J**	**38**	**58**	**44000**	**62**	**1400000**
Semivolatile Organics (µg/kg)										
Carbazole	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	--	**9200**	**14**	**6.5**	5 U	**0.75 J**	**1.3 J**	**860**	**2.1 J**	**78000**
PCB Aroclors (µg/kg)										
Aroclor 1016	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	--

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	B-56	GP-04	GP-07	GS-01	GS-01	GS-02	GS-02	GS-03	GS-03	GS-10
Sample Name:	2708-040601-003	GP4-S-7.5	GP7-S-9.0	GS-01-S (4-6)	GS-01-S (9-11)	GS-02-S (4-6)	GS-02-S (9-11)	GS-03-S (4-6)	GS-03-S (9-11)	GS-10-S (4-6)
Sample Date:	6/1/2004	9/26/2002	10/2/2002	12/21/2006	12/21/2006	12/27/2006	12/27/2006	12/18/2006	12/18/2006	1/2/2007
Depth Interval:	335.28 - 365.76 cm	167.64 - 228.6 cm	213.36 - 274.32 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm
Aroclor 1260	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	GS-10	GS-11	GS-11	GS-12	GS-12	MW-04-101	MW-04-101	P-03	P-04	P-05
Sample Name:	GS-10-S (9-11)	GS-11-S (4-6)	GS-11-S (9-11)A	GS-12-S (4-6)	GS-12-S (9-11)	981014-M4-02	981014-M4-03	5237-010820-152	5237-010810-79	5237-010813-91
Sample Date:	1/2/2007	1/5/2007	1/5/2007	1/10/2007	1/10/2007	10/14/1998	10/14/1998	8/20/2001	8/10/2001	8/13/2001
Depth Interval:	274.32 - 335.28 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	121.92 - 182.88 cm	274.32 - 335.28 cm	167.64 - 182.88 cm	304.8 - 320.04 cm	198.12 - 198.12 cm	304.8 - 304.8 cm	198.12 - 198.12 cm
Conventional Parameters (mg/kg)										
Cyanide, total	**0.4 J**	**2.2 J**	**0.06 J**	0.3 UJ	**0.09 J**	--	0.02 U	0.02 U	--	--
Metals (mg/kg)										
Zinc	**112**	--	--	**63.8**	**62.6**	--	--	**42.6**	--	--
Volatile Organics (µg/kg)										
1,1-Dichloroethene	1800 U	150 U	1.5 U	1.4 U	1.5 UJ	--	--	--	--	--
1,2-Dichloroethene, cis-	1800 U	150 U	1.5 U	1.4 U	1.5 UJ	--	--	--	--	--
1,2-Dichloroethene, trans-	1800 U	150 U	1.5 U	1.4 U	1.5 UJ	--	--	--	--	--
Benzene	**3600**	**270**	1.5 U	1.4 U	1.5 UJ	25 U	25 U	--	--	--
Ethylbenzene	**13000**	**4300**	**6.9**	1.4 U	1.5 UJ	25 U	25 U	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--
o-Xylene	**3800**	**1600**	**2.7**	1.4 U	1.5 UJ	--	--	--	--	--
Toluene	**470 J**	**45 J**	1.5 U	1.4 U	1.5 UJ	25 U	25 U	--	--	--
Trichloroethene (TCE)	1800 U	150 U	1.5 U	1.4 U	1.5 UJ	--	--	--	--	--
Vinyl chloride	1800 U	150 U	1.5 U	1.4 U	1.5 UJ	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	**11000 T**	**2100 T**	**4 JT**	1.4 UT	1.5 UJT	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)										
2-Methylnaphthalene	**31000**	**110000**	**10**	5 U	**9.6**	--	--	--	--	--
Acenaphthene	**50000**	**120000**	**8.9**	**1.3 J**	**140**	50 U	50 U	--	--	--
Acenaphthylene	**1500**	**5000**	**0.48 J**	**0.37 J**	**18**	50 U	50 U	--	--	--
Anthracene	**28000**	**84000**	**3.1 J**	**1.2 J**	**120**	50 U	50 U	--	--	--
Benzo(a)anthracene	**23000**	**59000**	**2.8 J**	**2.6 J**	**190**	50 U	**130**	--	--	--
Benzo(a)pyrene	**32000**	**54000**	**2.5 J**	**2.8 J**	**230**	**100**	**230**	--	--	--
Benzo(b)fluoranthene	**20000**	**29000**	**1.8 J**	**2.3 J**	**150**	**100**	**250**	--	--	--
Benzo(g,h,i)perylene	**25000**	**33000**	**2.2 J**	**2.7 J**	**190**	50 U	50 U	--	--	--
Benzo(k)fluoranthene	**16000**	**28000**	**1.6 J**	**1.8 J**	**130**	50 U	50 U	--	--	--
Chrysene	**30000**	**73000**	**3.5 J**	**3.5 J**	**250**	**57**	**160**	--	--	--
Dibenzo(a,h)anthracene	**2500**	**4400**	4.9 U	5 U	**21**	50 U	50 U	--	--	--
Fluoranthene	**90000**	**190000**	**8.7**	**6.9**	**570**	50 U	**210**	--	--	--
Fluorene	**26000**	**66000**	**3.6 J**	**0.84 J**	**91**	50 U	50 U	--	--	--
Indeno(1,2,3-c,d)pyrene	**22000**	**33000**	**2 J**	**2.2 J**	**160**	50 U	50 U	--	--	--
LWG RA Total HPAH (Calculated U = 1/2)	**360000 T**	**730000 T**	**39 JT**	**35 JT**	**2600 T**	**520 T**	**1500 T**	--	--	--
LWG RA Total LPAH (Calculated U = 1/2)	**400000 T**	**1100000 T**	**81 JT**	**16 JT**	**960 T**	50 UT	50 UT	--	--	--
Naphthalene	**91000**	**270000**	**35**	7.7 U	**23**	50 U	50 U	--	--	--
Phenanthrene	**170000**	**400000**	**20**	**6.4**	**560**	50 U	50 U	--	--	--
Pyrene	**99000**	**230000**	**11**	**7.8**	**690**	**110**	**460**	--	--	--
Semivolatile Organics (µg/kg)										
Carbazole	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	**3900**	**7700**	**0.71 J**	**0.36 J**	**17**	--	--	--	--	--
PCB Aroclors (µg/kg)										
Aroclor 1016	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	--

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	**GS-10**	**GS-11**	**GS-11**	**GS-12**	**GS-12**	**MW-04-101**	**MW-04-101**	**P-03**	**P-04**	**P-05**
Sample Name:	**GS-10-S (9-11)**	**GS-11-S (4-6)**	**GS-11-S (9-11)A**	**GS-12-S (4-6)**	**GS-12-S (9-11)**	**981014-M4-02**	**981014-M4-03**	**5237-010820-152**	**5237-010810-79**	**5237-010813-91**
Sample Date:	**1/2/2007**	**1/5/2007**	**1/5/2007**	**1/10/2007**	**1/10/2007**	**10/14/1998**	**10/14/1998**	**8/20/2001**	**8/10/2001**	**8/13/2001**
Depth Interval:	**274.32 - 335.28 cm**	**121.92 - 182.88 cm**	**274.32 - 335.28 cm**	**121.92 - 182.88 cm**	**274.32 - 335.28 cm**	**167.64 - 182.88 cm**	**304.8 - 320.04 cm**	**198.12 - 198.12 cm**	**304.8 - 304.8 cm**	**198.12 - 198.12 cm**
Aroclor 1260	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	--	--	--	--	--	--	--	22 U	**37.4**	21.7 U
Residual Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	P-05	RAA-20	WLCGSG04RAA17	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS06	WLCGSJ06GS06
Sample Name:	5237-010813-92	RAA-20SD-0506	WLCGSG04RAA17SD0010	WLCGSJ06GS04S46	WLCGSJ06GS04S911	WLCGSJ06GS05S34	WLCGSJ06GS05S911	WLCGSJ06GS06S46	WLCGSJ06GS06S911
Sample Date:	8/13/2001	7/22/2004	7/22/2004	12/12/2006	12/12/2006	10/24/2006	10/25/2006	1/17/2007	1/17/2007
Depth Interval:	289.56 - 289.56 cm	152.4 - 182.88 cm	0 - 304.8 cm	121.9 - 182.9 cm	274.3 - 335.3 cm	91.44 - 121.9 cm	274.3 - 335.3 cm	121.9 - 182.9 cm	274.3 - 335.3 cm
Conventional Parameters (mg/kg)									
Cyanide, total	8780	--	0.14 J	0.3 J	2.1 J	10.7 J	0.3	1.4 T	0.8
Metals (mg/kg)									
Zinc	38.7	--	64.5	70.4	60.4	--	--	66.2 T	65.3
Volatile Organics (µg/kg)									
1,1-Dichloroethene	--	--	800 U	1.7 U	1.4 U	430 U	1.6 U	1.2 UT	1.6 U
1,2-Dichloroethene, cis-	100 U	--	800 U	1.7 U	1.4 U	430 U	1.6 U	1.2 UT	1.6 U
1,2-Dichloroethene, trans-	--	--	800 U	1.7 U	1.4 U	430 U	1.6 U	1.2 UT	1.6 U
Benzene	100 U	400	800 U	1.7 U	1.4 U	430 U	3.6	19 T	18
Ethylbenzene	1380	1300	1600	1.7 UJ	1.4 U	1900	88	26 T	49
Naphthalene	--	--	--	1.7 UJ	1.4 U	--	--	--	--
o-Xylene	--	700	330 J	1.7 UJ	1.4 U	1200	64	10 T	21
Toluene	150	100 J	800 U	1.7 U	1.4 U	430 U	2.7	1.6 T	1.5 J
Trichloroethene (TCE)	100 U	--	800 U	1.7 U	1.4 U	430 U	1.6 U	1.2 UT	1.6 U
Vinyl chloride	120 U	--	800 U	1.7 U	1.4 U	430 U	1.6 U	1.2 UT	1.6 U
LWG RA Total Xylene (Calculated U = 1/2)	--	1300 T	730 JT	3.4 UJT	2.8 UT	2100 T	110 T	17 T	36 T
Polycyclic Aromatic Hydrocarbons (µg/kg)									
2-Methylnaphthalene	553000	--	11000	5 U	5 U	16000	7300	10000 T	3400
Acenaphthene	463000	--	61000	4.3 J	0.28 J	62000	8000	15000 T	4300
Acenaphthylene	36000	--	3400	9.9	0.46 J	5700	890	960 T	470
Anthracene	322000	--	32000	9.4	0.62 J	44000	6400	8600 T	2900
Benzo(a)anthracene	207000	--	29000	160	3.2 J	58000	5300	9100 T	3500
Benzo(a)pyrene	205000	--	43000	170	3.5 J	77000	6200	12000 T	4400
Benzo(b)fluoranthene	103000	--	37000	130	3.2 J	48000	3400	7900 T	2800
Benzo(g,h,i)perylene	149000	--	38000	130	5 U	53000	4800	8600 T	2900
Benzo(k)fluoranthene	103000	--	10000	120	2.4 J	40000	3500	5400 T	2300
Chrysene	245000	--	35000	210	4.3 J	69000	6900	11000 T	4300
Dibenzo(a,h)anthracene	24200	--	4100	16	5 U	6300	520	1000 T	360
Fluoranthene	655000	--	120000	560	11	190000	20000	31000 T	11000
Fluorene	307000	--	20000	5.9	0.41 J	39000	5500	8800 T	2700
Indeno(1,2,3-c,d)pyrene	83200	--	31000	110	5 U	51000	4300	7900 T	2900
LWG RA Total HPAH (Calculated U = 1/2)	2550000 T	--	490000 T	2300 T	49 JT	810000 T	79000 T	130000 T	48000 T
LWG RA Total LPAH (Calculated U = 1/2)	3700000 T	--	370000 T	50 JT	6.8 JT	430000 T	72000 T	110000 T	34000 T
Naphthalene	905000	--	96000	--	--	15000	4100	10000 T	4400
Phenanthrene	1120000	--	150000	18	5 U	250000	40000	53000 T	16000
Pyrene	772000	--	140000	660	14	220000	24000	38000 T	14000
Semivolatile Organics (µg/kg)									
Carbazole	68700	--	--	--	--	--	--	--	--
Dibenzofuran	40000	--	1800	5 U	5 U	6700	860	1700 T	440
PCB Aroclors (µg/kg)									
Aroclor 1016	--	--	--	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	**P-05**	**RAA-20**	**WLCGSG04RAA17**	**WLCGSJ06GS04**	**WLCGSJ06GS04**	**WLCGSJ06GS05**	**WLCGSJ06GS05**	**WLCGSJ06GS06**	**WLCGSJ06GS06**
Sample Name:	**5237-010813-92**	**RAA-20SD-0506**	**WLCGSG04RAA17SD0010**	**WLCGSJ06GS04S46**	**WLCGSJ06GS04S911**	**WLCGSJ06GS05S34**	**WLCGSJ06GS05S911**	**WLCGSJ06GS06S46**	**WLCGSJ06GS06S911**
Sample Date:	**8/13/2001**	**7/22/2004**	**7/22/2004**	**12/12/2006**	**12/12/2006**	**10/24/2006**	**10/25/2006**	**1/17/2007**	**1/17/2007**
Depth Interval:	**289.56 - 289.56 cm**	**152.4 - 182.88 cm**	**0 - 304.8 cm**	**121.9 - 182.9 cm**	**274.3 - 335.3 cm**	**91.44 - 121.9 cm**	**274.3 - 335.3 cm**	**121.9 - 182.9 cm**	**274.3 - 335.3 cm**
Aroclor 1260	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
Pesticides (µg/kg)									
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)									
Diesel Range Hydrocarbons	**14000**	--	**3400**	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	**3600**	--	--	--	--	--	--

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS09	WLCGSJ06GS09
Sample Name:	WLCGSJ06GS07S46	WLCGSJ06GS07S911	WLCGSJ06GS08S34	WLCGSJ06GS08S89	WLCGSJ06GS09S46	WLCGSJ06GS09S911
Sample Date:	10/16/2006	10/16/2006	10/25/2006	10/25/2006	10/5/2006	10/9/2006
Depth Interval:	121.9 - 182.9 cm	274.3 - 335.3 cm	91.44 - 121.9 cm	243.8 - 274.3 cm	121.9 - 182.9 cm	274.3 - 335.3 cm
Conventional Parameters (mg/kg)						
Cyanide, total	**4.7**	**2.2**	**0.34**	**0.21**	0.2 UJ	**1.1**
Metals (mg/kg)						
Zinc	--	--	**66.9**	**66.1**	--	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	2300 U	400 U	1.2 U	1.5 U	69 U	58 U
1,2-Dichloroethene, cis-	2300 U	400 U	1.2 U	1.5 U	69 U	58 U
1,2-Dichloroethene, trans-	2300 U	400 U	1.2 U	1.5 U	69 U	58 U
Benzene	**3000**	**150 J**	1.2 U	**3.6**	69 U	**150**
Ethylbenzene	**14000**	**130 J**	1.2 U	**17**	**56 J**	**800**
Naphthalene	--	--	--	--	--	--
o-Xylene	**9000**	**220 J**	1.2 U	**8.9**	**30 J**	**340**
Toluene	**1200 J**	400 U	**0.14 J**	**0.6 J**	69 U	**20 J**
Trichloroethene (TCE)	2300 U	400 U	1.2 U	1.5 U	69 U	58 U
Vinyl chloride	2300 U	400 U	1.2 U	1.5 U	69 U	58 U
LWG RA Total Xylene (Calculated U = 1/2)	**25000 T**	**490 JT**	2.4 UT	**23 T**	**65 JT**	**490 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	**1400000**	**49000**	**0.53 J**	**200**	**21000**	**35000**
Acenaphthene	**550000**	**32000**	**12**	**170**	**31000**	**50000**
Acenaphthylene	**42000**	**110000**	**1.2 J**	**2.1 J**	**2000**	**2400**
Anthracene	**490000**	**99000**	**5.8**	**17**	**17000**	**25000**
Benzo(a)anthracene	**300000**	**68000**	**20**	**12**	**12000**	**17000**
Benzo(a)pyrene	**290000**	**85000**	**26**	**15**	**15000**	**22000**
Benzo(b)fluoranthene	**160000**	**49000**	**23**	**9.3**	**8700**	**12000**
Benzo(g,h,i)perylene	**170000**	**58000**	**25**	**9.3**	**10000**	**14000**
Benzo(k)fluoranthene	**150000**	**48000**	**17**	**7.6**	**8400**	**12000**
Chrysene	**350000**	**83000**	**32**	**15**	**15000**	**22000**
Dibenzo(a,h)anthracene	**20000**	**6000**	**3.4 J**	**1.1 J**	**1000**	**1500**
Fluoranthene	**920000**	**260000**	**44**	**52**	**44000**	**66000**
Fluorene	**390000**	**67000**	**12**	**45**	**15000**	**24000**
Indeno(1,2,3-c,d)pyrene	**160000**	**54000**	**23**	**9.5**	**9600**	**13000**
LWG RA Total HPAH (Calculated U = 1/2)	**3700000 T**	**990000 T**	**280 JT**	**190 JT**	**170000 T**	**250000 T**
LWG RA Total LPAH (Calculated U = 1/2)	**7700000 T**	**970000 T**	**60 JT**	**1400 JT**	**180000 T**	**310000 T**
Naphthalene	**2500000**	**150000**	4.9 U	**830**	**5000**	**43000**
Phenanthrene	**2300000**	**460000**	**26**	**140**	**85000**	**130000**
Pyrene	**1200000**	**280000**	**65**	**57**	**49000**	**74000**
Semivolatile Organics (µg/kg)						
Carbazole	--	--	--	--	--	--
Dibenzofuran	**64000**	**8600**	**3.2 J**	**8**	**2400**	**3700**
PCB Aroclors (µg/kg)						
Aroclor 1016	--	--	--	--	--	--
Aroclor 1221	--	--	--	--	--	--
Aroclor 1232	--	--	--	--	--	--
Aroclor 1242	--	--	--	--	--	--
Aroclor 1248	--	--	--	--	--	--
Aroclor 1254	--	--	--	--	--	--

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Analysis Matrix:	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
System Location Code:	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS09	WLCGSJ06GS09
Sample Name:	WLCGSJ06GS07S46	WLCGSJ06GS07S911	WLCGSJ06GS08S34	WLCGSJ06GS08S89	WLCGSJ06GS09S46	WLCGSJ06GS09S911
Sample Date:	10/16/2006	10/16/2006	10/25/2006	10/25/2006	10/5/2006	10/9/2006
Depth Interval:	121.9 - 182.9 cm	274.3 - 335.3 cm	91.44 - 121.9 cm	243.8 - 274.3 cm	121.9 - 182.9 cm	274.3 - 335.3 cm
Aroclor 1260	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--	--
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--	--
Endrin ketone	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-28
Existing Data Screening Table - Riverbank Soils (Sub-surface depth) Ecological

Notes:
Detected concentration is greater than 1 screening level
Detected concentration is greater than 2 screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation
-- = Results not reported or not applicable
N = Normal Field Sample

Acronyms:
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
cPAH = carcinogenic PAH
cm = centimeters
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
HPAH = high molecular weight polycyclic aromatic hydrocarbon
LPAH = low molecular weight polycyclic aromatic hydrocarbon
LWG = Lower Willamette Group
MQ = mean quotient
NA = not applicable
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyls
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-29
Existing Data Screening Table – TZW Human Health

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	**Gasco RM6-6.7_TZW**	**Gasco RM6-6.7_TZW**	**Gasco RM6-6.7_TZW**	**Gasco RM6-6.7_TZW**	**Gasco RM6-6.7_TZW**	**Gasco RM6-6.7_TZW**	**Gasco RM6-6.7_TZW**	**Gasco RM6-6.7_TZW**
Location Name:	**GP-200**	**GP-201**	**GP-202**	**GP-203**	**GP-204**	**GP-205**	**GP-206**	**GP-207**
Sample Name:	**GP200-W-1.0**	**GP201-W-1.0**	**GP202-W-1.0**	**GP203-W-1.0**	**GP204-W-1.0**	**GP205-W-1.0**	**GP206-W-1.0**	**GP207-W-1.0**
Sample Date:	**9/14/2010**	**9/20/2010**	**9/20/2010**	**9/17/2010**	**9/20/2010**	**9/14/2010**	**9/14/2010**	**9/13/2010**
Depth Interval:	**0 - 30.48 cm**	**0 - 30.48 cm**	**0 - 30.48 cm**	**0 - 30.48 cm**	**0 - 30.48 cm**	**0 - 30.48 cm**	**0 - 30.48 cm**	**0 - 30.48 cm**
Conventional Parameters (mg/L)								
Cyanide, total	--	--	--	--	--	--	--	--
Metals (µg/L)								
Zinc	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)								
1,1-Dichloroethene	**2.53**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	**33.5**	**0.73**	0.2 U	**0.26**	**37.1**	**3.88**	0.2 U	0.3 U
1,2-Dichloroethene, trans-	**1.47**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzene	**18.4**	0.2 U	0.2 U	0.2 U	0.2 U	**28.6**	0.2 U	0.2 U
Ethylbenzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	0.4 UT	0.4 UT	0.4 UT	**1.1 T**	0.4 UT	2 UT
Naphthalene	**2.32**	0.2 U	0.2 U	0.2 U	0.2 U	**9.1**	0.2 U	0.2 U
o-Xylene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.87**	0.2 U	0.2 U
Toluene	**0.52**	0.2 U	0.2 U	0.2 U	0.2 U	**0.99**	0.2 U	0.2 U
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	**97.3**	**1.46**	0.2 U	0.2 U	**87.6**	**19.9**	0.2 U	0.3 U
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--	--
Semivolatile Organics (µg/L)								
Dibenzofuran	--	--	--	--	--	--	--	--

Table 3-29
Existing Data Screening Table – TZW Human Health

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	GP-207B	GP-38	GP-65	GS-01-B-PR	GS-02-A-TR	GS-02-A-TR	GS-07-B-TR	GS-07-D-PR
Sample Name:	GP207B-W-1.0	GP38-W-1.0	GP65-W-1.0	LWG2-P-GSC1B	LWG2-T30-GS2A	LWG2-T30-GS2A-FILT	LWG2-T30-GS7B	LWG2-P-GSC7D
Sample Date:	9/22/2010	9/21/2010	9/21/2010	11/29/2005	10/25/2005	10/25/2005	10/25/2005	11/29/2005
Depth Interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 38 cm	30 - 30 cm	30 - 30 cm	30 - 30 cm	0 - 38 cm
Conventional Parameters (mg/L)								
Cyanide, total	--	--	--	1.4 U	**23.1 J**	--	**0.03 J**	**0.006 J**
Metals (µg/L)								
Zinc	--	--	--	5.03 UJ	**15.3**	--	**44.5**	3.66 UJ
Volatile Organics (µg/L)								
1,1-Dichloroethene	0.2 U	**0.23**	0.2 U	0.25 U	0.13 U	--	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.2 U	**81.9**	**117**	0.24 U	0.12 U	--	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.2 U	0.2 U	0.2 U	0.29 UJ	0.15 U	--	0.15 U	0.15 U
Benzene	0.2 U	**1.02**	**10.6**	**42**	**250**	--	**540**	0.14 U
Ethylbenzene	0.2 U	0.2 U	0.2 U	**3.3**	**33**	--	**77**	0.13 U
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	0.4 UT	**7.5 T**	**34 T**	--	**100 T**	**0.74 JT**
Naphthalene	0.2 U	0.2 U	0.2 U	**250**	--	--	**3100**	**4.4**
o-Xylene	0.2 U	0.2 U	0.2 U	**3.1**	**20**	--	**47**	**0.42 J**
Toluene	**0.52**	0.2 U	**0.45**	**28**	**16**	--	**11**	0.25 U
Trichloroethene (TCE)	0.2 U	**0.38**	0.2 U	0.27 U	0.14 U	--	0.14 U	0.14 U
Vinyl chloride	**0.29**	**48.4**	**596**	0.084 U	0.042 U	--	0.042 U	0.042 U
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	--	--	**7.2**	**51**	--	**84**	**0.28**
Acenaphthene	--	--	--	**18**	**17**	--	**120**	**21**
Acenaphthylene	--	--	--	**0.18**	**1**	--	**3.6**	**0.17**
Anthracene	--	--	--	**0.88**	**4.8**	--	**9.3**	**0.88**
Benzo(a)anthracene	--	--	--	**0.13**	**3.2**	--	**2.4**	**0.042**
Benzo(a)pyrene	--	--	--	**0.082**	**3**	--	**2.7**	**0.016 J**
Benzo(b)fluoranthene	--	--	--	**0.054**	**2.1**	--	**1.5**	**0.012 J**
Benzo(g,h,i)perylene	--	--	--	**0.066**	**3.2**	--	**2.1**	**0.014 J**
Benzo(k)fluoranthene	--	--	--	**0.065**	**2**	--	**1.5**	**0.0071 J**
Chrysene	--	--	--	**0.18**	**4.4**	--	**3.6**	**0.053**
Dibenzo(a,h)anthracene	--	--	--	**0.0047 J**	**0.34**	--	**0.21**	0.0033 U
Fluoranthene	--	--	--	**3.6**	**15**	--	**17**	**2.1**
Fluorene	--	--	--	**6.8**	**18**	--	**31**	**6**
Indeno(1,2,3-c,d)pyrene	--	--	--	**0.051**	**2.7**	--	**1.9**	0.0098 U
Naphthalene	--	--	--	--	**1100**	--	--	--
Phenanthrene	--	--	--	**7.8**	**50**	--	**79**	**12**
Pyrene	--	--	--	**3.4**	**32**	--	**31**	**2.2**
Semivolatile Organics (µg/L)								
Dibenzofuran	--	--	--	**0.83**	**3.3**	--	**8**	**0.48**

Table 3-29
Existing Data Screening Table – TZW Human Health

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	GS-08-A-TR	GS-08-A-TR	GS-08-D-TR	GS-08-D-TR	SL-01-A-TR	SL-01-A-TR	SL-01-E-PR	SL-02-A-TR
Sample Name:	LWG2-T30-GS8A	LWG2-T30-GS8A-FILT	LWG2-T30-GS8D	LWG2-T30-GS8D-FILT	LWG2-T30-SL1A	LWG2-T30-SL1A-FILT	LWG2-P-SLT1E	LWG2-T30-SL2A
Sample Date:	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/7/2005	10/7/2005	11/15/2005	10/7/2005
Depth Interval:	30 - 30 cm	30 - 30 cm	30 - 30 cm	30 - 30 cm	30 - 30 cm	30 - 30 cm	0 - 38 cm	30 - 30 cm
Conventional Parameters (mg/L)								
Cyanide, total	**0.135 JT**	--	**0.12 J**	--	**0.11**	--	**0.2**	**0.02**
Metals (µg/L)								
Zinc	5.43 UT	--	**41.3**	--	9.99 U	--	1.79 UJ	6.22 U
Volatile Organics (µg/L)								
1,1-Dichloroethene	0.13 U	--	0.13 U	--	0.13 U	--	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	--	0.12 U	--	0.12 U	--	**0.63**	0.12 U
1,2-Dichloroethene, trans-	0.15 U	--	0.15 U	--	0.15 U	--	0.15 U	0.15 U
Benzene	0.14 U	--	**14**	--	**0.94**	--	**9.2**	0.14 U
Ethylbenzene	0.13 U	--	**2.2**	--	**0.42 J**	--	**0.46 J**	0.13 U
LWG RA Total Xylene (Calculated U = 1/2)	**0.43 JT**	--	**1.6 T**	--	**2.2 T**	--	**2.8 T**	0.22 UT
Naphthalene	--	--	**6.5**	--	**2.3**	--	**1 J**	--
o-Xylene	0.2 U	--	**0.95**	--	**1.6**	--	**1.6**	0.11 U
Toluene	0.24 U	--	0.79 U	--	0.6 U	--	**1.3**	0.32 U
Trichloroethene (TCE)	0.14 U	--	0.14 U	--	0.14 U	--	0.14 U	0.14 U
Vinyl chloride	0.042 U	--	0.042 U	--	0.042 U	--	**1.4**	0.042 U
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	**0.53**	--	**6.7**	--	**0.3**	--	**0.58**	0.012 U
Acenaphthene	**3.1**	--	**77**	--	**110**	--	**15**	**3.6**
Acenaphthylene	**0.16**	--	**0.37**	--	**0.58**	--	**0.087**	0.055 U
Anthracene	**0.2**	--	**2.6**	--	**4.5**	--	**0.35**	0.061 U
Benzo(a)anthracene	0.069 U	--	**0.21**	--	0.2 U	--	**0.0064 J**	0.048 U
Benzo(a)pyrene	**0.077**	--	**0.11**	--	0.062 U	--	0.003 U	**0.069**
Benzo(b)fluoranthene	0.053 U	--	**0.073**	--	0.04 U	--	0.0037 U	0.047 U
Benzo(g,h,i)perylene	**0.066**	--	**0.064**	--	**0.03 J**	--	0.007 U	**0.079**
Benzo(k)fluoranthene	0.045 U	--	**0.083**	--	0.046 U	--	0.0026 U	0.045 U
Chrysene	0.12 U	--	0.3 U	--	**0.31**	--	**0.011 J**	**0.078**
Dibenzo(a,h)anthracene	**0.0087 J**	--	**0.0086 J**	--	0.0033 U	--	0.0031 U	0.0048 U
Fluoranthene	**0.78**	--	**4.3**	--	**5.9**	--	**0.33**	0.36 U
Fluorene	**0.93**	--	**18**	--	**26**	--	**3.3**	0.72 U
Indeno(1,2,3-c,d)pyrene	**0.052**	--	**0.058**	--	**0.023 J**	--	0.004 U	**0.054**
Naphthalene	0.11 U	--	--	--	--	--	--	**0.47**
Phenanthrene	**1.7**	--	**29**	--	**44**	--	**3.4**	0.69 U
Pyrene	**0.87**	--	4.3 U	--	**6.1**	--	**0.3**	0.42 U
Semivolatile Organics (µg/L)								
Dibenzofuran	**0.14**	--	**0.77**	--	**4.8**	--	**0.21**	0.011 U

Table 3-29
Existing Data Screening Table – TZW Human Health

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	SL-02-A-TR	SL-02-C-PR	SL-02-E-PR	SL-03-A-TR	SL-03-A-TR	SL-03-C-PR	SL-03-F-PR	SL-04-A-TR
Sample Name:	LWG2-T30-SL2A-FILT	LWG2-P-SLT2C	LWG2-P-SLT2E	LWG2-T30-SL3A	LWG2-T30-SL3A-FILT	LWG2-P-SLT3C	LWG2-P-SLT3F	LWG2-T30-SL4A
Sample Date:	10/7/2005	11/16/2005	11/16/2005	10/7/2005	10/7/2005	11/17/2005	11/16/2005	10/8/2005
Depth Interval:	30 - 30 cm	0 - 38 cm	0 - 38 cm	30 - 30 cm	30 - 30 cm	0 - 38 cm	0 - 38 cm	30 - 30 cm
Conventional Parameters (mg/L)								
Cyanide, total	--	**0.008 J**	**0.38**	**0.01**	--	**0.007 J**	**0.69**	**0.03 T**
Metals (µg/L)								
Zinc	--	2.33 UJ	1.51 UJ	8.7 U	--	2.74 UJ	1.82 UJ	8.95 UT
Volatile Organics (µg/L)								
1,1-Dichloroethene	--	0.13 U	0.13 U	0.13 U	--	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	--	0.12 U	0.12 U	0.12 U	--	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	--	0.15 U	0.15 U	0.15 U	--	0.15 U	0.15 U	0.15 U
Benzene	--	0.17 U	**2.4**	0.14 U	--	0.14 U	**19**	0.14 U
Ethylbenzene	--	0.13 U	**0.65**	0.13 U	--	0.13 U	**0.54**	0.13 U
LWG RA Total Xylene (Calculated U = 1/2)	--	**0.59 JT**	**3.8 T**	**0.23 JT**	--	**0.44 JT**	**1.2 T**	**0.42 JT**
Naphthalene	--	**0.63 J**	**1.6 J**	--	--	**0.52 J**	**0.78 J**	--
o-Xylene	--	**0.33 J**	**2.5**	**0.12 J**	--	**0.22 J**	**0.65**	**0.17 J**
Toluene	--	**0.93**	**2.2**	0.31 U	--	0.51 U	**2.5**	0.19 U
Trichloroethene (TCE)	--	0.14 U	0.14 U	0.14 U	--	0.14 U	0.14 U	0.14 U
Vinyl chloride	--	0.042 U	**0.21 J**	0.042 U	--	0.042 U	**0.16 J**	0.042 U
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	**0.12**	**4.1**	0.021 U	--	**0.082**	**0.23**	0.027 U
Acenaphthene	--	**1.2**	**88**	**63**	--	**8.4**	**22**	**61**
Acenaphthylene	--	**0.027 J**	**0.57**	**0.24**	--	**0.11**	**0.18**	**0.25**
Anthracene	--	**0.14**	**2**	**0.55**	--	**0.33**	**0.2**	**2.3**
Benzo(a)anthracene	--	**0.0056 J**	**0.026 J**	0.092 U	--	**0.0073 J**	**0.0089 J**	0.14 U
Benzo(a)pyrene	--	0.0028 U	0.0028 U	**0.066**	--	0.0028 U	0.0028 U	**0.076**
Benzo(b)fluoranthene	--	0.0035 U	0.0035 U	0.046 U	--	0.0035 U	0.0035 U	0.053 U
Benzo(g,h,i)perylene	--	0.0065 U	0.0065 U	**0.057**	--	0.0065 U	0.0065 U	**0.058**
Benzo(k)fluoranthene	--	0.0024 U	0.0024 U	0.042 U	--	0.0024 U	0.0024 U	0.051 U
Chrysene	--	**0.0091 J**	**0.025 J**	0.14 U	--	**0.013 J**	**0.0049 J**	0.17 U
Dibenzo(a,h)anthracene	--	0.0029 U	0.0029 U	0.0061 U	--	0.0029 U	0.0029 U	0.008 U
Fluoranthene	--	**0.23**	**1.3**	**2.8**	--	**0.43**	**0.11**	**4**
Fluorene	--	**0.43**	**25**	**24**	--	**2.6**	**4**	**33**
Indeno(1,2,3-c,d)pyrene	--	0.0037 U	0.0037 U	**0.037**	--	0.0037 U	0.0037 U	**0.043**
Naphthalene	--	--	--	0.091 U	--	--	--	0.19 U
Phenanthrene	--	**0.86**	**16**	**12**	--	**3.9**	**1.4**	**18**
Pyrene	--	**0.25**	**1.4**	**2.1**	--	**0.5**	**0.12**	**2.9**
Semivolatile Organics (µg/L)								
Dibenzofuran	--	**0.041**	**3.2**	0.042 U	--	**0.094**	**0.47**	**0.3**

Table 3-29
Existing Data Screening Table – TZW Human Health

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	SL-04-A-TR	SL-04-F-PR	SL-05-A-TR	SL-05-A-TR	WLCSLH01GP39	WLCSLH01GP40	WLCSLH01GP41	WLCSLH01GP42
Sample Name:	LWG2-T30-SL4A-FILT	LWG2-P-SLT4F	LWG2-T30-SL5A	LWG2-T30-SL5A-FILT	WLCSLH01GP39W1	WLCSLH01GP40W1	WLCSLH01GP41W1	WLCSLH01GP42W1
Sample Date:	10/8/2005	11/16/2005	10/8/2005	10/8/2005	5/10/2005	5/10/2005	5/10/2005	5/10/2005
Depth Interval:	30 - 30 cm	0 - 38 cm	30 - 30 cm	30 - 30 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm
Conventional Parameters (mg/L)								
Cyanide, total	--	**0.22**	**0.01**	--	--	--	--	--
Metals (µg/L)								
Zinc	--	2.67 UJT	9.06 U	--	--	--	--	--
Volatile Organics (µg/L)								
1,1-Dichloroethene	--	0.13 U	0.13 U	--	**0.85**	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	--	**0.26 J**	0.12 U	--	**517**	0.2 U	0.2 U	**6.36**
1,2-Dichloroethene, trans-	--	0.15 U	0.15 U	--	**0.35**	0.3 U	0.3 U	0.3 U
Benzene	--	**49**	0.14 U	--	**11.9**	**0.51**	0.2 U	0.2 U
Ethylbenzene	--	**5**	0.13 U	--	0.2 U	**1.02**	**0.52**	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	--	**11 T**	**0.22 JT**	--	0.4 UT	**0.78 T**	**0.7 T**	0.4 UT
Naphthalene	--	**2.9**	--	--	1 U	**5.29**	**37.9**	**2.52**
o-Xylene	--	**7**	**0.11 J**	--	0.2 U	**0.58**	**0.5**	0.2 U
Toluene	--	**4.7**	0.28 U	--	**0.99**	**2.23**	**2.69**	0.2 U
Trichloroethene (TCE)	--	0.14 U	0.14 U	--	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	--	**0.32 J**	0.042 U	--	**390**	0.2 U	0.2 U	**7.92**
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	**36**	0.017 U	--	--	--	--	--
Acenaphthene	--	**76**	**12**	--	--	--	--	--
Acenaphthylene	--	**0.59**	**0.13**	--	--	--	--	--
Anthracene	--	**4.4**	0.25 U	--	--	--	--	--
Benzo(a)anthracene	--	**0.047**	0.056 U	--	--	--	--	--
Benzo(a)pyrene	--	**0.0076 J**	**0.024 J**	--	--	--	--	--
Benzo(b)fluoranthene	--	**0.021 J**	0.02 U	--	--	--	--	--
Benzo(g,h,i)perylene	--	**0.0069 J**	**0.021 J**	--	--	--	--	--
Benzo(k)fluoranthene	--	0.0025 U	0.015 U	--	--	--	--	--
Chrysene	--	**0.068**	0.091 U	--	--	--	--	--
Dibenzo(a,h)anthracene	--	0.003 U	0.0022 U	--	--	--	--	--
Fluoranthene	--	**2.4**	1.7 U	--	--	--	--	--
Fluorene	--	**24**	**3.7**	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	**0.0046 J**	**0.015 J**	--	--	--	--	--
Naphthalene	--	--	0.043 U	--	--	--	--	--
Phenanthrene	--	**34**	**7.7**	--	--	--	--	--
Pyrene	--	**2.4**	1.8 U	--	--	--	--	--
Semivolatile Organics (µg/L)								
Dibenzofuran	--	**7.3**	0.017 U	--	--	--	--	--

Table 3-29
Existing Data Screening Table – TZW Human Health

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	WLCSLH01GP43	WLCSLH01GP44	WLCSLH01GP45	WLCSLH01GP46	WLCSLH01GP47	WLCSLH01GP48	WLCSLH01GP49	WLCSLH01GP50
Sample Name:	WLCSLH01GP43W1	WLCSLH01GP44W1	WLCSLH01GP45W1	WLCSLH01GP46W1	WLCSLH01GP47W1	WLCSLH01GP48W1	WLCSLH01GP49W1	WLCSLH01GP50W1
Sample Date:	5/11/2005	5/11/2005	5/11/2005	5/11/2005	5/11/2005	5/11/2005	5/12/2005	5/12/2005
Depth Interval:	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm
Conventional Parameters (mg/L)								
Cyanide, total	--	--	--	--	--	--	--	--
Metals (µg/L)								
Zinc	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)								
1,1-Dichloroethene	0.2 UT	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	**25.4 T**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, trans-	0.3 UT	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	**1.24 T**	**1.58**	**4.08**	**7.99**	0.2 U	**7.98**	0.2 U	0.2 U
Ethylbenzene	0.2 UT	**32.6**	**5.62**	**1.56**	0.2 U	**0.24**	0.2 U	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	**8.18 T**	**1.29 T**	**2.38 T**	0.4 UT	0.4 UT	0.4 UT	0.4 UT
Naphthalene	1 UT	**678**	**57.6**	**24.8**	**2.53**	1 U	**2.51**	1 U
o-Xylene	0.2 UT	**5.76**	**0.88**	**1.39**	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	**0.705 T**	**1.36**	**0.39**	**1.58**	0.2 U	**0.62**	0.2 U	**1.3**
Trichloroethene (TCE)	0.2 UT	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	**115 T**	**0.79**	0.2 U	0.2 U	0.2 U	**0.47**	0.2 U	0.2 U
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--	--
Semivolatile Organics (µg/L)								
Dibenzofuran	--	--	--	--	--	--	--	--

Table 3-29
Existing Data Screening Table – TZW Human Health

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	WLCSLH01GP51	WLCSLH01GP52	WLCSLH01GP53	WLCSLH01GP54	WLCSLH01GP55	WLCSLH01GP56	WLCSLH01GP57	WLCSLH01GP58
Sample Name:	WLCSLH01GP51W1	WLCSLH01GP52W1	WLCSLH01GP53W1	WLCSLH01GP54W1	WLCSLH01GP55W1	WLCSLH01GP56W1	WLCSLH01GP57W1	WLCSLH01GP58W1
Sample Date:	5/13/2005	5/13/2005	5/13/2005	5/13/2005	5/16/2005	5/16/2005	5/16/2005	5/16/2005
Depth Interval:	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm
Conventional Parameters (mg/L)								
Cyanide, total	--	--	--	--	**0.316**	--	--	--
Metals (µg/L)								
Zinc	--	--	--	--	**194**	--	--	--
Volatile Organics (µg/L)								
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	**7.24**	0.2 U	**1.55**	**1.7**	**111**	**27.5**
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	**0.38**	0.3 U
Benzene	0.2 U	**0.25**	**0.36**	**894**	**2.71**	**2.07**	**3.14**	**0.67**
Ethylbenzene	0.2 U	**1.15**	0.2 U	**46**	0.2 U	0.2 U	0.2 U	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	**0.46 T**	0.4 UT	**64.9 T**	0.4 UT	0.4 UT	0.4 UT	0.4 UT
Naphthalene	1 U	**29.6**	**1.94**	**3630**	--	**3.79**	1 U	1 U
o-Xylene	0.2 U	**0.26**	0.2 U	**22.3**	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	1.92 U	0.82 U	0.3 U	**178**	**0.45**	**1.19**	**0.57**	**0.26**
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.31**	0.2 U
Vinyl chloride	0.2 U	**0.48**	**8.27**	0.2 U	**16**	**2.19**	**139**	**7.92**
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	**16.6**	--	--	--
Acenaphthylene	--	--	--	--	**0.19**	--	--	--
Anthracene	--	--	--	--	**3.12**	--	--	--
Benzo(a)anthracene	--	--	--	--	**0.495**	--	--	--
Benzo(a)pyrene	--	--	--	--	**0.343**	--	--	--
Benzo(b)fluoranthene	--	--	--	--	**0.286**	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	**0.2**	--	--	--
Benzo(k)fluoranthene	--	--	--	--	**0.124**	--	--	--
Chrysene	--	--	--	--	**0.562**	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	0.0476 U	--	--	--
Fluoranthene	--	--	--	--	**5.28**	--	--	--
Fluorene	--	--	--	--	**8.6**	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	**0.133**	--	--	--
Naphthalene	--	--	--	--	**0.229**	--	--	--
Phenanthrene	--	--	--	--	**14.1**	--	--	--
Pyrene	--	--	--	--	**5.43**	--	--	--
Semivolatile Organics (µg/L)								
Dibenzofuran	--	--	--	--	--	--	--	--

Table 3-29
Existing Data Screening Table – TZW Human Health

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	WLCSLH01GP61	WLCSLH01GP62	WLCSLH01GP63	WLCSLH01GP64	WLCSLH01GP66	WLCSLH01GP67	WLCSLH01GP68	WLCSLH01GP69
Sample Name:	WLCSLH01GP61W1	WLCSLH01GP62W1	WLCSLH01GP63W1	WLCSLH01GP64W1	WLCSLH01GP66W1	WLCSLH01GP67W1	WLCSLH01GP68W1	WLCSLH01GP69W1
Sample Date:	5/18/2005	5/18/2005	5/19/2005	5/19/2005	5/20/2005	5/23/2005	5/23/2005	5/24/2005
Depth Interval:	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm
Conventional Parameters (mg/L)								
Cyanide, total	0.0826 T	0.0668	0.117	0.356	--	--	0.196	0.231
Metals (µg/L)								
Zinc	167 T	983	568	266	--	--	126	53.2
Volatile Organics (µg/L)								
1,1-Dichloroethene	0.2 UT	0.2 U	0.2 U	2.44	0.2 U	39	0.2 U	1.3
1,2-Dichloroethene, cis-	0.2 UT	1.66	18.2	2950	17.1	67000	12	3830
1,2-Dichloroethene, trans-	0.3 UT	0.3 U	0.3 U	25.4	0.3 U	117	0.3 U	12.8
Benzene	3.95 T	0.2 U	2.45	747	2.31	99.2	3840	254
Ethylbenzene	0.2 UT	0.2 U	0.2 U	275	0.2 U	26.9	416	138
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	0.4 UT	158 T	0.4 UT	18.7 T	440 T	96.6 T
Naphthalene	--	1.85	20	12200	8.08	2520	12300	11400
o-Xylene	0.2 UT	0.2 U	0.2 U	67.5	0.2 U	9.66	150	40.4
Toluene	2.15 T	5.65	0.64	56.1	2.7 U	30.7	36.6	23
Trichloroethene (TCE)	0.2 UT	0.2 U	0.2 U	0.62	7	88500	43.5	4.31
Vinyl chloride	1.9 T	0.99	114	625	2.51	4300	0.2 U	540
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	--	--	--	--	--	--	--
Acenaphthene	26.4 T	61.4	3.29	172	--	--	174	262
Acenaphthylene	0.0774 T	0.372	0.067	0.807	--	--	6.72	2.08
Anthracene	0.479 T	9.33	1.99	12.5	--	--	32.2	31.2
Benzo(a)anthracene	0.0774 T	1.91	0.182	3.68	--	--	21.7	12.5
Benzo(a)pyrene	0.0484 T	0.881	0.067	3.57	--	--	24.2	15.2
Benzo(b)fluoranthene	0.0484 T	0.901	0.0766	3.11	--	--	22.5	12.9
Benzo(g,h,i)perylene	0.0483 UT	0.362	0.0479 U	2.24	--	--	15	11.2
Benzo(k)fluoranthene	0.0483 UT	0.255	0.0479 U	0.836	--	--	5.2	4.29
Chrysene	0.097 T	1.22	0.249	2.9	--	--	15.5	14.9
Dibenzo(a,h)anthracene	0.0483 UT	0.0686	0.0479 U	0.327	--	--	2.18	1.54
Fluoranthene	0.769 T	11.8	0.92	15.9	--	--	76.7	50.5
Fluorene	7.07 T	36.6	1.17	50.2	--	--	65.8	71.3
Indeno(1,2,3-c,d)pyrene	0.0483 UT	0.274	0.0479 U	1.62	--	--	10.7	7.72
Naphthalene	0.0677 T	--	--	--	--	--	--	--
Phenanthrene	3.13 T	64.7	3.17	93.9	--	--	200	182
Pyrene	0.672 T	12.8	0.91	19	--	--	92.1	68.7
Semivolatile Organics (µg/L)								
Dibenzofuran	--	--	--	--	--	--	--	--

Table 3-29
Existing Data Screening Table – TZW Human Health

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	WLCSLH01GP70	WLCSLH01GP71	WLCSLH01GP72	WLCSLH01GP73	WLCSLH01GP74	WLCSLH01GP75	WLCSLH01GP76	WLCSLH01GP80
Sample Name:	WLCSLH01GP70W1	WLCSLH01GP71W1	WLCSLH01GP72W1	WLCSLH01GP73W1	WLCSLH01GP74W1	WLCSLH01GP75W1	WLCSLH01GP76W1	WLCSLH01GP80W1
Sample Date:	5/24/2005	5/24/2005	5/25/2005	5/25/2005	5/26/2005	5/26/2005	5/27/2005	5/31/2005
Depth Interval:	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm
Conventional Parameters (mg/L)								
Cyanide, total	**0.0444**	--	--	**0.46**	--	**0.026**	0.01 U	--
Metals (µg/L)								
Zinc	**44.5**	--	--	10 U	--	**188**	**237**	--
Volatile Organics (µg/L)								
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	**24.6**	0.2 U	0.2 U	**21.5**	0.2 U
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	**123**	0.2 U	0.2 U	**242**	**6.04**	**0.99**	**8.8**	**2.47**
Ethylbenzene	**106**	**42.1**	0.2 U	**321**	**14.4**	**2.14**	**0.97**	**1.61**
LWG RA Total Xylene (Calculated U = 1/2)	**68.8 T**	**24 T**	0.4 UT	**161 T**	**6.63 T**	0.4 UT	0.4 UT	0.4 UT
Naphthalene	**4820**	**12400**	**22.9**	**13700**	**670**	**53.9**	**42.7**	**59.4**
o-Xylene	**26.9**	**18.7**	0.2 U	**81.5**	**4.01**	0.2 U	0.2 U	0.2 U
Toluene	**7.45**	**0.33**	**0.8**	**17.4**	**1.15**	**2.24**	**1.62**	1.09 U
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	**2.56**	0.2 U	0.2 U	**0.8**	0.2 U
Vinyl chloride	**0.88**	0.2 U	0.2 U	**1.22**	**0.43**	**0.59**	**1.69**	0.2 U
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	--	--	--	--	--	--	--
Acenaphthene	**85.1**	--	--	**399**	--	**16.6**	**4.27**	--
Acenaphthylene	**1.87**	--	--	**4.44**	--	**0.22**	**0.13**	--
Anthracene	**25.5**	--	--	**63.8**	--	**2.89**	**1.57**	--
Benzo(a)anthracene	**10.9**	--	--	**32.3**	--	**1.21**	**0.84**	--
Benzo(a)pyrene	**13.5**	--	--	**37.8**	--	**1.17**	**0.81**	--
Benzo(b)fluoranthene	**11.8**	--	--	**33.3**	--	**1.07**	**0.68**	--
Benzo(g,h,i)perylene	**9.76**	--	--	**28.8**	--	**0.86**	**0.7**	--
Benzo(k)fluoranthene	**3.64**	--	--	**9**	--	**0.33**	**0.26**	--
Chrysene	**12.9**	--	--	**34.5**	--	**1.34**	**1.08**	--
Dibenzo(a,h)anthracene	**1.35**	--	--	**3.71**	--	**0.14**	**0.1**	--
Fluoranthene	**43.6**	--	--	**106**	--	**4.79**	**3.76**	--
Fluorene	**29.6**	--	--	**108**	--	**5.59**	**1.69**	--
Indeno(1,2,3-c,d)pyrene	**6.76**	--	--	**16.9**	--	**0.62**	**0.46**	--
Naphthalene	--	--	--	--	--	--	--	--
Phenanthrene	**120**	--	--	**362**	--	**16.8**	**9.8**	--
Pyrene	**61**	--	--	**148**	--	**6.41**	**6.31**	--
Semivolatile Organics (µg/L)								
Dibenzofuran	--	--	--	--	--	--	--	--

Table 3-29
Existing Data Screening Table – TZW Human Health

Database:	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	WLCSLH01GP81	WLCSLH01GP82	WLCSLH01GP84
Sample Name:	WLCSLH01GP81W1	WLCSLH01GP82W1	WLCSLH01GP84W1
Sample Date:	5/31/2005	6/1/2005	6/1/2005
Depth Interval:	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm
Conventional Parameters (mg/L)			
Cyanide, total	**0.0669**	**0.0337**	**--**
Metals (µg/L)			
Zinc	**179**	**94.4**	**--**
Volatile Organics (µg/L)			
1,1-Dichloroethene	0.2 UT	0.2 U	0.2 U
1,2-Dichloroethene, cis-	**2.28 T**	**3.77**	**2.27**
1,2-Dichloroethene, trans-	0.3 UT	0.3 U	0.3 U
Benzene	**973 T**	**28.9**	0.2 U
Ethylbenzene	**134 T**	**75.5**	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	**87.5 T**	**57.2 T**	0.4 UT
Naphthalene	**8480 T**	**3890**	**47.3**
o-Xylene	**46.7 T**	**26.9**	0.2 U
Toluene	**44.7 T**	**9.32**	**2.73**
Trichloroethene (TCE)	0.2 UT	0.2 U	**5.63**
Vinyl chloride	**1.57 T**	**1.51**	**0.65**
Polycyclic Aromatic Hydrocarbons (µg/L)			
2-Methylnaphthalene	**--**	**--**	**--**
Acenaphthene	**123**	**111**	**--**
Acenaphthylene	**1.31**	**1.74**	**--**
Anthracene	**14**	**8.12**	**--**
Benzo(a)anthracene	**3.82**	**2.59**	**--**
Benzo(a)pyrene	**4.59**	**3.09**	**--**
Benzo(b)fluoranthene	**3.97**	**2.76**	**--**
Benzo(g,h,i)perylene	**4.05**	**2.5**	**--**
Benzo(k)fluoranthene	**1.23**	**0.826**	**--**
Chrysene	**4.4**	**2.6**	**--**
Dibenzo(a,h)anthracene	**0.48**	**0.327**	**--**
Fluoranthene	**18.8**	**11.7**	**--**
Fluorene	**30.9**	**33**	**--**
Indeno(1,2,3-c,d)pyrene	**2.71**	**1.66**	**--**
Naphthalene	**--**	**--**	**--**
Phenanthrene	**85.5**	**63.5**	**--**
Pyrene	**22.1**	**16.2**	**--**
Semivolatile Organics (µg/L)			
Dibenzofuran	**--**	**--**	**--**

Table 3-29
Existing Data Screening Table – TZW Human Health

Notes:

Detected concentration is greater than 1 screening level
Detected concentration is greater than 2 screening levels
Detected concentration is greater than 3 screening levels
Detected concentration is greater than 4 screening levels
Detected concentration is greater than 5 screening levels
Detected concentration is greater than 6 screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
T = Result is the value of a total or calculation.
-- = Results not reported or not applicable

Acronyms:
µg/L = micrograms per liter
mg/L = milligrams per liter
cm = centimeters
LWG = Lower Willamette Group
RA = Portland Harbor Site risk assessment
TZW = transition zone water
Totals are calculated as the sum of all detected results and 1/2 the undetected result. If all are undetected results, the highest reporting limit value is reported as the sum.

Table 3-30
Existing Data Screening Table – TZW Ecological

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	GP-200	GP-201	GP-202	GP-203	GP-204	GP-205	GP-206	GP-207
Sample Name:	GP200-W-1.0	GP201-W-1.0	GP202-W-1.0	GP203-W-1.0	GP204-W-1.0	GP205-W-1.0	GP206-W-1.0	GP207-W-1.0
Sample Date:	9/14/2010	9/20/2010	9/20/2010	9/17/2010	9/20/2010	9/14/2010	9/14/2010	9/13/2010
Depth Interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm
Conventional Parameters (mg/L)								
Cyanide, total	--	--	--	--	--	--	--	--
Metals (µg/L)								
Zinc	--	--	--	--	--	--	--	--
Dissolved Metals (µg/L)								
Zinc	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)								
1,1-Dichloroethene	**2.53**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	**33.5**	**0.73**	0.2 U	**0.26**	**37.1**	**3.88**	0.2 U	0.3 U
1,2-Dichloroethene, trans-	**1.47**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzene	**18.4**	0.2 U	0.2 U	0.2 U	0.2 U	**28.6**	0.2 U	0.2 U
Ethylbenzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	0.4 UT	0.4 UT	0.4 UT	**1.1 T**	0.4 UT	2 UT
m,p-Xylene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	2 U
Naphthalene	**2.32**	0.2 U	0.2 U	0.2 U	0.2 U	**9.1**	0.2 U	0.2 U
o-Xylene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.87**	0.2 U	0.2 U
Toluene	**0.52**	0.2 U	0.2 U	0.2 U	0.2 U	**0.99**	0.2 U	0.2 U
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	**97.3**	**1.46**	0.2 U	0.2 U	**87.6**	**19.9**	0.2 U	0.3 U
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--	--
Semivolatile Organics (µg/L)								
Dibenzofuran	--	--	--	--	--	--	--	--

Table 3-30
Existing Data Screening Table – TZW Ecological

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	GP-207B	GP-38	GP-65	GS-01-B-PR	GS-02-A-TR	GS-02-A-TR	GS-07-B-TR	GS-07-D-PR
Sample Name:	GP207B-W-1.0	GP38-W-1.0	GP65-W-1.0	LWG2-P-GSC1B	LWG2-T30-GS2A	LWG2-T30-GS2A-FILT	LWG2-T30-GS7B	LWG2-P-GSC7D
Sample Date:	9/22/2010	9/21/2010	9/21/2010	11/29/2005	10/25/2005	10/25/2005	10/25/2005	11/29/2005
Depth Interval:	0 - 30.48 cm	0 - 30.48 cm	0 - 30.48 cm	0 - 38 cm	30 - 30 cm	30 - 30 cm	30 - 30 cm	0 - 38 cm
Conventional Parameters (mg/L)								
Cyanide, total	--	--	--	1.4 U	**23.1 J**	--	**0.03 J**	**0.006 J**
Metals (µg/L)								
Zinc	--	--	--	5.03 UJ	**15.3**	--	**44.5**	3.66 UJ
Dissolved Metals (µg/L)								
Zinc	--	--	--	--	--	2.19 U	--	--
Volatile Organics (µg/L)								
1,1-Dichloroethene	0.2 U	**0.23**	0.2 U	0.25 U	0.13 U	--	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.2 U	**81.9**	**117**	0.24 U	0.12 U	--	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.2 U	0.2 U	0.2 U	0.29 UJ	0.15 U	--	0.15 U	0.15 U
Benzene	0.2 U	**1.02**	**10.6**	**42**	**250**	--	**540**	0.14 U
Ethylbenzene	0.2 U	0.2 U	0.2 U	**3.3**	**33**	--	**77**	0.13 U
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	0.4 UT	**7.5 T**	**34 T**	--	**100 T**	**0.74 JT**
m,p-Xylene	0.4 U	0.4 U	0.4 U	**4.4**	**14**	--	**58**	**0.32 J**
Naphthalene	0.2 U	0.2 U	0.2 U	**250**	--	--	**3100**	**4.4**
o-Xylene	0.2 U	0.2 U	0.2 U	**3.1**	**20**	--	**47**	**0.42 J**
Toluene	**0.52**	0.2 U	**0.45**	**28**	**16**	--	**11**	0.25 U
Trichloroethene (TCE)	0.2 U	**0.38**	0.2 U	0.27 U	0.14 U	--	0.14 U	0.14 U
Vinyl chloride	**0.29**	**48.4**	**596**	0.084 U	0.042 U	--	0.042 U	0.042 U
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	--	--	**7.2**	**51**	--	**84**	**0.28**
Acenaphthene	--	--	--	**18**	**17**	--	**120**	**21**
Acenaphthylene	--	--	--	**0.18**	**1**	--	**3.6**	**0.17**
Anthracene	--	--	--	**0.88**	**4.8**	--	**9.3**	**0.88**
Benzo(a)anthracene	--	--	--	**0.13**	**3.2**	--	**2.4**	**0.042**
Benzo(a)pyrene	--	--	--	**0.082**	**3**	--	**2.7**	**0.016 J**
Benzo(b)fluoranthene	--	--	--	**0.054**	**2.1**	--	**1.5**	**0.012 J**
Benzo(g,h,i)perylene	--	--	--	**0.066**	**3.2**	--	**2.1**	**0.014 J**
Benzo(k)fluoranthene	--	--	--	**0.065**	**2**	--	**1.5**	**0.0071 J**
Chrysene	--	--	--	**0.18**	**4.4**	--	**3.6**	**0.053**
Dibenzo(a,h)anthracene	--	--	--	**0.0047 J**	**0.34**	--	**0.21**	0.0033 U
Fluoranthene	--	--	--	**3.6**	**15**	--	**17**	**2.1**
Fluorene	--	--	--	**6.8**	**18**	--	**31**	**6**
Indeno(1,2,3-c,d)pyrene	--	--	--	**0.051**	**2.7**	--	**1.9**	0.0098 U
Naphthalene	--	--	--	--	**1100**	--	--	--
Phenanthrene	--	--	--	**7.8**	**50**	--	**79**	**12**
Pyrene	--	--	--	**3.4**	**32**	--	**31**	**2.2**
Semivolatile Organics (µg/L)								
Dibenzofuran	--	--	--	**0.83**	**3.3**	--	**8**	**0.48**

Table 3-30
Existing Data Screening Table – TZW Ecological

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	GS-08-A-TR	GS-08-A-TR	GS-08-D-TR	GS-08-D-TR	SL-01-A-TR	SL-01-A-TR	SL-01-E-PR	SL-02-A-TR
Sample Name:	LWG2-T30-GS8A	LWG2-T30-GS8A-FILT	LWG2-T30-GS8D	LWG2-T30-GS8D-FILT	LWG2-T30-SL1A	LWG2-T30-SL1A-FILT	LWG2-P-SLT1E	LWG2-T30-SL2A
Sample Date:	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/7/2005	10/7/2005	11/15/2005	10/7/2005
Depth Interval:	30 - 30 cm	30 - 30 cm	30 - 30 cm	30 - 30 cm	30 - 30 cm	30 - 30 cm	0 - 38 cm	30 - 30 cm
Conventional Parameters (mg/L)								
Cyanide, total	**0.135 JT**	--	**0.12 J**	--	**0.11**	--	**0.2**	**0.02**
Metals (µg/L)								
Zinc	5.43 UT	--	**41.3**	--	9.99 U	--	1.79 UJ	6.22 U
Dissolved Metals (µg/L)								
Zinc	--	2.59 U	--	2.83 U	--	2.44 U	--	--
Volatile Organics (µg/L)								
1,1-Dichloroethene	0.13 U	--	0.13 U	--	0.13 U	--	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	--	0.12 U	--	0.12 U	--	**0.63**	0.12 U
1,2-Dichloroethene, trans-	0.15 U	--	0.15 U	--	0.15 U	--	0.15 U	0.15 U
Benzene	0.14 U	--	**14**	--	**0.94**	--	**9.2**	0.14 U
Ethylbenzene	0.13 U	--	**2.2**	--	**0.42 J**	--	**0.46 J**	0.13 U
LWG RA Total Xylene (Calculated U = 1/2)	**0.43 JT**	--	**1.6 T**	--	**2.2 T**	--	**2.8 T**	0.22 UT
m,p-Xylene	**0.33 J**	--	**0.63**	--	**0.62**	--	**1.2**	0.22 U
Naphthalene	--	--	**6.5**	--	**2.3**	--	**1 J**	--
o-Xylene	0.2 U	--	**0.95**	--	**1.6**	--	**1.6**	0.11 U
Toluene	0.24 U	--	0.79 U	--	0.6 U	--	**1.3**	0.32 U
Trichloroethene (TCE)	0.14 U	--	0.14 U	--	0.14 U	--	0.14 U	0.14 U
Vinyl chloride	0.042 U	--	0.042 U	--	0.042 U	--	**1.4**	0.042 U
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	**0.53**	--	**6.7**	--	**0.3**	--	**0.58**	0.012 U
Acenaphthene	**3.1**	--	**77**	--	**110**	--	**15**	**3.6**
Acenaphthylene	**0.16**	--	**0.37**	--	**0.58**	--	**0.087**	0.055 U
Anthracene	**0.2**	--	**2.6**	--	**4.5**	--	**0.35**	0.061 U
Benzo(a)anthracene	0.069 U	--	**0.21**	--	0.2 U	--	**0.0064 J**	0.048 U
Benzo(a)pyrene	**0.077**	--	**0.11**	--	0.062 U	--	0.003 U	**0.069**
Benzo(b)fluoranthene	0.053 U	--	**0.073**	--	0.04 U	--	0.0037 U	0.047 U
Benzo(g,h,i)perylene	**0.066**	--	**0.064**	--	**0.03 J**	--	0.007 U	**0.079**
Benzo(k)fluoranthene	0.045 U	--	**0.083**	--	0.046 U	--	0.0026 U	0.045 U
Chrysene	0.12 U	--	0.3 U	--	**0.31**	--	**0.011 J**	**0.078**
Dibenzo(a,h)anthracene	**0.0087 J**	--	**0.0086 J**	--	0.0033 U	--	0.0031 U	0.0048 U
Fluoranthene	**0.78**	--	**4.3**	--	**5.9**	--	**0.33**	0.36 U
Fluorene	**0.93**	--	**18**	--	**26**	--	**3.3**	0.72 U
Indeno(1,2,3-c,d)pyrene	**0.052**	--	**0.058**	--	**0.023 J**	--	0.004 U	**0.054**
Naphthalene	0.11 U	--	--	--	--	--	--	**0.47**
Phenanthrene	**1.7**	--	**29**	--	**44**	--	**3.4**	0.69 U
Pyrene	**0.87**	--	4.3 U	--	**6.1**	--	**0.3**	0.42 U
Semivolatile Organics (µg/L)								
Dibenzofuran	**0.14**	--	**0.77**	--	**4.8**	--	**0.21**	0.011 U

Table 3-30
Existing Data Screening Table – TZW Ecological

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	SL-02-A-TR	SL-02-C-PR	SL-02-E-PR	SL-03-A-TR	SL-03-A-TR	SL-03-C-PR	SL-03-F-PR	SL-04-A-TR
Sample Name:	LWG2-T30-SL2A-FILT	LWG2-P-SLT2C	LWG2-P-SLT2E	LWG2-T30-SL3A	LWG2-T30-SL3A-FILT	LWG2-P-SLT3C	LWG2-P-SLT3F	LWG2-T30-SL4A
Sample Date:	10/7/2005	11/16/2005	11/16/2005	10/7/2005	10/7/2005	11/17/2005	11/16/2005	10/8/2005
Depth Interval:	30 - 30 cm	0 - 38 cm	0 - 38 cm	30 - 30 cm	30 - 30 cm	0 - 38 cm	0 - 38 cm	30 - 30 cm
Conventional Parameters (mg/L)								
Cyanide, total	--	**0.008 J**	**0.38**	**0.01**	--	**0.007 J**	**0.69**	**0.03 T**
Metals (µg/L)								
Zinc	--	2.33 UJ	1.51 UJ	8.7 U	--	2.74 UJ	1.82 UJ	8.95 UT
Dissolved Metals (µg/L)								
Zinc	1.66 U	--	--	--	2.39 U	--	--	--
Volatile Organics (µg/L)								
1,1-Dichloroethene	--	0.13 U	0.13 U	0.13 U	--	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	--	0.12 U	0.12 U	0.12 U	--	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	--	0.15 U	0.15 U	0.15 U	--	0.15 U	0.15 U	0.15 U
Benzene	--	0.17 U	**2.4**	0.14 U	--	0.14 U	**19**	0.14 U
Ethylbenzene	--	0.13 U	**0.65**	0.13 U	--	0.13 U	**0.54**	0.13 U
LWG RA Total Xylene (Calculated U = 1/2)	--	**0.59 JT**	**3.8 T**	**0.23 JT**	--	**0.44 JT**	**1.2 T**	**0.42 JT**
m,p-Xylene	--	**0.26 J**	**1.3**	0.22 U	--	**0.22 J**	**0.57**	**0.25 J**
Naphthalene	--	**0.63 J**	**1.6 J**	--	--	**0.52 J**	**0.78 J**	--
o-Xylene	--	**0.33 J**	**2.5**	**0.12 J**	--	**0.22 J**	**0.65**	**0.17 J**
Toluene	--	**0.93**	**2.2**	0.31 U	--	0.51 U	**2.5**	0.19 U
Trichloroethene (TCE)	--	0.14 U	0.14 U	0.14 U	--	0.14 U	0.14 U	0.14 U
Vinyl chloride	--	0.042 U	**0.21 J**	0.042 U	--	0.042 U	**0.16 J**	0.042 U
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	**0.12**	**4.1**	0.021 U	--	**0.082**	**0.23**	0.027 U
Acenaphthene	--	**1.2**	**88**	**63**	--	**8.4**	**22**	**61**
Acenaphthylene	--	**0.027 J**	**0.57**	**0.24**	--	**0.11**	**0.18**	**0.25**
Anthracene	--	**0.14**	**2**	**0.55**	--	**0.33**	**0.2**	**2.3**
Benzo(a)anthracene	--	**0.0056 J**	**0.026 J**	0.092 U	--	**0.0073 J**	**0.0089 J**	0.14 U
Benzo(a)pyrene	--	0.0028 U	0.0028 U	**0.066**	--	0.0028 U	0.0028 U	**0.076**
Benzo(b)fluoranthene	--	0.0035 U	0.0035 U	0.046 U	--	0.0035 U	0.0035 U	0.053 U
Benzo(g,h,i)perylene	--	0.0065 U	0.0065 U	**0.057**	--	0.0065 U	0.0065 U	**0.058**
Benzo(k)fluoranthene	--	0.0024 U	0.0024 U	0.042 U	--	0.0024 U	0.0024 U	0.051 U
Chrysene	--	**0.0091 J**	**0.025 J**	0.14 U	--	**0.013 J**	**0.0049 J**	0.17 U
Dibenzo(a,h)anthracene	--	0.0029 U	0.0029 U	0.0061 U	--	0.0029 U	0.0029 U	0.008 U
Fluoranthene	--	**0.23**	**1.3**	**2.8**	--	**0.43**	**0.11**	**4**
Fluorene	--	**0.43**	**25**	**24**	--	**2.6**	**4**	**33**
Indeno(1,2,3-c,d)pyrene	--	0.0037 U	0.0037 U	**0.037**	--	0.0037 U	0.0037 U	**0.043**
Naphthalene	--	--	--	0.091 U	--	--	--	0.19 U
Phenanthrene	--	**0.86**	**16**	**12**	--	**3.9**	**1.4**	**18**
Pyrene	--	**0.25**	**1.4**	**2.1**	--	**0.5**	**0.12**	**2.9**
Semivolatile Organics (µg/L)								
Dibenzofuran	--	**0.041**	**3.2**	0.042 U	--	**0.094**	**0.47**	**0.3**

Table 3-30
Existing Data Screening Table – TZW Ecological

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	SL-04-A-TR	SL-04-F-PR	SL-05-A-TR	SL-05-A-TR	WLCSLH01GP39	WLCSLH01GP40	WLCSLH01GP41	WLCSLH01GP42
Sample Name:	LWG2-T30-SL4A-FILT	LWG2-P-SLT4F	LWG2-T30-SL5A	LWG2-T30-SL5A-FILT	WLCSLH01GP39W1	WLCSLH01GP40W1	WLCSLH01GP41W1	WLCSLH01GP42W1
Sample Date:	10/8/2005	11/16/2005	10/8/2005	10/8/2005	5/10/2005	5/10/2005	5/10/2005	5/10/2005
Depth Interval:	30 - 30 cm	0 - 38 cm	30 - 30 cm	30 - 30 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm
Conventional Parameters (mg/L)								
Cyanide, total	--	**0.22**	**0.01**	--	--	--	--	--
Metals (µg/L)								
Zinc	--	2.67 UJT	9.06 U	--	--	--	--	--
Dissolved Metals (µg/L)								
Zinc	2.61 U	--	--	1.9 U	--	--	--	--
Volatile Organics (µg/L)								
1,1-Dichloroethene	--	0.13 U	0.13 U	--	**0.85**	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	--	**0.26 J**	0.12 U	--	**517**	0.2 U	0.2 U	**6.36**
1,2-Dichloroethene, trans-	--	0.15 U	0.15 U	--	**0.35**	0.3 U	0.3 U	0.3 U
Benzene	--	**49**	0.14 U	--	**11.9**	**0.51**	0.2 U	0.2 U
Ethylbenzene	--	**5**	0.13 U	--	0.2 U	**1.02**	**0.52**	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	--	**11 T**	**0.22 JT**	--	0.4 UT	**0.78 T**	**0.7 T**	0.4 UT
m,p-Xylene	--	**3.6**	0.22 U	--	0.4 U	0.4 U	0.4 U	0.4 U
Naphthalene	--	**2.9**	--	--	1 U	**5.29**	**37.9**	**2.52**
o-Xylene	--	**7**	**0.11 J**	--	0.2 U	**0.58**	**0.5**	0.2 U
Toluene	--	**4.7**	0.28 U	--	**0.99**	**2.23**	**2.69**	0.2 U
Trichloroethene (TCE)	--	0.14 U	0.14 U	--	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	--	**0.32 J**	0.042 U	--	**390**	0.2 U	0.2 U	**7.92**
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	**36**	0.017 U	--	--	--	--	--
Acenaphthene	--	**76**	**12**	--	--	--	--	--
Acenaphthylene	--	**0.59**	**0.13**	--	--	--	--	--
Anthracene	--	**4.4**	0.25 U	--	--	--	--	--
Benzo(a)anthracene	--	**0.047**	0.056 U	--	--	--	--	--
Benzo(a)pyrene	--	**0.0076 J**	**0.024 J**	--	--	--	--	--
Benzo(b)fluoranthene	--	**0.021 J**	0.02 U	--	--	--	--	--
Benzo(g,h,i)perylene	--	**0.0069 J**	**0.021 J**	--	--	--	--	--
Benzo(k)fluoranthene	--	0.0025 U	0.015 U	--	--	--	--	--
Chrysene	--	**0.068**	0.091 U	--	--	--	--	--
Dibenzo(a,h)anthracene	--	0.003 U	0.0022 U	--	--	--	--	--
Fluoranthene	--	**2.4**	1.7 U	--	--	--	--	--
Fluorene	--	**24**	**3.7**	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	**0.0046 J**	**0.015 J**	--	--	--	--	--
Naphthalene	--	--	0.043 U	--	--	--	--	--
Phenanthrene	--	**34**	**7.7**	--	--	--	--	--
Pyrene	--	**2.4**	1.8 U	--	--	--	--	--
Semivolatile Organics (µg/L)								
Dibenzofuran	--	**7.3**	0.017 U	--	--	--	--	--

Table 3-30
Existing Data Screening Table – TZW Ecological

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	WLCSLH01GP43	WLCSLH01GP44	WLCSLH01GP45	WLCSLH01GP46	WLCSLH01GP47	WLCSLH01GP48	WLCSLH01GP49	WLCSLH01GP50
Sample Name:	WLCSLH01GP43W1	WLCSLH01GP44W1	WLCSLH01GP45W1	WLCSLH01GP46W1	WLCSLH01GP47W1	WLCSLH01GP48W1	WLCSLH01GP49W1	WLCSLH01GP50W1
Sample Date:	5/11/2005	5/11/2005	5/11/2005	5/11/2005	5/11/2005	5/11/2005	5/12/2005	5/12/2005
Depth Interval:	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm
Conventional Parameters (mg/L)								
Cyanide, total	--	--	--	--	--	--	--	--
Metals (µg/L)								
Zinc	--	--	--	--	--	--	--	--
Dissolved Metals (µg/L)								
Zinc	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)								
1,1-Dichloroethene	0.2 UT	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	**25.4 T**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, trans-	0.3 UT	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	**1.24 T**	**1.58**	**4.08**	**7.99**	0.2 U	**7.98**	0.2 U	0.2 U
Ethylbenzene	0.2 UT	**32.6**	**5.62**	**1.56**	0.2 U	**0.24**	0.2 U	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	**8.18 T**	**1.29 T**	**2.38 T**	0.4 UT	0.4 UT	0.4 UT	0.4 UT
m,p-Xylene	0.4 UT	**2.42**	**0.41**	**0.99**	0.4 U	0.4 U	0.4 U	0.4 U
Naphthalene	1 UT	**678**	**57.6**	**24.8**	**2.53**	1 U	**2.51**	1 U
o-Xylene	0.2 UT	**5.76**	**0.88**	**1.39**	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	**0.705 T**	**1.36**	**0.39**	**1.58**	0.2 U	**0.62**	0.2 U	**1.3**
Trichloroethene (TCE)	0.2 UT	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	**115 T**	**0.79**	0.2 U	0.2 U	0.2 U	**0.47**	0.2 U	0.2 U
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--	--
Semivolatile Organics (µg/L)								
Dibenzofuran	--	--	--	--	--	--	--	--

Table 3-30
Existing Data Screening Table – TZW Ecological

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	WLCSLH01GP51	WLCSLH01GP52	WLCSLH01GP53	WLCSLH01GP54	WLCSLH01GP55	WLCSLH01GP56	WLCSLH01GP57	WLCSLH01GP58
Sample Name:	WLCSLH01GP51W1	WLCSLH01GP52W1	WLCSLH01GP53W1	WLCSLH01GP54W1	WLCSLH01GP55W1	WLCSLH01GP56W1	WLCSLH01GP57W1	WLCSLH01GP58W1
Sample Date:	5/13/2005	5/13/2005	5/13/2005	5/13/2005	5/16/2005	5/16/2005	5/16/2005	5/16/2005
Depth Interval:	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm
Conventional Parameters (mg/L)								
Cyanide, total	--	--	--	--	**0.316**	--	--	--
Metals (µg/L)								
Zinc	--	--	--	--	**194**	--	--	--
Dissolved Metals (µg/L)								
Zinc	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)								
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	**7.24**	0.2 U	**1.55**	**1.7**	**111**	**27.5**
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	**0.38**	0.3 U
Benzene	0.2 U	**0.25**	**0.36**	**894**	**2.71**	**2.07**	**3.14**	**0.67**
Ethylbenzene	0.2 U	**1.15**	0.2 U	**46**	0.2 U	0.2 U	0.2 U	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	**0.46 T**	0.4 UT	**64.9 T**	0.4 UT	0.4 UT	0.4 UT	0.4 UT
m,p-Xylene	0.4 U	0.4 U	0.4 U	**42.6**	0.4 U	0.4 U	0.4 U	0.4 U
Naphthalene	1 U	**29.6**	**1.94**	**3630**	--	**3.79**	1 U	1 U
o-Xylene	0.2 U	**0.26**	0.2 U	**22.3**	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	1.92 U	0.82 U	0.3 U	**178**	**0.45**	**1.19**	**0.57**	**0.26**
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.31**	0.2 U
Vinyl chloride	0.2 U	**0.48**	**8.27**	0.2 U	**16**	**2.19**	**139**	**7.92**
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	**16.6**	--	--	--
Acenaphthylene	--	--	--	--	**0.19**	--	--	--
Anthracene	--	--	--	--	**3.12**	--	--	--
Benzo(a)anthracene	--	--	--	--	**0.495**	--	--	--
Benzo(a)pyrene	--	--	--	--	**0.343**	--	--	--
Benzo(b)fluoranthene	--	--	--	--	**0.286**	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	**0.2**	--	--	--
Benzo(k)fluoranthene	--	--	--	--	**0.124**	--	--	--
Chrysene	--	--	--	--	**0.562**	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	0.0476 U	--	--	--
Fluoranthene	--	--	--	--	**5.28**	--	--	--
Fluorene	--	--	--	--	**8.6**	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	**0.133**	--	--	--
Naphthalene	--	--	--	--	**0.229**	--	--	--
Phenanthrene	--	--	--	--	**14.1**	--	--	--
Pyrene	--	--	--	--	**5.43**	--	--	--
Semivolatile Organics (µg/L)								
Dibenzofuran	--	--	--	--	--	--	--	--

Table 3-30
Existing Data Screening Table – TZW Ecological

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	WLCSLH01GP61	WLCSLH01GP62	WLCSLH01GP63	WLCSLH01GP64	WLCSLH01GP66	WLCSLH01GP67	WLCSLH01GP68	WLCSLH01GP69
Sample Name:	WLCSLH01GP61W1	WLCSLH01GP62W1	WLCSLH01GP63W1	WLCSLH01GP64W1	WLCSLH01GP66W1	WLCSLH01GP67W1	WLCSLH01GP68W1	WLCSLH01GP69W1
Sample Date:	5/18/2005	5/18/2005	5/19/2005	5/19/2005	5/20/2005	5/23/2005	5/23/2005	5/24/2005
Depth Interval:	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm
Conventional Parameters (mg/L)								
Cyanide, total	**0.0826 T**	**0.0668**	**0.117**	**0.356**	--	--	**0.196**	**0.231**
Metals (µg/L)								
Zinc	**167 T**	**983**	**568**	**266**	--	--	**126**	**53.2**
Dissolved Metals (µg/L)								
Zinc	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)								
1,1-Dichloroethene	0.2 UT	0.2 U	0.2 U	**2.44**	0.2 U	**39**	0.2 U	**1.3**
1,2-Dichloroethene, cis-	0.2 UT	**1.66**	**18.2**	**2950**	**17.1**	**67000**	**12**	**3830**
1,2-Dichloroethene, trans-	0.3 UT	0.3 U	0.3 U	**25.4**	0.3 U	**117**	0.3 U	**12.8**
Benzene	**3.95 T**	0.2 U	**2.45**	**747**	**2.31**	**99.2**	**3840**	**254**
Ethylbenzene	0.2 UT	0.2 U	0.2 U	**275**	0.2 U	**26.9**	**416**	**138**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	0.4 UT	**158 T**	0.4 UT	**18.7 T**	**440 T**	**96.6 T**
m,p-Xylene	0.4 UT	0.4 U	0.4 U	**90.2**	0.4 U	**9**	**293**	**56.2**
Naphthalene	--	**1.85**	**20**	**12200**	**8.08**	**2520**	**12300**	**11400**
o-Xylene	0.2 UT	0.2 U	0.2 U	**67.5**	0.2 U	**9.66**	**150**	**40.4**
Toluene	**2.15 T**	**5.65**	**0.64**	**56.1**	2.7 U	**30.7**	**36.6**	**23**
Trichloroethene (TCE)	0.2 UT	0.2 U	0.2 U	**0.62**	**7**	**88500**	**43.5**	**4.31**
Vinyl chloride	**1.9 T**	**0.99**	**114**	**625**	**2.51**	**4300**	0.2 U	**540**
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	--	--	--	--	--	--	--
Acenaphthene	**26.4 T**	**61.4**	**3.29**	**172**	--	--	**174**	**262**
Acenaphthylene	**0.0774 T**	**0.372**	**0.067**	**0.807**	--	--	**6.72**	**2.08**
Anthracene	**0.479 T**	**9.33**	**1.99**	**12.5**	--	--	**32.2**	**31.2**
Benzo(a)anthracene	**0.0774 T**	**1.91**	**0.182**	**3.68**	--	--	**21.7**	**12.5**
Benzo(a)pyrene	**0.0484 T**	**0.881**	**0.067**	**3.57**	--	--	**24.2**	**15.2**
Benzo(b)fluoranthene	**0.0484 T**	**0.901**	**0.0766**	**3.11**	--	--	**22.5**	**12.9**
Benzo(g,h,i)perylene	0.0483 UT	**0.362**	0.0479 U	**2.24**	--	--	**15**	**11.2**
Benzo(k)fluoranthene	0.0483 UT	**0.255**	0.0479 U	**0.836**	--	--	**5.2**	**4.29**
Chrysene	**0.097 T**	**1.22**	**0.249**	**2.9**	--	--	**15.5**	**14.9**
Dibenzo(a,h)anthracene	0.0483 UT	**0.0686**	0.0479 U	**0.327**	--	--	**2.18**	**1.54**
Fluoranthene	**0.769 T**	**11.8**	**0.92**	**15.9**	--	--	**76.7**	**50.5**
Fluorene	**7.07 T**	**36.6**	**1.17**	**50.2**	--	--	**65.8**	**71.3**
Indeno(1,2,3-c,d)pyrene	0.0483 UT	**0.274**	0.0479 U	**1.62**	--	--	**10.7**	**7.72**
Naphthalene	**0.0677 T**	--	--	--	--	--	--	--
Phenanthrene	**3.13 T**	**64.7**	**3.17**	**93.9**	--	--	**200**	**182**
Pyrene	**0.672 T**	**12.8**	**0.91**	**19**	--	--	**92.1**	**68.7**
Semivolatile Organics (µg/L)								
Dibenzofuran	--	--	--	--	--	--	--	--

Table 3-30
Existing Data Screening Table – TZW Ecological

Database:	Water	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	WLCSLH01GP70	WLCSLH01GP71	WLCSLH01GP72	WLCSLH01GP73	WLCSLH01GP74	WLCSLH01GP75	WLCSLH01GP76	WLCSLH01GP80
Sample Name:	WLCSLH01GP70W1	WLCSLH01GP71W1	WLCSLH01GP72W1	WLCSLH01GP73W1	WLCSLH01GP74W1	WLCSLH01GP75W1	WLCSLH01GP76W1	WLCSLH01GP80W1
Sample Date:	5/24/2005	5/24/2005	5/25/2005	5/25/2005	5/26/2005	5/26/2005	5/27/2005	5/31/2005
Depth Interval:	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm
Conventional Parameters (mg/L)								
Cyanide, total	**0.0444**	--	--	**0.46**	--	**0.026**	0.01 U	--
Metals (µg/L)								
Zinc	**44.5**	--	--	10 U	--	**188**	**237**	--
Dissolved Metals (µg/L)								
Zinc	--	--	--	--	--	--	--	--
Volatile Organics (µg/L)								
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	**24.6**	0.2 U	0.2 U	**21.5**	0.2 U
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	**123**	0.2 U	0.2 U	**242**	**6.04**	**0.99**	**8.8**	**2.47**
Ethylbenzene	**106**	**42.1**	0.2 U	**321**	**14.4**	**2.14**	**0.97**	**1.61**
LWG RA Total Xylene (Calculated U = 1/2)	**68.8 T**	**24 T**	0.4 UT	**161 T**	**6.63 T**	0.4 UT	0.4 UT	0.4 UT
m,p-Xylene	**41.9**	**5.25**	0.4 U	**79.3**	**2.62**	0.4 U	0.4 U	0.4 U
Naphthalene	**4820**	**12400**	**22.9**	**13700**	**670**	**53.9**	**42.7**	**59.4**
o-Xylene	**26.9**	**18.7**	0.2 U	**81.5**	**4.01**	0.2 U	0.2 U	0.2 U
Toluene	**7.45**	**0.33**	**0.8**	**17.4**	**1.15**	**2.24**	**1.62**	1.09 U
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	**2.56**	0.2 U	0.2 U	**0.8**	0.2 U
Vinyl chloride	**0.88**	0.2 U	0.2 U	**1.22**	**0.43**	**0.59**	**1.69**	0.2 U
Polycyclic Aromatic Hydrocarbons (µg/L)								
2-Methylnaphthalene	--	--	--	--	--	--	--	--
Acenaphthene	**85.1**	--	--	**399**	--	**16.6**	**4.27**	--
Acenaphthylene	**1.87**	--	--	**4.44**	--	**0.22**	**0.13**	--
Anthracene	**25.5**	--	--	**63.8**	--	**2.89**	**1.57**	--
Benzo(a)anthracene	**10.9**	--	--	**32.3**	--	**1.21**	**0.84**	--
Benzo(a)pyrene	**13.5**	--	--	**37.8**	--	**1.17**	**0.81**	--
Benzo(b)fluoranthene	**11.8**	--	--	**33.3**	--	**1.07**	**0.68**	--
Benzo(g,h,i)perylene	**9.76**	--	--	**28.8**	--	**0.86**	**0.7**	--
Benzo(k)fluoranthene	**3.64**	--	--	**9**	--	**0.33**	**0.26**	--
Chrysene	**12.9**	--	--	**34.5**	--	**1.34**	**1.08**	--
Dibenzo(a,h)anthracene	**1.35**	--	--	**3.71**	--	**0.14**	**0.1**	--
Fluoranthene	**43.6**	--	--	**106**	--	**4.79**	**3.76**	--
Fluorene	**29.6**	--	--	**108**	--	**5.59**	**1.69**	--
Indeno(1,2,3-c,d)pyrene	**6.76**	--	--	**16.9**	--	**0.62**	**0.46**	--
Naphthalene	--	--	--	--	--	--	--	--
Phenanthrene	**120**	--	--	**362**	--	**16.8**	**9.8**	--
Pyrene	**61**	--	--	**148**	--	**6.41**	**6.31**	--
Semivolatile Organics (µg/L)								
Dibenzofuran	--	--	--	--	--	--	--	--

Table 3-30
Existing Data Screening Table – TZW Ecological

Database:	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW	Gasco RM6-6.7_TZW
Location Name:	WLCSLH01GP81	WLCSLH01GP82	WLCSLH01GP84
Sample Name:	WLCSLH01GP81W1	WLCSLH01GP82W1	WLCSLH01GP84W1
Sample Date:	5/31/2005	6/1/2005	6/1/2005
Depth Interval:	30.48 - 30.48 cm	30.48 - 30.48 cm	30.48 - 30.48 cm
Conventional Parameters (mg/L)			
Cyanide, total	**0.0669**	**0.0337**	--
Metals (µg/L)			
Zinc	**179**	**94.4**	--
Dissolved Metals (µg/L)			
Zinc	--	--	--
Volatile Organics (µg/L)			
1,1-Dichloroethene	0.2 UT	0.2 U	0.2 U
1,2-Dichloroethene, cis-	**2.28 T**	**3.77**	**2.27**
1,2-Dichloroethene, trans-	0.3 UT	0.3 U	0.3 U
Benzene	**973 T**	**28.9**	0.2 U
Ethylbenzene	**134 T**	**75.5**	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	**87.5 T**	**57.2 T**	0.4 UT
m,p-Xylene	**40.8 T**	**30.3**	0.4 U
Naphthalene	**8480 T**	**3890**	**47.3**
o-Xylene	**46.7 T**	**26.9**	0.2 U
Toluene	**44.7 T**	**9.32**	**2.73**
Trichloroethene (TCE)	0.2 UT	0.2 U	**5.63**
Vinyl chloride	**1.57 T**	**1.51**	**0.65**
Polycyclic Aromatic Hydrocarbons (µg/L)			
2-Methylnaphthalene	--	--	--
Acenaphthene	**123**	**111**	--
Acenaphthylene	**1.31**	**1.74**	--
Anthracene	**14**	**8.12**	--
Benzo(a)anthracene	**3.82**	**2.59**	--
Benzo(a)pyrene	**4.59**	**3.09**	--
Benzo(b)fluoranthene	**3.97**	**2.76**	--
Benzo(g,h,i)perylene	**4.05**	**2.5**	--
Benzo(k)fluoranthene	**1.23**	**0.826**	--
Chrysene	**4.4**	**2.6**	--
Dibenzo(a,h)anthracene	**0.48**	**0.327**	--
Fluoranthene	**18.8**	**11.7**	--
Fluorene	**30.9**	**33**	--
Indeno(1,2,3-c,d)pyrene	**2.71**	**1.66**	--
Naphthalene	--	--	--
Phenanthrene	**85.5**	**63.5**	--
Pyrene	**22.1**	**16.2**	--
Semivolatile Organics (µg/L)			
Dibenzofuran	--	--	--

Table 3-30
Existing Data Screening Table – TZW Ecological

Notes:
Detected concentration is greater than 1 screening level
Detected concentration is greater than 2 screening levels
Detected concentration is greater than 3 screening levels
Detected concentration is greater than 4 screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
T = Result is the value of a total or calculation.
-- = Results not reported or not applicable

Acronyms:
µg/L = micrograms per liter
mg/L = milligrams per liter
cm = centimeters
LWG = Lower Willamette Group
RA = Portland Harbor Site risk assessment
TZW = transition zone water
Totals are calculated as the sum of all detected results and 1/2 the undetected result. If all are undetected results, the highest reporting limit value is reported as the sum.

Table 3-31
Existing Data Screening Table - Fill Groundwater Human Health

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill
System Location Code:	MW-01-22	MW-02-32	MW-03-26	MW-04-35	MW-19-22	MW-21-12	MW-23-27
Sample name:	2708-110329-MW-1-22-139	2708-110329-MW-2-32-134	2708-110330-MW-3-26-144	2708-110328-MW-4-35-126	2708-110331-MW-19-22-159	2708-110329-MW-21-12-141	2708-100622-MW-23-27-107
Sample date:	3/29/2011	3/29/2011	3/30/2011	3/28/2011	3/31/2011	3/29/2011	6/22/2010
Depth interval:	335.28 - 640.08 cm	655.32 - 960.12 cm	457.2 - 762 cm	731.52 - 1036.32 cm	365.76 - 670.56 cm	213.36 - 365.76 cm	539.496 - 844.296 cm
Conventional Parameters (mg/l)							
Cyanide, free	**0.0252**	**0.0051**	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**1.8**	**0.152**	**0.391**	**0.0986**	**0.0894**	**0.0293**	**0.173**
Metals (µg/l)							
Zinc	**27.2**	4 U	**4.18**	4 U	**240**	**4.49**	**15.5**
Volatile Organics (µg/l)							
1,1-Dichloroethene	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U
1,2-Dichloroethene, cis-	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U
1,2-Dichloroethene, trans-	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U
Benzene	1.5 U	0.25 U	0.25 U	**0.46**	**11**	0.25 U	**1.42**
Ethylbenzene	2.5 U	0.5 U	0.5 U	0.5 U	**5.4**	0.5 U	**1.32**
Naphthalene	**99.1**	2 U	2 U	2 U	**864**	2 U	**92.6**
o-Xylene	2.5 U	0.5 U	0.5 U	0.5 U	**6.15**	0.5 U	**1.07**
Toluene	5 U	1 U	1 U	1 U	5 U	1 U	**0.7**
Trichloroethene (TCE)	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U
Vinyl chloride	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	5 UT	1 UT	1 UT	1 UT	**11.6 T**	**1.37 T**	**3.38 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**15.4**	**0.153**	0.0755 U	0.08 U	943 U	0.243 U	**3.54**
Acenaphthene	**16.4**	**0.192**	**0.336**	**25.5**	**517**	**17**	**25.7**
Anthracene	**4.18**	**0.17**	**0.802**	**1.39**	**2280**	**0.626**	1.89 U
Benzo(a)anthracene	**1.27**	0.0396 U	**0.208**	**0.123**	**3500**	**0.147**	**2.8**
Benzo(a)pyrene	**1.49**	0.0396 U	**0.477**	**0.0479**	**4720**	**0.174**	**1.97**
Benzo(b)fluoranthene	--	0.0396 U	--	--	--	--	--
Benzo(k)fluoranthene	--	0.0396 U	--	--	--	--	--
Chrysene	**1.77**	0.0396 U	**0.266**	**0.124**	**5090**	**0.198**	**2.89**
Dibenzo(a,h)anthracene	**0.138**	0.0396 U	**0.0649**	0.04 U	472 U	0.0374 U	1.89 U
Fluoranthene	**6.02**	0.0396 U	**0.409**	**3.18**	**12500**	**0.277**	**6.97**
Fluorene	**14**	**0.46**	**0.133**	**6.34**	**650**	**13.4**	**5.07**
Indeno(1,2,3-c,d)pyrene	**0.889**	0.0396 U	**0.559**	0.04 U	**3320**	**0.235**	1.89 U
Naphthalene	**112**	**0.899**	**0.42**	**0.21**	**1330**	1.07 U	**55.3**
Pyrene	**6.54**	**0.321**	**0.578**	**2.82**	**15600**	**0.559**	**8.21**
Semivolatile Organics (µg/l)							
Dibenzofuran	**1.62**	**0.0408**	0.0377 U	**0.109**	472 U	**2.62**	1.89 U

Table 3-31
Existing Data Screening Table - Fill Groundwater Human Health

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill
System Location Code:	NWN-9-31	OW-7-17	OW-8-15	OW-9-25	PZ5-5	RP-11-30	WS-8-33
Sample name:	5237-110321-NWN-9-31-104	2708-100622-OW-7-17-101	2708-100622-OW-8-15-100	2708-100622-OW-9-25-106	2708-101005-PZ-5-5-141	5237-070827-RP-11-30-101	5237-110321-WS-8-33-100
Sample date:	3/21/2011	6/22/2010	6/22/2010	6/22/2010	10/5/2010	8/27/2007	3/21/2011
Depth interval:	487.68 - 944.88 cm	381 - 533.4 cm	307.848 - 460.248 cm	609.6 - 762 cm	115.824 - 146.304 cm	458.4192 - 915.6192 cm	685.8 - 990.6 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.005 U	**0.0552**	0.005 U	-- UR	0.005 U
Cyanide, total	**0.0283**	**0.0206**	**0.123**	**2.38**	**0.0841**	**0.0262 J**	**0.374**
Metals (µg/l)							
Zinc	**4.67**	**6.16**	**97.5**	**305**	**120**	**68.9**	**6.29**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	1 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	1 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	1 U
Benzene	**30.9**	0.25 U	0.25 U	0.25 U	0.25 U	0.4 U	**75.3**
Ethylbenzene	**24.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	**22.8**
Naphthalene	**416**	2 U	2 U	2 U	2 U	**--**	**166**
o-Xylene	**18.9**	0.5 U	0.5 U	0.5 U	0.5 U	1 U	**28.1**
Toluene	**1.62**	0.5 U	0.5 U	0.5 U	1 U	**0.75**	2 U
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	1 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	1 U
LWG RA Total Xylene (Calculated U = 1/2)	**30.1 T**	1 UT	1 UT	1 UT	1 UT	2 UT	**45.4 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**18.5**	**1.05**	0.19 U	**0.102**	3.96 U	0.0952 U	**81.1**
Acenaphthene	**66**	**21.2**	**1.61**	**0.0502**	**11.7**	**4.47 J**	**105**
Anthracene	**1.98**	**0.675**	**0.588**	**0.518**	**3.29**	0.0952 U	**10.7**
Benzo(a)anthracene	0.8 U	**0.432**	**1.2**	**0.957**	**16.3**	**0.0225**	**2.75**
Benzo(a)pyrene	0.8 U	**0.475**	**3.08**	**1.49**	**21.8**	**0.0169**	**2.83**
Benzo(b)fluoranthene	0.8 U	**--**	**--**	**--**	**--**	**0.0177**	**--**
Benzo(k)fluoranthene	0.8 U	**--**	**--**	**--**	**--**	**0.0124**	**--**
Chrysene	0.8 U	**0.52**	**1.87**	**1.49**	**23.2**	**0.0318**	**3.18**
Dibenzo(a,h)anthracene	0.8 U	0.189 U	**0.407**	**0.207**	**3.41**	0.00476 U	0.842 U
Fluoranthene	**4.28**	**4.32**	**1.24**	**1.8**	**39.1**	**0.373 J**	**13.2**
Fluorene	**13**	**0.91**	**0.299**	**0.647**	1.98 U	**0.595 J**	**29.2**
Indeno(1,2,3-c,d)pyrene	0.8 U	**0.499**	**3.16**	**1.58**	**23.2**	**0.0112**	**1.95**
Naphthalene	**307**	**1.26**	**0.789**	**0.425**	3.96 U	**0.106**	**96.6**
Pyrene	**4.24**	**3.87**	**1.8**	**2.32**	**54**	**0.326 J**	**15**
Semivolatile Organics (µg/l)							
Dibenzofuran	**1.26**	**0.541**	0.19 U	0.0388 U	1.98 U	0.0952 U	**4.65**

Table 3-31
Existing Data Screening Table - Fill Groundwater Human Health

Database:	**Upland_MW**
Analysis Matrix:	**Gasco RM6-6.7_GW_fill/alluvial**
System Location Code:	**MW-05-32**
Sample name:	**2708-110330-MW-5-32-149**
Sample date:	**3/30/2011**
Depth interval:	**640.08 - 944.88 cm**
Conventional Parameters (mg/l)	
Cyanide, free	0.005 U
Cyanide, total	**0.0951**
Metals (µg/l)	
Zinc	**5.87**
Volatile Organics (µg/l)	
1,1-Dichloroethene	0.5 U
1,2-Dichloroethene, cis-	0.5 U
1,2-Dichloroethene, trans-	0.5 U
Benzene	0.25 U
Ethylbenzene	0.5 U
Naphthalene	2 U
o-Xylene	0.5 U
Toluene	1 U
Trichloroethene (TCE)	0.5 U
Vinyl chloride	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	1 UT
Polycyclic Aromatic Hydrocarbons (µg/l)	
2-Methylnaphthalene	**0.15**
Acenaphthene	**0.118**
Anthracene	**0.92**
Benzo(a)anthracene	**0.735**
Benzo(a)pyrene	**1.04**
Benzo(b)fluoranthene	**--**
Benzo(k)fluoranthene	**--**
Chrysene	**1.07**
Dibenzo(a,h)anthracene	**0.113**
Fluoranthene	**1.19**
Fluorene	**0.107**
Indeno(1,2,3-c,d)pyrene	**0.74**
Naphthalene	**1**
Pyrene	**2.21**
Semivolatile Organics (µg/l)	
Dibenzofuran	0.0377 U

Table 3-31
Existing Data Screening Table - Fill Groundwater Human Health

Notes:

Detected concentration is greater than one screening level

Detected concentration is greater than two screening levels

Detected concentration is greater than three screening levels

Detected concentration is greater than four screening levels

Detected concentration is greater than five screening levels

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

R = Rejected

T = Result is the value of a total or calculation.

-- = Results not reported or not applicable

Acronyms:

µg/l = micrograms per liter

mg/l = milligrams per liter

cm = centimeters

LWG = Lower Willamette Group

RA = Portland Harbor Site risk assessment

Totals are calculated as the sum of all detected results and 1/2 the undetected result. If all are undetected results, the highest reporting limit value is reported as the sum.

Table 3-32
Existing Data Screening Table – Fill Groundwater Ecological

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill
System Location Code:	MW-01-22	MW-02-32	MW-03-26	MW-04-35	MW-19-22	MW-21-12	MW-23-27
Sample name:	2708-110329-MW-1-22-139	2708-110329-MW-2-32-134	2708-110330-MW-3-26-144	2708-110328-MW-4-35-126	2708-110331-MW-19-22-159	2708-110329-MW-21-12-141	2708-100622-MW-23-27-107
Sample date:	3/29/2011	3/29/2011	3/30/2011	3/28/2011	3/31/2011	3/29/2011	6/22/2010
Depth interval:	335.28 - 640.08 cm	655.32 - 960.12 cm	457.2 - 762 cm	731.52 - 1036.32 cm	365.76 - 670.56 cm	213.36 - 365.76 cm	539.496 - 844.296 cm
Conventional Parameters (mg/l)							
Cyanide, free	**0.0252**	**0.0051**	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**1.8**	**0.152**	**0.391**	**0.0986**	**0.0894**	**0.0293**	**0.173**
Metals (µg/l)							
Zinc	**27.2**	4 U	**4.18**	4 U	**240**	**4.49**	**15.5**
Volatile Organics (µg/l)							
1,1-Dichloroethene	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U
1,2-Dichloroethene, cis-	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U
1,2-Dichloroethene, trans-	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U
Benzene	1.5 U	0.25 U	0.25 U	**0.46**	**11**	0.25 U	**1.42**
Ethylbenzene	2.5 U	0.5 U	0.5 U	0.5 U	**5.4**	0.5 U	**1.32**
m,p-Xylene	5 U	1 U	1 U	1 U	**5.4**	**1.12**	**2.31**
Naphthalene	**99.1**	2 U	2 U	2 U	**864**	2 U	**92.6**
o-Xylene	2.5 U	0.5 U	0.5 U	0.5 U	**6.15**	0.5 U	**1.07**
Toluene	5 U	1 U	1 U	1 U	5 U	1 U	**0.7**
Trichloroethene (TCE)	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U
Vinyl chloride	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	5 UT	1 UT	1 UT	1 UT	**11.6 T**	**1.37 T**	**3.38 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**15.4**	**0.153**	0.0755 U	0.08 U	943 U	0.243 U	**3.54**
Acenaphthene	**16.4**	**0.192**	**0.336**	**25.5**	**517**	**17**	**25.7**
Acenaphthylene	**0.505**	**0.184**	**0.597**	**1.53**	472 U	1.21 U	**3.44**
Anthracene	**4.18**	**0.17**	**0.802**	**1.39**	**2280**	**0.626**	1.89 U
Benzo(a)anthracene	**1.27**	0.0396 U	**0.208**	**0.123**	**3500**	**0.147**	**2.8**
Benzo(a)pyrene	**1.49**	0.0396 U	**0.477**	**0.0479**	**4720**	**0.174**	**1.97**
Benzo(b)fluoranthene	--	0.0396 U	--	--	--	--	--
Benzo(g,h,i)perylene	**1.07**	0.0396 U	**0.745**	0.04 U	**3960**	**0.352**	1.89 U
Benzo(k)fluoranthene	--	0.0396 U	--	--	--	--	--
Chrysene	**1.77**	0.0396 U	**0.266**	**0.124**	**5090**	**0.198**	**2.89**
Dibenzo(a,h)anthracene	**0.138**	0.0396 U	**0.0649**	0.04 U	472 U	0.0374 U	1.89 U
Fluoranthene	**6.02**	0.0396 U	**0.409**	**3.18**	**12500**	**0.277**	**6.97**
Fluorene	**14**	**0.46**	**0.133**	**6.34**	**650**	**13.4**	**5.07**
Indeno(1,2,3-c,d)pyrene	**0.889**	0.0396 U	**0.559**	0.04 U	**3320**	**0.235**	1.89 U
Naphthalene	**112**	**0.899**	**0.42**	**0.21**	**1330**	1.07 U	**55.3**
Phenanthrene	**26.2**	**0.0555**	**0.0907**	**0.332**	**5330**	**0.128**	**7.83**
Pyrene	**6.54**	**0.321**	**0.578**	**2.82**	**15600**	**0.559**	**8.21**
Semivolatile Organics (µg/l)							
Dibenzofuran	**1.62**	**0.0408**	0.0377 U	**0.109**	472 U	**2.62**	1.89 U

Table 3-32
Existing Data Screening Table – Fill Groundwater Ecological

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill	Gasco RM6-6.7_GW_fill
System Location Code:	NWN-9-31	OW-7-17	OW-8-15	OW-9-25	PZ5-5	RP-11-30	WS-8-33
Sample name:	5237-110321-NWN-9-31-104	2708-100622-OW-7-17-101	2708-100622-OW-8-15-100	2708-100622-OW-9-25-106	2708-101005-PZ-5-5-141	5237-070827-RP-11-30-101	5237-110321-WS-8-33-100
Sample date:	3/21/2011	6/22/2010	6/22/2010	6/22/2010	10/5/2010	8/27/2007	3/21/2011
Depth interval:	487.68 - 944.88 cm	381 - 533.4 cm	307.848 - 460.248 cm	609.6 - 762 cm	115.824 - 146.304 cm	458.4192 - 915.6192 cm	685.8 - 990.6 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.005 U	**0.0552**	0.005 U	-- UR	0.005 U
Cyanide, total	**0.0283**	**0.0206**	**0.123**	**2.38**	**0.0841**	**0.0262 J**	**0.374**
Metals (µg/l)							
Zinc	**4.67**	**6.16**	**97.5**	**305**	**120**	**68.9**	**6.29**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	1 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	1 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	1 U
Benzene	**30.9**	0.25 U	0.25 U	0.25 U	0.25 U	0.4 U	**75.3**
Ethylbenzene	**24.7**	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	**22.8**
m,p-Xylene	**11.2**	1 U	1 U	1 U	1 U	2 U	**17.3**
Naphthalene	**416**	2 U	2 U	2 U	2 U	**--**	**166**
o-Xylene	**18.9**	0.5 U	0.5 U	0.5 U	0.5 U	1 U	**28.1**
Toluene	**1.62**	0.5 U	0.5 U	0.5 U	1 U	**0.75**	2 U
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	1 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	1 U
LWG RA Total Xylene (Calculated U = 1/2)	**30.1 T**	1 UT	1 UT	1 UT	1 UT	2 UT	**45.4 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**18.5**	**1.05**	0.19 U	**0.102**	3.96 U	0.0952 U	**81.1**
Acenaphthene	**66**	**21.2**	**1.61**	**0.0502**	**11.7**	**4.47 J**	**105**
Acenaphthylene	**1.61**	**0.591**	**1.68**	**0.819**	**6.7**	0.0952 U	**3.15**
Anthracene	**1.98**	**0.675**	**0.588**	**0.518**	**3.29**	0.0952 U	**10.7**
Benzo(a)anthracene	0.8 U	**0.432**	**1.2**	**0.957**	**16.3**	**0.0225**	**2.75**
Benzo(a)pyrene	0.8 U	**0.475**	**3.08**	**1.49**	**21.8**	**0.0169**	**2.83**
Benzo(b)fluoranthene	0.8 U	**--**	**--**	**--**	**--**	**0.0177**	**--**
Benzo(g,h,i)perylene	0.8 U	**0.647**	**3.93**	**1.92**	**28.5**	0.0952 U	**2.16**
Benzo(k)fluoranthene	0.8 U	**--**	**--**	**--**	**--**	**0.0124**	**--**
Chrysene	0.8 U	**0.52**	**1.87**	**1.49**	**23.2**	**0.0318**	**3.18**
Dibenzo(a,h)anthracene	0.8 U	0.189 U	**0.407**	**0.207**	**3.41**	0.00476 U	0.842 U
Fluoranthene	**4.28**	**4.32**	**1.24**	**1.8**	**39.1**	**0.373 J**	**13.2**
Fluorene	**13**	**0.91**	**0.299**	**0.647**	1.98 U	**0.595 J**	**29.2**
Indeno(1,2,3-c,d)pyrene	0.8 U	**0.499**	**3.16**	**1.58**	**23.2**	**0.0112**	**1.95**
Naphthalene	**307**	**1.26**	**0.789**	**0.425**	3.96 U	**0.106**	**96.6**
Phenanthrene	**7.62**	**1.18**	**0.424**	**1.31**	**3.07**	**0.532 J**	**57.7**
Pyrene	**4.24**	**3.87**	**1.8**	**2.32**	**54**	**0.326 J**	**15**
Semivolatile Organics (µg/l)							
Dibenzofuran	**1.26**	**0.541**	0.19 U	0.0388 U	1.98 U	0.0952 U	**4.65**

Table 3-32
Existing Data Screening Table – Fill Groundwater Ecological

Database:	**Upland_MW**
Analysis Matrix:	**Gasco RM6-6.7_GW_fill/alluvial**
System Location Code:	**MW-05-32**
Sample name:	**2708-110330-MW-5-32-149**
Sample date:	**3/30/2011**
Depth interval:	**640.08 - 944.88 cm**
Conventional Parameters (mg/l)	
Cyanide, free	0.005 U
Cyanide, total	**0.0951**
Metals (µg/l)	
Zinc	**5.87**
Volatile Organics (µg/l)	
1,1-Dichloroethene	0.5 U
1,2-Dichloroethene, cis-	0.5 U
1,2-Dichloroethene, trans-	0.5 U
Benzene	0.25 U
Ethylbenzene	0.5 U
m,p-Xylene	1 U
Naphthalene	2 U
o-Xylene	0.5 U
Toluene	1 U
Trichloroethene (TCE)	0.5 U
Vinyl chloride	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	1 UT
Polycyclic Aromatic Hydrocarbons (µg/l)	
2-Methylnaphthalene	**0.15**
Acenaphthene	**0.118**
Acenaphthylene	**0.63**
Anthracene	**0.92**
Benzo(a)anthracene	**0.735**
Benzo(a)pyrene	**1.04**
Benzo(b)fluoranthene	**--**
Benzo(g,h,i)perylene	**0.924**
Benzo(k)fluoranthene	**--**
Chrysene	**1.07**
Dibenzo(a,h)anthracene	**0.113**
Fluoranthene	**1.19**
Fluorene	**0.107**
Indeno(1,2,3-c,d)pyrene	**0.74**
Naphthalene	**1**
Phenanthrene	**0.232**
Pyrene	**2.21**
Semivolatile Organics (µg/l)	
Dibenzofuran	0.0377 U

Table 3-32
Existing Data Screening Table – Fill Groundwater Ecological

Notes:

Detected concentration is greater than one screening level

Detected concentration is greater than two screening levels

Detected concentration is greater than three screening levels

Detected concentration is greater than four screening levels

Detected concentration is greater than five screening levels

Detected concentration is greater than six screening levels

Detected concentration is greater than seven screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
R = Rejected
T = Result is the value of a total or calculation.
-- = Results not reported or not applicable

Acronyms:
µg/l = micrograms per liter
mg/l = milligrams per liter
cm = centimeters
LWG = Lower Willamette Group
RA = Portland Harbor Site risk assessment
Totals are calculated as the sum of all detected results and 1/2 the undetected result. If all are undetected results, the highest reporting limit value is reported as the sum.

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial
System Location Code:	MW-01-55	MW-01-82	MW-02-104	MW-02-61	MW-03-56	MW-04-101	MW-04-57
Sample name:	2708-110329-MW-1-55-137	2708-110329-MW-1-82-135	2708-110329-MW-2-104-136	2708-110329-MW-2-61-132	2708-110330-MW-3-56-146	2708-110328-MW-4-101-128	2708-110330-MW-4-57-150
Sample date:	3/29/2011	3/29/2011	3/29/2011	3/29/2011	3/30/2011	3/28/2011	3/30/2011
Depth interval:	1371.6 - 1676.4 cm	2194.56 - 2499.36 cm	2865.12 - 3169.92 cm	1524 - 1828.8 cm	1371.6 - 1676.4 cm	2727.96 - 3032.76 cm	1402.08 - 1706.88 cm
Conventional Parameters (mg/l)							
Cyanide, free	**0.0079**	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**0.763**	**0.0071**	**0.125**	**0.54**	**0.0362**	**0.65**	**2.16**
Metals (µg/l)							
Zinc	**10.1**	4 U	**5.97**	**6.52**	**14.4**	4 U	**12.2**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U
Benzene	0.25 U	0.25 U	0.25 U	0.25 U	**4.35**	**7.78**	**1880**
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**246**
Naphthalene	2 U	2 U	2 U	2 U	2 U	**3.46**	**214**
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	**0.9**	**3.96**	**42.7**
Toluene	1 U	1 U	1 U	1 U	1 U	1 U	10 U
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U
LWG RA Total Xylene (Calculated U = 1/2)	1 UT	1 UT	1 UT	1 UT	**1.97 T**	**4.46 T**	**65.9 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	0.0748 U	0.0748 U	0.0842 U	0.08 U	**2.23**	**0.865**	**26.8**
Acenaphthene	0.0467 U	0.0374 U	0.0421 U	0.04 U	**34.6**	**0.537**	**142**
Anthracene	0.0374 U	0.0374 U	0.0421 U	**0.0449**	**4.34**	**0.965**	**7.16**
Benzo(a)anthracene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**3.87**	0.04 U	**1.92**
Benzo(a)pyrene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**5.53**	0.04 U	**2.82**
Benzo(b)fluoranthene	0.0374 U	0.0374 U	0.0421 U	0.04 U	--	0.04 U	--
Benzo(k)fluoranthene	0.0374 U	0.0374 U	0.0421 U	0.04 U	--	0.04 U	--
Chrysene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**4.91**	0.04 U	**2.99**
Dibenzo(a,h)anthracene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**0.552**	0.04 U	**0.32**
Fluoranthene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**14.7**	0.04 U	**3.34**
Fluorene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**9.43**	**0.226**	**15.2**
Indeno(1,2,3-c,d)pyrene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**3.89**	0.04 U	**1.75**
Naphthalene	**0.15**	0.0748 U	0.0842 U	**0.22**	**1.13**	**2.8**	**205**
Pyrene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**22.2**	0.04 U	**4.1**
Semivolatile Organics (µg/l)							
Dibenzofuran	0.0374 U	0.0374 U	0.0421 U	0.04 U	**3.07**	0.04 U	**3.82**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial
System Location Code:	MW-05-100	MW-05-175	MW-16-65	MW-17-79	MW-18-125	MW-18-180
Sample name:	2708-110330-MW-5-100-147	2708-110330-MW-5-175-145	2708-110330-MW-16-65-148	2708-110330-MW-17-79-151	2708-110328-MW-18-125-132	2708-110328-MW-18-180-130
Sample date:	3/30/2011	3/30/2011	3/30/2011	3/30/2011	3/28/2011	3/28/2011
Depth interval:	2682.24 - 2987.04 cm	4968.24 - 5273.04 cm	1676.4 - 1981.2 cm	1173.48 - 2392.68 cm	3505.2 - 3810 cm	5181.6 - 5486.4 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**0.908**	**0.014**	**0.262**	**0.693**	**0.156**	**0.0306**
Metals (µg/l)						
Zinc	4 U	4 U	**12.6**	4 U	**5.47**	4 U
Volatile Organics (µg/l)						
1,1-Dichloroethene	50 U	0.5 U	10 U	0.5 U	2.5 U	0.5 U
1,2-Dichloroethene, cis-	**380**	0.5 U	10 U	0.5 U	2.5 U	0.5 U
1,2-Dichloroethene, trans-	**78**	0.5 U	10 U	0.5 U	2.5 U	0.5 U
Benzene	**9390**	0.25 U	**667**	**4.26**	**354**	0.25 U
Ethylbenzene	**524**	0.5 U	**78.8**	**0.57**	**8.75**	0.5 U
Naphthalene	**9630**	2 U	**1650**	**2.9**	**111**	2 U
o-Xylene	50 U	0.5 U	**25**	**1.1**	**2.7**	0.5 U
Toluene	100 U	1 U	20 U	1 U	5 U	1 U
Trichloroethene (TCE)	50 U	0.5 U	10 U	0.5 U	2.5 U	0.5 U
Vinyl chloride	50 U	0.5 U	10 U	0.5 U	2.5 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	**128 T**	1 UT	**65.2 T**	**1.6 T**	**19.1 T**	1 UT
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	**230**	0.0755 U	**186**	0.0748 U	**11.4**	0.087 U
Acenaphthene	37.4 U	0.0377 U	**71.8**	**1.44**	**11.5**	0.0435 U
Anthracene	**6.92**	0.0377 U	**6.19**	**1.61**	**2.4**	0.0435 U
Benzo(a)anthracene	0.0374 U	0.0377 U	**0.634**	**0.0533**	**0.138**	0.0435 U
Benzo(a)pyrene	0.0374 U	0.0377 U	**0.526**	0.0374 U	0.04 U	0.0435 U
Benzo(b)fluoranthene	0.0374 U	0.0377 U	--	0.0374 U	--	0.0435 U
Benzo(k)fluoranthene	0.0374 U	0.0377 U	--	0.0374 U	--	0.0435 U
Chrysene	0.0374 U	0.0377 U	**0.748**	0.0374 U	**0.161**	0.0435 U
Dibenzo(a,h)anthracene	0.0374 U	0.0377 U	**0.0559**	0.0374 U	0.04 U	0.0435 U
Fluoranthene	**0.0901**	0.0377 U	**3.84**	**0.424**	**2.9**	0.0435 U
Fluorene	**1.54**	0.0377 U	39.2 U	**0.645**	**5.51**	0.0435 U
Indeno(1,2,3-c,d)pyrene	0.0374 U	0.0377 U	**0.294**	0.0374 U	0.04 U	0.0435 U
Naphthalene	**12000**	0.0755 U	**2400**	**2.39**	**82.7**	0.087 U
Pyrene	**0.101**	0.0377 U	**4.43**	**0.434**	**2.9**	0.0435 U
Semivolatile Organics (µg/l)						
Dibenzofuran	**0.28**	0.0377 U	**5**	**0.0509**	**0.852**	0.0435 U
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial
System Location Code:	MW-19-125	MW-19-180	MW-20-120	MW-21-115	MW-21-115	MW-21-165
Sample name:	2708-110328-MW-19-125-129	2708-110328-MW-19-180-127	2708-110328-MW-20-120-131	2708-110329-MW-21-115-142	2708-110329-MW-21-115-143	2708-110329-MW-21-165-140
Sample date:	3/28/2011	3/28/2011	3/28/2011	3/29/2011	3/29/2011	3/29/2011
Depth interval:	3505.2 - 3810 cm	5181.6 - 5486.4 cm	3352.8 - 3657.6 cm	3200.4 - 3505.2 cm	3200.4 - 3505.2 cm	4754.88 - 5059.68 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**0.0153**	**0.0246**	**0.116**	**0.0085**	**0.0113**	0.005 U
Metals (µg/l)						
Zinc	4 U	**12**	**21.1**	4 U	4 U	**17**
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
Benzene	**0.54**	0.25 U	**78.4**	0.25 U	0.25 U	0.25 U
Ethylbenzene	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
Naphthalene	**4.32**	2 U	**185**	2 U	2 U	2 U
o-Xylene	**1.6**	0.5 U	**6.9**	0.5 U	0.5 U	0.5 U
Toluene	1 U	1 U	2 U	1 U	1 U	1 U
Trichloroethene (TCE)	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	**2.1 T**	1 UT	**7.9 T**	1 UT	1 UT	1 UT
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	0.0748 U	0.0755 U	**0.0771**	0.0842 U	0.08 U	0.0784 U
Acenaphthene	0.0374 U	0.0377 U	**0.0664**	0.0421 U	0.04 U	0.0392 U
Anthracene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Benzo(a)anthracene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Benzo(a)pyrene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Benzo(b)fluoranthene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Benzo(k)fluoranthene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Chrysene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Dibenzo(a,h)anthracene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Fluoranthene	0.0374 U	0.0377 U	**0.0409**	0.0421 U	0.04 U	0.0392 U
Fluorene	0.0374 U	0.0377 U	**0.0412**	0.0421 U	0.04 U	0.0392 U
Indeno(1,2,3-c,d)pyrene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Naphthalene	**2.4**	0.0755 U	**98.1**	0.0842 U	0.08 U	0.0784 U
Pyrene	0.0374 U	0.0377 U	**0.0434**	0.0421 U	0.04 U	0.0392 U
Semivolatile Organics (µg/l)						
Dibenzofuran	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial
System Location Code:	MW-21-75	MW-22-80	MW-23-123	MW-23-75	MW-24-130	MW-24-70
Sample name:	2708-110329-MW-21-75-138	2708-100622-MW-22-80-104	2708-100622-MW-23-123-109	2708-100622-MW-23-75-105	2708-100622-MW-24-130-103	2708-100622-MW-24-70-102
Sample date:	3/29/2011	6/22/2010	6/22/2010	6/22/2010	6/22/2010	6/22/2010
Depth interval:	1981.2 - 2286 cm	2130.56 - 2435.35 cm	3453.384 - 3758.184 cm	1972.056 - 2276.856 cm	3660.648 - 3965.448 cm	1831.848 - 2136.648 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	**0.0099**	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**0.102**	**1.55**	**0.014**	**0.102**	**0.0793**	**0.0921**
Metals (µg/l)						
Zinc	**7.33**	**11.7**	**23.1**	4 U	**19**	**98.1**
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U
Benzene	0.25 U	0.25 U	0.25 U	0.25 U	**106**	**5.64**
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	**3.96**	1 U
Naphthalene	2 U	2 U	2 U	**6.18**	**138**	**171**
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	**1.74**	**1.84**
Toluene	1 U	0.5 U	0.5 U	0.5 U	1 U	**1**
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U
LWG RA Total Xylene (Calculated U = 1/2)	1 UT	1 UT	1 UT	1 UT	**4.8 T**	**6.66 T**
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	0.0755 U	0.0394 U	**0.0921**	**0.306**	**22.6**	**13.7**
Acenaphthene	**0.0715**	0.0394 U	**0.386**	**13.2**	**16.6**	**25**
Anthracene	**0.0885**	0.0394 U	**0.543**	**0.335**	**3.7**	**2.83**
Benzo(a)anthracene	0.0377 U	0.0394 U	**0.844**	0.188 U	1.88 U	1.89 U
Benzo(a)pyrene	0.0377 U	0.0394 U	**0.67**	0.188 U	1.88 U	1.89 U
Benzo(b)fluoranthene	0.0377 U	0.0394 U	--	0.188 U	1.88 U	1.89 U
Benzo(k)fluoranthene	0.0377 U	0.0394 U	--	0.188 U	1.88 U	1.89 U
Chrysene	0.0377 U	0.0394 U	**1.04**	0.188 U	1.88 U	1.89 U
Dibenzo(a,h)anthracene	0.0377 U	0.0394 U	**0.0698**	0.188 UJ	1.88 U	1.89 U
Fluoranthene	0.0377 U	0.0394 U	**2.05**	**0.776**	**4.05**	**4.52**
Fluorene	0.0377 U	0.0394 U	**0.269**	**0.602**	**8.96**	**8.53**
Indeno(1,2,3-c,d)pyrene	0.0377 U	0.0394 U	**0.424**	0.188 UJ	1.88 U	1.89 U
Naphthalene	0.0755 U	**0.0901**	**0.77**	**4.96**	**112**	**125**
Pyrene	0.0377 U	0.0394 U	**2.51**	**0.827**	**4.12**	**4.89**
Semivolatile Organics (µg/l)						
Dibenzofuran	0.0377 U	0.0394 U	**0.0632**	0.188 U	1.88 U	1.89 U
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial
System Location Code:	PW-03-118	PW-03-85	PW-7-93	PW-8-39	PW-8-68	PW-9-92	PZ5-20
Sample name:	PW-03-118	GS-061608-6	GS-110810-1	GS-110810-3	GS-110810-2	GS-110810-4	2708-101005-PZ-5-20-139
Sample date:	7/16/2007	6/16/2008	11/8/2010	11/8/2010	11/8/2010	11/8/2010	10/5/2010
Depth interval:	3291.84 - 3596.64 cm	2286 - 2590.8 cm	2240.28 - 2849.88 cm	737.616 - 1194.816 cm	1463.04 - 2072.64 cm	2212.848 - 2822.448 cm	460.248 - 612.648 cm
Conventional Parameters (mg/l)							
Cyanide, free	**0.031**	**0.024**	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U
Cyanide, total	**0.41**	**0.82**	**0.1**	**0.0788**	**0.122**	**0.15**	**0.0795**
Metals (µg/l)							
Zinc	**360**	--	--	--	--	--	**24.2**
Volatile Organics (µg/l)							
1,1-Dichloroethene	5 U	--	--	--	--	--	0.5 U
1,2-Dichloroethene, cis-	**22**	--	--	--	--	--	0.5 U
1,2-Dichloroethene, trans-	**8.7**	--	--	--	--	--	0.5 U
Benzene	**2000**	--	--	--	--	--	0.25 U
Ethylbenzene	**74**	--	--	--	--	--	0.5 U
Naphthalene	**1200**	--	--	--	--	--	2 U
o-Xylene	**20**	--	--	--	--	--	0.5 U
Toluene	**11**	--	--	--	--	--	1 U
Trichloroethene (TCE)	5 U	--	--	--	--	--	0.5 U
Vinyl chloride	**3.6 J**	--	--	--	--	--	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	**41 T**	--	--	--	--	--	1 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**5.9**	--	--	--	--	--	0.374 U
Acenaphthene	--	--	--	--	--	--	**0.539**
Anthracene	--	--	--	--	--	--	**0.237**
Benzo(a)anthracene	--	--	--	--	--	--	**0.5**
Benzo(a)pyrene	--	--	--	--	--	--	**0.542**
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	**0.637**
Dibenzo(a,h)anthracene	--	--	--	--	--	--	0.187 U
Fluoranthene	--	--	--	--	--	--	**1.5**
Fluorene	--	--	--	--	--	--	0.187 U
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	**0.559**
Naphthalene	**940**	--	--	--	--	--	0.374 U
Pyrene	**3.6**	--	--	--	--	--	**1.97**
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	--	--	0.187 U
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial
System Location Code:	PZ5-55	PZ5-85	RP-11-160	RP-11-216	WS-11-125	WS-11-161
Sample name:	2708-101005-PZ-5-55-137	2708-101005-PZ-5-85-135	5237-070827-RP-11-160-102	5237-070827-RP-11-216-103	5237-110322-WS-11-125-113	5237-110321-WS-11-161-105
Sample date:	10/5/2010	10/5/2010	8/27/2007	8/27/2007	3/22/2011	3/21/2011
Depth interval:	1527.048 - 1679.448 cm	2438.4 - 2590.8 cm	4573.2192 - 4878.0192 cm	6417.2592 - 6569.6592 cm	3322.32 - 3779.52 cm	4419.6 - 4876.8 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	-- UR	-- UR	0.005 U	0.005 U
Cyanide, total	**0.0714**	**0.0324**	0.005 UJ	0.005 UJ	**0.491**	**0.006**
Metals (µg/l)						
Zinc	4 U	4 U	**165**	33 U	4 U	4 U
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.5 U	0.5 U	0.4 U	**0.63**	50 U	0.5 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.4 U	**6.28**	220 U	0.5 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.4 U	0.4 U	50 U	0.5 U
Benzene	**0.55**	0.25 U	0.4 U	**0.47**	**614**	**2.01**
Ethylbenzene	0.5 U	0.5 U	0.4 U	0.4 U	**229**	**5.22**
Naphthalene	2 U	2 U	**--**	**--**	**10200**	**122**
o-Xylene	**0.86**	0.5 U	1 U	1 U	**84**	**2.64**
Toluene	1 U	1 U	0.4 U	0.4 U	100 U	1 U
Trichloroethene (TCE)	0.5 U	0.5 U	0.4 U	**2.98**	50 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	0.4 U	**2.34**	50 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	**1.36 T**	1 UT	2 UT	2 UT	**230 T**	**6.61 T**
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	**0.189**	0.0755 U	0.0957 U	0.0952 U	**857**	**2.75**
Acenaphthene	**31.4**	0.0377 U	0.0957 U	0.0952 U	**275**	**0.583**
Anthracene	**0.0745**	0.0377 U	0.0957 U	0.0952 U	**26.4**	0.0374 U
Benzo(a)anthracene	0.0374 U	0.0377 U	0.00478 U	0.00476 U	3.85 U	0.0374 U
Benzo(a)pyrene	0.0374 U	0.0377 U	0.00478 U	0.00476 U	3.85 U	0.0374 U
Benzo(b)fluoranthene	0.0374 U	0.0377 U	0.00478 U	0.00476 U	3.85 U	0.0374 U
Benzo(k)fluoranthene	0.0374 U	0.0377 U	0.00478 U	0.00476 U	3.85 U	0.0374 U
Chrysene	0.0374 U	0.0377 U	0.00478 U	0.00476 U	3.85 U	0.0374 U
Dibenzo(a,h)anthracene	0.0374 U	0.0377 U	0.00478 U	0.00476 U	3.85 U	0.0374 U
Fluoranthene	0.0374 U	0.0377 U	0.0957 U	0.0952 U	**13**	0.0374 U
Fluorene	**4.05**	0.0377 U	0.0957 U	0.0952 U	**86.1**	**0.115**
Indeno(1,2,3-c,d)pyrene	0.0374 U	0.0377 U	0.00478 U	0.00476 U	3.85 U	0.0374 U
Naphthalene	**0.137**	0.0755 U	0.0957 U	0.0952 U	**15200**	**100**
Pyrene	0.0374 U	0.0377 U	0.0957 U	0.0952 U	**11.8**	0.0374 U
Semivolatile Organics (µg/l)						
Dibenzofuran	**1.1**	0.0377 U	0.0957 U	0.0952 U	**20.2**	0.0374 U
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	**--**	**--**	**--**	**--**	**--**	**--**
Residual Range Hydrocarbons	**--**	**--**	**--**	**--**	**--**	**--**

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial
System Location Code:	WS-12-125	WS-12-161	WS-14-125	WS-14-161	WS-20-112	WS-22-112
Sample name:	5237-110321-WS-12-125-101	5237-110321-WS-12-161-103	5237-110321-WS-14-125-111	5237-110321-WS-14-161-109	WS-20-112-080806	WS-22-112-070522
Sample date:	3/21/2011	3/21/2011	3/21/2011	3/21/2011	8/6/2008	5/22/2007
Depth interval:	3322.32 - 3779.52 cm	4419.6 - 4876.8 cm	3322.32 - 3779.52 cm	4419.6 - 4876.8 cm	2956.56 - 3413.76 cm	2956.56 - 3413.76 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	--
Cyanide, total	**0.526**	0.005 U	**0.278**	0.005 U	**0.14**	--
Metals (µg/l)						
Zinc	4 U	4 U	4 U	4 U	10 U	10 U
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.5 U	0.5 U	50 U	5 U	0.5 U	0.5 U
1,2-Dichloroethene, cis-	**2.1**	0.5 U	**102**	5 U	**1.83**	0.3 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	50 U	5 U	0.5 U	0.5 U
Benzene	**2.15**	0.25 U	**4120**	**3.3**	**150**	**118**
Ethylbenzene	0.5 U	0.5 U	**523**	**20**	**1.88**	**3.2**
Naphthalene	2 U	2 U	**10400**	**734**	--	--
o-Xylene	0.5 U	0.5 U	**238**	**8.8**	**1.28**	**2.58**
Toluene	1 U	1 U	**154**	10 U	**1.53**	**14.4**
Trichloroethene (TCE)	**0.66**	0.5 U	50 U	5 U	0.3 U	0.3 U
Vinyl chloride	**4.68**	0.5 U	50 U	5 U	0.3 U	**2.35**
LWG RA Total Xylene (Calculated U = 1/2)	1 UT	1 UT	**665 T**	**25.4 T**	**3.6 T**	**3.94 T**
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	0.0769 U	0.0769 U	**645**	**76**	--	--
Acenaphthene	**0.211**	0.0385 U	**216**	**34.8**	--	**0.426**
Anthracene	**0.171**	0.0385 U	**21.6**	**5.15**	--	**0.0595**
Benzo(a)anthracene	0.0385 U	0.0385 U	3.77 U	0.388 U	--	0.0496 U
Benzo(a)pyrene	0.0385 U	0.0385 U	3.77 U	0.388 U	--	0.0496 U
Benzo(b)fluoranthene	0.0385 U	0.0385 U	3.77 U	--	--	0.0496 U
Benzo(k)fluoranthene	0.0385 U	0.0385 U	3.77 U	--	--	0.0496 U
Chrysene	0.0385 U	0.0385 U	3.77 U	0.388 U	--	0.0496 U
Dibenzo(a,h)anthracene	0.0385 U	0.0385 U	3.77 U	0.388 U	--	0.0496 U
Fluoranthene	**0.0713**	0.0385 U	**10.6**	**2.64**	--	**0.139**
Fluorene	**0.0882**	0.0385 U	**63.7**	**12.6**	--	**0.159**
Indeno(1,2,3-c,d)pyrene	0.0385 U	0.0385 U	3.77 U	0.388 U	--	0.0496 U
Naphthalene	0.0769 U	0.0769 U	**19300**	**633**	**2.27**	--
Pyrene	**0.0764**	0.0385 U	**9.99**	**2.48**	--	**0.178**
Semivolatile Organics (µg/l)						
Dibenzofuran	0.0385 U	0.0385 U	**14.5**	**2.55**	--	--
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Upland_MW	Upland_MW	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_fill/alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WS-8-59	MW-05-32	GP-30	GP-30	GP-32	GP-32	GP-61
Sample name:	5237-110321-WS-8-59-102	2708-110330-MW-5-32-149	GP30-W-25.0	GP30-W-50.0	GP32-W-2.0	GP32-W-24.0	GP61-W-5.0
Sample date:	3/21/2011	3/30/2011	9/15/2010	9/15/2010	9/16/2010	9/16/2010	9/17/2010
Depth interval:	1478.28 - 1783.08 cm	640.08 - 944.88 cm	701.04 - 822.96 cm	1463.04 - 1584.96 cm	0 - 121.92 cm	670.56 - 792.48 cm	91.44 - 213.36 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	--	--	--	--	--
Cyanide, total	**0.356**	**0.0951**	--	--	--	--	--
Metals (µg/l)							
Zinc	**34.2**	**5.87**	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	**380**	**103**	**0.37**	**1.5**	**105**
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzene	**5.11**	0.25 U	**6.05**	**24.5**	**26**	**27.7**	**16.3 J**
Ethylbenzene	0.5 U	0.5 U	**0.22**	0.2 U	**3.68**	0.2 U	**0.3**
Naphthalene	2 U	2 U	0.2 U	**0.22**	**1.33**	0.2 U	0.2 U
o-Xylene	0.5 U	0.5 U	0.2 U	0.2 U	**2.29**	**1.54**	0.2 U
Toluene	1 U	1 U	**0.28**	**0.44**	**3.37**	**0.2**	**0.47**
Trichloroethene (TCE)	0.5 U	0.5 U	**0.79**	**2**	0.2 U	0.2 U	**0.51 J**
Vinyl chloride	0.5 U	0.5 U	**1880**	**600**	**0.95**	**7.34**	**699**
LWG RA Total Xylene (Calculated U = 1/2)	1 UT	1 UT	0.4 UT	0.4 UT	**2.5 T**	**1.7 T**	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	0.08 U	**0.15**	--	--	--	--	--
Acenaphthene	**0.142**	**0.118**	--	--	--	--	--
Anthracene	**0.2**	**0.92**	--	--	--	--	--
Benzo(a)anthracene	**0.219**	**0.735**	--	--	--	--	--
Benzo(a)pyrene	**0.326**	**1.04**	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	**0.273**	**1.07**	--	--	--	--	--
Dibenzo(a,h)anthracene	0.04 U	**0.113**	--	--	--	--	--
Fluoranthene	**0.328**	**1.19**	--	--	--	--	--
Fluorene	**0.0959**	**0.107**	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	**0.251**	**0.74**	--	--	--	--	--
Naphthalene	0.08 U	**1**	--	--	--	--	--
Pyrene	**0.428**	**2.21**	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	0.04 U	0.0377 U	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	GP-65	GS-07-D-TR	GS-08-D-TR	PCM-02Y1E2	PCM-03Y1E2	PCM-04Y1E2	PCM-05Y1E1
Sample name:	GP65-W-3.0	LWG2-T90-GS7D	LWG2-T90-GS8D	PCM-02PW-071107	PCM-03PW-071106	PCM-04PW-071107	PCM-05PW-070912
Sample date:	9/21/2010	10/25/2005	10/24/2005	11/7/2007	11/6/2007	11/7/2007	9/12/2007
Depth interval:	30.48 - 152.4 cm	150 - 150 cm	150 - 150 cm				
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	0.01 U	0.01 U	0.006 J	0.0127
Cyanide, total	--	--	0.35 J	0.04	0.04	0.14	--
Metals (µg/l)							
Zinc	--	--	46.6	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	2.2	0.13 U	0.13 U	--	--	--	--
1,2-Dichloroethene, cis-	526	0.12 U	0.12 U	--	--	--	--
1,2-Dichloroethene, trans-	1.84	0.15 U	0.15 U	--	--	--	--
Benzene	11.3	1.8	35	210	2600	650	12000
Ethylbenzene	0.2 U	0.53	4.5	36	14	9.7	130
Naphthalene	0.2 U	3.6	--	--	--	--	--
o-Xylene	0.2 U	0.79	6	17	17	17	170
Toluene	0.51	0.56 U	1.5 U	5.1	6	14	29
Trichloroethene (TCE)	0.22	0.14 U	0.14 U	--	--	--	--
Vinyl chloride	1840	0.042 U	0.042 U	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	1.3 T	8.4 T	48 T	38 T	32 T	360 T
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	--	9.5	56	45	6.4	110
Acenaphthene	--	--	130	370	100	49	240
Anthracene	--	--	15	11	1.7	1.1	17
Benzo(a)anthracene	--	--	4.8	0.021 J	0.023 J	0.23	0.85
Benzo(a)pyrene	--	--	4.4	0.0048 J	0.01 J	0.29	0.43
Benzo(b)fluoranthene	--	--	2.6	0.022 U	0.0094 J	0.25	0.48
Benzo(k)fluoranthene	--	--	2.3	0.022 U	0.0044 J	0.1	0.13
Chrysene	--	--	8	0.012 J	0.014 J	0.47	0.71
Dibenzo(a,h)anthracene	--	--	0.23	0.022 U	0.023 U	0.036	0.026
Fluoranthene	--	--	33	1.9	0.46	1.4	21
Fluorene	--	--	41	54	18	6.1	74
Indeno(1,2,3-c,d)pyrene	--	--	2.7	0.022 U	0.0061 J	0.24	0.23
Naphthalene	--	--	14	2500	4800	510	7300
Pyrene	--	--	48	1.4	0.39	1.3	23
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	15	6.5	--	2	--
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	2.8 J	--	--	--	--
Residual Range Hydrocarbons	--	--	0.7 J	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	PCM-06Y1E2	PCM-07Y0E1b	PCM-08Y1E2	PCM-09Y1E2	PCM-10Y0E1b	PCM-18Y0E2	PCM-21Y1E2
Sample name:	PCM-06PW-071106	PCM-PW07-060427	PCM-08PW-071108	PCM-09PW-071105	PCM-PW10-060428	PCM-PW18-060828	PCM-21PW-071106
Sample date:	11/6/2007	4/28/2006	11/8/2007	11/5/2007	4/28/2006	8/28/2006	11/6/2007
Depth interval:							
Conventional Parameters (mg/l)							
Cyanide, free	**0.008 J**	--	**0.009 J**	**0.007 J**	--	--	0.01 U
Cyanide, total	**0.03**	--	**0.07**	**0.04**	--	--	**0.02**
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--	--	--
Benzene	**540**	--	**400**	**94**	--	**58**	**0.48 J**
Ethylbenzene	**13**	--	**39**	**6.4**	--	**0.42 J**	**0.25 J**
Naphthalene	--	--	--	--	--	--	--
o-Xylene	**18**	--	**34**	**5.5**	--	**1.6**	**0.5**
Toluene	**6.7**	--	**6.4**	**1.2 J**	--	**0.71**	**0.39 J**
Trichloroethene (TCE)	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	**29 T**	**57 T**	**56 T**	**9 T**	**82 T**	**2 JT**	**0.9 JT**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**8.5**	--	**5.4**	**11**	--	--	**0.6**
Acenaphthene	**110**	--	**180**	**190**	--	**0.6**	**270**
Anthracene	**0.61**	--	**5.8**	**3.5**	--	**0.021 J**	**5.1**
Benzo(a)anthracene	**0.012 J**	--	**0.03**	**0.054**	--	0.022 U	**0.06**
Benzo(a)pyrene	**0.0071 J**	--	**0.012 J**	**0.035**	--	0.022 U	**0.023**
Benzo(b)fluoranthene	**0.0068 J**	--	**0.01 J**	**0.031**	--	0.022 U	**0.019 J**
Benzo(k)fluoranthene	0.023 U	--	**0.0039 J**	**0.01 J**	--	0.022 U	**0.0085 J**
Chrysene	**0.0092 J**	--	**0.019 J**	**0.051**	--	0.022 U	**0.036**
Dibenzo(a,h)anthracene	0.023 U	--	0.021 U	**0.0032 J**	--	0.022 U	0.02 U
Fluoranthene	**0.33**	--	**1.9**	**1.1**	--	**0.0067 J**	**2.6**
Fluorene	**2.8**	--	**19**	**11**	--	**0.1**	**35**
Indeno(1,2,3-c,d)pyrene	**0.0048 J**	--	**0.0073 J**	**0.021**	--	0.022 U	**0.011 J**
Naphthalene	**570**	--	**1900**	**640**	--	**18**	**52**
Pyrene	**0.29**	--	**1.2**	**1.1**	--	0.022 U	**2.3**
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	**6.4**	--	--	--
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	SL-03-F-TR	SL-04-A-TR	SL-04-A-TR	WLCGSG07GSB1	WLCGSG07GSB1	WLCGSG07GSB1	WLCGSG07GSB2
Sample name:	LWG2-T90-SL3F	LWG2-T90-SL4A	LWG2-T90-SL4A-FILT	WLCGSG07GSB1A	WLCGSG07GSB1B	WLCGSG07GSB1C	WLCGSG07GSB2A1
Sample date:	10/8/2005	10/8/2005	10/8/2005	7/17/2007	7/17/2007	7/17/2007	7/17/2007
Depth interval:	120 - 120 cm	90 - 90 cm	90 - 90 cm	27.43 - 57.91 cm	149.4 - 210.3 cm	393.2 - 454.2 cm	45.72 - 76.2 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	0.005 U	0.005 U	**0.006 J**	**0.023**
Cyanide, total	**0.6**	**0.16**	--	**1.21**	**0.26**	**0.64**	**2.74**
Metals (µg/l)							
Zinc	**106**	**40.5**	--	**1020**	**847**	**309**	**1300**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	--	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	--	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	--	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	**9.4**	**0.71**	--	**0.2 J**	**0.26 J**	0.14 U	**8.8**
Ethylbenzene	**0.14 J**	**1.6**	--	0.13 U	0.13 U	0.13 U	**33**
Naphthalene	--	**32**	--	--	--	--	--
o-Xylene	**1.4**	**1.6**	--	**0.14 J**	**0.17 J**	0.11 U	**2.9**
Toluene	0.66 U	0.61 U	--	**18**	**15**	**1.6**	**14**
Trichloroethene (TCE)	0.14 U	0.14 U	--	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	**0.06 J**	**0.09 J**	--	0.042 U	0.042 U	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**1.5 T**	**4.3 T**	--	**0.25 JT**	**0.44 JT**	0.22 UT	**4.1 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	0.044 U	**5.1**	--	**0.62**	**0.54**	**0.025**	**140**
Acenaphthene	**2.2**	**51**	--	**14**	**51**	**1.7**	**190**
Anthracene	0.093 U	**9.8**	--	**11**	**19**	**0.21**	**110**
Benzo(a)anthracene	**0.042**	**3.2**	--	**13**	**20**	**0.28**	**60**
Benzo(a)pyrene	**0.039 J**	**2.3**	--	**14**	**29**	**0.23**	**50**
Benzo(b)fluoranthene	0.03 U	**1.5**	--	**13**	**21**	**0.22**	**45**
Benzo(k)fluoranthene	0.025 U	**1.5**	--	**4.7**	**7**	**0.07**	**15**
Chrysene	0.073 U	**3.9**	--	**15**	**24**	**0.37**	**79**
Dibenzo(a,h)anthracene	0.0034 U	**0.16**	--	**1.5**	**2.2**	**0.023**	**5**
Fluoranthene	0.2 U	**21**	--	**47**	**100**	**1.1**	**270**
Fluorene	0.11 U	**23**	--	**9.3**	**11**	**0.17**	**110**
Indeno(1,2,3-c,d)pyrene	**0.026 J**	**1.3**	--	**13**	**26**	**0.22**	**46**
Naphthalene	**0.31**	--	--	**2.3**	**5.7**	**0.072**	**120**
Pyrene	0.24 U	**21**	--	**44**	**100**	**1.2**	**270**
Semivolatile Organics (µg/l)							
Dibenzofuran	0.032 U	**4.6**	--	**2.3**	**0.91**	**0.03**	**17**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	**0.24 J**	**2.1 J**	--	--	--	--	--
Residual Range Hydrocarbons	**0.17 J**	**0.68 J**	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB3
Sample name:	WLCGSG07GSB2A2	WLCGSG07GSB2B	WLCGSG07GSB2C	WLCGSG07GSB2W25	WLCGSG07GSB2W50	WLCGSG07GSB2W75	WLCGSG07GSB3A
Sample date:	7/17/2007	7/17/2007	7/17/2007	9/12/2007	9/12/2007	9/12/2007	7/19/2007
Depth interval:	137.2 - 167.6 cm	259.1 - 320 cm	502.9 - 563.9 cm	701 - 823 cm	1463 - 1585 cm	2225 - 2347 cm	30.48 - 60.96 cm
Conventional Parameters (mg/l)							
Cyanide, free	**0.026**	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ
Cyanide, total	**2.07**	**0.35**	**0.59**	**0.004 J**	**0.15**	**0.16**	**0.45**
Metals (µg/l)							
Zinc	**1270**	**350**	**222**	**14.3**	**57**	**108**	**384**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	**5.7**	0.14 U	0.14 U	0.14 U	**0.14 J**	**0.16 J**	0.14 U
Ethylbenzene	**22**	**0.29 J**	**0.45 J**	0.13 U	**0.22 J**	**0.27 J**	0.13 U
Naphthalene	**--**	**--**	**11**	**0.53 J**	**48**	**3**	**--**
o-Xylene	**1.7**	**0.13 J**	**0.12 J**	0.11 U	**0.18 J**	**0.14 J**	0.11 U
Toluene	**41**	**2.7**	**2.6**	**2.6**	**96**	**52**	**0.79**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**2.6 T**	**0.24 JT**	**0.23 JT**	0.22 UT	**0.66 JT**	**0.47 JT**	0.22 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**92**	**0.83**	**2.1**	**0.029**	**2**	**2.5**	**0.51**
Acenaphthene	**110**	**9.9**	**3.2**	**0.37**	**1.7**	**3.3**	**4.7**
Anthracene	**92**	**1.3**	**4.1**	**0.012 J**	**0.024**	**0.073**	**1.7**
Benzo(a)anthracene	**100**	**3.2**	**4**	**0.0078 J**	**0.0045 J**	**0.051**	**6.5**
Benzo(a)pyrene	**110**	**4**	**4.2**	0.0044 U	0.0044 U	**0.02 J**	**7**
Benzo(b)fluoranthene	**83**	**3.2**	**3.5**	**0.0045 J**	**0.037**	**0.061**	**6.6**
Benzo(k)fluoranthene	**26**	**1**	**1.2**	0.0026 U	**0.0078 J**	**0.015 J**	**2.4**
Chrysene	**130**	**4.1**	**5.3**	**0.0073 J**	**0.03**	**0.06**	**8.5**
Dibenzo(a,h)anthracene	**12**	**0.41**	**0.43**	0.0026 U	0.0026 U	**0.005 J**	**0.99**
Fluoranthene	**260**	**18**	**12**	**0.16**	**0.12**	**0.21**	**21**
Fluorene	**66**	**2.4**	**2.2**	**0.2**	**0.5**	**1.3**	**2.2**
Indeno(1,2,3-c,d)pyrene	**80**	**4**	**3.6**	0.0027 U	**0.019 J**	**0.045**	**7.3**
Naphthalene	**180**	**2.6**	**--**	**--**	**--**	**--**	**1.6**
Pyrene	**290**	**18**	**13**	**0.14**	**0.099**	**0.23**	**23**
Semivolatile Organics (µg/l)							
Dibenzofuran	**9.8**	**0.16**	**0.29**	**0.046**	**0.098**	**0.2**	**0.3**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Residual Range Hydrocarbons	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSB3	WLCGSG07GSB3	WLCGSG07GSB4	WLCGSG07GSB4	WLCGSG07GSB4	WLCGSG07GSB5	WLCGSG07GSB5
Sample name:	WLCGSG07GSB3B	WLCGSG07GSB3C	WLCGSG07GSB4A	WLCGSG07GSB4B	WLCGSG07GSB4C	WLCGSG07GSB5A	WLCGSG07GSB5B
Sample date:	7/19/2007	7/19/2007	7/19/2007	7/19/2007	7/19/2007	7/18/2007	7/18/2007
Depth interval:	152.4 - 213.4 cm	396.2 - 457.2 cm	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm	48.77 - 79.25 cm	170.7 - 231.6 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ
Cyanide, total	**0.1**	**0.21**	**0.23**	**0.3**	**0.1**	**0.08**	**0.1**
Metals (µg/l)							
Zinc	**223**	**96**	**3590**	**1030**	**622**	**826**	**807**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.25 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.24 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.29 U	0.15 U
Benzene	**0.36 J**	0.14 U	0.14 U	**54**	0.14 U	**2.2**	**2**
Ethylbenzene	**0.28 J**	0.13 U	0.13 U	**36**	0.13 U	**11**	**7.7**
Naphthalene	--	--	**6**	**53**	**0.67 J**	**1800**	**81**
o-Xylene	**0.71**	**0.22 J**	**0.12 J**	**18**	0.11 U	**8.1**	**2.8**
Toluene	**16**	**0.68**	**0.88**	**6.3**	**4.4**	**22**	**100**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.27 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.084 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**1.2 JT**	**0.33 JT**	**0.23 JT**	**21 T**	0.22 UT	**11 T**	**3.9 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.18**	**0.025**	**15**	**450**	**0.56**	**92**	**150**
Acenaphthene	**11**	**0.27**	**49**	**570**	**1.3**	**170**	**140**
Anthracene	**2.3**	**0.05**	**9.1**	**130**	**0.59**	**40**	**32**
Benzo(a)anthracene	**2.4**	0.0028 U	**6**	**80**	**0.47**	**33**	**19**
Benzo(a)pyrene	**3**	**0.0054 J**	**6.3**	**94**	**0.46**	**40 J**	**19 J**
Benzo(b)fluoranthene	**2.3**	**0.0056 J**	**5.8**	**72**	**0.41**	**32**	**16**
Benzo(k)fluoranthene	**0.78**	0.0027 U	**2.3**	**26**	**0.14**	**11**	**5.8**
Chrysene	**3.1**	**0.0079 J**	**8.1**	**91**	**0.63**	**40**	**23**
Dibenzo(a,h)anthracene	**0.27**	0.0027 U	**0.77**	**7.3**	**0.039**	**3.8**	**2.5**
Fluoranthene	**10**	**0.053**	**29**	**330**	**1.9**	**120**	**83**
Fluorene	**3.1**	**0.031**	**18**	**160**	**0.51**	**54**	**50**
Indeno(1,2,3-c,d)pyrene	**2.7**	**0.0055 J**	**6**	**80**	**0.42**	**33**	**17**
Naphthalene	**0.89**	**0.017 J**	--	--	--	--	--
Pyrene	**12**	**0.057**	**27**	**440**	**2.1**	**140**	**93**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.48**	0.0049 U	**0.33 J**	**24**	**0.065**	**7.2**	**11**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSB5	WLCGSG07GSB5	WLCGSG07GSB5	WLCGSG07GSB5	WLCGSG07GSB6	WLCGSG07GSB6	WLCGSG07GSB6
Sample name:	WLCGSG07GSB5C	WLCGSG07GSB5W25	WLCGSG07GSB5W50	WLCGSG07GSB5W75	WLCGSG07GSB6A	WLCGSG07GSB6B	WLCGSG07GSB6C
Sample date:	7/18/2007	9/14/2007	9/14/2007	9/14/2007	7/6/2007	7/6/2007	7/6/2007
Depth interval:	414.5 - 475.5 cm	701 - 823 cm	1463 - 1585 cm	2225 - 2347 cm	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 UJ	0.005 U	0.005 UT	0.005 U	0.005 U	**0.008 J**	0.005 U
Cyanide, total	**0.45**	**0.44**	**0.47 T**	**0.09**	**0.06 J**	**0.08 J**	**0.22 J**
Metals (µg/l)							
Zinc	**43**	**57**	**134 T**	**124**	**1090**	**4270**	**95**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 UT	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 UT	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 UT	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	**0.62**	0.14 U	**0.67 T**	**0.33 J**	0.14 U	**1.8**	0.14 U
Ethylbenzene	**2.1**	**0.14 J**	**1.5 T**	**1.9**	0.13 U	**1**	0.13 U
Naphthalene	**9.4**	**25**	**110 T**	**170**	**--**	**22**	**0.57 J**
o-Xylene	**2.5**	0.11 U	**0.79 T**	**0.61**	**0.15 J**	**0.99**	0.11 U
Toluene	**5.7**	**4.3**	**7.4 T**	**4.5**	**0.12 J**	**0.14 J**	0.11 U
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 UT	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 UT	0.042 U	0.042 U	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**3.1 T**	0.22 UT	**1.4 T**	**1.1 T**	**0.26 JT**	**1.5 T**	0.22 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.8**	**1.1**	**2.9 T**	**6.5**	**3.5**	**37**	**0.078**
Acenaphthene	**100**	**2.2**	**4.5 T**	**15**	**100**	**91**	**0.17**
Anthracene	**5**	**0.043**	**0.044 T**	**0.89**	**16**	**14**	**0.13**
Benzo(a)anthracene	**2.3**	**0.0053 J**	**0.0048 JT**	**0.021 J**	**5**	**4.1**	**0.11**
Benzo(a)pyrene	**2.3 J**	0.0044 U	0.0044 UT	**0.0053 J**	**3.9**	**3.4**	**0.13**
Benzo(b)fluoranthene	**2**	**0.0043 J**	0.0024 UT	**0.0075 J**	**3.3**	**2.9**	**0.12**
Benzo(k)fluoranthene	**0.68**	0.0026 U	0.0026 UT	0.0029 U	**1.2**	**1**	**0.038**
Chrysene	**2.8**	0.0035 U	0.0035 UT	**0.014 J**	**8.6**	**5.1**	**0.15**
Dibenzo(a,h)anthracene	**0.23**	0.0026 U	0.0026 UT	0.0029 U	**0.33**	**0.32**	**0.013 J**
Fluoranthene	**12**	**0.16**	**0.056 T**	**1.1**	**40**	**26**	**0.42**
Fluorene	**20**	**0.79**	**1.2 T**	**4**	**33**	**33**	**0.092**
Indeno(1,2,3-c,d)pyrene	**2.1**	**0.0053 J**	0.0027 UT	**0.0056 J**	**2.4**	**2.3**	**0.13**
Naphthalene	**--**	**--**	**--**	**--**	**8.5**	**--**	**--**
Pyrene	**13**	**0.11**	**0.035 T**	**0.86**	**43**	**25**	**0.41**
Semivolatile Organics (µg/l)							
Dibenzofuran	**2.8**	**0.13**	**0.19 T**	**0.56**	**2**	**8.2**	**0.017 J**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Residual Range Hydrocarbons	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB7
Sample name:	WLCGSG07GSB7A	WLCGSG07GSB7B	WLCGSG07GSB7C	WLCGSG07GSB7PWE071004	WLCGSG07GSB7PWE071005	WLCGSG07GSB7PWSH071005
Sample date:	7/5/2007	7/5/2007	7/5/2007	10/4/2007	10/5/2007	10/5/2007
Depth interval:	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm	38.1 - 53.34 cm	38.1 - 53.34 cm	38.1 - 53.34 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	0.005 U	--	--	--
Cyanide, total	**0.1**	0.003 U	**0.007 J**	--	--	--
Metals (µg/l)						
Zinc	**1340**	**1130**	**153**	--	--	--
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 UJ	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 U	--	--	--
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 UJ	0.15 U
Benzene	**0.15 J**	**7.8**	**170**	**0.19 J**	**0.24 J**	**0.24 J**
Ethylbenzene	0.13 U	**0.69**	**16**	**0.43 J**	**0.55 J**	**0.6**
Naphthalene	--	**54**	--	**7.2**	**15 J**	**19**
o-Xylene	**0.55**	**0.47 J**	**9.4**	**0.56**	**0.75 J**	**0.78**
Toluene	**0.16 J**	**0.57**	**32**	**2.6**	**1.1 J**	**0.82**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 UJ	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 UJ	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**0.87 JT**	**0.96 JT**	**26 T**	**1.3 T**	**1.4 JT**	**1.4 T**
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	**0.11**	**19**	**140**	--	--	--
Acenaphthene	**45**	**82**	**120**	--	--	--
Anthracene	**2.1**	**12**	**53**	--	--	--
Benzo(a)anthracene	**0.4**	**3.4**	**39**	--	--	--
Benzo(a)pyrene	**0.26**	**2**	**46**	--	--	--
Benzo(b)fluoranthene	**0.24**	**1.8**	**36**	--	--	--
Benzo(k)fluoranthene	**0.08**	**0.58**	**12**	--	--	--
Chrysene	**0.51**	**3.8**	**44**	--	--	--
Dibenzo(a,h)anthracene	**0.024**	**0.13**	**4.4**	--	--	--
Fluoranthene	**4.7**	**24**	**200**	--	--	--
Fluorene	**13**	**36**	**61**	--	--	--
Indeno(1,2,3-c,d)pyrene	**0.21**	**1.2**	**39**	--	--	--
Naphthalene	**0.45**	--	**850**	--	--	--
Pyrene	**4.2**	**21**	**190**	--	--	--
Semivolatile Organics (µg/l)						
Dibenzofuran	**0.24**	**19**	**10**	--	--	--
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB8	WLCGSG07GSB8
Sample name:	WLCGSG07GSB7PWSL071005	WLCGSG07GSB7PWSL071006	WLCGSG07GSB7W25	WLCGSG07GSB7W50	WLCGSG07GSB8A	WLCGSG07GSB8B
Sample date:	10/5/2007	10/6/2007	8/28/2007	8/29/2007	7/9/2007	7/9/2007
Depth interval:	38.1 - 53.34 cm	38.1 - 53.34 cm	701 - 823 cm	1463 - 1585 cm	30.48 - 60.96 cm	152.4 - 213.4 cm
Conventional Parameters (mg/l)						
Cyanide, free	--	--	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	--	--	**0.49**	**0.29**	**0.02**	**0.11**
Metals (µg/l)						
Zinc	--	--	**158**	**219**	**1240**	**10400**
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	--	--	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	**0.19 J**	**0.36 J**	**3.7**	**1.6**	**1.1**	**0.24 J**
Ethylbenzene	**0.36 J**	**0.48 J**	**0.95**	**0.34 J**	0.13 U	0.13 U
Naphthalene	**10**	**17**	**64**	**14**	**1.7 J**	--
o-Xylene	**0.46 J**	**0.66**	**0.76**	**1.5**	0.11 U	**0.11 J**
Toluene	**1.2**	**1.2**	**59**	**110**	**130**	**26**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**0.99 JT**	**1.4 T**	**2.4 T**	**3.6 T**	0.22 UT	**0.22 JT**
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	--	--	**3**	**0.65**	**0.085**	**0.42**
Acenaphthene	--	--	**1.8**	**0.61**	**0.76**	**13**
Anthracene	--	--	**1.5**	**0.41**	**0.18**	**1.6**
Benzo(a)anthracene	--	--	**1.3**	**0.4**	**0.63**	**2.7**
Benzo(a)pyrene	--	--	**1.7**	**0.49**	**0.81**	**2.6**
Benzo(b)fluoranthene	--	--	**1.4**	**0.43**	**0.7**	**2.2**
Benzo(k)fluoranthene	--	--	**0.44**	**0.14**	**0.23**	**0.94**
Chrysene	--	--	**1.5**	**0.46**	**0.79**	**3.8**
Dibenzo(a,h)anthracene	--	--	**0.2**	**0.056**	**0.16**	**0.43**
Fluoranthene	--	--	**6.1**	**1.6**	**2**	**12**
Fluorene	--	--	**1.7**	**0.42**	**0.37**	**5.8**
Indeno(1,2,3-c,d)pyrene	--	--	**1.5**	**0.45**	**0.89**	**2.4**
Naphthalene	--	--	--	--	--	**2.1**
Pyrene	--	--	**6.1**	**1.8**	**2**	**11**
Semivolatile Organics (µg/l)						
Dibenzofuran	--	--	**0.26**	**0.071**	**0.07**	**1.7**
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSB8	WLCGSG07GSB9	WLCGSG07GSB9	WLCGSG07GSB9	WLCGSG07GSC1	WLCGSG07GSC1	WLCGSG07GSC1
Sample name:	WLCGSG07GSB8C	WLCGSG07GSB9A	WLCGSG07GSB9B	WLCGSG07GSB9C	WLCGSG07GSC1A	WLCGSG07GSC1B	WLCGSG07GSC1C
Sample date:	7/9/2007	7/9/2007	7/9/2007	7/9/2007	7/16/2007	7/16/2007	7/16/2007
Depth interval:	396.2 - 457.2 cm	45.72 - 76.2 cm	152.4 - 213.4 cm	454.2 - 515.1 cm	51.82 - 82.3 cm	173.7 - 234.7 cm	417.6 - 478.5 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**0.55**	**0.03**	**0.04**	**0.25**	**0.2**	**0.06**	**0.39**
Metals (µg/l)							
Zinc	**158**	**1520**	**194**	**950**	**1550**	**335**	**21**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	**11**	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	**0.27 J**	0.14 U	**0.54**	0.14 U	**0.42 J**	**11**	**3.6**
Ethylbenzene	0.13 U	0.13 U	**1.7**	0.13 U	0.13 U	**5.5**	**1.4**
Naphthalene	--	--	--	--	--	**430**	**8.6**
o-Xylene	0.11 U	0.11 U	**0.64**	0.11 U	**0.32 J**	**6**	**4.6**
Toluene	**1.9**	**1.5**	**50**	**2.4**	**6.6**	**20**	**1.5**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	**4.9**	0.042 U	0.042 U	**0.29 J**	**0.11 J**	**0.17 J**	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	0.22 UT	0.22 UT	**0.97 JT**	0.22 UT	**0.76 JT**	**7.7 T**	**5.5 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.072**	**0.072**	**41**	**0.46**	**0.65**	**22**	**6.2**
Acenaphthene	**1.4**	**3.3**	**68**	**5.2**	**9.2**	**77**	**270**
Anthracene	**0.074**	**0.25**	**39**	**1**	**0.47**	**4.3**	**12**
Benzo(a)anthracene	**0.16**	**0.35**	**23**	**2.9**	**0.47**	**1.8**	**0.65**
Benzo(a)pyrene	**0.21**	**0.26**	**22**	**5.2**	**0.5**	**1.7**	**0.14**
Benzo(b)fluoranthene	**0.19**	**0.27**	**18**	**4.1**	**0.45**	**1.5**	**0.15**
Benzo(k)fluoranthene	**0.068**	**0.1**	**6**	**1.4**	**0.16**	**0.69**	**0.048**
Chrysene	**0.21**	**0.45**	**28**	**3.8**	**0.63**	**2.3**	**0.61**
Dibenzo(a,h)anthracene	**0.022**	**0.13**	**2.6**	**0.55**	**0.056**	**0.25**	**0.0077 J**
Fluoranthene	**0.66**	**2**	**49**	**12**	**2.7**	**11**	**19**
Fluorene	**0.26**	**1.7**	**34**	**1.2**	**2.2**	**17**	**70**
Indeno(1,2,3-c,d)pyrene	**0.22**	**0.29**	**18**	**5.6**	**0.45**	**1.6**	**0.07**
Naphthalene	**0.11**	**0.21**	**26**	**2.6**	**0.96**	--	--
Pyrene	**0.82**	**2**	**49**	**13**	**2.5**	**11**	**18**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.0087 J**	**0.08**	**5.7**	**0.27**	**0.36**	**5.5**	**16**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSC2	WLCGSG07GSC2	WLCGSG07GSC2	WLCGSG07GSC2	WLCGSG07GSC2	WLCGSG07GSC3	WLCGSG07GSC3
Sample name:	WLCGSG07GSC2A	WLCGSG07GSC2B	WLCGSG07GSC2C	WLCGSG07GSC2W25	WLCGSG07GSC2W50	WLCGSG07GSC3A	WLCGSG07GSC3B
Sample date:	7/16/2007	7/16/2007	7/16/2007	9/13/2007	9/13/2007	7/13/2007	7/13/2007
Depth interval:	73.15 - 103.6 cm	164.6 - 225.6 cm	408.4 - 469.4 cm	701 - 823 cm	1463 - 1585 cm	30.48 - 60.96 cm	152.4 - 213.4 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.005 UT	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**0.03**	**0.01**	**0.04 T**	**0.01**	**0.27**	**0.01**	**0.02**
Metals (µg/l)							
Zinc	**935**	**64**	**108 T**	**82.9**	**118**	**55**	**134**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 UT	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 UT	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 UT	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	**1.6**	0.14 U	0.14 UT	**0.45 J**	0.14 U	0.14 U	0.14 U
Ethylbenzene	**9.1**	0.13 U	0.13 UT	**1.2**	**1.9**	0.13 U	0.13 U
Naphthalene	**--**	**--**	**29 T**	**140**	**260**	**--**	**--**
o-Xylene	**3.1**	0.11 U	0.11 UT	**0.45 J**	**0.61**	0.11 U	**0.22 J**
Toluene	**1.1**	**4.3**	**11 T**	**8**	**4.6**	**8.6**	**4.3**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 UT	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 UT	0.042 U	0.042 U	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**3.8 T**	0.22 UT	0.22 UT	**0.77 JT**	**1 JT**	0.22 UT	**0.51 JT**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**250**	**0.63**	**2.9 T**	**5.3**	**18**	**0.49**	**2.2**
Acenaphthene	**510**	**16**	**3.1 T**	**6.3**	**23**	**52**	**120**
Anthracene	**94**	**7.4**	**1.1 T**	**0.046**	**0.037**	**12**	**19**
Benzo(a)anthracene	**52**	**17**	**1.1 T**	**0.068**	**0.011 J**	**25**	**17**
Benzo(a)pyrene	**56**	**21**	**1.3 T**	0.005 U	0.0044 U	**32**	**22**
Benzo(b)fluoranthene	**43**	**17**	**0.98 T**	**0.099**	**0.042**	**25**	**18**
Benzo(k)fluoranthene	**15**	**5.7**	**0.33 T**	**0.026**	**0.012 J**	**8.4**	**6**
Chrysene	**67**	**23**	**1.6 T**	**0.13**	**0.086**	**32**	**26**
Dibenzo(a,h)anthracene	**5.4**	**1.9**	**0.097 T**	**0.0066 J**	0.0026 U	**2.9**	**2.1**
Fluoranthene	**230**	**31**	**3.3 T**	**1.1**	**2.4**	**70**	**73**
Fluorene	**140**	**3.8**	**1 T**	**2**	**9.7**	**10**	**34**
Indeno(1,2,3-c,d)pyrene	**49**	**19**	**1.1 T**	**0.065**	**0.021**	**28**	**20**
Naphthalene	**44**	**3.7**	**--**	**--**	**--**	**3.2**	**6.8**
Pyrene	**230**	**88**	**3.8 T**	**1**	**1.5**	**100**	**76**
Semivolatile Organics (µg/l)							
Dibenzofuran	**30**	**0.58**	**0.25 T**	**0.36**	**1.6**	**0.59**	**2**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Residual Range Hydrocarbons	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSC3	WLCGSG07GSC4	WLCGSG07GSC4	WLCGSG07GSC4	WLCGSG07GSC5	WLCGSG07GSC5	WLCGSG07GSC5
Sample name:	WLCGSG07GSC3C	WLCGSG07GSC4A	WLCGSG07GSC4B	WLCGSG07GSC4C	WLCGSG07GSC5A	WLCGSG07GSC5B	WLCGSG07GSC5C
Sample date:	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/12/2007	7/12/2007	7/12/2007
Depth interval:	396.2 - 457.2 cm	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.003 U	0.003 U
Cyanide, total	**0.03**	**0.06**	**0.02**	**0.01**	**0.19**	**0.21**	**0.12**
Metals (µg/l)							
Zinc	**49**	**126**	**46**	**102**	**220**	**94**	**114**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	0.14 U	**0.29 J**	0.14 U	0.14 U	**0.22 J**	**0.22 J**	0.14 U
Ethylbenzene	0.13 U	**3.5**	0.13 U	0.13 U	0.13 U	**3**	0.13 U
Naphthalene	--	**330**	--	--	--	**5**	--
o-Xylene	**0.11 J**	**1.1**	0.11 U	0.11 U	**1.4**	**6.3**	0.11 U
Toluene	**5.4**	**0.44 J**	**0.31 J**	**3.2**	**0.86**	**0.65**	**5.3**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	**0.07 J**	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**0.34 JT**	**1.5 JT**	0.22 UT	0.22 UT	**2 T**	**7.3 T**	0.22 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.015 J**	**27**	**0.011 J**	**0.05**	**0.62**	**2.1**	**0.0044 J**
Acenaphthene	**0.25**	**43**	**0.014 J**	**0.14**	**46**	**40**	**0.066**
Anthracene	**0.17**	**30**	**0.0083 J**	**0.22**	**21**	**0.77**	**0.022**
Benzo(a)anthracene	**0.18**	**22**	**0.0088 J**	**0.21**	**3.1**	**0.12**	**0.0092 J**
Benzo(a)pyrene	**0.21**	**25**	**0.005 J**	**0.23**	**1.7**	**0.093**	**0.0045 J**
Benzo(b)fluoranthene	**0.18**	**20**	**0.0055 J**	**0.21**	**1.8**	**0.092**	**0.0054 J**
Benzo(k)fluoranthene	**0.066**	**7.1**	0.0025 U	**0.07**	**0.8**	**0.031**	**0.0026 J**
Chrysene	**0.29**	**45**	**0.015 J**	**0.48**	**4**	**0.16**	**0.012 J**
Dibenzo(a,h)anthracene	**0.02**	**2.6**	0.0025 U	**0.02 J**	**0.26**	**0.01 J**	0.0025 U
Fluoranthene	**0.74**	**79**	**0.028**	**0.7**	**18**	**0.67**	**0.032**
Fluorene	**0.1**	**18**	**0.0052 J**	**0.056**	**14**	**8.5**	**0.018 J**
Indeno(1,2,3-c,d)pyrene	**0.19**	**20**	**0.004 J**	**0.21**	**1.5**	**0.084**	**0.0042 J**
Naphthalene	**0.098**	--	**0.12**	**0.68**	**1.4**	--	0.003 U
Pyrene	**0.81**	**86**	**0.028**	**0.77**	**15**	**0.67**	**0.029**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.0056 J**	**3.1**	0.0046 U	**0.0098 J**	**0.97**	**0.065**	0.0046 U
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSC5	WLCGSG07GSC5	WLCGSG07GSC6	WLCGSG07GSC6	WLCGSG07GSC6	WLCGSG07GSC7	WLCGSG07GSC7
Sample name:	WLCGSG07GSC5W25	WLCGSG07GSC5W50	WLCGSG07GSC6A	WLCGSG07GSC6B	WLCGSG07GSC6C	WLCGSG07GSC7A	WLCGSG07GSC7B
Sample date:	9/11/2007	9/11/2007	7/12/2007	7/12/2007	7/12/2007	7/11/2007	7/11/2007
Depth interval:	701 - 823 cm	1463 - 1585 cm	33.53 - 64.01 cm	161.5 - 222.5 cm	405.4 - 466.3 cm	30.48 - 60.96 cm	152.4 - 213.4 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.003 U	0.003 U	0.003 U	0.005 U	0.005 U
Cyanide, total	**0.12**	**0.12**	**0.18**	**0.15**	**0.15**	**0.35**	**0.41**
Metals (µg/l)							
Zinc	**100**	**158**	**8.3**	**126**	**98**	**94**	**42**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	**0.14 J**	**0.16 J**	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	**0.26 J**	**0.27 J**	0.14 U	0.14 U	0.14 U	**0.34 J**	0.14 U
Ethylbenzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	**0.52**	0.13 U
Naphthalene	--	**1 J**	--	--	--	**85**	--
o-Xylene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	**0.42 J**	**0.39 J**
Toluene	**96**	**85**	**0.64**	**3.4**	**1.5**	**0.22 J**	**0.17 J**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	**0.12 J**	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	0.22 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT	**0.74 JT**	**0.5 JT**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.023**	**0.12**	**0.003 J**	**0.0049 J**	**0.006 J**	**13**	**0.05**
Acenaphthene	**0.047**	**0.3**	**8.1**	**0.14**	**0.093**	**31**	**36**
Anthracene	**0.0047 J**	**0.015 J**	**0.02**	**0.01 J**	**0.023**	**4.1**	**0.88**
Benzo(a)anthracene	0.0027 U	0.0026 U	**0.0047 J**	**0.014 J**	**0.034**	**2.7**	**0.0039 J**
Benzo(a)pyrene	0.0044 U	0.0043 U	0.0043 U	**0.01 J**	**0.029**	**2.8**	0.0043 U
Benzo(b)fluoranthene	0.0024 U	0.0023 U	0.0023 U	**0.011 J**	**0.026**	**2.3**	0.0023 U
Benzo(k)fluoranthene	0.0026 U	0.0025 U	0.0025 U	**0.0041 J**	**0.0092 J**	**0.84**	0.0025 U
Chrysene	0.0035 U	0.0034 U	0.0034 U	**0.02**	**0.053**	**5.1**	0.0034 U
Dibenzo(a,h)anthracene	0.0026 U	0.0025 U	0.0025 U	0.0025 U	**0.0027 J**	**0.27**	0.0025 U
Fluoranthene	**0.011 J**	**0.048**	**0.0092 J**	**0.061**	**0.13**	**9**	**0.41**
Fluorene	**0.019 J**	**0.11**	**0.4**	**0.024**	**0.025**	**9.7**	**9**
Indeno(1,2,3-c,d)pyrene	0.0027 U	0.0026 U	0.0026 U	**0.0093 J**	**0.026**	**2.4**	0.0026 U
Naphthalene	**0.16**	--	**0.036**	**0.023**	**0.039**	--	**0.27**
Pyrene	**0.0077 J**	**0.034**	**0.0085 J**	**0.056**	**0.13**	**11**	**0.14**
Semivolatile Organics (µg/l)							
Dibenzofuran	0.0047 U	**0.044**	0.0046 U	0.0046 U	0.0046 U	**0.51**	**0.73**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC7
Sample name:	WLCGSG07GSC7C	WLCGSG07GSC7PWE071004	WLCGSG07GSC7PWE071005	WLCGSG07GSC7PWSH071004	WLCGSG07GSC7PWSH071005	WLCGSG07GSC7PWSL071004
Sample date:	7/11/2007	10/4/2007	10/5/2007	10/4/2007	10/5/2007	10/4/2007
Depth interval:	396.2 - 457.2 cm	38.1 - 53.34 cm	38.1 - 53.34 cm	38.1 - 53.34 cm	38.1 - 53.34 cm	38.1 - 53.34 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**0.41**	**0.31**	**0.42**	**0.24**	**0.32**	**0.26**
Metals (µg/l)						
Zinc	**403**	--	--	--	--	--
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.13 U	13 U	25 U	13 U	13 UJ	13 U
1,2-Dichloroethene, cis-	0.12 U	--	--	--	--	--
1,2-Dichloroethene, trans-	0.15 U	15 U	29 U	15 U	15 UJ	15 U
Benzene	0.14 U	**3000**	**4800**	**2300**	**3100 J**	**2700**
Ethylbenzene	0.13 U	**460**	**690**	**360**	**470 J**	**420**
Naphthalene	**0.71 J**	**19000**	**17000**	**15000**	**17000 J**	--
o-Xylene	**4.1**	**140**	**210**	**110**	**140 J**	**130**
Toluene	**0.48 J**	**28 J**	**38 J**	**21 J**	**94 J**	**26 J**
Trichloroethene (TCE)	0.14 U	14 U	27 U	14 U	14 UJ	14 U
Vinyl chloride	0.042 U	4.2 U	8.4 U	4.2 U	4.2 UJ	4.2 U
LWG RA Total Xylene (Calculated U = 1/2)	**6 T**	**390 T**	**590 T**	**320 T**	**400 JT**	**370 T**
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	**0.057**	**570**	**660**	**520**	**770**	**1000**
Acenaphthene	**6.4**	**340**	**370**	**320**	**510**	**680**
Anthracene	**0.025**	**36**	**31**	**30**	**91**	**97**
Benzo(a)anthracene	**0.011 J**	**15**	**11**	**12**	**52**	**59**
Benzo(a)pyrene	**0.0048 J**	**18**	**13**	**14**	**66**	**75**
Benzo(b)fluoranthene	**0.007 J**	**16**	**11**	**12**	**57**	**65**
Benzo(k)fluoranthene	0.0025 U	**5.4**	**3.5**	**3.7**	**18**	**20**
Chrysene	**0.018 J**	**18**	**13**	**15**	**64**	**70**
Dibenzo(a,h)anthracene	0.0025 U	**1.9**	**1.3**	**1.5**	**5.6**	**6.7**
Fluoranthene	**0.044**	**75**	**55**	**61**	**250**	**310**
Fluorene	**1.1**	**82**	**79**	**71**	**150**	**170**
Indeno(1,2,3-c,d)pyrene	**0.0041 J**	**13**	**8.9**	**10**	**47**	**53**
Naphthalene	--	--	--	--	--	**15000**
Pyrene	**0.04**	**77**	**58**	**64**	**250**	**310**
Semivolatile Organics (µg/l)						
Dibenzofuran	0.0046 U	**17**	**18**	**15**	**28**	**33**
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC8	WLCGSG07GSC8
Sample name:	WLCGSG07GSC7PWSL071005	WLCGSG07GSC7PWSL071006	WLCGSG07GSC7W25	WLCGSG07GSC7W50	WLCGSG07GSC8A	WLCGSG07GSC8B
Sample date:	10/5/2007	10/6/2007	8/31/2007	8/31/2007	7/11/2007	7/11/2007
Depth interval:	38.1 - 53.34 cm	38.1 - 53.34 cm	701 - 823 cm	1463 - 1585 cm	36.58 - 67.06 cm	158.5 - 219.5 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**0.42**	**0.47**	**0.02**	**0.04**	**0.26**	**0.51**
Metals (µg/l)						
Zinc	--	--	**59.6**	**90.8**	**153**	**31.3**
Volatile Organics (µg/l)						
1,1-Dichloroethene	25 U	6.1 U	0.25 U	0.13 U	**0.68 J**	**27**
1,2-Dichloroethene, cis-	--	--	0.24 U	0.12 U	**230**	**11000**
1,2-Dichloroethene, trans-	29 U	7.2 U	0.29 U	0.15 U	**0.7 J**	**18 J**
Benzene	**4400**	**4500**	**4.4**	**2**	**36**	**44**
Ethylbenzene	**630**	**660**	**8.1**	**3.7**	**13**	6.5 U
Naphthalene	**19000**	**17000**	**480**	**320**	**8 J**	--
o-Xylene	**190**	**210**	**2.6**	**1.2**	**2.7**	5.1 U
Toluene	**42 J**	**40**	**110**	**120**	**6.6**	5.4 U
Trichloroethene (TCE)	27 U	6.7 U	0.27 U	0.14 U	0.34 U	**7 J**
Vinyl chloride	8.4 U	2.1 U	0.084 U	0.042 U	**780**	**7600**
LWG RA Total Xylene (Calculated U = 1/2)	**540 T**	**560 T**	**5 T**	**2.3 T**	**3.4 JT**	11 UT
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	**670**	**510**	**32**	**37**	**81**	**0.081**
Acenaphthene	**360**	**290**	**22**	**30**	**130**	**0.33**
Anthracene	**40**	**21**	**3.6**	**7.1**	**25**	**0.063**
Benzo(a)anthracene	**16**	**5.4**	**1.8**	**4.2**	**12**	**0.058**
Benzo(a)pyrene	**20**	**6.1**	**2.3**	**5.5**	**12**	**0.049**
Benzo(b)fluoranthene	**18**	**5.3**	**1.9**	**4.6**	**10**	**0.051**
Benzo(k)fluoranthene	**5.5**	**1.6**	**0.66**	**1.5**	**3.4**	**0.02**
Chrysene	**20**	**7.3**	**2.1**	**4.9**	**15**	**0.084**
Dibenzo(a,h)anthracene	**2.1**	**0.59**	**0.26**	**0.62**	**0.95**	**0.0055 J**
Fluoranthene	**82**	**33**	**7.9**	**19**	**50**	**0.24**
Fluorene	**89**	**70**	**5.6**	**10**	**41**	**0.053**
Indeno(1,2,3-c,d)pyrene	**15**	**4.3**	**2**	**4.7**	**8.3**	**0.044**
Naphthalene	--	--	--	--	--	**0.028**
Pyrene	**84**	**34**	**8**	**18**	**53**	**0.24**
Semivolatile Organics (µg/l)						
Dibenzofuran	**19**	**16**	**1.1**	**1.9**	**6.6**	**0.0077 J**
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSC8	WLCGSG07GSC9	WLCGSG07GSC9	WLCGSG07GSC9	WLCGSG07GSD1	WLCGSG07GSD1	WLCGSG07GSD1
Sample name:	WLCGSG07GSC8C	WLCGSG07GSC9A	WLCGSG07GSC9B	WLCGSG07GSC9C	WLCGSG07GSD1A	WLCGSG07GSD1B	WLCGSG07GSD1C
Sample date:	7/11/2007	7/10/2007	7/10/2007	7/10/2007	7/20/2007	7/20/2007	7/20/2007
Depth interval:	402.3 - 463.3 cm	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 UT	0.005 U	0.005 U	0.005 U
Cyanide, total	**0.06**	**0.02**	**0.008 J**	0.003 UT	**0.04**	**0.02**	**0.02**
Metals (µg/l)							
Zinc	**88.2**	**148**	**95.6**	**385 T**	**85**	**112**	**511**
Volatile Organics (µg/l)							
1,1-Dichloroethene	**0.68**	0.13 U	0.13 U	0.13 UT	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	**240**	**0.41 J**	**0.57**	**0.16 JT**	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	**1**	0.15 U	0.15 U	0.15 UT	0.15 U	0.15 U	0.15 U
Benzene	**1.8**	**0.16 J**	**0.77**	0.14 UT	0.14 U	0.14 U	0.14 U
Ethylbenzene	0.13 U	0.13 U	0.13 U	0.13 UT	0.13 U	0.13 U	0.13 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	0.11 U	0.11 U	0.11 U	0.11 UT	0.11 U	0.11 U	0.11 U
Toluene	**0.74**	**23**	**5.7**	**2.7 T**	**0.25 J**	**0.77**	**4.1**
Trichloroethene (TCE)	**1.3**	0.14 U	0.14 U	0.14 UT	0.14 U	0.14 U	0.14 U
Vinyl chloride	**91**	**0.05 J**	**0.08 J**	**0.23 JT**	0.042 U	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	0.22 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.14**	**0.022**	**0.0057 J**	**0.0026 JT**	**0.34**	**0.027**	**0.043**
Acenaphthene	**0.32**	**15**	**0.07**	**0.02 JT**	**1.8**	**0.41**	**0.27**
Anthracene	**0.11**	**0.41**	**0.033**	**0.0058 JT**	**1.3**	**0.5**	**0.25**
Benzo(a)anthracene	**0.098**	**0.094**	**0.027**	**0.0095 JT**	**2.8**	**1.1**	**0.57**
Benzo(a)pyrene	**0.087**	**0.12**	**0.018 J**	**0.0052 JT**	**3.3**	**1.3**	**0.65**
Benzo(b)fluoranthene	**0.081**	**0.13**	**0.021**	**0.008 JT**	**2.7**	**1.1**	**0.56**
Benzo(k)fluoranthene	**0.039**	**0.049**	**0.0092 J**	**0.0038 JT**	**0.95**	**0.39**	**0.2**
Chrysene	**0.14**	**0.14**	**0.042**	**0.015 JT**	**4.1**	**1.9**	**0.92**
Dibenzo(a,h)anthracene	**0.0088 J**	**0.015 J**	0.0025 U	0.0025 UT	**0.27**	**0.12**	**0.062**
Fluoranthene	**0.45**	**1.9**	**0.13**	**0.046 T**	**10**	**3.9**	**1.9**
Fluorene	**0.097**	**8.7**	**0.045**	**0.012 JT**	**1.3**	**0.27**	**0.15**
Indeno(1,2,3-c,d)pyrene	**0.072**	**0.12**	**0.018 J**	**0.0045 JT**	**2.8**	**1.2**	**0.61**
Naphthalene	**0.042**	**0.088**	**0.039**	**0.0067 JT**	**0.77**	**0.16**	**0.26**
Pyrene	**0.43**	**1.1**	**0.1**	**0.033 T**	**11**	**4**	**1.9**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.014 J**	**0.033**	0.0046 U	0.0046 UT	**0.057**	**0.014 J**	**0.013 J**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSD2	WLCGSG07GSD2	WLCGSG07GSD2	WLCGSG07GSD2	WLCGSG07GSD2	WLCGSG07GSD3	WLCGSG07GSD3
Sample name:	WLCGSG07GSD2A	WLCGSG07GSD2B	WLCGSG07GSD2C	WLCGSG07GSD2W25	WLCGSG07GSD2W50	WLCGSG07GSD3A	WLCGSG07GSD3B
Sample date:	7/20/2007	7/20/2007	7/20/2007	9/10/2007	9/10/2007	7/23/2007	7/23/2007
Depth interval:	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm	701 - 823 cm	1463 - 1585 cm	15.24 - 45.72 cm	137.2 - 198.1 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ	0.005 UJ
Cyanide, total	**0.04**	**0.05**	**0.05**	**0.06**	**0.06**	**0.05**	**0.05**
Metals (µg/l)							
Zinc	**11**	**93**	**138**	**21.7**	**76.1**	**23.5 J**	**108 J**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 U	0.12 U	**0.12 J**	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	0.14 U	0.14 U	0.14 U	0.14 U	**0.22 J**	0.14 U	0.14 U
Ethylbenzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Naphthalene	--	--	--	--	**2.1**	--	--
o-Xylene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Toluene	**0.33 J**	**3.4**	**3.2**	**21**	**71**	**0.31 J**	**4**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	0.22 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.0031 J**	**0.0053 J**	**0.012 J**	**0.11**	**0.32**	0.0023 U	**0.0055 J**
Acenaphthene	**0.0054 J**	**0.018 J**	**0.021**	**0.76**	**0.26**	0.0044 U	**0.013 J**
Anthracene	**0.0049 J**	**0.027**	**0.03**	**0.18**	**0.0047 J**	0.0036 UJ	**0.0054 J**
Benzo(a)anthracene	0.0028 U	**0.05**	**0.11**	**0.0062 J**	**0.0029 J**	**0.0073 J**	**0.015 J**
Benzo(a)pyrene	**0.0058 J**	**0.043**	**0.11**	0.0044 U	0.0086 UJ	**-- R**	**-- R**
Benzo(b)fluoranthene	**0.0085 J**	**0.045**	**0.11**	**0.0032 J**	0.0046 UJ	**0.0048 J**	**0.012 J**
Benzo(k)fluoranthene	**0.0045 J**	**0.017 J**	**0.035**	0.0026 U	0.005 UJ	0.0025 U	**0.0041 J**
Chrysene	**0.012 J**	**0.066**	**0.14**	0.0035 U	0.0034 U	**0.0083 J**	**0.017 J**
Dibenzo(a,h)anthracene	**0.0037 J**	**0.0051 J**	**0.013 J**	0.0026 U	0.005 UJ	0.0025 U	0.0025 U
Fluoranthene	**0.032**	**0.17**	**0.26**	**0.12**	**0.032**	**0.028**	**0.048**
Fluorene	0.004 U	**0.013 J**	**0.014 J**	**0.51**	**0.11**	0.0038 U	**0.0089 J**
Indeno(1,2,3-c,d)pyrene	**0.0091 J**	**0.043**	**0.098**	0.0027 U	0.0052 UJ	0.0026 U	**0.0062 J**
Naphthalene	**0.012 J**	**0.022**	**0.043**	**0.051**	--	0.003 U	0.003 U
Pyrene	**0.034**	**0.18**	**0.28**	**0.077**	**0.02**	**0.028**	**0.043**
Semivolatile Organics (µg/l)							
Dibenzofuran	0.0049 U	0.0046 U	0.0046 U	**0.082**	**0.021**	0.0046 U	0.0046 U
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSD3	WLCGSG07GSD4	WLCGSG07GSD4	WLCGSG07GSD4	WLCGSG07GSD4	WLCGSG07GSD4	WLCGSG07GSD5
Sample name:	WLCGSG07GSD3C	WLCGSG07GSD4A	WLCGSG07GSD4B	WLCGSG07GSD4C	WLCGSG07GSD4W25	WLCGSG07GSD4W50	WLCGSG07GSD5A
Sample date:	7/23/2007	7/23/2007	7/23/2007	7/23/2007	9/6/2007	9/6/2007	7/24/2007
Depth interval:	381 - 442 cm	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm	701 - 823 cm	1463 - 1585 cm	30.48 - 60.96 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJT	0.005 UT	0.005 U	0.005 UJ
Cyanide, total	**0.02**	**0.03**	**0.03**	**0.03 T**	**0.0095 JT**	0.003 U	0.003 U
Metals (µg/l)							
Zinc	**368 J**	**37.4 J**	**115 J**	**101 JT**	**17.9 T**	**134**	**37.6 J**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 UT	0.13 UT	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	**0.37 J**	**0.14 J**	**0.16 JT**	0.12 UT	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 UT	0.15 UT	0.15 U	0.15 U
Benzene	0.14 U	0.14 U	0.14 U	0.14 UT	**0.14 JT**	**0.87**	0.14 U
Ethylbenzene	0.13 U	0.13 U	0.13 U	0.13 UT	0.13 UT	0.13 U	0.13 U
Naphthalene	--	**0.68 J**	--	--	--	**3.7**	--
o-Xylene	0.11 U	0.11 U	0.11 U	0.11 UT	0.11 UT	**0.11 J**	**0.31 J**
Toluene	**15**	**0.42 J**	**1.5**	**1.6 T**	**50 T**	**290**	**0.72**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 UT	0.14 UT	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 UT	0.042 UT	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**0.3 JT**	0.22 UT	0.22 UT	0.22 UT	0.22 UT	**0.51 JT**	**0.54 JT**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.024**	**0.042**	**0.0071 J**	**0.0078 JT**	**12 T**	**0.33**	**0.06**
Acenaphthene	**0.024**	**2.1**	**0.0094 J**	**0.017 JT**	**18 T**	**0.5**	**38**
Anthracene	**0.018 J**	**0.0057 J**	0.0036 UJ	**0.013 JT**	**7.9 T**	**0.31**	**0.4 J**
Benzo(a)anthracene	**0.11**	**0.0094 J**	**0.0082 J**	**0.021 JT**	**5.9 T**	**0.35**	**0.021**
Benzo(a)pyrene	**-- R**	**0.0047 J**	**-- R**	**-- R**	**6.3 T**	**0.34**	**0.013 J**
Benzo(b)fluoranthene	**0.13**	**0.0065 J**	**0.013 J**	**0.035 T**	**6.9 T**	**0.67**	**0.014 J**
Benzo(k)fluoranthene	**0.083**	0.0025 U	**0.0039 J**	**0.018 JT**	**1.9 T**	0.0025 U	**0.0056 J**
Chrysene	**0.15**	**0.009 J**	**0.019 J**	**0.051 T**	**6.3 T**	**0.43**	**0.019 J**
Dibenzo(a,h)anthracene	**0.074**	0.0025 U	0.0025 U	0.0025 UT	**0.61 T**	**0.034**	0.0025 U
Fluoranthene	**0.22**	**0.026**	**0.051**	**0.087 JT**	**23 T**	**1.3**	**0.076**
Fluorene	**0.017 J**	**0.04**	**0.0052 J**	**0.013 JT**	**7.5 T**	**0.31**	**8.5**
Indeno(1,2,3-c,d)pyrene	**0.11**	**0.0035 J**	**0.006 J**	**0.022 T**	**5 T**	**0.29**	**0.008 J**
Naphthalene	**0.14**	**--**	**0.029**	**0.023 T**	**30 T**	**--**	**0.13**
Pyrene	**0.21**	**0.024**	**0.047**	**0.087 JT**	**24 T**	**1.4**	**0.07**
Semivolatile Organics (µg/l)							
Dibenzofuran	0.0047 U	0.0046 U	0.0046 U	0.0046 UT	**1.2 T**	**0.043**	**0.039**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSD5	WLCGSG07GSD5	WLCGSG07GSD5	WLCGSG07GSD5	WLCGSG07GSD5	WLCGSG07GSD5
Sample name:	WLCGSG07GSD5B	WLCGSG07GSD5C	WLCGSG07GSD5PWE071004	WLCGSG07GSD5PWE071005	WLCGSG07GSD5PWSH071004	WLCGSG07GSD5PWSH071005
Sample date:	7/24/2007	7/24/2007	10/4/2007	10/5/2007	10/4/2007	10/5/2007
Depth interval:	152.4 - 213.4 cm	396.2 - 457.2 cm	38.1 - 53.34 cm	38.1 - 53.34 cm	38.1 - 53.34 cm	38.1 - 53.34 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 UJ	0.005 UJ	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	**0.004 J**	**0.009 J**	0.003 U	**0.06**	0.003 U
Metals (µg/l)						
Zinc	**104 J**	**121 J**	--	--	--	--
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.13 U	1.3 U	0.13 U	0.13 UJ	0.13 U	0.13 UJ
1,2-Dichloroethene, cis-	0.12 U	1.2 U	--	--	--	--
1,2-Dichloroethene, trans-	0.15 U	1.5 U	0.15 U	0.15 UJ	0.15 U	0.15 UJ
Benzene	**17**	**14**	0.14 U	0.14 UJ	0.14 U	0.14 UJ
Ethylbenzene	**26**	**110**	0.13 U	0.13 UJ	0.13 U	0.13 UJ
Naphthalene	**42**	**1000**	--	--	--	--
o-Xylene	**5.2**	**21**	0.11 U	0.11 UJ	0.11 U	0.11 UJ
Toluene	**2.5**	**21**	**0.75**	**0.78 J**	0.11 U	0.11 UJ
Trichloroethene (TCE)	0.14 U	1.4 U	**0.16 J**	0.14 UJ	0.14 U	0.14 UJ
Vinyl chloride	0.042 U	0.42 U	0.042 U	0.042 UJ	0.042 U	0.042 UJ
LWG RA Total Xylene (Calculated U = 1/2)	**8.2 T**	**32 T**	0.22 UT	0.22 UJT	0.22 UT	0.22 UJT
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	**3.7**	**150**	**0.0078 J**	**0.0091 J**	**0.014 J**	**0.0097 J**
Acenaphthene	**89**	**84**	**9.5**	**11**	**9.2**	**9.2**
Anthracene	**0.82 J**	**0.05 J**	**0.051**	**0.06**	**0.044**	**0.06**
Benzo(a)anthracene	**0.0088 J**	**0.046**	0.0026 U	0.0026 U	0.0026 U	0.0026 U
Benzo(a)pyrene	**0.0044 J**	**0.041 J**	**0.0087 J**	0.0043 U	0.0043 U	0.0043 U
Benzo(b)fluoranthene	**0.0057 J**	**0.042**	**0.014 J**	0.0023 U	0.0023 U	0.0023 U
Benzo(k)fluoranthene	0.0025 U	**0.013 J**	**0.0065 J**	0.0025 U	0.0025 U	0.0025 U
Chrysene	**0.0075 J**	**0.054**	**0.0064 J**	**0.0047 J**	**0.004 J**	**0.0036 J**
Dibenzo(a,h)anthracene	0.0025 U	**0.0052 J**	**0.0065 J**	0.0025 U	0.0025 U	0.0025 U
Fluoranthene	**0.14**	**0.14**	**0.11**	**0.13**	**0.1**	**0.12**
Fluorene	**14**	**15**	**1.8**	**2**	**1.6**	**1.9**
Indeno(1,2,3-c,d)pyrene	**0.0043 J**	**0.032**	**0.018 J**	0.0026 U	0.0026 U	0.0026 U
Naphthalene	--	--	0.003 U	0.003 U	**0.11**	0.003 U
Pyrene	**0.08**	**0.15**	**0.078**	**0.085**	**0.071**	**0.084**
Semivolatile Organics (µg/l)						
Dibenzofuran	**1.3**	**2.1**	**0.013 J**	**0.016 J**	**0.012 J**	**0.018 J**
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSD5	WLCGSG07GSD5	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS04
Sample name:	WLCGSG07GSD5PWSL071005	WLCGSG07GSD5PWSL071006	WLCGSJ06GS04W2731	WLCGSJ06GS04W46	WLCGSJ06GS04W4852	WLCGSJ06GS04W7377
Sample date:	10/5/2007	10/6/2007	12/12/2006	12/12/2006	12/13/2006	12/13/2006
Depth interval:	38.1 - 53.34 cm	38.1 - 53.34 cm	823 - 944.9 cm	121.9 - 182.9 cm	1463 - 1585 cm	2225 - 2347 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ
Cyanide, total	0.003 U	**0.004 J**	**0.19 J**	**0.34 J**	**0.21 J**	**0.11 J**
Metals (µg/l)						
Zinc	--	--	**525**	**17400**	**436**	**879**
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.13 UJ	0.13 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, cis-	--	--	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, trans-	0.15 UJ	0.15 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	0.14 UJ	0.14 U	**0.38 J**	**1.2**	**0.21 J**	**0.8**
Ethylbenzene	0.13 UJ	0.13 U	0.5 U	0.5 U	0.5 U	0.5 U
Naphthalene	--	--	--	--	--	--
o-Xylene	0.11 UJ	0.11 U	**0.12 J**	**0.14 J**	0.5 U	0.5 U
Toluene	**1.1 J**	**0.2 J**	**0.15 J**	**0.33 J**	0.5 U	**0.11 J**
Trichloroethene (TCE)	0.14 UJ	0.14 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.042 UJ	0.042 U	0.5 U	0.5 U	0.5 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	0.22 UJT	0.22 UT	**0.37 JT**	**0.39 JT**	0.5 UT	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	**0.0078 J**	**0.021**	**0.37**	**1.8**	**0.93**	**0.13**
Acenaphthene	**9.6**	**11**	**1**	**0.93**	**0.45**	**0.05**
Anthracene	**0.061**	**0.099**	**0.16**	**0.25**	**0.32**	**0.067**
Benzo(a)anthracene	0.0026 U	0.0026 U	**0.15**	**0.65**	**0.75**	**0.21**
Benzo(a)pyrene	0.0043 U	**0.0064 J**	**0.12**	**0.8**	**0.57**	**0.15**
Benzo(b)fluoranthene	0.0023 U	**0.0081 J**	**0.1**	**0.52**	**0.78**	**0.14**
Benzo(k)fluoranthene	0.0025 U	0.0025 U	**0.093**	**0.48**	**0.75**	**0.14**
Chrysene	**0.0044 J**	**0.017 J**	**0.34**	**0.82**	**1.8**	**0.46**
Dibenzo(a,h)anthracene	0.0025 U	0.0025 U	**0.012 J**	**0.059**	**0.18 J**	**0.015 J**
Fluoranthene	**0.13**	**0.16**	**0.8**	**2.3**	**2.5**	**0.61**
Fluorene	**1.9**	**2.4**	**0.37**	**2.5**	**1.2**	**0.14**
Indeno(1,2,3-c,d)pyrene	0.0026 U	**0.0037 J**	**0.094**	**0.53**	**0.62**	**0.1**
Naphthalene	0.003 U	**0.068**	**0.39**	**2.2**	**2.7**	**0.33**
Pyrene	**0.086**	**0.15**	**0.91**	**3**	**2.9**	**0.83**
Semivolatile Organics (µg/l)						
Dibenzofuran	**0.018 J**	**0.025**	**0.0052 J**	**0.0097 J**	0.2 U	**0.0038 J**
Total Petroleum Hydrocarbons (mg/l)						
Diesel Range Hydrocarbons	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05
Sample name:	WLCGSJ06GS04W911	WLCGSJ06GS04W98102	WLCGSJ06GS05CW100	WLCGSJ06GS05W2327	WLCGSJ06GS05W46	WLCGSJ06GS05W5559	WLCGSJ06GS05W7377
Sample date:	12/12/2006	12/13/2006	10/26/2006	10/25/2006	10/24/2006	10/25/2006	10/26/2006
Depth interval:	274.3 - 335.3 cm	2987 - 3109 cm	3048 - 3048 cm	701 - 823 cm	121.9 - 182.9 cm	1676 - 1798 cm	2225 - 2347 cm
Conventional Parameters (mg/l)							
Cyanide, free	**0.005 J**	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Cyanide, total	**0.36 J**	**0.01 J**	**0.04**	**0.02**	**0.03**	**0.13**	**0.03**
Metals (µg/l)							
Zinc	**492**	**13800**	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.5 U	**0.25 J**	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	0.5 U	**2.9**	0.5 U	**0.79**	**1**	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	**1.8**	**0.28 J**	0.5 U	0.5 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	0.5 U	**0.16 J**	0.5 U	**1.4**	**0.36 J**	0.5 U	0.5 U
Toluene	0.5 U	**0.21 J**	0.5 U	**0.47 J**	**0.59**	0.5 U	0.5 U
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	**0.41 JT**	0.5 UT	**2.6 T**	**1.9 JT**	0.5 UT	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.045**	**0.43 J**	**0.045**	**16**	**1.1**	**0.21**	**0.026**
Acenaphthene	**0.048**	**0.13 J**	**0.091**	**6.9**	**28**	**0.38**	**0.14**
Anthracene	**0.073**	**0.17 J**	**0.078**	**1**	**0.28**	**0.75**	**0.082**
Benzo(a)anthracene	**0.38**	**0.33 J**	**0.016 J**	**0.3**	**0.11**	**0.26**	**0.013 J**
Benzo(a)pyrene	**0.53**	**0.19 J**	**0.013 J**	**0.25**	**0.081**	**0.2**	**0.0084 J**
Benzo(b)fluoranthene	**0.37**	**0.16 J**	**0.0092 J**	**0.16**	**0.049**	**0.14**	**0.005 J**
Benzo(k)fluoranthene	**0.29**	**0.11 J**	**0.0077 J**	**0.15**	**0.043**	**0.13**	0.02 U
Chrysene	**0.57**	**1.1 J**	**0.019 J**	**0.42**	**0.15**	**0.48**	**0.014 J**
Dibenzo(a,h)anthracene	**0.042**	**0.091 J**	0.02 U	**0.018 J**	0.029 U	**0.014 J**	**0.0038 J**
Fluoranthene	**1.3**	**0.45 J**	**0.15**	**2**	**0.67**	**1.7**	**0.15**
Fluorene	**0.069**	**0.54 J**	**0.077**	**3**	**3.6**	**0.41**	**0.063**
Indeno(1,2,3-c,d)pyrene	**0.36**	**0.085 J**	**0.0084 J**	**0.16**	**0.04**	**0.12**	**0.0042 J**
Naphthalene	0.02 U	**2.2 J**	0.02 U	**65**	**1.7**	**0.42**	0.02 U
Pyrene	**1.6**	**0.63 J**	**0.15**	**2.1**	**0.76**	**1.8**	**0.15**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.004 J**	**0.015 J**	**0.017 J**	**0.54**	**0.07**	**0.029**	**0.0099 J**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06
Sample name:	WLCGSJ06GS05W911	WLCGSJ06GS05W98102	WLCGSJ06GS06W2327	WLCGSJ06GS06W46	WLCGSJ06GS06W4852	WLCGSJ06GS06W7377	WLCGSJ06GS06W911
Sample date:	10/24/2006	10/26/2006	1/17/2007	1/15/2007	1/17/2007	1/17/2007	1/15/2007
Depth interval:	274.3 - 335.3 cm	2987 - 3109 cm	701 - 823 cm	121.9 - 182.9 cm	1463 - 1585 cm	2225 - 2347 cm	274.3 - 335.3 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.01 U	0.01 U	0.01 UT	0.01 U	0.01 UT	0.01 U	0.01 U
Cyanide, total	**0.03**	**0.04**	**0.05 T**	**0.85**	**0.18 T**	**0.07**	**0.68**
Metals (µg/l)							
Zinc	**--**	**--**	**9.6 T**	**403**	**16.8 T**	**13.1**	**47.7**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.5 UT	0.5 U	0.5 UT	0.5 U	0.5 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.5 UT	0.5 U	0.5 UT	0.5 U	0.5 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 UT	0.5 U	0.5 UT	0.5 U	0.5 U
Benzene	**1**	0.5 U	**0.62 T**	**100**	0.5 UT	0.5 U	**0.7**
Ethylbenzene	**1.3**	0.5 U	**0.86 T**	**32**	0.5 UT	0.5 U	**0.54**
Naphthalene	**--**	**--**	**--**	**--**	**--**	**--**	**--**
o-Xylene	**1.2**	0.5 U	**0.35 JT**	**11**	0.5 UT	0.5 U	**0.49 J**
Toluene	**0.56**	0.5 U	0.5 UT	**2.1**	0.5 UT	0.5 U	**0.69**
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 UT	0.5 U	0.5 UT	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	0.5 UT	0.5 U	0.5 UT	0.5 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	**2.6 T**	0.5 UT	**0.95 JT**	**18 T**	0.5 UT	0.5 UT	**0.89 JT**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**5.2**	**0.029**	**0.073 T**	**110**	**0.029 T**	**0.013 J**	**4.3**
Acenaphthene	**6.6**	**0.056**	**0.13 T**	**200**	**0.025 JT**	**0.015 J**	**8.4**
Anthracene	**0.43**	**0.11**	**0.018 JT**	**76**	**0.0072 JT**	0.02 U	**2.9**
Benzo(a)anthracene	**0.16**	**0.016 J**	**0.0059 JT**	**71**	**0.0078 JT**	**0.0041 J**	**2.9**
Benzo(a)pyrene	**0.15**	**0.0088 J**	**0.0049 JT**	**110**	0.022 UT	0.02 U	**4**
Benzo(b)fluoranthene	**0.11**	**0.0073 J**	**0.0085 JT**	**66**	**0.0083 JT**	0.02 U	**2.8**
Benzo(k)fluoranthene	**0.094**	**0.0063 J**	0.021 UJT	**57**	0.022 UJT	0.02 UJ	**2**
Chrysene	**0.21**	**0.019 J**	**0.0084 JT**	**96**	**0.019 JT**	0.02 U	**3.7**
Dibenzo(a,h)anthracene	**0.0077 J**	0.02 U	**0.0054 JT**	**8.9**	**0.0046 JT**	**0.0037 J**	**0.4**
Fluoranthene	**0.86**	**0.21**	**0.057 T**	**240**	**0.043 T**	**0.023**	**9.8**
Fluorene	**1.8**	**0.067**	**0.063 T**	**85**	**0.016 JT**	**0.0059 J**	**3.6**
Indeno(1,2,3-c,d)pyrene	**0.074**	**0.0067 J**	**0.0048 JT**	**78**	**0.0036 JT**	0.02 U	**2.9**
Naphthalene	**26**	0.02 U	**0.25 T**	**910**	**0.089 T**	**0.048**	**28**
Pyrene	**1**	**0.21**	**0.052 T**	**270**	**0.045 T**	0.02 U	**12**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.23**	**0.011 J**	**0.013 JT**	**14**	**0.0056 JT**	0.02 U	**0.61**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Residual Range Hydrocarbons	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07
Sample name:	WLCGSJ06GS06W98102	WLCGSJ06GS07CW100	WLCGSJ06GS07W2327	WLCGSJ06GS07W46	WLCGSJ06GS07W4852	WLCGSJ06GS07W7377	WLCGSJ06GS07W911
Sample date:	1/18/2007	10/18/2006	10/17/2006	10/16/2006	10/17/2006	10/18/2006	10/16/2006
Depth interval:	2987 - 3109 cm	3048 - 3048 cm	701 - 823 cm	121.9 - 182.9 cm	1463 - 1585 cm	2225 - 2347 cm	274.3 - 335.3 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 UT	0.01 U
Cyanide, total	**0.13**	**0.02**	**1**	**1.2**	**0.6**	**0.4 T**	**1.3**
Metals (µg/l)							
Zinc	**6.5**	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	13 U	0.5 U	1 U	0.5 UT	25 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	13 U	0.5 U	1 U	0.5 UT	25 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	13 U	0.5 U	1 U	0.5 UT	25 U
Benzene	0.5 U	0.5 U	**64**	**19**	**600**	**0.34 JT**	**220**
Ethylbenzene	0.5 U	0.5 U	**89**	**24**	**8.8**	**0.16 JT**	**120**
Naphthalene	--	--	--	--	--	--	--
o-Xylene	0.5 U	**0.13 J**	**47**	**30**	**4.2**	**0.58 T**	**49**
Toluene	0.5 U	0.5 U	**12 J**	**3**	**0.58 J**	0.5 UT	**15 J**
Trichloroethene (TCE)	0.5 U	0.5 U	13 U	0.5 U	**0.4 J**	0.5 UT	25 U
Vinyl chloride	0.5 U	0.5 U	13 U	0.5 U	1 U	0.5 UT	25 U
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	**0.38 JT**	**110 T**	**47 T**	**8.1 T**	**0.83 T**	**81 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.12**	**0.99**	**1100**	**200**	**87**	**2.2 T**	**180**
Acenaphthene	**0.1**	**6.5**	**680**	**97**	**75**	**5.1 T**	**170**
Anthracene	**0.0086 J**	**5.5**	**400**	**70**	**49**	**1.4 T**	**57**
Benzo(a)anthracene	0.02 U	**3.1**	**260**	**34**	**31**	**0.7 T**	**28**
Benzo(a)pyrene	0.02 U	**3.1**	**330**	**34**	**32**	**0.77 T**	**30**
Benzo(b)fluoranthene	0.02 U	**1.9**	**180**	**17**	**19**	**0.48 T**	**18**
Benzo(k)fluoranthene	0.02 UJ	**1.8**	**170**	**21**	**17**	**0.48 T**	**17**
Chrysene	0.02 U	**5.5**	**350**	**44**	**43**	**0.68 T**	**39**
Dibenzo(a,h)anthracene	0.02 U	**0.28**	**27**	**2.5**	**2.5**	**0.058 T**	**2**
Fluoranthene	**0.035**	**13**	**820**	**120**	**100**	**3.3 T**	**120**
Fluorene	**0.027**	**5.9**	**380**	**71**	**46**	**3.6 T**	**60**
Indeno(1,2,3-c,d)pyrene	0.02 U	**2.1**	**220**	**15**	**20**	**0.55 T**	**18**
Naphthalene	**0.49**	**2.4**	**6100**	**480**	**250**	**9.5 T**	**2800**
Pyrene	**0.029**	**16**	**1000**	**150**	**130**	**3.7 T**	**140**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.0086 J**	**0.6**	**49**	**12**	**5.7**	**0.39 T**	**9.4**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSJ06GS07	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS08
Sample name:	WLCGSJ06GS07W98102	WLCGSJ06GS08W100	WLCGSJ06GS08W2327	WLCGSJ06GS08W46	WLCGSJ06GS08W4852	WLCGSJ06GS08W7377	WLCGSJ06GS08W911
Sample date:	10/18/2006	10/27/2006	10/25/2006	10/25/2006	10/26/2006	10/26/2006	10/25/2006
Depth interval:	2987 - 3109 cm	3048 - 3048 cm	701 - 823 cm	121.9 - 182.9 cm	1463 - 1585 cm	2225 - 2347 cm	274.3 - 335.3 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.01 U	**0.007 J**	0.01 U	0.01 U	0.01 UT	0.01 U	0.01 U
Cyanide, total	**0.01**	**0.57**	**0.11**	**0.16**	**0.52 T**	**0.67**	**0.11**
Metals (µg/l)							
Zinc	**--**	**162**	**49.9 J**	**176 J**	**565 JT**	**117 J**	**138 J**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	25 U	0.5 UT	0.5 U	0.5 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.5 U	25 U	0.5 UT	0.5 U	0.5 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	25 U	0.5 UT	0.5 U	0.5 U
Benzene	0.5 U	**280**	0.5 U	**560**	0.5 UT	**1.2**	**1.3**
Ethylbenzene	0.5 U	**6.8**	0.5 U	**170**	0.5 UT	**0.37 J**	**2.9**
Naphthalene	**--**	**--**	**--**	**--**	**--**	**--**	**--**
o-Xylene	**0.16 J**	**10**	0.5 U	**79**	0.5 UT	**3.2**	**1.6**
Toluene	0.5 U	**0.84**	0.5 U	**13 J**	0.5 UT	**0.3 J**	**0.3 J**
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	25 U	0.5 UT	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	25 U	0.5 UT	0.5 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	**0.41 JT**	**74 T**	0.5 UT	**130 T**	0.5 UT	**11 T**	**2.7 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.13**	**0.97**	**3.5**	**720**	**0.17 T**	**0.14**	**18**
Acenaphthene	**0.45**	**0.093**	**4.3**	**720**	**0.39 T**	**0.082**	**19**
Anthracene	**0.55**	**0.019 J**	**1.1**	**250**	**0.15 T**	**0.021**	**5.8**
Benzo(a)anthracene	**0.28**	**0.015 J**	**0.86**	**130**	**0.082 T**	**0.017 J**	**4.9**
Benzo(a)pyrene	**0.27**	**0.014 J**	**1**	**170**	**0.081 T**	**0.017 J**	**5.9**
Benzo(b)fluoranthene	**0.16**	**0.01 J**	**0.55**	**94**	**0.05 T**	**0.012 J**	**3.2**
Benzo(k)fluoranthene	**0.16**	**0.0062 J**	**0.53**	**77**	**0.044 T**	**0.011 J**	**3.1**
Chrysene	**0.48**	**0.015 J**	**1.1**	**180**	**0.1 T**	**0.019 J**	**5.7**
Dibenzo(a,h)anthracene	**0.02**	0.02 U	**0.063**	**12**	**0.0058 JT**	0.02 U	**0.38**
Fluoranthene	**1.2**	**0.059**	**3.4**	**520**	**0.42 T**	**0.08**	**20**
Fluorene	**0.49**	**0.043**	**1.7**	**270**	**0.22 T**	**0.043**	**7.4**
Indeno(1,2,3-c,d)pyrene	**0.19**	**0.0074 J**	**0.52**	**120**	**0.048 T**	**0.012 J**	**3.3**
Naphthalene	**0.28**	**130**	**16**	**7200**	**0.55 T**	**0.89**	**120**
Pyrene	**1.5**	**0.068**	**4.1**	**550**	**0.51 T**	**0.073**	**22**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.046**	0.02 U	**0.26**	**42**	**0.034 T**	**0.0056 J**	**1.2**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Residual Range Hydrocarbons	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSJ06GS08	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09
Sample name:	WLCGSJ06GS08W98102	WLCGSJ06GS09CW100	WLCGSJ06GS09W2327	WLCGSJ06GS09W46	WLCGSJ06GS09W4852	WLCGSJ06GS09W7377	WLCGSJ06GS09W911
Sample date:	10/27/2006	10/11/2006	10/9/2006	10/5/2006	10/10/2006	10/10/2006	10/5/2006
Depth interval:	2987 - 3109 cm	3048 - 3048 cm	701 - 823 cm	121.9 - 182.9 cm	1463 - 1585 cm	2225 - 2347 cm	274.3 - 335.3 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.01 U	0.01 U	0.01 U	0.01 U	**0.0065 J**	0.01 U	0.01 U
Cyanide, total	**0.55**	**0.25**	**0.26**	**0.34**	--	**1.2**	**0.43**
Metals (µg/l)							
Zinc	**122**	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	5 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	**0.27 J**	0.5 U	0.5 U	**0.32 J**	5 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	5 U
Benzene	**310**	**61**	**70**	0.5 U	**160**	**470**	**370**
Ethylbenzene	**7.6**	**3.7**	**9.1**	0.5 U	**7.8**	**12**	**130**
Naphthalene	**180**	--	--	--	--	--	--
o-Xylene	**11**	**4.7**	**6.1**	**0.32 J**	**79**	**120**	**58**
Toluene	**0.87**	**0.5**	**0.55**	**0.13 J**	**2.4**	**2.8**	**6.5**
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.6**	5 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	5 U
LWG RA Total Xylene (Calculated U = 1/2)	**81 T**	**18 T**	**26 T**	**0.96 JT**	**140 T**	**250 T**	**75 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**1.2**	**1**	**22**	**0.54**	**0.57**	**3.1**	**670**
Acenaphthene	**0.075**	**0.96**	**19**	**40**	**0.54**	**0.97**	**540**
Anthracene	**0.023**	**0.39**	**1.2**	**1.6**	**0.051**	**0.047**	**96**
Benzo(a)anthracene	**0.024**	**0.22**	**0.44**	**3.8**	**0.014 J**	0.02 U	**52**
Benzo(a)pyrene	**0.025**	**0.19**	**0.5**	**6.4**	**0.013 J**	0.02 U	**64**
Benzo(b)fluoranthene	**0.014 J**	**0.13**	**0.3**	**4.3**	**0.0099 J**	0.02 U	**36**
Benzo(k)fluoranthene	**0.013 J**	**0.12**	**0.31**	**3.5**	**0.0089 J**	0.02 U	**34**
Chrysene	**0.028**	**0.33**	**0.59**	**5.1**	**0.016 J**	0.02 U	**73**
Dibenzo(a,h)anthracene	0.02 U	**0.017 J**	**0.046**	**0.61**	0.02 U	0.02 U	**5.8**
Fluoranthene	**0.078**	**1.3**	**2.2**	**13**	**0.07**	**0.051**	**210**
Fluorene	**0.034**	**0.63**	**4.8**	**8.8**	**0.18**	**0.31**	**170**
Indeno(1,2,3-c,d)pyrene	**0.015 J**	**0.13**	**0.37**	**4.7**	**0.011 J**	0.02 U	**41**
Naphthalene	--	**66**	**44**	**1.8**	**14**	**920**	**1000**
Pyrene	**0.1**	**1.5**	**2.5**	**15**	**0.072**	**0.044**	**250**
Semivolatile Organics (µg/l)							
Dibenzofuran	0.02 U	**0.067**	**0.75**	**0.16**	**0.03**	**0.053**	**26**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSJ06GS09	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP26	WLCSLH01GP26
Sample name:	WLCGSJ06GS09W98102	WLCSLH01GP25W2	WLCSLH01GP25W36	WLCSLH01GP25W74	WLCSLH01GP25W89	WLCSLH01GP26W2	WLCSLH01GP26W30
Sample date:	10/11/2006	9/30/2004	9/30/2004	10/1/2004	10/1/2004	10/6/2004	10/6/2004
Depth interval:	2987 - 3109 cm	60.96 - 76.2 cm	1097 - 1112 cm	2256 - 2271 cm	2713 - 2728 cm	60.96 - 76.2 cm	914.4 - 929.6 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.01 U	--	--	--	--	--	--
Cyanide, total	**0.24**	**0.159**	**0.435**	**0.546**	**0.799**	**0.0342**	**0.332**
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.2 U	0.2 U	0.2 U	**4.88**	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.5 U	0.2 U	**14**	0.2 U	**1360**	0.2 U	0.2 U
1,2-Dichloroethene, trans-	0.5 U	0.3 U	0.3 U	0.3 U	**5.37**	0.3 U	0.3 U
Benzene	**60**	**1.15**	**0.62**	**0.82**	**74.2**	0.2 U	0.2 U
Ethylbenzene	**3**	**2.66**	**1.42**	**1.8**	**12.2**	**1.1**	0.46 U
Naphthalene	--	**7.91**	**151**	**147**	**913**	**103**	--
o-Xylene	**4.8**	**2.83**	0.2 U	**0.49**	**3.9**	**0.6**	0.24 U
Toluene	**0.48 J**	0.57 U	0.67 U	0.24 U	0.87 U	0.2 U	0.84 U
Trichloroethene (TCE)	0.5 U	0.2 U	0.2 U	0.2 U	**62.2**	0.2 U	0.2 U
Vinyl chloride	0.5 U	0.2 U	**3.43**	**13.6**	**298**	0.2 U	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	**19 T**	**5.73 T**	**1.5 T**	**0.87 T**	**8.39 T**	**1.44 T**	1.01 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.57**	**24.5**	**13.4**	**16.6**	**60.9**	**36.3**	0.958 U
Acenaphthene	**0.54**	**61**	**25.7**	**19.2**	**101**	**38**	**1.9**
Anthracene	**0.17**	**8.32**	**7.77**	**7.33**	**15.2**	**17.7**	**0.0905**
Benzo(a)anthracene	**0.093**	**2.35**	**2.91**	**3.94**	**4.38**	**9.02**	**0.101**
Benzo(a)pyrene	**0.088**	**1.43**	**3.61**	**4.35**	**4.57**	**8.31**	**0.151**
Benzo(b)fluoranthene	**0.055**	**1.56**	**2.97**	**3.87**	**3.92**	**7.28**	**0.131**
Benzo(k)fluoranthene	**0.056**	**0.349**	**0.944**	**1.13**	**1.18**	**2.28**	0.0503 U
Chrysene	**0.12**	**2.35**	**2.88**	**3.77**	**4.6**	**10.6**	**0.101**
Dibenzo(a,h)anthracene	**0.008 J**	**0.11**	**0.391**	**0.503**	**0.507**	**0.937**	0.0503 U
Fluoranthene	**0.59**	**15.9**	**15.7**	**16.4**	**26.4**	**32.2**	**1.4**
Fluorene	**0.36**	**23.7**	**9.72**	**9.96**	**40.9**	**20.1**	**0.191**
Indeno(1,2,3-c,d)pyrene	**0.061**	**0.458**	**1.94**	**2.16**	**2.53**	**5.82**	**0.101**
Naphthalene	**86**	--	--	--	--	--	**0.854**
Pyrene	**0.65**	**16.3**	**16.7**	**17.4**	**27.5**	**35.8**	**2.29**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.035**	**8.42**	**1.57**	**1.78**	**6.47**	**3.35**	0.958 U
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	**0.972**	**0.927**	**0.887**	**2.81**	**1.48**	0.25 U
Residual Range Hydrocarbons	--	**0.668**	0.53 U	**0.566**	**0.566**	**0.597**	0.5 U

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP28
Sample name:	WLCSLH01GP26W60	WLCSLH01GP26W83	WLCSLH01GP27W15	WLCSLH01GP27W2	WLCSLH01GP27W34	WLCSLH01GP27W59	WLCSLH01GP28W2
Sample date:	10/6/2004	10/6/2004	10/12/2004	10/12/2004	10/12/2004	10/12/2004	10/15/2004
Depth interval:	1829 - 1844 cm	2530 - 2545 cm	457.2 - 472.4 cm	60.96 - 76.2 cm	1036 - 1051 cm	1798 - 1813 cm	60.96 - 76.2 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Cyanide, total	--	0.548	0.318	0.142	0.475	0.949	0.159
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	0.2 U	6.41	9.62	0.2 U
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	281	17.5	1.64	99.2	15.5	3.64	0.2 U
Ethylbenzene	109	26.2	5.06	215	88.5	39.1	0.72
Naphthalene	6840	1730	489	6800	--	--	--
o-Xylene	43.8	7.76	2.98	80.5	22.4	9.36	0.4
Toluene	51.6 U	6.52	1.21	5.44 U	5.96	1.51	0.2 U
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	0.2 U	0.2 U	1.18	0.2 U	17.4	51.6	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	112 T	24 T	4.84 T	144 T	48.8 T	22.5 T	1.65 T
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	160	27.4	453	341	201	6.19
Acenaphthene	--	169	76.2	317	329	226	40.9
Anthracene	--	18.5	7.24	36.4	24.7	22.2	3.76
Benzo(a)anthracene	--	4.29	1.77	22	7.12	5.55	0.438
Benzo(a)pyrene	--	4.16	1.56	24.6	7.29	5.7	0.333
Benzo(b)fluoranthene	--	3.45	1.3	20.2	5.49	4.84	0.314
Benzo(k)fluoranthene	--	1.22	0.327	6.28	2.36	1.73	0.105
Chrysene	--	5.22	2.13	22.9	7.05	6.44	0.428
Dibenzo(a,h)anthracene	--	0.367	0.135	0.16	0.438	0.302	0.0476 U
Fluoranthene	--	25.1	12	63.3	35	32.1	7.72
Fluorene	--	56.4	20.3	61.2	55.1	45.1	16.7
Indeno(1,2,3-c,d)pyrene	--	3.58	0.596	15.8	4.4	3.75	0.143
Naphthalene	--	--	--	--	3730	1760	0.618
Pyrene	--	27.3	12.6	67.7	37	34.5	7
Semivolatile Organics (µg/l)							
Dibenzofuran	--	8.26	2.67	16.1	12.8	9.15	0.953 U
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	3.8	0.968	1.02	6.35	4.29	1.1
Residual Range Hydrocarbons	--	0.626	0.486 U	0.493 U	0.501 U	0.487	0.48 U

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP30
Sample name:	WLCSLH01GP28W36	WLCSLH01GP28W74	WLCSLH01GP28W89	WLCSLH01GP29W2	WLCSLH01GP29W22	WLCSLH01GP29W46	WLCSLH01GP30W2
Sample date:	10/15/2004	10/15/2004	10/15/2004	10/20/2004	10/20/2004	10/21/2004	10/22/2004
Depth interval:	1097 - 1112 cm	2256 - 2271 cm	2713 - 2728 cm	60.96 - 76.2 cm	670.6 - 685.8 cm	1402 - 1417 cm	60.96 - 76.2 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Cyanide, total	0.366	0.471	0.519	0.717	0.692	0.541	0.227
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	40.8	63.6	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	8870	11200	0.2 U	0.99	1.84	72.6
1,2-Dichloroethene, trans-	0.3 U	68.2	23.7	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	0.2 U	67.8	103	44.2	0.72 U	3.22	1.6
Ethylbenzene	0.2 U	1.48	0.77	532	52.8	213	34.1
Naphthalene	--	83	13.9	12600	2740	6940	67.4
o-Xylene	0.2 U	0.35	0.28	138	11.9	69.7	3.46
Toluene	0.2 U	2.97 U	4.5	13.3	2.74	9.38	8.08
Trichloroethene (TCE)	0.2 U	251	8.8	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	3.27	828	6390	1.87	18.4	11.6	18.8
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	1.2 T	0.89 T	306 T	27.3 T	154 T	6.05 T
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	1.12	16	3.32	762	292	540	106
Acenaphthene	8.25	15.7	2.97	420	195	339	125
Anthracene	1.1	7.36	1.17	40.7	20.1	32.5	26.6
Benzo(a)anthracene	0.676	4.33	0.134	30.2	7.28	20.5	10.8
Benzo(a)pyrene	0.743	4.53	0.115	35.3	9.75	24.2	11.4
Benzo(b)fluoranthene	0.638	3.84	0.115	28.7	8.39	19.7	9.96
Benzo(k)fluoranthene	0.219	1.21	0.0478 U	10.1	2.58	7.1	2.96
Chrysene	1.06	3.98	0.134	32.3	6.98	23.2	11.5
Dibenzo(a,h)anthracene	0.0857	0.456	0.0478 U	5.02	0.933	3.27	1.19
Fluoranthene	3.69	16.1	1.69	75.7	38.5	59.4	45.4
Fluorene	3.88	9.57	1.48	68.9	59.7	58.9	55.6
Indeno(1,2,3-c,d)pyrene	0.333	1.83	0.0573	23.3	4.3	15.5	4.75
Naphthalene	3.4	--	--	--	--	--	--
Pyrene	4	18.1	1.78	78.2	38.8	61.6	48.6
Semivolatile Organics (µg/l)							
Dibenzofuran	0.957 U	0.981	0.957 U	19.5	8.01	15.3	13
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	0.239 U	0.294	0.334	23	4.21	8.85	2.6
Residual Range Hydrocarbons	0.478 U	0.481 U	0.48 U	2.81	0.479 U	1.03	1.13

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP30	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP32	WLCSLH01GP32
Sample name:	WLCSLH01GP30W25	WLCSLH01GP30W50	WLCSLH01GP31W2	WLCSLH01GP31W22	WLCSLH01GP31W46	WLCSLH01GP32W2	WLCSLH01GP32W24
Sample date:	10/25/2004	10/25/2004	10/26/2004	10/27/2004	10/27/2004	10/28/2004	10/28/2004
Depth interval:	762 - 777.2 cm	1524 - 1539 cm	60.96 - 76.2 cm	670.6 - 685.8 cm	1402 - 1417 cm	60.96 - 76.2 cm	731.5 - 746.7 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Cyanide, total	**0.501**	**0.584**	0.01 U	**0.358**	**0.349**	**0.736**	**0.191**
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	--	--	0.2 U	0.2 U	0.2 U	--	--
1,2-Dichloroethene, cis-	--	--	**2.3**	**23.7**	**97.3**	--	--
1,2-Dichloroethene, trans-	--	--	0.3 U	**1.84**	**0.52**	--	--
Benzene	--	--	**1.17**	**53**	**4.32**	--	--
Ethylbenzene	--	--	**1.02**	**11.1**	**5.96**	--	--
Naphthalene	--	--	**57.7**	**219**	--	--	--
o-Xylene	--	--	**1.27**	**12**	**2.5**	--	--
Toluene	--	--	0.2 U	**3.14**	0.2 U	--	--
Trichloroethene (TCE)	--	--	0.2 U	**2.75**	**12.1**	--	--
Vinyl chloride	--	--	**0.88**	**3.73**	**13.5**	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	**1.5 T**	**16.5 T**	**3.04 T**	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**23.3**	0.951 U	**4.45**	**11.2**	**28.8**	**3.19**	**16.3**
Acenaphthene	**21.8**	**0.572**	**12.8**	**69**	**49.4**	**17**	**24**
Anthracene	**12**	**0.124**	**4.79**	**2.39**	**5.87**	**7.04**	**3.33**
Benzo(a)anthracene	**9.19**	**0.0763**	**3.35**	**0.05**	**0.75**	**4.46**	**0.231**
Benzo(a)pyrene	**7.2**	**0.0572**	**3.98**	0.963 U	**0.76**	**3.13**	**0.132**
Benzo(b)fluoranthene	**5.98**	**0.0572**	**3.36**	0.05 U	**0.63**	**3.1**	**0.121**
Benzo(k)fluoranthene	**2.07**	0.0477 U	**1.02**	0.05 U	**0.21**	**1.14**	0.0549 U
Chrysene	**10.5**	**0.0572**	**3.13**	0.05 U	**0.93**	**5.29**	**0.22**
Dibenzo(a,h)anthracene	**1.06**	0.0477 U	**0.41**	0.05 U	**0.08**	**0.164**	0.0549 U
Fluoranthene	**28.4**	**0.296**	**13**	**1.36**	**6.6**	**19**	**4.94**
Fluorene	**11.3**	**0.267**	**5.88**	**17.2**	**15.3**	**14.8**	**10.4**
Indeno(1,2,3-c,d)pyrene	**4.88**	0.0477 U	**2.14**	0.05 U	**0.39**	**1.45**	**0.0659**
Naphthalene	--	--	--	--	**327**	--	--
Pyrene	**32.9**	**0.296**	**11.9**	**1.34**	**6.61**	**21.9**	**5.08**
Semivolatile Organics (µg/l)							
Dibenzofuran	**2.08**	0.951 U	0.952 U	0.963 U	**3.5**	**1.76**	**2.46**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	**0.617**	0.238 U	**0.268**	**1.08**	**1.1**	**0.451**	**0.668**
Residual Range Hydrocarbons	0.473 U	0.475 U	0.476 U	0.478 U	0.487 U	0.484 U	0.607 U

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP32	WLCSLH01GP41	WLCSLH01GP42	WLCSLH01GP47	WLCSLH01GP49	WLCSLH01GP49	WLCSLH01GP49
Sample name:	WLCSLH01GP32W46	WLCSLH01GP41W3	WLCSLH01GP42W3	WLCSLH01GP47W3	WLCSLH01GP49W20	WLCSLH01GP49W37	WLCSLH01GP49W52
Sample date:	10/29/2004	5/10/2005	5/10/2005	5/11/2005	5/12/2005	5/12/2005	5/12/2005
Depth interval:	1402 - 1417 cm	91.44 - 91.44 cm	91.44 - 91.44 cm	91.44 - 91.44 cm	609.6 - 609.6 cm	1128 - 1128 cm	1585 - 1585 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Cyanide, total	**0.368**	--	--	--	--	--	--
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	**2.18**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	**387**	0.2 U	**3.55**	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	**26.5**	0.2 U	0.2 U	**0.45**	0.2 U	0.2 U	0.2 U
Ethylbenzene	**0.2**	0.2 U	0.2 U	**0.42**	0.2 U	0.2 U	0.2 U
Naphthalene	--	**26**	1 U	**4.26**	1 U	1 U	1 U
o-Xylene	**2.32**	**1.2**	0.2 U	**1.06**	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	**0.29**	0.2 U	**1**	**1.19**
Trichloroethene (TCE)	**7.58**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	**726**	0.2 U	**3.61**	0.2 U	0.2 U	0.2 U	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	**2.5 T**	**1.4 T**	0.4 UT	**1.86 T**	0.4 UT	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	0.96 U	--	--	--	--	--	--
Acenaphthene	**2.99**	--	--	--	--	--	--
Anthracene	**0.629**	--	--	--	--	--	--
Benzo(a)anthracene	**0.11**	--	--	--	--	--	--
Benzo(a)pyrene	**0.0699**	--	--	--	--	--	--
Benzo(b)fluoranthene	**0.0599**	--	--	--	--	--	--
Benzo(k)fluoranthene	0.0499 U	--	--	--	--	--	--
Chrysene	**0.0998**	--	--	--	--	--	--
Dibenzo(a,h)anthracene	0.0499 U	--	--	--	--	--	--
Fluoranthene	**1.83**	--	--	--	--	--	--
Fluorene	**1.52**	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	0.0499 U	--	--	--	--	--	--
Naphthalene	**3.93**	--	--	--	--	--	--
Pyrene	**2.07**	--	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	0.96 U	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	**0.303**	--	--	--	--	--	--
Residual Range Hydrocarbons	0.479 U	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP51	WLCSLH01GP52	WLCSLH01GP53	WLCSLH01GP55	WLCSLH01GP55	WLCSLH01GP56	WLCSLH01GP62
Sample name:	WLCSLH01GP51W3	WLCSLH01GP52W3	WLCSLH01GP53W3	WLCSLH01GP55W3	WLCSLH01GP55W5	WLCSLH01GP56W3	WLCSLH01GP62W3
Sample date:	5/13/2005	5/13/2005	5/13/2005	5/16/2005	5/16/2005	5/16/2005	5/18/2005
Depth interval:	91.44 - 91.44 cm	91.44 - 91.44 cm	91.44 - 91.44 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	91.44 - 91.44 cm	91.44 - 91.44 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Cyanide, total	--	--	--	--	--	--	--
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	**2.98**	**3.07**	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	**103**	**254**	**267**	0.2 U	**4.09**
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	**1**	0.2 U	**0.57**	**6.9**	**8.08**	**1.04**	**1.03**
Ethylbenzene	**1.14**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Naphthalene	**19.8**	**2.05**	1 U	**1.58**	1 U	**2.47**	**99.9**
o-Xylene	**0.62**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	1.38 U	0.41 U	0.2 U	**0.41**	**0.33**	**0.76**	**13.2**
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	**4.05**	**4.51**	0.2 U	0.2 U
Vinyl chloride	0.2 U	**0.65**	**34.3**	**422**	**484**	**0.57**	**1.4**
LWG RA Total Xylene (Calculated U = 1/2)	**0.82 T**	0.4 UT	0.4 UT	0.4 UT	0.4 UT	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP62	WLCSLH01GP63	WLCSLH01GP63	WLCSLH01GP64	WLCSLH01GP64	WLCSLH01GP66	WLCSLH01GP66
Sample name:	WLCSLH01GP62W5	WLCSLH01GP63W3	WLCSLH01GP63W5	WLCSLH01GP64W3	WLCSLH01GP64W5	WLCSLH01GP66W113	WLCSLH01GP66W12
Sample date:	5/18/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/20/2005	5/20/2005
Depth interval:	152.4 - 152.4 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	396.2 - 396.2 cm	365.8 - 365.8 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Cyanide, total	--	--	--	--	--	--	--
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	**0.96**	**7.31**	**25.4**	0.2 U	**2.32**
1,2-Dichloroethene, cis-	**1.25**	**15.3**	**106**	**7600**	**10900**	**9.54**	**552**
1,2-Dichloroethene, trans-	0.3 U	0.3 U	**0.31**	**79.9**	**61.7**	0.3 U	**1.16**
Benzene	0.2 U	**27.3**	**6.51**	**138**	**144**	**1.24**	**19.5**
Ethylbenzene	0.2 U	**2.84**	0.2 U	**70.2**	**72.4**	0.2 U	0.2 U
Naphthalene	**3.12**	**361**	**18.6**	**3560**	**4250**	1 U	1 U
o-Xylene	0.2 U	**1.01**	0.2 U	**16.6**	**16**	0.2 U	0.2 U
Toluene	**8.37**	**1.97**	**0.98**	**26.2**	**28.8**	0.99 U	2.72 U
Trichloroethene (TCE)	0.2 U	0.2 U	**0.91**	**51.5**	**19500**	0.87 U	1.93 U
Vinyl chloride	**0.39**	**125**	**89.3**	**475**	**98.3**	**6.16**	**567**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	**2.94 T**	0.4 UT	**43.7 T**	**40.9 T**	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP66	WLCSLH01GP66	WLCSLH01GP67	WLCSLH01GP68	WLCSLH01GP68	WLCSLH01GP69	WLCSLH01GP69
Sample name:	WLCSLH01GP66W27	WLCSLH01GP66W52	WLCSLH01GP67W3	WLCSLH01GP68W3	WLCSLH01GP68W5	WLCSLH01GP69W3	WLCSLH01GP69W5
Sample date:	5/20/2005	5/20/2005	5/23/2005	5/23/2005	5/23/2005	5/24/2005	5/24/2005
Depth interval:	823 - 823 cm	1585 - 1585 cm	91.44 - 91.44 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	91.44 - 91.44 cm	152.4 - 152.4 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Cyanide, total	--	--	--	--	--	--	--
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	**0.95**	**1.6**	**283**	0.2 U	0.2 U	**7.33**	0.2 U
1,2-Dichloroethene, cis-	**252**	**342**	**574000**	0.2 U	0.2 U	**7570**	**92.8**
1,2-Dichloroethene, trans-	**0.46**	**1.07**	**1760**	0.3 U	0.3 U	**47.5**	0.3 U
Benzene	**5.92**	**13.4**	**2560**	**201**	**12.2**	**232**	**129**
Ethylbenzene	0.2 U	0.2 U	**52.9**	**43.8**	**2.47**	**71.2**	**21.4**
Naphthalene	1 U	1 U	**1860**	**1800**	**218**	**2840**	**2350**
o-Xylene	0.2 U	0.2 U	**19.6**	**11.6**	**0.64**	**18.2**	**8.24**
Toluene	1.27 U	1.6 U	**215**	**3.18**	**0.88**	**9.81**	1.7 U
Trichloroethene (TCE)	2.87 U	1.49 U	**585000**	**2.01**	**1.32**	**77**	**2.67**
Vinyl chloride	**100**	**207**	**28900**	**0.51**	**0.76**	**506**	**18**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	**44.3 T**	**29.6 T**	**2 T**	**32.2 T**	**12.9 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP70	WLCSLH01GP70	WLCSLH01GP71	WLCSLH01GP72	WLCSLH01GP72	WLCSLH01GP73	WLCSLH01GP73
Sample name:	WLCSLH01GP70W3	WLCSLH01GP70W5	WLCSLH01GP71W3	WLCSLH01GP72W25	WLCSLH01GP72W44	WLCSLH01GP73W3	WLCSLH01GP73W5
Sample date:	5/24/2005	5/24/2005	5/24/2005	5/25/2005	5/25/2005	5/25/2005	5/25/2005
Depth interval:	91.44 - 91.44 cm	152.4 - 152.4 cm	91.44 - 91.44 cm	762 - 762 cm	1341 - 1341 cm	91.44 - 91.44 cm	152.4 - 152.4 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Cyanide, total	--	--	--	--	--	--	--
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**1.85**	**1.46**
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	**2.55**	0.2 U	0.2 U	0.2 U	0.2 U	**7.63**	**3.06**
Ethylbenzene	**6.11**	**2.35**	**0.82**	0.2 U	0.2 U	**21.1**	**25.8**
Naphthalene	**594**	**569**	**101**	**6.43**	**10.3**	**1550**	**4020**
o-Xylene	**7.08**	**3.56**	**3.04**	0.2 U	0.2 U	**4.9**	**7.76**
Toluene	0.53 U	0.2 U	0.2 U	0.2 U	**0.29**	**1.04**	**0.58**
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	0.2 U	**1.43**	**2.24**	0.2 U	0.2 U	**1.18**	**0.99**
LWG RA Total Xylene (Calculated U = 1/2)	**9.01 T**	**3.8 T**	**3.2 T**	0.4 UT	0.4 UT	**10.7 T**	**14.5 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP74	WLCSLH01GP74	WLCSLH01GP75	WLCSLH01GP75	WLCSLH01GP76	WLCSLH01GP76	WLCSLH01GP80
Sample name:	WLCSLH01GP74W23	WLCSLH01GP74W5	WLCSLH01GP75W3	WLCSLH01GP75W5	WLCSLH01GP76W3	WLCSLH01GP76W5	WLCSLH01GP80W12
Sample date:	5/26/2005	5/26/2005	5/26/2005	5/26/2005	5/27/2005	5/27/2005	5/31/2005
Depth interval:	701 - 701 cm	152.4 - 152.4 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	365.8 - 365.8 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Cyanide, total	--	--	--	--	--	--	--
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	**1.33**	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	0.2 U	**570**	**36.8**	0.2 U
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	**2.39**	0.3 U	0.3 U
Benzene	**0.88**	**629**	**0.69**	0.2 U	**271**	**2550**	**107**
Ethylbenzene	**2.25**	**337**	**2.42**	**0.64**	**79.7**	**168**	**19.6**
Naphthalene	**184**	**9480**	**104**	**72**	**11200**	**10900**	**2130**
o-Xylene	0.2 U	**78.3**	0.2 U	0.2 U	**22.4**	**47.4**	**3.71**
Toluene	**0.4**	**14.9**	**3.04**	**0.5**	**54.1**	**13.7**	2.38 U
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	**29.2**	**1.75**	0.2 U
Vinyl chloride	**0.4**	**0.35**	**0.55**	**1.01**	**87.7**	**2.41**	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	**120 T**	0.4 UT	0.4 UT	**52.9 T**	**121 T**	**7.54 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP80	WLCSLH01GP80	WLCSLH01GP81	WLCSLH01GP81	WLCSLH01GP82	WLCSLH01GP82	WLCSLH01GP83
Sample name:	WLCSLH01GP80W22	WLCSLH01GP80W32	WLCSLH01GP81W3	WLCSLH01GP81W5	WLCSLH01GP82W3	WLCSLH01GP82W5	WLCSLH01GP83W12
Sample date:	5/31/2005	5/31/2005	5/31/2005	5/31/2005	6/1/2005	6/1/2005	6/1/2005
Depth interval:	670.6 - 670.6 cm	975.4 - 975.4 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	365.8 - 365.8 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Cyanide, total	--	--	--	--	--	--	--
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**3.25**
1,2-Dichloroethene, cis-	**29.2**	**29.7**	0.2 U	0.2 U	0.2 U	0.2 U	**3610**
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	**6.82**
Benzene	**0.3**	**0.61**	**569**	**5490**	**33.7**	**26.4**	**3340**
Ethylbenzene	0.2 U	**1.16**	**41.7**	**246**	**22.5**	**24**	**340**
Naphthalene	**41.8**	**207**	**2840**	**14000**	**1990**	**190**	**17100**
o-Xylene	0.2 U	0.2 U	**11.7**	**114**	**6.37**	**5.97**	**113**
Toluene	0.2 U	0.46 U	**8.25**	**821**	**5.43**	**2.95**	**216**
Trichloroethene (TCE)	0.2 U	0.2 U	**0.71**	**1.04**	0.2 U	0.2 U	**98.5**
Vinyl chloride	**3.1**	**2.81**	**0.76**	**0.84**	**0.65**	0.2 U	**593**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	**26.2 T**	**290 T**	**11.5 T**	**13.3 T**	**287 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Database:	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP83	WLCSLH01GP84
Sample name:	WLCSLH01GP83W5	WLCSLH01GP84W3
Sample date:	6/1/2005	6/1/2005
Depth interval:	152.4 - 152.4 cm	91.44 - 91.44 cm
Conventional Parameters (mg/l)		
Cyanide, free	--	--
Cyanide, total	--	--
Metals (µg/l)		
Zinc	--	--
Volatile Organics (µg/l)		
1,1-Dichloroethene	**2.14 T**	0.2 U
1,2-Dichloroethene, cis-	**4720 T**	**1.9**
1,2-Dichloroethene, trans-	**8.64 T**	0.3 U
Benzene	**103 T**	**48.4**
Ethylbenzene	**22.7 T**	**17.7**
Naphthalene	**1420 T**	**968**
o-Xylene	**5.46 T**	**3.61**
Toluene	**31.5 T**	**3.51**
Trichloroethene (TCE)	**1.9 T**	**2.96**
Vinyl chloride	**1600 T**	**0.73**
LWG RA Total Xylene (Calculated U = 1/2)	**14.9 T**	**10.8 T**
Polycyclic Aromatic Hydrocarbons (µg/l)		
2-Methylnaphthalene	--	--
Acenaphthene	--	--
Anthracene	--	--
Benzo(a)anthracene	--	--
Benzo(a)pyrene	--	--
Benzo(b)fluoranthene	--	--
Benzo(k)fluoranthene	--	--
Chrysene	--	--
Dibenzo(a,h)anthracene	--	--
Fluoranthene	--	--
Fluorene	--	--
Indeno(1,2,3-c,d)pyrene	--	--
Naphthalene	--	--
Pyrene	--	--
Semivolatile Organics (µg/l)		
Dibenzofuran	--	--
Total Petroleum Hydrocarbons (mg/l)		
Diesel Range Hydrocarbons	--	--
Residual Range Hydrocarbons	--	--

Table 3-33
Existing Data Screening Table – Alluvial Groundwater Human Health

Notes:
Detected concentration is greater than one screening level
Detected concentration is greater than two screening levels
Detected concentration is greater than three screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
-- = Results not reported or not applicable

Acronyms:
µg/l = micrograms per liter
mg/l = milligrams per liter
cm = centimeters
LWG = Lower Willamette Group
RA = Portland Harbor Site risk assessment
Totals are calculated as the sum of all detected results and 1/2 the undetected result. If all are undetected results, the highest reporting limit value is reported as the sum.

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial
System Location Code:	MW-01-55	MW-01-82	MW-02-104	MW-02-61	MW-03-56	MW-04-101	MW-04-57
Sample name:	2708-110329-MW-1-55-137	2708-110329-MW-1-82-135	2708-110329-MW-2-104-136	2708-110329-MW-2-61-132	2708-110330-MW-3-56-146	2708-110328-MW-4-101-128	2708-110330-MW-4-57-150
Sample date:	3/29/2011	3/29/2011	3/29/2011	3/29/2011	3/30/2011	3/28/2011	3/30/2011
Depth interval:	1371.6 - 1676.4 cm	2194.56 - 2499.36 cm	2865.12 - 3169.92 cm	1524 - 1828.8 cm	1371.6 - 1676.4 cm	2727.96 - 3032.76 cm	1402.08 - 1706.88 cm
Conventional Parameters (mg/l)							
Cyanide, free	**0.0079**	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U
Benzene	0.25 U	0.25 U	0.25 U	0.25 U	**4.35**	**7.78**	**1880**
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**246**
m,p-Xylene	1 U	1 U	1 U	1 U	**1.07**	1 U	**23.2**
Naphthalene	2 U	2 U	2 U	2 U	2 U	**3.46**	**214**
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	**0.9**	**3.96**	**42.7**
Toluene	1 U	1 U	1 U	1 U	1 U	1 U	10 U
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5 U
LWG RA Total Xylene (Calculated U = 1/2)	1 UT	1 UT	1 UT	1 UT	**1.97 T**	**4.46 T**	**65.9 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	0.0748 U	0.0748 U	0.0842 U	0.08 U	**2.23**	**0.865**	**26.8**
Acenaphthene	0.0467 U	0.0374 U	0.0421 U	0.04 U	**34.6**	**0.537**	**142**
Acenaphthylene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**1.62**	**0.285**	**5.66**
Anthracene	0.0374 U	0.0374 U	0.0421 U	**0.0449**	**4.34**	**0.965**	**7.16**
Benzo(a)anthracene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**3.87**	0.04 U	**1.92**
Benzo(a)pyrene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**5.53**	0.04 U	**2.82**
Benzo(b)fluoranthene	0.0374 U	0.0374 U	0.0421 U	0.04 U	--	0.04 U	--
Benzo(g,h,i)perylene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**4.9**	0.04 U	**2.08**
Benzo(k)fluoranthene	0.0374 U	0.0374 U	0.0421 U	0.04 U	--	0.04 U	--
Chrysene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**4.91**	0.04 U	**2.99**
Dibenzo(a,h)anthracene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**0.552**	0.04 U	**0.32**
Fluoranthene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**14.7**	0.04 U	**3.34**
Fluorene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**9.43**	**0.226**	**15.2**
Indeno(1,2,3-c,d)pyrene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**3.89**	0.04 U	**1.75**
Naphthalene	**0.15**	0.0748 U	0.0842 U	**0.22**	**1.13**	**2.8**	**205**
Phenanthrene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**14.3**	0.2 U	**17.3**
Pyrene	0.0374 U	0.0374 U	0.0421 U	0.04 U	**22.2**	0.04 U	**4.1**
Semivolatile Organics (µg/l)							
Dibenzofuran	0.0374 U	0.0374 U	0.0421 U	0.04 U	**3.07**	0.04 U	**3.82**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial
System Location Code:	MW-05-100	MW-05-175	MW-16-65	MW-17-79	MW-18-125	MW-18-180
Sample name:	2708-110330-MW-5-100-147	2708-110330-MW-5-175-145	2708-110330-MW-16-65-148	2708-110330-MW-17-79-151	2708-110328-MW-18-125-132	2708-110328-MW-18-180-130
Sample date:	3/30/2011	3/30/2011	3/30/2011	3/30/2011	3/28/2011	3/28/2011
Depth interval:	2682.24 - 2987.04 cm	4968.24 - 5273.04 cm	1676.4 - 1981.2 cm	1173.48 - 2392.68 cm	3505.2 - 3810 cm	5181.6 - 5486.4 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dissolved Metals (µg/l)						
Zinc	--	--	--	--	--	--
Volatile Organics (µg/l)						
1,1-Dichloroethene	50 U	0.5 U	10 U	0.5 U	2.5 U	0.5 U
1,2-Dichloroethene, cis-	**380**	0.5 U	10 U	0.5 U	2.5 U	0.5 U
1,2-Dichloroethene, trans-	**78**	0.5 U	10 U	0.5 U	2.5 U	0.5 U
Benzene	**9390**	0.25 U	**667**	**4.26**	**354**	0.25 U
Ethylbenzene	**524**	0.5 U	**78.8**	**0.57**	**8.75**	0.5 U
m,p-Xylene	**103**	1 U	**40.2**	1 U	**16.4**	1 U
Naphthalene	**9630**	2 U	**1650**	**2.9**	**111**	2 U
o-Xylene	50 U	0.5 U	**25**	**1.1**	**2.7**	0.5 U
Toluene	100 U	1 U	20 U	1 U	5 U	1 U
Trichloroethene (TCE)	50 U	0.5 U	10 U	0.5 U	2.5 U	0.5 U
Vinyl chloride	50 U	0.5 U	10 U	0.5 U	2.5 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	**128 T**	1 UT	**65.2 T**	**1.6 T**	**19.1 T**	1 UT
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	**230**	0.0755 U	**186**	0.0748 U	**11.4**	0.087 U
Acenaphthene	37.4 U	0.0377 U	**71.8**	**1.44**	**11.5**	0.0435 U
Acenaphthylene	37.4 U	0.0377 U	**3.41**	**0.727**	**0.295**	0.0435 U
Anthracene	**6.92**	0.0377 U	**6.19**	**1.61**	**2.4**	0.0435 U
Benzo(a)anthracene	0.0374 U	0.0377 U	**0.634**	**0.0533**	**0.138**	0.0435 U
Benzo(a)pyrene	0.0374 U	0.0377 U	**0.526**	0.0374 U	0.04 U	0.0435 U
Benzo(b)fluoranthene	0.0374 U	0.0377 U	--	0.0374 U	--	0.0435 U
Benzo(g,h,i)perylene	0.0374 U	0.0377 U	**0.351**	0.0374 U	0.04 U	0.0435 U
Benzo(k)fluoranthene	0.0374 U	0.0377 U	--	0.0374 U	--	0.0435 U
Chrysene	0.0374 U	0.0377 U	**0.748**	0.0374 U	**0.161**	0.0435 U
Dibenzo(a,h)anthracene	0.0374 U	0.0377 U	**0.0559**	0.0374 U	0.04 U	0.0435 U
Fluoranthene	**0.0901**	0.0377 U	**3.84**	**0.424**	**2.9**	0.0435 U
Fluorene	**1.54**	0.0377 U	39.2 U	**0.645**	**5.51**	0.0435 U
Indeno(1,2,3-c,d)pyrene	0.0374 U	0.0377 U	**0.294**	0.0374 U	0.04 U	0.0435 U
Naphthalene	**12000**	0.0755 U	**2400**	**2.39**	**82.7**	0.087 U
Phenanthrene	37.4 U	0.0377 U	**60.5**	**0.116**	**19**	0.0435 U
Pyrene	**0.101**	0.0377 U	**4.43**	**0.434**	**2.9**	0.0435 U
Semivolatile Organics (µg/l)						
Dibenzofuran	**0.28**	0.0377 U	**5**	**0.0509**	**0.852**	0.0435 U

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial
System Location Code:	MW-19-125	MW-19-180	MW-20-120	MW-21-115	MW-21-115	MW-21-165
Sample name:	2708-110328-MW-19-125-129	2708-110328-MW-19-180-127	2708-110328-MW-20-120-131	2708-110329-MW-21-115-142	2708-110329-MW-21-115-143	2708-110329-MW-21-165-140
Sample date:	3/28/2011	3/28/2011	3/28/2011	3/29/2011	3/29/2011	3/29/2011
Depth interval:	3505.2 - 3810 cm	5181.6 - 5486.4 cm	3352.8 - 3657.6 cm	3200.4 - 3505.2 cm	3200.4 - 3505.2 cm	4754.88 - 5059.68 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dissolved Metals (µg/l)						
Zinc	--	--	--	--	--	--
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
Benzene	**0.54**	0.25 U	**78.4**	0.25 U	0.25 U	0.25 U
Ethylbenzene	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
m,p-Xylene	1 U	1 U	2 U	1 U	1 U	1 U
Naphthalene	**4.32**	2 U	**185**	2 U	2 U	2 U
o-Xylene	**1.6**	0.5 U	**6.9**	0.5 U	0.5 U	0.5 U
Toluene	1 U	1 U	2 U	1 U	1 U	1 U
Trichloroethene (TCE)	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	**2.1 T**	1 UT	**7.9 T**	1 UT	1 UT	1 UT
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	0.0748 U	0.0755 U	**0.0771**	0.0842 U	0.08 U	0.0784 U
Acenaphthene	0.0374 U	0.0377 U	**0.0664**	0.0421 U	0.04 U	0.0392 U
Acenaphthylene	**0.0554**	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Anthracene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Benzo(a)anthracene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Benzo(a)pyrene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Benzo(b)fluoranthene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Benzo(g,h,i)perylene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Benzo(k)fluoranthene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Chrysene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Dibenzo(a,h)anthracene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Fluoranthene	0.0374 U	0.0377 U	**0.0409**	0.0421 U	0.04 U	0.0392 U
Fluorene	0.0374 U	0.0377 U	**0.0412**	0.0421 U	0.04 U	0.0392 U
Indeno(1,2,3-c,d)pyrene	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U
Naphthalene	**2.4**	0.0755 U	**98.1**	0.0842 U	0.08 U	0.0784 U
Phenanthrene	0.0374 U	0.0377 U	**0.11**	0.0421 U	0.04 U	0.0392 U
Pyrene	0.0374 U	0.0377 U	**0.0434**	0.0421 U	0.04 U	0.0392 U
Semivolatile Organics (µg/l)						
Dibenzofuran	0.0374 U	0.0377 U	0.0377 U	0.0421 U	0.04 U	0.0392 U

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial
System Location Code:	MW-21-75	MW-22-80	MW-23-123	MW-23-75	MW-24-130	MW-24-70
Sample name:	2708-110329-MW-21-75-138	2708-100622-MW-22-80-104	2708-100622-MW-23-123-109	2708-100622-MW-23-75-105	2708-100622-MW-24-130-103	2708-100622-MW-24-70-102
Sample date:	3/29/2011	6/22/2010	6/22/2010	6/22/2010	6/22/2010	6/22/2010
Depth interval:	1981.2 - 2286 cm	2130.56 - 2435.35 cm	3453.384 - 3758.184 cm	1972.056 - 2276.856 cm	3660.648 - 3965.448 cm	1831.848 - 2136.648 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	**0.0099**	0.005 U	0.005 U	0.005 U	0.005 U
Dissolved Metals (µg/l)						
Zinc	--	--	--	--	--	--
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U
Benzene	0.25 U	0.25 U	0.25 U	0.25 U	**106**	**5.64**
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	**3.96**	1 U
m,p-Xylene	1 U	1 U	1 U	1 U	**3.06**	**4.82**
Naphthalene	2 U	2 U	2 U	**6.18**	**138**	**171**
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	**1.74**	**1.84**
Toluene	1 U	0.5 U	0.5 U	0.5 U	1 U	**1**
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U
LWG RA Total Xylene (Calculated U = 1/2)	1 UT	1 UT	1 UT	1 UT	**4.8 T**	**6.66 T**
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	0.0755 U	0.0394 U	**0.0921**	**0.306**	**22.6**	**13.7**
Acenaphthene	**0.0715**	0.0394 U	**0.386**	**13.2**	**16.6**	**25**
Acenaphthylene	0.0377 U	0.0394 U	**0.227**	**0.338**	**5.06**	**3.32**
Anthracene	**0.0885**	0.0394 U	**0.543**	**0.335**	**3.7**	**2.83**
Benzo(a)anthracene	0.0377 U	0.0394 U	**0.844**	0.188 U	1.88 U	1.89 U
Benzo(a)pyrene	0.0377 U	0.0394 U	**0.67**	0.188 U	1.88 U	1.89 U
Benzo(b)fluoranthene	0.0377 U	0.0394 U	--	0.188 U	1.88 U	1.89 U
Benzo(g,h,i)perylene	0.0377 U	0.0394 U	**0.475**	0.188 UJ	1.88 U	1.89 U
Benzo(k)fluoranthene	0.0377 U	0.0394 U	--	0.188 U	1.88 U	1.89 U
Chrysene	0.0377 U	0.0394 U	**1.04**	0.188 U	1.88 U	1.89 U
Dibenzo(a,h)anthracene	0.0377 U	0.0394 U	**0.0698**	0.188 UJ	1.88 U	1.89 U
Fluoranthene	0.0377 U	0.0394 U	**2.05**	**0.776**	**4.05**	**4.52**
Fluorene	0.0377 U	0.0394 U	**0.269**	**0.602**	**8.96**	**8.53**
Indeno(1,2,3-c,d)pyrene	0.0377 U	0.0394 U	**0.424**	0.188 UJ	1.88 U	1.89 U
Naphthalene	0.0755 U	**0.0901**	**0.77**	**4.96**	**112**	**125**
Phenanthrene	0.0377 U	**0.0888**	**2.01**	**1.49**	**27**	**20.6**
Pyrene	0.0377 U	0.0394 U	**2.51**	**0.827**	**4.12**	**4.89**
Semivolatile Organics (µg/l)						
Dibenzofuran	0.0377 U	0.0394 U	**0.0632**	0.188 U	1.88 U	1.89 U

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial
System Location Code:	PW-03-118	PW-03-85	PW-7-93	PW-8-39	PW-8-68	PW-9-92	PZ5-20
Sample name:	PW-03-118	GS-061608-6	GS-110810-1	GS-110810-3	GS-110810-2	GS-110810-4	2708-101005-PZ-5-20-139
Sample date:	7/16/2007	6/16/2008	11/8/2010	11/8/2010	11/8/2010	11/8/2010	10/5/2010
Depth interval:	3291.84 - 3596.64 cm	2286 - 2590.8 cm	2240.28 - 2849.88 cm	737.616 - 1194.816 cm	1463.04 - 2072.64 cm	2212.848 - 2822.448 cm	460.248 - 612.648 cm
Conventional Parameters (mg/l)							
Cyanide, free	**0.031**	**0.024**	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	5 U	--	--	--	--	--	0.5 U
1,2-Dichloroethene, cis-	**22**	--	--	--	--	--	0.5 U
1,2-Dichloroethene, trans-	**8.7**	--	--	--	--	--	0.5 U
Benzene	**2000**	--	--	--	--	--	0.25 U
Ethylbenzene	**74**	--	--	--	--	--	0.5 U
m,p-Xylene	**21**	--	--	--	--	--	1 U
Naphthalene	**1200**	--	--	--	--	--	2 U
o-Xylene	**20**	--	--	--	--	--	0.5 U
Toluene	**11**	--	--	--	--	--	1 U
Trichloroethene (TCE)	5 U	--	--	--	--	--	0.5 U
Vinyl chloride	**3.6 J**	--	--	--	--	--	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	**41 T**	--	--	--	--	--	1 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**5.9**	--	--	--	--	--	0.374 U
Acenaphthene	--	--	--	--	--	--	**0.539**
Acenaphthylene	--	--	--	--	--	--	**0.23**
Anthracene	--	--	--	--	--	--	**0.237**
Benzo(a)anthracene	--	--	--	--	--	--	**0.5**
Benzo(a)pyrene	--	--	--	--	--	--	**0.542**
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	**0.692**
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	**0.637**
Dibenzo(a,h)anthracene	--	--	--	--	--	--	0.187 U
Fluoranthene	--	--	--	--	--	--	**1.5**
Fluorene	--	--	--	--	--	--	0.187 U
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	**0.559**
Naphthalene	**940**	--	--	--	--	--	0.374 U
Phenanthrene	**7.7**	--	--	--	--	--	**0.336**
Pyrene	**3.6**	--	--	--	--	--	**1.97**
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	--	--	0.187 U

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial
System Location Code:	PZ5-55	PZ5-85	RP-11-160	RP-11-216	WS-11-125	WS-11-161
Sample name:	2708-101005-PZ-5-55-137	2708-101005-PZ-5-85-135	5237-070827-RP-11-160-102	5237-070827-RP-11-216-103	5237-110322-WS-11-125-113	5237-110321-WS-11-161-105
Sample date:	10/5/2010	10/5/2010	8/27/2007	8/27/2007	3/22/2011	3/21/2011
Depth interval:	1527.048 - 1679.448 cm	2438.4 - 2590.8 cm	4573.2192 - 4878.0192 cm	6417.2592 - 6569.6592 cm	3322.32 - 3779.52 cm	4419.6 - 4876.8 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	-- UR	-- UR	0.005 U	0.005 U
Dissolved Metals (µg/l)						
Zinc	--	--	--	--	--	--
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.5 U	0.5 U	0.4 U	**0.63**	50 U	0.5 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.4 U	**6.28**	220 U	0.5 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.4 U	0.4 U	50 U	0.5 U
Benzene	**0.55**	0.25 U	0.4 U	**0.47**	**614**	**2.01**
Ethylbenzene	0.5 U	0.5 U	0.4 U	0.4 U	**229**	**5.22**
m,p-Xylene	1 U	1 U	2 U	2 U	**150**	**3.97**
Naphthalene	2 U	2 U	--	--	**10200**	**122**
o-Xylene	**0.86**	0.5 U	1 U	1 U	**84**	**2.64**
Toluene	1 U	1 U	0.4 U	0.4 U	100 U	1 U
Trichloroethene (TCE)	0.5 U	0.5 U	0.4 U	**2.98**	50 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	0.4 U	**2.34**	50 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	**1.36 T**	1 UT	2 UT	2 UT	**230 T**	**6.61 T**
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	**0.189**	0.0755 U	0.0957 U	0.0952 U	**857**	**2.75**
Acenaphthene	**31.4**	0.0377 U	0.0957 U	0.0952 U	**275**	**0.583**
Acenaphthylene	0.187 U	0.0377 U	0.0957 U	0.0952 U	**4.43**	**0.05**
Anthracene	**0.0745**	0.0377 U	0.0957 U	0.0952 U	**26.4**	0.0374 U
Benzo(a)anthracene	0.0374 U	0.0377 U	0.00478 U	0.00476 U	3.85 U	0.0374 U
Benzo(a)pyrene	0.0374 U	0.0377 U	0.00478 U	0.00476 U	3.85 U	0.0374 U
Benzo(b)fluoranthene	0.0374 U	0.0377 U	0.00478 U	0.00476 U	3.85 U	0.0374 U
Benzo(g,h,i)perylene	0.0374 U	0.0377 U	0.0957 U	0.0952 U	3.85 U	0.0374 U
Benzo(k)fluoranthene	0.0374 U	0.0377 U	0.00478 U	0.00476 U	3.85 U	0.0374 U
Chrysene	0.0374 U	0.0377 U	0.00478 U	0.00476 U	3.85 U	0.0374 U
Dibenzo(a,h)anthracene	0.0374 U	0.0377 U	0.00478 U	0.00476 U	3.85 U	0.0374 U
Fluoranthene	0.0374 U	0.0377 U	0.0957 U	0.0952 U	**13**	0.0374 U
Fluorene	**4.05**	0.0377 U	0.0957 U	0.0952 U	**86.1**	**0.115**
Indeno(1,2,3-c,d)pyrene	0.0374 U	0.0377 U	0.00478 U	0.00476 U	3.85 U	0.0374 U
Naphthalene	**0.137**	0.0755 U	0.0957 U	0.0952 U	**15200**	**100**
Phenanthrene	0.0467 U	0.0377 U	0.0957 U	0.0952 U	**152**	**0.122**
Pyrene	0.0374 U	0.0377 U	0.0957 U	0.0952 U	**11.8**	0.0374 U
Semivolatile Organics (µg/l)						
Dibenzofuran	**1.1**	0.0377 U	0.0957 U	0.0952 U	**20.2**	0.0374 U

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW	Upland_MW
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_alluvial
System Location Code:	WS-12-125	WS-12-161	WS-14-125	WS-14-161	WS-20-112	WS-22-112
Sample name:	5237-110321-WS-12-125-101	5237-110321-WS-12-161-103	5237-110321-WS-14-125-111	5237-110321-WS-14-161-109	WS-20-112-080806	WS-22-112-070522
Sample date:	3/21/2011	3/21/2011	3/21/2011	3/21/2011	8/6/2008	5/22/2007
Depth interval:	3322.32 - 3779.52 cm	4419.6 - 4876.8 cm	3322.32 - 3779.52 cm	4419.6 - 4876.8 cm	2956.56 - 3413.76 cm	2956.56 - 3413.76 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.01 U	--
Dissolved Metals (µg/l)						
Zinc	--	--	--	--	10 U	10 U
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.5 U	0.5 U	50 U	5 U	0.5 U	0.5 U
1,2-Dichloroethene, cis-	**2.1**	0.5 U	**102**	5 U	**1.83**	0.3 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	50 U	5 U	0.5 U	0.5 U
Benzene	**2.15**	0.25 U	**4120**	**3.3**	**150**	**118**
Ethylbenzene	0.5 U	0.5 U	**523**	**20**	**1.88**	**3.2**
m,p-Xylene	1 U	1 U	**427**	**16.6**	1 U	**1.36**
Naphthalene	2 U	2 U	**10400**	**734**	--	--
o-Xylene	0.5 U	0.5 U	**238**	**8.8**	**1.28**	**2.58**
Toluene	1 U	1 U	**154**	10 U	**1.53**	**14.4**
Trichloroethene (TCE)	**0.66**	0.5 U	50 U	5 U	0.3 U	0.3 U
Vinyl chloride	**4.68**	0.5 U	50 U	5 U	0.3 U	**2.35**
LWG RA Total Xylene (Calculated U = 1/2)	1 UT	1 UT	**665 T**	**25.4 T**	**3.6 T**	**3.94 T**
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	0.0769 U	0.0769 U	**645**	**76**	--	--
Acenaphthene	**0.211**	0.0385 U	**216**	**34.8**	--	**0.426**
Acenaphthylene	0.0385 U	0.0385 U	**4.01**	**0.549**	--	0.0496 U
Anthracene	**0.171**	0.0385 U	**21.6**	**5.15**	--	**0.0595**
Benzo(a)anthracene	0.0385 U	0.0385 U	3.77 U	0.388 U	--	0.0496 U
Benzo(a)pyrene	0.0385 U	0.0385 U	3.77 U	0.388 U	--	0.0496 U
Benzo(b)fluoranthene	0.0385 U	0.0385 U	3.77 U	--	--	0.0496 U
Benzo(g,h,i)perylene	0.0385 U	0.0385 U	3.77 U	0.388 U	--	0.0496 U
Benzo(k)fluoranthene	0.0385 U	0.0385 U	3.77 U	--	--	0.0496 U
Chrysene	0.0385 U	0.0385 U	3.77 U	0.388 U	--	0.0496 U
Dibenzo(a,h)anthracene	0.0385 U	0.0385 U	3.77 U	0.388 U	--	0.0496 U
Fluoranthene	**0.0713**	0.0385 U	**10.6**	**2.64**	--	**0.139**
Fluorene	**0.0882**	0.0385 U	**63.7**	**12.6**	--	**0.159**
Indeno(1,2,3-c,d)pyrene	0.0385 U	0.0385 U	3.77 U	0.388 U	--	0.0496 U
Naphthalene	0.0769 U	0.0769 U	**19300**	**633**	**2.27**	--
Phenanthrene	**0.0448**	0.0385 U	**114**	**29.3**	--	**0.337**
Pyrene	**0.0764**	0.0385 U	**9.99**	**2.48**	--	**0.178**
Semivolatile Organics (µg/l)						
Dibenzofuran	0.0385 U	0.0385 U	**14.5**	**2.55**	--	--

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Upland_MW	Upland_MW	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_alluvial	Gasco RM6-6.7_GW_fill/alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WS-8-59	MW-05-32	GP-30	GP-30	GP-32	GP-32
Sample name:	5237-110321-WS-8-59-102	2708-110330-MW-5-32-149	GP30-W-25.0	GP30-W-50.0	GP32-W-2.0	GP32-W-24.0
Sample date:	3/21/2011	3/30/2011	9/15/2010	9/15/2010	9/16/2010	9/16/2010
Depth interval:	1478.28 - 1783.08 cm	640.08 - 944.88 cm	701.04 - 822.96 cm	1463.04 - 1584.96 cm	0 - 121.92 cm	670.56 - 792.48 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	--	--	--	--
Dissolved Metals (µg/l)						
Zinc	--	--	--	--	--	--
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	**380**	**103**	**0.37**	**1.5**
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzene	**5.11**	0.25 U	**6.05**	**24.5**	**26**	**27.7**
Ethylbenzene	0.5 U	0.5 U	**0.22**	0.2 U	**3.68**	0.2 U
m,p-Xylene	1 U	1 U	0.4 U	0.4 U	0.4 U	0.4 U
Naphthalene	2 U	2 U	0.2 U	**0.22**	**1.33**	0.2 U
o-Xylene	0.5 U	0.5 U	0.2 U	0.2 U	**2.29**	**1.54**
Toluene	1 U	1 U	**0.28**	**0.44**	**3.37**	**0.2**
Trichloroethene (TCE)	0.5 U	0.5 U	**0.79**	**2**	0.2 U	0.2 U
Vinyl chloride	0.5 U	0.5 U	**1880**	**600**	**0.95**	**7.34**
LWG RA Total Xylene (Calculated U = 1/2)	1 UT	1 UT	0.4 UT	0.4 UT	**2.5 T**	**1.7 T**
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	0.08 U	**0.15**	--	--	--	--
Acenaphthene	**0.142**	**0.118**	--	--	--	--
Acenaphthylene	**0.129**	**0.63**	--	--	--	--
Anthracene	**0.2**	**0.92**	--	--	--	--
Benzo(a)anthracene	**0.219**	**0.735**	--	--	--	--
Benzo(a)pyrene	**0.326**	**1.04**	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--
Benzo(g,h,i)perylene	**0.295**	**0.924**	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--
Chrysene	**0.273**	**1.07**	--	--	--	--
Dibenzo(a,h)anthracene	0.04 U	**0.113**	--	--	--	--
Fluoranthene	**0.328**	**1.19**	--	--	--	--
Fluorene	**0.0959**	**0.107**	--	--	--	--
Indeno(1,2,3-c,d)pyrene	**0.251**	**0.74**	--	--	--	--
Naphthalene	0.08 U	**1**	--	--	--	--
Phenanthrene	**0.149**	**0.232**	--	--	--	--
Pyrene	**0.428**	**2.21**	--	--	--	--
Semivolatile Organics (µg/l)						
Dibenzofuran	0.04 U	0.0377 U	--	--	--	--

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	GP-61	GP-65	GS-07-D-TR	GS-08-D-TR	PCM-02Y1E2	PCM-03Y1E2	PCM-04Y1E2
Sample name:	GP61-W-5.0	GP65-W-3.0	LWG2-T90-GS7D	LWG2-T90-GS8D	PCM-02PW-071107	PCM-03PW-071106	PCM-04PW-071107
Sample date:	9/17/2010	9/21/2010	10/25/2005	10/24/2005	11/7/2007	11/6/2007	11/7/2007
Depth interval:	91.44 - 213.36 cm	30.48 - 152.4 cm	150 - 150 cm	150 - 150 cm			
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	0.01 U	0.01 U	**0.006 J**
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	**2.2**	0.13 U	0.13 U	--	--	--
1,2-Dichloroethene, cis-	**105**	**526**	0.12 U	0.12 U	--	--	--
1,2-Dichloroethene, trans-	0.2 U	**1.84**	0.15 U	0.15 U	--	--	--
Benzene	**16.3 J**	**11.3**	**1.8**	**35**	**210**	**2600**	**650**
Ethylbenzene	**0.3**	0.2 U	**0.53**	**4.5**	**36**	**14**	**9.7**
m,p-Xylene	0.4 U	0.4 U	**0.55**	**2.4**	**31**	**21**	**15**
Naphthalene	0.2 U	0.2 U	**3.6**	--	--	--	--
o-Xylene	0.2 U	0.2 U	**0.79**	**6**	**17**	**17**	**17**
Toluene	**0.47**	**0.51**	0.56 U	1.5 U	**5.1**	**6**	**14**
Trichloroethene (TCE)	**0.51 J**	**0.22**	0.14 U	0.14 U	--	--	--
Vinyl chloride	**699**	**1840**	0.042 U	0.042 U	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	**1.3 T**	**8.4 T**	**48 T**	**38 T**	**32 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	--	--	**9.5**	**56**	**45**	**6.4**
Acenaphthene	--	--	--	**130**	**370**	**100**	**49**
Acenaphthylene	--	--	--	**1.4**	**2**	**120**	**17**
Anthracene	--	--	--	**15**	**11**	**1.7**	**1.1**
Benzo(a)anthracene	--	--	--	**4.8**	**0.021 J**	**0.023 J**	**0.23**
Benzo(a)pyrene	--	--	--	**4.4**	**0.0048 J**	**0.01 J**	**0.29**
Benzo(b)fluoranthene	--	--	--	**2.6**	0.022 U	**0.0094 J**	**0.25**
Benzo(g,h,i)perylene	--	--	--	**3.1**	0.022 U	**0.0058 J**	**0.26**
Benzo(k)fluoranthene	--	--	--	**2.3**	0.022 U	**0.0044 J**	**0.1**
Chrysene	--	--	--	**8**	**0.012 J**	**0.014 J**	**0.47**
Dibenzo(a,h)anthracene	--	--	--	**0.23**	0.022 U	0.023 U	**0.036**
Fluoranthene	--	--	--	**33**	**1.9**	**0.46**	**1.4**
Fluorene	--	--	--	**41**	**54**	**18**	**6.1**
Indeno(1,2,3-c,d)pyrene	--	--	--	**2.7**	0.022 U	**0.0061 J**	**0.24**
Naphthalene	--	--	--	**14**	**2500**	**4800**	**510**
Phenanthrene	--	--	--	**110**	**100**	**35**	**7.9**
Pyrene	--	--	--	**48**	**1.4**	**0.39**	**1.3**
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	**15**	**6.5**	--	**2**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	PCM-05Y1E1	PCM-06Y1E2	PCM-07Y0E1b	PCM-08Y1E2	PCM-09Y1E2	PCM-10Y0E1b	PCM-18Y0E2
Sample name:	PCM-05PW-070912	PCM-06PW-071106	PCM-PW07-060427	PCM-08PW-071108	PCM-09PW-071105	PCM-PW10-060428	PCM-PW18-060828
Sample date:	9/12/2007	11/6/2007	4/28/2006	11/8/2007	11/5/2007	4/28/2006	8/28/2006
Depth interval:							
Conventional Parameters (mg/l)							
Cyanide, free	0.0127	0.008 J	--	0.009 J	0.007 J	--	--
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--	--	--
Benzene	12000	540	--	400	94	--	58
Ethylbenzene	130	13	--	39	6.4	--	0.42 J
m,p-Xylene	190	11	--	22	3.5	--	0.35 J
Naphthalene	--	--	--	--	--	--	--
o-Xylene	170	18	--	34	5.5	--	1.6
Toluene	29	6.7	--	6.4	1.2 J	--	0.71
Trichloroethene (TCE)	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	360 T	29 T	57 T	56 T	9 T	82 T	2 JT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	110	8.5	--	5.4	11	--	--
Acenaphthene	240	110	--	180	190	--	0.6
Acenaphthylene	80	5.1	--	33	22	--	0.25
Anthracene	17	0.61	--	5.8	3.5	--	0.021 J
Benzo(a)anthracene	0.85	0.012 J	--	0.03	0.054	--	0.022 U
Benzo(a)pyrene	0.43	0.0071 J	--	0.012 J	0.035	--	0.022 U
Benzo(b)fluoranthene	0.48	0.0068 J	--	0.01 J	0.031	--	0.022 U
Benzo(g,h,i)perylene	0.22	0.0057 J	--	0.0076 J	0.024	--	0.022 U
Benzo(k)fluoranthene	0.13	0.023 U	--	0.0039 J	0.01 J	--	0.022 U
Chrysene	0.71	0.0092 J	--	0.019 J	0.051	--	0.022 U
Dibenzo(a,h)anthracene	0.026	0.023 U	--	0.021 U	0.0032 J	--	0.022 U
Fluoranthene	21	0.33	--	1.9	1.1	--	0.0067 J
Fluorene	74	2.8	--	19	11	--	0.1
Indeno(1,2,3-c,d)pyrene	0.23	0.0048 J	--	0.0073 J	0.021	--	0.022 U
Naphthalene	7300	570	--	1900	640	--	18
Phenanthrene	160	5.1	--	100	47	--	0.11
Pyrene	23	0.29	--	1.2	1.1	--	0.022 U
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	6.4	--	--

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	PCM-21Y1E2	SL-03-F-TR	SL-04-A-TR	SL-04-A-TR	WLCGSG07GSB1	WLCGSG07GSB1	WLCGSG07GSB1
Sample name:	PCM-21PW-071106	LWG2-T90-SL3F	LWG2-T90-SL4A	LWG2-T90-SL4A-FILT	WLCGSG07GSB1A	WLCGSG07GSB1B	WLCGSG07GSB1C
Sample date:	11/6/2007	10/8/2005	10/8/2005	10/8/2005	7/17/2007	7/17/2007	7/17/2007
Depth interval:		120 - 120 cm	90 - 90 cm	90 - 90 cm	27.43 - 57.91 cm	149.4 - 210.3 cm	393.2 - 454.2 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.01 U	--	--	--	0.005 U	0.005 U	**0.006 J**
Dissolved Metals (µg/l)							
Zinc	--	--	--	2.02 U	**4.47**	**51.7**	**24.5**
Volatile Organics (µg/l)							
1,1-Dichloroethene	--	0.13 U	0.13 U	--	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	--	0.12 U	0.12 U	--	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	--	0.15 U	0.15 U	--	0.15 U	0.15 U	0.15 U
Benzene	**0.48 J**	**9.4**	**0.71**	--	**0.2 J**	**0.26 J**	0.14 U
Ethylbenzene	**0.25 J**	**0.14 J**	**1.6**	--	0.13 U	0.13 U	0.13 U
m,p-Xylene	**0.4 J**	0.22 U	**2.7**	--	0.22 U	**0.27 J**	0.22 U
Naphthalene	--	--	**32**	--	--	--	--
o-Xylene	**0.5**	**1.4**	**1.6**	--	**0.14 J**	**0.17 J**	0.11 U
Toluene	**0.39 J**	0.66 U	0.61 U	--	**18**	**15**	**1.6**
Trichloroethene (TCE)	--	0.14 U	0.14 U	--	0.14 U	0.14 U	0.14 U
Vinyl chloride	--	**0.06 J**	**0.09 J**	--	0.042 U	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**0.9 JT**	**1.5 T**	**4.3 T**	--	**0.25 JT**	**0.44 JT**	0.22 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.6**	0.044 U	**5.1**	--	**0.62**	**0.54**	**0.025**
Acenaphthene	**270**	**2.2**	**51**	--	**14**	**51**	**1.7**
Acenaphthylene	**2.1**	0.041 U	0.76 U	--	**1.3**	**1.2**	**0.038**
Anthracene	**5.1**	0.093 U	**9.8**	--	**11**	**19**	**0.21**
Benzo(a)anthracene	**0.06**	**0.042**	**3.2**	--	**13**	**20**	**0.28**
Benzo(a)pyrene	**0.023**	**0.039 J**	**2.3**	--	**14**	**29**	**0.23**
Benzo(b)fluoranthene	**0.019 J**	0.03 U	**1.5**	--	**13**	**21**	**0.22**
Benzo(g,h,i)perylene	**0.011 J**	**0.037 J**	**1.5**	--	**13**	**27**	**0.23**
Benzo(k)fluoranthene	**0.0085 J**	0.025 U	**1.5**	--	**4.7**	**7**	**0.07**
Chrysene	**0.036**	0.073 U	**3.9**	--	**15**	**24**	**0.37**
Dibenzo(a,h)anthracene	0.02 U	0.0034 U	**0.16**	--	**1.5**	**2.2**	**0.023**
Fluoranthene	**2.6**	0.2 U	**21**	--	**47**	**100**	**1.1**
Fluorene	**35**	0.11 U	**23**	--	**9.3**	**11**	**0.17**
Indeno(1,2,3-c,d)pyrene	**0.011 J**	**0.026 J**	**1.3**	--	**13**	**26**	**0.22**
Naphthalene	**52**	**0.31**	--	--	**2.3**	**5.7**	**0.072**
Phenanthrene	**66**	0.24 U	**65**	--	**56**	**110**	**1.1**
Pyrene	**2.3**	0.24 U	**21**	--	**44**	**100**	**1.2**
Semivolatile Organics (µg/l)							
Dibenzofuran	--	0.032 U	**4.6**	--	**2.3**	**0.91**	**0.03**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB2
Sample name:	WLCGSG07GSB2A1	WLCGSG07GSB2A2	WLCGSG07GSB2B	WLCGSG07GSB2C	WLCGSG07GSB2W25	WLCGSG07GSB2W50	WLCGSG07GSB2W75
Sample date:	7/17/2007	7/17/2007	7/17/2007	7/17/2007	9/12/2007	9/12/2007	9/12/2007
Depth interval:	45.72 - 76.2 cm	137.2 - 167.6 cm	259.1 - 320 cm	502.9 - 563.9 cm	701 - 823 cm	1463 - 1585 cm	2225 - 2347 cm
Conventional Parameters (mg/l)							
Cyanide, free	**0.023**	**0.026**	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dissolved Metals (µg/l)							
Zinc	**2.93**	**4.35**	**--**	**--**	**2.78**	**5.09**	**5.63**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	**8.8**	**5.7**	0.14 U	0.14 U	0.14 U	**0.14 J**	**0.16 J**
Ethylbenzene	**33**	**22**	**0.29 J**	**0.45 J**	0.13 U	**0.22 J**	**0.27 J**
m,p-Xylene	**1.2**	**0.92**	0.22 U	0.22 U	0.22 U	**0.48 J**	**0.33 J**
Naphthalene	**--**	**--**	**--**	**11**	**0.53 J**	**48**	**3**
o-Xylene	**2.9**	**1.7**	**0.13 J**	**0.12 J**	0.11 U	**0.18 J**	**0.14 J**
Toluene	**14**	**41**	**2.7**	**2.6**	**2.6**	**96**	**52**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**4.1 T**	**2.6 T**	**0.24 JT**	**0.23 JT**	0.22 UT	**0.66 JT**	**0.47 JT**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**140**	**92**	**0.83**	**2.1**	**0.029**	**2**	**2.5**
Acenaphthene	**190**	**110**	**9.9**	**3.2**	**0.37**	**1.7**	**3.3**
Acenaphthylene	**4.5**	**5.4**	**0.33**	**0.29**	**0.089**	**0.045**	**0.042**
Anthracene	**110**	**92**	**1.3**	**4.1**	**0.012 J**	**0.024**	**0.073**
Benzo(a)anthracene	**60**	**100**	**3.2**	**4**	**0.0078 J**	**0.0045 J**	**0.051**
Benzo(a)pyrene	**50**	**110**	**4**	**4.2**	0.0044 U	0.0044 U	**0.02 J**
Benzo(b)fluoranthene	**45**	**83**	**3.2**	**3.5**	**0.0045 J**	**0.037**	**0.061**
Benzo(g,h,i)perylene	**39**	**90**	**4.2**	**3.6**	**0.0037 J**	**0.017 J**	**0.047**
Benzo(k)fluoranthene	**15**	**26**	**1**	**1.2**	0.0026 U	**0.0078 J**	**0.015 J**
Chrysene	**79**	**130**	**4.1**	**5.3**	**0.0073 J**	**0.03**	**0.06**
Dibenzo(a,h)anthracene	**5**	**12**	**0.41**	**0.43**	0.0026 U	0.0026 U	**0.005 J**
Fluoranthene	**270**	**260**	**18**	**12**	**0.16**	**0.12**	**0.21**
Fluorene	**110**	**66**	**2.4**	**2.2**	**0.2**	**0.5**	**1.3**
Indeno(1,2,3-c,d)pyrene	**46**	**80**	**4**	**3.6**	0.0027 U	**0.019 J**	**0.045**
Naphthalene	**120**	**180**	**2.6**	**--**	**--**	**--**	**--**
Phenanthrene	**520**	**380**	**25**	**15**	**1.2**	**0.36**	**1.8**
Pyrene	**270**	**290**	**18**	**13**	**0.14**	**0.099**	**0.23**
Semivolatile Organics (µg/l)							
Dibenzofuran	**17**	**9.8**	**0.16**	**0.29**	**0.046**	**0.098**	**0.2**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSB3	WLCGSG07GSB3	WLCGSG07GSB3	WLCGSG07GSB4	WLCGSG07GSB4	WLCGSG07GSB4	WLCGSG07GSB5
Sample name:	WLCGSG07GSB3A	WLCGSG07GSB3B	WLCGSG07GSB3C	WLCGSG07GSB4A	WLCGSG07GSB4B	WLCGSG07GSB4C	WLCGSG07GSB5A
Sample date:	7/19/2007	7/19/2007	7/19/2007	7/19/2007	7/19/2007	7/19/2007	7/18/2007
Depth interval:	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm	48.77 - 79.25 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ
Dissolved Metals (µg/l)							
Zinc	--	--	--	3.97	--	--	22.5
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.25 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.24 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.29 U
Benzene	0.14 U	0.36 J	0.14 U	0.14 U	54	0.14 U	2.2
Ethylbenzene	0.13 U	0.28 J	0.13 U	0.13 U	36	0.13 U	11
m,p-Xylene	0.22 U	0.44 J	0.22 U	0.22 U	3.1	0.22 U	2.9
Naphthalene	--	--	--	6	53	0.67 J	1800
o-Xylene	0.11 U	0.71	0.22 J	0.12 J	18	0.11 U	8.1
Toluene	0.79	16	0.68	0.88	6.3	4.4	22
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.27 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.084 U
LWG RA Total Xylene (Calculated U = 1/2)	0.22 UT	1.2 JT	0.33 JT	0.23 JT	21 T	0.22 UT	11 T
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	0.51	0.18	0.025	15	450	0.56	92
Acenaphthene	4.7	11	0.27	49	570	1.3	170
Acenaphthylene	1	0.2	0.03	1.1	17	0.079	6
Anthracene	1.7	2.3	0.05	9.1	130	0.59	40
Benzo(a)anthracene	6.5	2.4	0.0028 U	6	80	0.47	33
Benzo(a)pyrene	7	3	0.0054 J	6.3	94	0.46	40 J
Benzo(b)fluoranthene	6.6	2.3	0.0056 J	5.8	72	0.41	32
Benzo(g,h,i)perylene	8.1	2.9	0.0031 U	6.6	89	0.44	36
Benzo(k)fluoranthene	2.4	0.78	0.0027 U	2.3	26	0.14	11
Chrysene	8.5	3.1	0.0079 J	8.1	91	0.63	40
Dibenzo(a,h)anthracene	0.99	0.27	0.0027 U	0.77	7.3	0.039	3.8
Fluoranthene	21	10	0.053	29	330	1.9	120
Fluorene	2.2	3.1	0.031	18	160	0.51	54
Indeno(1,2,3-c,d)pyrene	7.3	2.7	0.0055 J	6	80	0.42	33
Naphthalene	1.6	0.89	0.017 J	--	--	--	--
Phenanthrene	10	12	0.14	57	710	2.6	240
Pyrene	23	12	0.057	27	440	2.1	140
Semivolatile Organics (µg/l)							
Dibenzofuran	0.3	0.48	0.0049 U	0.33 J	24	0.065	7.2

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSB5	WLCGSG07GSB5	WLCGSG07GSB5	WLCGSG07GSB5	WLCGSG07GSB5	WLCGSG07GSB6	WLCGSG07GSB6
Sample name:	WLCGSG07GSB5B	WLCGSG07GSB5C	WLCGSG07GSB5W25	WLCGSG07GSB5W50	WLCGSG07GSB5W75	WLCGSG07GSB6A	WLCGSG07GSB6B
Sample date:	7/18/2007	7/18/2007	9/14/2007	9/14/2007	9/14/2007	7/6/2007	7/6/2007
Depth interval:	170.7 - 231.6 cm	414.5 - 475.5 cm	701 - 823 cm	1463 - 1585 cm	2225 - 2347 cm	30.48 - 60.96 cm	152.4 - 213.4 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 UJ	0.005 UJ	0.005 U	0.005 UT	0.005 U	0.005 U	**0.008 J**
Dissolved Metals (µg/l)							
Zinc	**5.98**	**4.02**	**11.2**	**9.68 T**	**6.27**	**--**	**--**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 UT	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 U	0.12 UT	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 UT	0.15 U	0.15 U	0.15 U
Benzene	**2**	**0.62**	0.14 U	**0.67 T**	**0.33 J**	0.14 U	**1.8**
Ethylbenzene	**7.7**	**2.1**	**0.14 J**	**1.5 T**	**1.9**	0.13 U	**1**
m,p-Xylene	**1.1**	**0.58**	0.22 U	**0.6 T**	**0.52**	0.22 U	**0.55**
Naphthalene	**81**	**9.4**	**25**	**110 T**	**170**	**--**	**22**
o-Xylene	**2.8**	**2.5**	0.11 U	**0.79 T**	**0.61**	**0.15 J**	**0.99**
Toluene	**100**	**5.7**	**4.3**	**7.4 T**	**4.5**	**0.12 J**	**0.14 J**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 UT	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 UT	0.042 U	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**3.9 T**	**3.1 T**	0.22 UT	**1.4 T**	**1.1 T**	**0.26 JT**	**1.5 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**150**	**0.8**	**1.1**	**2.9 T**	**6.5**	**3.5**	**37**
Acenaphthene	**140**	**100**	**2.2**	**4.5 T**	**15**	**100**	**91**
Acenaphthylene	**3.6**	**0.52**	**0.027**	**0.045 T**	**0.072**	**0.7**	**0.94**
Anthracene	**32**	**5**	**0.043**	**0.044 T**	**0.89**	**16**	**14**
Benzo(a)anthracene	**19**	**2.3**	**0.0053 J**	**0.0048 JT**	**0.021 J**	**5**	**4.1**
Benzo(a)pyrene	**19 J**	**2.3 J**	0.0044 U	0.0044 UT	**0.0053 J**	**3.9**	**3.4**
Benzo(b)fluoranthene	**16**	**2**	**0.0043 J**	0.0024 UT	**0.0075 J**	**3.3**	**2.9**
Benzo(g,h,i)perylene	**19**	**2.1**	**0.0068 J**	0.003 UT	**0.0063 J**	**2.4**	**2.4**
Benzo(k)fluoranthene	**5.8**	**0.68**	0.0026 U	0.0026 UT	0.0029 U	**1.2**	**1**
Chrysene	**23**	**2.8**	0.0035 U	0.0035 UT	**0.014 J**	**8.6**	**5.1**
Dibenzo(a,h)anthracene	**2.5**	**0.23**	0.0026 U	0.0026 UT	0.0029 U	**0.33**	**0.32**
Fluoranthene	**83**	**12**	**0.16**	**0.056 T**	**1.1**	**40**	**26**
Fluorene	**50**	**20**	**0.79**	**1.2 T**	**4**	**33**	**33**
Indeno(1,2,3-c,d)pyrene	**17**	**2.1**	**0.0053 J**	0.0027 UT	**0.0056 J**	**2.4**	**2.3**
Naphthalene	**--**	**--**	**--**	**--**	**--**	**8.5**	**--**
Phenanthrene	**210**	**49**	**2.7**	**2.9 T**	**16**	**130**	**110**
Pyrene	**93**	**13**	**0.11**	**0.035 T**	**0.86**	**43**	**25**
Semivolatile Organics (µg/l)							
Dibenzofuran	**11**	**2.8**	**0.13**	**0.19 T**	**0.56**	**2**	**8.2**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSB6	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB7
Sample name:	WLCGSG07GSB6C	WLCGSG07GSB7A	WLCGSG07GSB7B	WLCGSG07GSB7C	WLCGSG07GSB7PWE071004	WLCGSG07GSB7PWE071005
Sample date:	7/6/2007	7/5/2007	7/5/2007	7/5/2007	10/4/2007	10/5/2007
Depth interval:	396.2 - 457.2 cm	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm	38.1 - 53.34 cm	38.1 - 53.34 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	--	--
Dissolved Metals (µg/l)						
Zinc	--	--	--	--	--	--
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 UJ
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 U	0.12 U	--	--
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 UJ
Benzene	0.14 U	**0.15 J**	**7.8**	**170**	**0.19 J**	**0.24 J**
Ethylbenzene	0.13 U	0.13 U	**0.69**	**16**	**0.43 J**	**0.55 J**
m,p-Xylene	0.22 U	**0.32 J**	**0.49 J**	**17**	**0.69**	**0.65 J**
Naphthalene	**0.57 J**	--	**54**	--	**7.2**	**15 J**
o-Xylene	0.11 U	**0.55**	**0.47 J**	**9.4**	**0.56**	**0.75 J**
Toluene	0.11 U	**0.16 J**	**0.57**	**32**	**2.6**	**1.1 J**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 UJ
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 UJ
LWG RA Total Xylene (Calculated U = 1/2)	0.22 UT	**0.87 JT**	**0.96 JT**	**26 T**	**1.3 T**	**1.4 JT**
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	**0.078**	**0.11**	**19**	**140**	--	--
Acenaphthene	**0.17**	**45**	**82**	**120**	--	--
Acenaphthylene	**0.026**	**0.26**	**0.45**	**42**	--	--
Anthracene	**0.13**	**2.1**	**12**	**53**	--	--
Benzo(a)anthracene	**0.11**	**0.4**	**3.4**	**39**	--	--
Benzo(a)pyrene	**0.13**	**0.26**	**2**	**46**	--	--
Benzo(b)fluoranthene	**0.12**	**0.24**	**1.8**	**36**	--	--
Benzo(g,h,i)perylene	**0.12**	**0.22**	**1.1**	**37**	--	--
Benzo(k)fluoranthene	**0.038**	**0.08**	**0.58**	**12**	--	--
Chrysene	**0.15**	**0.51**	**3.8**	**44**	--	--
Dibenzo(a,h)anthracene	**0.013 J**	**0.024**	**0.13**	**4.4**	--	--
Fluoranthene	**0.42**	**4.7**	**24**	**200**	--	--
Fluorene	**0.092**	**13**	**36**	**61**	--	--
Indeno(1,2,3-c,d)pyrene	**0.13**	**0.21**	**1.2**	**39**	--	--
Naphthalene	--	**0.45**	--	**850**	--	--
Phenanthrene	**0.56**	**28**	**77**	**380**	--	--
Pyrene	**0.41**	**4.2**	**21**	**190**	--	--
Semivolatile Organics (µg/l)						
Dibenzofuran	**0.017 J**	**0.24**	**19**	**10**	--	--

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB8
Sample name:	WLCGSG07GSB7PWSH071005	WLCGSG07GSB7PWSL071005	WLCGSG07GSB7PWSL071006	WLCGSG07GSB7W25	WLCGSG07GSB7W50	WLCGSG07GSB8A
Sample date:	10/5/2007	10/5/2007	10/6/2007	8/28/2007	8/29/2007	7/9/2007
Depth interval:	38.1 - 53.34 cm	38.1 - 53.34 cm	38.1 - 53.34 cm	701 - 823 cm	1463 - 1585 cm	30.48 - 60.96 cm
Conventional Parameters (mg/l)						
Cyanide, free	--	--	--	0.005 U	0.005 U	0.005 U
Dissolved Metals (µg/l)						
Zinc	--	--	--	**11.4**	**9.17**	--
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	--	--	--	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	**0.24 J**	**0.19 J**	**0.36 J**	**3.7**	**1.6**	**1.1**
Ethylbenzene	**0.6**	**0.36 J**	**0.48 J**	**0.95**	**0.34 J**	0.13 U
m,p-Xylene	**0.64**	**0.53**	**0.71**	**1.6**	**2.1**	0.22 U
Naphthalene	**19**	**10**	**17**	**64**	**14**	**1.7 J**
o-Xylene	**0.78**	**0.46 J**	**0.66**	**0.76**	**1.5**	0.11 U
Toluene	**0.82**	**1.2**	**1.2**	**59**	**110**	**130**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**1.4 T**	**0.99 JT**	**1.4 T**	**2.4 T**	**3.6 T**	0.22 UT
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	--	--	--	**3**	**0.65**	**0.085**
Acenaphthene	--	--	--	**1.8**	**0.61**	**0.76**
Acenaphthylene	--	--	--	**2.4**	**0.5**	**0.19**
Anthracene	--	--	--	**1.5**	**0.41**	**0.18**
Benzo(a)anthracene	--	--	--	**1.3**	**0.4**	**0.63**
Benzo(a)pyrene	--	--	--	**1.7**	**0.49**	**0.81**
Benzo(b)fluoranthene	--	--	--	**1.4**	**0.43**	**0.7**
Benzo(g,h,i)perylene	--	--	--	**1.5**	**0.44**	**0.87**
Benzo(k)fluoranthene	--	--	--	**0.44**	**0.14**	**0.23**
Chrysene	--	--	--	**1.5**	**0.46**	**0.79**
Dibenzo(a,h)anthracene	--	--	--	**0.2**	**0.056**	**0.16**
Fluoranthene	--	--	--	**6.1**	**1.6**	**2**
Fluorene	--	--	--	**1.7**	**0.42**	**0.37**
Indeno(1,2,3-c,d)pyrene	--	--	--	**1.5**	**0.45**	**0.89**
Naphthalene	--	--	--	--	--	--
Phenanthrene	--	--	--	**9.1**	**2.5**	**1.7**
Pyrene	--	--	--	**6.1**	**1.8**	**2**
Semivolatile Organics (µg/l)						
Dibenzofuran	--	--	--	**0.26**	**0.071**	**0.07**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSB8	WLCGSG07GSB8	WLCGSG07GSB9	WLCGSG07GSB9	WLCGSG07GSB9	WLCGSG07GSC1	WLCGSG07GSC1
Sample name:	WLCGSG07GSB8B	WLCGSG07GSB8C	WLCGSG07GSB9A	WLCGSG07GSB9B	WLCGSG07GSB9C	WLCGSG07GSC1A	WLCGSG07GSC1B
Sample date:	7/9/2007	7/9/2007	7/9/2007	7/9/2007	7/9/2007	7/16/2007	7/16/2007
Depth interval:	152.4 - 213.4 cm	396.2 - 457.2 cm	45.72 - 76.2 cm	152.4 - 213.4 cm	454.2 - 515.1 cm	51.82 - 82.3 cm	173.7 - 234.7 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	**11**	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	**0.24 J**	**0.27 J**	0.14 U	**0.54**	0.14 U	**0.42 J**	**11**
Ethylbenzene	0.13 U	0.13 U	0.13 U	**1.7**	0.13 U	0.13 U	**5.5**
m,p-Xylene	0.22 U	0.22 U	0.22 U	**0.33 J**	0.22 U	**0.44 J**	**1.7**
Naphthalene	--	--	--	--	--	--	**430**
o-Xylene	**0.11 J**	0.11 U	0.11 U	**0.64**	0.11 U	**0.32 J**	**6**
Toluene	**26**	**1.9**	**1.5**	**50**	**2.4**	**6.6**	**20**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	**4.9**	0.042 U	0.042 U	**0.29 J**	**0.11 J**	**0.17 J**
LWG RA Total Xylene (Calculated U = 1/2)	**0.22 JT**	0.22 UT	0.22 UT	**0.97 JT**	0.22 UT	**0.76 JT**	**7.7 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.42**	**0.072**	**0.072**	**41**	**0.46**	**0.65**	**22**
Acenaphthene	**13**	**1.4**	**3.3**	**68**	**5.2**	**9.2**	**77**
Acenaphthylene	**0.73**	**0.033**	**0.071**	**4.3**	**0.85**	**0.17**	**1.2**
Anthracene	**1.6**	**0.074**	**0.25**	**39**	**1**	**0.47**	**4.3**
Benzo(a)anthracene	**2.7**	**0.16**	**0.35**	**23**	**2.9**	**0.47**	**1.8**
Benzo(a)pyrene	**2.6**	**0.21**	**0.26**	**22**	**5.2**	**0.5**	**1.7**
Benzo(b)fluoranthene	**2.2**	**0.19**	**0.27**	**18**	**4.1**	**0.45**	**1.5**
Benzo(g,h,i)perylene	**2.3**	**0.24**	**0.31**	**17**	**6.1**	**0.47**	**1.7**
Benzo(k)fluoranthene	**0.94**	**0.068**	**0.1**	**6**	**1.4**	**0.16**	**0.69**
Chrysene	**3.8**	**0.21**	**0.45**	**28**	**3.8**	**0.63**	**2.3**
Dibenzo(a,h)anthracene	**0.43**	**0.022**	**0.13**	**2.6**	**0.55**	**0.056**	**0.25**
Fluoranthene	**12**	**0.66**	**2**	**49**	**12**	**2.7**	**11**
Fluorene	**5.8**	**0.26**	**1.7**	**34**	**1.2**	**2.2**	**17**
Indeno(1,2,3-c,d)pyrene	**2.4**	**0.22**	**0.29**	**18**	**5.6**	**0.45**	**1.6**
Naphthalene	**2.1**	**0.11**	**0.21**	**26**	**2.6**	**0.96**	--
Phenanthrene	**19**	**1.4**	**4.8**	**110**	**11**	**5.6**	**36**
Pyrene	**11**	**0.82**	**2**	**49**	**13**	**2.5**	**11**
Semivolatile Organics (µg/l)							
Dibenzofuran	**1.7**	**0.0087 J**	**0.08**	**5.7**	**0.27**	**0.36**	**5.5**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSC1	WLCGSG07GSC2	WLCGSG07GSC2	WLCGSG07GSC2	WLCGSG07GSC2	WLCGSG07GSC2	WLCGSG07GSC3
Sample name:	WLCGSG07GSC1C	WLCGSG07GSC2A	WLCGSG07GSC2B	WLCGSG07GSC2C	WLCGSG07GSC2W25	WLCGSG07GSC2W50	WLCGSG07GSC3A
Sample date:	7/16/2007	7/16/2007	7/16/2007	7/16/2007	9/13/2007	9/13/2007	7/13/2007
Depth interval:	417.6 - 478.5 cm	73.15 - 103.6 cm	164.6 - 225.6 cm	408.4 - 469.4 cm	701 - 823 cm	1463 - 1585 cm	30.48 - 60.96 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 UT	0.005 U	0.005 U	0.005 U
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	**2.95**	**2.52**	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 UT	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 U	0.12 UT	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 UT	0.15 U	0.15 U	0.15 U
Benzene	**3.6**	**1.6**	0.14 U	0.14 UT	**0.45 J**	0.14 U	0.14 U
Ethylbenzene	**1.4**	**9.1**	0.13 U	0.13 UT	**1.2**	**1.9**	0.13 U
m,p-Xylene	**0.94**	**0.66**	0.22 U	0.22 UT	**0.32 J**	**0.4 J**	0.22 U
Naphthalene	**8.6**	--	--	**29 T**	**140**	**260**	--
o-Xylene	**4.6**	**3.1**	0.11 U	0.11 UT	**0.45 J**	**0.61**	0.11 U
Toluene	**1.5**	**1.1**	**4.3**	**11 T**	**8**	**4.6**	**8.6**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 UT	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 UT	0.042 U	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**5.5 T**	**3.8 T**	0.22 UT	0.22 UT	**0.77 JT**	**1 JT**	0.22 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**6.2**	**250**	**0.63**	**2.9 T**	**5.3**	**18**	**0.49**
Acenaphthene	**270**	**510**	**16**	**3.1 T**	**6.3**	**23**	**52**
Acenaphthylene	**0.81**	**12**	**4.4**	**0.23 T**	**0.095**	**0.3**	**5.2**
Anthracene	**12**	**94**	**7.4**	**1.1 T**	**0.046**	**0.037**	**12**
Benzo(a)anthracene	**0.65**	**52**	**17**	**1.1 T**	**0.068**	**0.011 J**	**25**
Benzo(a)pyrene	**0.14**	**56**	**21**	**1.3 T**	0.005 U	0.0044 U	**32**
Benzo(b)fluoranthene	**0.15**	**43**	**17**	**0.98 T**	**0.099**	**0.042**	**25**
Benzo(g,h,i)perylene	**0.066**	**46**	**19**	**1.1 T**	**0.069**	**0.0072 J**	**27**
Benzo(k)fluoranthene	**0.048**	**15**	**5.7**	**0.33 T**	**0.026**	**0.012 J**	**8.4**
Chrysene	**0.61**	**67**	**23**	**1.6 T**	**0.13**	**0.086**	**32**
Dibenzo(a,h)anthracene	**0.0077 J**	**5.4**	**1.9**	**0.097 T**	**0.0066 J**	0.0026 U	**2.9**
Fluoranthene	**19**	**230**	**31**	**3.3 T**	**1.1**	**2.4**	**70**
Fluorene	**70**	**140**	**3.8**	**1 T**	**2**	**9.7**	**10**
Indeno(1,2,3-c,d)pyrene	**0.07**	**49**	**19**	**1.1 T**	**0.065**	**0.021**	**28**
Naphthalene	--	**44**	**3.7**	--	--	--	**3.2**
Phenanthrene	**140**	**490**	**14**	**5 T**	**3.5**	**30**	**17**
Pyrene	**18**	**230**	**88**	**3.8 T**	**1**	**1.5**	**100**
Semivolatile Organics (µg/l)							
Dibenzofuran	**16**	**30**	**0.58**	**0.25 T**	**0.36**	**1.6**	**0.59**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSC3	WLCGSG07GSC3	WLCGSG07GSC4	WLCGSG07GSC4	WLCGSG07GSC4	WLCGSG07GSC5	WLCGSG07GSC5
Sample name:	WLCGSG07GSC3B	WLCGSG07GSC3C	WLCGSG07GSC4A	WLCGSG07GSC4B	WLCGSG07GSC4C	WLCGSG07GSC5A	WLCGSG07GSC5B
Sample date:	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/12/2007	7/12/2007
Depth interval:	152.4 - 213.4 cm	396.2 - 457.2 cm	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm	30.48 - 60.96 cm	152.4 - 213.4 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.003 U	0.003 U
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	0.14 U	0.14 U	**0.29 J**	0.14 U	0.14 U	**0.22 J**	**0.22 J**
Ethylbenzene	0.13 U	0.13 U	**3.5**	0.13 U	0.13 U	0.13 U	**3**
m,p-Xylene	**0.29 J**	**0.23 J**	**0.41 J**	0.22 U	0.22 U	**0.61**	**1**
Naphthalene	--	--	**330**	--	--	--	**5**
o-Xylene	**0.22 J**	**0.11 J**	**1.1**	0.11 U	0.11 U	**1.4**	**6.3**
Toluene	**4.3**	**5.4**	**0.44 J**	**0.31 J**	**3.2**	**0.86**	**0.65**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	**0.07 J**	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**0.51 JT**	**0.34 JT**	**1.5 JT**	0.22 UT	0.22 UT	**2 T**	**7.3 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**2.2**	**0.015 J**	**27**	**0.011 J**	**0.05**	**0.62**	**2.1**
Acenaphthene	**120**	**0.25**	**43**	**0.014 J**	**0.14**	**46**	**40**
Acenaphthylene	**4.1**	**0.04**	**5.5**	**0.0039 J**	**0.052**	**0.6**	**0.32**
Anthracene	**19**	**0.17**	**30**	**0.0083 J**	**0.22**	**21**	**0.77**
Benzo(a)anthracene	**17**	**0.18**	**22**	**0.0088 J**	**0.21**	**3.1**	**0.12**
Benzo(a)pyrene	**22**	**0.21**	**25**	**0.005 J**	**0.23**	**1.7**	**0.093**
Benzo(b)fluoranthene	**18**	**0.18**	**20**	**0.0055 J**	**0.21**	**1.8**	**0.092**
Benzo(g,h,i)perylene	**19**	**0.21**	**24**	**0.0053 J**	**0.23**	**1.3**	**0.09**
Benzo(k)fluoranthene	**6**	**0.066**	**7.1**	0.0025 U	**0.07**	**0.8**	**0.031**
Chrysene	**26**	**0.29**	**45**	**0.015 J**	**0.48**	**4**	**0.16**
Dibenzo(a,h)anthracene	**2.1**	**0.02**	**2.6**	0.0025 U	**0.02 J**	**0.26**	**0.01 J**
Fluoranthene	**73**	**0.74**	**79**	**0.028**	**0.7**	**18**	**0.67**
Fluorene	**34**	**0.1**	**18**	**0.0052 J**	**0.056**	**14**	**8.5**
Indeno(1,2,3-c,d)pyrene	**20**	**0.19**	**20**	**0.004 J**	**0.21**	**1.5**	**0.084**
Naphthalene	**6.8**	**0.098**	--	**0.12**	**0.68**	**1.4**	--
Phenanthrene	**110**	**0.52**	**97**	**0.023**	**0.31**	**39**	**2.5**
Pyrene	**76**	**0.81**	**86**	**0.028**	**0.77**	**15**	**0.67**
Semivolatile Organics (µg/l)							
Dibenzofuran	**2**	**0.0056 J**	**3.1**	0.0046 U	**0.0098 J**	**0.97**	**0.065**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSC5	WLCGSG07GSC5	WLCGSG07GSC5	WLCGSG07GSC6	WLCGSG07GSC6	WLCGSG07GSC6	WLCGSG07GSC7
Sample name:	WLCGSG07GSC5C	WLCGSG07GSC5W25	WLCGSG07GSC5W50	WLCGSG07GSC6A	WLCGSG07GSC6B	WLCGSG07GSC6C	WLCGSG07GSC7A
Sample date:	7/12/2007	9/11/2007	9/11/2007	7/12/2007	7/12/2007	7/12/2007	7/11/2007
Depth interval:	396.2 - 457.2 cm	701 - 823 cm	1463 - 1585 cm	33.53 - 64.01 cm	161.5 - 222.5 cm	405.4 - 466.3 cm	30.48 - 60.96 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.003 U	0.005 U	0.005 U	0.003 U	0.003 U	0.003 U	0.005 U
Dissolved Metals (µg/l)							
Zinc	--	**3.69**	**8.2**	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	**0.14 J**	**0.16 J**	0.12 U	0.12 U	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	0.14 U	**0.26 J**	**0.27 J**	0.14 U	0.14 U	0.14 U	**0.34 J**
Ethylbenzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	**0.52**
m,p-Xylene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	**0.32 J**
Naphthalene	--	--	**1 J**	--	--	--	**85**
o-Xylene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	**0.42 J**
Toluene	**5.3**	**96**	**85**	**0.64**	**3.4**	**1.5**	**0.22 J**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	**0.12 J**
LWG RA Total Xylene (Calculated U = 1/2)	0.22 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT	**0.74 JT**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.0044 J**	**0.023**	**0.12**	**0.003 J**	**0.0049 J**	**0.006 J**	**13**
Acenaphthene	**0.066**	**0.047**	**0.3**	**8.1**	**0.14**	**0.093**	**31**
Acenaphthylene	0.0034 U	**0.0049 J**	**0.0049 J**	**0.024**	0.0034 U	**0.0061 J**	**0.67**
Anthracene	**0.022**	**0.0047 J**	**0.015 J**	**0.02**	**0.01 J**	**0.023**	**4.1**
Benzo(a)anthracene	**0.0092 J**	0.0027 U	0.0026 U	**0.0047 J**	**0.014 J**	**0.034**	**2.7**
Benzo(a)pyrene	**0.0045 J**	0.0044 U	0.0043 U	0.0043 U	**0.01 J**	**0.029**	**2.8**
Benzo(b)fluoranthene	**0.0054 J**	0.0024 U	0.0023 U	0.0023 U	**0.011 J**	**0.026**	**2.3**
Benzo(g,h,i)perylene	**0.0046 J**	0.003 U	0.0029 U	0.0029 U	**0.011 J**	**0.026**	**2.5**
Benzo(k)fluoranthene	**0.0026 J**	0.0026 U	0.0025 U	0.0025 U	**0.0041 J**	**0.0092 J**	**0.84**
Chrysene	**0.012 J**	0.0035 U	0.0034 U	0.0034 U	**0.02**	**0.053**	**5.1**
Dibenzo(a,h)anthracene	0.0025 U	0.0026 U	0.0025 U	0.0025 U	0.0025 U	**0.0027 J**	**0.27**
Fluoranthene	**0.032**	**0.011 J**	**0.048**	**0.0092 J**	**0.061**	**0.13**	**9**
Fluorene	**0.018 J**	**0.019 J**	**0.11**	**0.4**	**0.024**	**0.025**	**9.7**
Indeno(1,2,3-c,d)pyrene	**0.0042 J**	0.0027 U	0.0026 U	0.0026 U	**0.0093 J**	**0.026**	**2.4**
Naphthalene	0.003 U	**0.16**	--	**0.036**	**0.023**	**0.039**	--
Phenanthrene	**0.037**	**0.088**	**0.33**	**0.0087 J**	**0.074**	**0.06**	**16**
Pyrene	**0.029**	**0.0077 J**	**0.034**	**0.0085 J**	**0.056**	**0.13**	**11**
Semivolatile Organics (µg/l)							
Dibenzofuran	0.0046 U	0.0047 U	**0.044**	0.0046 U	0.0046 U	0.0046 U	**0.51**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC7
Sample name:	WLCGSG07GSC7B	WLCGSG07GSC7C	WLCGSG07GSC7PWE071004	WLCGSG07GSC7PWE071005	WLCGSG07GSC7PWSH071004	WLCGSG07GSC7PWSH071005
Sample date:	7/11/2007	7/11/2007	10/4/2007	10/5/2007	10/4/2007	10/5/2007
Depth interval:	152.4 - 213.4 cm	396.2 - 457.2 cm	38.1 - 53.34 cm	38.1 - 53.34 cm	38.1 - 53.34 cm	38.1 - 53.34 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dissolved Metals (µg/l)						
Zinc	--	--	--	--	--	--
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.13 U	0.13 U	13 U	25 U	13 U	13 UJ
1,2-Dichloroethene, cis-	0.12 U	0.12 U	--	--	--	--
1,2-Dichloroethene, trans-	0.15 U	0.15 U	15 U	29 U	15 U	15 UJ
Benzene	0.14 U	0.14 U	**3000**	**4800**	**2300**	**3100 J**
Ethylbenzene	0.13 U	0.13 U	**460**	**690**	**360**	**470 J**
m,p-Xylene	0.22 U	**1.9**	**250**	**380**	**210**	**260 J**
Naphthalene	--	**0.71 J**	**19000**	**17000**	**15000**	**17000 J**
o-Xylene	**0.39 J**	**4.1**	**140**	**210**	**110**	**140 J**
Toluene	**0.17 J**	**0.48 J**	**28 J**	**38 J**	**21 J**	**94 J**
Trichloroethene (TCE)	0.14 U	0.14 U	14 U	27 U	14 U	14 UJ
Vinyl chloride	0.042 U	0.042 U	4.2 U	8.4 U	4.2 U	4.2 UJ
LWG RA Total Xylene (Calculated U = 1/2)	**0.5 JT**	**6 T**	**390 T**	**590 T**	**320 T**	**400 JT**
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	**0.05**	**0.057**	**570**	**660**	**520**	**770**
Acenaphthene	**36**	**6.4**	**340**	**370**	**320**	**510**
Acenaphthylene	**0.38**	**0.11**	**4.5**	**3.6**	**3.5**	**12**
Anthracene	**0.88**	**0.025**	**36**	**31**	**30**	**91**
Benzo(a)anthracene	**0.0039 J**	**0.011 J**	**15**	**11**	**12**	**52**
Benzo(a)pyrene	0.0043 U	**0.0048 J**	**18**	**13**	**14**	**66**
Benzo(b)fluoranthene	0.0023 U	**0.007 J**	**16**	**11**	**12**	**57**
Benzo(g,h,i)perylene	0.0029 U	**0.0042 J**	**14**	**9.5**	**11**	**49**
Benzo(k)fluoranthene	0.0025 U	0.0025 U	**5.4**	**3.5**	**3.7**	**18**
Chrysene	0.0034 U	**0.018 J**	**18**	**13**	**15**	**64**
Dibenzo(a,h)anthracene	0.0025 U	0.0025 U	**1.9**	**1.3**	**1.5**	**5.6**
Fluoranthene	**0.41**	**0.044**	**75**	**55**	**61**	**250**
Fluorene	**9**	**1.1**	**82**	**79**	**71**	**150**
Indeno(1,2,3-c,d)pyrene	0.0026 U	**0.0041 J**	**13**	**8.9**	**10**	**47**
Naphthalene	**0.27**	--	--	--	--	--
Phenanthrene	**9.3**	**0.27**	**280**	**240**	**270**	**570**
Pyrene	**0.14**	**0.04**	**77**	**58**	**64**	**250**
Semivolatile Organics (µg/l)						
Dibenzofuran	**0.73**	0.0046 U	**17**	**18**	**15**	**28**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC7	WLCGSG07GSC8
Sample name:	WLCGSG07GSC7PWSL071004	WLCGSG07GSC7PWSL071005	WLCGSG07GSC7PWSL071006	WLCGSG07GSC7W25	WLCGSG07GSC7W50	WLCGSG07GSC8A
Sample date:	10/4/2007	10/5/2007	10/6/2007	8/31/2007	8/31/2007	7/11/2007
Depth interval:	38.1 - 53.34 cm	38.1 - 53.34 cm	38.1 - 53.34 cm	701 - 823 cm	1463 - 1585 cm	36.58 - 67.06 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Dissolved Metals (µg/l)						
Zinc	--	--	--	5.63	6.88	--
Volatile Organics (µg/l)						
1,1-Dichloroethene	13 U	25 U	6.1 U	0.25 U	0.13 U	0.68 J
1,2-Dichloroethene, cis-	--	--	--	0.24 U	0.12 U	230
1,2-Dichloroethene, trans-	15 U	29 U	7.2 U	0.29 U	0.15 U	0.7 J
Benzene	2700	4400	4500	4.4	2	36
Ethylbenzene	420	630	660	8.1	3.7	13
m,p-Xylene	240	350	350	2.4	1.1	0.7 J
Naphthalene	--	19000	17000	480	320	8 J
o-Xylene	130	190	210	2.6	1.2	2.7
Toluene	26 J	42 J	40	110	120	6.6
Trichloroethene (TCE)	14 U	27 U	6.7 U	0.27 U	0.14 U	0.34 U
Vinyl chloride	4.2 U	8.4 U	2.1 U	0.084 U	0.042 U	780
LWG RA Total Xylene (Calculated U = 1/2)	370 T	540 T	560 T	5 T	2.3 T	3.4 JT
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	1000	670	510	32	37	81
Acenaphthene	680	360	290	22	30	130
Acenaphthylene	12	4.9	2.4	0.51	0.99	3.3
Anthracene	97	40	21	3.6	7.1	25
Benzo(a)anthracene	59	16	5.4	1.8	4.2	12
Benzo(a)pyrene	75	20	6.1	2.3	5.5	12
Benzo(b)fluoranthene	65	18	5.3	1.9	4.6	10
Benzo(g,h,i)perylene	54	15	4.6	1.9	4.5	7.4
Benzo(k)fluoranthene	20	5.5	1.6	0.66	1.5	3.4
Chrysene	70	20	7.3	2.1	4.9	15
Dibenzo(a,h)anthracene	6.7	2.1	0.59	0.26	0.62	0.95
Fluoranthene	310	82	33	7.9	19	50
Fluorene	170	89	70	5.6	10	41
Indeno(1,2,3-c,d)pyrene	53	15	4.3	2	4.7	8.3
Naphthalene	15000	--	--	--	--	--
Phenanthrene	790	270	160	19	41	130
Pyrene	310	84	34	8	18	53
Semivolatile Organics (µg/l)						
Dibenzofuran	33	19	16	1.1	1.9	6.6

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSC8	WLCGSG07GSC8	WLCGSG07GSC9	WLCGSG07GSC9	WLCGSG07GSC9	WLCGSG07GSD1	WLCGSG07GSD1
Sample name:	WLCGSG07GSC8B	WLCGSG07GSC8C	WLCGSG07GSC9A	WLCGSG07GSC9B	WLCGSG07GSC9C	WLCGSG07GSD1A	WLCGSG07GSD1B
Sample date:	7/11/2007	7/11/2007	7/10/2007	7/10/2007	7/10/2007	7/20/2007	7/20/2007
Depth interval:	158.5 - 219.5 cm	402.3 - 463.3 cm	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm	30.48 - 60.96 cm	152.4 - 213.4 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UT	0.005 U	0.005 U
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	**27**	**0.68**	0.13 U	0.13 U	0.13 UT	0.13 U	0.13 U
1,2-Dichloroethene, cis-	**11000**	**240**	**0.41 J**	**0.57**	**0.16 JT**	0.12 U	0.12 U
1,2-Dichloroethene, trans-	**18 J**	**1**	0.15 U	0.15 U	0.15 UT	0.15 U	0.15 U
Benzene	**44**	**1.8**	**0.16 J**	**0.77**	0.14 UT	0.14 U	0.14 U
Ethylbenzene	6.5 U	0.13 U	0.13 U	0.13 U	0.13 UT	0.13 U	0.13 U
m,p-Xylene	11 U	0.22 U	0.22 U	0.22 U	0.22 UT	0.22 U	0.22 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	5.1 U	0.11 U	0.11 U	0.11 U	0.11 UT	0.11 U	0.11 U
Toluene	5.4 U	**0.74**	**23**	**5.7**	**2.7 T**	**0.25 J**	**0.77**
Trichloroethene (TCE)	**7 J**	**1.3**	0.14 U	0.14 U	0.14 UT	0.14 U	0.14 U
Vinyl chloride	**7600**	**91**	**0.05 J**	**0.08 J**	**0.23 JT**	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	11 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.081**	**0.14**	**0.022**	**0.0057 J**	**0.0026 JT**	**0.34**	**0.027**
Acenaphthene	**0.33**	**0.32**	**15**	**0.07**	**0.02 JT**	**1.8**	**0.41**
Acenaphthylene	**0.025**	**0.027**	**0.11**	**0.0068 J**	0.0034 UT	**0.58**	**0.25**
Anthracene	**0.063**	**0.11**	**0.41**	**0.033**	**0.0058 JT**	**1.3**	**0.5**
Benzo(a)anthracene	**0.058**	**0.098**	**0.094**	**0.027**	**0.0095 JT**	**2.8**	**1.1**
Benzo(a)pyrene	**0.049**	**0.087**	**0.12**	**0.018 J**	**0.0052 JT**	**3.3**	**1.3**
Benzo(b)fluoranthene	**0.051**	**0.081**	**0.13**	**0.021**	**0.008 JT**	**2.7**	**1.1**
Benzo(g,h,i)perylene	**0.046**	**0.076**	**0.12**	**0.02 J**	**0.0048 JT**	**2.9**	**1.2**
Benzo(k)fluoranthene	**0.02**	**0.039**	**0.049**	**0.0092 J**	**0.0038 JT**	**0.95**	**0.39**
Chrysene	**0.084**	**0.14**	**0.14**	**0.042**	**0.015 JT**	**4.1**	**1.9**
Dibenzo(a,h)anthracene	**0.0055 J**	**0.0088 J**	**0.015 J**	0.0025 U	0.0025 UT	**0.27**	**0.12**
Fluoranthene	**0.24**	**0.45**	**1.9**	**0.13**	**0.046 T**	**10**	**3.9**
Fluorene	**0.053**	**0.097**	**8.7**	**0.045**	**0.012 JT**	**1.3**	**0.27**
Indeno(1,2,3-c,d)pyrene	**0.044**	**0.072**	**0.12**	**0.018 J**	**0.0045 JT**	**2.8**	**1.2**
Naphthalene	**0.028**	**0.042**	**0.088**	**0.039**	**0.0067 JT**	**0.77**	**0.16**
Phenanthrene	**0.29**	**0.49**	**19**	**0.17**	**0.05 T**	**0.99**	**0.33**
Pyrene	**0.24**	**0.43**	**1.1**	**0.1**	**0.033 T**	**11**	**4**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.0077 J**	**0.014 J**	**0.033**	0.0046 U	0.0046 UT	**0.057**	**0.014 J**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSD1	WLCGSG07GSD2	WLCGSG07GSD2	WLCGSG07GSD2	WLCGSG07GSD2	WLCGSG07GSD2	WLCGSG07GSD3
Sample name:	WLCGSG07GSD1C	WLCGSG07GSD2A	WLCGSG07GSD2B	WLCGSG07GSD2C	WLCGSG07GSD2W25	WLCGSG07GSD2W50	WLCGSG07GSD3A
Sample date:	7/20/2007	7/20/2007	7/20/2007	7/20/2007	9/10/2007	9/10/2007	7/23/2007
Depth interval:	396.2 - 457.2 cm	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm	701 - 823 cm	1463 - 1585 cm	15.24 - 45.72 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	**4.04**	**3.18**	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	**0.12 J**	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	**0.22 J**	0.14 U
Ethylbenzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
m,p-Xylene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Naphthalene	--	--	--	--	--	**2.1**	--
o-Xylene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Toluene	**4.1**	**0.33 J**	**3.4**	**3.2**	**21**	**71**	**0.31 J**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	0.22 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT	0.22 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.043**	**0.0031 J**	**0.0053 J**	**0.012 J**	**0.11**	**0.32**	0.0023 U
Acenaphthene	**0.27**	**0.0054 J**	**0.018 J**	**0.021**	**0.76**	**0.26**	0.0044 U
Acenaphthylene	**0.11**	0.0036 U	**0.0083 J**	**0.019 J**	**0.011 J**	**0.0093 J**	0.0034 U
Anthracene	**0.25**	**0.0049 J**	**0.027**	**0.03**	**0.18**	**0.0047 J**	0.0036 UJ
Benzo(a)anthracene	**0.57**	0.0028 U	**0.05**	**0.11**	**0.0062 J**	**0.0029 J**	**0.0073 J**
Benzo(a)pyrene	**0.65**	**0.0058 J**	**0.043**	**0.11**	0.0044 U	0.0086 UJ	**-- R**
Benzo(b)fluoranthene	**0.56**	**0.0085 J**	**0.045**	**0.11**	**0.0032 J**	0.0046 UJ	**0.0048 J**
Benzo(g,h,i)perylene	**0.6**	0.0031 U	**0.044**	**0.11**	0.003 U	0.0058 UJ	**0.003 J**
Benzo(k)fluoranthene	**0.2**	**0.0045 J**	**0.017 J**	**0.035**	0.0026 U	0.005 UJ	0.0025 U
Chrysene	**0.92**	**0.012 J**	**0.066**	**0.14**	0.0035 U	0.0034 U	**0.0083 J**
Dibenzo(a,h)anthracene	**0.062**	**0.0037 J**	**0.0051 J**	**0.013 J**	0.0026 U	0.005 UJ	0.0025 U
Fluoranthene	**1.9**	**0.032**	**0.17**	**0.26**	**0.12**	**0.032**	**0.028**
Fluorene	**0.15**	0.004 U	**0.013 J**	**0.014 J**	**0.51**	**0.11**	0.0038 U
Indeno(1,2,3-c,d)pyrene	**0.61**	**0.0091 J**	**0.043**	**0.098**	0.0027 U	0.0052 UJ	0.0026 U
Naphthalene	**0.26**	**0.012 J**	**0.022**	**0.043**	**0.051**	--	0.003 U
Phenanthrene	**0.42**	**0.028**	**0.12**	**0.13**	**1.9**	**0.24**	**0.014 J**
Pyrene	**1.9**	**0.034**	**0.18**	**0.28**	**0.077**	**0.02**	**0.028**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.013 J**	0.0049 U	0.0046 U	0.0046 U	**0.082**	**0.021**	0.0046 U

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSD3	WLCGSG07GSD3	WLCGSG07GSD4	WLCGSG07GSD4	WLCGSG07GSD4	WLCGSG07GSD4	WLCGSG07GSD4
Sample name:	WLCGSG07GSD3B	WLCGSG07GSD3C	WLCGSG07GSD4A	WLCGSG07GSD4B	WLCGSG07GSD4C	WLCGSG07GSD4W25	WLCGSG07GSD4W50
Sample date:	7/23/2007	7/23/2007	7/23/2007	7/23/2007	7/23/2007	9/6/2007	9/6/2007
Depth interval:	137.2 - 198.1 cm	381 - 442 cm	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm	701 - 823 cm	1463 - 1585 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJ	0.005 UJT	0.005 UT	0.005 U
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	**3.76 T**	**9.87**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 UT	0.13 UT	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	**0.37 J**	**0.14 J**	**0.16 JT**	0.12 UT	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 UT	0.15 UT	0.15 U
Benzene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 UT	**0.14 JT**	**0.87**
Ethylbenzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 UT	0.13 UT	0.13 U
m,p-Xylene	0.22 U	**0.24 J**	0.22 U	0.22 U	0.22 UT	0.22 UT	**0.4 J**
Naphthalene	--	--	**0.68 J**	--	--	--	**3.7**
o-Xylene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 UT	0.11 UT	**0.11 J**
Toluene	**4**	**15**	**0.42 J**	**1.5**	**1.6 T**	**50 T**	**290**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 UT	0.14 UT	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 UT	0.042 UT	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	0.22 UT	**0.3 JT**	0.22 UT	0.22 UT	0.22 UT	0.22 UT	**0.51 JT**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.0055 J**	**0.024**	**0.042**	**0.0071 J**	**0.0078 JT**	**12 T**	**0.33**
Acenaphthene	**0.013 J**	**0.024**	**2.1**	**0.0094 J**	**0.017 JT**	**18 T**	**0.5**
Acenaphthylene	**0.0038 J**	**0.013 J**	**0.029**	**0.0041 J**	**0.015 JT**	**1.2 T**	**0.11**
Anthracene	**0.0054 J**	**0.018 J**	**0.0057 J**	0.0036 UJ	**0.013 JT**	**7.9 T**	**0.31**
Benzo(a)anthracene	**0.015 J**	**0.11**	**0.0094 J**	**0.0082 J**	**0.021 JT**	**5.9 T**	**0.35**
Benzo(a)pyrene	-- R	-- R	**0.0047 J**	-- R	-- R	**6.3 T**	**0.34**
Benzo(b)fluoranthene	**0.012 J**	**0.13**	**0.0065 J**	**0.013 J**	**0.035 T**	**6.9 T**	**0.67**
Benzo(g,h,i)perylene	**0.0086 J**	**0.13**	**0.0053 J**	**0.0078 J**	**0.025 T**	**5 T**	**0.34**
Benzo(k)fluoranthene	**0.0041 J**	**0.083**	0.0025 U	**0.0039 J**	**0.018 JT**	**1.9 T**	0.0025 U
Chrysene	**0.017 J**	**0.15**	**0.009 J**	**0.019 J**	**0.051 T**	**6.3 T**	**0.43**
Dibenzo(a,h)anthracene	0.0025 U	**0.074**	0.0025 U	0.0025 U	0.0025 UT	**0.61 T**	**0.034**
Fluoranthene	**0.048**	**0.22**	**0.026**	**0.051**	**0.087 JT**	**23 T**	**1.3**
Fluorene	**0.0089 J**	**0.017 J**	**0.04**	**0.0052 J**	**0.013 JT**	**7.5 T**	**0.31**
Indeno(1,2,3-c,d)pyrene	**0.0062 J**	**0.11**	**0.0035 J**	**0.006 J**	**0.022 T**	**5 T**	**0.29**
Naphthalene	0.003 U	**0.14**	--	**0.029**	**0.023 T**	**30 T**	--
Phenanthrene	**0.039**	**0.12**	**0.021**	**0.041**	**0.079 JT**	**47 T**	**2.3**
Pyrene	**0.043**	**0.21**	**0.024**	**0.047**	**0.087 JT**	**24 T**	**1.4**
Semivolatile Organics (µg/l)							
Dibenzofuran	0.0046 U	0.0047 U	0.0046 U	0.0046 U	0.0046 UT	**1.2 T**	**0.043**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSD5	WLCGSG07GSD5	WLCGSG07GSD5	WLCGSG07GSD5	WLCGSG07GSD5	WLCGSG07GSD5
Sample name:	WLCGSG07GSD5A	WLCGSG07GSD5B	WLCGSG07GSD5C	WLCGSG07GSD5PWE071004	WLCGSG07GSD5PWE071005	WLCGSG07GSD5PWSH071004
Sample date:	7/24/2007	7/24/2007	7/24/2007	10/4/2007	10/5/2007	10/4/2007
Depth interval:	30.48 - 60.96 cm	152.4 - 213.4 cm	396.2 - 457.2 cm	38.1 - 53.34 cm	38.1 - 53.34 cm	38.1 - 53.34 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 UJ	0.005 UJ	0.005 UJ	0.005 U	0.005 U	0.005 U
Dissolved Metals (µg/l)						
Zinc	--	--	--	--	--	--
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.13 U	0.13 U	1.3 U	0.13 U	0.13 UJ	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	1.2 U	--	--	--
1,2-Dichloroethene, trans-	0.15 U	0.15 U	1.5 U	0.15 U	0.15 UJ	0.15 U
Benzene	0.14 U	**17**	**14**	0.14 U	0.14 UJ	0.14 U
Ethylbenzene	0.13 U	**26**	**110**	0.13 U	0.13 UJ	0.13 U
m,p-Xylene	**0.23 J**	**3**	**11**	0.22 U	0.22 UJ	0.22 U
Naphthalene	--	**42**	**1000**	--	--	--
o-Xylene	**0.31 J**	**5.2**	**21**	0.11 U	0.11 UJ	0.11 U
Toluene	**0.72**	**2.5**	**21**	**0.75**	**0.78 J**	0.11 U
Trichloroethene (TCE)	0.14 U	0.14 U	1.4 U	**0.16 J**	0.14 UJ	0.14 U
Vinyl chloride	0.042 U	0.042 U	0.42 U	0.042 U	0.042 UJ	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**0.54 JT**	**8.2 T**	**32 T**	0.22 UT	0.22 UJT	0.22 UT
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	**0.06**	**3.7**	**150**	**0.0078 J**	**0.0091 J**	**0.014 J**
Acenaphthene	**38**	**89**	**84**	**9.5**	**11**	**9.2**
Acenaphthylene	**0.23**	**0.35**	**0.51**	**0.026**	**0.029**	**0.023**
Anthracene	**0.4 J**	**0.82 J**	**0.05 J**	**0.051**	**0.06**	**0.044**
Benzo(a)anthracene	**0.021**	**0.0088 J**	**0.046**	0.0026 U	0.0026 U	0.0026 U
Benzo(a)pyrene	**0.013 J**	**0.0044 J**	**0.041 J**	**0.0087 J**	0.0043 U	0.0043 U
Benzo(b)fluoranthene	**0.014 J**	**0.0057 J**	**0.042**	**0.014 J**	0.0023 U	0.0023 U
Benzo(g,h,i)perylene	**0.0082 J**	**0.0042 J**	**0.033**	**0.014 J**	0.0029 U	0.0029 U
Benzo(k)fluoranthene	**0.0056 J**	0.0025 U	**0.013 J**	**0.0065 J**	0.0025 U	0.0025 U
Chrysene	**0.019 J**	**0.0075 J**	**0.054**	**0.0064 J**	**0.0047 J**	**0.004 J**
Dibenzo(a,h)anthracene	0.0025 U	0.0025 U	**0.0052 J**	**0.0065 J**	0.0025 U	0.0025 U
Fluoranthene	**0.076**	**0.14**	**0.14**	**0.11**	**0.13**	**0.1**
Fluorene	**8.5**	**14**	**15**	**1.8**	**2**	**1.6**
Indeno(1,2,3-c,d)pyrene	**0.008 J**	**0.0043 J**	**0.032**	**0.018 J**	0.0026 U	0.0026 U
Naphthalene	**0.13**	--	--	0.003 U	0.003 U	**0.11**
Phenanthrene	**5.4**	**10**	**0.9**	**1.1**	**1.2**	**0.99**
Pyrene	**0.07**	**0.08**	**0.15**	**0.078**	**0.085**	**0.071**
Semivolatile Organics (µg/l)						
Dibenzofuran	**0.039**	**1.3**	**2.1**	**0.013 J**	**0.016 J**	**0.012 J**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSG07GSD5	WLCGSG07GSD5	WLCGSG07GSD5	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS04
Sample name:	WLCGSG07GSD5PWSH071005	WLCGSG07GSD5PWSL071005	WLCGSG07GSD5PWSL071006	WLCGSJ06GS04W2731	WLCGSJ06GS04W46	WLCGSJ06GS04W4852
Sample date:	10/5/2007	10/5/2007	10/6/2007	12/12/2006	12/12/2006	12/13/2006
Depth interval:	38.1 - 53.34 cm	38.1 - 53.34 cm	38.1 - 53.34 cm	823 - 944.9 cm	121.9 - 182.9 cm	1463 - 1585 cm
Conventional Parameters (mg/l)						
Cyanide, free	0.005 U	0.005 U	0.005 U	0.01 UJ	0.01 UJ	0.01 UJ
Dissolved Metals (µg/l)						
Zinc	--	--	--	**119**	**19200**	**248**
Volatile Organics (µg/l)						
1,1-Dichloroethene	0.13 UJ	0.13 UJ	0.13 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, cis-	--	--	--	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, trans-	0.15 UJ	0.15 UJ	0.15 U	0.5 U	0.5 U	0.5 U
Benzene	0.14 UJ	0.14 UJ	0.14 U	**0.38 J**	**1.2**	**0.21 J**
Ethylbenzene	0.13 UJ	0.13 UJ	0.13 U	0.5 U	0.5 U	0.5 U
m,p-Xylene	0.22 UJ	0.22 UJ	0.22 U	0.5 U	0.5 U	0.5 U
Naphthalene	--	--	--	--	--	--
o-Xylene	0.11 UJ	0.11 UJ	0.11 U	**0.12 J**	**0.14 J**	0.5 U
Toluene	0.11 UJ	**1.1 J**	**0.2 J**	**0.15 J**	**0.33 J**	0.5 U
Trichloroethene (TCE)	0.14 UJ	0.14 UJ	0.14 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.042 UJ	0.042 UJ	0.042 U	0.5 U	0.5 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	0.22 UJT	0.22 UJT	0.22 UT	**0.37 JT**	**0.39 JT**	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)						
2-Methylnaphthalene	**0.0097 J**	**0.0078 J**	**0.021**	**0.37**	**1.8**	**0.93**
Acenaphthene	**9.2**	**9.6**	**11**	**1**	**0.93**	**0.45**
Acenaphthylene	**0.027**	**0.029**	**0.036**	**0.055**	**0.17**	**0.25**
Anthracene	**0.06**	**0.061**	**0.099**	**0.16**	**0.25**	**0.32**
Benzo(a)anthracene	0.0026 U	0.0026 U	0.0026 U	**0.15**	**0.65**	**0.75**
Benzo(a)pyrene	0.0043 U	0.0043 U	**0.0064 J**	**0.12**	**0.8**	**0.57**
Benzo(b)fluoranthene	0.0023 U	0.0023 U	**0.0081 J**	**0.1**	**0.52**	**0.78**
Benzo(g,h,i)perylene	0.0029 U	0.0029 U	**0.0041 J**	**0.11**	**0.64**	**0.81**
Benzo(k)fluoranthene	0.0025 U	0.0025 U	0.0025 U	**0.093**	**0.48**	**0.75**
Chrysene	**0.0036 J**	**0.0044 J**	**0.017 J**	**0.34**	**0.82**	**1.8**
Dibenzo(a,h)anthracene	0.0025 U	0.0025 U	0.0025 U	**0.012 J**	**0.059**	**0.18 J**
Fluoranthene	**0.12**	**0.13**	**0.16**	**0.8**	**2.3**	**2.5**
Fluorene	**1.9**	**1.9**	**2.4**	**0.37**	**2.5**	**1.2**
Indeno(1,2,3-c,d)pyrene	0.0026 U	0.0026 U	**0.0037 J**	**0.094**	**0.53**	**0.62**
Naphthalene	0.003 U	0.003 U	**0.068**	**0.39**	**2.2**	**2.7**
Phenanthrene	**1.1**	**1.2**	**1.6**	**0.9**	**1.3**	**2**
Pyrene	**0.084**	**0.086**	**0.15**	**0.91**	**3**	**2.9**
Semivolatile Organics (µg/l)						
Dibenzofuran	**0.018 J**	**0.018 J**	**0.025**	**0.0052 J**	**0.0097 J**	0.2 U

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05
Sample name:	WLCGSJ06GS04W7377	WLCGSJ06GS04W911	WLCGSJ06GS04W98102	WLCGSJ06GS05CW100	WLCGSJ06GS05W2327	WLCGSJ06GS05W46	WLCGSJ06GS05W5559
Sample date:	12/13/2006	12/12/2006	12/13/2006	10/26/2006	10/25/2006	10/24/2006	10/25/2006
Depth interval:	2225 - 2347 cm	274.3 - 335.3 cm	2987 - 3109 cm	3048 - 3048 cm	701 - 823 cm	121.9 - 182.9 cm	1676 - 1798 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.01 UJ	**0.005 J**	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U
Dissolved Metals (µg/l)							
Zinc	**542**	**172**	**995**	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.5 U	0.5 U	**0.25 J**	0.5 U	0.5 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	**0.8**	0.5 U	**2.9**	0.5 U	**0.79**	**1**	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	**1.8**	**0.28 J**	0.5 U
m,p-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	**1.2**	**1.5**	0.5 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	0.5 U	0.5 U	**0.16 J**	0.5 U	**1.4**	**0.36 J**	0.5 U
Toluene	**0.11 J**	0.5 U	**0.21 J**	0.5 U	**0.47 J**	**0.59**	0.5 U
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	0.5 UT	**0.41 JT**	0.5 UT	**2.6 T**	**1.9 JT**	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.13**	**0.045**	**0.43 J**	**0.045**	**16**	**1.1**	**0.21**
Acenaphthene	**0.05**	**0.048**	**0.13 J**	**0.091**	**6.9**	**28**	**0.38**
Acenaphthylene	**0.036**	**0.12**	**0.036 J**	**0.0093 J**	**0.22**	**0.14**	**0.038**
Anthracene	**0.067**	**0.073**	**0.17 J**	**0.078**	**1**	**0.28**	**0.75**
Benzo(a)anthracene	**0.21**	**0.38**	**0.33 J**	**0.016 J**	**0.3**	**0.11**	**0.26**
Benzo(a)pyrene	**0.15**	**0.53**	**0.19 J**	**0.013 J**	**0.25**	**0.081**	**0.2**
Benzo(b)fluoranthene	**0.14**	**0.37**	**0.16 J**	**0.0092 J**	**0.16**	**0.049**	**0.14**
Benzo(g,h,i)perylene	**0.14**	**0.4**	**0.2 J**	**0.011 J**	**0.19**	**0.046**	**0.14**
Benzo(k)fluoranthene	**0.14**	**0.29**	**0.11 J**	**0.0077 J**	**0.15**	**0.043**	**0.13**
Chrysene	**0.46**	**0.57**	**1.1 J**	**0.019 J**	**0.42**	**0.15**	**0.48**
Dibenzo(a,h)anthracene	**0.015 J**	**0.042**	**0.091 J**	0.02 U	**0.018 J**	0.029 U	**0.014 J**
Fluoranthene	**0.61**	**1.3**	**0.45 J**	**0.15**	**2**	**0.67**	**1.7**
Fluorene	**0.14**	**0.069**	**0.54 J**	**0.077**	**3**	**3.6**	**0.41**
Indeno(1,2,3-c,d)pyrene	**0.1**	**0.36**	**0.085 J**	**0.0084 J**	**0.16**	**0.04**	**0.12**
Naphthalene	**0.33**	0.02 U	**2.2 J**	0.02 U	**65**	**1.7**	**0.42**
Phenanthrene	**0.36**	**0.12**	**1.6 J**	**0.78**	**9.2**	**2**	**5.8**
Pyrene	**0.83**	**1.6**	**0.63 J**	**0.15**	**2.1**	**0.76**	**1.8**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.0038 J**	**0.004 J**	**0.015 J**	**0.017 J**	**0.54**	**0.07**	**0.029**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS06
Sample name:	WLCGSJ06GS05W7377	WLCGSJ06GS05W911	WLCGSJ06GS05W98102	WLCGSJ06GS06W2327	WLCGSJ06GS06W46	WLCGSJ06GS06W4852	WLCGSJ06GS06W7377
Sample date:	10/26/2006	10/24/2006	10/26/2006	1/17/2007	1/15/2007	1/17/2007	1/17/2007
Depth interval:	2225 - 2347 cm	274.3 - 335.3 cm	2987 - 3109 cm	701 - 823 cm	121.9 - 182.9 cm	1463 - 1585 cm	2225 - 2347 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.01 U	0.01 U	0.01 U	0.01 UT	0.01 U	0.01 UT	0.01 U
Dissolved Metals (µg/l)							
Zinc	--	--	--	**2.85 T**	**12**	**4.6 T**	**4**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 UT	0.5 U	0.5 UT	0.5 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.5 U	0.5 UT	0.5 U	0.5 UT	0.5 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	0.5 UT	0.5 U	0.5 UT	0.5 U
Benzene	0.5 U	**1**	0.5 U	**0.62 T**	**100**	0.5 UT	0.5 U
Ethylbenzene	0.5 U	**1.3**	0.5 U	**0.86 T**	**32**	0.5 UT	0.5 U
m,p-Xylene	0.5 U	**1.4**	0.5 U	**0.6 T**	**6.7**	0.5 UT	0.5 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	0.5 U	**1.2**	0.5 U	**0.35 JT**	**11**	0.5 UT	0.5 U
Toluene	0.5 U	**0.56**	0.5 U	0.5 UT	**2.1**	0.5 UT	0.5 U
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	0.5 UT	0.5 U	0.5 UT	0.5 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 UT	0.5 U	0.5 UT	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	**2.6 T**	0.5 UT	**0.95 JT**	**18 T**	0.5 UT	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.026**	**5.2**	**0.029**	**0.073 T**	**110**	**0.029 T**	**0.013 J**
Acenaphthene	**0.14**	**6.6**	**0.056**	**0.13 T**	**200**	**0.025 JT**	**0.015 J**
Acenaphthylene	**0.015 J**	**0.14**	**0.0079 J**	**0.014 JT**	**27**	**0.0052 JT**	**0.0037 J**
Anthracene	**0.082**	**0.43**	**0.11**	**0.018 JT**	**76**	**0.0072 JT**	0.02 U
Benzo(a)anthracene	**0.013 J**	**0.16**	**0.016 J**	**0.0059 JT**	**71**	**0.0078 JT**	**0.0041 J**
Benzo(a)pyrene	**0.0084 J**	**0.15**	**0.0088 J**	**0.0049 JT**	**110**	0.022 UT	0.02 U
Benzo(b)fluoranthene	**0.005 J**	**0.11**	**0.0073 J**	**0.0085 JT**	**66**	**0.0083 JT**	0.02 U
Benzo(g,h,i)perylene	**0.0055 J**	**0.091**	**0.0081 J**	**0.0046 JT**	**89**	**0.0052 JT**	0.02 U
Benzo(k)fluoranthene	0.02 U	**0.094**	**0.0063 J**	0.021 UJT	**57**	0.022 UJT	0.02 UJ
Chrysene	**0.014 J**	**0.21**	**0.019 J**	**0.0084 JT**	**96**	**0.019 JT**	0.02 U
Dibenzo(a,h)anthracene	**0.0038 J**	**0.0077 J**	0.02 U	**0.0054 JT**	**8.9**	**0.0046 JT**	**0.0037 J**
Fluoranthene	**0.15**	**0.86**	**0.21**	**0.057 T**	**240**	**0.043 T**	**0.023**
Fluorene	**0.063**	**1.8**	**0.067**	**0.063 T**	**85**	**0.016 JT**	**0.0059 J**
Indeno(1,2,3-c,d)pyrene	**0.0042 J**	**0.074**	**0.0067 J**	**0.0048 JT**	**78**	**0.0036 JT**	0.02 U
Naphthalene	0.02 U	**26**	0.02 U	**0.25 T**	**910**	**0.089 T**	**0.048**
Phenanthrene	**0.74**	**3.3**	**0.94**	**0.22 T**	**370**	**0.079 T**	**0.031**
Pyrene	**0.15**	**1**	**0.21**	**0.052 T**	**270**	**0.045 T**	0.02 U
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.0099 J**	**0.23**	**0.011 J**	**0.013 JT**	**14**	**0.0056 JT**	0.02 U

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07
Sample name:	WLCGSJ06GS06W911	WLCGSJ06GS06W98102	WLCGSJ06GS07CW100	WLCGSJ06GS07W2327	WLCGSJ06GS07W46	WLCGSJ06GS07W4852	WLCGSJ06GS07W7377
Sample date:	1/15/2007	1/18/2007	10/18/2006	10/17/2006	10/16/2006	10/17/2006	10/18/2006
Depth interval:	274.3 - 335.3 cm	2987 - 3109 cm	3048 - 3048 cm	701 - 823 cm	121.9 - 182.9 cm	1463 - 1585 cm	2225 - 2347 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 UT
Dissolved Metals (µg/l)							
Zinc	**14.7**	**4.1**	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	13 U	0.5 U	1 U	0.5 UT
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.5 U	13 U	0.5 U	1 U	0.5 UT
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	13 U	0.5 U	1 U	0.5 UT
Benzene	**0.7**	0.5 U	0.5 U	**64**	**19**	**600**	**0.34 JT**
Ethylbenzene	**0.54**	0.5 U	0.5 U	**89**	**24**	**8.8**	**0.16 JT**
m,p-Xylene	**0.4 J**	0.5 U	0.5 U	**68**	**17**	**3.9**	0.5 UT
Naphthalene	--	--	--	--	--	--	--
o-Xylene	**0.49 J**	0.5 U	**0.13 J**	**47**	**30**	**4.2**	**0.58 T**
Toluene	**0.69**	0.5 U	0.5 U	**12 J**	**3**	**0.58 J**	0.5 UT
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	13 U	0.5 U	**0.4 J**	0.5 UT
Vinyl chloride	0.5 U	0.5 U	0.5 U	13 U	0.5 U	1 U	0.5 UT
LWG RA Total Xylene (Calculated U = 1/2)	**0.89 JT**	0.5 UT	**0.38 JT**	**110 T**	**47 T**	**8.1 T**	**0.83 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**4.3**	**0.12**	**0.99**	**1100**	**200**	**87**	**2.2 T**
Acenaphthene	**8.4**	**0.1**	**6.5**	**680**	**97**	**75**	**5.1 T**
Acenaphthylene	**1**	**0.0063 J**	**1.4**	**140**	**9**	**21**	**1.3 T**
Anthracene	**2.9**	**0.0086 J**	**5.5**	**400**	**70**	**49**	**1.4 T**
Benzo(a)anthracene	**2.9**	0.02 U	**3.1**	**260**	**34**	**31**	**0.7 T**
Benzo(a)pyrene	**4**	0.02 U	**3.1**	**330**	**34**	**32**	**0.77 T**
Benzo(b)fluoranthene	**2.8**	0.02 U	**1.9**	**180**	**17**	**19**	**0.48 T**
Benzo(g,h,i)perylene	**3.5**	0.02 U	**2.4**	**240**	**17**	**22**	**0.6 T**
Benzo(k)fluoranthene	**2**	0.02 UJ	**1.8**	**170**	**21**	**17**	**0.48 T**
Chrysene	**3.7**	0.02 U	**5.5**	**350**	**44**	**43**	**0.68 T**
Dibenzo(a,h)anthracene	**0.4**	0.02 U	**0.28**	**27**	**2.5**	**2.5**	**0.058 T**
Fluoranthene	**9.8**	**0.035**	**13**	**820**	**120**	**100**	**3.3 T**
Fluorene	**3.6**	**0.027**	**5.9**	**380**	**71**	**46**	**3.6 T**
Indeno(1,2,3-c,d)pyrene	**2.9**	0.02 U	**2.1**	**220**	**15**	**20**	**0.55 T**
Naphthalene	**28**	**0.49**	**2.4**	**6100**	**480**	**250**	**9.5 T**
Phenanthrene	**15**	**0.093**	**36**	**1700**	**310**	**230**	**12 T**
Pyrene	**12**	**0.029**	**16**	**1000**	**150**	**130**	**3.7 T**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.61**	**0.0086 J**	**0.6**	**49**	**12**	**5.7**	**0.39 T**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS08
Sample name:	WLCGSJ06GS07W911	WLCGSJ06GS07W98102	WLCGSJ06GS08W100	WLCGSJ06GS08W2327	WLCGSJ06GS08W46	WLCGSJ06GS08W4852	WLCGSJ06GS08W7377
Sample date:	10/16/2006	10/18/2006	10/27/2006	10/25/2006	10/25/2006	10/26/2006	10/26/2006
Depth interval:	274.3 - 335.3 cm	2987 - 3109 cm	3048 - 3048 cm	701 - 823 cm	121.9 - 182.9 cm	1463 - 1585 cm	2225 - 2347 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.01 U	0.01 U	**0.007 J**	0.01 U	0.01 U	0.01 UT	0.01 U
Dissolved Metals (µg/l)							
Zinc	--	--	**59.3**	**12.3**	**129**	**7.25 T**	**37**
Volatile Organics (µg/l)							
1,1-Dichloroethene	25 U	0.5 U	0.5 U	0.5 U	25 U	0.5 UT	0.5 U
1,2-Dichloroethene, cis-	25 U	0.5 U	0.5 U	0.5 U	25 U	0.5 UT	0.5 U
1,2-Dichloroethene, trans-	25 U	0.5 U	0.5 U	0.5 U	25 U	0.5 UT	0.5 U
Benzene	**220**	0.5 U	**280**	0.5 U	**560**	0.5 UT	**1.2**
Ethylbenzene	**120**	0.5 U	**6.8**	0.5 U	**170**	0.5 UT	**0.37 J**
m,p-Xylene	**32**	0.5 U	**64**	0.5 U	**54**	0.5 UT	**7.4**
Naphthalene	--	--	--	--	--	--	--
o-Xylene	**49**	**0.16 J**	**10**	0.5 U	**79**	0.5 UT	**3.2**
Toluene	**15 J**	0.5 U	**0.84**	0.5 U	**13 J**	0.5 UT	**0.3 J**
Trichloroethene (TCE)	25 U	0.5 U	0.5 U	0.5 U	25 U	0.5 UT	0.5 U
Vinyl chloride	25 U	0.5 U	0.5 U	0.5 U	25 U	0.5 UT	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	**81 T**	**0.41 JT**	**74 T**	0.5 UT	**130 T**	0.5 UT	**11 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**180**	**0.13**	**0.97**	**3.5**	**720**	**0.17 T**	**0.14**
Acenaphthene	**170**	**0.45**	**0.093**	**4.3**	**720**	**0.39 T**	**0.082**
Acenaphthylene	**4.4**	**0.13**	**0.016 J**	**0.15**	**21**	**0.027 T**	**0.02**
Anthracene	**57**	**0.55**	**0.019 J**	**1.1**	**250**	**0.15 T**	**0.021**
Benzo(a)anthracene	**28**	**0.28**	**0.015 J**	**0.86**	**130**	**0.082 T**	**0.017 J**
Benzo(a)pyrene	**30**	**0.27**	**0.014 J**	**1**	**170**	**0.081 T**	**0.017 J**
Benzo(b)fluoranthene	**18**	**0.16**	**0.01 J**	**0.55**	**94**	**0.05 T**	**0.012 J**
Benzo(g,h,i)perylene	**21**	**0.21**	**0.0079 J**	**0.6**	**130**	**0.059 T**	**0.013 J**
Benzo(k)fluoranthene	**17**	**0.16**	**0.0062 J**	**0.53**	**77**	**0.044 T**	**0.011 J**
Chrysene	**39**	**0.48**	**0.015 J**	**1.1**	**180**	**0.1 T**	**0.019 J**
Dibenzo(a,h)anthracene	**2**	**0.02**	0.02 U	**0.063**	**12**	**0.0058 JT**	0.02 U
Fluoranthene	**120**	**1.2**	**0.059**	**3.4**	**520**	**0.42 T**	**0.08**
Fluorene	**60**	**0.49**	**0.043**	**1.7**	**270**	**0.22 T**	**0.043**
Indeno(1,2,3-c,d)pyrene	**18**	**0.19**	**0.0074 J**	**0.52**	**120**	**0.048 T**	**0.012 J**
Naphthalene	**2800**	**0.28**	**130**	**16**	**7200**	**0.55 T**	**0.89**
Phenanthrene	**290**	**3.2**	**0.18**	**8.1**	**1100**	**1.2 T**	**0.16**
Pyrene	**140**	**1.5**	**0.068**	**4.1**	**550**	**0.51 T**	**0.073**
Semivolatile Organics (µg/l)							
Dibenzofuran	**9.4**	**0.046**	0.02 U	**0.26**	**42**	**0.034 T**	**0.0056 J**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09
Sample name:	WLCGSJ06GS08W911	WLCGSJ06GS08W98102	WLCGSJ06GS09CW100	WLCGSJ06GS09W2327	WLCGSJ06GS09W46	WLCGSJ06GS09W4852	WLCGSJ06GS09W7377
Sample date:	10/25/2006	10/27/2006	10/11/2006	10/9/2006	10/5/2006	10/10/2006	10/10/2006
Depth interval:	274.3 - 335.3 cm	2987 - 3109 cm	3048 - 3048 cm	701 - 823 cm	121.9 - 182.9 cm	1463 - 1585 cm	2225 - 2347 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	**0.0065 J**	0.01 U
Dissolved Metals (µg/l)							
Zinc	**490**	**49.2**	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.5 U	**0.27 J**	0.5 U	0.5 U	**0.32 J**
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
Benzene	**1.3**	**310**	**61**	**70**	0.5 U	**160**	**470**
Ethylbenzene	**2.9**	**7.6**	**3.7**	**9.1**	0.5 U	**7.8**	**12**
m,p-Xylene	**1.1**	**70**	**13**	**20**	**0.64**	**64**	**130**
Naphthalene	--	**180**	--	--	--	--	--
o-Xylene	**1.6**	**11**	**4.7**	**6.1**	**0.32 J**	**79**	**120**
Toluene	**0.3 J**	**0.87**	**0.5**	**0.55**	**0.13 J**	**2.4**	**2.8**
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1.6**
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
LWG RA Total Xylene (Calculated U = 1/2)	**2.7 T**	**81 T**	**18 T**	**26 T**	**0.96 JT**	**140 T**	**250 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**18**	**1.2**	**1**	**22**	**0.54**	**0.57**	**3.1**
Acenaphthene	**19**	**0.075**	**0.96**	**19**	**40**	**0.54**	**0.97**
Acenaphthylene	**0.75**	**0.03**	**0.053**	**0.23**	**1.4**	**0.027**	**0.031**
Anthracene	**5.8**	**0.023**	**0.39**	**1.2**	**1.6**	**0.051**	**0.047**
Benzo(a)anthracene	**4.9**	**0.024**	**0.22**	**0.44**	**3.8**	**0.014 J**	0.02 U
Benzo(a)pyrene	**5.9**	**0.025**	**0.19**	**0.5**	**6.4**	**0.013 J**	0.02 U
Benzo(b)fluoranthene	**3.2**	**0.014 J**	**0.13**	**0.3**	**4.3**	**0.0099 J**	0.02 U
Benzo(g,h,i)perylene	**3.6**	**0.014 J**	**0.15**	**0.4**	**5.3**	**0.013 J**	0.02 U
Benzo(k)fluoranthene	**3.1**	**0.013 J**	**0.12**	**0.31**	**3.5**	**0.0089 J**	0.02 U
Chrysene	**5.7**	**0.028**	**0.33**	**0.59**	**5.1**	**0.016 J**	0.02 U
Dibenzo(a,h)anthracene	**0.38**	0.02 U	**0.017 J**	**0.046**	**0.61**	0.02 U	0.02 U
Fluoranthene	**20**	**0.078**	**1.3**	**2.2**	**13**	**0.07**	**0.051**
Fluorene	**7.4**	**0.034**	**0.63**	**4.8**	**8.8**	**0.18**	**0.31**
Indeno(1,2,3-c,d)pyrene	**3.3**	**0.015 J**	**0.13**	**0.37**	**4.7**	**0.011 J**	0.02 U
Naphthalene	**120**	--	**66**	**44**	**1.8**	**14**	**920**
Phenanthrene	**40**	**0.17**	**3.9**	**11**	**18**	**0.37**	**0.43**
Pyrene	**22**	**0.1**	**1.5**	**2.5**	**15**	**0.072**	**0.044**
Semivolatile Organics (µg/l)							
Dibenzofuran	**1.2**	0.02 U	**0.067**	**0.75**	**0.16**	**0.03**	**0.053**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCGSJ06GS09	WLCGSJ06GS09	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP25	WLCSLH01GP26
Sample name:	WLCGSJ06GS09W911	WLCGSJ06GS09W98102	WLCSLH01GP25W2	WLCSLH01GP25W36	WLCSLH01GP25W74	WLCSLH01GP25W89	WLCSLH01GP26W2
Sample date:	10/5/2006	10/11/2006	9/30/2004	9/30/2004	10/1/2004	10/1/2004	10/6/2004
Depth interval:	274.3 - 335.3 cm	2987 - 3109 cm	60.96 - 76.2 cm	1097 - 1112 cm	2256 - 2271 cm	2713 - 2728 cm	60.96 - 76.2 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.01 U	0.01 U	--	--	--	--	--
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	5 U	0.5 U	0.2 U	0.2 U	0.2 U	**4.88**	0.2 U
1,2-Dichloroethene, cis-	5 U	0.5 U	0.2 U	**14**	0.2 U	**1360**	0.2 U
1,2-Dichloroethene, trans-	5 U	0.5 U	0.3 U	0.3 U	0.3 U	**5.37**	0.3 U
Benzene	**370**	**60**	**1.15**	**0.62**	**0.82**	**74.2**	0.2 U
Ethylbenzene	**130**	**3**	**2.66**	**1.42**	**1.8**	**12.2**	**1.1**
m,p-Xylene	**17**	**14**	**2.9**	**1.35**	0.76 U	**4.49**	**0.84**
Naphthalene	--	--	**7.91**	**151**	**147**	**913**	**103**
o-Xylene	**58**	**4.8**	**2.83**	0.2 U	**0.49**	**3.9**	**0.6**
Toluene	**6.5**	**0.48 J**	0.57 U	0.67 U	0.24 U	0.87 U	0.2 U
Trichloroethene (TCE)	5 U	0.5 U	0.2 U	0.2 U	0.2 U	**62.2**	0.2 U
Vinyl chloride	5 U	0.5 U	0.2 U	**3.43**	**13.6**	**298**	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	**75 T**	**19 T**	**5.73 T**	**1.5 T**	**0.87 T**	**8.39 T**	**1.44 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**670**	**0.57**	**24.5**	**13.4**	**16.6**	**60.9**	**36.3**
Acenaphthene	**540**	**0.54**	**61**	**25.7**	**19.2**	**101**	**38**
Acenaphthylene	**11**	**0.03**	**0.388**	**0.334**	**0.533**	**0.825**	**1.27**
Anthracene	**96**	**0.17**	**8.32**	**7.77**	**7.33**	**15.2**	**17.7**
Benzo(a)anthracene	**52**	**0.093**	**2.35**	**2.91**	**3.94**	**4.38**	**9.02**
Benzo(a)pyrene	**64**	**0.088**	**1.43**	**3.61**	**4.35**	**4.57**	**8.31**
Benzo(b)fluoranthene	**36**	**0.055**	**1.56**	**2.97**	**3.87**	**3.92**	**7.28**
Benzo(g,h,i)perylene	**46**	**0.072**	**1.39**	**2.67**	**2.88**	**3.65**	**8.71**
Benzo(k)fluoranthene	**34**	**0.056**	**0.349**	**0.944**	**1.13**	**1.18**	**2.28**
Chrysene	**73**	**0.12**	**2.35**	**2.88**	**3.77**	**4.6**	**10.6**
Dibenzo(a,h)anthracene	**5.8**	**0.008 J**	**0.11**	**0.391**	**0.503**	**0.507**	**0.937**
Fluoranthene	**210**	**0.59**	**15.9**	**15.7**	**16.4**	**26.4**	**32.2**
Fluorene	**170**	**0.36**	**23.7**	**9.72**	**9.96**	**40.9**	**20.1**
Indeno(1,2,3-c,d)pyrene	**41**	**0.061**	**0.458**	**1.94**	**2.16**	**2.53**	**5.82**
Naphthalene	**1000**	**86**	--	--	--	--	--
Phenanthrene	**530**	**2.1**	**47.1**	**43.2**	**42.4**	**108**	**73.7**
Pyrene	**250**	**0.65**	**16.3**	**16.7**	**17.4**	**27.5**	**35.8**
Semivolatile Organics (µg/l)							
Dibenzofuran	**26**	**0.035**	**8.42**	**1.57**	**1.78**	**6.47**	**3.35**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP27
Sample name:	WLCSLH01GP26W30	WLCSLH01GP26W60	WLCSLH01GP26W83	WLCSLH01GP27W15	WLCSLH01GP27W2	WLCSLH01GP27W34	WLCSLH01GP27W59
Sample date:	10/6/2004	10/6/2004	10/6/2004	10/12/2004	10/12/2004	10/12/2004	10/12/2004
Depth interval:	914.4 - 929.6 cm	1829 - 1844 cm	2530 - 2545 cm	457.2 - 472.4 cm	60.96 - 76.2 cm	1036 - 1051 cm	1798 - 1813 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**6.41**	**9.62**
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	0.2 U	**281**	**17.5**	**1.64**	**99.2**	**15.5**	**3.64**
Ethylbenzene	0.46 U	**109**	**26.2**	**5.06**	**215**	**88.5**	**39.1**
m,p-Xylene	1.01 U	**68.1**	**16.2**	3.72 U	**63.2**	**26.4**	**13.1**
Naphthalene	--	**6840**	**1730**	**489**	**6800**	--	--
o-Xylene	0.24 U	**43.8**	**7.76**	**2.98**	**80.5**	**22.4**	**9.36**
Toluene	0.84 U	51.6 U	**6.52**	**1.21**	5.44 U	**5.96**	**1.51**
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	0.2 U	0.2 U	0.2 U	**1.18**	0.2 U	**17.4**	**51.6**
LWG RA Total Xylene (Calculated U = 1/2)	1.01 UT	**112 T**	**24 T**	**4.84 T**	**144 T**	**48.8 T**	**22.5 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	0.958 U	--	**160**	**27.4**	**453**	**341**	**201**
Acenaphthene	**1.9**	--	**169**	**76.2**	**317**	**329**	**226**
Acenaphthylene	0.0503 U	--	**3.32**	**0.356**	**3.54**	**1.17**	**0.888**
Anthracene	**0.0905**	--	**18.5**	**7.24**	**36.4**	**24.7**	**22.2**
Benzo(a)anthracene	**0.101**	--	**4.29**	**1.77**	**22**	**7.12**	**5.55**
Benzo(a)pyrene	**0.151**	--	**4.16**	**1.56**	**24.6**	**7.29**	**5.7**
Benzo(b)fluoranthene	**0.131**	--	**3.45**	**1.3**	**20.2**	**5.49**	**4.84**
Benzo(g,h,i)perylene	**0.161**	--	**5.12**	**1.47**	**22.7**	**6.67**	**5.6**
Benzo(k)fluoranthene	0.0503 U	--	**1.22**	**0.327**	**6.28**	**2.36**	**1.73**
Chrysene	**0.101**	--	**5.22**	**2.13**	**22.9**	**7.05**	**6.44**
Dibenzo(a,h)anthracene	0.0503 U	--	**0.367**	**0.135**	**0.16**	**0.438**	**0.302**
Fluoranthene	**1.4**	--	**25.1**	**12**	**63.3**	**35**	**32.1**
Fluorene	**0.191**	--	**56.4**	**20.3**	**61.2**	**55.1**	**45.1**
Indeno(1,2,3-c,d)pyrene	**0.101**	--	**3.58**	**0.596**	**15.8**	**4.4**	**3.75**
Naphthalene	**0.854**	--	--	--	--	**3730**	**1760**
Phenanthrene	**1.74**	--	**124**	**43.8**	**282**	**122**	**115**
Pyrene	**2.29**	--	**27.3**	**12.6**	**67.7**	**37**	**34.5**
Semivolatile Organics (µg/l)							
Dibenzofuran	0.958 U	--	**8.26**	**2.67**	**16.1**	**12.8**	**9.15**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP29
Sample name:	WLCSLH01GP28W2	WLCSLH01GP28W36	WLCSLH01GP28W74	WLCSLH01GP28W89	WLCSLH01GP29W2	WLCSLH01GP29W22	WLCSLH01GP29W46
Sample date:	10/15/2004	10/15/2004	10/15/2004	10/15/2004	10/20/2004	10/20/2004	10/21/2004
Depth interval:	60.96 - 76.2 cm	1097 - 1112 cm	2256 - 2271 cm	2713 - 2728 cm	60.96 - 76.2 cm	670.6 - 685.8 cm	1402 - 1417 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	**40.8**	**63.6**	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	**8870**	**11200**	0.2 U	**0.99**	**1.84**
1,2-Dichloroethene, trans-	0.3 U	0.3 U	**68.2**	**23.7**	0.3 U	0.3 U	0.3 U
Benzene	0.2 U	0.2 U	**67.8**	**103**	**44.2**	0.72 U	**3.22**
Ethylbenzene	**0.72**	0.2 U	**1.48**	**0.77**	**532**	**52.8**	**213**
m,p-Xylene	**1.25**	0.4 U	**0.85**	**0.61**	**168**	**15.4**	**84.4**
Naphthalene	--	--	**83**	**13.9**	**12600**	**2740**	**6940**
o-Xylene	**0.4**	0.2 U	**0.35**	**0.28**	**138**	**11.9**	**69.7**
Toluene	0.2 U	0.2 U	2.97 U	**4.5**	**13.3**	**2.74**	**9.38**
Trichloroethene (TCE)	0.2 U	0.2 U	**251**	**8.8**	0.2 U	0.2 U	0.2 U
Vinyl chloride	0.2 U	**3.27**	**828**	**6390**	**1.87**	**18.4**	**11.6**
LWG RA Total Xylene (Calculated U = 1/2)	**1.65 T**	0.4 UT	**1.2 T**	**0.89 T**	**306 T**	**27.3 T**	**154 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**6.19**	**1.12**	**16**	**3.32**	**762**	**292**	**540**
Acenaphthene	**40.9**	**8.25**	**15.7**	**2.97**	**420**	**195**	**339**
Acenaphthylene	**0.438**	**0.124**	**0.77**	0.0478 U	**6.57**	**1.75**	**4.34**
Anthracene	**3.76**	**1.1**	**7.36**	**1.17**	**40.7**	**20.1**	**32.5**
Benzo(a)anthracene	**0.438**	**0.676**	**4.33**	**0.134**	**30.2**	**7.28**	**20.5**
Benzo(a)pyrene	**0.333**	**0.743**	**4.53**	**0.115**	**35.3**	**9.75**	**24.2**
Benzo(b)fluoranthene	**0.314**	**0.638**	**3.84**	**0.115**	**28.7**	**8.39**	**19.7**
Benzo(g,h,i)perylene	**0.2**	**0.457**	**2.36**	**0.0764**	**32.7**	**5.71**	**21.8**
Benzo(k)fluoranthene	**0.105**	**0.219**	**1.21**	0.0478 U	**10.1**	**2.58**	**7.1**
Chrysene	**0.428**	**1.06**	**3.98**	**0.134**	**32.3**	**6.98**	**23.2**
Dibenzo(a,h)anthracene	0.0476 U	**0.0857**	**0.456**	0.0478 U	**5.02**	**0.933**	**3.27**
Fluoranthene	**7.72**	**3.69**	**16.1**	**1.69**	**75.7**	**38.5**	**59.4**
Fluorene	**16.7**	**3.88**	**9.57**	**1.48**	**68.9**	**59.7**	**58.9**
Indeno(1,2,3-c,d)pyrene	**0.143**	**0.333**	**1.83**	**0.0573**	**23.3**	**4.3**	**15.5**
Naphthalene	**0.618**	**3.4**	--	--	--	--	--
Phenanthrene	**21**	**6.56**	**46**	**7.5**	**353**	**145**	**99.4**
Pyrene	**7**	**4**	**18.1**	**1.78**	**78.2**	**38.8**	**61.6**
Semivolatile Organics (µg/l)							
Dibenzofuran	0.953 U	0.957 U	**0.981**	0.957 U	**19.5**	**8.01**	**15.3**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP30	WLCSLH01GP30	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP31	WLCSLH01GP32
Sample name:	WLCSLH01GP30W2	WLCSLH01GP30W25	WLCSLH01GP30W50	WLCSLH01GP31W2	WLCSLH01GP31W22	WLCSLH01GP31W46	WLCSLH01GP32W2
Sample date:	10/22/2004	10/25/2004	10/25/2004	10/26/2004	10/27/2004	10/27/2004	10/28/2004
Depth interval:	60.96 - 76.2 cm	762 - 777.2 cm	1524 - 1539 cm	60.96 - 76.2 cm	670.6 - 685.8 cm	1402 - 1417 cm	60.96 - 76.2 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	--	--	0.2 U	0.2 U	0.2 U	--
1,2-Dichloroethene, cis-	**72.6**	--	--	**2.3**	**23.7**	**97.3**	--
1,2-Dichloroethene, trans-	0.3 U	--	--	0.3 U	**1.84**	**0.52**	--
Benzene	**1.6**	--	--	**1.17**	**53**	**4.32**	--
Ethylbenzene	**34.1**	--	--	**1.02**	**11.1**	**5.96**	--
m,p-Xylene	**2.59**	--	--	0.4 U	**4.45**	**0.54**	--
Naphthalene	**67.4**	--	--	**57.7**	**219**	--	--
o-Xylene	**3.46**	--	--	**1.27**	**12**	**2.5**	--
Toluene	**8.08**	--	--	0.2 U	**3.14**	0.2 U	--
Trichloroethene (TCE)	0.2 U	--	--	0.2 U	**2.75**	**12.1**	--
Vinyl chloride	**18.8**	--	--	**0.88**	**3.73**	**13.5**	--
LWG RA Total Xylene (Calculated U = 1/2)	**6.05 T**	--	--	**1.5 T**	**16.5 T**	**3.04 T**	--
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**106**	**23.3**	0.951 U	**4.45**	**11.2**	**28.8**	**3.19**
Acenaphthene	**125**	**21.8**	**0.572**	**12.8**	**69**	**49.4**	**17**
Acenaphthylene	**1.97**	**1.16**	0.0477 U	**0.5**	**0.2**	**0.23**	**3.11**
Anthracene	**26.6**	**12**	**0.124**	**4.79**	**2.39**	**5.87**	**7.04**
Benzo(a)anthracene	**10.8**	**9.19**	**0.0763**	**3.35**	**0.05**	**0.75**	**4.46**
Benzo(a)pyrene	**11.4**	**7.2**	**0.0572**	**3.98**	0.963 U	**0.76**	**3.13**
Benzo(b)fluoranthene	**9.96**	**5.98**	**0.0572**	**3.36**	0.05 U	**0.63**	**3.1**
Benzo(g,h,i)perylene	**6.72**	**7.03**	0.0477 U	**2.81**	0.05 U	**0.53**	**2.28**
Benzo(k)fluoranthene	**2.96**	**2.07**	0.0477 U	**1.02**	0.05 U	**0.21**	**1.14**
Chrysene	**11.5**	**10.5**	**0.0572**	**3.13**	0.05 U	**0.93**	**5.29**
Dibenzo(a,h)anthracene	**1.19**	**1.06**	0.0477 U	**0.41**	0.05 U	**0.08**	**0.164**
Fluoranthene	**45.4**	**28.4**	**0.296**	**13**	**1.36**	**6.6**	**19**
Fluorene	**55.6**	**11.3**	**0.267**	**5.88**	**17.2**	**15.3**	**14.8**
Indeno(1,2,3-c,d)pyrene	**4.75**	**4.88**	0.0477 U	**2.14**	0.05 U	**0.39**	**1.45**
Naphthalene	--	--	--	--	--	**327**	--
Phenanthrene	**158**	**55.6**	**0.915**	**27.2**	**17.8**	**37.4**	**12.6**
Pyrene	**48.6**	**32.9**	**0.296**	**11.9**	**1.34**	**6.61**	**21.9**
Semivolatile Organics (µg/l)							
Dibenzofuran	**13**	**2.08**	0.951 U	0.952 U	0.963 U	**3.5**	**1.76**

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP32	WLCSLH01GP32	WLCSLH01GP41	WLCSLH01GP42	WLCSLH01GP47	WLCSLH01GP49	WLCSLH01GP49
Sample name:	WLCSLH01GP32W24	WLCSLH01GP32W46	WLCSLH01GP41W3	WLCSLH01GP42W3	WLCSLH01GP47W3	WLCSLH01GP49W20	WLCSLH01GP49W37
Sample date:	10/28/2004	10/29/2004	5/10/2005	5/10/2005	5/11/2005	5/12/2005	5/12/2005
Depth interval:	731.5 - 746.7 cm	1402 - 1417 cm	91.44 - 91.44 cm	91.44 - 91.44 cm	91.44 - 91.44 cm	609.6 - 609.6 cm	1128 - 1128 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	--	**2.18**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	--	**387**	0.2 U	**3.55**	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, trans-	--	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	--	**26.5**	0.2 U	0.2 U	**0.45**	0.2 U	0.2 U
Ethylbenzene	--	**0.2**	0.2 U	0.2 U	**0.42**	0.2 U	0.2 U
m,p-Xylene	--	0.4 U	0.4 U	0.4 U	**0.8**	0.4 U	0.4 U
Naphthalene	--	--	**26**	1 U	**4.26**	1 U	1 U
o-Xylene	--	**2.32**	**1.2**	0.2 U	**1.06**	0.2 U	0.2 U
Toluene	--	0.2 U	0.2 U	0.2 U	**0.29**	0.2 U	**1**
Trichloroethene (TCE)	--	**7.58**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	--	**726**	0.2 U	**3.61**	0.2 U	0.2 U	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	--	**2.5 T**	**1.4 T**	0.4 UT	**1.86 T**	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**16.3**	0.96 U	--	--	--	--	--
Acenaphthene	**24**	**2.99**	--	--	--	--	--
Acenaphthylene	**0.187**	0.0499 U	--	--	--	--	--
Anthracene	**3.33**	**0.629**	--	--	--	--	--
Benzo(a)anthracene	**0.231**	**0.11**	--	--	--	--	--
Benzo(a)pyrene	**0.132**	**0.0699**	--	--	--	--	--
Benzo(b)fluoranthene	**0.121**	**0.0599**	--	--	--	--	--
Benzo(g,h,i)perylene	**0.0878**	**0.0499**	--	--	--	--	--
Benzo(k)fluoranthene	0.0549 U	0.0499 U	--	--	--	--	--
Chrysene	**0.22**	**0.0998**	--	--	--	--	--
Dibenzo(a,h)anthracene	0.0549 U	0.0499 U	--	--	--	--	--
Fluoranthene	**4.94**	**1.83**	--	--	--	--	--
Fluorene	**10.4**	**1.52**	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	**0.0659**	0.0499 U	--	--	--	--	--
Naphthalene	--	**3.93**	--	--	--	--	--
Phenanthrene	**20.9**	**4.32**	--	--	--	--	--
Pyrene	**5.08**	**2.07**	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	**2.46**	0.96 U	--	--	--	--	--

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP49	WLCSLH01GP51	WLCSLH01GP52	WLCSLH01GP53	WLCSLH01GP55	WLCSLH01GP55	WLCSLH01GP56
Sample name:	WLCSLH01GP49W52	WLCSLH01GP51W3	WLCSLH01GP52W3	WLCSLH01GP53W3	WLCSLH01GP55W3	WLCSLH01GP55W5	WLCSLH01GP56W3
Sample date:	5/12/2005	5/13/2005	5/13/2005	5/13/2005	5/16/2005	5/16/2005	5/16/2005
Depth interval:	1585 - 1585 cm	91.44 - 91.44 cm	91.44 - 91.44 cm	91.44 - 91.44 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	91.44 - 91.44 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	**2.98**	**3.07**	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	**103**	**254**	**267**	0.2 U
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	0.2 U	**1**	0.2 U	**0.57**	**6.9**	**8.08**	**1.04**
Ethylbenzene	0.2 U	**1.14**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
m,p-Xylene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Naphthalene	1 U	**19.8**	**2.05**	1 U	**1.58**	1 U	**2.47**
o-Xylene	0.2 U	**0.62**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	**1.19**	1.38 U	0.41 U	0.2 U	**0.41**	**0.33**	**0.76**
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	**4.05**	**4.51**	0.2 U
Vinyl chloride	0.2 U	0.2 U	**0.65**	**34.3**	**422**	**484**	**0.57**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	**0.82 T**	0.4 UT	0.4 UT	0.4 UT	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	--	--	--

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP62	WLCSLH01GP62	WLCSLH01GP63	WLCSLH01GP63	WLCSLH01GP64	WLCSLH01GP64	WLCSLH01GP66
Sample name:	WLCSLH01GP62W3	WLCSLH01GP62W5	WLCSLH01GP63W3	WLCSLH01GP63W5	WLCSLH01GP64W3	WLCSLH01GP64W5	WLCSLH01GP66W113
Sample date:	5/18/2005	5/18/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/20/2005
Depth interval:	91.44 - 91.44 cm	152.4 - 152.4 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	396.2 - 396.2 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	**0.96**	**7.31**	**25.4**	0.2 U
1,2-Dichloroethene, cis-	**4.09**	**1.25**	**15.3**	**106**	**7600**	**10900**	**9.54**
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	**0.31**	**79.9**	**61.7**	0.3 U
Benzene	**1.03**	0.2 U	**27.3**	**6.51**	**138**	**144**	**1.24**
Ethylbenzene	0.2 U	0.2 U	**2.84**	0.2 U	**70.2**	**72.4**	0.2 U
m,p-Xylene	0.4 U	0.4 U	**1.93**	0.4 U	**27.1**	**24.9**	0.4 U
Naphthalene	**99.9**	**3.12**	**361**	**18.6**	**3560**	**4250**	1 U
o-Xylene	0.2 U	0.2 U	**1.01**	0.2 U	**16.6**	**16**	0.2 U
Toluene	**13.2**	**8.37**	**1.97**	**0.98**	**26.2**	**28.8**	0.99 U
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	**0.91**	**51.5**	**19500**	0.87 U
Vinyl chloride	**1.4**	**0.39**	**125**	**89.3**	**475**	**98.3**	**6.16**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	**2.94 T**	0.4 UT	**43.7 T**	**40.9 T**	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	--	--	--

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP66	WLCSLH01GP66	WLCSLH01GP66	WLCSLH01GP67	WLCSLH01GP68	WLCSLH01GP68	WLCSLH01GP69
Sample name:	WLCSLH01GP66W12	WLCSLH01GP66W27	WLCSLH01GP66W52	WLCSLH01GP67W3	WLCSLH01GP68W3	WLCSLH01GP68W5	WLCSLH01GP69W3
Sample date:	5/20/2005	5/20/2005	5/20/2005	5/23/2005	5/23/2005	5/23/2005	5/24/2005
Depth interval:	365.8 - 365.8 cm	823 - 823 cm	1585 - 1585 cm	91.44 - 91.44 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	91.44 - 91.44 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	**2.32**	**0.95**	**1.6**	**283**	0.2 U	0.2 U	**7.33**
1,2-Dichloroethene, cis-	**552**	**252**	**342**	**574000**	0.2 U	0.2 U	**7570**
1,2-Dichloroethene, trans-	**1.16**	**0.46**	**1.07**	**1760**	0.3 U	0.3 U	**47.5**
Benzene	**19.5**	**5.92**	**13.4**	**2560**	**201**	**12.2**	**232**
Ethylbenzene	0.2 U	0.2 U	0.2 U	**52.9**	**43.8**	**2.47**	**71.2**
m,p-Xylene	0.4 U	0.4 U	0.4 U	**24.7**	**18**	**1.36**	**14**
Naphthalene	1 U	1 U	1 U	**1860**	**1800**	**218**	**2840**
o-Xylene	0.2 U	0.2 U	0.2 U	**19.6**	**11.6**	**0.64**	**18.2**
Toluene	2.72 U	1.27 U	1.6 U	**215**	**3.18**	**0.88**	**9.81**
Trichloroethene (TCE)	1.93 U	2.87 U	1.49 U	**585000**	**2.01**	**1.32**	**77**
Vinyl chloride	**567**	**100**	**207**	**28900**	**0.51**	**0.76**	**506**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	0.4 UT	**44.3 T**	**29.6 T**	**2 T**	**32.2 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	--	--	--

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP69	WLCSLH01GP70	WLCSLH01GP70	WLCSLH01GP71	WLCSLH01GP72	WLCSLH01GP72	WLCSLH01GP73
Sample name:	WLCSLH01GP69W5	WLCSLH01GP70W3	WLCSLH01GP70W5	WLCSLH01GP71W3	WLCSLH01GP72W25	WLCSLH01GP72W44	WLCSLH01GP73W3
Sample date:	5/24/2005	5/24/2005	5/24/2005	5/24/2005	5/25/2005	5/25/2005	5/25/2005
Depth interval:	152.4 - 152.4 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	91.44 - 91.44 cm	762 - 762 cm	1341 - 1341 cm	91.44 - 91.44 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	**92.8**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**1.85**
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	**129**	**2.55**	0.2 U	0.2 U	0.2 U	0.2 U	**7.63**
Ethylbenzene	**21.4**	**6.11**	**2.35**	**0.82**	0.2 U	0.2 U	**21.1**
m,p-Xylene	**4.63**	**1.93**	0.4 U	0.4 U	0.4 U	0.4 U	**5.76**
Naphthalene	**2350**	**594**	**569**	**101**	**6.43**	**10.3**	**1550**
o-Xylene	**8.24**	**7.08**	**3.56**	**3.04**	0.2 U	0.2 U	**4.9**
Toluene	1.7 U	0.53 U	0.2 U	0.2 U	0.2 U	**0.29**	**1.04**
Trichloroethene (TCE)	**2.67**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	**18**	0.2 U	**1.43**	**2.24**	0.2 U	0.2 U	**1.18**
LWG RA Total Xylene (Calculated U = 1/2)	**12.9 T**	**9.01 T**	**3.8 T**	**3.2 T**	0.4 UT	0.4 UT	**10.7 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	--	--	--

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP73	WLCSLH01GP74	WLCSLH01GP74	WLCSLH01GP75	WLCSLH01GP75	WLCSLH01GP76	WLCSLH01GP76
Sample name:	WLCSLH01GP73W5	WLCSLH01GP74W23	WLCSLH01GP74W5	WLCSLH01GP75W3	WLCSLH01GP75W5	WLCSLH01GP76W3	WLCSLH01GP76W5
Sample date:	5/25/2005	5/26/2005	5/26/2005	5/26/2005	5/26/2005	5/27/2005	5/27/2005
Depth interval:	152.4 - 152.4 cm	701 - 701 cm	152.4 - 152.4 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	91.44 - 91.44 cm	152.4 - 152.4 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**1.33**	0.2 U
1,2-Dichloroethene, cis-	**1.46**	0.2 U	0.2 U	0.2 U	0.2 U	**570**	**36.8**
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	**2.39**	0.3 U
Benzene	**3.06**	**0.88**	**629**	**0.69**	0.2 U	**271**	**2550**
Ethylbenzene	**25.8**	**2.25**	**337**	**2.42**	**0.64**	**79.7**	**168**
m,p-Xylene	**6.72**	0.4 U	**41.4**	0.4 U	0.4 U	**30.5**	**73.2**
Naphthalene	**4020**	**184**	**9480**	**104**	**72**	**11200**	**10900**
o-Xylene	**7.76**	0.2 U	**78.3**	0.2 U	0.2 U	**22.4**	**47.4**
Toluene	**0.58**	**0.4**	**14.9**	**3.04**	**0.5**	**54.1**	**13.7**
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**29.2**	**1.75**
Vinyl chloride	**0.99**	**0.4**	**0.35**	**0.55**	**1.01**	**87.7**	**2.41**
LWG RA Total Xylene (Calculated U = 1/2)	**14.5 T**	0.4 UT	**120 T**	0.4 UT	0.4 UT	**52.9 T**	**121 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	--	--	--

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP80	WLCSLH01GP80	WLCSLH01GP80	WLCSLH01GP81	WLCSLH01GP81	WLCSLH01GP82	WLCSLH01GP82
Sample name:	WLCSLH01GP80W12	WLCSLH01GP80W22	WLCSLH01GP80W32	WLCSLH01GP81W3	WLCSLH01GP81W5	WLCSLH01GP82W3	WLCSLH01GP82W5
Sample date:	5/31/2005	5/31/2005	5/31/2005	5/31/2005	5/31/2005	6/1/2005	6/1/2005
Depth interval:	365.8 - 365.8 cm	670.6 - 670.6 cm	975.4 - 975.4 cm	91.44 - 91.44 cm	152.4 - 152.4 cm	91.44 - 91.44 cm	152.4 - 152.4 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Dissolved Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	**29.2**	**29.7**	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	**107**	**0.3**	**0.61**	**569**	**5490**	**33.7**	**26.4**
Ethylbenzene	**19.6**	0.2 U	**1.16**	**41.7**	**246**	**22.5**	**24**
m,p-Xylene	**3.83**	0.4 U	0.4 U	**14.5**	**176**	**5.12**	**7.34**
Naphthalene	**2130**	**41.8**	**207**	**2840**	**14000**	**1990**	**190**
o-Xylene	**3.71**	0.2 U	0.2 U	**11.7**	**114**	**6.37**	**5.97**
Toluene	2.38 U	0.2 U	0.46 U	**8.25**	**821**	**5.43**	**2.95**
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	**0.71**	**1.04**	0.2 U	0.2 U
Vinyl chloride	0.2 U	**3.1**	**2.81**	**0.76**	**0.84**	**0.65**	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	**7.54 T**	0.4 UT	0.4 UT	**26.2 T**	**290 T**	**11.5 T**	**13.3 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--
Anthracene	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--
Chrysene	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--	--	--
Fluoranthene	--	--	--	--	--	--	--
Fluorene	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--
Phenanthrene	--	--	--	--	--	--	--
Pyrene	--	--	--	--	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	--	--	--	--	--	--	--

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Database:	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial	Gasco RM6-6.7_GW_Alluvial
System Location Code:	WLCSLH01GP83	WLCSLH01GP83	WLCSLH01GP84
Sample name:	WLCSLH01GP83W12	WLCSLH01GP83W5	WLCSLH01GP84W3
Sample date:	6/1/2005	6/1/2005	6/1/2005
Depth interval:	365.8 - 365.8 cm	152.4 - 152.4 cm	91.44 - 91.44 cm
Conventional Parameters (mg/l)			
Cyanide, free	--	--	--
Dissolved Metals (µg/l)			
Zinc	--	--	--
Volatile Organics (µg/l)			
1,1-Dichloroethene	**3.25**	**2.14 T**	0.2 U
1,2-Dichloroethene, cis-	**3610**	**4720 T**	**1.9**
1,2-Dichloroethene, trans-	**6.82**	**8.64 T**	0.3 U
Benzene	**3340**	**103 T**	**48.4**
Ethylbenzene	**340**	**22.7 T**	**17.7**
m,p-Xylene	**174**	**9.48 T**	**7.19**
Naphthalene	**17100**	**1420 T**	**968**
o-Xylene	**113**	**5.46 T**	**3.61**
Toluene	**216**	**31.5 T**	**3.51**
Trichloroethene (TCE)	**98.5**	**1.9 T**	**2.96**
Vinyl chloride	**593**	**1600 T**	**0.73**
LWG RA Total Xylene (Calculated U = 1/2)	**287 T**	**14.9 T**	**10.8 T**
Polycyclic Aromatic Hydrocarbons (µg/l)			
2-Methylnaphthalene	--	--	--
Acenaphthene	--	--	--
Acenaphthylene	--	--	--
Anthracene	--	--	--
Benzo(a)anthracene	--	--	--
Benzo(a)pyrene	--	--	--
Benzo(b)fluoranthene	--	--	--
Benzo(g,h,i)perylene	--	--	--
Benzo(k)fluoranthene	--	--	--
Chrysene	--	--	--
Dibenzo(a,h)anthracene	--	--	--
Fluoranthene	--	--	--
Fluorene	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--
Naphthalene	--	--	--
Phenanthrene	--	--	--
Pyrene	--	--	--
Semivolatile Organics (µg/l)			
Dibenzofuran	--	--	--

Table 3-34
Existing Data Screening Table – Alluvial Groundwater Ecological

Notes:

	Detected concentration is greater than one screening level
	Detected concentration is greater than two screening levels
	Detected concentration is greater than three screening levels
	Detected concentration is greater than four screening levels
	Detected concentration is greater than five screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected

Acronyms:
µg/l = micrograms per liter
mg/l = milligrams per liter
cm = centimeters
LWG = Lower Willamette Group
RA = Portland Harbor Site risk assessment
Totals are calculated as the sum of all detected results and 1/2 the undetected result. If all are undetected results, the highest reporting limit value is reported as the sum.

Table 3-35
Existing Data Screening Table – Deep Groundwater Human Health

Analysis Matrix:	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep
System Location Code:	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB2	WLCGSG07GSB5	WLCGSG07GSB7	WLCGSG07GSB7	WLCGSG07GSB7
Sample name:	WLCGSG07GSB2W100	WLCGSG07GSB2W125	WLCGSG07GSB2W144	WLCGSG07GSB5W98.5	WLCGSG07GSB7W100	WLCGSG07GSB7W125	WLCGSG07GSB7W75
Sample date:	9/12/2007	9/12/2007	9/12/2007	9/14/2007	8/29/2007	8/29/2007	8/29/2007
Depth interval:	2987 - 3109 cm	3749 - 3871 cm	4267 - 4389 cm	2880 - 3002 cm	2987 - 3109 cm	3749 - 3871 cm	2225 - 2347 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**0.15**	**0.34**	**0.33**	**0.11**	**0.04**	0.003 U	**0.02**
Metals (µg/l)							
Zinc	**520**	**1360**	**2890**	**532**	**222**	**122**	**404**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 U	0.12 U	**0.21 J**	0.12 U	0.12 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Benzene	**0.22 J**	**1.1**	**1.7**	**1.5**	**1.1**	**1.7**	**0.98**
Ethylbenzene	**0.5**	**1.4**	**3.4**	**5.7**	**0.25 J**	**0.39 J**	**0.31 J**
Naphthalene	**6.2**	**24**	**31**	**350**	**9.7**	**8.5**	**12**
o-Xylene	**0.17 J**	**0.39 J**	**0.83**	**1.7**	**0.18 J**	**0.27 J**	**1.2**
Toluene	**9.7**	**13**	**21**	**7.8**	**170**	**520**	**110**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl chloride	0.042 U	0.042 U	**0.05 J**	0.042 U	**0.05 J**	0.042 U	0.042 U
LWG RA Total Xylene (Calculated U = 1/2)	**0.4 JT**	**0.71 JT**	**1.5 T**	**3 T**	**0.58 JT**	**0.84 JT**	**2.5 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**5.6**	**12**	**5.1**	**20**	**0.77**	**0.44**	**0.83**
Acenaphthene	**3.8**	**18**	**7**	**45**	**0.95**	**0.52**	**0.94**
Anthracene	**0.062**	**5.5**	**0.91**	**0.77**	**0.92**	**0.29**	**0.64**
Benzo(a)anthracene	**0.033**	**3.9**	**0.53**	**0.068**	**1.9**	**0.48**	**1.1**
Benzo(a)pyrene	0.012 U	**2.9**	**0.46**	**0.047**	**2.9**	**0.74**	**1.6**
Benzo(b)fluoranthene	**0.95**	**3.9**	**0.55**	**0.058**	**2.4**	**0.62**	**1.4**
Benzo(k)fluoranthene	**0.21**	**1.1**	**0.15**	**0.015 J**	**0.81**	**0.21**	**0.44**
Chrysene	**0.83**	**4.8**	**0.63**	**0.064**	**2.2**	**0.54**	**1.3**
Dibenzo(a,h)anthracene	**0.041 J**	**0.29**	**0.042**	**0.0043 J**	**0.33**	**0.081**	**0.2**
Fluoranthene	**3.7**	**21**	**2.8**	**0.86**	**5.4**	**1.7**	**3.5**
Fluorene	**2.7**	**8.6**	**2.5**	**10**	**0.65**	**0.33**	**0.6**
Indeno(1,2,3-c,d)pyrene	**0.66**	**2.6**	**0.38**	**0.041**	**2.7**	**0.7**	**1.6**
Naphthalene	--	--	--	--	--	--	--
Pyrene	**2.6**	**25**	**3.1**	**0.81**	**5.8**	**1.5**	**3.9**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.48**	**1.4**	**0.38**	**1.4**	**0.11**	**0.058**	**0.11**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-35
Existing Data Screening Table – Deep Groundwater Human Health

Analysis Matrix:	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep
System Location Code:	WLCGSG07GSC2	WLCGSG07GSC2	WLCGSG07GSC2	WLCGSG07GSC5	WLCGSG07GSC5	WLCGSG07GSC7	WLCGSG07GSC7
Sample name:	WLCGSG07GSC2W100	WLCGSG07GSC2W119	WLCGSG07GSC2W75	WLCGSG07GSC5W75	WLCGSG07GSC5W94	WLCGSG07GSC7W100	WLCGSG07GSC7W75
Sample date:	9/13/2007	9/13/2007	9/13/2007	9/11/2007	9/11/2007	9/4/2007	9/4/2007
Depth interval:	2987 - 3109 cm	3505 - 3627 cm	2225 - 2347 cm	2225 - 2347 cm	2743 - 2865 cm	2987 - 3109 cm	2225 - 2347 cm
Conventional Parameters (mg/l)							
Cyanide, free	**0.024**	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**0.49**	**0.04**	**0.46**	**0.11**	**0.1**	**0.008 J**	**0.03**
Metals (µg/l)							
Zinc	**219**	**422**	**499**	**92.4**	**128**	**689**	**142**
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.61 U	0.13 U
1,2-Dichloroethene, cis-	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	**5.7**	**7.1**
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.72 U	0.15 U
Benzene	**0.36 J**	**0.46 J**	**0.66**	**0.49 J**	**0.61**	**7.9**	**2.8**
Ethylbenzene	**3.5**	**2.9**	**4.9**	0.13 U	**0.14 J**	**8.9**	**4.3**
Naphthalene	**400**	**340**	**430**	**0.39 J**	**0.79 J**	**1000**	**300**
o-Xylene	**1.4**	**1.3**	**1.9**	0.11 U	**0.16 J**	**2.9**	**1.4**
Toluene	**10**	**11**	**25**	**190**	**300**	**480**	**82**
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	**2.4 J**	**4.8**
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	**0.35 J**	**0.23 J**
LWG RA Total Xylene (Calculated U = 1/2)	**2.3 T**	**2 T**	**3 T**	**0.39 JT**	**0.82 JT**	**6 T**	**2.8 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**40**	**19**	**55**	**0.086**	**0.12**	**140**	**26**
Acenaphthene	**73**	**27**	**92**	**0.58**	**0.95**	**120**	**25**
Anthracene	**4.3**	**0.12**	**1.1**	**0.053**	**0.048**	**15**	**6.7**
Benzo(a)anthracene	**0.021 J**	**0.13**	**0.063**	**0.013 J**	**0.0066 J**	**5**	**3.9**
Benzo(a)pyrene	**0.011 J**	0.005 U	**0.0047 J**	0.0043 U	0.0043 U	**4.8**	**4.1**
Benzo(b)fluoranthene	**0.012 J**	**0.25**	**0.061**	**0.0072 J**	**0.0038 J**	**5.3**	**4.5**
Benzo(k)fluoranthene	**0.0039 J**	**0.066**	**0.016 J**	0.0025 U	0.0025 U	**1.4**	**1.2**
Chrysene	**0.02 J**	**0.22**	**0.06**	**0.011 J**	**0.0042 J**	**5.4**	**4.2**
Dibenzo(a,h)anthracene	0.0026 U	**0.019 J**	**0.0057 J**	0.0025 U	0.0025 U	**0.42**	**0.43**
Fluoranthene	**2.4**	**0.92**	**0.76**	**0.15**	**0.043**	**27**	**17**
Fluorene	**22**	**7**	**28**	**0.25**	**0.35**	**30**	**9**
Indeno(1,2,3-c,d)pyrene	**0.0091 J**	**0.18**	**0.044**	**0.0045 J**	0.0026 U	**3.6**	**3.3**
Naphthalene	--	--	--	--	--	--	--
Pyrene	**1.6**	**0.98**	**0.51**	**0.14**	**0.03**	**28**	**17**
Semivolatile Organics (µg/l)							
Dibenzofuran	**3.1**	**1.2**	**4.3**	**0.074**	**0.1**	**6.1**	**1.6**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-35
Existing Data Screening Table – Deep Groundwater Human Health

Analysis Matrix:	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep
System Location Code:	WLCGSG07GSD2	WLCGSG07GSD2	WLCGSG07GSD4	WLCGSJ06GS04	WLCGSJ06GS04	WLCGSJ06GS05	WLCGSJ06GS05
Sample name:	WLCGSG07GSD2W100	WLCGSG07GSD2W75	WLCGSG07GSD4W63	WLCGSJ06GS04W123127	WLCGSJ06GS04W148152	WLCGSJ06GS05W123127	WLCGSJ06GS05W148152
Sample date:	9/10/2007	9/10/2007	9/6/2007	12/14/2006	12/15/2006	10/27/2006	10/27/2006
Depth interval:	2987 - 3109 cm	2225 - 2347 cm	1798 - 1920 cm	3749 - 3871 cm	4511 - 4633 cm	3749 - 3871 cm	4511 - 4633 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.005 U	0.005 U	0.005 U	--	--	**0.005 J**	0.01 U
Cyanide, total	**0.05**	**0.06**	**0.009 J**	**0.003 J**	**0.003 J**	**0.1**	**0.02**
Metals (µg/l)							
Zinc	**79.1**	**39.6**	**94.1**	**109**	**5.3**	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.13 U	0.13 U	0.13 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, cis-	0.12 U	**0.12 J**	0.12 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, trans-	0.15 U	0.15 U	0.15 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	**0.47 J**	**0.22 J**	**0.35 J**	0.5 U	0.5 U	**0.73**	0.5 U
Ethylbenzene	0.13 U	0.13 U	0.13 U	0.5 U	0.5 U	**0.17 J**	0.5 U
Naphthalene	--	--	**12**	--	--	--	--
o-Xylene	0.11 U	0.11 U	0.11 U	**0.11 J**	0.5 U	0.5 U	0.5 U
Toluene	**160**	**88**	**140**	**0.25 J**	0.5 U	**0.47 J**	0.5 U
Trichloroethene (TCE)	0.14 U	0.14 U	0.14 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.042 U	0.042 U	0.042 U	0.5 U	0.5 U	0.5 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	**0.31 JT**	0.22 UT	**0.28 JT**	**0.41 JT**	0.5 UT	**0.49 JT**	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.021**	**0.013 J**	**1.9**	**0.046**	0.02 U	**0.19**	**0.038**
Acenaphthene	**0.15**	**0.073**	**1.9**	**0.014 J**	**0.0054 J**	**0.28**	**0.045**
Anthracene	**0.049**	**0.0047 J**	**0.42**	**0.04**	0.02 U	**0.4**	**0.055**
Benzo(a)anthracene	**0.093**	**0.0028 J**	**0.32**	**0.14**	0.02 U	**0.044**	**0.012 J**
Benzo(a)pyrene	**0.068**	0.044 UJ	**0.36**	**0.088**	0.02 U	**0.037**	**0.0059 J**
Benzo(b)fluoranthene	**0.089**	0.024 UJ	**0.41**	**0.087**	0.02 U	**0.022 J**	**0.0054 J**
Benzo(k)fluoranthene	**0.023**	0.026 UJ	**0.098**	**0.076**	0.02 U	**0.025 J**	0.02 U
Chrysene	**0.11**	0.0035 U	**0.37**	**0.29**	0.02 U	**0.062**	**0.014 J**
Dibenzo(a,h)anthracene	**0.0073 J**	0.026 UJ	**0.033**	**0.01 J**	0.02 U	0.027 U	0.02 U
Fluoranthene	**0.32**	**0.05**	**1.3**	**0.45**	0.02 U	**0.42**	**0.091**
Fluorene	**0.083**	**0.072**	**0.6**	0.02 U	0.02 U	**0.3**	**0.045**
Indeno(1,2,3-c,d)pyrene	**0.054**	0.027 UJ	**0.32**	**0.074**	0.02 U	**0.039**	0.02 U
Naphthalene	**0.074**	**0.12**	--	**0.16**	0.02 U	**0.43**	**0.14**
Pyrene	**0.35**	**0.026**	**1.3**	**0.64**	0.02 U	**0.47**	**0.12**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.0093 J**	**0.0095 J**	**0.11**	**0.0059 J**	0.02 U	**0.053**	**0.0088 J**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-35
Existing Data Screening Table – Deep Groundwater Human Health

Analysis Matrix:	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep
System Location Code:	WLCGSJ06GS05	WLCGSJ06GS05	WLCGSJ06GS06	WLCGSJ06GS06	WLCGSJ06GS07	WLCGSJ06GS07	WLCGSJ06GS07
Sample name:	WLCGSJ06GS05W173177	WLCGSJ06GS05W191195	WLCGSJ06GS06W123127	WLCGSJ06GS06W148152	WLCGSJ06GS07W123127	WLCGSJ06GS07W148152	WLCGSJ06GS07W170174
Sample date:	10/30/2006	10/31/2006	1/18/2007	1/18/2007	10/18/2006	10/19/2006	10/19/2006
Depth interval:	5273 - 5395 cm	5822 - 5944 cm	3749 - 3871 cm	4511 - 4633 cm	3749 - 3871 cm	4511 - 4633 cm	5182 - 5304 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	**0.0063 J**	0.01 U
Cyanide, total	**0.005 J**	**0.09**	**0.05**	**0.05**	**0.002 J**	**0.07**	**0.03**
Metals (µg/l)							
Zinc	--	--	**5.2**	**7.6**	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, cis-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	0.5 U	**0.69**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Naphthalene	--	--	--	--	--	--	--
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	0.5 U	**1.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	0.5 UT	0.5 UT	0.5 UT	0.5 UT	0.5 UT	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.044**	**0.041**	**0.015 J**	**0.0076 J**	**0.16**	**0.025**	**0.12**
Acenaphthene	**0.12**	**0.063**	**0.015 J**	**0.008 J**	**0.76**	**0.46**	**0.23**
Anthracene	**0.12**	**0.035**	0.02 U	0.02 U	**0.23**	**0.19**	**0.095**
Benzo(a)anthracene	**0.1**	**0.011 J**	**0.0041 J**	0.02 U	**0.078**	**0.03**	**0.015 J**
Benzo(a)pyrene	**0.099**	**0.0047 J**	0.02 U	0.02 U	**0.072**	**0.017 J**	**0.0073 J**
Benzo(b)fluoranthene	**0.069**	0.021 U	0.02 U	0.02 U	**0.051**	**0.014 J**	**0.0064 J**
Benzo(k)fluoranthene	**0.059**	0.021 U	0.02 UJ	0.02 UJ	**0.048**	**0.013 J**	**0.0067 J**
Chrysene	**0.15**	**0.013 J**	0.02 U	0.02 U	**0.074**	**0.038**	**0.016 J**
Dibenzo(a,h)anthracene	**0.0071 J**	0.021 U	**0.0045 J**	**0.004 J**	**0.0057 J**	0.02 U	0.02 U
Fluoranthene	**0.48**	**0.1**	**0.016 J**	**0.013 J**	**0.48**	**0.31**	**0.15**
Fluorene	**0.061**	**0.032**	**0.0059 J**	**0.0052 J**	**0.58**	**0.46**	**0.21**
Indeno(1,2,3-c,d)pyrene	**0.062**	0.021 U	0.02 U	0.02 U	**0.053**	0.02 U	0.02 U
Naphthalene	**0.19**	**0.18**	**0.051**	**0.015 J**	**0.54**	**0.059**	**0.25**
Pyrene	**0.62**	**0.1**	**0.018 J**	**0.012 J**	**0.53**	**0.33**	**0.16**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.015 J**	**0.0088 J**	0.02 U	0.02 U	**0.06**	**0.044**	**0.019 J**
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	--	--
Residual Range Hydrocarbons	--	--	--	--	--	--	--

Table 3-35
Existing Data Screening Table – Deep Groundwater Human Health

Analysis Matrix:	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep
System Location Code:	WLCGSJ06GS08	WLCGSJ06GS08	WLCGSJ06GS09	WLCGSJ06GS09	WLCGSJ06GS09	WLCSLH01GP25	WLCSLH01GP25
Sample name:	WLCGSJ06GS08W123127	WLCGSJ06GS08W148152	WLCGSJ06GS09W123127	WLCGSJ06GS09W148152	WLCGSJ06GS09W173177	WLCSLH01GP25W116	WLCSLH01GP25W151
Sample date:	10/27/2006	10/27/2006	10/12/2006	10/12/2006	10/13/2006	10/1/2004	9/30/2004
Depth interval:	3749 - 3871 cm	4511 - 4633 cm	3749 - 3871 cm	4511 - 4633 cm	5273 - 5395 cm	3536 - 3551 cm	4602 - 4617 cm
Conventional Parameters (mg/l)							
Cyanide, free	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	--	--
Cyanide, total	**0.15**	**0.18**	**0.02**	**0.13**	**0.1**	**0.383**	**0.0745**
Metals (µg/l)							
Zinc	**89.3**	**696**	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**19.4**	0.2 U
1,2-Dichloroethene, cis-	**0.34 J**	**0.35 J**	0.5 U	**0.57**	**0.5**	**5680**	**2.49**
1,2-Dichloroethene, trans-	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**28.4**	0.3 U
Benzene	**0.33 J**	0.5 U	**1.7**	**0.83**	**1.7**	**64.2**	**1.46**
Ethylbenzene	0.5 U	0.5 U	**0.21 J**	0.5 U	**0.16 J**	**5.31**	**2.12**
Naphthalene	--	--	--	--	--	**197**	**76.5**
o-Xylene	0.5 U	0.5 U	**0.24 J**	**0.12 J**	**0.17 J**	**1.68**	**0.26**
Toluene	0.5 U	0.5 U	**0.11 J**	**0.14 J**	**0.11 J**	2.63 U	0.69 U
Trichloroethene (TCE)	0.5 U	0.5 U	0.5 U	**0.22 J**	**0.41 J**	**952**	**1.39**
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**1010**	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	0.5 UT	**0.46 JT**	**0.37 JT**	**0.42 JT**	**2.67 T**	**2.03 T**
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	**0.039**	**0.041**	**0.45**	**0.16**	**0.24**	**13.2**	**4.79**
Acenaphthene	**0.065**	**0.084**	**0.34**	**0.12**	**0.28**	**13.5**	**7.01**
Anthracene	**0.026**	**0.049**	**0.072**	**0.013 J**	**0.096**	**1.98**	**1.87**
Benzo(a)anthracene	**0.03**	**0.049**	**0.038**	**0.011 J**	**0.045**	**0.385**	**0.925**
Benzo(a)pyrene	**0.031**	**0.055**	**0.03**	**0.0076 J**	**0.035**	**0.34**	**1.2**
Benzo(b)fluoranthene	**0.019 J**	**0.037**	**0.023**	**0.0065 J**	**0.03**	**0.317**	**1.02**
Benzo(k)fluoranthene	**0.016 J**	**0.031**	**0.019 J**	**0.0054 J**	**0.021**	**0.102**	**0.315**
Chrysene	**0.033**	**0.067**	**0.056**	**0.013 J**	**0.064**	**0.363**	**0.944**
Dibenzo(a,h)anthracene	0.02 U	0.023 U	0.02 U	0.02 U	0.02 U	0.0567 U	**0.133**
Fluoranthene	**0.093**	**0.16**	**0.25**	**0.058**	**0.3**	**5.19**	**5.75**
Fluorene	**0.036**	**0.054**	**0.16**	**0.043**	**0.16**	**5.11**	**3.2**
Indeno(1,2,3-c,d)pyrene	**0.02**	**0.038**	**0.019 J**	**0.0059 J**	**0.025**	**0.181**	**0.686**
Naphthalene	**0.92**	**0.15**	**21**	**5.9**	**7.7**	--	--
Pyrene	**0.12**	**0.23**	**0.29**	**0.059**	**0.38**	**5.4**	**6.13**
Semivolatile Organics (µg/l)							
Dibenzofuran	**0.0071 J**	**0.011 J**	**0.028**	**0.0094 J**	**0.035**	1.21 U	1.01 U
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	--	--	--	--	--	**0.89**	**0.435**
Residual Range Hydrocarbons	--	--	--	--	--	0.637 U	0.476 U

Table 3-35
Existing Data Screening Table – Deep Groundwater Human Health

Analysis Matrix:	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep
System Location Code:	WLCSLH01GP26	WLCSLH01GP26	WLCSLH01GP27	WLCSLH01GP27	WLCSLH01GP28	WLCSLH01GP28	WLCSLH01GP29
Sample name:	WLCSLH01GP26W110	WLCSLH01GP26W128	WLCSLH01GP27W110	WLCSLH01GP27W84	WLCSLH01GP28W116	WLCSLH01GP28W160	WLCSLH01GP29W117
Sample date:	10/6/2004	10/5/2004	10/11/2004	10/12/2004	10/15/2004	10/14/2004	10/20/2004
Depth interval:	3353 - 3368 cm	3901 - 3916 cm	3353 - 3368 cm	2560 - 2575 cm	3536 - 3551 cm	4877 - 4892 cm	3566 - 3581 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Cyanide, total	0.148	0.104	0.229	0.0743	0.0526	0.0391	0.042
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	12.6	1.55	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	284	3620	605	27	76.8	0.2 U
1,2-Dichloroethene, trans-	0.3 U	0.74	9.76	2.19	0.3 U	0.3 U	0.3 U
Benzene	21.4	34.6	30.8	2.62	0.2 U	0.2 U	0.2 U
Ethylbenzene	10	24.5	45.7	6.03	1.96	0.36 U	0.2 U
Naphthalene	503	1180	--	430	90	--	--
o-Xylene	2.54	7.56	14.1	1.49	0.4	0.2 U	0.2 U
Toluene	3.25 U	11.2	2.24	0.67	0.2 U	0.2 U	0.2 U
Trichloroethene (TCE)	0.2 U	243	605	20.4	0.2 U	7.91	0.2 U
Vinyl chloride	10.3	94	341	70.8	22.6	16	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	7.86 T	23.6 T	45.3 T	2.97 T	1.69 T	0.7 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	48.5	95.4	264	43.5	32.5	4.91	772
Acenaphthene	65.5	128	244	64.8	54.4	6.73	432
Anthracene	23.3	41.4	36.4	10.1	37.6	3.06	28.8
Benzo(a)anthracene	15.5	17.7	14.2	2.5	28	1.61	10.9
Benzo(a)pyrene	17.5	28.6	18.4	2.19	32.4	1.64	12.5
Benzo(b)fluoranthene	13.5	23.8	15.7	1.89	27.3	1.27	9.35
Benzo(k)fluoranthene	4.87	5.78	4.46	0.562	7.85	0.205	4.08
Chrysene	18.3	16.7	13.3	2.72	25.5	1.99	11
Dibenzo(a,h)anthracene	0.394	2.72	2.03	0.241	2.79	0.0782	1.76
Fluoranthene	50.5	89.7	67.4	16.3	95.2	8.78	44.6
Fluorene	24.2	56.8	74.2	23.9	36.9	3.66	71
Indeno(1,2,3-c,d)pyrene	13.9	12.4	9.03	1.37	12.6	1.18	8.05
Naphthalene	--	--	2240	--	--	2.26	8020
Pyrene	52.8	94.6	66.3	17.4	105	9.14	43.8
Semivolatile Organics (µg/l)							
Dibenzofuran	4.18	6.91	11.5	3.39	2.82	0.958 U	20.5
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	2.31	4.77	5.9	1.18	1.35	0.454	17
Residual Range Hydrocarbons	1.01	1.8	0.716	0.494 U	0.792	0.564	0.877

Table 3-35
Existing Data Screening Table – Deep Groundwater Human Health

Analysis Matrix:	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep
System Location Code:	WLCSLH01GP29	WLCSLH01GP29	WLCSLH01GP30	WLCSLH01GP30	WLCSLH01GP30	WLCSLH01GP31	WLCSLH01GP31
Sample name:	WLCSLH01GP29W68	WLCSLH01GP29W88	WLCSLH01GP30W118	WLCSLH01GP30W75	WLCSLH01GP30W95	WLCSLH01GP31W113	WLCSLH01GP31W69
Sample date:	10/21/2004	10/21/2004	10/22/2004	10/25/2004	10/25/2004	10/26/2004	10/27/2004
Depth interval:	2073 - 2088 cm	2682 - 2697 cm	3597 - 3612 cm	2286 - 2301 cm	2896 - 2911 cm	3444 - 3459 cm	2103 - 2118 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Cyanide, total	0.761	0.476	0.01 U	0.034	0.0466	0.0602	0.0822
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	2.17	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	668	108	8.2	342	11.1	112	58
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.89	0.3 U	0.3 U	0.3 U
Benzene	1.98 U	1.88 U	0.36	3.02	0.2 U	1.8	2.74
Ethylbenzene	67.3	143	1.07 U	0.28 U	0.32 U	9.98	4.05
Naphthalene	2490	6010	--	--	--	--	--
o-Xylene	16.4	34.5	0.2 U	0.2 U	0.2 U	1.04	1.74
Toluene	2.85 U	3.61 U	0.3 U	0.43 U	0.33 U	1.51 U	0.2 U
Trichloroethene (TCE)	0.35	0.64	1.83	2.6	0.85	5.1	3.3
Vinyl chloride	109	61.3	2.44	279	3.63	4.32	8.95
LWG RA Total Xylene (Calculated U = 1/2)	25.7 T	67 T	0.88 T	0.4 UT	0.4 UT	4.11 T	2.38 T
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	301	581	5.23	0.95 U	0.985 U	85.5	21.5
Acenaphthene	223	358	3.63	0.997	1.22	71.8	42.5
Anthracene	24.2	28.4	0.794	0.504	0.459	13.9	5.96
Benzo(a)anthracene	9.39	12.6	0.591	0.485	0.391	3.83	1.2
Benzo(a)pyrene	10.9	15.2	0.707	0.532	0.43	9.9	0.78
Benzo(b)fluoranthene	8.77	12	0.62	0.504	0.411	12.1	0.69
Benzo(k)fluoranthene	3.21	4.83	0.213	0.152	0.127	3.61	0.23
Chrysene	10.8	14.9	0.707	0.456	0.391	4.05	1.31
Dibenzo(a,h)anthracene	1.42	1.95	0.0774	0.057	0.0489 U	1.25	0.08
Fluoranthene	39.8	48.8	2.03	1.9	1.59	22	8.3
Fluorene	46.5	61.3	1.35	0.58	0.753	29.6	13.8
Indeno(1,2,3-c,d)pyrene	6.72	9.25	0.319	0.238	0.186	5.54	0.42
Naphthalene	--	--	3.04	0.2	0.528	695	274
Pyrene	41.5	48.7	2.22	2.23	1.7	20.6	8.68
Semivolatile Organics (µg/l)							
Dibenzofuran	10.5	16	0.964 U	0.95 U	0.985 U	7.7	3.22
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	4.91	12.3	0.244 U	0.237 U	0.237 U	1.85	0.779
Residual Range Hydrocarbons	0.583	1.62	0.489 U	0.473 U	0.475 U	0.48 U	0.484 U

Table 3-35
Existing Data Screening Table – Deep Groundwater Human Health

Analysis Matrix:	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep	Gasco RM6-6.7_GW_Deep
System Location Code:	WLCSLH01GP31	WLCSLH01GP32	WLCSLH01GP32	WLCSLH01GP32	WLCSLH01GP49	WLCSLH01GP49	WLCSLH01GP66
Sample name:	WLCSLH01GP31W89	WLCSLH01GP32W121	WLCSLH01GP32W70	WLCSLH01GP32W90	WLCSLH01GP49W67	WLCSLH01GP49W87	WLCSLH01GP66W77
Sample date:	10/27/2004	10/28/2004	10/29/2004	10/29/2004	5/12/2005	5/12/2005	5/20/2005
Depth interval:	2713 - 2728 cm	3688 - 3703 cm	2134 - 2149 cm	2743 - 2758 cm	2042 - 2042 cm	2652 - 2652 cm	2347 - 2347 cm
Conventional Parameters (mg/l)							
Cyanide, free	--	--	--	--	--	--	--
Cyanide, total	0.0888	0.01 U	0.436	0.024	--	--	--
Metals (µg/l)							
Zinc	--	--	--	--	--	--	--
Volatile Organics (µg/l)							
1,1-Dichloroethene	0.2 U	0.7	2.04	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	210	18	448	3.7	0.2 U	0.2 U	194
1,2-Dichloroethene, trans-	0.88	0.86	0.56	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	5.28	0.81	38.5	0.29	0.2 U	0.2 U	17.3
Ethylbenzene	8.67	0.86	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Naphthalene	578	69.9	--	--	1 U	1 U	1 U
o-Xylene	2.49	1.23	1.39	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	1.27	0.95	2.69
Trichloroethene (TCE)	30.7	2.16	0.67	0.2 U	0.2 U	0.2 U	5.53
Vinyl chloride	22	2.24	437	5.03	0.2 U	0.2 U	205
LWG RA Total Xylene (Calculated U = 1/2)	4.29 T	1.4 T	1.6 T	0.4 UT	0.4 UT	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)							
2-Methylnaphthalene	45.5	18.1	0.956 U	0.986 U	--	--	--
Acenaphthene	85.3	24.6	0.809	1.34	--	--	--
Anthracene	11.1	5.28	0.241	0.221	--	--	--
Benzo(a)anthracene	1.66	1.03	0.0482 U	0.0479 U	--	--	--
Benzo(a)pyrene	1.71	0.317	0.0482 U	0.0479 U	--	--	--
Benzo(b)fluoranthene	1.48	0.298	0.0482 U	0.0479 U	--	--	--
Benzo(k)fluoranthene	0.49	0.134	0.0482 U	0.0479 U	--	--	--
Chrysene	1.88	1.04	0.0482 U	0.0479	--	--	--
Dibenzo(a,h)anthracene	0.18	0.0865	0.0482 U	0.0479 U	--	--	--
Fluoranthene	12.6	7.31	0.318	1.06	--	--	--
Fluorene	27.6	9.93	0.385	0.575	--	--	--
Indeno(1,2,3-c,d)pyrene	0.9	0.183	0.0482 U	0.0479 U	--	--	--
Naphthalene	--	--	1.41	0.911	--	--	--
Pyrene	12.9	7.38	0.279	1.24	--	--	--
Semivolatile Organics (µg/l)							
Dibenzofuran	6.33	2.89	0.956 U	0.986 U	--	--	--
Total Petroleum Hydrocarbons (mg/l)							
Diesel Range Hydrocarbons	1.39	0.487	0.399	0.246 U	--	--	--
Residual Range Hydrocarbons	0.5 U	0.478 U	0.475 U	0.491 U	--	--	--

Table 3-35
Existing Data Screening Table – Deep Groundwater Human Health

Notes:

Detected concentration is greater than one screening level

Detected concentration is greater than two screening levels

Detected concentration is greater than three screening levels

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

Acronyms:

µg/l = micrograms per liter

mg/l = milligrams per liter

cm = centimeters

LWG = Lower Willamette Group

RA = Portland Harbor Site risk assessment

Totals are calculated as the sum of all detected results and 1/2 the undetected result. If all are undetected results, the highest reporting limit value is reported as the sum.

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW2-W012	LW2-W012	LW2-W012	LW3-W031	LW3-W031
Sample Name:	LW2-W012	LW2-W2012	LW2-W3012	LW3-W3031-NS	LW3-W3031-NS
Sample Date:	12/2/2004	3/17/2005	7/15/2005	11/5/2006	11/5/2006
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	**2.1 T**	**2.5**	**4.3 J**	--	3.5 U
Disolved Metals (µg/l)					
Zinc	**1.5**	**1.7**	**1.8 J**	--	**5.4**
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	**0.22**	0.0054 U	0.034 U	--	0.0084 U
Acenaphthene	**0.038**	0.004 U	**0.21**	--	0.0062 U
Acenaphthylene	0.027 U	**0.005 J**	**0.043**	--	0.0046 U
Anthracene	0.015 U	0.0027 U	**0.072**	--	0.0078 U
Benzo(a)anthracene	**0.019**	0.006 U	**0.11**	--	0.0078 U
Benzo(a)pyrene	**0.02**	0.0082 U	**0.15**	--	0.0086 U
Benzo(b)fluoranthene	**0.021**	0.0073 U	**0.11**	--	0.0092 U
Benzo(g,h,i)perylene	**0.02**	**0.01 J**	**0.14**	--	0.0082 U
Benzo(k)fluoranthene	**0.0072 J**	0.0068 U	**0.1**	--	0.011 U
Chrysene	**0.026**	0.0093 U	**0.19**	--	0.011 U
Dibenzo(a,h)anthracene	0.0033 U	0.0033 U	**0.011 J**	--	0.0072 U
Fluoranthene	**0.049**	0.019 U	**0.4**	--	**0.016**
Fluorene	**0.017**	0.0052 U	**0.063**	--	0.0072 U
Indeno(1,2,3-c,d)pyrene	**0.019**	**0.0094 J**	**0.11**	--	0.0066 U
Naphthalene	**0.77**	**0.0068 J**	**0.13**	--	0.013 U
Phenanthrene	**0.039**	0.0064 U	**0.17**	--	0.0078 U
Pyrene	**0.055**	0.028 U	**0.45**	--	**0.011 J**
Semivolatile Organics (µg/l)					
Carbazole	**0.024 J**	0.014 U	**0.06 J**	--	0.013 U
Dibenzofuran	0.015 U	0.015 U	0.015 U	--	0.0076 U
PCB Aroclors (µg/l)					

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW2-W012	LW2-W012	LW2-W012	LW3-W031	LW3-W031
Sample Name:	LW2-W012	LW2-W2012	LW2-W3012	LW3-W3031-NS	LW3-W3031-NS
Sample Date:	12/2/2004	3/17/2005	7/15/2005	11/5/2006	11/5/2006
Aroclor 1016	0.0025 UJ	0.0026 U	0.0025 U	--	--
Aroclor 1221	0.0025 UJ	0.0026 U	0.0025 U	--	--
Aroclor 1232	0.0025 UJ	0.0026 U	0.0025 U	--	--
Aroclor 1242	0.0025 UJ	0.0026 U	0.0025 U	--	--
Aroclor 1248	0.00125 UJ	0.0013 U	0.00125 U	--	--
Aroclor 1254	0.00125 UJ	0.0013 U	0.00125 U	--	--
Aroclor 1260	0.0025 UJ	0.0026 U	0.0025 U	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	0.0025 UJT	0.0026 UT	0.0025 UT	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	**0.00033 T**	--
PCB-081	--	--	--	0.00045 UT	--
PCB-105	--	--	--	**0.00144 JT**	--
PCB-114	--	--	--	0.00024 UT	--
PCB-118	--	--	--	**0.0042 T**	--
PCB-123	--	--	--	0.00048 UT	--
PCB-126	--	--	--	0.0002 UT	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	**6.4E-05 JT**	--
PCB-169	--	--	--	0.00072 UT	--
PCB-189	--	--	--	2.9E-05 UT	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	**0.33 T**	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	**2.1E-05 T**	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	0.0005 U	0.00051 U	0.000481 U	**3.5E-05 JT**	0.00094 U
2,4'-DDE (o,p'-DDE)	0.0005 U	0.00051 U	0.000481 U	**3E-06 JT**	0.00025 U
2,4'-DDT (o,p'-DDT)	0.0005 U	0.00051 U	0.000481 U	**5.9E-06 JT**	0.00048 U
4,4'-DDD (p,p'-DDD)	0.0005 U	0.00051 U	**0.000839**	**7.72E-05 JT**	0.00093 U
4,4'-DDE (p,p'-DDE)	0.0005 U	0.00051 U	0.000481 U	**5.78E-05 JT**	0.00016 U
4,4'-DDT (p,p'-DDT)	0.0005 U	0.00051 U	0.000481 U	**1.71E-05 JT**	**0.0029 J**
alpha-Hexachlorocyclohexane (BHC)	0.0005 U	0.00051 U	0.000481 U	**2.8E-05 JT**	**9.9E-05 J**
beta-Hexachlorocyclohexane (BHC)	0.0005 U	0.00051 U	0.000481 U	**1.62E-06 JT**	0.0029 U
delta-Hexachlorocyclohexane (BHC)	0.0005 U	0.00051 U	0.000481 U	9.6E-06 UT	0.00018 U
Endrin ketone	0.0005 U	0.00051 U	0.000481 U	1.2E-05 UT	0.00015 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.0005 U	0.00051 U	0.000481 U	**3.17E-05 JT**	0.00048 U
LWG RA Sum DDD (Calculated U = 1/2)	0.0005 UT	0.00051 UT	**0.00108 T**	**0.00011 T**	0.00094 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.0005 UT	0.00051 UT	0.000481 UT	**6.1E-05 T**	0.00025 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.0005 UT	0.00051 UT	0.000481 UT	**2.3E-05 JT**	**0.0031 JT**
LWG RA Total DDx (Calculated U = 1/2)	0.0005 UT	0.00051 UT	**0.00204 T**	**0.0002 JT**	**0.0043 JT**
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW3-W031	LW3-W031	LW3-W031	LW3-W031	LW3-W031
Sample Name:	LW3-W3031-NS-C	LW3-W3031-NS-F	LW3-W4031-NS	LW3-W4031-NS	LW3-W4031-NS-C
Sample Date:	11/5/2006	11/5/2006	2/24/2007	2/24/2007	2/24/2007
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	**3.5**	--
Disolved Metals (µg/l)					
Zinc	--	--	--	1.9 U	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	**0.014 J**	--
Acenaphthene	--	--	--	0.0062 U	--
Acenaphthylene	--	--	--	**0.0051 J**	--
Anthracene	--	--	--	0.0078 U	--
Benzo(a)anthracene	--	--	--	0.0078 U	--
Benzo(a)pyrene	--	--	--	0.0086 U	--
Benzo(b)fluoranthene	--	--	--	0.0092 U	--
Benzo(g,h,i)perylene	--	--	--	0.0082 U	--
Benzo(k)fluoranthene	--	--	--	0.011 U	--
Chrysene	--	--	--	0.011 U	--
Dibenzo(a,h)anthracene	--	--	--	0.0072 U	--
Fluoranthene	--	--	--	0.0094 U	--
Fluorene	--	--	--	0.0072 U	--
Indeno(1,2,3-c,d)pyrene	--	--	--	0.0066 U	--
Naphthalene	--	--	--	**0.039**	--
Phenanthrene	--	--	--	0.0064 U	--
Pyrene	--	--	--	0.0094 U	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	0.013 U	--
Dibenzofuran	--	--	--	0.0076 U	--
PCB Aroclors (µg/l)					

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW3-W031	LW3-W031	LW3-W031	LW3-W031	LW3-W031
Sample Name:	LW3-W3031-NS-C	LW3-W3031-NS-F	LW3-W4031-NS	LW3-W4031-NS	LW3-W4031-NS-C
Sample Date:	11/5/2006	11/5/2006	2/24/2007	2/24/2007	2/24/2007
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	**0.00033**	9.7E-05 U	**0.000359 T**	--	**0.000146**
PCB-081	0.00018 U	0.000453 U	9E-05 UT	--	9.17E-05 U
PCB-105	**0.00115**	**0.000291 J**	**0.00149 T**	--	**0.000455**
PCB-114	8.2E-05 U	0.000242 U	**5.2E-05 T**	--	4.1E-05 U
PCB-118	**0.00311**	**0.0011**	**0.00366 T**	--	**0.00133**
PCB-123	6.4E-05 U	0.000483 U	**5.6E-05 T**	--	4.1E-05 U
PCB-126	9E-05 U	0.000226 U	4.6E-05 UT	--	4.58E-05 U
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	9.2E-05 U	**6.4E-05 J**	**0.00029 JT**	--	**6.8E-05 J**
PCB-169	0.00072 U	0.000181 U	3.67E-05 UT	--	3.67E-05 U
PCB-189	2.2E-05 U	2.9E-05 U	**8.3E-05 T**	--	2E-05 U
LWG RA Total PCB Congener (Calculated U = 1/2)	**0.21 JT**	**0.15 JT**	**0.19 T**	--	**0.1 JT**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**1.5E-05 T**	**1.4E-05 JT**	**3.1E-06 T**	--	**2.9E-06 JT**
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	**3.2E-05 J**	**3.01E-06 J**	**6.41E-05 JT**	--	**4.64E-05**
2,4'-DDE (o,p'-DDE)	**2.97E-06 J**	4.8E-06 U	**9.9E-06 JT**	--	**6.1E-06 J**
2,4'-DDT (o,p'-DDT)	**5.94E-06 J**	1.2E-05 U	**4.88E-05 JT**	--	**2.95E-05 J**
4,4'-DDD (p,p'-DDD)	**6.97E-05 J**	**7.49E-06 J**	**0.00011 JT**	--	**6.03E-05**
4,4'-DDE (p,p'-DDE)	**5.23E-05 J**	**5.54E-06 J**	**0.000129 T**	--	**6.13E-05**
4,4'-DDT (p,p'-DDT)	**1.38E-05 J**	**3.28E-06 J**	**0.000163 T**	--	**6.07E-05**
alpha-Hexachlorocyclohexane (BHC)	**2.8E-05 J**	5.13E-07 U	**2.15E-05 JT**	--	**2.15E-05 J**
beta-Hexachlorocyclohexane (BHC)	6.38E-06 U	**1.62E-06 J**	8.7E-06 UT	--	8.67E-06 U
delta-Hexachlorocyclohexane (BHC)	9.62E-06 U	5.5E-07 U	**3.56E-06 JT**	--	**3.56E-06 J**
Endrin ketone	1.2E-05 U	1.2E-05 U	**4.14E-06 JT**	--	**4.14E-06 J**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**3.17E-05 J**	6.41E-07 U	**2.07E-05 JT**	--	**2.03E-05 J**
LWG RA Sum DDD (Calculated U = 1/2)	**0.0001 JT**	**1.05E-05 JT**	**0.000174 T**	--	**0.000107 T**
LWG RA Sum DDE (Calculated U = 1/2)	**5.53E-05 JT**	**7.9E-06 JT**	**0.00014 T**	--	**6.7E-05 JT**
LWG RA Sum DDT (Calculated U = 1/2)	**1.97E-05 JT**	**9.3E-06 JT**	**0.000212 T**	--	**9.02E-05 JT**
LWG RA Total DDx (Calculated U = 1/2)	**0.00018 JT**	**2.8E-05 JT**	**0.00052 T**	--	**0.00026 JT**
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW3-W031	WillametteRiver	WillametteRiver	WillametteRiver	WLCGSG07GSW03
Sample Name:	LW3-W4031-NS-F	GS-110810-5	GS-111010-12	GS-111110-16	WLCGSG07GSW03AE071005
Sample Date:	2/24/2007	11/8/2010	11/10/2010	11/11/2010	10/5/2007
Conventional Parameters (mg/l)					
Cyanide, free	--	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	--	**0.0251**	**0.0076**	**0.0246**	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW3-W031	WillametteRiver	WillametteRiver	WillametteRiver	WLCGSG07GSW03
Sample Name:	LW3-W4031-NS-F	GS-110810-5	GS-111010-12	GS-111110-16	WLCGSG07GSW03AE071005
Sample Date:	2/24/2007	11/8/2010	11/10/2010	11/11/2010	10/5/2007
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	**0.000213**	--	--	--	--
PCB-081	9E-06 U	--	--	--	--
PCB-105	**0.00103**	--	--	--	--
PCB-114	**5.2E-05**	--	--	--	--
PCB-118	**0.00233**	--	--	--	--
PCB-123	**5.6E-05**	--	--	--	--
PCB-126	2.4E-05 U	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	**0.000219**	--	--	--	--
PCB-169	1.56E-05 U	--	--	--	--
PCB-189	**8.3E-05**	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	**0.091 JT**	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**1.6E-06 T**	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	**1.77E-05 J**	--	--	--	--
2,4'-DDE (o,p'-DDE)	**3.78E-06 J**	--	--	--	--
2,4'-DDT (o,p'-DDT)	**1.93E-05 J**	--	--	--	--
4,4'-DDD (p,p'-DDD)	**4.95E-05 J**	--	--	--	--
4,4'-DDE (p,p'-DDE)	**6.75E-05**	--	--	--	--
4,4'-DDT (p,p'-DDT)	**0.000102**	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	2.34E-06 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	2.8E-06 U	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	1.87E-06 U	--	--	--	--
Endrin ketone	2.34E-06 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**3.64E-07 J**	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**6.72E-05 JT**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**7.13E-05 JT**	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**0.000121 JT**	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**0.00026 JT**	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW04
Sample Name:	WLCGSG07GSW03ASH071001	WLCGSG07GSW03ASL071003	WLCGSG07GSW04AE071004	WLCGSG07GSW04ASH071004	WLCGSG07GSW04ASL071002
Sample Date:	10/1/2007	10/3/2007	10/4/2007	10/4/2007	10/2/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW04
Sample Name:	WLCGSG07GSW03ASH071001	WLCGSG07GSW03ASL071003	WLCGSG07GSW04AE071004	WLCGSG07GSW04ASH071004	WLCGSG07GSW04ASL071002
Sample Date:	10/1/2007	10/3/2007	10/4/2007	10/4/2007	10/2/2007
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW06	WLCGSG07GSW06
Sample Name:	WLCGSG07GSW05AE071008	WLCGSG07GSW05ASH071005	WLCGSG07GSW05ASL071004	WLCGSG07GSW06AE071008	WLCGSG07GSW06ASH071002
Sample Date:	10/8/2007	10/5/2007	10/4/2007	10/8/2007	10/2/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW06	WLCGSG07GSW06
Sample Name:	WLCGSG07GSW05AE071008	WLCGSG07GSW05ASH071005	WLCGSG07GSW05ASL071004	WLCGSG07GSW06AE071008	WLCGSG07GSW06ASH071002
Sample Date:	10/8/2007	10/5/2007	10/4/2007	10/8/2007	10/2/2007
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07	WLCGSG07GSW07	WLCGSG07GSW08
Sample Name:	WLCGSG07GSW06ASL071004	WLCGSG07GSW07AE071005	WLCGSG07GSW07ASH071001	WLCGSG07GSW07ASL071003	WLCGSG07GSW08AE071008
Sample Date:	10/4/2007	10/5/2007	10/1/2007	10/3/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07	WLCGSG07GSW07	WLCGSG07GSW08
Sample Name:	WLCGSG07GSW06ASL071004	WLCGSG07GSW07AE071005	WLCGSG07GSW07ASH071001	WLCGSG07GSW07ASL071003	WLCGSG07GSW08AE071008
Sample Date:	10/4/2007	10/5/2007	10/1/2007	10/3/2007	10/8/2007
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW08ASH071002	WLCGSG07GSW08ASL071004	WLCGSG07GSW09AE071001	WLCGSG07GSW09ASH071003	WLCGSG07GSW09ASL071008
Sample Date:	10/2/2007	10/4/2007	10/1/2007	10/3/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW08ASH071002	WLCGSG07GSW08ASL071004	WLCGSG07GSW09AE071001	WLCGSG07GSW09ASH071003	WLCGSG07GSW09ASL071008
Sample Date:	10/2/2007	10/4/2007	10/1/2007	10/3/2007	10/8/2007
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW11	WLCGSG07GSW11
Sample Name:	WLCGSG07GSW10AE071008	WLCGSG07GSW10ASH071002	WLCGSG07GSW10ASL071005	WLCGSG07GSW11AE071002	WLCGSG07GSW11ASH071003
Sample Date:	10/8/2007	10/2/2007	10/5/2007	10/2/2007	10/3/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW11	WLCGSG07GSW11
Sample Name:	WLCGSG07GSW10AE071008	WLCGSG07GSW10ASH071002	WLCGSG07GSW10ASL071005	WLCGSG07GSW11AE071002	WLCGSG07GSW11ASH071003
Sample Date:	10/8/2007	10/2/2007	10/5/2007	10/2/2007	10/3/2007
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12	WLCGSG07GSW12	WLCGSG07GSW13
Sample Name:	WLCGSG07GSW11ASL071008	WLCGSG07GSW12AE071001	WLCGSG07GSW12ASH071003	WLCGSG07GSW12ASL071005	WLCGSG07GSW13AE071001
Sample Date:	10/8/2007	10/1/2007	10/3/2007	10/5/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	**0.004 J**	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12	WLCGSG07GSW12	WLCGSG07GSW13
Sample Name:	WLCGSG07GSW11ASL071008	WLCGSG07GSW12AE071001	WLCGSG07GSW12ASH071003	WLCGSG07GSW12ASL071005	WLCGSG07GSW13AE071001
Sample Date:	10/8/2007	10/1/2007	10/3/2007	10/5/2007	10/1/2007
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW13ASH071002	WLCGSG07GSW13ASL071005	WLCGSG07GSW14AE071008	WLCGSG07GSW14ASH071005	WLCGSG07GSW14ASL071002
Sample Date:	10/2/2007	10/5/2007	10/8/2007	10/5/2007	10/2/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW13ASH071002	WLCGSG07GSW13ASL071005	WLCGSG07GSW14AE071008	WLCGSG07GSW14ASH071005	WLCGSG07GSW14ASL071002
Sample Date:	10/2/2007	10/5/2007	10/8/2007	10/5/2007	10/2/2007
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW16	WLCGSG07GSW16
Sample Name:	WLCGSG07GSW15AE071002	WLCGSG07GSW15ASH071004	WLCGSG07GSW15ASL071008	WLCGSG07GSW16AE071008	WLCGSG07GSW16ASH071004
Sample Date:	10/2/2007	10/4/2007	10/8/2007	10/8/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**0.007 J**	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW16	WLCGSG07GSW16
Sample Name:	WLCGSG07GSW15AE071002	WLCGSG07GSW15ASH071004	WLCGSG07GSW15ASL071008	WLCGSG07GSW16AE071008	WLCGSG07GSW16ASH071004
Sample Date:	10/2/2007	10/4/2007	10/8/2007	10/8/2007	10/4/2007
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17	WLCGSG07GSW17	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW16ASL071008	WLCGSG07GSW17AE071003	WLCGSG07GSW17ASH071009	WLCGSG07GSW17ASL071003	WLCGSG07GSW18AE071001
Sample Date:	10/8/2007	10/3/2007	10/9/2007	10/3/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17	WLCGSG07GSW17	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW16ASL071008	WLCGSG07GSW17AE071003	WLCGSG07GSW17ASH071009	WLCGSG07GSW17ASL071003	WLCGSG07GSW18AE071001
Sample Date:	10/8/2007	10/3/2007	10/9/2007	10/3/2007	10/1/2007
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW18	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW18ASH071005	WLCGSG07GSW18ASL071008
Sample Date:	10/5/2007	10/8/2007
Conventional Parameters (mg/l)		
Cyanide, free	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U
Metals (µg/l)		
Zinc	--	--
Disolved Metals (µg/l)		
Zinc	--	--
Volatile Organics (µg/l)		
1,1-Dichloroethene	--	--
1,2-Dichloroethene, cis-	--	--
1,2-Dichloroethene, trans-	--	--
Benzene	--	--
Ethylbenzene	--	--
m,p-Xylene	--	--
Naphthalene	--	--
o-Xylene	--	--
Toluene	--	--
Trichloroethene (TCE)	--	--
Vinyl chloride	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)		
2-Methylnaphthalene	--	--
Acenaphthene	--	--
Acenaphthylene	--	--
Anthracene	--	--
Benzo(a)anthracene	--	--
Benzo(a)pyrene	--	--
Benzo(b)fluoranthene	--	--
Benzo(g,h,i)perylene	--	--
Benzo(k)fluoranthene	--	--
Chrysene	--	--
Dibenzo(a,h)anthracene	--	--
Fluoranthene	--	--
Fluorene	--	--
Indeno(1,2,3-c,d)pyrene	--	--
Naphthalene	--	--
Phenanthrene	--	--
Pyrene	--	--
Semivolatile Organics (µg/l)		
Carbazole	--	--
Dibenzofuran	--	--
PCB Aroclors (µg/l)		

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Database:	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW18	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW18ASH071005	WLCGSG07GSW18ASL071008
Sample Date:	10/5/2007	10/8/2007
Aroclor 1016	--	--
Aroclor 1221	--	--
Aroclor 1232	--	--
Aroclor 1242	--	--
Aroclor 1248	--	--
Aroclor 1254	--	--
Aroclor 1260	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--
PCB Congeners (ng/l)		
PCB-077	--	--
PCB-081	--	--
PCB-105	--	--
PCB-114	--	--
PCB-118	--	--
PCB-123	--	--
PCB-126	--	--
PCB-156	--	--
PCB-157	--	--
PCB-167	--	--
PCB-169	--	--
PCB-189	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--
Pesticides (µg/l)		
2,4'-DDD (o,p'-DDD)	--	--
2,4'-DDE (o,p'-DDE)	--	--
2,4'-DDT (o,p'-DDT)	--	--
4,4'-DDD (p,p'-DDD)	--	--
4,4'-DDE (p,p'-DDE)	--	--
4,4'-DDT (p,p'-DDT)	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--
beta-Hexachlorocyclohexane (BHC)	--	--
delta-Hexachlorocyclohexane (BHC)	--	--
Endrin ketone	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--
Total Petroleum Hydrocarbons (mg/l)		
Diesel Range Hydrocarbons	--	--

Table 3-36
Existing Data Screening Table – Surface Water (Near-Surface Depth) Human Health

Notes:

Detected concentration is greater than 1 screening level
Detected concentration is greater than 2 screening levels
Detected concentration is greater than 3 screening levels
Detected concentration is greater than 4 screening levels
Detected concentration is greater than 5 screening levels
Detected concentration is greater than 6 screening levels
Detected concentration is greater than 7 screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation
-- = Results not reported or not applicable
N = Normal Field Sample

Acronyms:
µg/kg = micrograms per liter
mg/kg = milligrams per liter
ng/l = nanograms per liter
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
LWG = Lower Willamette Group
PCB = polychlorinated biphenyls
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW2-W012	LW2-W012	LW2-W012	LW3-W031	LW3-W031
Sample Name:	LW2-W012	LW2-W2012	LW2-W3012	LW3-W3031-NS	LW3-W3031-NS
Sample Date:	12/2/2004	3/17/2005	7/15/2005	11/5/2006	11/5/2006
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	**2.1 T**	**2.5**	**4.3 J**	--	3.5 U
Disolved Metals (µg/l)					
Zinc	**1.5**	**1.7**	**1.8 J**	--	**5.4**
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	**0.22**	0.0054 U	0.034 U	--	0.0084 U
Acenaphthene	**0.038**	0.004 U	**0.21**	--	0.0062 U
Acenaphthylene	0.027 U	**0.005 J**	**0.043**	--	0.0046 U
Anthracene	0.015 U	0.0027 U	**0.072**	--	0.0078 U
Benzo(a)anthracene	**0.019**	0.006 U	**0.11**	--	0.0078 U
Benzo(a)pyrene	**0.02**	0.0082 U	**0.15**	--	0.0086 U
Benzo(b)fluoranthene	**0.021**	0.0073 U	**0.11**	--	0.0092 U
Benzo(g,h,i)perylene	**0.02**	**0.01 J**	**0.14**	--	0.0082 U
Benzo(k)fluoranthene	**0.0072 J**	0.0068 U	**0.1**	--	0.011 U
Chrysene	**0.026**	0.0093 U	**0.19**	--	0.011 U
Dibenzo(a,h)anthracene	0.0033 U	0.0033 U	**0.011 J**	--	0.0072 U
Fluoranthene	**0.049**	0.019 U	**0.4**	--	**0.016**
Fluorene	**0.017**	0.0052 U	**0.063**	--	0.0072 U
Indeno(1,2,3-c,d)pyrene	**0.019**	**0.0094 J**	**0.11**	--	0.0066 U
Naphthalene	**0.77**	**0.0068 J**	**0.13**	--	0.013 U
Phenanthrene	**0.039**	0.0064 U	**0.17**	--	0.0078 U
Pyrene	**0.055**	0.028 U	**0.45**	--	**0.011 J**
Semivolatile Organics (µg/l)					
Carbazole	**0.024 J**	0.014 U	**0.06 J**	--	0.013 U
Dibenzofuran	0.015 U	0.015 U	0.015 U	--	0.0076 U
PCB Aroclors (µg/l)					
Aroclor 1016	0.0025 UJ	0.0026 U	0.0025 U	--	--
Aroclor 1221	0.0025 UJ	0.0026 U	0.0025 U	--	--
Aroclor 1232	0.0025 UJ	0.0026 U	0.0025 U	--	--
Aroclor 1242	0.0025 UJ	0.0026 U	0.0025 U	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW2-W012	LW2-W012	LW2-W012	LW3-W031	LW3-W031
Sample Name:	LW2-W012	LW2-W2012	LW2-W3012	LW3-W3031-NS	LW3-W3031-NS
Sample Date:	12/2/2004	3/17/2005	7/15/2005	11/5/2006	11/5/2006
Aroclor 1248	0.00125 UJ	0.0013 U	0.00125 U	--	--
Aroclor 1254	0.00125 UJ	0.0013 U	0.00125 U	--	--
Aroclor 1260	0.0025 UJ	0.0026 U	0.0025 U	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	0.0025 UJT	0.0026 UT	0.0025 UT	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	**0.00033 T**	--
PCB-081	--	--	--	0.00045 UT	--
PCB-105	--	--	--	**0.00144 JT**	--
PCB-114	--	--	--	0.00024 UT	--
PCB-118	--	--	--	**0.0042 T**	--
PCB-123	--	--	--	0.00048 UT	--
PCB-126	--	--	--	0.0002 UT	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	**6.4E-05 JT**	--
PCB-169	--	--	--	0.00072 UT	--
PCB-189	--	--	--	2.9E-05 UT	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	**0.33 T**	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	**2.1E-05 T**	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	0.0005 U	0.00051 U	0.000481 U	**3.5E-05 JT**	0.00094 U
2,4'-DDE (o,p'-DDE)	0.0005 U	0.00051 U	0.000481 U	**3E-06 JT**	0.00025 U
2,4'-DDT (o,p'-DDT)	0.0005 U	0.00051 U	0.000481 U	**5.9E-06 JT**	0.00048 U
4,4'-DDD (p,p'-DDD)	0.0005 U	0.00051 U	**0.000839**	**7.72E-05 JT**	0.00093 U
4,4'-DDE (p,p'-DDE)	0.0005 U	0.00051 U	0.000481 U	**5.78E-05 JT**	0.00016 U
4,4'-DDT (p,p'-DDT)	0.0005 U	0.00051 U	0.000481 U	**1.71E-05 JT**	**0.0029 J**
alpha-Hexachlorocyclohexane (BHC)	0.0005 U	0.00051 U	0.000481 U	**2.8E-05 JT**	**9.9E-05 J**
beta-Hexachlorocyclohexane (BHC)	0.0005 U	0.00051 U	0.000481 U	**1.62E-06 JT**	0.0029 U
delta-Hexachlorocyclohexane (BHC)	0.0005 U	0.00051 U	0.000481 U	9.6E-06 UT	0.00018 U
Endrin ketone	0.0005 U	0.00051 U	0.000481 U	1.2E-05 UT	0.00015 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.0005 U	0.00051 U	0.000481 U	**3.17E-05 JT**	0.00048 U
LWG RA Sum DDD (Calculated U = 1/2)	0.0005 UT	0.00051 UT	**0.00108 T**	**0.00011 T**	0.00094 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.0005 UT	0.00051 UT	0.000481 UT	**6.1E-05 T**	0.00025 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.0005 UT	0.00051 UT	0.000481 UT	**2.3E-05 JT**	**0.0031 JT**
LWG RA Total DDx (Calculated U = 1/2)	0.0005 UT	0.00051 UT	**0.00204 T**	**0.0002 JT**	**0.0043 JT**
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW3-W031	LW3-W031	LW3-W031	LW3-W031	LW3-W031
Sample Name:	LW3-W3031-NS-C	LW3-W3031-NS-F	LW3-W4031-NS	LW3-W4031-NS	LW3-W4031-NS-C
Sample Date:	11/5/2006	11/5/2006	2/24/2007	2/24/2007	2/24/2007
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	**3.5**	--
Disolved Metals (µg/l)					
Zinc	--	--	--	1.9 U	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	**0.014 J**	--
Acenaphthene	--	--	--	0.0062 U	--
Acenaphthylene	--	--	--	**0.0051 J**	--
Anthracene	--	--	--	0.0078 U	--
Benzo(a)anthracene	--	--	--	0.0078 U	--
Benzo(a)pyrene	--	--	--	0.0086 U	--
Benzo(b)fluoranthene	--	--	--	0.0092 U	--
Benzo(g,h,i)perylene	--	--	--	0.0082 U	--
Benzo(k)fluoranthene	--	--	--	0.011 U	--
Chrysene	--	--	--	0.011 U	--
Dibenzo(a,h)anthracene	--	--	--	0.0072 U	--
Fluoranthene	--	--	--	0.0094 U	--
Fluorene	--	--	--	0.0072 U	--
Indeno(1,2,3-c,d)pyrene	--	--	--	0.0066 U	--
Naphthalene	--	--	--	**0.039**	--
Phenanthrene	--	--	--	0.0064 U	--
Pyrene	--	--	--	0.0094 U	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	0.013 U	--
Dibenzofuran	--	--	--	0.0076 U	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW3-W031	LW3-W031	LW3-W031	LW3-W031	LW3-W031
Sample Name:	LW3-W3031-NS-C	LW3-W3031-NS-F	LW3-W4031-NS	LW3-W4031-NS	LW3-W4031-NS-C
Sample Date:	11/5/2006	11/5/2006	2/24/2007	2/24/2007	2/24/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	**0.00033**	9.7E-05 U	**0.000359 T**	--	**0.000146**
PCB-081	0.00018 U	0.000453 U	9E-05 UT	--	9.17E-05 U
PCB-105	**0.00115**	**0.000291 J**	**0.00149 T**	--	**0.000455**
PCB-114	8.2E-05 U	0.000242 U	**5.2E-05 T**	--	4.1E-05 U
PCB-118	**0.00311**	**0.0011**	**0.00366 T**	--	**0.00133**
PCB-123	6.4E-05 U	0.000483 U	**5.6E-05 T**	--	4.1E-05 U
PCB-126	9E-05 U	0.000226 U	4.6E-05 UT	--	4.58E-05 U
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	9.2E-05 U	**6.4E-05 J**	**0.00029 JT**	--	**6.8E-05 J**
PCB-169	0.00072 U	0.000181 U	3.67E-05 UT	--	3.67E-05 U
PCB-189	2.2E-05 U	2.9E-05 U	**8.3E-05 T**	--	2E-05 U
LWG RA Total PCB Congener (Calculated U = 1/2)	**0.21 JT**	**0.15 JT**	**0.19 T**	--	**0.1 JT**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**1.5E-05 T**	**1.4E-05 JT**	**3.1E-06 T**	--	**2.9E-06 JT**
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	**3.2E-05 J**	**3.01E-06 J**	**6.41E-05 JT**	--	**4.64E-05**
2,4'-DDE (o,p'-DDE)	**2.97E-06 J**	4.8E-06 U	**9.9E-06 JT**	--	**6.1E-06 J**
2,4'-DDT (o,p'-DDT)	**5.94E-06 J**	1.2E-05 U	**4.88E-05 JT**	--	**2.95E-05 J**
4,4'-DDD (p,p'-DDD)	**6.97E-05 J**	**7.49E-06 J**	**0.00011 JT**	--	**6.03E-05**
4,4'-DDE (p,p'-DDE)	**5.23E-05 J**	**5.54E-06 J**	**0.000129 T**	--	**6.13E-05**
4,4'-DDT (p,p'-DDT)	**1.38E-05 J**	**3.28E-06 J**	**0.000163 T**	--	**6.07E-05**
alpha-Hexachlorocyclohexane (BHC)	**2.8E-05 J**	5.13E-07 U	**2.15E-05 JT**	--	**2.15E-05 J**
beta-Hexachlorocyclohexane (BHC)	6.38E-06 U	**1.62E-06 J**	8.7E-06 UT	--	8.67E-06 U
delta-Hexachlorocyclohexane (BHC)	9.62E-06 U	5.5E-07 U	**3.56E-06 JT**	--	**3.56E-06 J**
Endrin ketone	1.2E-05 U	1.2E-05 U	**4.14E-06 JT**	--	**4.14E-06 J**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**3.17E-05 J**	6.41E-07 U	**2.07E-05 JT**	--	**2.03E-05 J**
LWG RA Sum DDD (Calculated U = 1/2)	**0.0001 JT**	**1.05E-05 JT**	**0.000174 T**	--	**0.000107 T**
LWG RA Sum DDE (Calculated U = 1/2)	**5.53E-05 JT**	**7.9E-06 JT**	**0.00014 T**	--	**6.7E-05 JT**
LWG RA Sum DDT (Calculated U = 1/2)	**1.97E-05 JT**	**9.3E-06 JT**	**0.000212 T**	--	**9.02E-05 JT**
LWG RA Total DDx (Calculated U = 1/2)	**0.00018 JT**	**2.8E-05 JT**	**0.00052 T**	--	**0.00026 JT**
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW3-W031	WillametteRiver	WillametteRiver	WillametteRiver	WLCGSG07GSW03
Sample Name:	LW3-W4031-NS-F	GS-110810-5	GS-111010-12	GS-111110-16	WLCGSG07GSW03AE071005
Sample Date:	2/24/2007	11/8/2010	11/10/2010	11/11/2010	10/5/2007
Conventional Parameters (mg/l)					
Cyanide, free	--	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	--	**0.0251**	**0.0076**	**0.0246**	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW3-W031	WillametteRiver	WillametteRiver	WillametteRiver	WLCGSG07GSW03
Sample Name:	LW3-W4031-NS-F	GS-110810-5	GS-111010-12	GS-111110-16	WLCGSG07GSW03AE071005
Sample Date:	2/24/2007	11/8/2010	11/10/2010	11/11/2010	10/5/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	**0.000213**	--	--	--	--
PCB-081	9E-06 U	--	--	--	--
PCB-105	**0.00103**	--	--	--	--
PCB-114	**5.2E-05**	--	--	--	--
PCB-118	**0.00233**	--	--	--	--
PCB-123	**5.6E-05**	--	--	--	--
PCB-126	2.4E-05 U	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	**0.000219**	--	--	--	--
PCB-169	1.56E-05 U	--	--	--	--
PCB-189	**8.3E-05**	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	**0.091 JT**	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**1.6E-06 T**	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	**1.77E-05 J**	--	--	--	--
2,4'-DDE (o,p'-DDE)	**3.78E-06 J**	--	--	--	--
2,4'-DDT (o,p'-DDT)	**1.93E-05 J**	--	--	--	--
4,4'-DDD (p,p'-DDD)	**4.95E-05 J**	--	--	--	--
4,4'-DDE (p,p'-DDE)	**6.75E-05**	--	--	--	--
4,4'-DDT (p,p'-DDT)	**0.000102**	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	2.34E-06 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	2.8E-06 U	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	1.87E-06 U	--	--	--	--
Endrin ketone	2.34E-06 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**3.64E-07 J**	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**6.72E-05 JT**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**7.13E-05 JT**	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**0.000121 JT**	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**0.00026 JT**	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW04
Sample Name:	WLCGSG07GSW03ASH071001	WLCGSG07GSW03ASL071003	WLCGSG07GSW04AE071004	WLCGSG07GSW04ASH071004	WLCGSG07GSW04ASL071002
Sample Date:	10/1/2007	10/3/2007	10/4/2007	10/4/2007	10/2/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW04
Sample Name:	WLCGSG07GSW03ASH071001	WLCGSG07GSW03ASL071003	WLCGSG07GSW04AE071004	WLCGSG07GSW04ASH071004	WLCGSG07GSW04ASL071002
Sample Date:	10/1/2007	10/3/2007	10/4/2007	10/4/2007	10/2/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW06	WLCGSG07GSW06
Sample Name:	WLCGSG07GSW05AE071008	WLCGSG07GSW05ASH071005	WLCGSG07GSW05ASL071004	WLCGSG07GSW06AE071008	WLCGSG07GSW06ASH071002
Sample Date:	10/8/2007	10/5/2007	10/4/2007	10/8/2007	10/2/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW06	WLCGSG07GSW06
Sample Name:	WLCGSG07GSW05AE071008	WLCGSG07GSW05ASH071005	WLCGSG07GSW05ASL071004	WLCGSG07GSW06AE071008	WLCGSG07GSW06ASH071002
Sample Date:	10/8/2007	10/5/2007	10/4/2007	10/8/2007	10/2/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07	WLCGSG07GSW07	WLCGSG07GSW08
Sample Name:	WLCGSG07GSW06ASL071004	WLCGSG07GSW07AE071005	WLCGSG07GSW07ASH071001	WLCGSG07GSW07ASL071003	WLCGSG07GSW08AE071008
Sample Date:	10/4/2007	10/5/2007	10/1/2007	10/3/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07	WLCGSG07GSW07	WLCGSG07GSW08
Sample Name:	WLCGSG07GSW06ASL071004	WLCGSG07GSW07AE071005	WLCGSG07GSW07ASH071001	WLCGSG07GSW07ASL071003	WLCGSG07GSW08AE071008
Sample Date:	10/4/2007	10/5/2007	10/1/2007	10/3/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW08ASH071002	WLCGSG07GSW08ASL071004	WLCGSG07GSW09AE071001	WLCGSG07GSW09ASH071003	WLCGSG07GSW09ASL071008
Sample Date:	10/2/2007	10/4/2007	10/1/2007	10/3/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW08ASH071002	WLCGSG07GSW08ASL071004	WLCGSG07GSW09AE071001	WLCGSG07GSW09ASH071003	WLCGSG07GSW09ASL071008
Sample Date:	10/2/2007	10/4/2007	10/1/2007	10/3/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW11	WLCGSG07GSW11
Sample Name:	WLCGSG07GSW10AE071008	WLCGSG07GSW10ASH071002	WLCGSG07GSW10ASL071005	WLCGSG07GSW11AE071002	WLCGSG07GSW11ASH071003
Sample Date:	10/8/2007	10/2/2007	10/5/2007	10/2/2007	10/3/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW11	WLCGSG07GSW11
Sample Name:	WLCGSG07GSW10AE071008	WLCGSG07GSW10ASH071002	WLCGSG07GSW10ASL071005	WLCGSG07GSW11AE071002	WLCGSG07GSW11ASH071003
Sample Date:	10/8/2007	10/2/2007	10/5/2007	10/2/2007	10/3/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12	WLCGSG07GSW12	WLCGSG07GSW13
Sample Name:	WLCGSG07GSW11ASL071008	WLCGSG07GSW12AE071001	WLCGSG07GSW12ASH071003	WLCGSG07GSW12ASL071005	WLCGSG07GSW13AE071001
Sample Date:	10/8/2007	10/1/2007	10/3/2007	10/5/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	**0.004 J**	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12	WLCGSG07GSW12	WLCGSG07GSW13
Sample Name:	WLCGSG07GSW11ASL071008	WLCGSG07GSW12AE071001	WLCGSG07GSW12ASH071003	WLCGSG07GSW12ASL071005	WLCGSG07GSW13AE071001
Sample Date:	10/8/2007	10/1/2007	10/3/2007	10/5/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW13ASH071002	WLCGSG07GSW13ASL071005	WLCGSG07GSW14AE071008	WLCGSG07GSW14ASH071005	WLCGSG07GSW14ASL071002
Sample Date:	10/2/2007	10/5/2007	10/8/2007	10/5/2007	10/2/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW13ASH071002	WLCGSG07GSW13ASL071005	WLCGSG07GSW14AE071008	WLCGSG07GSW14ASH071005	WLCGSG07GSW14ASL071002
Sample Date:	10/2/2007	10/5/2007	10/8/2007	10/5/2007	10/2/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW16	WLCGSG07GSW16
Sample Name:	WLCGSG07GSW15AE071002	WLCGSG07GSW15ASH071004	WLCGSG07GSW15ASL071008	WLCGSG07GSW16AE071008	WLCGSG07GSW16ASH071004
Sample Date:	10/2/2007	10/4/2007	10/8/2007	10/8/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**0.007 J**	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW16	WLCGSG07GSW16
Sample Name:	WLCGSG07GSW15AE071002	WLCGSG07GSW15ASH071004	WLCGSG07GSW15ASL071008	WLCGSG07GSW16AE071008	WLCGSG07GSW16ASH071004
Sample Date:	10/2/2007	10/4/2007	10/8/2007	10/8/2007	10/4/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17	WLCGSG07GSW17	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW16ASL071008	WLCGSG07GSW17AE071003	WLCGSG07GSW17ASH071009	WLCGSG07GSW17ASL071003	WLCGSG07GSW18AE071001
Sample Date:	10/8/2007	10/3/2007	10/9/2007	10/3/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17	WLCGSG07GSW17	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW16ASL071008	WLCGSG07GSW17AE071003	WLCGSG07GSW17ASH071009	WLCGSG07GSW17ASL071003	WLCGSG07GSW18AE071001
Sample Date:	10/8/2007	10/3/2007	10/9/2007	10/3/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW18	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW18ASH071005	WLCGSG07GSW18ASL071008
Sample Date:	10/5/2007	10/8/2007
Conventional Parameters (mg/l)		
Cyanide, free	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U
Metals (µg/l)		
Zinc	--	--
Disolved Metals (µg/l)		
Zinc	--	--
Volatile Organics (µg/l)		
1,1-Dichloroethene	--	--
1,2-Dichloroethene, cis-	--	--
1,2-Dichloroethene, trans-	--	--
Benzene	--	--
Ethylbenzene	--	--
m,p-Xylene	--	--
Naphthalene	--	--
o-Xylene	--	--
Toluene	--	--
Trichloroethene (TCE)	--	--
Vinyl chloride	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)		
2-Methylnaphthalene	--	--
Acenaphthene	--	--
Acenaphthylene	--	--
Anthracene	--	--
Benzo(a)anthracene	--	--
Benzo(a)pyrene	--	--
Benzo(b)fluoranthene	--	--
Benzo(g,h,i)perylene	--	--
Benzo(k)fluoranthene	--	--
Chrysene	--	--
Dibenzo(a,h)anthracene	--	--
Fluoranthene	--	--
Fluorene	--	--
Indeno(1,2,3-c,d)pyrene	--	--
Naphthalene	--	--
Phenanthrene	--	--
Pyrene	--	--
Semivolatile Organics (µg/l)		
Carbazole	--	--
Dibenzofuran	--	--
PCB Aroclors (µg/l)		
Aroclor 1016	--	--
Aroclor 1221	--	--
Aroclor 1232	--	--
Aroclor 1242	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Database:	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW18	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW18ASH071005	WLCGSG07GSW18ASL071008
Sample Date:	10/5/2007	10/8/2007
Aroclor 1248	--	--
Aroclor 1254	--	--
Aroclor 1260	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--
PCB Congeners (ng/l)		
PCB-077	--	--
PCB-081	--	--
PCB-105	--	--
PCB-114	--	--
PCB-118	--	--
PCB-123	--	--
PCB-126	--	--
PCB-156	--	--
PCB-157	--	--
PCB-167	--	--
PCB-169	--	--
PCB-189	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--
Pesticides (µg/l)		
2,4'-DDD (o,p'-DDD)	--	--
2,4'-DDE (o,p'-DDE)	--	--
2,4'-DDT (o,p'-DDT)	--	--
4,4'-DDD (p,p'-DDD)	--	--
4,4'-DDE (p,p'-DDE)	--	--
4,4'-DDT (p,p'-DDT)	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--
beta-Hexachlorocyclohexane (BHC)	--	--
delta-Hexachlorocyclohexane (BHC)	--	--
Endrin ketone	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--
Total Petroleum Hydrocarbons (mg/l)		
Diesel Range Hydrocarbons	--	--

Table 37
Existing Data Screening Table – Surface Water (Near-Surface Depth) Ecological

Notes:

	Detected concentration is greater than 1 screening level
	Detected concentration is greater than 2 screening levels
	Detected concentration is greater than 3 screening levels
	Detected concentration is greater than 4 screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation
-- = Results not reported or not applicable
N = Normal Field Sample

Acronyms:
µg/kg = micrograms per liter
mg/kg = milligrams per liter
ng/l = nanograms per liter
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
LWG = Lower Willamette Group
PCB = polychlorinated biphenyls
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW2-W012	LW2-W012	LW2-W012	LW3-W031	LW3-W031
Sample Name:	LW2-W012	LW2-W2012	LW2-W3012	LW3-W3031-NS	LW3-W3031-NS
Sample Date:	12/2/2004	3/17/2005	7/15/2005	11/5/2006	11/5/2006
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	**2.1 T**	**2.5**	**4.3 J**	--	3.5 U
Disolved Metals (µg/l)					
Zinc	**1.5**	**1.7**	**1.8 J**	--	**5.4**
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	**0.22**	0.0054 U	0.034 U	--	0.0084 U
Acenaphthene	**0.038**	0.004 U	**0.21**	--	0.0062 U
Acenaphthylene	0.027 U	**0.005 J**	**0.043**	--	0.0046 U
Anthracene	0.015 U	0.0027 U	**0.072**	--	0.0078 U
Benzo(a)anthracene	**0.019**	0.006 U	**0.11**	--	0.0078 U
Benzo(a)pyrene	**0.02**	0.0082 U	**0.15**	--	0.0086 U
Benzo(b)fluoranthene	**0.021**	0.0073 U	**0.11**	--	0.0092 U
Benzo(g,h,i)perylene	**0.02**	**0.01 J**	**0.14**	--	0.0082 U
Benzo(k)fluoranthene	**0.0072 J**	0.0068 U	**0.1**	--	0.011 U
Chrysene	**0.026**	0.0093 U	**0.19**	--	0.011 U
Dibenzo(a,h)anthracene	0.0033 U	0.0033 U	**0.011 J**	--	0.0072 U
Fluoranthene	**0.049**	0.019 U	**0.4**	--	**0.016**
Fluorene	**0.017**	0.0052 U	**0.063**	--	0.0072 U
Indeno(1,2,3-c,d)pyrene	**0.019**	**0.0094 J**	**0.11**	--	0.0066 U
Naphthalene	**0.77**	**0.0068 J**	**0.13**	--	0.013 U
Phenanthrene	**0.039**	0.0064 U	**0.17**	--	0.0078 U
Pyrene	**0.055**	0.028 U	**0.45**	--	**0.011 J**
Semivolatile Organics (µg/l)					
Carbazole	**0.024 J**	0.014 U	**0.06 J**	--	0.013 U
Dibenzofuran	0.015 U	0.015 U	0.015 U	--	0.0076 U
PCB Aroclors (µg/l)					
Aroclor 1016	0.0025 UJ	0.0026 U	0.0025 U	--	--
Aroclor 1221	0.0025 UJ	0.0026 U	0.0025 U	--	--
Aroclor 1232	0.0025 UJ	0.0026 U	0.0025 U	--	--
Aroclor 1242	0.0025 UJ	0.0026 U	0.0025 U	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW2-W012	LW2-W012	LW2-W012	LW3-W031	LW3-W031
Sample Name:	LW2-W012	LW2-W2012	LW2-W3012	LW3-W3031-NS	LW3-W3031-NS
Sample Date:	12/2/2004	3/17/2005	7/15/2005	11/5/2006	11/5/2006
Aroclor 1248	0.00125 UJ	0.0013 U	0.00125 U	--	--
Aroclor 1254	0.00125 UJ	0.0013 U	0.00125 U	--	--
Aroclor 1260	0.0025 UJ	0.0026 U	0.0025 U	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	0.0025 UJT	0.0026 UT	0.0025 UT	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	**0.00033 T**	--
PCB-081	--	--	--	0.00045 UT	--
PCB-105	--	--	--	**0.00144 JT**	--
PCB-114	--	--	--	0.00024 UT	--
PCB-118	--	--	--	**0.0042 T**	--
PCB-123	--	--	--	0.00048 UT	--
PCB-126	--	--	--	0.0002 UT	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	**6.4E-05 JT**	--
PCB-169	--	--	--	0.00072 UT	--
PCB-189	--	--	--	2.9E-05 UT	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	**0.33 T**	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	**2.1E-05 T**	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	0.0005 U	0.00051 U	0.000481 U	**3.5E-05 JT**	0.00094 U
2,4'-DDE (o,p'-DDE)	0.0005 U	0.00051 U	0.000481 U	**3E-06 JT**	0.00025 U
2,4'-DDT (o,p'-DDT)	0.0005 U	0.00051 U	0.000481 U	**5.9E-06 JT**	0.00048 U
4,4'-DDD (p,p'-DDD)	0.0005 U	0.00051 U	**0.000839**	**7.72E-05 JT**	0.00093 U
4,4'-DDE (p,p'-DDE)	0.0005 U	0.00051 U	0.000481 U	**5.78E-05 JT**	0.00016 U
4,4'-DDT (p,p'-DDT)	0.0005 U	0.00051 U	0.000481 U	**1.71E-05 JT**	**0.0029 J**
alpha-Hexachlorocyclohexane (BHC)	0.0005 U	0.00051 U	0.000481 U	**2.8E-05 JT**	**9.9E-05 J**
beta-Hexachlorocyclohexane (BHC)	0.0005 U	0.00051 U	0.000481 U	**1.62E-06 JT**	0.0029 U
delta-Hexachlorocyclohexane (BHC)	0.0005 U	0.00051 U	0.000481 U	9.6E-06 UT	0.00018 U
Endrin ketone	0.0005 U	0.00051 U	0.000481 U	1.2E-05 UT	0.00015 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.0005 U	0.00051 U	0.000481 U	**3.17E-05 JT**	0.00048 U
LWG RA Sum DDD (Calculated U = 1/2)	0.0005 UT	0.00051 UT	**0.00108 T**	**0.00011 T**	0.00094 UT
LWG RA Sum DDE (Calculated U = 1/2)	0.0005 UT	0.00051 UT	0.000481 UT	**6.1E-05 T**	0.00025 UT
LWG RA Sum DDT (Calculated U = 1/2)	0.0005 UT	0.00051 UT	0.000481 UT	**2.3E-05 JT**	**0.0031 JT**
LWG RA Total DDx (Calculated U = 1/2)	0.0005 UT	0.00051 UT	**0.00204 T**	**0.0002 JT**	**0.0043 JT**
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW3-W031	LW3-W031	LW3-W031	LW3-W031	LW3-W031
Sample Name:	LW3-W3031-NS-C	LW3-W3031-NS-F	LW3-W4031-NS	LW3-W4031-NS	LW3-W4031-NS-C
Sample Date:	11/5/2006	11/5/2006	2/24/2007	2/24/2007	2/24/2007
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	**3.5**	--
Disolved Metals (µg/l)					
Zinc	--	--	--	1.9 U	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	**0.014 J**	--
Acenaphthene	--	--	--	0.0062 U	--
Acenaphthylene	--	--	--	**0.0051 J**	--
Anthracene	--	--	--	0.0078 U	--
Benzo(a)anthracene	--	--	--	0.0078 U	--
Benzo(a)pyrene	--	--	--	0.0086 U	--
Benzo(b)fluoranthene	--	--	--	0.0092 U	--
Benzo(g,h,i)perylene	--	--	--	0.0082 U	--
Benzo(k)fluoranthene	--	--	--	0.011 U	--
Chrysene	--	--	--	0.011 U	--
Dibenzo(a,h)anthracene	--	--	--	0.0072 U	--
Fluoranthene	--	--	--	0.0094 U	--
Fluorene	--	--	--	0.0072 U	--
Indeno(1,2,3-c,d)pyrene	--	--	--	0.0066 U	--
Naphthalene	--	--	--	**0.039**	--
Phenanthrene	--	--	--	0.0064 U	--
Pyrene	--	--	--	0.0094 U	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	0.013 U	--
Dibenzofuran	--	--	--	0.0076 U	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW3-W031	LW3-W031	LW3-W031	LW3-W031	LW3-W031
Sample Name:	LW3-W3031-NS-C	LW3-W3031-NS-F	LW3-W4031-NS	LW3-W4031-NS	LW3-W4031-NS-C
Sample Date:	11/5/2006	11/5/2006	2/24/2007	2/24/2007	2/24/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	**0.00033**	9.7E-05 U	**0.000359 T**	--	**0.000146**
PCB-081	0.00018 U	0.000453 U	9E-05 UT	--	9.17E-05 U
PCB-105	**0.00115**	**0.000291 J**	**0.00149 T**	--	**0.000455**
PCB-114	8.2E-05 U	0.000242 U	**5.2E-05 T**	--	4.1E-05 U
PCB-118	**0.00311**	**0.0011**	**0.00366 T**	--	**0.00133**
PCB-123	6.4E-05 U	0.000483 U	**5.6E-05 T**	--	4.1E-05 U
PCB-126	9E-05 U	0.000226 U	4.6E-05 UT	--	4.58E-05 U
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	9.2E-05 U	**6.4E-05 J**	**0.00029 JT**	--	**6.8E-05 J**
PCB-169	0.00072 U	0.000181 U	3.67E-05 UT	--	3.67E-05 U
PCB-189	2.2E-05 U	2.9E-05 U	**8.3E-05 T**	--	2E-05 U
LWG RA Total PCB Congener (Calculated U = 1/2)	**0.21 JT**	**0.15 JT**	**0.19 T**	--	**0.1 JT**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**1.5E-05 T**	**1.4E-05 JT**	**3.1E-06 T**	--	**2.9E-06 JT**
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	**3.2E-05 J**	**3.01E-06 J**	**6.41E-05 JT**	--	**4.64E-05**
2,4'-DDE (o,p'-DDE)	**2.97E-06 J**	4.8E-06 U	**9.9E-06 JT**	--	**6.1E-06 J**
2,4'-DDT (o,p'-DDT)	**5.94E-06 J**	1.2E-05 U	**4.88E-05 JT**	--	**2.95E-05 J**
4,4'-DDD (p,p'-DDD)	**6.97E-05 J**	**7.49E-06 J**	**0.00011 JT**	--	**6.03E-05**
4,4'-DDE (p,p'-DDE)	**5.23E-05 J**	**5.54E-06 J**	**0.000129 T**	--	**6.13E-05**
4,4'-DDT (p,p'-DDT)	**1.38E-05 J**	**3.28E-06 J**	**0.000163 T**	--	**6.07E-05**
alpha-Hexachlorocyclohexane (BHC)	**2.8E-05 J**	5.13E-07 U	**2.15E-05 JT**	--	**2.15E-05 J**
beta-Hexachlorocyclohexane (BHC)	6.38E-06 U	**1.62E-06 J**	8.7E-06 UT	--	8.67E-06 U
delta-Hexachlorocyclohexane (BHC)	9.62E-06 U	5.5E-07 U	**3.56E-06 JT**	--	**3.56E-06 J**
Endrin ketone	1.2E-05 U	1.2E-05 U	**4.14E-06 JT**	--	**4.14E-06 J**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**3.17E-05 J**	6.41E-07 U	**2.07E-05 JT**	--	**2.03E-05 J**
LWG RA Sum DDD (Calculated U = 1/2)	**0.0001 JT**	**1.05E-05 JT**	**0.000174 T**	--	**0.000107 T**
LWG RA Sum DDE (Calculated U = 1/2)	**5.53E-05 JT**	**7.9E-06 JT**	**0.00014 T**	--	**6.7E-05 JT**
LWG RA Sum DDT (Calculated U = 1/2)	**1.97E-05 JT**	**9.3E-06 JT**	**0.000212 T**	--	**9.02E-05 JT**
LWG RA Total DDx (Calculated U = 1/2)	**0.00018 JT**	**2.8E-05 JT**	**0.00052 T**	--	**0.00026 JT**
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW3-W031	WillametteRiver	WillametteRiver	WillametteRiver	WLCGSG07GSW03
Sample Name:	LW3-W4031-NS-F	GS-110810-5	GS-111010-12	GS-111110-16	WLCGSG07GSW03AE071005
Sample Date:	2/24/2007	11/8/2010	11/10/2010	11/11/2010	10/5/2007
Conventional Parameters (mg/l)					
Cyanide, free	--	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	--	**0.0251**	**0.0076**	**0.0246**	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	LW3-W031	WillametteRiver	WillametteRiver	WillametteRiver	WLCGSG07GSW03
Sample Name:	LW3-W4031-NS-F	GS-110810-5	GS-111010-12	GS-111110-16	WLCGSG07GSW03AE071005
Sample Date:	2/24/2007	11/8/2010	11/10/2010	11/11/2010	10/5/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	**0.000213**	--	--	--	--
PCB-081	9E-06 U	--	--	--	--
PCB-105	**0.00103**	--	--	--	--
PCB-114	**5.2E-05**	--	--	--	--
PCB-118	**0.00233**	--	--	--	--
PCB-123	**5.6E-05**	--	--	--	--
PCB-126	2.4E-05 U	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	**0.000219**	--	--	--	--
PCB-169	1.56E-05 U	--	--	--	--
PCB-189	**8.3E-05**	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	**0.091 JT**	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**1.6E-06 T**	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	**1.77E-05 J**	--	--	--	--
2,4'-DDE (o,p'-DDE)	**3.78E-06 J**	--	--	--	--
2,4'-DDT (o,p'-DDT)	**1.93E-05 J**	--	--	--	--
4,4'-DDD (p,p'-DDD)	**4.95E-05 J**	--	--	--	--
4,4'-DDE (p,p'-DDE)	**6.75E-05**	--	--	--	--
4,4'-DDT (p,p'-DDT)	**0.000102**	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	2.34E-06 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	2.8E-06 U	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	1.87E-06 U	--	--	--	--
Endrin ketone	2.34E-06 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**3.64E-07 J**	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	**6.72E-05 JT**	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	**7.13E-05 JT**	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	**0.000121 JT**	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	**0.00026 JT**	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW04
Sample Name:	WLCGSG07GSW03ASH071001	WLCGSG07GSW03ASL071003	WLCGSG07GSW04AE071004	WLCGSG07GSW04ASH071004	WLCGSG07GSW04ASL071002
Sample Date:	10/1/2007	10/3/2007	10/4/2007	10/4/2007	10/2/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 UJ
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW04
Sample Name:	WLCGSG07GSW03ASH071001	WLCGSG07GSW03ASL071003	WLCGSG07GSW04AE071004	WLCGSG07GSW04ASH071004	WLCGSG07GSW04ASL071002
Sample Date:	10/1/2007	10/3/2007	10/4/2007	10/4/2007	10/2/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW06	WLCGSG07GSW06
Sample Name:	WLCGSG07GSW05AE071008	WLCGSG07GSW05ASH071005	WLCGSG07GSW05ASL071004	WLCGSG07GSW06AE071008	WLCGSG07GSW06ASH071002
Sample Date:	10/8/2007	10/5/2007	10/4/2007	10/8/2007	10/2/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW06	WLCGSG07GSW06
Sample Name:	WLCGSG07GSW05AE071008	WLCGSG07GSW05ASH071005	WLCGSG07GSW05ASL071004	WLCGSG07GSW06AE071008	WLCGSG07GSW06ASH071002
Sample Date:	10/8/2007	10/5/2007	10/4/2007	10/8/2007	10/2/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07	WLCGSG07GSW07	WLCGSG07GSW08
Sample Name:	WLCGSG07GSW06ASL071004	WLCGSG07GSW07AE071005	WLCGSG07GSW07ASH071001	WLCGSG07GSW07ASL071003	WLCGSG07GSW08AE071008
Sample Date:	10/4/2007	10/5/2007	10/1/2007	10/3/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07	WLCGSG07GSW07	WLCGSG07GSW08
Sample Name:	WLCGSG07GSW06ASL071004	WLCGSG07GSW07AE071005	WLCGSG07GSW07ASH071001	WLCGSG07GSW07ASL071003	WLCGSG07GSW08AE071008
Sample Date:	10/4/2007	10/5/2007	10/1/2007	10/3/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW08ASH071002	WLCGSG07GSW08ASL071004	WLCGSG07GSW09AE071001	WLCGSG07GSW09ASH071003	WLCGSG07GSW09ASL071008
Sample Date:	10/2/2007	10/4/2007	10/1/2007	10/3/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW08ASH071002	WLCGSG07GSW08ASL071004	WLCGSG07GSW09AE071001	WLCGSG07GSW09ASH071003	WLCGSG07GSW09ASL071008
Sample Date:	10/2/2007	10/4/2007	10/1/2007	10/3/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW11	WLCGSG07GSW11
Sample Name:	WLCGSG07GSW10AE071008	WLCGSG07GSW10ASH071002	WLCGSG07GSW10ASL071005	WLCGSG07GSW11AE071002	WLCGSG07GSW11ASH071003
Sample Date:	10/8/2007	10/2/2007	10/5/2007	10/2/2007	10/3/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW11	WLCGSG07GSW11
Sample Name:	WLCGSG07GSW10AE071008	WLCGSG07GSW10ASH071002	WLCGSG07GSW10ASL071005	WLCGSG07GSW11AE071002	WLCGSG07GSW11ASH071003
Sample Date:	10/8/2007	10/2/2007	10/5/2007	10/2/2007	10/3/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12	WLCGSG07GSW12	WLCGSG07GSW13
Sample Name:	WLCGSG07GSW11ASL071008	WLCGSG07GSW12AE071001	WLCGSG07GSW12ASH071003	WLCGSG07GSW12ASL071005	WLCGSG07GSW13AE071001
Sample Date:	10/8/2007	10/1/2007	10/3/2007	10/5/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	**0.004 J**	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12	WLCGSG07GSW12	WLCGSG07GSW13
Sample Name:	WLCGSG07GSW11ASL071008	WLCGSG07GSW12AE071001	WLCGSG07GSW12ASH071003	WLCGSG07GSW12ASL071005	WLCGSG07GSW13AE071001
Sample Date:	10/8/2007	10/1/2007	10/3/2007	10/5/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW13ASH071002	WLCGSG07GSW13ASL071005	WLCGSG07GSW14AE071008	WLCGSG07GSW14ASH071005	WLCGSG07GSW14ASL071002
Sample Date:	10/2/2007	10/5/2007	10/8/2007	10/5/2007	10/2/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW13ASH071002	WLCGSG07GSW13ASL071005	WLCGSG07GSW14AE071008	WLCGSG07GSW14ASH071005	WLCGSG07GSW14ASL071002
Sample Date:	10/2/2007	10/5/2007	10/8/2007	10/5/2007	10/2/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW16	WLCGSG07GSW16
Sample Name:	WLCGSG07GSW15AE071002	WLCGSG07GSW15ASH071004	WLCGSG07GSW15ASL071008	WLCGSG07GSW16AE071008	WLCGSG07GSW16ASH071004
Sample Date:	10/2/2007	10/4/2007	10/8/2007	10/8/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	**0.007 J**	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW16	WLCGSG07GSW16
Sample Name:	WLCGSG07GSW15AE071002	WLCGSG07GSW15ASH071004	WLCGSG07GSW15ASL071008	WLCGSG07GSW16AE071008	WLCGSG07GSW16ASH071004
Sample Date:	10/2/2007	10/4/2007	10/8/2007	10/8/2007	10/4/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17	WLCGSG07GSW17	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW16ASL071008	WLCGSG07GSW17AE071003	WLCGSG07GSW17ASH071009	WLCGSG07GSW17ASL071003	WLCGSG07GSW18AE071001
Sample Date:	10/8/2007	10/3/2007	10/9/2007	10/3/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17	WLCGSG07GSW17	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW16ASL071008	WLCGSG07GSW17AE071003	WLCGSG07GSW17ASH071009	WLCGSG07GSW17ASL071003	WLCGSG07GSW18AE071001
Sample Date:	10/8/2007	10/3/2007	10/9/2007	10/3/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW18	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW18ASH071005	WLCGSG07GSW18ASL071008
Sample Date:	10/5/2007	10/8/2007
Conventional Parameters (mg/l)		
Cyanide, free	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U
Metals (µg/l)		
Zinc	--	--
Disolved Metals (µg/l)		
Zinc	--	--
Volatile Organics (µg/l)		
1,1-Dichloroethene	--	--
1,2-Dichloroethene, cis-	--	--
1,2-Dichloroethene, trans-	--	--
Benzene	--	--
Ethylbenzene	--	--
m,p-Xylene	--	--
Naphthalene	--	--
o-Xylene	--	--
Toluene	--	--
Trichloroethene (TCE)	--	--
Vinyl chloride	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)		
2-Methylnaphthalene	--	--
Acenaphthene	--	--
Acenaphthylene	--	--
Anthracene	--	--
Benzo(a)anthracene	--	--
Benzo(a)pyrene	--	--
Benzo(b)fluoranthene	--	--
Benzo(g,h,i)perylene	--	--
Benzo(k)fluoranthene	--	--
Chrysene	--	--
Dibenzo(a,h)anthracene	--	--
Fluoranthene	--	--
Fluorene	--	--
Indeno(1,2,3-c,d)pyrene	--	--
Naphthalene	--	--
Phenanthrene	--	--
Pyrene	--	--
Semivolatile Organics (µg/l)		
Carbazole	--	--
Dibenzofuran	--	--
PCB Aroclors (µg/l)		
Aroclor 1016	--	--
Aroclor 1221	--	--
Aroclor 1232	--	--
Aroclor 1242	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Database:	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearSurf	Gasco RM6-6.7_WS_NearSurf
System Location Code:	WLCGSG07GSW18	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW18ASH071005	WLCGSG07GSW18ASL071008
Sample Date:	10/5/2007	10/8/2007
Aroclor 1248	--	--
Aroclor 1254	--	--
Aroclor 1260	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--
PCB Congeners (ng/l)		
PCB-077	--	--
PCB-081	--	--
PCB-105	--	--
PCB-114	--	--
PCB-118	--	--
PCB-123	--	--
PCB-126	--	--
PCB-156	--	--
PCB-157	--	--
PCB-167	--	--
PCB-169	--	--
PCB-189	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--
Pesticides (µg/l)		
2,4'-DDD (o,p'-DDD)	--	--
2,4'-DDE (o,p'-DDE)	--	--
2,4'-DDT (o,p'-DDT)	--	--
4,4'-DDD (p,p'-DDD)	--	--
4,4'-DDE (p,p'-DDE)	--	--
4,4'-DDT (p,p'-DDT)	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--
beta-Hexachlorocyclohexane (BHC)	--	--
delta-Hexachlorocyclohexane (BHC)	--	--
Endrin ketone	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--
Total Petroleum Hydrocarbons (mg/l)		
Diesel Range Hydrocarbons	--	--

Table 3-38
Existing Data Screening Table – Surface Water (Near-Surface Depth) Background

Notes:
Detected concentration is greater than 1 screening level

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation
-- = Results not reported or not applicable
N = Normal Field Sample

Acronyms:
µg/kg = micrograms per liter
mg/kg = milligrams per liter
ng/l = nanograms per liter
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
LWG = Lower Willamette Group
PCB = polychlorinated biphenyls
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	LWM-C11	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04
Sample Name:	LWM-SW11	WLCGSG07GSW03BE071005	WLCGSG07GSW03BSH071001	WLCGSG07GSW03BSL071003	WLCGSG07GSW04BE071004
Sample Date:	9/3/2008	10/5/2007	10/1/2007	10/3/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.005 UT	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	4 U	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	0.01 U	--	--	--	--
Acenaphthene	0.01 U	--	--	--	--
Acenaphthylene	0.01 U	--	--	--	--
Anthracene	0.01 U	--	--	--	--
Benzo(a)anthracene	0.01 U	--	--	--	--
Benzo(a)pyrene	0.01 UJ	--	--	--	--
Benzo(b)fluoranthene	0.01 U	--	--	--	--
Benzo(g,h,i)perylene	0.01 U	--	--	--	--
Benzo(k)fluoranthene	0.01 U	--	--	--	--
Chrysene	0.01 U	--	--	--	--
Dibenzo(a,h)anthracene	0.01 U	--	--	--	--
Fluoranthene	**0.016**	--	--	--	--
Fluorene	0.01 U	--	--	--	--
Indeno(1,2,3-c,d)pyrene	0.01 U	--	--	--	--
Naphthalene	**0.016**	--	--	--	--
Phenanthrene	0.01 U	--	--	--	--
Pyrene	**0.02**	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	0.01 U	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	0.011 U	--	--	--	--
Aroclor 1221	0.011 U	--	--	--	--
Aroclor 1232	0.011 U	--	--	--	--
Aroclor 1242	0.011 U	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	LWM-C11	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04
Sample Name:	LWM-SW11	WLCGSG07GSW03BE071005	WLCGSG07GSW03BSH071001	WLCGSG07GSW03BSL071003	WLCGSG07GSW04BE071004
Sample Date:	9/3/2008	10/5/2007	10/1/2007	10/3/2007	10/4/2007
Aroclor 1248	0.011 U	--	--	--	--
Aroclor 1254	0.011 U	--	--	--	--
Aroclor 1260	0.011 U	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	0.00801 U	--	--	--	--
PCB-081	0.00749 U	--	--	--	--
PCB-105	0.0115 U	--	--	--	--
PCB-114	0.0131 U	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	0.011 U	--	--	--	--
PCB-126	0.0125 U	--	--	--	--
PCB-156	0.0064 U	--	--	--	--
PCB-157	0.0071 U	--	--	--	--
PCB-167	0.00731 U	--	--	--	--
PCB-169	0.00757 U	--	--	--	--
PCB-189	0.00507 U	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	**2.2 JT**	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	0.0013 UT	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	0.01 U	--	--	--	--
2,4'-DDE (o,p'-DDE)	0.01 U	--	--	--	--
2,4'-DDT (o,p'-DDT)	0.01 U	--	--	--	--
4,4'-DDD (p,p'-DDD)	0.01 U	--	--	--	--
4,4'-DDE (p,p'-DDE)	0.01 U	--	--	--	--
4,4'-DDT (p,p'-DDT)	0.01 U	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.005 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.005 U	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.005 U	--	--	--	--
Endrin ketone	0.01 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.005 U	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	0.01 UT	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	0.01 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	0.01 UT	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	0.01 UT	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	0.25 U	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05
Sample Name:	WLCGSG07GSW04BSH071004	WLCGSG07GSW04BSL071002	WLCGSG07GSW05BE071008	WLCGSG07GSW05BSH071005	WLCGSG07GSW05BSL071004
Sample Date:	10/4/2007	10/2/2007	10/8/2007	10/5/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05
Sample Name:	WLCGSG07GSW04BSH071004	WLCGSG07GSW04BSL071002	WLCGSG07GSW05BE071008	WLCGSG07GSW05BSH071005	WLCGSG07GSW05BSL071004
Sample Date:	10/4/2007	10/2/2007	10/8/2007	10/5/2007	10/4/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07
Sample Name:	WLCGSG07GSW06BE071008	WLCGSG07GSW06BSH071002	WLCGSG07GSW06BSL071004	WLCGSG07GSW07BE071005	WLCGSG07GSW07BSH071001
Sample Date:	10/8/2007	10/2/2007	10/4/2007	10/5/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07
Sample Name:	WLCGSG07GSW06BE071008	WLCGSG07GSW06BSH071002	WLCGSG07GSW06BSL071004	WLCGSG07GSW07BE071005	WLCGSG07GSW07BSH071001
Sample Date:	10/8/2007	10/2/2007	10/4/2007	10/5/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW07	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW07BSL071003	WLCGSG07GSW08BE071008	WLCGSG07GSW08BSH071002	WLCGSG07GSW08BSL071004	WLCGSG07GSW09BE071001
Sample Date:	10/3/2007	10/8/2007	10/2/2007	10/4/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	**0.02**	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW07	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW07BSL071003	WLCGSG07GSW08BE071008	WLCGSG07GSW08BSH071002	WLCGSG07GSW08BSL071004	WLCGSG07GSW09BE071001
Sample Date:	10/3/2007	10/8/2007	10/2/2007	10/4/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10
Sample Name:	WLCGSG07GSW09BSH071003	WLCGSG07GSW09BSL071008	WLCGSG07GSW10BE071008	WLCGSG07GSW10BSH071002	WLCGSG07GSW10BSL071005
Sample Date:	10/3/2007	10/8/2007	10/8/2007	10/2/2007	10/5/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	**0.01**	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10
Sample Name:	WLCGSG07GSW09BSH071003	WLCGSG07GSW09BSL071008	WLCGSG07GSW10BE071008	WLCGSG07GSW10BSH071002	WLCGSG07GSW10BSL071005
Sample Date:	10/3/2007	10/8/2007	10/8/2007	10/2/2007	10/5/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12
Sample Name:	WLCGSG07GSW11BE071002	WLCGSG07GSW11BSH071003	WLCGSG07GSW11BSL071008	WLCGSG07GSW12BE071001	WLCGSG07GSW12BSH071003
Sample Date:	10/2/2007	10/3/2007	10/8/2007	10/1/2007	10/3/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	**0.02**	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12
Sample Name:	WLCGSG07GSW11BE071002	WLCGSG07GSW11BSH071003	WLCGSG07GSW11BSL071008	WLCGSG07GSW12BE071001	WLCGSG07GSW12BSH071003
Sample Date:	10/2/2007	10/3/2007	10/8/2007	10/1/2007	10/3/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW12	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW12BSL071005	WLCGSG07GSW13BE071001	WLCGSG07GSW13BSH071002	WLCGSG07GSW13BSL071005	WLCGSG07GSW14BE071008
Sample Date:	10/5/2007	10/1/2007	10/2/2007	10/5/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW12	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW12BSL071005	WLCGSG07GSW13BE071001	WLCGSG07GSW13BSH071002	WLCGSG07GSW13BSL071005	WLCGSG07GSW14BE071008
Sample Date:	10/5/2007	10/1/2007	10/2/2007	10/5/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15
Sample Name:	WLCGSG07GSW14BSH071005	WLCGSG07GSW14BSL071002	WLCGSG07GSW15BE071002	WLCGSG07GSW15BSH071004	WLCGSG07GSW15BSL071008
Sample Date:	10/5/2007	10/2/2007	10/2/2007	10/4/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	**0.09**	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15
Sample Name:	WLCGSG07GSW14BSH071005	WLCGSG07GSW14BSL071002	WLCGSG07GSW15BE071002	WLCGSG07GSW15BSH071004	WLCGSG07GSW15BSL071008
Sample Date:	10/5/2007	10/2/2007	10/2/2007	10/4/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17
Sample Name:	WLCGSG07GSW16BE071008	WLCGSG07GSW16BSH071004	WLCGSG07GSW16BSL071008	WLCGSG07GSW17BE071003	WLCGSG07GSW17BSH071009
Sample Date:	10/8/2007	10/4/2007	10/8/2007	10/3/2007	10/9/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17
Sample Name:	WLCGSG07GSW16BE071008	WLCGSG07GSW16BSH071004	WLCGSG07GSW16BSL071008	WLCGSG07GSW17BE071003	WLCGSG07GSW17BSH071009
Sample Date:	10/8/2007	10/4/2007	10/8/2007	10/3/2007	10/9/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW17	WLCGSG07GSW18	WLCGSG07GSW18	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW17BSL071003	WLCGSG07GSW18BE071001	WLCGSG07GSW18BSH071005	WLCGSG07GSW18BSL071008
Sample Date:	10/3/2007	10/1/2007	10/5/2007	10/8/2007
Conventional Parameters (mg/l)				
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)				
Zinc	--	--	--	--
Disolved Metals (µg/l)				
Zinc	--	--	--	--
Volatile Organics (µg/l)				
1,1-Dichloroethene	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--
Benzene	--	--	--	--
Ethylbenzene	--	--	--	--
m,p-Xylene	--	--	--	--
Naphthalene	--	--	--	--
o-Xylene	--	--	--	--
Toluene	--	--	--	--
Trichloroethene (TCE)	--	--	--	--
Vinyl chloride	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)				
2-Methylnaphthalene	--	--	--	--
Acenaphthene	--	--	--	--
Acenaphthylene	--	--	--	--
Anthracene	--	--	--	--
Benzo(a)anthracene	--	--	--	--
Benzo(a)pyrene	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--
Chrysene	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--
Fluoranthene	--	--	--	--
Fluorene	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--
Naphthalene	--	--	--	--
Phenanthrene	--	--	--	--
Pyrene	--	--	--	--
Semivolatile Organics (µg/l)				
Carbazole	--	--	--	--
Dibenzofuran	--	--	--	--
PCB Aroclors (µg/l)				
Aroclor 1016	--	--	--	--
Aroclor 1221	--	--	--	--
Aroclor 1232	--	--	--	--
Aroclor 1242	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Database:	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW17	WLCGSG07GSW18	WLCGSG07GSW18	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW17BSL071003	WLCGSG07GSW18BE071001	WLCGSG07GSW18BSH071005	WLCGSG07GSW18BSL071008
Sample Date:	10/3/2007	10/1/2007	10/5/2007	10/8/2007
Aroclor 1248	--	--	--	--
Aroclor 1254	--	--	--	--
Aroclor 1260	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--
PCB Congeners (ng/l)				
PCB-077	--	--	--	--
PCB-081	--	--	--	--
PCB-105	--	--	--	--
PCB-114	--	--	--	--
PCB-118	--	--	--	--
PCB-123	--	--	--	--
PCB-126	--	--	--	--
PCB-156	--	--	--	--
PCB-157	--	--	--	--
PCB-167	--	--	--	--
PCB-169	--	--	--	--
PCB-189	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--
Pesticides (µg/l)				
2,4'-DDD (o,p'-DDD)	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--
Endrin ketone	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)				
Diesel Range Hydrocarbons	--	--	--	--

Table 3-39
Existing Data Screening Table – Surface Water (Mid-Depth) Human Health

Notes:

Detected concentration is greater than 1 screening level
Detected concentration is greater than 2 screening levels
Detected concentration is greater than 3 screening levels
Detected concentration is greater than 4 screening levels
Detected concentration is greater than 5 screening levels
Detected concentration is greater than 6 screening levels
Detected concentration is greater than 7 screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation
-- = Results not reported or not applicable
N = Normal Field Sample

Acronyms:
µg/kg = micrograms per liter
mg/kg = milligrams per liter
ng/l = nanograms per liter
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
LWG = Lower Willamette Group
PCB = polychlorinated biphenyls
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	LWM-C11	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04
Sample Name:	LWM-SW11	WLCGSG07GSW03BE071005	WLCGSG07GSW03BSH071001	WLCGSG07GSW03BSL071003	WLCGSG07GSW04BE071004
Sample Date:	9/3/2008	10/5/2007	10/1/2007	10/3/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.005 UT	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	4 U	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	0.01 U	--	--	--	--
Acenaphthene	0.01 U	--	--	--	--
Acenaphthylene	0.01 U	--	--	--	--
Anthracene	0.01 U	--	--	--	--
Benzo(a)anthracene	0.01 U	--	--	--	--
Benzo(a)pyrene	0.01 UJ	--	--	--	--
Benzo(b)fluoranthene	0.01 U	--	--	--	--
Benzo(g,h,i)perylene	0.01 U	--	--	--	--
Benzo(k)fluoranthene	0.01 U	--	--	--	--
Chrysene	0.01 U	--	--	--	--
Dibenzo(a,h)anthracene	0.01 U	--	--	--	--
Fluoranthene	**0.016**	--	--	--	--
Fluorene	0.01 U	--	--	--	--
Indeno(1,2,3-c,d)pyrene	0.01 U	--	--	--	--
Naphthalene	**0.016**	--	--	--	--
Phenanthrene	0.01 U	--	--	--	--
Pyrene	**0.02**	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	0.01 U	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	0.011 U	--	--	--	--
Aroclor 1221	0.011 U	--	--	--	--
Aroclor 1232	0.011 U	--	--	--	--
Aroclor 1242	0.011 U	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	LWM-C11	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04
Sample Name:	LWM-SW11	WLCGSG07GSW03BE071005	WLCGSG07GSW03BSH071001	WLCGSG07GSW03BSL071003	WLCGSG07GSW04BE071004
Sample Date:	9/3/2008	10/5/2007	10/1/2007	10/3/2007	10/4/2007
Aroclor 1248	0.011 U	--	--	--	--
Aroclor 1254	0.011 U	--	--	--	--
Aroclor 1260	0.011 U	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	0.00801 U	--	--	--	--
PCB-081	0.00749 U	--	--	--	--
PCB-105	0.0115 U	--	--	--	--
PCB-114	0.0131 U	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	0.011 U	--	--	--	--
PCB-126	0.0125 U	--	--	--	--
PCB-156	0.0064 U	--	--	--	--
PCB-157	0.0071 U	--	--	--	--
PCB-167	0.00731 U	--	--	--	--
PCB-169	0.00757 U	--	--	--	--
PCB-189	0.00507 U	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	**2.2 JT**	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	0.0013 UT	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	0.01 U	--	--	--	--
2,4'-DDE (o,p'-DDE)	0.01 U	--	--	--	--
2,4'-DDT (o,p'-DDT)	0.01 U	--	--	--	--
4,4'-DDD (p,p'-DDD)	0.01 U	--	--	--	--
4,4'-DDE (p,p'-DDE)	0.01 U	--	--	--	--
4,4'-DDT (p,p'-DDT)	0.01 U	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.005 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.005 U	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.005 U	--	--	--	--
Endrin ketone	0.01 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.005 U	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	0.01 UT	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	0.01 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	0.01 UT	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	0.01 UT	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	0.25 U	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05
Sample Name:	WLCGSG07GSW04BSH071004	WLCGSG07GSW04BSL071002	WLCGSG07GSW05BE071008	WLCGSG07GSW05BSH071005	WLCGSG07GSW05BSL071004
Sample Date:	10/4/2007	10/2/2007	10/8/2007	10/5/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05
Sample Name:	WLCGSG07GSW04BSH071004	WLCGSG07GSW04BSL071002	WLCGSG07GSW05BE071008	WLCGSG07GSW05BSH071005	WLCGSG07GSW05BSL071004
Sample Date:	10/4/2007	10/2/2007	10/8/2007	10/5/2007	10/4/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07
Sample Name:	WLCGSG07GSW06BE071008	WLCGSG07GSW06BSH071002	WLCGSG07GSW06BSL071004	WLCGSG07GSW07BE071005	WLCGSG07GSW07BSH071001
Sample Date:	10/8/2007	10/2/2007	10/4/2007	10/5/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07
Sample Name:	WLCGSG07GSW06BE071008	WLCGSG07GSW06BSH071002	WLCGSG07GSW06BSL071004	WLCGSG07GSW07BE071005	WLCGSG07GSW07BSH071001
Sample Date:	10/8/2007	10/2/2007	10/4/2007	10/5/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW07	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW07BSL071003	WLCGSG07GSW08BE071008	WLCGSG07GSW08BSH071002	WLCGSG07GSW08BSL071004	WLCGSG07GSW09BE071001
Sample Date:	10/3/2007	10/8/2007	10/2/2007	10/4/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	**0.02**	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW07	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW07BSL071003	WLCGSG07GSW08BE071008	WLCGSG07GSW08BSH071002	WLCGSG07GSW08BSL071004	WLCGSG07GSW09BE071001
Sample Date:	10/3/2007	10/8/2007	10/2/2007	10/4/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10
Sample Name:	WLCGSG07GSW09BSH071003	WLCGSG07GSW09BSL071008	WLCGSG07GSW10BE071008	WLCGSG07GSW10BSH071002	WLCGSG07GSW10BSL071005
Sample Date:	10/3/2007	10/8/2007	10/8/2007	10/2/2007	10/5/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	**0.01**	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10
Sample Name:	WLCGSG07GSW09BSH071003	WLCGSG07GSW09BSL071008	WLCGSG07GSW10BE071008	WLCGSG07GSW10BSH071002	WLCGSG07GSW10BSL071005
Sample Date:	10/3/2007	10/8/2007	10/8/2007	10/2/2007	10/5/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12
Sample Name:	WLCGSG07GSW11BE071002	WLCGSG07GSW11BSH071003	WLCGSG07GSW11BSL071008	WLCGSG07GSW12BE071001	WLCGSG07GSW12BSH071003
Sample Date:	10/2/2007	10/3/2007	10/8/2007	10/1/2007	10/3/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	**0.02**	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12
Sample Name:	WLCGSG07GSW11BE071002	WLCGSG07GSW11BSH071003	WLCGSG07GSW11BSL071008	WLCGSG07GSW12BE071001	WLCGSG07GSW12BSH071003
Sample Date:	10/2/2007	10/3/2007	10/8/2007	10/1/2007	10/3/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW12	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW12BSL071005	WLCGSG07GSW13BE071001	WLCGSG07GSW13BSH071002	WLCGSG07GSW13BSL071005	WLCGSG07GSW14BE071008
Sample Date:	10/5/2007	10/1/2007	10/2/2007	10/5/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW12	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW12BSL071005	WLCGSG07GSW13BE071001	WLCGSG07GSW13BSH071002	WLCGSG07GSW13BSL071005	WLCGSG07GSW14BE071008
Sample Date:	10/5/2007	10/1/2007	10/2/2007	10/5/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15
Sample Name:	WLCGSG07GSW14BSH071005	WLCGSG07GSW14BSL071002	WLCGSG07GSW15BE071002	WLCGSG07GSW15BSH071004	WLCGSG07GSW15BSL071008
Sample Date:	10/5/2007	10/2/2007	10/2/2007	10/4/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	**0.09**	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15
Sample Name:	WLCGSG07GSW14BSH071005	WLCGSG07GSW14BSL071002	WLCGSG07GSW15BE071002	WLCGSG07GSW15BSH071004	WLCGSG07GSW15BSL071008
Sample Date:	10/5/2007	10/2/2007	10/2/2007	10/4/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17
Sample Name:	WLCGSG07GSW16BE071008	WLCGSG07GSW16BSH071004	WLCGSG07GSW16BSL071008	WLCGSG07GSW17BE071003	WLCGSG07GSW17BSH071009
Sample Date:	10/8/2007	10/4/2007	10/8/2007	10/3/2007	10/9/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17
Sample Name:	WLCGSG07GSW16BE071008	WLCGSG07GSW16BSH071004	WLCGSG07GSW16BSL071008	WLCGSG07GSW17BE071003	WLCGSG07GSW17BSH071009
Sample Date:	10/8/2007	10/4/2007	10/8/2007	10/3/2007	10/9/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW17	WLCGSG07GSW18	WLCGSG07GSW18	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW17BSL071003	WLCGSG07GSW18BE071001	WLCGSG07GSW18BSH071005	WLCGSG07GSW18BSL071008
Sample Date:	10/3/2007	10/1/2007	10/5/2007	10/8/2007
Conventional Parameters (mg/l)				
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)				
Zinc	--	--	--	--
Disolved Metals (µg/l)				
Zinc	--	--	--	--
Volatile Organics (µg/l)				
1,1-Dichloroethene	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--
Benzene	--	--	--	--
Ethylbenzene	--	--	--	--
m,p-Xylene	--	--	--	--
Naphthalene	--	--	--	--
o-Xylene	--	--	--	--
Toluene	--	--	--	--
Trichloroethene (TCE)	--	--	--	--
Vinyl chloride	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)				
2-Methylnaphthalene	--	--	--	--
Acenaphthene	--	--	--	--
Acenaphthylene	--	--	--	--
Anthracene	--	--	--	--
Benzo(a)anthracene	--	--	--	--
Benzo(a)pyrene	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--
Chrysene	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--
Fluoranthene	--	--	--	--
Fluorene	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--
Naphthalene	--	--	--	--
Phenanthrene	--	--	--	--
Pyrene	--	--	--	--
Semivolatile Organics (µg/l)				
Carbazole	--	--	--	--
Dibenzofuran	--	--	--	--
PCB Aroclors (µg/l)				
Aroclor 1016	--	--	--	--
Aroclor 1221	--	--	--	--
Aroclor 1232	--	--	--	--
Aroclor 1242	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-depth) Ecological

Database:	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW17	WLCGSG07GSW18	WLCGSG07GSW18	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW17BSL071003	WLCGSG07GSW18BE071001	WLCGSG07GSW18BSH071005	WLCGSG07GSW18BSL071008
Sample Date:	10/3/2007	10/1/2007	10/5/2007	10/8/2007
Aroclor 1248	--	--	--	--
Aroclor 1254	--	--	--	--
Aroclor 1260	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--
PCB Congeners (ng/l)				
PCB-077	--	--	--	--
PCB-081	--	--	--	--
PCB-105	--	--	--	--
PCB-114	--	--	--	--
PCB-118	--	--	--	--
PCB-123	--	--	--	--
PCB-126	--	--	--	--
PCB-156	--	--	--	--
PCB-157	--	--	--	--
PCB-167	--	--	--	--
PCB-169	--	--	--	--
PCB-189	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--
Pesticides (µg/l)				
2,4'-DDD (o,p'-DDD)	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--
Endrin ketone	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)				
Diesel Range Hydrocarbons	--	--	--	--

Table 3-40
Existing Data Screening Table – Surface Water (Mid-Depth) Ecological

Notes:

Detected concentration is greater than 1 screening level

Detected concentration is greater than 2 screening levels

Detected concentration is greater than 3 screening levels

Detected concentration is greater than 4 screening levels

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R = Rejected

T = Result is the value of a total or calculation

-- = Results not reported or not applicable

N = Normal Field Sample

Acronyms:

µg/kg = micrograms per liter

mg/kg = milligrams per liter

ng/l = nanograms per liter

BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

LWG = Lower Willamette Group

PCB = polychlorinated biphenyls

RA = Portland Harbor Site risk assessment

TEQ = toxic equivalents quotient

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	LWM-C11	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04
Sample Name:	LWM-SW11	WLCGSG07GSW03BE071005	WLCGSG07GSW03BSH071001	WLCGSG07GSW03BSL071003	WLCGSG07GSW04BE071004
Sample Date:	9/3/2008	10/5/2007	10/1/2007	10/3/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.005 UT	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	4 U	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	0.01 U	--	--	--	--
Acenaphthene	0.01 U	--	--	--	--
Acenaphthylene	0.01 U	--	--	--	--
Anthracene	0.01 U	--	--	--	--
Benzo(a)anthracene	0.01 U	--	--	--	--
Benzo(a)pyrene	0.01 UJ	--	--	--	--
Benzo(b)fluoranthene	0.01 U	--	--	--	--
Benzo(g,h,i)perylene	0.01 U	--	--	--	--
Benzo(k)fluoranthene	0.01 U	--	--	--	--
Chrysene	0.01 U	--	--	--	--
Dibenzo(a,h)anthracene	0.01 U	--	--	--	--
Fluoranthene	**0.016**	--	--	--	--
Fluorene	0.01 U	--	--	--	--
Indeno(1,2,3-c,d)pyrene	0.01 U	--	--	--	--
Naphthalene	**0.016**	--	--	--	--
Phenanthrene	0.01 U	--	--	--	--
Pyrene	**0.02**	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	0.01 U	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	0.011 U	--	--	--	--
Aroclor 1221	0.011 U	--	--	--	--
Aroclor 1232	0.011 U	--	--	--	--
Aroclor 1242	0.011 U	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	LWM-C11	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04
Sample Name:	LWM-SW11	WLCGSG07GSW03BE071005	WLCGSG07GSW03BSH071001	WLCGSG07GSW03BSL071003	WLCGSG07GSW04BE071004
Sample Date:	9/3/2008	10/5/2007	10/1/2007	10/3/2007	10/4/2007
Aroclor 1248	0.011 U	--	--	--	--
Aroclor 1254	0.011 U	--	--	--	--
Aroclor 1260	0.011 U	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	0.00801 U	--	--	--	--
PCB-081	0.00749 U	--	--	--	--
PCB-105	0.0115 U	--	--	--	--
PCB-114	0.0131 U	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	0.011 U	--	--	--	--
PCB-126	0.0125 U	--	--	--	--
PCB-156	0.0064 U	--	--	--	--
PCB-157	0.0071 U	--	--	--	--
PCB-167	0.00731 U	--	--	--	--
PCB-169	0.00757 U	--	--	--	--
PCB-189	0.00507 U	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	**2.2 JT**	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	0.0013 UT	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	0.01 U	--	--	--	--
2,4'-DDE (o,p'-DDE)	0.01 U	--	--	--	--
2,4'-DDT (o,p'-DDT)	0.01 U	--	--	--	--
4,4'-DDD (p,p'-DDD)	0.01 U	--	--	--	--
4,4'-DDE (p,p'-DDE)	0.01 U	--	--	--	--
4,4'-DDT (p,p'-DDT)	0.01 U	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	0.005 U	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	0.005 U	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	0.005 U	--	--	--	--
Endrin ketone	0.01 U	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	0.005 U	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	0.01 UT	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	0.01 UT	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	0.01 UT	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	0.01 UT	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	0.25 U	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05
Sample Name:	WLCGSG07GSW04BSH071004	WLCGSG07GSW04BSL071002	WLCGSG07GSW05BE071008	WLCGSG07GSW05BSH071005	WLCGSG07GSW05BSL071004
Sample Date:	10/4/2007	10/2/2007	10/8/2007	10/5/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05
Sample Name:	WLCGSG07GSW04BSH071004	WLCGSG07GSW04BSL071002	WLCGSG07GSW05BE071008	WLCGSG07GSW05BSH071005	WLCGSG07GSW05BSL071004
Sample Date:	10/4/2007	10/2/2007	10/8/2007	10/5/2007	10/4/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07
Sample Name:	WLCGSG07GSW06BE071008	WLCGSG07GSW06BSH071002	WLCGSG07GSW06BSL071004	WLCGSG07GSW07BE071005	WLCGSG07GSW07BSH071001
Sample Date:	10/8/2007	10/2/2007	10/4/2007	10/5/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07
Sample Name:	WLCGSG07GSW06BE071008	WLCGSG07GSW06BSH071002	WLCGSG07GSW06BSL071004	WLCGSG07GSW07BE071005	WLCGSG07GSW07BSH071001
Sample Date:	10/8/2007	10/2/2007	10/4/2007	10/5/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW07	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW07BSL071003	WLCGSG07GSW08BE071008	WLCGSG07GSW08BSH071002	WLCGSG07GSW08BSL071004	WLCGSG07GSW09BE071001
Sample Date:	10/3/2007	10/8/2007	10/2/2007	10/4/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	**0.02**	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW07	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW07BSL071003	WLCGSG07GSW08BE071008	WLCGSG07GSW08BSH071002	WLCGSG07GSW08BSL071004	WLCGSG07GSW09BE071001
Sample Date:	10/3/2007	10/8/2007	10/2/2007	10/4/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10
Sample Name:	WLCGSG07GSW09BSH071003	WLCGSG07GSW09BSL071008	WLCGSG07GSW10BE071008	WLCGSG07GSW10BSH071002	WLCGSG07GSW10BSL071005
Sample Date:	10/3/2007	10/8/2007	10/8/2007	10/2/2007	10/5/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	**0.01**	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10
Sample Name:	WLCGSG07GSW09BSH071003	WLCGSG07GSW09BSL071008	WLCGSG07GSW10BE071008	WLCGSG07GSW10BSH071002	WLCGSG07GSW10BSL071005
Sample Date:	10/3/2007	10/8/2007	10/8/2007	10/2/2007	10/5/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12
Sample Name:	WLCGSG07GSW11BE071002	WLCGSG07GSW11BSH071003	WLCGSG07GSW11BSL071008	WLCGSG07GSW12BE071001	WLCGSG07GSW12BSH071003
Sample Date:	10/2/2007	10/3/2007	10/8/2007	10/1/2007	10/3/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	**0.02**	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12
Sample Name:	WLCGSG07GSW11BE071002	WLCGSG07GSW11BSH071003	WLCGSG07GSW11BSL071008	WLCGSG07GSW12BE071001	WLCGSG07GSW12BSH071003
Sample Date:	10/2/2007	10/3/2007	10/8/2007	10/1/2007	10/3/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW12	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW12BSL071005	WLCGSG07GSW13BE071001	WLCGSG07GSW13BSH071002	WLCGSG07GSW13BSL071005	WLCGSG07GSW14BE071008
Sample Date:	10/5/2007	10/1/2007	10/2/2007	10/5/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW12	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW12BSL071005	WLCGSG07GSW13BE071001	WLCGSG07GSW13BSH071002	WLCGSG07GSW13BSL071005	WLCGSG07GSW14BE071008
Sample Date:	10/5/2007	10/1/2007	10/2/2007	10/5/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15
Sample Name:	WLCGSG07GSW14BSH071005	WLCGSG07GSW14BSL071002	WLCGSG07GSW15BE071002	WLCGSG07GSW15BSH071004	WLCGSG07GSW15BSL071008
Sample Date:	10/5/2007	10/2/2007	10/2/2007	10/4/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	**0.09**	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15
Sample Name:	WLCGSG07GSW14BSH071005	WLCGSG07GSW14BSL071002	WLCGSG07GSW15BE071002	WLCGSG07GSW15BSH071004	WLCGSG07GSW15BSL071008
Sample Date:	10/5/2007	10/2/2007	10/2/2007	10/4/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17
Sample Name:	WLCGSG07GSW16BE071008	WLCGSG07GSW16BSH071004	WLCGSG07GSW16BSL071008	WLCGSG07GSW17BE071003	WLCGSG07GSW17BSH071009
Sample Date:	10/8/2007	10/4/2007	10/8/2007	10/3/2007	10/9/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17
Sample Name:	WLCGSG07GSW16BE071008	WLCGSG07GSW16BSH071004	WLCGSG07GSW16BSL071008	WLCGSG07GSW17BE071003	WLCGSG07GSW17BSH071009
Sample Date:	10/8/2007	10/4/2007	10/8/2007	10/3/2007	10/9/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW17	WLCGSG07GSW18	WLCGSG07GSW18	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW17BSL071003	WLCGSG07GSW18BE071001	WLCGSG07GSW18BSH071005	WLCGSG07GSW18BSL071008
Sample Date:	10/3/2007	10/1/2007	10/5/2007	10/8/2007
Conventional Parameters (mg/l)				
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)				
Zinc	--	--	--	--
Disolved Metals (µg/l)				
Zinc	--	--	--	--
Volatile Organics (µg/l)				
1,1-Dichloroethene	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--
Benzene	--	--	--	--
Ethylbenzene	--	--	--	--
m,p-Xylene	--	--	--	--
Naphthalene	--	--	--	--
o-Xylene	--	--	--	--
Toluene	--	--	--	--
Trichloroethene (TCE)	--	--	--	--
Vinyl chloride	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)				
2-Methylnaphthalene	--	--	--	--
Acenaphthene	--	--	--	--
Acenaphthylene	--	--	--	--
Anthracene	--	--	--	--
Benzo(a)anthracene	--	--	--	--
Benzo(a)pyrene	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--
Chrysene	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--
Fluoranthene	--	--	--	--
Fluorene	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--
Naphthalene	--	--	--	--
Phenanthrene	--	--	--	--
Pyrene	--	--	--	--
Semivolatile Organics (µg/l)				
Carbazole	--	--	--	--
Dibenzofuran	--	--	--	--
PCB Aroclors (µg/l)				
Aroclor 1016	--	--	--	--
Aroclor 1221	--	--	--	--
Aroclor 1232	--	--	--	--
Aroclor 1242	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Database:	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid	Gasco RM6-6.7_WS_Mid
System Location Code:	WLCGSG07GSW17	WLCGSG07GSW18	WLCGSG07GSW18	WLCGSG07GSW18
Sample Name:	WLCGSG07GSW17BSL071003	WLCGSG07GSW18BE071001	WLCGSG07GSW18BSH071005	WLCGSG07GSW18BSL071008
Sample Date:	10/3/2007	10/1/2007	10/5/2007	10/8/2007
Aroclor 1248	--	--	--	--
Aroclor 1254	--	--	--	--
Aroclor 1260	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--
PCB Congeners (ng/l)				
PCB-077	--	--	--	--
PCB-081	--	--	--	--
PCB-105	--	--	--	--
PCB-114	--	--	--	--
PCB-118	--	--	--	--
PCB-123	--	--	--	--
PCB-126	--	--	--	--
PCB-156	--	--	--	--
PCB-157	--	--	--	--
PCB-167	--	--	--	--
PCB-169	--	--	--	--
PCB-189	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--
Pesticides (µg/l)				
2,4'-DDD (o,p'-DDD)	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--
Endrin ketone	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)				
Diesel Range Hydrocarbons	--	--	--	--

Table 3-41
Existing Data Screening Table – Surface Water (Mid-Depth) Background

Notes:
Detected concentration is greater than 1 screening level

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation
-- = Results not reported or not applicable
N = Normal Field Sample

Acronyms:
µg/kg = micrograms per liter
mg/kg = milligrams per liter
ng/l = nanograms per liter
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
LWG = Lower Willamette Group
PCB = polychlorinated biphenyls
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	LW3-W031	LW3-W031	LW3-W031	LW3-W031	LW3-W031
Sample Name:	LW3-W3031-NB	LW3-W3031-NB	LW3-W3031-NB-C	LW3-W3031-NB-F	LW3-W4031-NB
Sample Date:	11/5/2006	11/5/2006	11/5/2006	11/5/2006	2/24/2007
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	3.4 U	--	--	--
Disolved Metals (µg/l)					
Zinc	--	2.6 U	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	0.0084 U	--	--	--
Acenaphthene	--	0.0062 U	--	--	--
Acenaphthylene	--	0.0046 U	--	--	--
Anthracene	--	0.0078 U	--	--	--
Benzo(a)anthracene	--	0.0078 U	--	--	--
Benzo(a)pyrene	--	0.0086 U	--	--	--
Benzo(b)fluoranthene	--	0.0092 U	--	--	--
Benzo(g,h,i)perylene	--	0.0082 U	--	--	--
Benzo(k)fluoranthene	--	0.011 U	--	--	--
Chrysene	--	0.011 U	--	--	--
Dibenzo(a,h)anthracene	--	0.0072 U	--	--	--
Fluoranthene	--	**0.018**	--	--	--
Fluorene	--	0.0072 U	--	--	--
Indeno(1,2,3-c,d)pyrene	--	0.0066 U	--	--	--
Naphthalene	--	0.013 U	--	--	--
Phenanthrene	--	0.0089 U	--	--	--
Pyrene	--	**0.014 J**	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	0.013 U	--	--	--
Dibenzofuran	--	0.0076 U	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	LW3-W031	LW3-W031	LW3-W031	LW3-W031	LW3-W031
Sample Name:	LW3-W3031-NB	LW3-W3031-NB	LW3-W3031-NB-C	LW3-W3031-NB-F	LW3-W4031-NB
Sample Date:	11/5/2006	11/5/2006	11/5/2006	11/5/2006	2/24/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	**0.000568 JT**	--	**0.000279**	**0.000289 J**	**0.000553 T**
PCB-081	0.000444 UT	--	0.000176 U	0.000444 U	9.5E-05 UT
PCB-105	**0.0029 T**	--	**0.00111**	**0.00179**	**0.005 T**
PCB-114	9.9E-05 UT	--	8.4E-05 U	9.9E-05 U	**0.00029 JT**
PCB-118	**0.0071 T**	--	**0.00282**	**0.0043**	**0.0116 T**
PCB-123	**6.7E-05 JT**	--	8.9E-05 U	**6.7E-05 J**	**0.00015 T**
PCB-126	**3.4E-05 JT**	--	**3.4E-05 J**	0.000222 U	**5.7E-05 T**
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	**0.000137 JT**	--	**0.000137 J**	0.000299 U	**0.00085 T**
PCB-169	0.000706 UT	--	0.000706 U	0.000178 U	4.5E-05 UT
PCB-189	7.2E-05 UT	--	5.2E-05 U	7.2E-05 U	**0.00032 T**
LWG RA Total PCB Congener (Calculated U = 1/2)	**0.29 T**	--	**0.18 JT**	**0.13 JT**	**0.46 T**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**1.4E-05 T**	--	**1.4E-05 JT**	**1.4E-05 JT**	**7.1E-06 T**
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	**5.47E-05 JT**	--	**3.52E-05 J**	**1.95E-05 J**	**0.000102 T**
2,4'-DDE (o,p'-DDE)	**5.8E-06 JT**	--	**3.3E-06 J**	**2.49E-06 J**	**2.16E-05 JT**
2,4'-DDT (o,p'-DDT)	**5.32E-06 JT**	--	5.77E-06 U	**5.32E-06 J**	**4.88E-05 JT**
4,4'-DDD (p,p'-DDD)	**0.000125 JT**	--	**6.85E-05 J**	**5.68E-05 J**	**0.00032 T**
4,4'-DDE (p,p'-DDE)	**7.96E-05 JT**	--	**4.52E-05 J**	**3.44E-05 J**	**0.00022 T**
4,4'-DDT (p,p'-DDT)	**4.05E-05 JT**	--	**1.44E-05 J**	**2.61E-05 J**	**0.00014 T**
alpha-Hexachlorocyclohexane (BHC)	**2.94E-05 JT**	--	**2.94E-05 J**	1.42E-06 U	**2.04E-05 JT**
beta-Hexachlorocyclohexane (BHC)	**2.1E-06 JT**	--	7.15E-06 U	**2.1E-06 J**	**8.91E-06 JT**
delta-Hexachlorocyclohexane (BHC)	9.68E-06 UT	--	9.68E-06 U	9.41E-06 U	**3.88E-06 JT**
Endrin ketone	1.21E-05 UT	--	1.21E-05 U	1.18E-05 U	**4.03E-06 JT**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**2.92E-05 JT**	--	**2.79E-05 J**	**1.28E-06 J**	**2.17E-05 JT**
LWG RA Sum DDD (Calculated U = 1/2)	**0.00018 T**	--	**0.000104 JT**	**7.63E-05 JT**	**0.000422 T**
LWG RA Sum DDE (Calculated U = 1/2)	**8.5E-05 T**	--	**4.9E-05 JT**	**3.69E-05 JT**	**0.000242 T**
LWG RA Sum DDT (Calculated U = 1/2)	**4.58E-05 T**	--	**1.73E-05 JT**	**3.14E-05 JT**	**0.00019 T**
LWG RA Total DDx (Calculated U = 1/2)	**0.00031 T**	--	**0.00017 JT**	**0.000145 JT**	**0.00085 T**
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	LW3-W031	LW3-W031	LW3-W031	PCM-01Y1E2	PCM-01Y3E2
Sample Name:	LW3-W4031-NB	LW3-W4031-NB-C	LW3-W4031-NB-F	PCM-01 TSW-071211	PCM-01-DSW-091209
Sample Date:	2/24/2007	2/24/2007	2/24/2007	12/11/2007	12/9/2009
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	0.01 U
Cyanide, total	--	--	--	--	0.01 U
Metals (µg/l)					
Zinc	**8.4**	--	--	--	--
Disolved Metals (µg/l)					
Zinc	2.2 U	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	**0.04 J**
Ethylbenzene	--	--	--	--	0.5 U
m,p-Xylene	--	--	--	--	0.5 U
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	0.5 U
Toluene	--	--	--	--	**0.08 J**
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	**0.62**	--	--	--	**0.0032 J**
Acenaphthene	**0.21**	--	--	**72 J**	**0.0047 J**
Acenaphthylene	**0.033**	--	--	10 UJ	0.021 U
Anthracene	**0.48**	--	--	**76 J**	0.021 U
Benzo(a)anthracene	**0.27**	--	--	**83 J**	0.021 U
Benzo(a)pyrene	**0.19**	--	--	**12 J**	0.021 U
Benzo(b)fluoranthene	**0.13**	--	--	**11 J**	0.021 U
Benzo(g,h,i)perylene	**0.14**	--	--	10 UJ	0.021 U
Benzo(k)fluoranthene	**0.13**	--	--	**11 J**	0.021 U
Chrysene	**0.37**	--	--	**96 J**	0.021 U
Dibenzo(a,h)anthracene	**0.024**	--	--	10 UJ	0.021 U
Fluoranthene	**0.81**	--	--	**620 J**	**0.0066 J**
Fluorene	**0.31**	--	--	**63 J**	0.021 U
Indeno(1,2,3-c,d)pyrene	**0.12**	--	--	10 UJ	0.021 U
Naphthalene	**0.083**	--	--	90 UJ	**0.031**
Phenanthrene	**2.2**	--	--	**370 J**	**0.0083 J**
Pyrene	**1.3**	--	--	**580 J**	**0.0053 J**
Semivolatile Organics (µg/l)					
Carbazole	**0.16 J**	--	--	--	--
Dibenzofuran	**0.046**	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	LW3-W031	LW3-W031	LW3-W031	PCM-01Y1E2	PCM-01Y3E2
Sample Name:	LW3-W4031-NB	LW3-W4031-NB-C	LW3-W4031-NB-F	PCM-01 TSW-071211	PCM-01-DSW-091209
Sample Date:	2/24/2007	2/24/2007	2/24/2007	12/11/2007	12/9/2009
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	0.000147 U	**0.000553**	--	--
PCB-081	--	9.5E-05 U	1.7E-05 U	--	--
PCB-105	--	**0.000639**	**0.00436**	--	--
PCB-114	--	**4.7E-05 J**	**0.000242**	--	--
PCB-118	--	**0.00154**	**0.0101**	--	--
PCB-123	--	3.9E-05 U	**0.000154**	--	--
PCB-126	--	4.75E-05 U	**5.7E-05**	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	6.8E-05 U	**0.000854**	--	--
PCB-169	--	3.8E-05 U	4.52E-05 U	--	--
PCB-189	--	1.8E-05 U	**0.000319**	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	**0.11 JT**	**0.35 JT**	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	**3E-06 JT**	**7E-06 T**	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	**4.98E-05**	**5.19E-05**	--	--
2,4'-DDE (o,p'-DDE)	--	**6.83E-06 J**	**1.48E-05 J**	--	--
2,4'-DDT (o,p'-DDT)	--	**2.67E-05 J**	**2.21E-05 J**	--	--
4,4'-DDD (p,p'-DDD)	--	**8.72E-05**	**0.000233**	--	--
4,4'-DDE (p,p'-DDE)	--	**6.22E-05**	**0.000158**	--	--
4,4'-DDT (p,p'-DDT)	--	**5.4E-05**	**8.99E-05**	--	--
alpha-Hexachlorocyclohexane (BHC)	--	**2.04E-05 J**	2.41E-06 U	--	--
beta-Hexachlorocyclohexane (BHC)	--	**8.91E-06 J**	2.89E-06 U	--	--
delta-Hexachlorocyclohexane (BHC)	--	**3.88E-06 J**	3.13E-07 U	--	--
Endrin ketone	--	**4.03E-06 J**	2.41E-06 U	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	**2.17E-05 J**	5.16E-07 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	**0.000137 T**	**0.000285 T**	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	**6.9E-05 JT**	**0.000173 JT**	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	**8.1E-05 JT**	**0.000112 JT**	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	**0.00029 JT**	**0.00057 JT**	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-02Y1E2	PCM-02Y3E2	PCM-03Y1E2	PCM-03Y3E2	PCM-04Y1E2
Sample Name:	PCM-02 TSW-071211	PCM-02-DSW-091209	PCM-03 TSW-071211	PCM-03-DSW-091209	PCM-04 TSW-071211
Sample Date:	12/11/2007	12/9/2009	12/11/2007	12/9/2009	12/11/2007
Conventional Parameters (mg/l)					
Cyanide, free	--	0.01 U	--	0.01 U	--
Cyanide, total	--	0.01 U	--	0.01 U	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	**0.05 J**	--	**0.05 J**	--
Ethylbenzene	--	0.5 U	--	0.5 U	--
m,p-Xylene	--	0.5 U	--	0.5 U	--
Naphthalene	--	--	--	--	--
o-Xylene	--	0.5 U	--	0.5 U	--
Toluene	--	**0.11 J**	--	**0.08 J**	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	0.5 UT	--	0.5 UT	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	**0.0073 J**	--	**0.0055 J**	--
Acenaphthene	**200 J**	**0.019 J**	**180 J**	**0.014 J**	**210 J**
Acenaphthylene	**12 J**	0.02 U	**13 J**	0.02 U	**17 J**
Anthracene	**280 J**	**0.0075 J**	**330 J**	**0.0051 J**	**640 J**
Benzo(a)anthracene	**240 J**	0.02 U	**320 J**	0.02 U	**540 J**
Benzo(a)pyrene	**41 J**	**0.0067 J**	**43 J**	**0.0048 J**	**63 J**
Benzo(b)fluoranthene	**31 J**	**0.0064 J**	**63 J**	**0.0042 J**	**89 J**
Benzo(g,h,i)perylene	10 UJ	0.02 U	10 UJ	0.02 U	**13 J**
Benzo(k)fluoranthene	**31 J**	0.02 U	**16 J**	0.02 U	**24 J**
Chrysene	**250 J**	**0.0061 J**	**320 J**	**0.0052 J**	**500 J**
Dibenzo(a,h)anthracene	10 UJ	0.02 U	10 UJ	0.02 U	10 UJ
Fluoranthene	**990 J**	**0.025**	**1700 J**	**0.015 J**	**2400 J**
Fluorene	**93 J**	**0.012 J**	**110 J**	**0.0066 J**	**120 J**
Indeno(1,2,3-c,d)pyrene	10 UJ	**0.0047 J**	10 UJ	**0.0035 J**	10 UJ
Naphthalene	140 UJ	**0.067**	120 UJ	**0.077**	98 UJ
Phenanthrene	**650 J**	**0.029**	**790 J**	**0.02**	**950 J**
Pyrene	**2200 J**	**0.024**	**1300 J**	**0.017 J**	**1900 J**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-02Y1E2	PCM-02Y3E2	PCM-03Y1E2	PCM-03Y3E2	PCM-04Y1E2
Sample Name:	PCM-02 TSW-071211	PCM-02-DSW-091209	PCM-03 TSW-071211	PCM-03-DSW-091209	PCM-04 TSW-071211
Sample Date:	12/11/2007	12/9/2009	12/11/2007	12/9/2009	12/11/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-04Y3E2	PCM-05Y1E2	PCM-05Y3E2	PCM-06Y1E2	PCM-06Y3E2
Sample Name:	PCM-04-DSW-091209	PCM-05 TSW-071211	PCM-05-DSW-091209	PCM-06 TSW-071211	PCM-06-DSW-091209
Sample Date:	12/9/2009	12/11/2007	12/9/2009	12/11/2007	12/9/2009
Conventional Parameters (mg/l)					
Cyanide, free	0.01 U	--	0.01 U	--	0.01 U
Cyanide, total	0.01 U	--	0.01 U	--	0.01 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	**0.05 J**	--	0.5 U	--	0.5 U
Ethylbenzene	0.5 U	--	0.5 U	--	0.5 U
m,p-Xylene	0.5 U	--	0.5 U	--	0.5 U
Naphthalene	--	--	--	--	--
o-Xylene	0.5 U	--	0.5 U	--	0.5 U
Toluene	**0.08 J**	--	**0.08 J**	--	**0.06 J**
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	--	0.5 UT	--	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	**0.0078 J**	--	**0.0082 J**	--	**0.0046 J**
Acenaphthene	**0.013 J**	**200 J**	**0.02 J**	**170 J**	**0.0073 J**
Acenaphthylene	**0.0041 J**	10 UJ	0.02 U	**11 J**	0.02 U
Anthracene	**0.0047 J**	**360 J**	**0.007 J**	**320 J**	0.02 U
Benzo(a)anthracene	0.02 U	**400 J**	0.02 U	**240 J**	0.02 U
Benzo(a)pyrene	0.02 U	**45 J**	**0.0065 J**	**28 J**	0.02 U
Benzo(b)fluoranthene	**0.0053 J**	**57 J**	**0.0061 J**	**42 J**	0.02 U
Benzo(g,h,i)perylene	0.02 U	10 UJ	0.02 U	10 UJ	0.02 U
Benzo(k)fluoranthene	0.02 U	**21 J**	0.02 U	**11 J**	0.02 U
Chrysene	**0.0048 J**	**380 J**	**0.008 J**	**250 J**	0.02 U
Dibenzo(a,h)anthracene	0.02 U	10 UJ	0.02 U	10 UJ	0.02 U
Fluoranthene	**0.019 J**	**1400 J**	**0.025**	**910 J**	**0.0091 J**
Fluorene	**0.0058 J**	**78 J**	**0.011 J**	**86 J**	**0.0041 J**
Indeno(1,2,3-c,d)pyrene	**0.0039 J**	10 UJ	**0.0038 J**	10 UJ	0.02 U
Naphthalene	**0.075**	250 UJ	**0.096**	130 UJ	**0.057**
Phenanthrene	**0.02 J**	**540 J**	**0.027**	**530 J**	**0.011 J**
Pyrene	**0.021**	**1100 J**	**0.027**	**810 J**	**0.0094 J**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-04Y3E2	PCM-05Y1E2	PCM-05Y3E2	PCM-06Y1E2	PCM-06Y3E2
Sample Name:	PCM-04-DSW-091209	PCM-05 TSW-071211	PCM-05-DSW-091209	PCM-06 TSW-071211	PCM-06-DSW-091209
Sample Date:	12/9/2009	12/11/2007	12/9/2009	12/11/2007	12/9/2009
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-07Y0E1b	PCM-08Y1E2	PCM-08Y3E2	PCM-09Y1E2	PCM-09Y3E2
Sample Name:	PCM-07TSW-060606	PCM-08 TSW-071211	PCM-08-DSW-091209	PCM-09 TSW-071211	PCM-09-DSW-091209
Sample Date:	6/6/2006	12/11/2007	12/9/2009	12/11/2007	12/9/2009
Conventional Parameters (mg/l)					
Cyanide, free	--	--	0.01 U	--	0.01 U
Cyanide, total	--	--	0.01 U	--	0.01 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	0.5 U	--	**0.05 J**
Ethylbenzene	--	--	0.5 U	--	0.5 U
m,p-Xylene	--	--	0.5 U	--	0.5 U
Naphthalene	--	--	--	--	--
o-Xylene	--	--	0.5 U	--	0.5 U
Toluene	--	--	**0.07 J**	--	**0.08 J**
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	0.5 UT	--	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	**0.004 J**	--	**0.007 J**
Acenaphthene	**87**	**230 J**	**0.0055 J**	**180 J**	**0.014 J**
Acenaphthylene	**7 J**	**15 J**	0.02 U	**17 J**	**0.0039 J**
Anthracene	**35**	**590 J**	0.02 U	**560 J**	**0.0062 J**
Benzo(a)anthracene	**130**	**360 J**	0.02 U	**400 J**	0.02 U
Benzo(a)pyrene	**14 J**	**55 J**	0.02 U	**80 J**	**0.0081 J**
Benzo(b)fluoranthene	**39**	**71 J**	0.02 U	**100 J**	**0.01 J**
Benzo(g,h,i)perylene	**12 J**	**19 J**	0.02 U	**29 J**	0.02 U
Benzo(k)fluoranthene	**24**	**24 J**	0.02 U	**31 J**	**0.0042 J**
Chrysene	**210**	**380 J**	0.02 U	**450 J**	**0.0079 J**
Dibenzo(a,h)anthracene	20 U	10 UJ	0.02 U	10 UJ	0.02 U
Fluoranthene	**600**	**1500 J**	**0.0095 J**	**1600 J**	**0.022**
Fluorene	**64**	**120 J**	0.02 U	**96 J**	**0.0062 J**
Indeno(1,2,3-c,d)pyrene	20 U	**11 J**	0.02 U	**17 J**	**0.0065 J**
Naphthalene	69 U	260 UJ	**0.038**	230 UJ	**0.051**
Phenanthrene	**260**	**760 J**	**0.0099 J**	**640 J**	**0.019 J**
Pyrene	**770**	**1100 J**	**0.0077 J**	**1200 J**	**0.021**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-07Y0E1b	PCM-08Y1E2	PCM-08Y3E2	PCM-09Y1E2	PCM-09Y3E2
Sample Name:	PCM-07TSW-060606	PCM-08 TSW-071211	PCM-08-DSW-091209	PCM-09 TSW-071211	PCM-09-DSW-091209
Sample Date:	6/6/2006	12/11/2007	12/9/2009	12/11/2007	12/9/2009
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-10Y1E2	PCM-10Y3E2	PCM-13Y1E2	PCM-13Y3E2	PCM-18Y0E2
Sample Name:	PCM-10 TSW-071211	PCM-10-DSW-091209	PCM-13 TSW-071211	PCM-13-DSW-091209	PCM-DSW18-060901
Sample Date:	12/11/2007	12/9/2009	12/11/2007	12/9/2009	9/1/2006
Conventional Parameters (mg/l)					
Cyanide, free	--	0.01 U	--	0.01 U	--
Cyanide, total	--	0.01 U	--	0.01 U	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	0.5 U	--	**0.05 J**	**0.84**
Ethylbenzene	--	0.5 U	--	0.5 U	**0.14 J**
m,p-Xylene	--	0.5 U	--	0.5 U	**0.23 J**
Naphthalene	--	--	--	--	--
o-Xylene	--	0.5 U	--	0.5 U	**0.11 J**
Toluene	--	**0.07 J**	--	**0.13 J**	**0.31 J**
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	0.5 UT	--	0.5 UT	**0.34 JT**
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	**0.0053 J**	--	**0.0049 J**	--
Acenaphthene	**200 J**	**0.01 J**	**65 J**	**0.0082 J**	**0.12**
Acenaphthylene	**20 J**	0.021 U	**13 J**	0.02 U	**0.032**
Anthracene	**750 J**	**0.007 J**	**350 J**	0.02 U	**0.0096 J**
Benzo(a)anthracene	**320 J**	0.021 U	**110 J**	0.02 U	**0.0051 J**
Benzo(a)pyrene	**68 J**	**0.011 J**	**12 J**	**0.0056 J**	0.021 U
Benzo(b)fluoranthene	**84 J**	**0.013 J**	**18 J**	**0.0044 J**	0.021 U
Benzo(g,h,i)perylene	**28 J**	0.021 U	10 UJ	0.02 U	0.021 U
Benzo(k)fluoranthene	**28 J**	**0.0055 J**	10 UJ	0.02 U	0.021 U
Chrysene	**370 J**	**0.015 J**	**140 J**	**0.0053 J**	**0.011 J**
Dibenzo(a,h)anthracene	10 UJ	0.021 U	10 UJ	0.02 U	0.021 U
Fluoranthene	**1600 J**	**0.029**	**430 J**	**0.018 J**	**0.089**
Fluorene	**110 J**	**0.0052 J**	**60 J**	0.02 U	**0.043**
Indeno(1,2,3-c,d)pyrene	**17 J**	**0.01 J**	10 UJ	**0.0038 J**	0.021 U
Naphthalene	210 UJ	**0.08**	170 UJ	**0.042**	**1.5**
Phenanthrene	**890 J**	**0.02 J**	**340 J**	**0.018 J**	**0.14**
Pyrene	**1200 J**	**0.028**	**410 J**	**0.018 J**	**0.069**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-10Y1E2	PCM-10Y3E2	PCM-13Y1E2	PCM-13Y3E2	PCM-18Y0E2
Sample Name:	PCM-10 TSW-071211	PCM-10-DSW-091209	PCM-13 TSW-071211	PCM-13-DSW-091209	PCM-DSW18-060901
Sample Date:	12/11/2007	12/9/2009	12/11/2007	12/9/2009	9/1/2006
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-18Y0E3	PCM-18Y0E3	PCM-19Y3E2	PCM-20Y3E2	PCM-21Y1E2
Sample Name:	PCM-18DSW-061208	PCM-18TSW-070112	PCM-19-DSW-091209	PCM-20-DSW-091209	PCM-21 TSW-071211
Sample Date:	12/8/2006	1/12/2007	12/9/2009	12/9/2009	12/11/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.01 UJ	--	0.01 U	0.01 U	--
Cyanide, total	--	--	0.01 U	0.01 U	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	0.5 U	--	**0.06 J**	**0.04 J**	--
Ethylbenzene	0.5 U	--	0.5 U	0.5 U	--
m,p-Xylene	0.5 U	--	0.5 U	0.5 U	--
Naphthalene	2 U	--	--	--	--
o-Xylene	0.5 U	--	0.5 U	0.5 U	--
Toluene	0.5 U	--	**0.12 J**	**0.1 J**	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	--	0.5 UT	0.5 UT	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	**0.0059 J**	**0.0046 J**	--
Acenaphthene	--	**120**	**0.014 J**	**0.0063 J**	**180 J**
Acenaphthylene	--	**20**	0.02 U	0.021 U	**19 J**
Anthracene	--	**150**	**0.0051 J**	**0.0038 J**	**740 J**
Benzo(a)anthracene	--	**88**	0.02 U	0.021 U	**650 J**
Benzo(a)pyrene	--	**18**	**0.0048 J**	**0.0066 J**	**160 J**
Benzo(b)fluoranthene	--	**21**	**0.0034 J**	**0.0058 J**	**200 J**
Benzo(g,h,i)perylene	--	10 U	0.02 U	0.021 U	**63 J**
Benzo(k)fluoranthene	--	**14**	0.02 U	0.021 U	**58 J**
Chrysene	--	**140**	**0.0042 J**	**0.0049 J**	**750 J**
Dibenzo(a,h)anthracene	--	10 U	0.02 U	0.021 U	10 UJ
Fluoranthene	--	**720**	**0.016 J**	**0.02 J**	**2200 J**
Fluorene	--	**100**	**0.0053 J**	**0.0045 J**	**100 J**
Indeno(1,2,3-c,d)pyrene	--	10 U	**0.0033 J**	**0.0043 J**	**44 J**
Naphthalene	--	**68**	**0.074**	**0.066**	200 UJ
Phenanthrene	--	**630**	**0.019 J**	**0.015 J**	**800 J**
Pyrene	--	**830**	**0.016 J**	**0.023**	**1600 J**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-18Y0E3	PCM-18Y0E3	PCM-19Y3E2	PCM-20Y3E2	PCM-21Y1E2
Sample Name:	PCM-18DSW-061208	PCM-18TSW-070112	PCM-19-DSW-091209	PCM-20-DSW-091209	PCM-21 TSW-071211
Sample Date:	12/8/2006	1/12/2007	12/9/2009	12/9/2009	12/11/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-21Y3E2	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04
Sample Name:	PCM-21-DSW-091209	WLCGSG07GSW03CE071005	WLCGSG07GSW03CSH071001	WLCGSG07GSW03CSL071003	WLCGSG07GSW04CE071004
Sample Date:	12/9/2009	10/5/2007	10/1/2007	10/3/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.01 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	0.5 U	--	--	--	--
Ethylbenzene	0.5 U	--	--	--	--
m,p-Xylene	0.5 U	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	0.5 U	--	--	--	--
Toluene	**0.08 J**	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	**0.0041 J**	--	--	--	--
Acenaphthene	**0.0046 J**	--	--	--	--
Acenaphthylene	0.02 U	--	--	--	--
Anthracene	0.02 U	--	--	--	--
Benzo(a)anthracene	0.02 U	--	--	--	--
Benzo(a)pyrene	0.02 U	--	--	--	--
Benzo(b)fluoranthene	**0.0029 J**	--	--	--	--
Benzo(g,h,i)perylene	0.02 U	--	--	--	--
Benzo(k)fluoranthene	0.02 U	--	--	--	--
Chrysene	0.02 U	--	--	--	--
Dibenzo(a,h)anthracene	0.02 U	--	--	--	--
Fluoranthene	**0.0091 J**	--	--	--	--
Fluorene	0.02 U	--	--	--	--
Indeno(1,2,3-c,d)pyrene	0.02 U	--	--	--	--
Naphthalene	**0.074**	--	--	--	--
Phenanthrene	**0.011 J**	--	--	--	--
Pyrene	**0.007 J**	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-21Y3E2	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04
Sample Name:	PCM-21-DSW-091209	WLCGSG07GSW03CE071005	WLCGSG07GSW03CSH071001	WLCGSG07GSW03CSL071003	WLCGSG07GSW04CE071004
Sample Date:	12/9/2009	10/5/2007	10/1/2007	10/3/2007	10/4/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05
Sample Name:	WLCGSG07GSW04CSH071004	WLCGSG07GSW04CSL071002	WLCGSG07GSW05CE071008	WLCGSG07GSW05CSH071005	WLCGSG07GSW05CSL071004
Sample Date:	10/4/2007	10/2/2007	10/8/2007	10/5/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05
Sample Name:	WLCGSG07GSW04CSH071004	WLCGSG07GSW04CSL071002	WLCGSG07GSW05CE071008	WLCGSG07GSW05CSH071005	WLCGSG07GSW05CSL071004
Sample Date:	10/4/2007	10/2/2007	10/8/2007	10/5/2007	10/4/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07
Sample Name:	WLCGSG07GSW06CE071008	WLCGSG07GSW06CSH071002	WLCGSG07GSW06CSL071004	WLCGSG07GSW07CE071005	WLCGSG07GSW07CSH071001
Sample Date:	10/8/2007	10/2/2007	10/4/2007	10/5/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07
Sample Name:	WLCGSG07GSW06CE071008	WLCGSG07GSW06CSH071002	WLCGSG07GSW06CSL071004	WLCGSG07GSW07CE071005	WLCGSG07GSW07CSH071001
Sample Date:	10/8/2007	10/2/2007	10/4/2007	10/5/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW07	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW07CSL071003	WLCGSG07GSW08CE071008	WLCGSG07GSW08CSH071002	WLCGSG07GSW08CSL071004	WLCGSG07GSW09CE071001
Sample Date:	10/3/2007	10/8/2007	10/2/2007	10/4/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	**0.01**
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW07	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW07CSL071003	WLCGSG07GSW08CE071008	WLCGSG07GSW08CSH071002	WLCGSG07GSW08CSL071004	WLCGSG07GSW09CE071001
Sample Date:	10/3/2007	10/8/2007	10/2/2007	10/4/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10
Sample Name:	WLCGSG07GSW09CSH071003	WLCGSG07GSW09CSL071008	WLCGSG07GSW10CE071008	WLCGSG07GSW10CSH071002	WLCGSG07GSW10CSL071005
Sample Date:	10/3/2007	10/8/2007	10/8/2007	10/2/2007	10/5/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10
Sample Name:	WLCGSG07GSW09CSH071003	WLCGSG07GSW09CSL071008	WLCGSG07GSW10CE071008	WLCGSG07GSW10CSH071002	WLCGSG07GSW10CSL071005
Sample Date:	10/3/2007	10/8/2007	10/8/2007	10/2/2007	10/5/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12
Sample Name:	WLCGSG07GSW11CE071002	WLCGSG07GSW11CSH071003	WLCGSG07GSW11CSL071008	WLCGSG07GSW12CE071001	WLCGSG07GSW12CSH071003
Sample Date:	10/2/2007	10/3/2007	10/8/2007	10/1/2007	10/3/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12
Sample Name:	WLCGSG07GSW11CE071002	WLCGSG07GSW11CSH071003	WLCGSG07GSW11CSL071008	WLCGSG07GSW12CE071001	WLCGSG07GSW12CSH071003
Sample Date:	10/2/2007	10/3/2007	10/8/2007	10/1/2007	10/3/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW12	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW12CSL071005	WLCGSG07GSW13CE071001	WLCGSG07GSW13CSH071002	WLCGSG07GSW13CSL071005	WLCGSG07GSW14CE071008
Sample Date:	10/5/2007	10/1/2007	10/2/2007	10/5/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	**0.11**
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW12	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW12CSL071005	WLCGSG07GSW13CE071001	WLCGSG07GSW13CSH071002	WLCGSG07GSW13CSL071005	WLCGSG07GSW14CE071008
Sample Date:	10/5/2007	10/1/2007	10/2/2007	10/5/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15
Sample Name:	WLCGSG07GSW14CSH071005	WLCGSG07GSW14CSL071002	WLCGSG07GSW15CE071002	WLCGSG07GSW15CSH071004	WLCGSG07GSW15CSL071008
Sample Date:	10/5/2007	10/2/2007	10/2/2007	10/4/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15
Sample Name:	WLCGSG07GSW14CSH071005	WLCGSG07GSW14CSL071002	WLCGSG07GSW15CE071002	WLCGSG07GSW15CSH071004	WLCGSG07GSW15CSL071008
Sample Date:	10/5/2007	10/2/2007	10/2/2007	10/4/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17
Sample Name:	WLCGSG07GSW16CE071008	WLCGSG07GSW16CSH071004	WLCGSG07GSW16CSL071008	WLCGSG07GSW17CE071003	WLCGSG07GSW17CSH071009
Sample Date:	10/8/2007	10/4/2007	10/8/2007	10/3/2007	10/9/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17
Sample Name:	WLCGSG07GSW16CE071008	WLCGSG07GSW16CSH071004	WLCGSG07GSW16CSL071008	WLCGSG07GSW17CE071003	WLCGSG07GSW17CSH071009
Sample Date:	10/8/2007	10/4/2007	10/8/2007	10/3/2007	10/9/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW17	WLCGSG07GSW18	WLCGSG07GSW18	WLCGSG07GSW18	WLCSLH01GP59
Sample Name:	WLCGSG07GSW17CSL071003	WLCGSG07GSW18CE071001	WLCGSG07GSW18CSH071005	WLCGSG07GSW18CSL071008	WLCSLH01GP59SW
Sample Date:	10/3/2007	10/1/2007	10/5/2007	10/8/2007	5/17/2005
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 UJ	0.005 U	0.005 U	--
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	0.2 U
1,2-Dichloroethene, cis-	--	--	--	--	0.2 U
1,2-Dichloroethene, trans-	--	--	--	--	0.3 U
Benzene	--	--	--	--	0.2 U
Ethylbenzene	--	--	--	--	0.2 U
m,p-Xylene	--	--	--	--	0.4 U
Naphthalene	--	--	--	--	1 U
o-Xylene	--	--	--	--	0.2 U
Toluene	--	--	--	--	0.2 U
Trichloroethene (TCE)	--	--	--	--	0.2 U
Vinyl chloride	--	--	--	--	**0.47**
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW17	WLCGSG07GSW18	WLCGSG07GSW18	WLCGSG07GSW18	WLCSLH01GP59
Sample Name:	WLCGSG07GSW17CSL071003	WLCGSG07GSW18CE071001	WLCGSG07GSW18CSH071005	WLCGSG07GSW18CSL071008	WLCSLH01GP59SW
Sample Date:	10/3/2007	10/1/2007	10/5/2007	10/8/2007	5/17/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP60	WLCSLH01GP61	WLCSLH01GP61	WLCSLH01GP62	WLCSLH01GP63
Sample Name:	WLCSLH01GP60SW	WLCSLH01GP61SW	WLCSLH01GP61SWA	WLCSLH01GP62SW	WLCSLH01GP63SW
Sample Date:	5/17/2005	5/17/2005	5/18/2005	5/18/2005	5/19/2005
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	**1.24**	0.2 U
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
m,p-Xylene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Naphthalene	1 U	1 U	1 U	1 U	1 U
o-Xylene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	**0.24**
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	0.2 U	0.2 U	**0.57**	**0.76**	**0.32**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	0.4 UT	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP60	WLCSLH01GP61	WLCSLH01GP61	WLCSLH01GP62	WLCSLH01GP63
Sample Name:	WLCSLH01GP60SW	WLCSLH01GP61SW	WLCSLH01GP61SWA	WLCSLH01GP62SW	WLCSLH01GP63SW
Sample Date:	5/17/2005	5/17/2005	5/18/2005	5/18/2005	5/19/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP64	WLCSLH01GP68	WLCSLH01GP69	WLCSLH01GP70	WLCSLH01GP72
Sample Name:	WLCSLH01GP64SW	WLCSLH01GP68SW	WLCSLH01GP69SW	WLCSLH01GP70SW	WLCSLH01GP72SW
Sample Date:	5/19/2005	5/23/2005	5/24/2005	5/24/2005	5/25/2005
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	**0.51**	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	**279**	**130**	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, trans-	**1.46**	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	**31.4**	0.2 U	**4.14**	**0.46**	0.2 U
Ethylbenzene	**11.4**	0.2 U	**1.33**	**1.55**	0.2 U
m,p-Xylene	**3.93**	0.4 U	0.4 U	**0.54**	0.4 U
Naphthalene	**458**	**38.2**	**81.9**	**282**	**3.7**
o-Xylene	**1.97**	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	**4.12**	**0.93**	0.36 U	0.48 U	0.2 U
Trichloroethene (TCE)	0.2 U	**194**	**0.61**	0.2 U	0.2 U
Vinyl chloride	**73.2**	**7.26**	**1.15**	**0.49**	**0.48**
LWG RA Total Xylene (Calculated U = 1/2)	**5.9 T**	0.4 UT	0.4 UT	**0.64 T**	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP64	WLCSLH01GP68	WLCSLH01GP69	WLCSLH01GP70	WLCSLH01GP72
Sample Name:	WLCSLH01GP64SW	WLCSLH01GP68SW	WLCSLH01GP69SW	WLCSLH01GP70SW	WLCSLH01GP72SW
Sample Date:	5/19/2005	5/23/2005	5/24/2005	5/24/2005	5/25/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP73	WLCSLH01GP74	WLCSLH01GP75	WLCSLH01GP76	WLCSLH01GP77
Sample Name:	WLCSLH01GP73SW	WLCSLH01GP74SW	WLCSLH01GP75SW	WLCSLH01GP76SW	WLCSLH01GP77SW
Sample Date:	5/25/2005	5/26/2005	5/26/2005	5/27/2005	5/27/2005
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	0.2 U	**1**	**1.74**	0.2 U	0.2 U
Ethylbenzene	0.2 U	**3.5**	**1.75**	0.2 U	**0.55**
m,p-Xylene	0.4 U	**0.48**	0.4 U	0.4 U	0.4 U
Naphthalene	**2.46**	**227**	**139**	**2.89**	**377**
o-Xylene	0.2 U	**0.43**	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	**0.91**	**0.82**	0.2 U	**0.29**
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	**0.46**	**0.44**	**0.46**	**0.52**	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	**0.91 T**	0.4 UT	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP73	WLCSLH01GP74	WLCSLH01GP75	WLCSLH01GP76	WLCSLH01GP77
Sample Name:	WLCSLH01GP73SW	WLCSLH01GP74SW	WLCSLH01GP75SW	WLCSLH01GP76SW	WLCSLH01GP77SW
Sample Date:	5/25/2005	5/26/2005	5/26/2005	5/27/2005	5/27/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP78	WLCSLH01GP79	WLCSLH01GP81	WLCSLH01GP82	WLCSLH01GP83
Sample Name:	WLCSLH01GP78SW	WLCSLH01GP79SW	WLCSLH01GP81SW	WLCSLH01GP82SW	WLCSLH01GP83SW
Sample Date:	5/27/2005	5/31/2005	5/31/2005	6/1/2005	6/1/2005
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	0.2 U	**3.28**
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	0.2 U	0.2 U	**0.46**	**0.69**	0.2 U
Ethylbenzene	0.2 U	0.2 U	**1.15**	**3.46**	0.2 U
m,p-Xylene	0.4 U	0.4 U	**0.43**	0.4 U	0.4 U
Naphthalene	**9.47**	**2.56**	**166**	**605**	**5.11**
o-Xylene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.34 U	0.35 U	**0.28**	0.2 U
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	0.2 U	0.2 U	0.2 U	0.2 U	**1.69**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	**0.53 T**	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP78	WLCSLH01GP79	WLCSLH01GP81	WLCSLH01GP82	WLCSLH01GP83
Sample Name:	WLCSLH01GP78SW	WLCSLH01GP79SW	WLCSLH01GP81SW	WLCSLH01GP82SW	WLCSLH01GP83SW
Sample Date:	5/27/2005	5/31/2005	5/31/2005	6/1/2005	6/1/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP84
Sample Name:	WLCSLH01GP84SW
Sample Date:	6/1/2005
Conventional Parameters (mg/l)	
Cyanide, free	--
Cyanide, total	--
Metals (µg/l)	
Zinc	--
Disolved Metals (µg/l)	
Zinc	--
Volatile Organics (µg/l)	
1,1-Dichloroethene	0.2 U
1,2-Dichloroethene, cis-	**4.7**
1,2-Dichloroethene, trans-	0.3 U
Benzene	**0.27**
Ethylbenzene	0.2 U
m,p-Xylene	0.4 U
Naphthalene	**34.5**
o-Xylene	0.2 U
Toluene	**0.21**
Trichloroethene (TCE)	0.2 U
Vinyl chloride	**2.13**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)	
2-Methylnaphthalene	--
Acenaphthene	--
Acenaphthylene	--
Anthracene	--
Benzo(a)anthracene	--
Benzo(a)pyrene	--
Benzo(b)fluoranthene	--
Benzo(g,h,i)perylene	--
Benzo(k)fluoranthene	--
Chrysene	--
Dibenzo(a,h)anthracene	--
Fluoranthene	--
Fluorene	--
Indeno(1,2,3-c,d)pyrene	--
Naphthalene	--
Phenanthrene	--
Pyrene	--
Semivolatile Organics (µg/l)	
Carbazole	--
Dibenzofuran	--
PCB Aroclors (µg/l)	
Aroclor 1016	--
Aroclor 1221	--
Aroclor 1232	--
Aroclor 1242	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Database:	**Water**
Analysis Matrix:	**Gasco RM6-6.7_WS_NearBot**
System Location Code:	**WLCSLH01GP84**
Sample Name:	**WLCSLH01GP84SW**
Sample Date:	**6/1/2005**
Aroclor 1248	--
Aroclor 1254	--
Aroclor 1260	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--
PCB Congeners (ng/l)	
PCB-077	--
PCB-081	--
PCB-105	--
PCB-114	--
PCB-118	--
PCB-123	--
PCB-126	--
PCB-156	--
PCB-157	--
PCB-167	--
PCB-169	--
PCB-189	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--
Pesticides (µg/l)	
2,4'-DDD (o,p'-DDD)	--
2,4'-DDE (o,p'-DDE)	--
2,4'-DDT (o,p'-DDT)	--
4,4'-DDD (p,p'-DDD)	--
4,4'-DDE (p,p'-DDE)	--
4,4'-DDT (p,p'-DDT)	--
alpha-Hexachlorocyclohexane (BHC)	--
beta-Hexachlorocyclohexane (BHC)	--
delta-Hexachlorocyclohexane (BHC)	--
Endrin ketone	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--
LWG RA Sum DDD (Calculated U = 1/2)	--
LWG RA Sum DDE (Calculated U = 1/2)	--
LWG RA Sum DDT (Calculated U = 1/2)	--
LWG RA Total DDx (Calculated U = 1/2)	--
Total Petroleum Hydrocarbons (mg/l)	
Diesel Range Hydrocarbons	--

Table 3-42
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Human Health

Notes:

Detected concentration is greater than 1 screening level

Detected concentration is greater than 2 screening levels

Detected concentration is greater than 3 screening levels

Detected concentration is greater than 4 screening levels

Detected concentration is greater than 5 screening levels

Detected concentration is greater than 6 screening levels

Detected concentration is greater than 7 screening levels

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation
-- = Results not reported or not applicable
N = Normal Field Sample

Acronyms:
µg/kg = micrograms per liter
mg/kg = milligrams per liter
ng/l = nanograms per liter
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
LWG = Lower Willamette Group
PCB = polychlorinated biphenyls
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	LW3-W031	LW3-W031	LW3-W031	LW3-W031	LW3-W031
Sample Name:	LW3-W3031-NB	LW3-W3031-NB	LW3-W3031-NB-C	LW3-W3031-NB-F	LW3-W4031-NB
Sample Date:	11/5/2006	11/5/2006	11/5/2006	11/5/2006	2/24/2007
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	3.4 U	--	--	--
Disolved Metals (µg/l)					
Zinc	--	2.6 U	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	0.0084 U	--	--	--
Acenaphthene	--	0.0062 U	--	--	--
Acenaphthylene	--	0.0046 U	--	--	--
Anthracene	--	0.0078 U	--	--	--
Benzo(a)anthracene	--	0.0078 U	--	--	--
Benzo(a)pyrene	--	0.0086 U	--	--	--
Benzo(b)fluoranthene	--	0.0092 U	--	--	--
Benzo(g,h,i)perylene	--	0.0082 U	--	--	--
Benzo(k)fluoranthene	--	0.011 U	--	--	--
Chrysene	--	0.011 U	--	--	--
Dibenzo(a,h)anthracene	--	0.0072 U	--	--	--
Fluoranthene	--	**0.018**	--	--	--
Fluorene	--	0.0072 U	--	--	--
Indeno(1,2,3-c,d)pyrene	--	0.0066 U	--	--	--
Naphthalene	--	0.013 U	--	--	--
Phenanthrene	--	0.0089 U	--	--	--
Pyrene	--	**0.014 J**	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	0.013 U	--	--	--
Dibenzofuran	--	0.0076 U	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	LW3-W031	LW3-W031	LW3-W031	LW3-W031	LW3-W031
Sample Name:	LW3-W3031-NB	LW3-W3031-NB	LW3-W3031-NB-C	LW3-W3031-NB-F	LW3-W4031-NB
Sample Date:	11/5/2006	11/5/2006	11/5/2006	11/5/2006	2/24/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	**0.000568 JT**	--	**0.000279**	**0.000289 J**	**0.000553 T**
PCB-081	0.000444 UT	--	0.000176 U	0.000444 U	9.5E-05 UT
PCB-105	**0.0029 T**	--	**0.00111**	**0.00179**	**0.005 T**
PCB-114	9.9E-05 UT	--	8.4E-05 U	9.9E-05 U	**0.00029 JT**
PCB-118	**0.0071 T**	--	**0.00282**	**0.0043**	**0.0116 T**
PCB-123	**6.7E-05 JT**	--	8.9E-05 U	**6.7E-05 J**	**0.00015 T**
PCB-126	**3.4E-05 JT**	--	**3.4E-05 J**	0.000222 U	**5.7E-05 T**
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	**0.000137 JT**	--	**0.000137 J**	0.000299 U	**0.00085 T**
PCB-169	0.000706 UT	--	0.000706 U	0.000178 U	4.5E-05 UT
PCB-189	7.2E-05 UT	--	5.2E-05 U	7.2E-05 U	**0.00032 T**
LWG RA Total PCB Congener (Calculated U = 1/2)	**0.29 T**	--	**0.18 JT**	**0.13 JT**	**0.46 T**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**1.4E-05 T**	--	**1.4E-05 JT**	**1.4E-05 JT**	**7.1E-06 T**
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	**5.47E-05 JT**	--	**3.52E-05 J**	**1.95E-05 J**	**0.000102 T**
2,4'-DDE (o,p'-DDE)	**5.8E-06 JT**	--	**3.3E-06 J**	**2.49E-06 J**	**2.16E-05 JT**
2,4'-DDT (o,p'-DDT)	**5.32E-06 JT**	--	5.77E-06 U	**5.32E-06 J**	**4.88E-05 JT**
4,4'-DDD (p,p'-DDD)	**0.000125 JT**	--	**6.85E-05 J**	**5.68E-05 J**	**0.00032 T**
4,4'-DDE (p,p'-DDE)	**7.96E-05 JT**	--	**4.52E-05 J**	**3.44E-05 J**	**0.00022 T**
4,4'-DDT (p,p'-DDT)	**4.05E-05 JT**	--	**1.44E-05 J**	**2.61E-05 J**	**0.00014 T**
alpha-Hexachlorocyclohexane (BHC)	**2.94E-05 JT**	--	**2.94E-05 J**	1.42E-06 U	**2.04E-05 JT**
beta-Hexachlorocyclohexane (BHC)	**2.1E-06 JT**	--	7.15E-06 U	**2.1E-06 J**	**8.91E-06 JT**
delta-Hexachlorocyclohexane (BHC)	9.68E-06 UT	--	9.68E-06 U	9.41E-06 U	**3.88E-06 JT**
Endrin ketone	1.21E-05 UT	--	1.21E-05 U	1.18E-05 U	**4.03E-06 JT**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**2.92E-05 JT**	--	**2.79E-05 J**	**1.28E-06 J**	**2.17E-05 JT**
LWG RA Sum DDD (Calculated U = 1/2)	**0.00018 T**	--	**0.000104 JT**	**7.63E-05 JT**	**0.000422 T**
LWG RA Sum DDE (Calculated U = 1/2)	**8.5E-05 T**	--	**4.9E-05 JT**	**3.69E-05 JT**	**0.000242 T**
LWG RA Sum DDT (Calculated U = 1/2)	**4.58E-05 T**	--	**1.73E-05 JT**	**3.14E-05 JT**	**0.00019 T**
LWG RA Total DDx (Calculated U = 1/2)	**0.00031 T**	--	**0.00017 JT**	**0.000145 JT**	**0.00085 T**
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	LW3-W031	LW3-W031	LW3-W031	PCM-01Y1E2	PCM-01Y3E2
Sample Name:	LW3-W4031-NB	LW3-W4031-NB-C	LW3-W4031-NB-F	PCM-01 TSW-071211	PCM-01-DSW-091209
Sample Date:	2/24/2007	2/24/2007	2/24/2007	12/11/2007	12/9/2009
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	0.01 U
Cyanide, total	--	--	--	--	0.01 U
Metals (µg/l)					
Zinc	**8.4**	--	--	--	--
Disolved Metals (µg/l)					
Zinc	2.2 U	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	**0.04 J**
Ethylbenzene	--	--	--	--	0.5 U
m,p-Xylene	--	--	--	--	0.5 U
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	0.5 U
Toluene	--	--	--	--	**0.08 J**
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	**0.62**	--	--	--	**0.0032 J**
Acenaphthene	**0.21**	--	--	**72 J**	**0.0047 J**
Acenaphthylene	**0.033**	--	--	10 UJ	0.021 U
Anthracene	**0.48**	--	--	**76 J**	0.021 U
Benzo(a)anthracene	**0.27**	--	--	**83 J**	0.021 U
Benzo(a)pyrene	**0.19**	--	--	**12 J**	0.021 U
Benzo(b)fluoranthene	**0.13**	--	--	**11 J**	0.021 U
Benzo(g,h,i)perylene	**0.14**	--	--	10 UJ	0.021 U
Benzo(k)fluoranthene	**0.13**	--	--	**11 J**	0.021 U
Chrysene	**0.37**	--	--	**96 J**	0.021 U
Dibenzo(a,h)anthracene	**0.024**	--	--	10 UJ	0.021 U
Fluoranthene	**0.81**	--	--	**620 J**	**0.0066 J**
Fluorene	**0.31**	--	--	**63 J**	0.021 U
Indeno(1,2,3-c,d)pyrene	**0.12**	--	--	10 UJ	0.021 U
Naphthalene	**0.083**	--	--	90 UJ	**0.031**
Phenanthrene	**2.2**	--	--	**370 J**	**0.0083 J**
Pyrene	**1.3**	--	--	**580 J**	**0.0053 J**
Semivolatile Organics (µg/l)					
Carbazole	**0.16 J**	--	--	--	--
Dibenzofuran	**0.046**	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	LW3-W031	LW3-W031	LW3-W031	PCM-01Y1E2	PCM-01Y3E2
Sample Name:	LW3-W4031-NB	LW3-W4031-NB-C	LW3-W4031-NB-F	PCM-01 TSW-071211	PCM-01-DSW-091209
Sample Date:	2/24/2007	2/24/2007	2/24/2007	12/11/2007	12/9/2009
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	0.000147 U	**0.000553**	--	--
PCB-081	--	9.5E-05 U	1.7E-05 U	--	--
PCB-105	--	**0.000639**	**0.00436**	--	--
PCB-114	--	**4.7E-05 J**	**0.000242**	--	--
PCB-118	--	**0.00154**	**0.0101**	--	--
PCB-123	--	3.9E-05 U	**0.000154**	--	--
PCB-126	--	4.75E-05 U	**5.7E-05**	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	6.8E-05 U	**0.000854**	--	--
PCB-169	--	3.8E-05 U	4.52E-05 U	--	--
PCB-189	--	1.8E-05 U	**0.000319**	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	**0.11 JT**	**0.35 JT**	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	**3E-06 JT**	**7E-06 T**	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	**4.98E-05**	**5.19E-05**	--	--
2,4'-DDE (o,p'-DDE)	--	**6.83E-06 J**	**1.48E-05 J**	--	--
2,4'-DDT (o,p'-DDT)	--	**2.67E-05 J**	**2.21E-05 J**	--	--
4,4'-DDD (p,p'-DDD)	--	**8.72E-05**	**0.000233**	--	--
4,4'-DDE (p,p'-DDE)	--	**6.22E-05**	**0.000158**	--	--
4,4'-DDT (p,p'-DDT)	--	**5.4E-05**	**8.99E-05**	--	--
alpha-Hexachlorocyclohexane (BHC)	--	**2.04E-05 J**	2.41E-06 U	--	--
beta-Hexachlorocyclohexane (BHC)	--	**8.91E-06 J**	2.89E-06 U	--	--
delta-Hexachlorocyclohexane (BHC)	--	**3.88E-06 J**	3.13E-07 U	--	--
Endrin ketone	--	**4.03E-06 J**	2.41E-06 U	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	**2.17E-05 J**	5.16E-07 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	**0.000137 T**	**0.000285 T**	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	**6.9E-05 JT**	**0.000173 JT**	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	**8.1E-05 JT**	**0.000112 JT**	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	**0.00029 JT**	**0.00057 JT**	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-02Y1E2	PCM-02Y3E2	PCM-03Y1E2	PCM-03Y3E2	PCM-04Y1E2
Sample Name:	PCM-02 TSW-071211	PCM-02-DSW-091209	PCM-03 TSW-071211	PCM-03-DSW-091209	PCM-04 TSW-071211
Sample Date:	12/11/2007	12/9/2009	12/11/2007	12/9/2009	12/11/2007
Conventional Parameters (mg/l)					
Cyanide, free	--	0.01 U	--	0.01 U	--
Cyanide, total	--	0.01 U	--	0.01 U	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	**0.05 J**	--	**0.05 J**	--
Ethylbenzene	--	0.5 U	--	0.5 U	--
m,p-Xylene	--	0.5 U	--	0.5 U	--
Naphthalene	--	--	--	--	--
o-Xylene	--	0.5 U	--	0.5 U	--
Toluene	--	**0.11 J**	--	**0.08 J**	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	0.5 UT	--	0.5 UT	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	**0.0073 J**	--	**0.0055 J**	--
Acenaphthene	**200 J**	**0.019 J**	**180 J**	**0.014 J**	**210 J**
Acenaphthylene	**12 J**	0.02 U	**13 J**	0.02 U	**17 J**
Anthracene	**280 J**	**0.0075 J**	**330 J**	**0.0051 J**	**640 J**
Benzo(a)anthracene	**240 J**	0.02 U	**320 J**	0.02 U	**540 J**
Benzo(a)pyrene	**41 J**	**0.0067 J**	**43 J**	**0.0048 J**	**63 J**
Benzo(b)fluoranthene	**31 J**	**0.0064 J**	**63 J**	**0.0042 J**	**89 J**
Benzo(g,h,i)perylene	10 UJ	0.02 U	10 UJ	0.02 U	**13 J**
Benzo(k)fluoranthene	**31 J**	0.02 U	**16 J**	0.02 U	**24 J**
Chrysene	**250 J**	**0.0061 J**	**320 J**	**0.0052 J**	**500 J**
Dibenzo(a,h)anthracene	10 UJ	0.02 U	10 UJ	0.02 U	10 UJ
Fluoranthene	**990 J**	**0.025**	**1700 J**	**0.015 J**	**2400 J**
Fluorene	**93 J**	**0.012 J**	**110 J**	**0.0066 J**	**120 J**
Indeno(1,2,3-c,d)pyrene	10 UJ	**0.0047 J**	10 UJ	**0.0035 J**	10 UJ
Naphthalene	140 UJ	**0.067**	120 UJ	**0.077**	98 UJ
Phenanthrene	**650 J**	**0.029**	**790 J**	**0.02**	**950 J**
Pyrene	**2200 J**	**0.024**	**1300 J**	**0.017 J**	**1900 J**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-02Y1E2	PCM-02Y3E2	PCM-03Y1E2	PCM-03Y3E2	PCM-04Y1E2
Sample Name:	PCM-02 TSW-071211	PCM-02-DSW-091209	PCM-03 TSW-071211	PCM-03-DSW-091209	PCM-04 TSW-071211
Sample Date:	12/11/2007	12/9/2009	12/11/2007	12/9/2009	12/11/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-04Y3E2	PCM-05Y1E2	PCM-05Y3E2	PCM-06Y1E2	PCM-06Y3E2
Sample Name:	PCM-04-DSW-091209	PCM-05 TSW-071211	PCM-05-DSW-091209	PCM-06 TSW-071211	PCM-06-DSW-091209
Sample Date:	12/9/2009	12/11/2007	12/9/2009	12/11/2007	12/9/2009
Conventional Parameters (mg/l)					
Cyanide, free	0.01 U	--	0.01 U	--	0.01 U
Cyanide, total	0.01 U	--	0.01 U	--	0.01 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	**0.05 J**	--	0.5 U	--	0.5 U
Ethylbenzene	0.5 U	--	0.5 U	--	0.5 U
m,p-Xylene	0.5 U	--	0.5 U	--	0.5 U
Naphthalene	--	--	--	--	--
o-Xylene	0.5 U	--	0.5 U	--	0.5 U
Toluene	**0.08 J**	--	**0.08 J**	--	**0.06 J**
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	--	0.5 UT	--	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	**0.0078 J**	--	**0.0082 J**	--	**0.0046 J**
Acenaphthene	**0.013 J**	**200 J**	**0.02 J**	**170 J**	**0.0073 J**
Acenaphthylene	**0.0041 J**	10 UJ	0.02 U	**11 J**	0.02 U
Anthracene	**0.0047 J**	**360 J**	**0.007 J**	**320 J**	0.02 U
Benzo(a)anthracene	0.02 U	**400 J**	0.02 U	**240 J**	0.02 U
Benzo(a)pyrene	0.02 U	**45 J**	**0.0065 J**	**28 J**	0.02 U
Benzo(b)fluoranthene	**0.0053 J**	**57 J**	**0.0061 J**	**42 J**	0.02 U
Benzo(g,h,i)perylene	0.02 U	10 UJ	0.02 U	10 UJ	0.02 U
Benzo(k)fluoranthene	0.02 U	**21 J**	0.02 U	**11 J**	0.02 U
Chrysene	**0.0048 J**	**380 J**	**0.008 J**	**250 J**	0.02 U
Dibenzo(a,h)anthracene	0.02 U	10 UJ	0.02 U	10 UJ	0.02 U
Fluoranthene	**0.019 J**	**1400 J**	**0.025**	**910 J**	**0.0091 J**
Fluorene	**0.0058 J**	**78 J**	**0.011 J**	**86 J**	**0.0041 J**
Indeno(1,2,3-c,d)pyrene	**0.0039 J**	10 UJ	**0.0038 J**	10 UJ	0.02 U
Naphthalene	**0.075**	250 UJ	**0.096**	130 UJ	**0.057**
Phenanthrene	**0.02 J**	**540 J**	**0.027**	**530 J**	**0.011 J**
Pyrene	**0.021**	**1100 J**	**0.027**	**810 J**	**0.0094 J**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-04Y3E2	PCM-05Y1E2	PCM-05Y3E2	PCM-06Y1E2	PCM-06Y3E2
Sample Name:	PCM-04-DSW-091209	PCM-05 TSW-071211	PCM-05-DSW-091209	PCM-06 TSW-071211	PCM-06-DSW-091209
Sample Date:	12/9/2009	12/11/2007	12/9/2009	12/11/2007	12/9/2009
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-07Y0E1b	PCM-08Y1E2	PCM-08Y3E2	PCM-09Y1E2	PCM-09Y3E2
Sample Name:	PCM-07TSW-060606	PCM-08 TSW-071211	PCM-08-DSW-091209	PCM-09 TSW-071211	PCM-09-DSW-091209
Sample Date:	6/6/2006	12/11/2007	12/9/2009	12/11/2007	12/9/2009
Conventional Parameters (mg/l)					
Cyanide, free	--	--	0.01 U	--	0.01 U
Cyanide, total	--	--	0.01 U	--	0.01 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	0.5 U	--	**0.05 J**
Ethylbenzene	--	--	0.5 U	--	0.5 U
m,p-Xylene	--	--	0.5 U	--	0.5 U
Naphthalene	--	--	--	--	--
o-Xylene	--	--	0.5 U	--	0.5 U
Toluene	--	--	**0.07 J**	--	**0.08 J**
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	0.5 UT	--	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	**0.004 J**	--	**0.007 J**
Acenaphthene	**87**	**230 J**	**0.0055 J**	**180 J**	**0.014 J**
Acenaphthylene	**7 J**	**15 J**	0.02 U	**17 J**	**0.0039 J**
Anthracene	**35**	**590 J**	0.02 U	**560 J**	**0.0062 J**
Benzo(a)anthracene	**130**	**360 J**	0.02 U	**400 J**	0.02 U
Benzo(a)pyrene	**14 J**	**55 J**	0.02 U	**80 J**	**0.0081 J**
Benzo(b)fluoranthene	**39**	**71 J**	0.02 U	**100 J**	**0.01 J**
Benzo(g,h,i)perylene	**12 J**	**19 J**	0.02 U	**29 J**	0.02 U
Benzo(k)fluoranthene	**24**	**24 J**	0.02 U	**31 J**	**0.0042 J**
Chrysene	**210**	**380 J**	0.02 U	**450 J**	**0.0079 J**
Dibenzo(a,h)anthracene	20 U	10 UJ	0.02 U	10 UJ	0.02 U
Fluoranthene	**600**	**1500 J**	**0.0095 J**	**1600 J**	**0.022**
Fluorene	**64**	**120 J**	0.02 U	**96 J**	**0.0062 J**
Indeno(1,2,3-c,d)pyrene	20 U	**11 J**	0.02 U	**17 J**	**0.0065 J**
Naphthalene	69 U	260 UJ	**0.038**	230 UJ	**0.051**
Phenanthrene	**260**	**760 J**	**0.0099 J**	**640 J**	**0.019 J**
Pyrene	**770**	**1100 J**	**0.0077 J**	**1200 J**	**0.021**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-07Y0E1b	PCM-08Y1E2	PCM-08Y3E2	PCM-09Y1E2	PCM-09Y3E2
Sample Name:	PCM-07TSW-060606	PCM-08 TSW-071211	PCM-08-DSW-091209	PCM-09 TSW-071211	PCM-09-DSW-091209
Sample Date:	6/6/2006	12/11/2007	12/9/2009	12/11/2007	12/9/2009
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-10Y1E2	PCM-10Y3E2	PCM-13Y1E2	PCM-13Y3E2	PCM-18Y0E2
Sample Name:	PCM-10 TSW-071211	PCM-10-DSW-091209	PCM-13 TSW-071211	PCM-13-DSW-091209	PCM-DSW18-060901
Sample Date:	12/11/2007	12/9/2009	12/11/2007	12/9/2009	9/1/2006
Conventional Parameters (mg/l)					
Cyanide, free	--	0.01 U	--	0.01 U	--
Cyanide, total	--	0.01 U	--	0.01 U	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	0.5 U	--	**0.05 J**	**0.84**
Ethylbenzene	--	0.5 U	--	0.5 U	**0.14 J**
m,p-Xylene	--	0.5 U	--	0.5 U	**0.23 J**
Naphthalene	--	--	--	--	--
o-Xylene	--	0.5 U	--	0.5 U	**0.11 J**
Toluene	--	**0.07 J**	--	**0.13 J**	**0.31 J**
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	0.5 UT	--	0.5 UT	**0.34 JT**
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	**0.0053 J**	--	**0.0049 J**	--
Acenaphthene	**200 J**	**0.01 J**	**65 J**	**0.0082 J**	**0.12**
Acenaphthylene	**20 J**	0.021 U	**13 J**	0.02 U	**0.032**
Anthracene	**750 J**	**0.007 J**	**350 J**	0.02 U	**0.0096 J**
Benzo(a)anthracene	**320 J**	0.021 U	**110 J**	0.02 U	**0.0051 J**
Benzo(a)pyrene	**68 J**	**0.011 J**	**12 J**	**0.0056 J**	0.021 U
Benzo(b)fluoranthene	**84 J**	**0.013 J**	**18 J**	**0.0044 J**	0.021 U
Benzo(g,h,i)perylene	**28 J**	0.021 U	10 UJ	0.02 U	0.021 U
Benzo(k)fluoranthene	**28 J**	**0.0055 J**	10 UJ	0.02 U	0.021 U
Chrysene	**370 J**	**0.015 J**	**140 J**	**0.0053 J**	**0.011 J**
Dibenzo(a,h)anthracene	10 UJ	0.021 U	10 UJ	0.02 U	0.021 U
Fluoranthene	**1600 J**	**0.029**	**430 J**	**0.018 J**	**0.089**
Fluorene	**110 J**	**0.0052 J**	**60 J**	0.02 U	**0.043**
Indeno(1,2,3-c,d)pyrene	**17 J**	**0.01 J**	10 UJ	**0.0038 J**	0.021 U
Naphthalene	210 UJ	**0.08**	170 UJ	**0.042**	**1.5**
Phenanthrene	**890 J**	**0.02 J**	**340 J**	**0.018 J**	**0.14**
Pyrene	**1200 J**	**0.028**	**410 J**	**0.018 J**	**0.069**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-10Y1E2	PCM-10Y3E2	PCM-13Y1E2	PCM-13Y3E2	PCM-18Y0E2
Sample Name:	PCM-10 TSW-071211	PCM-10-DSW-091209	PCM-13 TSW-071211	PCM-13-DSW-091209	PCM-DSW18-060901
Sample Date:	12/11/2007	12/9/2009	12/11/2007	12/9/2009	9/1/2006
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-18Y0E3	PCM-18Y0E3	PCM-19Y3E2	PCM-20Y3E2	PCM-21Y1E2
Sample Name:	PCM-18DSW-061208	PCM-18TSW-070112	PCM-19-DSW-091209	PCM-20-DSW-091209	PCM-21 TSW-071211
Sample Date:	12/8/2006	1/12/2007	12/9/2009	12/9/2009	12/11/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.01 UJ	--	0.01 U	0.01 U	--
Cyanide, total	--	--	0.01 U	0.01 U	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	0.5 U	--	**0.06 J**	**0.04 J**	--
Ethylbenzene	0.5 U	--	0.5 U	0.5 U	--
m,p-Xylene	0.5 U	--	0.5 U	0.5 U	--
Naphthalene	2 U	--	--	--	--
o-Xylene	0.5 U	--	0.5 U	0.5 U	--
Toluene	0.5 U	--	**0.12 J**	**0.1 J**	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	--	0.5 UT	0.5 UT	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	**0.0059 J**	**0.0046 J**	--
Acenaphthene	--	**120**	**0.014 J**	**0.0063 J**	**180 J**
Acenaphthylene	--	**20**	0.02 U	0.021 U	**19 J**
Anthracene	--	**150**	**0.0051 J**	**0.0038 J**	**740 J**
Benzo(a)anthracene	--	**88**	0.02 U	0.021 U	**650 J**
Benzo(a)pyrene	--	**18**	**0.0048 J**	**0.0066 J**	**160 J**
Benzo(b)fluoranthene	--	**21**	**0.0034 J**	**0.0058 J**	**200 J**
Benzo(g,h,i)perylene	--	10 U	0.02 U	0.021 U	**63 J**
Benzo(k)fluoranthene	--	**14**	0.02 U	0.021 U	**58 J**
Chrysene	--	**140**	**0.0042 J**	**0.0049 J**	**750 J**
Dibenzo(a,h)anthracene	--	10 U	0.02 U	0.021 U	10 UJ
Fluoranthene	--	**720**	**0.016 J**	**0.02 J**	**2200 J**
Fluorene	--	**100**	**0.0053 J**	**0.0045 J**	**100 J**
Indeno(1,2,3-c,d)pyrene	--	10 U	**0.0033 J**	**0.0043 J**	**44 J**
Naphthalene	--	**68**	**0.074**	**0.066**	200 UJ
Phenanthrene	--	**630**	**0.019 J**	**0.015 J**	**800 J**
Pyrene	--	**830**	**0.016 J**	**0.023**	**1600 J**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-18Y0E3	PCM-18Y0E3	PCM-19Y3E2	PCM-20Y3E2	PCM-21Y1E2
Sample Name:	PCM-18DSW-061208	PCM-18TSW-070112	PCM-19-DSW-091209	PCM-20-DSW-091209	PCM-21 TSW-071211
Sample Date:	12/8/2006	1/12/2007	12/9/2009	12/9/2009	12/11/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-21Y3E2	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04
Sample Name:	PCM-21-DSW-091209	WLCGSG07GSW03CE071005	WLCGSG07GSW03CSH071001	WLCGSG07GSW03CSL071003	WLCGSG07GSW04CE071004
Sample Date:	12/9/2009	10/5/2007	10/1/2007	10/3/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.01 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	0.5 U	--	--	--	--
Ethylbenzene	0.5 U	--	--	--	--
m,p-Xylene	0.5 U	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	0.5 U	--	--	--	--
Toluene	**0.08 J**	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	**0.0041 J**	--	--	--	--
Acenaphthene	**0.0046 J**	--	--	--	--
Acenaphthylene	0.02 U	--	--	--	--
Anthracene	0.02 U	--	--	--	--
Benzo(a)anthracene	0.02 U	--	--	--	--
Benzo(a)pyrene	0.02 U	--	--	--	--
Benzo(b)fluoranthene	**0.0029 J**	--	--	--	--
Benzo(g,h,i)perylene	0.02 U	--	--	--	--
Benzo(k)fluoranthene	0.02 U	--	--	--	--
Chrysene	0.02 U	--	--	--	--
Dibenzo(a,h)anthracene	0.02 U	--	--	--	--
Fluoranthene	**0.0091 J**	--	--	--	--
Fluorene	0.02 U	--	--	--	--
Indeno(1,2,3-c,d)pyrene	0.02 U	--	--	--	--
Naphthalene	**0.074**	--	--	--	--
Phenanthrene	**0.011 J**	--	--	--	--
Pyrene	**0.007 J**	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-21Y3E2	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04
Sample Name:	PCM-21-DSW-091209	WLCGSG07GSW03CE071005	WLCGSG07GSW03CSH071001	WLCGSG07GSW03CSL071003	WLCGSG07GSW04CE071004
Sample Date:	12/9/2009	10/5/2007	10/1/2007	10/3/2007	10/4/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05
Sample Name:	WLCGSG07GSW04CSH071004	WLCGSG07GSW04CSL071002	WLCGSG07GSW05CE071008	WLCGSG07GSW05CSH071005	WLCGSG07GSW05CSL071004
Sample Date:	10/4/2007	10/2/2007	10/8/2007	10/5/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05
Sample Name:	WLCGSG07GSW04CSH071004	WLCGSG07GSW04CSL071002	WLCGSG07GSW05CE071008	WLCGSG07GSW05CSH071005	WLCGSG07GSW05CSL071004
Sample Date:	10/4/2007	10/2/2007	10/8/2007	10/5/2007	10/4/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07
Sample Name:	WLCGSG07GSW06CE071008	WLCGSG07GSW06CSH071002	WLCGSG07GSW06CSL071004	WLCGSG07GSW07CE071005	WLCGSG07GSW07CSH071001
Sample Date:	10/8/2007	10/2/2007	10/4/2007	10/5/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07
Sample Name:	WLCGSG07GSW06CE071008	WLCGSG07GSW06CSH071002	WLCGSG07GSW06CSL071004	WLCGSG07GSW07CE071005	WLCGSG07GSW07CSH071001
Sample Date:	10/8/2007	10/2/2007	10/4/2007	10/5/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW07	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW07CSL071003	WLCGSG07GSW08CE071008	WLCGSG07GSW08CSH071002	WLCGSG07GSW08CSL071004	WLCGSG07GSW09CE071001
Sample Date:	10/3/2007	10/8/2007	10/2/2007	10/4/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	**0.01**
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW07	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW07CSL071003	WLCGSG07GSW08CE071008	WLCGSG07GSW08CSH071002	WLCGSG07GSW08CSL071004	WLCGSG07GSW09CE071001
Sample Date:	10/3/2007	10/8/2007	10/2/2007	10/4/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10
Sample Name:	WLCGSG07GSW09CSH071003	WLCGSG07GSW09CSL071008	WLCGSG07GSW10CE071008	WLCGSG07GSW10CSH071002	WLCGSG07GSW10CSL071005
Sample Date:	10/3/2007	10/8/2007	10/8/2007	10/2/2007	10/5/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10
Sample Name:	WLCGSG07GSW09CSH071003	WLCGSG07GSW09CSL071008	WLCGSG07GSW10CE071008	WLCGSG07GSW10CSH071002	WLCGSG07GSW10CSL071005
Sample Date:	10/3/2007	10/8/2007	10/8/2007	10/2/2007	10/5/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12
Sample Name:	WLCGSG07GSW11CE071002	WLCGSG07GSW11CSH071003	WLCGSG07GSW11CSL071008	WLCGSG07GSW12CE071001	WLCGSG07GSW12CSH071003
Sample Date:	10/2/2007	10/3/2007	10/8/2007	10/1/2007	10/3/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12
Sample Name:	WLCGSG07GSW11CE071002	WLCGSG07GSW11CSH071003	WLCGSG07GSW11CSL071008	WLCGSG07GSW12CE071001	WLCGSG07GSW12CSH071003
Sample Date:	10/2/2007	10/3/2007	10/8/2007	10/1/2007	10/3/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW12	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW12CSL071005	WLCGSG07GSW13CE071001	WLCGSG07GSW13CSH071002	WLCGSG07GSW13CSL071005	WLCGSG07GSW14CE071008
Sample Date:	10/5/2007	10/1/2007	10/2/2007	10/5/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	**0.11**
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW12	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW12CSL071005	WLCGSG07GSW13CE071001	WLCGSG07GSW13CSH071002	WLCGSG07GSW13CSL071005	WLCGSG07GSW14CE071008
Sample Date:	10/5/2007	10/1/2007	10/2/2007	10/5/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15
Sample Name:	WLCGSG07GSW14CSH071005	WLCGSG07GSW14CSL071002	WLCGSG07GSW15CE071002	WLCGSG07GSW15CSH071004	WLCGSG07GSW15CSL071008
Sample Date:	10/5/2007	10/2/2007	10/2/2007	10/4/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15
Sample Name:	WLCGSG07GSW14CSH071005	WLCGSG07GSW14CSL071002	WLCGSG07GSW15CE071002	WLCGSG07GSW15CSH071004	WLCGSG07GSW15CSL071008
Sample Date:	10/5/2007	10/2/2007	10/2/2007	10/4/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17
Sample Name:	WLCGSG07GSW16CE071008	WLCGSG07GSW16CSH071004	WLCGSG07GSW16CSL071008	WLCGSG07GSW17CE071003	WLCGSG07GSW17CSH071009
Sample Date:	10/8/2007	10/4/2007	10/8/2007	10/3/2007	10/9/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17
Sample Name:	WLCGSG07GSW16CE071008	WLCGSG07GSW16CSH071004	WLCGSG07GSW16CSL071008	WLCGSG07GSW17CE071003	WLCGSG07GSW17CSH071009
Sample Date:	10/8/2007	10/4/2007	10/8/2007	10/3/2007	10/9/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW17	WLCGSG07GSW18	WLCGSG07GSW18	WLCGSG07GSW18	WLCSLH01GP59
Sample Name:	WLCGSG07GSW17CSL071003	WLCGSG07GSW18CE071001	WLCGSG07GSW18CSH071005	WLCGSG07GSW18CSL071008	WLCSLH01GP59SW
Sample Date:	10/3/2007	10/1/2007	10/5/2007	10/8/2007	5/17/2005
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 UJ	0.005 U	0.005 U	--
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	0.2 U
1,2-Dichloroethene, cis-	--	--	--	--	0.2 U
1,2-Dichloroethene, trans-	--	--	--	--	0.3 U
Benzene	--	--	--	--	0.2 U
Ethylbenzene	--	--	--	--	0.2 U
m,p-Xylene	--	--	--	--	0.4 U
Naphthalene	--	--	--	--	1 U
o-Xylene	--	--	--	--	0.2 U
Toluene	--	--	--	--	0.2 U
Trichloroethene (TCE)	--	--	--	--	0.2 U
Vinyl chloride	--	--	--	--	**0.47**
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW17	WLCGSG07GSW18	WLCGSG07GSW18	WLCGSG07GSW18	WLCSLH01GP59
Sample Name:	WLCGSG07GSW17CSL071003	WLCGSG07GSW18CE071001	WLCGSG07GSW18CSH071005	WLCGSG07GSW18CSL071008	WLCSLH01GP59SW
Sample Date:	10/3/2007	10/1/2007	10/5/2007	10/8/2007	5/17/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP60	WLCSLH01GP61	WLCSLH01GP61	WLCSLH01GP62	WLCSLH01GP63
Sample Name:	WLCSLH01GP60SW	WLCSLH01GP61SW	WLCSLH01GP61SWA	WLCSLH01GP62SW	WLCSLH01GP63SW
Sample Date:	5/17/2005	5/17/2005	5/18/2005	5/18/2005	5/19/2005
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	**1.24**	0.2 U
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
m,p-Xylene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Naphthalene	1 U	1 U	1 U	1 U	1 U
o-Xylene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	**0.24**
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	0.2 U	0.2 U	**0.57**	**0.76**	**0.32**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	0.4 UT	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP60	WLCSLH01GP61	WLCSLH01GP61	WLCSLH01GP62	WLCSLH01GP63
Sample Name:	WLCSLH01GP60SW	WLCSLH01GP61SW	WLCSLH01GP61SWA	WLCSLH01GP62SW	WLCSLH01GP63SW
Sample Date:	5/17/2005	5/17/2005	5/18/2005	5/18/2005	5/19/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP64	WLCSLH01GP68	WLCSLH01GP69	WLCSLH01GP70	WLCSLH01GP72
Sample Name:	WLCSLH01GP64SW	WLCSLH01GP68SW	WLCSLH01GP69SW	WLCSLH01GP70SW	WLCSLH01GP72SW
Sample Date:	5/19/2005	5/23/2005	5/24/2005	5/24/2005	5/25/2005
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	**0.51**	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	**279**	**130**	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, trans-	**1.46**	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	**31.4**	0.2 U	**4.14**	**0.46**	0.2 U
Ethylbenzene	**11.4**	0.2 U	**1.33**	**1.55**	0.2 U
m,p-Xylene	**3.93**	0.4 U	0.4 U	**0.54**	0.4 U
Naphthalene	**458**	**38.2**	**81.9**	**282**	**3.7**
o-Xylene	**1.97**	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	**4.12**	**0.93**	0.36 U	0.48 U	0.2 U
Trichloroethene (TCE)	0.2 U	**194**	**0.61**	0.2 U	0.2 U
Vinyl chloride	**73.2**	**7.26**	**1.15**	**0.49**	**0.48**
LWG RA Total Xylene (Calculated U = 1/2)	**5.9 T**	0.4 UT	0.4 UT	**0.64 T**	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP64	WLCSLH01GP68	WLCSLH01GP69	WLCSLH01GP70	WLCSLH01GP72
Sample Name:	WLCSLH01GP64SW	WLCSLH01GP68SW	WLCSLH01GP69SW	WLCSLH01GP70SW	WLCSLH01GP72SW
Sample Date:	5/19/2005	5/23/2005	5/24/2005	5/24/2005	5/25/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP73	WLCSLH01GP74	WLCSLH01GP75	WLCSLH01GP76	WLCSLH01GP77
Sample Name:	WLCSLH01GP73SW	WLCSLH01GP74SW	WLCSLH01GP75SW	WLCSLH01GP76SW	WLCSLH01GP77SW
Sample Date:	5/25/2005	5/26/2005	5/26/2005	5/27/2005	5/27/2005
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	0.2 U	**1**	**1.74**	0.2 U	0.2 U
Ethylbenzene	0.2 U	**3.5**	**1.75**	0.2 U	**0.55**
m,p-Xylene	0.4 U	**0.48**	0.4 U	0.4 U	0.4 U
Naphthalene	**2.46**	**227**	**139**	**2.89**	**377**
o-Xylene	0.2 U	**0.43**	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	**0.91**	**0.82**	0.2 U	**0.29**
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	**0.46**	**0.44**	**0.46**	**0.52**	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	**0.91 T**	0.4 UT	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP73	WLCSLH01GP74	WLCSLH01GP75	WLCSLH01GP76	WLCSLH01GP77
Sample Name:	WLCSLH01GP73SW	WLCSLH01GP74SW	WLCSLH01GP75SW	WLCSLH01GP76SW	WLCSLH01GP77SW
Sample Date:	5/25/2005	5/26/2005	5/26/2005	5/27/2005	5/27/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP78	WLCSLH01GP79	WLCSLH01GP81	WLCSLH01GP82	WLCSLH01GP83
Sample Name:	WLCSLH01GP78SW	WLCSLH01GP79SW	WLCSLH01GP81SW	WLCSLH01GP82SW	WLCSLH01GP83SW
Sample Date:	5/27/2005	5/31/2005	5/31/2005	6/1/2005	6/1/2005
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	0.2 U	**3.28**
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	0.2 U	0.2 U	**0.46**	**0.69**	0.2 U
Ethylbenzene	0.2 U	0.2 U	**1.15**	**3.46**	0.2 U
m,p-Xylene	0.4 U	0.4 U	**0.43**	0.4 U	0.4 U
Naphthalene	**9.47**	**2.56**	**166**	**605**	**5.11**
o-Xylene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.34 U	0.35 U	**0.28**	0.2 U
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	0.2 U	0.2 U	0.2 U	0.2 U	**1.69**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	**0.53 T**	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP78	WLCSLH01GP79	WLCSLH01GP81	WLCSLH01GP82	WLCSLH01GP83
Sample Name:	WLCSLH01GP78SW	WLCSLH01GP79SW	WLCSLH01GP81SW	WLCSLH01GP82SW	WLCSLH01GP83SW
Sample Date:	5/27/2005	5/31/2005	5/31/2005	6/1/2005	6/1/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP84
Sample Name:	WLCSLH01GP84SW
Sample Date:	6/1/2005
Conventional Parameters (mg/l)	
Cyanide, free	--
Cyanide, total	--
Metals (µg/l)	
Zinc	--
Disolved Metals (µg/l)	
Zinc	--
Volatile Organics (µg/l)	
1,1-Dichloroethene	0.2 U
1,2-Dichloroethene, cis-	**4.7**
1,2-Dichloroethene, trans-	0.3 U
Benzene	**0.27**
Ethylbenzene	0.2 U
m,p-Xylene	0.4 U
Naphthalene	**34.5**
o-Xylene	0.2 U
Toluene	**0.21**
Trichloroethene (TCE)	0.2 U
Vinyl chloride	**2.13**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)	
2-Methylnaphthalene	--
Acenaphthene	--
Acenaphthylene	--
Anthracene	--
Benzo(a)anthracene	--
Benzo(a)pyrene	--
Benzo(b)fluoranthene	--
Benzo(g,h,i)perylene	--
Benzo(k)fluoranthene	--
Chrysene	--
Dibenzo(a,h)anthracene	--
Fluoranthene	--
Fluorene	--
Indeno(1,2,3-c,d)pyrene	--
Naphthalene	--
Phenanthrene	--
Pyrene	--
Semivolatile Organics (µg/l)	
Carbazole	--
Dibenzofuran	--
PCB Aroclors (µg/l)	
Aroclor 1016	--
Aroclor 1221	--
Aroclor 1232	--
Aroclor 1242	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Database:	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP84
Sample Name:	WLCSLH01GP84SW
Sample Date:	6/1/2005
Aroclor 1248	--
Aroclor 1254	--
Aroclor 1260	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--
PCB Congeners (ng/l)	
PCB-077	--
PCB-081	--
PCB-105	--
PCB-114	--
PCB-118	--
PCB-123	--
PCB-126	--
PCB-156	--
PCB-157	--
PCB-167	--
PCB-169	--
PCB-189	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--
Pesticides (µg/l)	
2,4'-DDD (o,p'-DDD)	--
2,4'-DDE (o,p'-DDE)	--
2,4'-DDT (o,p'-DDT)	--
4,4'-DDD (p,p'-DDD)	--
4,4'-DDE (p,p'-DDE)	--
4,4'-DDT (p,p'-DDT)	--
alpha-Hexachlorocyclohexane (BHC)	--
beta-Hexachlorocyclohexane (BHC)	--
delta-Hexachlorocyclohexane (BHC)	--
Endrin ketone	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--
LWG RA Sum DDD (Calculated U = 1/2)	--
LWG RA Sum DDE (Calculated U = 1/2)	--
LWG RA Sum DDT (Calculated U = 1/2)	--
LWG RA Total DDx (Calculated U = 1/2)	--
Total Petroleum Hydrocarbons (mg/l)	
Diesel Range Hydrocarbons	--

Table 3-43
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Ecological

Notes:

Detected concentration is greater than 1 screening level

Detected concentration is greater than 2 screening levels

Detected concentration is greater than 3 screening levels

Detected concentration is greater than 4 screening levels

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R = Rejected

T = Result is the value of a total or calculation

-- = Results not reported or not applicable

N = Normal Field Sample

Acronyms:

µg/kg = micrograms per liter

mg/kg = milligrams per liter

ng/l = nanograms per liter

BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

LWG = Lower Willamette Group

PCB = polychlorinated biphenyls

RA = Portland Harbor Site risk assessment

TEQ = toxic equivalents quotient

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	LW3-W031	LW3-W031	LW3-W031	LW3-W031	LW3-W031
Sample Name:	LW3-W3031-NB	LW3-W3031-NB	LW3-W3031-NB-C	LW3-W3031-NB-F	LW3-W4031-NB
Sample Date:	11/5/2006	11/5/2006	11/5/2006	11/5/2006	2/24/2007
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	3.4 U	--	--	--
Disolved Metals (µg/l)					
Zinc	--	2.6 U	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	0.0084 U	--	--	--
Acenaphthene	--	0.0062 U	--	--	--
Acenaphthylene	--	0.0046 U	--	--	--
Anthracene	--	0.0078 U	--	--	--
Benzo(a)anthracene	--	0.0078 U	--	--	--
Benzo(a)pyrene	--	0.0086 U	--	--	--
Benzo(b)fluoranthene	--	0.0092 U	--	--	--
Benzo(g,h,i)perylene	--	0.0082 U	--	--	--
Benzo(k)fluoranthene	--	0.011 U	--	--	--
Chrysene	--	0.011 U	--	--	--
Dibenzo(a,h)anthracene	--	0.0072 U	--	--	--
Fluoranthene	--	**0.018**	--	--	--
Fluorene	--	0.0072 U	--	--	--
Indeno(1,2,3-c,d)pyrene	--	0.0066 U	--	--	--
Naphthalene	--	0.013 U	--	--	--
Phenanthrene	--	0.0089 U	--	--	--
Pyrene	--	**0.014 J**	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	0.013 U	--	--	--
Dibenzofuran	--	0.0076 U	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	LW3-W031	LW3-W031	LW3-W031	LW3-W031	LW3-W031
Sample Name:	LW3-W3031-NB	LW3-W3031-NB	LW3-W3031-NB-C	LW3-W3031-NB-F	LW3-W4031-NB
Sample Date:	11/5/2006	11/5/2006	11/5/2006	11/5/2006	2/24/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	**0.000568 JT**	--	**0.000279**	**0.000289 J**	**0.000553 T**
PCB-081	0.000444 UT	--	0.000176 U	0.000444 U	9.5E-05 UT
PCB-105	**0.0029 T**	--	**0.00111**	**0.00179**	**0.005 T**
PCB-114	9.9E-05 UT	--	8.4E-05 U	9.9E-05 U	**0.00029 JT**
PCB-118	**0.0071 T**	--	**0.00282**	**0.0043**	**0.0116 T**
PCB-123	**6.7E-05 JT**	--	8.9E-05 U	**6.7E-05 J**	**0.00015 T**
PCB-126	**3.4E-05 JT**	--	**3.4E-05 J**	0.000222 U	**5.7E-05 T**
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	**0.000137 JT**	--	**0.000137 J**	0.000299 U	**0.00085 T**
PCB-169	0.000706 UT	--	0.000706 U	0.000178 U	4.5E-05 UT
PCB-189	7.2E-05 UT	--	5.2E-05 U	7.2E-05 U	**0.00032 T**
LWG RA Total PCB Congener (Calculated U = 1/2)	**0.29 T**	--	**0.18 JT**	**0.13 JT**	**0.46 T**
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	**1.4E-05 T**	--	**1.4E-05 JT**	**1.4E-05 JT**	**7.1E-06 T**
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	**5.47E-05 JT**	--	**3.52E-05 J**	**1.95E-05 J**	**0.000102 T**
2,4'-DDE (o,p'-DDE)	**5.8E-06 JT**	--	**3.3E-06 J**	**2.49E-06 J**	**2.16E-05 JT**
2,4'-DDT (o,p'-DDT)	**5.32E-06 JT**	--	5.77E-06 U	**5.32E-06 J**	**4.88E-05 JT**
4,4'-DDD (p,p'-DDD)	**0.000125 JT**	--	**6.85E-05 J**	**5.68E-05 J**	**0.00032 T**
4,4'-DDE (p,p'-DDE)	**7.96E-05 JT**	--	**4.52E-05 J**	**3.44E-05 J**	**0.00022 T**
4,4'-DDT (p,p'-DDT)	**4.05E-05 JT**	--	**1.44E-05 J**	**2.61E-05 J**	**0.00014 T**
alpha-Hexachlorocyclohexane (BHC)	**2.94E-05 JT**	--	**2.94E-05 J**	1.42E-06 U	**2.04E-05 JT**
beta-Hexachlorocyclohexane (BHC)	**2.1E-06 JT**	--	7.15E-06 U	**2.1E-06 J**	**8.91E-06 JT**
delta-Hexachlorocyclohexane (BHC)	9.68E-06 UT	--	9.68E-06 U	9.41E-06 U	**3.88E-06 JT**
Endrin ketone	1.21E-05 UT	--	1.21E-05 U	1.18E-05 U	**4.03E-06 JT**
gamma-Hexachlorocyclohexane (BHC) (Lindane)	**2.92E-05 JT**	--	**2.79E-05 J**	**1.28E-06 J**	**2.17E-05 JT**
LWG RA Sum DDD (Calculated U = 1/2)	**0.00018 T**	--	**0.000104 JT**	**7.63E-05 JT**	**0.000422 T**
LWG RA Sum DDE (Calculated U = 1/2)	**8.5E-05 T**	--	**4.9E-05 JT**	**3.69E-05 JT**	**0.000242 T**
LWG RA Sum DDT (Calculated U = 1/2)	**4.58E-05 T**	--	**1.73E-05 JT**	**3.14E-05 JT**	**0.00019 T**
LWG RA Total DDx (Calculated U = 1/2)	**0.00031 T**	--	**0.00017 JT**	**0.000145 JT**	**0.00085 T**
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	LW3-W031	LW3-W031	LW3-W031	PCM-01Y1E2	PCM-01Y3E2
Sample Name:	LW3-W4031-NB	LW3-W4031-NB-C	LW3-W4031-NB-F	PCM-01 TSW-071211	PCM-01-DSW-091209
Sample Date:	2/24/2007	2/24/2007	2/24/2007	12/11/2007	12/9/2009
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	0.01 U
Cyanide, total	--	--	--	--	0.01 U
Metals (µg/l)					
Zinc	**8.4**	--	--	--	--
Disolved Metals (µg/l)					
Zinc	2.2 U	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	**0.04 J**
Ethylbenzene	--	--	--	--	0.5 U
m,p-Xylene	--	--	--	--	0.5 U
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	0.5 U
Toluene	--	--	--	--	**0.08 J**
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	**0.62**	--	--	--	**0.0032 J**
Acenaphthene	**0.21**	--	--	**72 J**	**0.0047 J**
Acenaphthylene	**0.033**	--	--	10 UJ	0.021 U
Anthracene	**0.48**	--	--	**76 J**	0.021 U
Benzo(a)anthracene	**0.27**	--	--	**83 J**	0.021 U
Benzo(a)pyrene	**0.19**	--	--	**12 J**	0.021 U
Benzo(b)fluoranthene	**0.13**	--	--	**11 J**	0.021 U
Benzo(g,h,i)perylene	**0.14**	--	--	10 UJ	0.021 U
Benzo(k)fluoranthene	**0.13**	--	--	**11 J**	0.021 U
Chrysene	**0.37**	--	--	**96 J**	0.021 U
Dibenzo(a,h)anthracene	**0.024**	--	--	10 UJ	0.021 U
Fluoranthene	**0.81**	--	--	**620 J**	**0.0066 J**
Fluorene	**0.31**	--	--	**63 J**	0.021 U
Indeno(1,2,3-c,d)pyrene	**0.12**	--	--	10 UJ	0.021 U
Naphthalene	**0.083**	--	--	90 UJ	**0.031**
Phenanthrene	**2.2**	--	--	**370 J**	**0.0083 J**
Pyrene	**1.3**	--	--	**580 J**	**0.0053 J**
Semivolatile Organics (µg/l)					
Carbazole	**0.16 J**	--	--	--	--
Dibenzofuran	**0.046**	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	LW3-W031	LW3-W031	LW3-W031	PCM-01Y1E2	PCM-01Y3E2
Sample Name:	LW3-W4031-NB	LW3-W4031-NB-C	LW3-W4031-NB-F	PCM-01 TSW-071211	PCM-01-DSW-091209
Sample Date:	2/24/2007	2/24/2007	2/24/2007	12/11/2007	12/9/2009
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	0.000147 U	**0.000553**	--	--
PCB-081	--	9.5E-05 U	1.7E-05 U	--	--
PCB-105	--	**0.000639**	**0.00436**	--	--
PCB-114	--	**4.7E-05 J**	**0.000242**	--	--
PCB-118	--	**0.00154**	**0.0101**	--	--
PCB-123	--	3.9E-05 U	**0.000154**	--	--
PCB-126	--	4.75E-05 U	**5.7E-05**	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	6.8E-05 U	**0.000854**	--	--
PCB-169	--	3.8E-05 U	4.52E-05 U	--	--
PCB-189	--	1.8E-05 U	**0.000319**	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	**0.11 JT**	**0.35 JT**	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	**3E-06 JT**	**7E-06 T**	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	**4.98E-05**	**5.19E-05**	--	--
2,4'-DDE (o,p'-DDE)	--	**6.83E-06 J**	**1.48E-05 J**	--	--
2,4'-DDT (o,p'-DDT)	--	**2.67E-05 J**	**2.21E-05 J**	--	--
4,4'-DDD (p,p'-DDD)	--	**8.72E-05**	**0.000233**	--	--
4,4'-DDE (p,p'-DDE)	--	**6.22E-05**	**0.000158**	--	--
4,4'-DDT (p,p'-DDT)	--	**5.4E-05**	**8.99E-05**	--	--
alpha-Hexachlorocyclohexane (BHC)	--	**2.04E-05 J**	2.41E-06 U	--	--
beta-Hexachlorocyclohexane (BHC)	--	**8.91E-06 J**	2.89E-06 U	--	--
delta-Hexachlorocyclohexane (BHC)	--	**3.88E-06 J**	3.13E-07 U	--	--
Endrin ketone	--	**4.03E-06 J**	2.41E-06 U	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	**2.17E-05 J**	5.16E-07 U	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	**0.000137 T**	**0.000285 T**	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	**6.9E-05 JT**	**0.000173 JT**	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	**8.1E-05 JT**	**0.000112 JT**	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	**0.00029 JT**	**0.00057 JT**	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-02Y1E2	PCM-02Y3E2	PCM-03Y1E2	PCM-03Y3E2	PCM-04Y1E2
Sample Name:	PCM-02 TSW-071211	PCM-02-DSW-091209	PCM-03 TSW-071211	PCM-03-DSW-091209	PCM-04 TSW-071211
Sample Date:	12/11/2007	12/9/2009	12/11/2007	12/9/2009	12/11/2007
Conventional Parameters (mg/l)					
Cyanide, free	--	0.01 U	--	0.01 U	--
Cyanide, total	--	0.01 U	--	0.01 U	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	**0.05 J**	--	**0.05 J**	--
Ethylbenzene	--	0.5 U	--	0.5 U	--
m,p-Xylene	--	0.5 U	--	0.5 U	--
Naphthalene	--	--	--	--	--
o-Xylene	--	0.5 U	--	0.5 U	--
Toluene	--	**0.11 J**	--	**0.08 J**	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	0.5 UT	--	0.5 UT	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	**0.0073 J**	--	**0.0055 J**	--
Acenaphthene	**200 J**	**0.019 J**	**180 J**	**0.014 J**	**210 J**
Acenaphthylene	**12 J**	0.02 U	**13 J**	0.02 U	**17 J**
Anthracene	**280 J**	**0.0075 J**	**330 J**	**0.0051 J**	**640 J**
Benzo(a)anthracene	**240 J**	0.02 U	**320 J**	0.02 U	**540 J**
Benzo(a)pyrene	**41 J**	**0.0067 J**	**43 J**	**0.0048 J**	**63 J**
Benzo(b)fluoranthene	**31 J**	**0.0064 J**	**63 J**	**0.0042 J**	**89 J**
Benzo(g,h,i)perylene	10 UJ	0.02 U	10 UJ	0.02 U	**13 J**
Benzo(k)fluoranthene	**31 J**	0.02 U	**16 J**	0.02 U	**24 J**
Chrysene	**250 J**	**0.0061 J**	**320 J**	**0.0052 J**	**500 J**
Dibenzo(a,h)anthracene	10 UJ	0.02 U	10 UJ	0.02 U	10 UJ
Fluoranthene	**990 J**	**0.025**	**1700 J**	**0.015 J**	**2400 J**
Fluorene	**93 J**	**0.012 J**	**110 J**	**0.0066 J**	**120 J**
Indeno(1,2,3-c,d)pyrene	10 UJ	**0.0047 J**	10 UJ	**0.0035 J**	10 UJ
Naphthalene	140 UJ	**0.067**	120 UJ	**0.077**	98 UJ
Phenanthrene	**650 J**	**0.029**	**790 J**	**0.02**	**950 J**
Pyrene	**2200 J**	**0.024**	**1300 J**	**0.017 J**	**1900 J**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-02Y1E2	PCM-02Y3E2	PCM-03Y1E2	PCM-03Y3E2	PCM-04Y1E2
Sample Name:	PCM-02 TSW-071211	PCM-02-DSW-091209	PCM-03 TSW-071211	PCM-03-DSW-091209	PCM-04 TSW-071211
Sample Date:	12/11/2007	12/9/2009	12/11/2007	12/9/2009	12/11/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-04Y3E2	PCM-05Y1E2	PCM-05Y3E2	PCM-06Y1E2	PCM-06Y3E2
Sample Name:	PCM-04-DSW-091209	PCM-05 TSW-071211	PCM-05-DSW-091209	PCM-06 TSW-071211	PCM-06-DSW-091209
Sample Date:	12/9/2009	12/11/2007	12/9/2009	12/11/2007	12/9/2009
Conventional Parameters (mg/l)					
Cyanide, free	0.01 U	--	0.01 U	--	0.01 U
Cyanide, total	0.01 U	--	0.01 U	--	0.01 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	**0.05 J**	--	0.5 U	--	0.5 U
Ethylbenzene	0.5 U	--	0.5 U	--	0.5 U
m,p-Xylene	0.5 U	--	0.5 U	--	0.5 U
Naphthalene	--	--	--	--	--
o-Xylene	0.5 U	--	0.5 U	--	0.5 U
Toluene	**0.08 J**	--	**0.08 J**	--	**0.06 J**
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	--	0.5 UT	--	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	**0.0078 J**	--	**0.0082 J**	--	**0.0046 J**
Acenaphthene	**0.013 J**	**200 J**	**0.02 J**	**170 J**	**0.0073 J**
Acenaphthylene	**0.0041 J**	10 UJ	0.02 U	**11 J**	0.02 U
Anthracene	**0.0047 J**	**360 J**	**0.007 J**	**320 J**	0.02 U
Benzo(a)anthracene	0.02 U	**400 J**	0.02 U	**240 J**	0.02 U
Benzo(a)pyrene	0.02 U	**45 J**	**0.0065 J**	**28 J**	0.02 U
Benzo(b)fluoranthene	**0.0053 J**	**57 J**	**0.0061 J**	**42 J**	0.02 U
Benzo(g,h,i)perylene	0.02 U	10 UJ	0.02 U	10 UJ	0.02 U
Benzo(k)fluoranthene	0.02 U	**21 J**	0.02 U	**11 J**	0.02 U
Chrysene	**0.0048 J**	**380 J**	**0.008 J**	**250 J**	0.02 U
Dibenzo(a,h)anthracene	0.02 U	10 UJ	0.02 U	10 UJ	0.02 U
Fluoranthene	**0.019 J**	**1400 J**	**0.025**	**910 J**	**0.0091 J**
Fluorene	**0.0058 J**	**78 J**	**0.011 J**	**86 J**	**0.0041 J**
Indeno(1,2,3-c,d)pyrene	**0.0039 J**	10 UJ	**0.0038 J**	10 UJ	0.02 U
Naphthalene	**0.075**	250 UJ	**0.096**	130 UJ	**0.057**
Phenanthrene	**0.02 J**	**540 J**	**0.027**	**530 J**	**0.011 J**
Pyrene	**0.021**	**1100 J**	**0.027**	**810 J**	**0.0094 J**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-04Y3E2	PCM-05Y1E2	PCM-05Y3E2	PCM-06Y1E2	PCM-06Y3E2
Sample Name:	PCM-04-DSW-091209	PCM-05 TSW-071211	PCM-05-DSW-091209	PCM-06 TSW-071211	PCM-06-DSW-091209
Sample Date:	12/9/2009	12/11/2007	12/9/2009	12/11/2007	12/9/2009
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-07Y0E1b	PCM-08Y1E2	PCM-08Y3E2	PCM-09Y1E2	PCM-09Y3E2
Sample Name:	PCM-07TSW-060606	PCM-08 TSW-071211	PCM-08-DSW-091209	PCM-09 TSW-071211	PCM-09-DSW-091209
Sample Date:	6/6/2006	12/11/2007	12/9/2009	12/11/2007	12/9/2009
Conventional Parameters (mg/l)					
Cyanide, free	--	--	0.01 U	--	0.01 U
Cyanide, total	--	--	0.01 U	--	0.01 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	0.5 U	--	**0.05 J**
Ethylbenzene	--	--	0.5 U	--	0.5 U
m,p-Xylene	--	--	0.5 U	--	0.5 U
Naphthalene	--	--	--	--	--
o-Xylene	--	--	0.5 U	--	0.5 U
Toluene	--	--	**0.07 J**	--	**0.08 J**
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	0.5 UT	--	0.5 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	**0.004 J**	--	**0.007 J**
Acenaphthene	**87**	**230 J**	**0.0055 J**	**180 J**	**0.014 J**
Acenaphthylene	**7 J**	**15 J**	0.02 U	**17 J**	**0.0039 J**
Anthracene	**35**	**590 J**	0.02 U	**560 J**	**0.0062 J**
Benzo(a)anthracene	**130**	**360 J**	0.02 U	**400 J**	0.02 U
Benzo(a)pyrene	**14 J**	**55 J**	0.02 U	**80 J**	**0.0081 J**
Benzo(b)fluoranthene	**39**	**71 J**	0.02 U	**100 J**	**0.01 J**
Benzo(g,h,i)perylene	**12 J**	**19 J**	0.02 U	**29 J**	0.02 U
Benzo(k)fluoranthene	**24**	**24 J**	0.02 U	**31 J**	**0.0042 J**
Chrysene	**210**	**380 J**	0.02 U	**450 J**	**0.0079 J**
Dibenzo(a,h)anthracene	20 U	10 UJ	0.02 U	10 UJ	0.02 U
Fluoranthene	**600**	**1500 J**	**0.0095 J**	**1600 J**	**0.022**
Fluorene	**64**	**120 J**	0.02 U	**96 J**	**0.0062 J**
Indeno(1,2,3-c,d)pyrene	20 U	**11 J**	0.02 U	**17 J**	**0.0065 J**
Naphthalene	69 U	260 UJ	**0.038**	230 UJ	**0.051**
Phenanthrene	**260**	**760 J**	**0.0099 J**	**640 J**	**0.019 J**
Pyrene	**770**	**1100 J**	**0.0077 J**	**1200 J**	**0.021**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-07Y0E1b	PCM-08Y1E2	PCM-08Y3E2	PCM-09Y1E2	PCM-09Y3E2
Sample Name:	PCM-07TSW-060606	PCM-08 TSW-071211	PCM-08-DSW-091209	PCM-09 TSW-071211	PCM-09-DSW-091209
Sample Date:	6/6/2006	12/11/2007	12/9/2009	12/11/2007	12/9/2009
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-10Y1E2	PCM-10Y3E2	PCM-13Y1E2	PCM-13Y3E2	PCM-18Y0E2
Sample Name:	PCM-10 TSW-071211	PCM-10-DSW-091209	PCM-13 TSW-071211	PCM-13-DSW-091209	PCM-DSW18-060901
Sample Date:	12/11/2007	12/9/2009	12/11/2007	12/9/2009	9/1/2006
Conventional Parameters (mg/l)					
Cyanide, free	--	0.01 U	--	0.01 U	--
Cyanide, total	--	0.01 U	--	0.01 U	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	0.5 U	--	**0.05 J**	**0.84**
Ethylbenzene	--	0.5 U	--	0.5 U	**0.14 J**
m,p-Xylene	--	0.5 U	--	0.5 U	**0.23 J**
Naphthalene	--	--	--	--	--
o-Xylene	--	0.5 U	--	0.5 U	**0.11 J**
Toluene	--	**0.07 J**	--	**0.13 J**	**0.31 J**
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	0.5 UT	--	0.5 UT	**0.34 JT**
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	**0.0053 J**	--	**0.0049 J**	--
Acenaphthene	**200 J**	**0.01 J**	**65 J**	**0.0082 J**	**0.12**
Acenaphthylene	**20 J**	0.021 U	**13 J**	0.02 U	**0.032**
Anthracene	**750 J**	**0.007 J**	**350 J**	0.02 U	**0.0096 J**
Benzo(a)anthracene	**320 J**	0.021 U	**110 J**	0.02 U	**0.0051 J**
Benzo(a)pyrene	**68 J**	**0.011 J**	**12 J**	**0.0056 J**	0.021 U
Benzo(b)fluoranthene	**84 J**	**0.013 J**	**18 J**	**0.0044 J**	0.021 U
Benzo(g,h,i)perylene	**28 J**	0.021 U	10 UJ	0.02 U	0.021 U
Benzo(k)fluoranthene	**28 J**	**0.0055 J**	10 UJ	0.02 U	0.021 U
Chrysene	**370 J**	**0.015 J**	**140 J**	**0.0053 J**	**0.011 J**
Dibenzo(a,h)anthracene	10 UJ	0.021 U	10 UJ	0.02 U	0.021 U
Fluoranthene	**1600 J**	**0.029**	**430 J**	**0.018 J**	**0.089**
Fluorene	**110 J**	**0.0052 J**	**60 J**	0.02 U	**0.043**
Indeno(1,2,3-c,d)pyrene	**17 J**	**0.01 J**	10 UJ	**0.0038 J**	0.021 U
Naphthalene	210 UJ	**0.08**	170 UJ	**0.042**	**1.5**
Phenanthrene	**890 J**	**0.02 J**	**340 J**	**0.018 J**	**0.14**
Pyrene	**1200 J**	**0.028**	**410 J**	**0.018 J**	**0.069**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-10Y1E2	PCM-10Y3E2	PCM-13Y1E2	PCM-13Y3E2	PCM-18Y0E2
Sample Name:	PCM-10 TSW-071211	PCM-10-DSW-091209	PCM-13 TSW-071211	PCM-13-DSW-091209	PCM-DSW18-060901
Sample Date:	12/11/2007	12/9/2009	12/11/2007	12/9/2009	9/1/2006
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-18Y0E3	PCM-18Y0E3	PCM-19Y3E2	PCM-20Y3E2	PCM-21Y1E2
Sample Name:	PCM-18DSW-061208	PCM-18TSW-070112	PCM-19-DSW-091209	PCM-20-DSW-091209	PCM-21 TSW-071211
Sample Date:	12/8/2006	1/12/2007	12/9/2009	12/9/2009	12/11/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.01 UJ	--	0.01 U	0.01 U	--
Cyanide, total	--	--	0.01 U	0.01 U	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	0.5 U	--	**0.06 J**	**0.04 J**	--
Ethylbenzene	0.5 U	--	0.5 U	0.5 U	--
m,p-Xylene	0.5 U	--	0.5 U	0.5 U	--
Naphthalene	2 U	--	--	--	--
o-Xylene	0.5 U	--	0.5 U	0.5 U	--
Toluene	0.5 U	--	**0.12 J**	**0.1 J**	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	--	0.5 UT	0.5 UT	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	**0.0059 J**	**0.0046 J**	--
Acenaphthene	--	**120**	**0.014 J**	**0.0063 J**	**180 J**
Acenaphthylene	--	**20**	0.02 U	0.021 U	**19 J**
Anthracene	--	**150**	**0.0051 J**	**0.0038 J**	**740 J**
Benzo(a)anthracene	--	**88**	0.02 U	0.021 U	**650 J**
Benzo(a)pyrene	--	**18**	**0.0048 J**	**0.0066 J**	**160 J**
Benzo(b)fluoranthene	--	**21**	**0.0034 J**	**0.0058 J**	**200 J**
Benzo(g,h,i)perylene	--	10 U	0.02 U	0.021 U	**63 J**
Benzo(k)fluoranthene	--	**14**	0.02 U	0.021 U	**58 J**
Chrysene	--	**140**	**0.0042 J**	**0.0049 J**	**750 J**
Dibenzo(a,h)anthracene	--	10 U	0.02 U	0.021 U	10 UJ
Fluoranthene	--	**720**	**0.016 J**	**0.02 J**	**2200 J**
Fluorene	--	**100**	**0.0053 J**	**0.0045 J**	**100 J**
Indeno(1,2,3-c,d)pyrene	--	10 U	**0.0033 J**	**0.0043 J**	**44 J**
Naphthalene	--	**68**	**0.074**	**0.066**	200 UJ
Phenanthrene	--	**630**	**0.019 J**	**0.015 J**	**800 J**
Pyrene	--	**830**	**0.016 J**	**0.023**	**1600 J**
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-18Y0E3	PCM-18Y0E3	PCM-19Y3E2	PCM-20Y3E2	PCM-21Y1E2
Sample Name:	PCM-18DSW-061208	PCM-18TSW-070112	PCM-19-DSW-091209	PCM-20-DSW-091209	PCM-21 TSW-071211
Sample Date:	12/8/2006	1/12/2007	12/9/2009	12/9/2009	12/11/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-21Y3E2	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04
Sample Name:	PCM-21-DSW-091209	WLCGSG07GSW03CE071005	WLCGSG07GSW03CSH071001	WLCGSG07GSW03CSL071003	WLCGSG07GSW04CE071004
Sample Date:	12/9/2009	10/5/2007	10/1/2007	10/3/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.01 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.01 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	0.5 U	--	--	--	--
Ethylbenzene	0.5 U	--	--	--	--
m,p-Xylene	0.5 U	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	0.5 U	--	--	--	--
Toluene	**0.08 J**	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	0.5 UT	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	**0.0041 J**	--	--	--	--
Acenaphthene	**0.0046 J**	--	--	--	--
Acenaphthylene	0.02 U	--	--	--	--
Anthracene	0.02 U	--	--	--	--
Benzo(a)anthracene	0.02 U	--	--	--	--
Benzo(a)pyrene	0.02 U	--	--	--	--
Benzo(b)fluoranthene	**0.0029 J**	--	--	--	--
Benzo(g,h,i)perylene	0.02 U	--	--	--	--
Benzo(k)fluoranthene	0.02 U	--	--	--	--
Chrysene	0.02 U	--	--	--	--
Dibenzo(a,h)anthracene	0.02 U	--	--	--	--
Fluoranthene	**0.0091 J**	--	--	--	--
Fluorene	0.02 U	--	--	--	--
Indeno(1,2,3-c,d)pyrene	0.02 U	--	--	--	--
Naphthalene	**0.074**	--	--	--	--
Phenanthrene	**0.011 J**	--	--	--	--
Pyrene	**0.007 J**	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	PCM-21Y3E2	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW03	WLCGSG07GSW04
Sample Name:	PCM-21-DSW-091209	WLCGSG07GSW03CE071005	WLCGSG07GSW03CSH071001	WLCGSG07GSW03CSL071003	WLCGSG07GSW04CE071004
Sample Date:	12/9/2009	10/5/2007	10/1/2007	10/3/2007	10/4/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05
Sample Name:	WLCGSG07GSW04CSH071004	WLCGSG07GSW04CSL071002	WLCGSG07GSW05CE071008	WLCGSG07GSW05CSH071005	WLCGSG07GSW05CSL071004
Sample Date:	10/4/2007	10/2/2007	10/8/2007	10/5/2007	10/4/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 UJ	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW04	WLCGSG07GSW04	WLCGSG07GSW05	WLCGSG07GSW05	WLCGSG07GSW05
Sample Name:	WLCGSG07GSW04CSH071004	WLCGSG07GSW04CSL071002	WLCGSG07GSW05CE071008	WLCGSG07GSW05CSH071005	WLCGSG07GSW05CSL071004
Sample Date:	10/4/2007	10/2/2007	10/8/2007	10/5/2007	10/4/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07
Sample Name:	WLCGSG07GSW06CE071008	WLCGSG07GSW06CSH071002	WLCGSG07GSW06CSL071004	WLCGSG07GSW07CE071005	WLCGSG07GSW07CSH071001
Sample Date:	10/8/2007	10/2/2007	10/4/2007	10/5/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW06	WLCGSG07GSW07	WLCGSG07GSW07
Sample Name:	WLCGSG07GSW06CE071008	WLCGSG07GSW06CSH071002	WLCGSG07GSW06CSL071004	WLCGSG07GSW07CE071005	WLCGSG07GSW07CSH071001
Sample Date:	10/8/2007	10/2/2007	10/4/2007	10/5/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW07	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW07CSL071003	WLCGSG07GSW08CE071008	WLCGSG07GSW08CSH071002	WLCGSG07GSW08CSL071004	WLCGSG07GSW09CE071001
Sample Date:	10/3/2007	10/8/2007	10/2/2007	10/4/2007	10/1/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	**0.01**
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW07	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW08	WLCGSG07GSW09
Sample Name:	WLCGSG07GSW07CSL071003	WLCGSG07GSW08CE071008	WLCGSG07GSW08CSH071002	WLCGSG07GSW08CSL071004	WLCGSG07GSW09CE071001
Sample Date:	10/3/2007	10/8/2007	10/2/2007	10/4/2007	10/1/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10
Sample Name:	WLCGSG07GSW09CSH071003	WLCGSG07GSW09CSL071008	WLCGSG07GSW10CE071008	WLCGSG07GSW10CSH071002	WLCGSG07GSW10CSL071005
Sample Date:	10/3/2007	10/8/2007	10/8/2007	10/2/2007	10/5/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW09	WLCGSG07GSW09	WLCGSG07GSW10	WLCGSG07GSW10	WLCGSG07GSW10
Sample Name:	WLCGSG07GSW09CSH071003	WLCGSG07GSW09CSL071008	WLCGSG07GSW10CE071008	WLCGSG07GSW10CSH071002	WLCGSG07GSW10CSL071005
Sample Date:	10/3/2007	10/8/2007	10/8/2007	10/2/2007	10/5/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12
Sample Name:	WLCGSG07GSW11CE071002	WLCGSG07GSW11CSH071003	WLCGSG07GSW11CSL071008	WLCGSG07GSW12CE071001	WLCGSG07GSW12CSH071003
Sample Date:	10/2/2007	10/3/2007	10/8/2007	10/1/2007	10/3/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW11	WLCGSG07GSW12	WLCGSG07GSW12
Sample Name:	WLCGSG07GSW11CE071002	WLCGSG07GSW11CSH071003	WLCGSG07GSW11CSL071008	WLCGSG07GSW12CE071001	WLCGSG07GSW12CSH071003
Sample Date:	10/2/2007	10/3/2007	10/8/2007	10/1/2007	10/3/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW12	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW12CSL071005	WLCGSG07GSW13CE071001	WLCGSG07GSW13CSH071002	WLCGSG07GSW13CSL071005	WLCGSG07GSW14CE071008
Sample Date:	10/5/2007	10/1/2007	10/2/2007	10/5/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	**0.11**
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW12	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW13	WLCGSG07GSW14
Sample Name:	WLCGSG07GSW12CSL071005	WLCGSG07GSW13CE071001	WLCGSG07GSW13CSH071002	WLCGSG07GSW13CSL071005	WLCGSG07GSW14CE071008
Sample Date:	10/5/2007	10/1/2007	10/2/2007	10/5/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15
Sample Name:	WLCGSG07GSW14CSH071005	WLCGSG07GSW14CSL071002	WLCGSG07GSW15CE071002	WLCGSG07GSW15CSH071004	WLCGSG07GSW15CSL071008
Sample Date:	10/5/2007	10/2/2007	10/2/2007	10/4/2007	10/8/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW14	WLCGSG07GSW14	WLCGSG07GSW15	WLCGSG07GSW15	WLCGSG07GSW15
Sample Name:	WLCGSG07GSW14CSH071005	WLCGSG07GSW14CSL071002	WLCGSG07GSW15CE071002	WLCGSG07GSW15CSH071004	WLCGSG07GSW15CSL071008
Sample Date:	10/5/2007	10/2/2007	10/2/2007	10/4/2007	10/8/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17
Sample Name:	WLCGSG07GSW16CE071008	WLCGSG07GSW16CSH071004	WLCGSG07GSW16CSL071008	WLCGSG07GSW17CE071003	WLCGSG07GSW17CSH071009
Sample Date:	10/8/2007	10/4/2007	10/8/2007	10/3/2007	10/9/2007
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	--
1,2-Dichloroethene, cis-	--	--	--	--	--
1,2-Dichloroethene, trans-	--	--	--	--	--
Benzene	--	--	--	--	--
Ethylbenzene	--	--	--	--	--
m,p-Xylene	--	--	--	--	--
Naphthalene	--	--	--	--	--
o-Xylene	--	--	--	--	--
Toluene	--	--	--	--	--
Trichloroethene (TCE)	--	--	--	--	--
Vinyl chloride	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW16	WLCGSG07GSW17	WLCGSG07GSW17
Sample Name:	WLCGSG07GSW16CE071008	WLCGSG07GSW16CSH071004	WLCGSG07GSW16CSL071008	WLCGSG07GSW17CE071003	WLCGSG07GSW17CSH071009
Sample Date:	10/8/2007	10/4/2007	10/8/2007	10/3/2007	10/9/2007
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW17	WLCGSG07GSW18	WLCGSG07GSW18	WLCGSG07GSW18	WLCSLH01GP59
Sample Name:	WLCGSG07GSW17CSL071003	WLCGSG07GSW18CE071001	WLCGSG07GSW18CSH071005	WLCGSG07GSW18CSL071008	WLCSLH01GP59SW
Sample Date:	10/3/2007	10/1/2007	10/5/2007	10/8/2007	5/17/2005
Conventional Parameters (mg/l)					
Cyanide, free	0.005 U	0.005 UJ	0.005 U	0.005 U	--
Cyanide, total	0.003 U	0.003 U	0.003 U	0.003 U	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	--	--	--	--	0.2 U
1,2-Dichloroethene, cis-	--	--	--	--	0.2 U
1,2-Dichloroethene, trans-	--	--	--	--	0.3 U
Benzene	--	--	--	--	0.2 U
Ethylbenzene	--	--	--	--	0.2 U
m,p-Xylene	--	--	--	--	0.4 U
Naphthalene	--	--	--	--	1 U
o-Xylene	--	--	--	--	0.2 U
Toluene	--	--	--	--	0.2 U
Trichloroethene (TCE)	--	--	--	--	0.2 U
Vinyl chloride	--	--	--	--	**0.47**
LWG RA Total Xylene (Calculated U = 1/2)	--	--	--	--	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCGSG07GSW17	WLCGSG07GSW18	WLCGSG07GSW18	WLCGSG07GSW18	WLCSLH01GP59
Sample Name:	WLCGSG07GSW17CSL071003	WLCGSG07GSW18CE071001	WLCGSG07GSW18CSH071005	WLCGSG07GSW18CSL071008	WLCSLH01GP59SW
Sample Date:	10/3/2007	10/1/2007	10/5/2007	10/8/2007	5/17/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP60	WLCSLH01GP61	WLCSLH01GP61	WLCSLH01GP62	WLCSLH01GP63
Sample Name:	WLCSLH01GP60SW	WLCSLH01GP61SW	WLCSLH01GP61SWA	WLCSLH01GP62SW	WLCSLH01GP63SW
Sample Date:	5/17/2005	5/17/2005	5/18/2005	5/18/2005	5/19/2005
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	**1.24**	0.2 U
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
m,p-Xylene	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Naphthalene	1 U	1 U	1 U	1 U	1 U
o-Xylene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	**0.24**
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	0.2 U	0.2 U	**0.57**	**0.76**	**0.32**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	0.4 UT	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP60	WLCSLH01GP61	WLCSLH01GP61	WLCSLH01GP62	WLCSLH01GP63
Sample Name:	WLCSLH01GP60SW	WLCSLH01GP61SW	WLCSLH01GP61SWA	WLCSLH01GP62SW	WLCSLH01GP63SW
Sample Date:	5/17/2005	5/17/2005	5/18/2005	5/18/2005	5/19/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP64	WLCSLH01GP68	WLCSLH01GP69	WLCSLH01GP70	WLCSLH01GP72
Sample Name:	WLCSLH01GP64SW	WLCSLH01GP68SW	WLCSLH01GP69SW	WLCSLH01GP70SW	WLCSLH01GP72SW
Sample Date:	5/19/2005	5/23/2005	5/24/2005	5/24/2005	5/25/2005
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	**0.51**	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	**279**	**130**	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, trans-	**1.46**	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	**31.4**	0.2 U	**4.14**	**0.46**	0.2 U
Ethylbenzene	**11.4**	0.2 U	**1.33**	**1.55**	0.2 U
m,p-Xylene	**3.93**	0.4 U	0.4 U	**0.54**	0.4 U
Naphthalene	**458**	**38.2**	**81.9**	**282**	**3.7**
o-Xylene	**1.97**	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	**4.12**	**0.93**	0.36 U	0.48 U	0.2 U
Trichloroethene (TCE)	0.2 U	**194**	**0.61**	0.2 U	0.2 U
Vinyl chloride	**73.2**	**7.26**	**1.15**	**0.49**	**0.48**
LWG RA Total Xylene (Calculated U = 1/2)	**5.9 T**	0.4 UT	0.4 UT	**0.64 T**	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP64	WLCSLH01GP68	WLCSLH01GP69	WLCSLH01GP70	WLCSLH01GP72
Sample Name:	WLCSLH01GP64SW	WLCSLH01GP68SW	WLCSLH01GP69SW	WLCSLH01GP70SW	WLCSLH01GP72SW
Sample Date:	5/19/2005	5/23/2005	5/24/2005	5/24/2005	5/25/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP73	WLCSLH01GP74	WLCSLH01GP75	WLCSLH01GP76	WLCSLH01GP77
Sample Name:	WLCSLH01GP73SW	WLCSLH01GP74SW	WLCSLH01GP75SW	WLCSLH01GP76SW	WLCSLH01GP77SW
Sample Date:	5/25/2005	5/26/2005	5/26/2005	5/27/2005	5/27/2005
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	0.2 U	**1**	**1.74**	0.2 U	0.2 U
Ethylbenzene	0.2 U	**3.5**	**1.75**	0.2 U	**0.55**
m,p-Xylene	0.4 U	**0.48**	0.4 U	0.4 U	0.4 U
Naphthalene	**2.46**	**227**	**139**	**2.89**	**377**
o-Xylene	0.2 U	**0.43**	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	**0.91**	**0.82**	0.2 U	**0.29**
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	**0.46**	**0.44**	**0.46**	**0.52**	0.2 U
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	**0.91 T**	0.4 UT	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP73	WLCSLH01GP74	WLCSLH01GP75	WLCSLH01GP76	WLCSLH01GP77
Sample Name:	WLCSLH01GP73SW	WLCSLH01GP74SW	WLCSLH01GP75SW	WLCSLH01GP76SW	WLCSLH01GP77SW
Sample Date:	5/25/2005	5/26/2005	5/26/2005	5/27/2005	5/27/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP78	WLCSLH01GP79	WLCSLH01GP81	WLCSLH01GP82	WLCSLH01GP83
Sample Name:	WLCSLH01GP78SW	WLCSLH01GP79SW	WLCSLH01GP81SW	WLCSLH01GP82SW	WLCSLH01GP83SW
Sample Date:	5/27/2005	5/31/2005	5/31/2005	6/1/2005	6/1/2005
Conventional Parameters (mg/l)					
Cyanide, free	--	--	--	--	--
Cyanide, total	--	--	--	--	--
Metals (µg/l)					
Zinc	--	--	--	--	--
Disolved Metals (µg/l)					
Zinc	--	--	--	--	--
Volatile Organics (µg/l)					
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethene, cis-	0.2 U	0.2 U	0.2 U	0.2 U	**3.28**
1,2-Dichloroethene, trans-	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Benzene	0.2 U	0.2 U	**0.46**	**0.69**	0.2 U
Ethylbenzene	0.2 U	0.2 U	**1.15**	**3.46**	0.2 U
m,p-Xylene	0.4 U	0.4 U	**0.43**	0.4 U	0.4 U
Naphthalene	**9.47**	**2.56**	**166**	**605**	**5.11**
o-Xylene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.34 U	0.35 U	**0.28**	0.2 U
Trichloroethene (TCE)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride	0.2 U	0.2 U	0.2 U	0.2 U	**1.69**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT	0.4 UT	**0.53 T**	0.4 UT	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)					
2-Methylnaphthalene	--	--	--	--	--
Acenaphthene	--	--	--	--	--
Acenaphthylene	--	--	--	--	--
Anthracene	--	--	--	--	--
Benzo(a)anthracene	--	--	--	--	--
Benzo(a)pyrene	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--
Chrysene	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	--	--	--
Fluoranthene	--	--	--	--	--
Fluorene	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	--	--	--
Naphthalene	--	--	--	--	--
Phenanthrene	--	--	--	--	--
Pyrene	--	--	--	--	--
Semivolatile Organics (µg/l)					
Carbazole	--	--	--	--	--
Dibenzofuran	--	--	--	--	--
PCB Aroclors (µg/l)					
Aroclor 1016	--	--	--	--	--
Aroclor 1221	--	--	--	--	--
Aroclor 1232	--	--	--	--	--
Aroclor 1242	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water	Water	Water	Water	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP78	WLCSLH01GP79	WLCSLH01GP81	WLCSLH01GP82	WLCSLH01GP83
Sample Name:	WLCSLH01GP78SW	WLCSLH01GP79SW	WLCSLH01GP81SW	WLCSLH01GP82SW	WLCSLH01GP83SW
Sample Date:	5/27/2005	5/31/2005	5/31/2005	6/1/2005	6/1/2005
Aroclor 1248	--	--	--	--	--
Aroclor 1254	--	--	--	--	--
Aroclor 1260	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--	--	--	--	--
PCB Congeners (ng/l)					
PCB-077	--	--	--	--	--
PCB-081	--	--	--	--	--
PCB-105	--	--	--	--	--
PCB-114	--	--	--	--	--
PCB-118	--	--	--	--	--
PCB-123	--	--	--	--	--
PCB-126	--	--	--	--	--
PCB-156	--	--	--	--	--
PCB-157	--	--	--	--	--
PCB-167	--	--	--	--	--
PCB-169	--	--	--	--	--
PCB-189	--	--	--	--	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--	--	--	--	--
Pesticides (µg/l)					
2,4'-DDD (o,p'-DDD)	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	--	--	--	--	--
Endrin ketone	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/l)					
Diesel Range Hydrocarbons	--	--	--	--	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP84
Sample Name:	WLCSLH01GP84SW
Sample Date:	6/1/2005
Conventional Parameters (mg/l)	
Cyanide, free	--
Cyanide, total	--
Metals (µg/l)	
Zinc	--
Disolved Metals (µg/l)	
Zinc	--
Volatile Organics (µg/l)	
1,1-Dichloroethene	0.2 U
1,2-Dichloroethene, cis-	**4.7**
1,2-Dichloroethene, trans-	0.3 U
Benzene	**0.27**
Ethylbenzene	0.2 U
m,p-Xylene	0.4 U
Naphthalene	**34.5**
o-Xylene	0.2 U
Toluene	**0.21**
Trichloroethene (TCE)	0.2 U
Vinyl chloride	**2.13**
LWG RA Total Xylene (Calculated U = 1/2)	0.4 UT
Polycyclic Aromatic Hydrocarbons (µg/l)	
2-Methylnaphthalene	--
Acenaphthene	--
Acenaphthylene	--
Anthracene	--
Benzo(a)anthracene	--
Benzo(a)pyrene	--
Benzo(b)fluoranthene	--
Benzo(g,h,i)perylene	--
Benzo(k)fluoranthene	--
Chrysene	--
Dibenzo(a,h)anthracene	--
Fluoranthene	--
Fluorene	--
Indeno(1,2,3-c,d)pyrene	--
Naphthalene	--
Phenanthrene	--
Pyrene	--
Semivolatile Organics (µg/l)	
Carbazole	--
Dibenzofuran	--
PCB Aroclors (µg/l)	
Aroclor 1016	--
Aroclor 1221	--
Aroclor 1232	--
Aroclor 1242	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Database:	Water
Analysis Matrix:	Gasco RM6-6.7_WS_NearBot
System Location Code:	WLCSLH01GP84
Sample Name:	WLCSLH01GP84SW
Sample Date:	6/1/2005
Aroclor 1248	--
Aroclor 1254	--
Aroclor 1260	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	--
PCB Congeners (ng/l)	
PCB-077	--
PCB-081	--
PCB-105	--
PCB-114	--
PCB-118	--
PCB-123	--
PCB-126	--
PCB-156	--
PCB-157	--
PCB-167	--
PCB-169	--
PCB-189	--
LWG RA Total PCB Congener (Calculated U = 1/2)	--
LWG RA Total PCB Congener TEQ 2005 (Mammal) (Calculated U = 1/2)	--
Pesticides (µg/l)	
2,4'-DDD (o,p'-DDD)	--
2,4'-DDE (o,p'-DDE)	--
2,4'-DDT (o,p'-DDT)	--
4,4'-DDD (p,p'-DDD)	--
4,4'-DDE (p,p'-DDE)	--
4,4'-DDT (p,p'-DDT)	--
alpha-Hexachlorocyclohexane (BHC)	--
beta-Hexachlorocyclohexane (BHC)	--
delta-Hexachlorocyclohexane (BHC)	--
Endrin ketone	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	--
LWG RA Sum DDD (Calculated U = 1/2)	--
LWG RA Sum DDE (Calculated U = 1/2)	--
LWG RA Sum DDT (Calculated U = 1/2)	--
LWG RA Total DDx (Calculated U = 1/2)	--
Total Petroleum Hydrocarbons (mg/l)	
Diesel Range Hydrocarbons	--

Table 3-44
Existing Data Screening Table – Surface Water (Near-Bottom Depth) Background

Notes:
Detected concentration is greater than 1 screening level

Bold = Detected result
J = Estimated value
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
R = Rejected
T = Result is the value of a total or calculation
-- = Results not reported or not applicable
N = Normal Field Sample

Acronyms:
µg/kg = micrograms per liter
mg/kg = milligrams per liter
ng/l = nanograms per liter
BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane
LWG = Lower Willamette Group
PCB = polychlorinated biphenyls
RA = Portland Harbor Site risk assessment
TEQ = toxic equivalents quotient

Table 3-45
Initial Sediment Bioassay Results and Toxicity Classification

Hyalella azteca 28-Day Amphipod Sediment Toxicity Test									Midge and Amphipod Pooled Bioassay Results Hit (Yes/No)[3]
	Survival				Growth				
Sediment Sample Identification	Percent Survival (Mean ± SD)	Negative-Control Adjusted Response (%)	Statistically Significantly Different?[1]	Effect Level[2]	Total Biomass (mg) (Mean ± SD)	Negative-Control Adjusted Response (%)	Significantly Different?[1]	Effect Level[2]	
Negative Control	95.0 ± 7.6	--	--	--	1.94 ± 0.21	--	--	--	--
DGS-01SG-101014	88.8 ± 11.3	93.4	No	0	1.81 ± 0.29	93.4	No	0	No
DGS-02SG-101014	93.8 ± 7.4	98.7	No	0	1.37 ± 0.09	70.8	Yes	1	No
DGS-04SG-101013	91.3 ± 11.3	96.1	No	0	1.58 ± 0.69	81.8	Yes	0	Yes
DGS-05SG-101014	91.3 ± 8.3	96.1	No	0	1.87 ± 0.38	96.4	No	0	Yes
DGS-06SG-101014	92.5 ± 7.1	97.4	No	0	1.58 ± 0.14	81.8	Yes	0	No
DGS-08SG-101013	88.8 ± 9.9	93.4	No	0	1.72 ± 0.41	88.9	No	0	Yes
DGS-09SG-101013	90.0 ± 14.1	94.7	No	0	1.41 ± 0.18	73.0	Yes	1	Yes
DGS-12SG-101013	92.5 ± 10.4	97.4	No	0	1.32 ± 0.12	68.1	Yes	1	No
DGS-13SG-101013	97.5 ± 4.6	102.6	No	0	1.54 ± 0.18	79.5	Yes	0	Yes
DGS-16SG-101013	93.8 ± 7.4	98.7	No	0	1.37 ± 0.19	70.7	Yes	1	No
DGS-17SG-101013	95.0 ± 10.7	100.0	No	0	1.57 ± 0.14	81.3	Yes	0	No
DGS-20SG-101013	96.3 ± 5.2	101.3	No	0	1.61 ± 0.14	83.1	Yes	0	No
DGS-21SG-101013	96.3 ± 7.4	101.3	No	0	1.34 ± 0.16	69.2	Yes	1	Yes
DGS-25SG-101012	90.0 ± 17.7	94.7	No	0	1.34 ± 0.17	69.2	Yes	1	Yes
DGS-26SG-101013	97.5 ± 4.6	102.6	No	0	1.43 ± 0.08	73.9	Yes	0	Yes
DGS-30SG-101012	87.5 ± 11.6	92.1	No	0	1.33 ± 0.16	68.9	Yes	1	Yes
DGS-31SG-101012	95.0 ± 7.6	100.0	No	0	1.39 ± 0.35	71.8	Yes	1	Yes
DGS-33SG-101012	97.5 ± 4.6	102.6	No	0	1.39 ± 0.10	71.8	Yes	1	Yes
DGS-34SG-101012	88.8 ± 8.3	93.4	No	0	1.35 ± 0.15	69.8	Yes	1	Yes
DGS-35SG-101012	82.5 ± 14.9	86.8	Yes	1	1.49 ± 0.38	76.9	Yes	0	Yes
U2C2SG-110421[4]	87.5 ± 10.4	92.1	No	0	1.47 ± 0.22	76.0	Yes	0	--
U4Q1SG-110421[4,5]	92.5 ± 10.4	97.4	No	0	1.49 ± 0.19	77.1	Yes	0	--
U4Q2SG-110421[4,5]	93.8 ± 7.4	98.7	No	0	1.40 ± 0.18	72.5	Yes	1	--

Notes:

[1] = Statistically different from the negative control response (one-tailed test, $p<0.05$)

[2] = Effect Level assignment was based on statistically significant differences ($p \leq 0.05$) between test and negative control sample responses, and comparison of the negative-control adjusted responses to reference thresholds developed for the U.S. Environmental Protection Agency (EPA) for application in the Baseline Ecological Risk Assessment (Windward 2011).

[3] = Test sediments were given a "Hit" designation if one toxicity endpoint (*Chironomus* survival or growth or *Hyalella* survival or growth) exceeded a Level 3 threshold, or two endpoints exceeded a Level 2 threshold (Anchor QEA 2012).

[4] = Initial bioassay reference samples.

[5] = Retest bioassay reference samples, locations U4Q1SG and U4Q2SG were retested.

Anchor QEA, LLC, 2012. Draft Feasibility Study. Prepared for the Lower Willamette Group. 2012.

Windward Environmental, LLC, 2011. Portland Harbor RI/FS. Appendix G: Baseline Ecological Risk Assessment. Prepared for the Lower Willamette Group. July 2011.

Table 3-46
Retest Sediment Bioassay Results and Toxicity Classification

Chironomus dilutus 10-Day Midge Sediment Toxicity Test									Midge and Amphipod Pooled Bioassay Results Hit (Yes/No)[3]
	Survival				Growth				
Sediment Sample Identification	Percent Survival (Mean ± SD)	Negative-Control Adjusted Response (%)	Statistically Significantly Different?[1]	Effect Level[2]	Total Ash-Free Dry Weight (mg) (Mean ± SD)	Negative-Control Adjusted Response (%)	Significantly Different?[1]	Effect Level[2]	
Negative Control	90.42 ± 5.47	--	--	--	7.10 ± 1.22	--	--	--	--
DGS-01SG-110420	77.50 ± 17.53	85.7	Yes	1	6.95 ± 1.38	97.9	No	0	No
DGS-02SG-110420	83.75 ± 19.23	92.6	No	0	6.26 ± 1.72	88.2	No	0	No
DGS-04SG-110420	20.00 ± 14.14	22.1	Yes	3	0.60 ± 0.69	8.4	Yes	3	Yes
DGS-05SG-110418	46.25 ± 32.04	51.2	Yes	3	3.76 ± 2.71	53.0	Yes	3	Yes
DGS-06SG-110420	81.25 ± 18.08	89.9	No	0	5.98 ± 1.09	84.2	Yes	1	No
DGS-08SG-110418	65.00 ± 29.76	71.9	Yes	3	4.72 ± 1.94	66.4	Yes	3	Yes
DGS-09SG-110418	76.25 ± 31.14	84.3	No	0	4.85 ± 2.20	68.2	Yes	3	Yes
DGS-12SG-110418	75.00 ± 22.68	82.9	Yes	2	5.78 ± 1.61	81.4	No	0	No
DGS-13SG-110418	42.50 ± 25.50	47.0	Yes	3	2.52 ± 1.85	35.5	Yes	3	Yes
DGS-16SG-110418	75.00 ± 26.19	82.9	No	0	5.67 ± 1.83	79.8	No	0	No
DGS-17SG-110418	73.75 ± 26.69	81.6	No	0	5.91 ± 1.87	83.2	No	0	No
DGS-20SG-110419	86.25 ± 19.96	95.4	No	0	6.53 ± 1.20	91.9	No	0	No
DGS-21SG-110419	58.75 ± 26.96	65.0	Yes	3	3.70 ± 1.88	52.1	Yes	3	Yes
DGS-25SG-110419	55.00 ± 26.73	60.8	Yes	3	4.45 ± 2.09	62.7	Yes	3	Yes
DGS-26SG-110419	42.50 ± 23.15	47.0	Yes	3	1.57 ± 0.87	22.1	Yes	3	Yes
DGS-30SG-110419	72.50 ± 18.32	80.2	Yes	2	5.21 ± 0.73	73.3	Yes	2	Yes
DGS-31SG-110419	56.25 ± 21.34	62.2	Yes	3	3.35 ± 1.01	47.2	Yes	3	Yes
DGS-33SG-110419	61.25 ± 19.59	67.7	Yes	3	4.88 ± 2.18	68.7	Yes	3	Yes
DGS-34SG-110419	26.25 ± 15.98	29.0	Yes	3	0.82 ± 0.91	11.5	Yes	3	Yes
DGS-35SG-110419	30.00 ± 23.90	33.2	Yes	3	0.66 ± 0.47	9.3	Yes	3	Yes
U3C2SG-110421[5]	80.00 ± 15.12	88.5	No	0	5.20 ± 1.21	73.17	Yes	2	--
U4Q1SG-110421[4,5]	80.00 ± 18.52	88.5	No	0	7.09 ± 1.55	99.82	No	0	--
U4Q2SG-110421[4,5]	78.75 ± 14.58	87.1	Yes	1	6.88 ± 0.65	96.81	No	0	--

Notes:

[1] = Statistically different from the negative control response (one-tailed test, $p<0.05$)

[2] = Effect Level assignment was based on statistically significant differences ($p \leq 0.05$) between test and negative control sample responses, and comparison of the negative-control adjusted responses to reference thresholds developed for U.S. Environmental Protection Agency (EPA) for application in the Baseline Ecological Risk Assessment (Windward 2011).

[3] = Test sediments were given a "Hit" designation if one toxicity endpoint (*Chironomus* survival or growth or *Hyalella* survival or growth) exceeded a Level 3 threshold, or two endpoints exceeded a Level 2 threshold (Anchor QEA 2012).

[4] = Initial bioassay reference samples.

[5] = Retest bioassay reference samples, locations U4Q1SG and U4Q2SG were retested.

Anchor QEA, LLC, 2012. Draft Feasibility Study. Prepared for the Lower Willamette Group. 2012.

Windward Environmental, LLC, 2011. Portland Harbor RI/FS. Appendix G: Baseline Ecological Risk Assessment. Prepared for the Lower Willamette Group. July 2011.

Table 3-47
Portland Harbor Bioassay Results

Station ID	Amphipod Control Adjusted Survival (%)	Amphipod Control Adjusted Survival (%) REA Level	Amphipod Control Adjusted Growth (biomass) (%)	Amphipod Control Adjusted Growth (biomass) REA Level	Midge Control Adjusted Survival (%)	Midge Control Adjusted Survival REA Level	Midge Control Adjusted Growth (%)	Midge Control Adjusted Growth REA Level	Hit (Yes/No)
G263	107.04	0	78.45	0	90.41	1	95.51	0	No
G264	88.73	0	72.99	1	53.42	3	32.48	3	Yes
G269	92.96	0	76.28	0	75.34	2	41.64	3	Yes
G270-1	92.50	0	69.67	1	73.53	3	55.60	3	Yes
G273	70.89	2	56.74	3	93.24	0	71.91	3	Yes
G274	17.11	3	16.43	3	72.00	3	43.66	3	Yes
G283	1.41	3	1.80	3	4.11	3	2.06	3	Yes
G294-1	0.00	3	0.00	3	0.00	3	0.00	3	Yes
G301	97.37	0	87.35	0	101.37	0	110.31	0	No
G302	1.32	3	1.27	3	0.00	3	0.00	3	Yes
G308	82.89	1	72.68	1	71.23	3	61.79	3	Yes
G311-1	61.25	3	75.05	0	16.18	3	2.85	3	Yes

Notes:

Data obtained from Windward. 2011. Portland Harbor RI/FS. Baseline Ecological Risk Assessment. Draft Final. Prepared for Lower Willamette Group. Windward Environmental LLC, Seattle, WA. July 1, 2011.

REA level and hit (yes/no) determined using the methodologies outlined in the Draft Final BERA.

Acronyms:

REA = reference envelope approach

FIGURES

Surface Sediment Sample Locations

Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

1. Acronyms:
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD = North American Datum
2. Arrow indicates direction of flow of river.
3. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
4. Vertical datum is NAVD88.
5. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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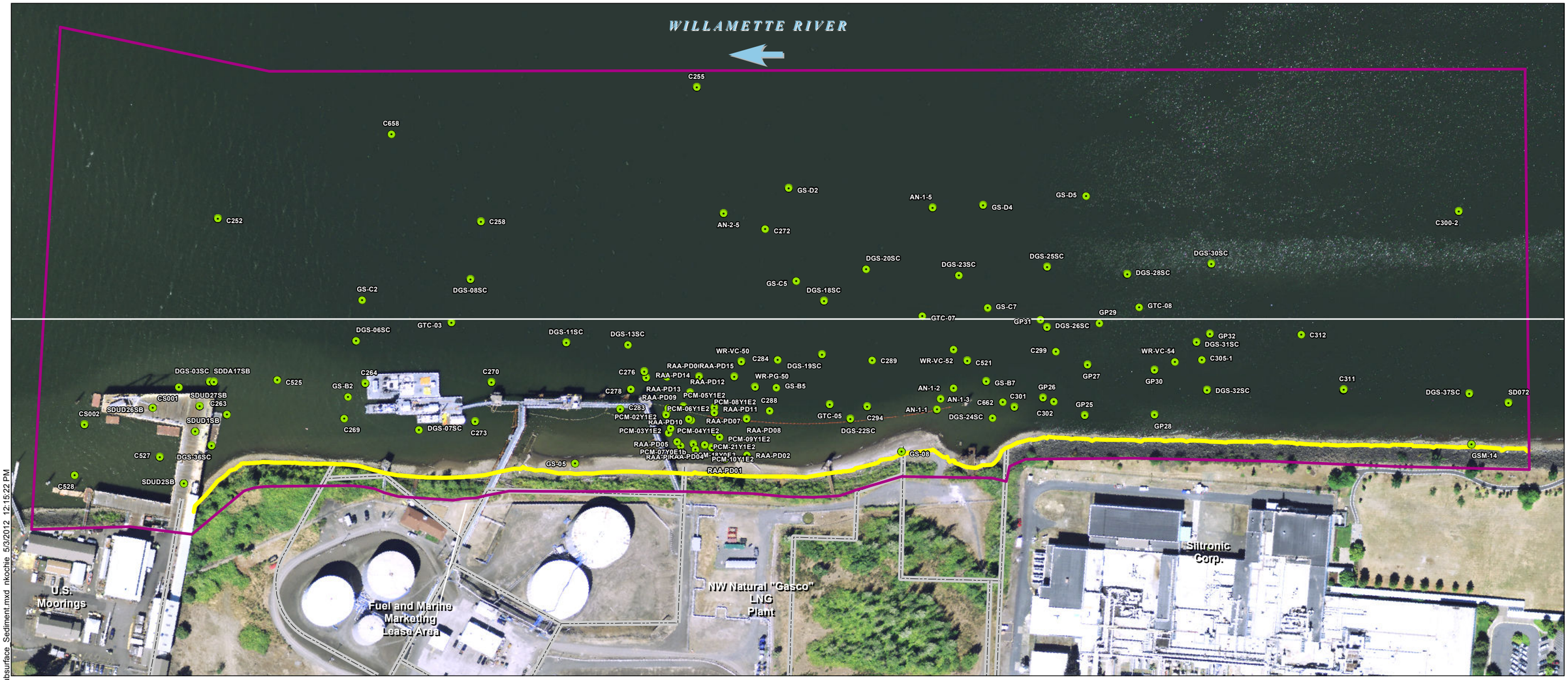
ANCHOR QEA

Figure 2-1
Surface Sediment Sample Locations
Project AIR Data Rescreen
Gasco Sediments Cleanup Action



- Subsurface Sediment Sample Locations
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

1. Acronyms:
DEQ = Oregon Department of Environmental Quality
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3. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
4. Vertical datum is NAVD88.
5. Aerial imagery from July 2007.

Feet
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Figure 2-2
Subsurface Sediment Sample Locations
Project AIR Data Rescreen
Gasco Sediments Cleanup Action

Sediment Trap Sample Locations

Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

1. Acronyms:
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD = North American Datum
2. Arrow indicates direction of flow of river.
3. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
4. Vertical datum is NAVD88.
5. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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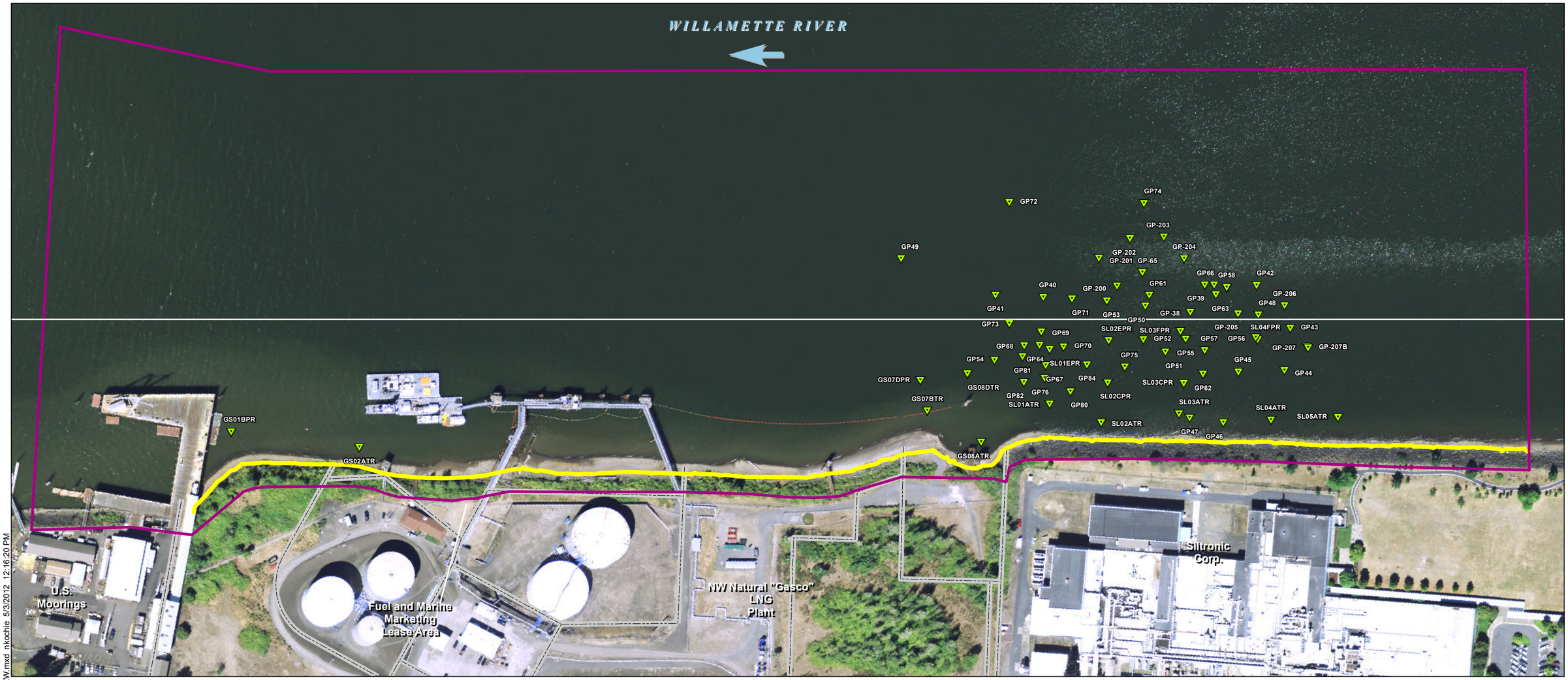
Figure 2-3
Sediment Trap Sample Locations
Project AIR Data Rescreen
Gasco Sediments Cleanup Action



Transition Zone Water Sample Locations

Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

1. Acronyms:
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD = North American Datum
2. Arrow indicates direction of flow of river.
3. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
4. Vertical datum is NAVD88.
5. Aerial imagery from July 2007.

Feet
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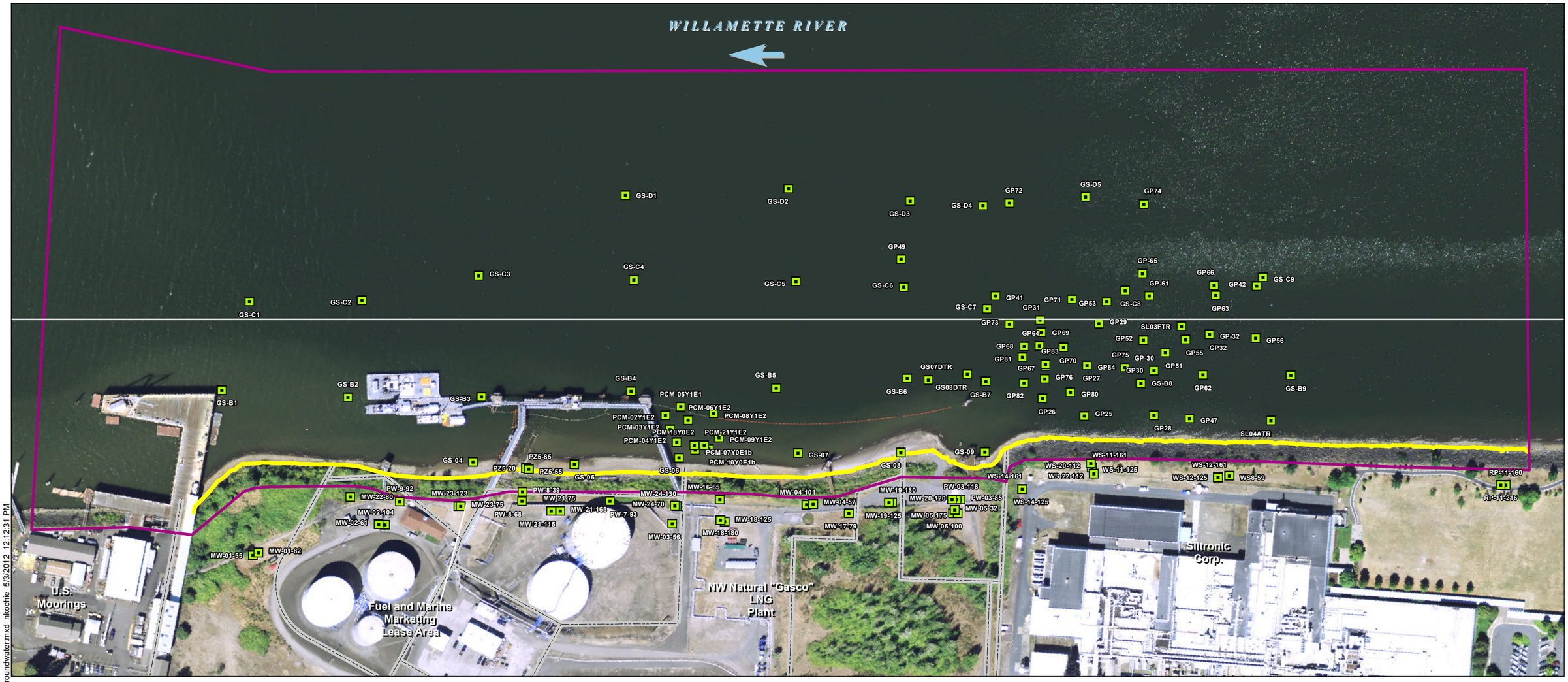
ANCHOR QEA

Figure 2-4
Transition Zone Water Sample Locations
Project AIR Data Rescreen
Gasco Sediments Cleanup Action



Groundwater Sample Locations

Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

1. Acronyms:
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD = North American Datum
2. Arrow indicates direction of flow of river.
3. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
4. Vertical datum is NAVD88.
5. Aerial imagery from July 2007.

Feet
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Figure 2-5
Groundwater Sample Locations
Project AIR Data Rescreen
Gasco Sediments Cleanup Action

0- to 3.5-Foot Riverbank Soil Sample Locations

Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

1. Acronyms:
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD = North American Datum
2. Arrow indicates direction of flow of river.
3. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
4. Vertical datum is NAVD88.
5. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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ANCHOR QEA

Figure 2-6
0- to 3.5-Foot Riverbank Soil Sample Locations
Project AIR Data Rescreen
Gasco Sediments Cleanup Action

0- to 12-Foot Riverbank Soil Sample Locations

Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

1. Acronyms:
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD = North American Datum
2. Arrow indicates direction of flow of river.
3. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
4. Vertical datum is NAVD88.
5. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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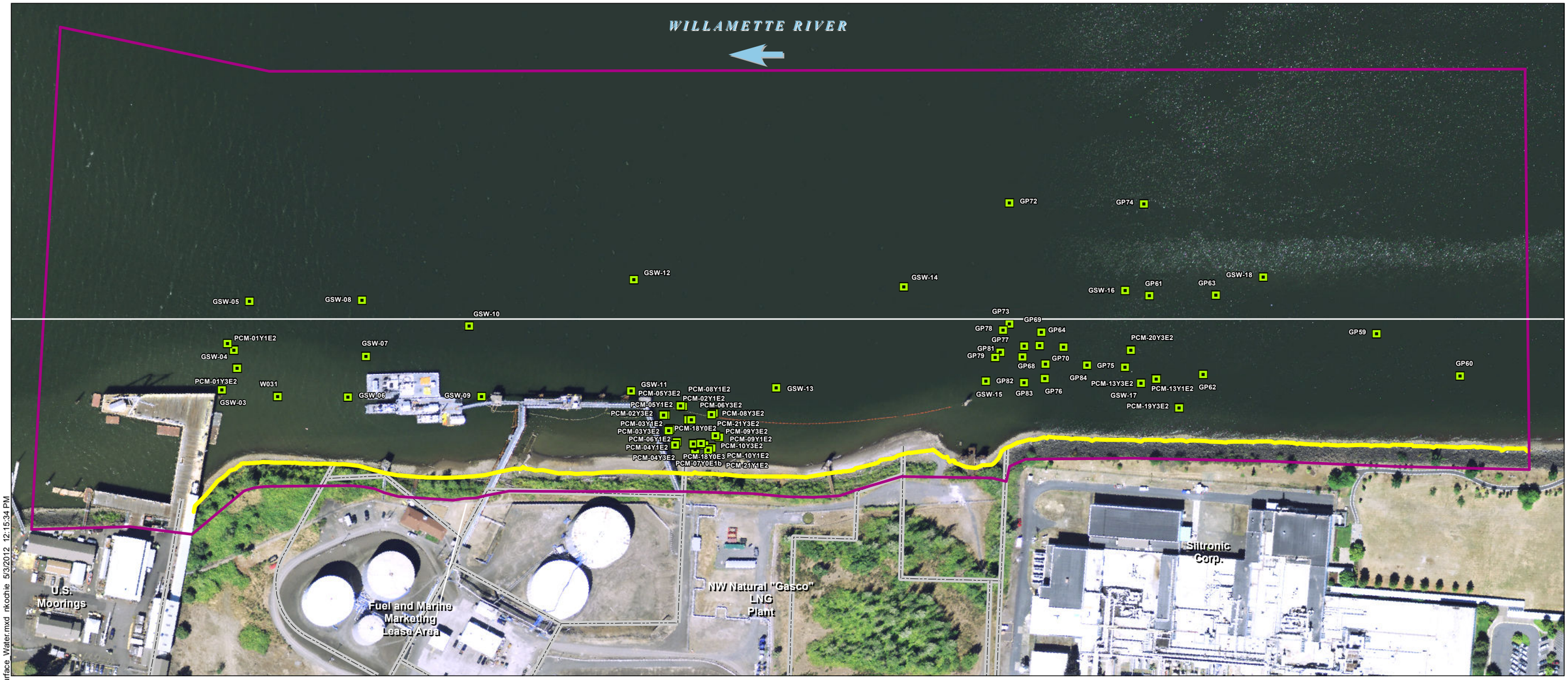
Figure 2-7
0- to 12-Foot Riverbank Soil Sample Locations
Project AIR Data Rescreen
Gasco Sediments Cleanup Action



Surface Water Locations

Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

1. Acronyms:
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD = North American Datum
2. Arrow indicates direction of flow of river.
3. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
4. Vertical datum is NAVD88.
5. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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ANCHOR QEA

Figure 2-8
Surface Water Locations
Project AIR Data Rescreen
Gasco Sediments Cleanup Action

Bioassay Sample Locations

Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

1. Acronyms:
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD = North American Datum
2. Arrow indicates direction of flow of river.
3. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
4. Vertical datum is NAVD88.
5. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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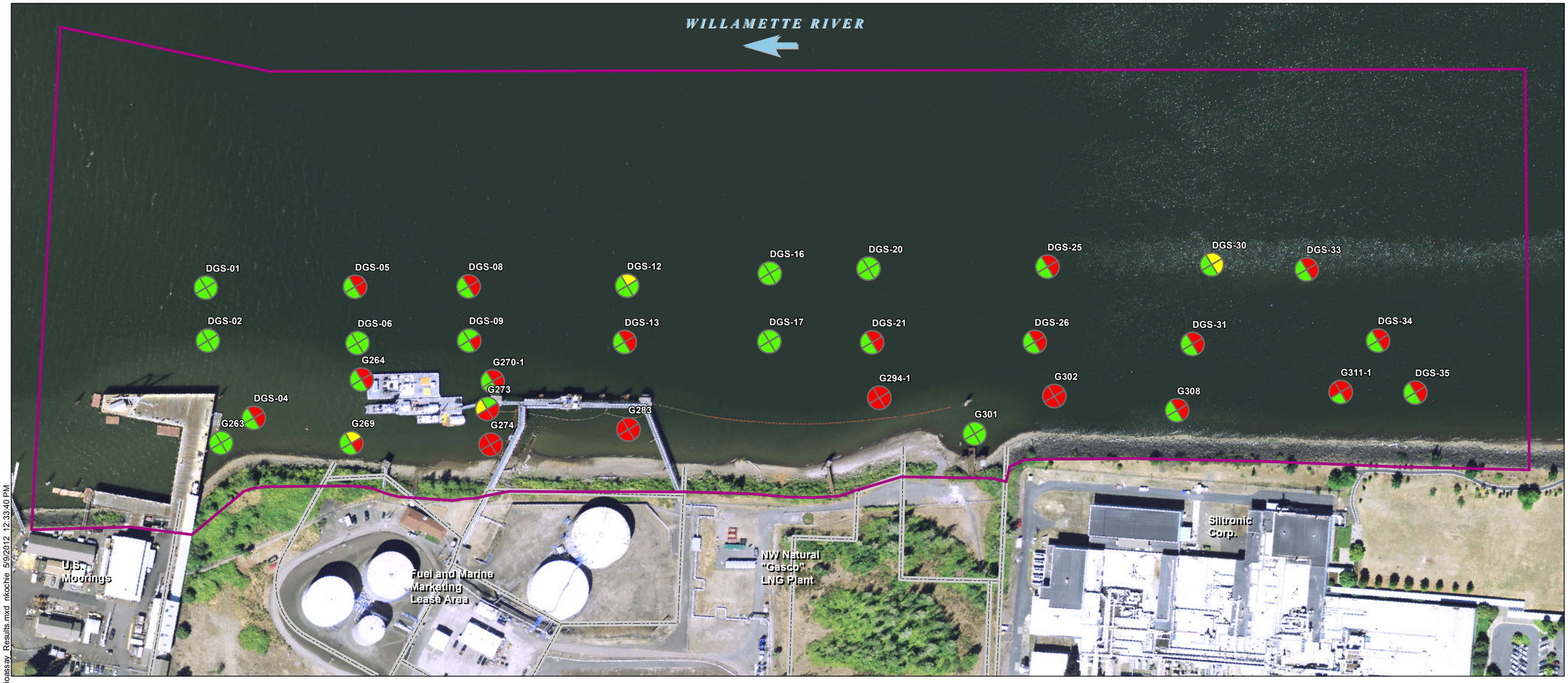
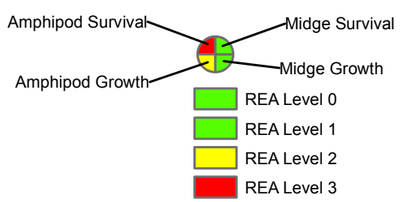
ANCHOR QEA

Figure 2-9
Bioassay Sample Locations
Project AIR Data Rescreen
Gasco Sediments Cleanup Action



Gasco Sediment Site Area of Interest
(Final Work Plan [Anchor QEA 2009])

Bioassay Test Interpretation



REA Level 0
REA Level 1
REA Level 2
REA Level 3

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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ANCHOR QEA

Figure 3-1
Bioassay Results
Project AIR Data Rescreen
Gasco Sediments Cleanup Action

ATTACHMENT 1
SCREENING LEVEL REVISIONS

ANCHOR QEA

6650 SW Redwood Lane, Suite 333
Portland, Oregon 97224
Phone 503.670.1108
Fax 503.670.1128
www.anchorqea.com

MEMORANDUM

To:	Sean Sheldrake, Project Coordinator EPA, Region 10 1200 Sixth Avenue, M/S ECL-111 Seattle, Washington 98101	**Date:**	May 11, 2012
From:	Ryan Barth, Anchor QEA	**Project:**	000029-02.28
Re:	Project Data Screening Levels and Response to EPA Comments on Draft Project Area Identification Report and Data Gaps QAPP, Gasco Sediments Cleanup Action (dated March 2010)		

This memorandum transmits for your review and approval the revised human health, ecological, and background screening levels and remedial action levels (RALs) for the project data screen detailed in Section 3.4.1.2 of the Statement of Work (SOW) (Docket No. CERCLA 10-2009-0255). Pursuant to the SOW, available bulk sediment, riverbank soils, and water media chemistry data collected within the Gasco Sediment Site Area of Interest (AOI) identified in the *Final Work Plan* (Anchor QEA 2009; see Figure 1.2.1) are required to be compared to the revised screening levels and the screen results presented in data tables and on GIS layers.

NW Natural and Siltronic Corporation (Siltronic) initially submitted proposed screening levels to the U. S. Environmental Protection Agency (EPA) for review and approval on January 13, 2010. NW Natural and Siltronic revised the screening levels to incorporate written comments provided by EPA on February 3, 2010, and received EPA approval to use the screening levels for the project data screen on February 26, 2010. Appendixes B and C of the *Draft Project Area Identification and Data Gaps QAPP* (Draft AIR) (Anchor QEA 2010a) present the data screen results using the reviewed screening levels.

Following its review of the Draft AIR, EPA provided additional comments on the revised screening levels in a May 4, 2009, memorandum. These comments were discussed during the June 3, 2010, monthly coordination meeting held between NW Natural, Siltronic, EPA, and The Oregon Department of Environmental Quality (DEQ). During this discussion, EPA stated that its pending comments on the draft Portland Harbor Site Risk Assessment (RA) would affect the screening levels required for use in the AIR. In addition, NW Natural and DEQ were currently negotiating the upland risk assessment for the NW Natural "Gasco" property adjacent to the

AOI, which would also affect screening levels. To facilitate incorporation of those pending screening level changes into the data screening of the existing data set, EPA approved postponement of the revised data screening until the Portland Harbor Site RA comments were available and the Gasco Upland RA negotiations were complete. The *Final Project Area Identification and Data Gaps QAPP* (Final AIR) (Anchor QEA 2010b) was developed without revision to the data screen and conditionally approved by EPA on September 8, 2010.

The *Draft Final Portland Harbor RI/FS Remedial Investigation Report* (Draft Final RI) (Integral et al. 2011c), including the Appendix F, the *Draft Final Baseline Human Health Risk Assessment* (Draft Final BHHRA) (Integral et al. 2011a) and Appendix G, the *Draft Final Baseline Ecological Risk Assessment* (Draft Final BERA) (Integral et al. 2011b), which incorporate the comments referenced by EPA during the previously referenced June 3, 2010, meeting, are now available. The Portland Harbor Site draft Feasibility Study (draft FS) RALs are also available. In addition, since the June 3, 2010, coordination meeting, NW Natural and DEQ have been in negotiation regarding screening levels to be used during the Gasco Upland RA. Although the final screening framework for the Gasco Upland RA is not yet available, the screening levels that DEQ transmitted to NW Natural in a letter dated January 5, 2012 (DEQ 2012) are not expected to undergo major revision and have been incorporated into the EE/CA data screening.

NW Natural and Siltronic have revised the screening levels consistent with the previously described documents and to incorporate the EPA's May 4, 2009 comments. Attachments 1 and 2 summarize these changes and present the revised screening levels. Attachment 1 is divided into the following three sections: the first section describes revisions to the screening levels based on the Portland Harbor Site process, the second describes revisions based on the Gasco Upland RA negotiations, and the final section provides NW Natural's and Siltronic's responses to EPA's May 4, 2009, comments on the screening levels. Attachment 2 contains six tables: revised Tables 2-1 through 2-6 of the Final AIR. Tables 2-1 through 2-4 contain screening levels for sediment, water, benthic toxicity, and soil, respectively. Table 2-5 identifies site chemicals of concern (COCs) without screening levels and Table 2-6 summarizes the screening levels to be used for each matrix (sediment, water, benthic toxicity, and soils). Note that AIR Table 10, which contains screening levels for subsurface sediment, has not been revised because the screening levels in this table are no longer used in the Portland Harbor Site process and will not be used in this data screen.

Revised summary tables, data tables, and GIS layers presenting the screen results will be provided to EPA following approval of the revised screening levels.

cc (via email):

Audie Huber, Umatilla Tribe
Brian Cunninghame, Warm Springs Tribe
Erin Madden, Nez Perce Tribe
Sheila Fleming, Ridolfi
David Allen, Stratus Consulting
Jennifer Peers, Status Consulting
Jeff Baker, Grande Ronde Tribe
Tom Downey, Siletz Tribe
Rob Neely, NOAA
Jeremy Buck, USFW
Greg Smith, USFW
Jim Anderson, DEQ
Matt McClincy, DEQ
Mike Poulsen, DEQ
Jennifer Peterson, DEQ
Rick Kepler, ODFW
Cyril Young, DSL
Eric Blischke, EPA
Lori Cora, EPA
Dana Davoli, EPA
Rene Fuentes, EPA
Chip Humphrey, EPA
Kristine Koch, EPA
Nancy Munn, NOAA-NMFS
Preston Sleeger, USDOI
John Edwards, Anchor QEA
Tom Schadt, Anchor QEA
Carl Stivers, Anchor QEA
John Verduin, Anchor QEA

ATTACHMENT 1A

Section 1 - Revisions based on the Portland Harbor Process

Revisions to screening levels based on the Portland Harbor process are listed as follows by matrix. Screening levels are presented in tables 2-1 through 2-4 of Appendix G to the draft Engineering Evaluation/Cost Analysis (EE/CA).

Sediment Screening Levels

NW Natural and Siltronic Corporation (Siltronic) revised the sediment screening levels as follows:

- The Baseline Human Health Risk Assessment (BHHRA) screening levels were updated, where necessary, to be consistent with the *Draft Final Baseline Human Health Risk Assessment* (Draft Final BHHRA) (Integral et al. 2011a).
- The Baseline Ecological Risk Assessment (BERA) screening levels were updated, where necessary, to be consistent with the *Draft Final Baseline Ecological Risk Assessment* (Draft Final BERA) (Integral et al. 2011b). In addition, the Draft BERA screening levels for mean quotient (MQ; 0.7) and maximum probability of toxicity (pMAX; 0.59) were added to Table 1.
- The Portland Harbor Preliminary Remediation Goal (PRG) based screening levels were replaced by a range representing the upper and lower remedial action level (RAL) values for the Portland Harbor Feasibility Study (FS), which were transmitted from the Lower Willamette Group (LWG) to the U.S. Environmental Protection Agency (EPA) in a letter dated August 23, 2011.
- The Lower Willamette River upriver surface sediment background levels were revised, where necessary, to be consistent with the *Draft Final Portland Harbor Remedial Investigation/Feasibility Study Report* (Draft Final RI; Integral et al. 2011c). NW Natural and Siltronic note that these screening levels were developed to be used on a site-wide surface weighted average concentration (SWAC) basis, and not for screening on a point-by-point basis. However, for this screening exercise, NW Natural and Siltronic will screen site data against these levels on a point-by-point basis.
- The hill-topped Lower Willamette River upriver surface sediment background levels were removed from Table 1 because they are no longer being used as screening levels for the Portland Harbor Site.

Water Screening Levels

NW Natural and Siltronic revised the water screening levels as follows:

- The BHHRA Screening Concentrations were replaced by the human health screening levels for surface water and transitional zone water (TZW) in tables D.3.3-1 and D.3.3-2 of Appendix D of the Draft Final RI (Integral et al 2011c).
- The background water concentrations were revised, where necessary, consistent with Table 7.4-4a of the Draft Final Portland Harbor RI.

Benthic Toxicity Screening Levels

NW Natural and Siltronic revised the benthic toxicity screening levels consistent with EPA methods presented in the *Benthic Toxicity Reanalysis Technical Memorandum* (Windward 2009).

Soil Screening Levels

No revision; soil screening levels were not affected by the Portland Harbor process.

Section 2 - Revisions Based on Gasco Upland Risk Assessment Negotiations

Revisions to screening levels based on the Gasco Upland Risk Assessment (RA) negotiations are listed as follows by environmental matrix. Screening levels are presented in tables 2-1 through 2-4 of Appendix G to the EE/CA.

Sediment Screening Levels

No revisions made, sediment screening levels were not part of the Gasco Upland RA negotiations.

Water Screening Levels

NW Natural and Siltronic revised the water screening levels to include screening levels for the fill and alluvial water bearing zone (WBZ) from the table entitled "Human Health, Ecological, and Source Control Screening Criteria" (Upland RA Screening Criteria Table) attached to the Oregon Department of Environmental Quality's (DEQ) January 5, 2012, letter to NW Natural (DEQ 2012). These screening levels were not previously listed on the table. The Gasco Upland RA WBZ screening levels are as follows:

Fill WBZ:

- Human health screening levels: DEQ risk-based concentrations (RBCs) occupational worker volatilization to indoor air; construction and excavation worker direct contact and volatilization to outdoor air (DEQ 2011).
- Ecological screening levels selected according to the following hierarchy:
    1. Lower of DEQ water screening level values (SLVs) for mammals, birds, invertebrates and plants (DEQ 2001)
    2. National Recommended Water Quality Criteria (NRWQC) (EPA 2009), adjusted to 25 milligrams per liter (mg/L) calcium carbonate for hardness dependent criteria
    3. Oak Ridge National Laboratory (ORNL) Tier II Chronic Values (Suter and Tsao 1996)
    4. Final Chronic Values (FCV) for polycyclic aromatic hydrocarbons (PAHs) (EPA 2003)
    5. EPA Region III Biological Technical Assistance Group (BTAG) Freshwater Screening Criteria (EPA 2006)
    6. Water SLV protective of wildlife to cyanide exposure from Eisler (1991) 50 milligrams per liter (mg/L)

Alluvial WBZ:

- Human health screening level: DEQ RBCs - occupational worker exposure (DEQ 2011)
- Ecological screening levels selected according to the following hierarchy:
    1. NRWQC (EPA 2009), adjusted to 25 mg/L calcium carbonate for hardness dependent criteria
    2. ORNL Tier II Chronic Values (Suter and Tsao 1996)
    3. FCV for PAHs (EPA 2003)
    4. EPA Region III BTAG Freshwater Screening Criteria (EPA 2006)

The screening levels and hierarchy provided above for the fill WBZ and Alluvial WBZ represent the current agreements with DEQ for the Gasco Upland RA. Note that the use of human health criteria for screening the Alluvial WBZ groundwater during the Gasco Upland RA is consistent with agreements reached with DEQ regarding the process to move forward with the risk assessment screening while DEQ and NW Natural resolve the conclusion of beneficial use determination (BUD) for deep alluvial groundwater at the Gasco property.

Benthic Toxicity Screening Levels

No revisions made; benthic toxicity screening criteria were not part of the Gasco Upland RA negotiations.

Soil Screening Levels

NW Natural and Siltronic revised the soil screening levels to include riverbank soil screening levels from the Upland RA Screening Criteria Table, when these screening levels were not already listed on the table. The riverbank screening levels are as follows:

Surface soil (0 to 3.5 feet):

- Human health screening levels selected according to the following hierarchy:
    1. DEQ RBCs - Occupational and construction worker direct contact and outdoor air volatilization pathways (EPA 2009)
    2. EPA Regional Screening Levels (RSLs) (EPA 2011)
- Ecological levels selected according to the following hierarchy:

    1. EPA Ecological Soil Screening Levels (Eco-SSLs) for low-molecular-weight polycyclic aromatic hydrocarbons (LPAHs) and high-molecular-weight polycyclic

aromatic hydrocarbons (HPAHs; soil invertebrates and mammals) (EPA 2007a)[1] and metals (plants, soil invertebrates, birds, mammals; EPA 2007b)

2. DEQ Terrestrial SLVs, direct contact and ingestion (terrestrial invertebrates, plants, mammals, and bird values) (DEQ 2001)[2]
3. EPA Region 5 soil Ecological Screening Levels (ESLs) direct contact and ingestion

- Alternative cyanide screening level (described below)
- Alternative dibenzofuran screening level (described below)

Ecological screening levels based on a no observed adverse effect level (NOAEL) endpoint are multiplied by five in accordance with DEQ risk assessment guidance.

Surface and subsurface soil:

- Human health screening levels selected according to the following hierarchy:
  1. DEQ RBCs - Construction & Excavation Worker direct contact and volatilization to outdoor air; Occupational Worker vapor intrusion and outdoor air (DEQ 2011)
  2. EPA RSLs (EPA 2011)

NW Natural and Siltronic continue to have concerns about the use of the EPA Region 5 soil ESLs for ecological soil screening. NW Natural and Siltronic's main concern regarding the use of EPA Region 5 SLVs are that the specific methods and assumptions used to derive these screening levels are not available and, therefore, NW Natural and Siltronic have no ability to evaluate the appropriateness of these screening levels for their intended use as requested by EPA. Where appropriate in accordance with the agreed-upon soil screening level hierarchy, the EPA Region 5 soil ESLs have been included as soil screening levels. The alternative mammalian ecological soil screening level proposed to DEQ for cyanide in the October 31, 2011 memorandum from Mr. Fuji and Ms. Hitchko of Anchor QEA to Mr. Bayuk of DEQ entitled "Proposed Alternative Cyanide Screening Level" is also included as a soil screening level.

[1] HPAH and LPAH SSLs are applied on an individual and total LPAH and total HPAH basis.
[2] Because threatened or endangered species are not presentment at the Gasco Site, a multiplier of five is applied to bird and mammal SLVs.

In addition, the soil screening levels include the alternative ecological screening level for dibenzofuran that that DEQ e-mailed to NW Natural on February 23, 2012. Per DEQ's correspondence, this screening level was also applied to carbazole.

In addition to the previously listed soil screening level changes, the definition of surface soil has been revised to be the 0 to 3.5 foot below ground surface (bgs) depth interval, consistent with the Gasco Upland RA definition.

Section 3 – Response to EPA's May 4, 2009, Comments:

This section presents a summary of responses by NW Natural and Siltronic to the EPA May 4, 2009, comments on the screening levels presented in the Draft Area Identification Report (AIR) (Anchor QEA 2010). For easier reference, EPA's original comments are provided in **bold** above NW Natural and Siltronic's response. Please note that Tables 2-2, 2-3, 2-4, and 2-5 referenced in the EPA comments were renumbered in the *Final Project Area Identification and Data Gaps Report* (Final AIR; Anchor QEA 2010) to Table 2-2, Table 2-3, Table 2-4, and Table 2-5 of Appendix G, respectively.

Table 2-2. Ecological Water Screening Table. Transition zone water and surface water toxicity reference values (TRVs) should be the same values. For example, a screening level value (SLV) is listed for cyanide in transition zone water, but not surface water. In addition, although Table 5-2 (Water TRVs for Surface Water) and Table 6-2 (Water TRVs for Transition Zone Water COIs) from the risk assessment are cited, it does not appear all SLVs were utilized to screen data for the AIR. The full list of SLVs is found in these tables, and Appendix G and Attachment 5 (SLERA and Refined Screen). The referenced sources of information also provide values for pesticides such as alpha, beta, and gamma HCH (Lindane); Endrin Ketone, PCB Aroclors, Total PCBs, carbazole, trans-1,2-dichlorethene, and vinyl chloride. For clarification and completeness, any SLVs not used for screening purposes in the AIR should be clearly identified.

Regarding specific analytes and/or chemical groups the following criteria should be used.

3. **Cyanide: The cyanide water criteria should be applied to free and total values.**
4. **PCBs: All PCBs, Aroclors, congeners, or Total PCBs, should be compared to the National Ambient Water Quality Criteria of 0.014 microgram per liter (ug/L). Acute water criteria should not be used.**
5. **DDTs: The ambient water quality criteria of 0.001 ug/L should be applied to each isomer as well as the total value for surface water and transition zone water. It is not clear from reviewing the table why this value is not applied to all the DDD, DDE and DDT isomers for surface water.**

NW Natural and Siltronic Response:

Response to comments on the use of screening level values (SLVs):

NW Natural and Siltronic screened surface water and TZW data against toxicity reference values (TRVs) in Table 6-22 and Table 6-26 (respectively) of the Draft BERA (Integral et al. 2009). This comment references TRVs used during the screening-level ecological risk assessment

(SLERA), an earlier step in the BERA process. A number of the chemicals of interest (COIs) included in the SLERA did not exceed their associated screening levels and thus were not screened in the BERA or have TRVs presented on BERA Tables 6-22 and 6-26. NW Natural and Siltronic believe that tracking those chemicals that earlier work has shown do not pose risk at the Portland Harbor Site is inconsistent with the Statement of Work (SOW) process.

Nevertheless, to facilitate completion of the Project AIR data screening, NW Natural and Siltronic have modified Table 2-2 to replace the BERA Table 6-22 and Table 6-26 SLVs with the SLERA TRVs referenced in the this EPA comment. Surface water data and TZW data has been screened against the values found in Table 5-2 and 6-2, respectively, of Attachment 5 to the *Draft Final Baseline Ecological Risk Assessment* (Draft Final BERA) (Integral et al. 2011b).

As discussed in the EPA comment, TRVs for certain chemicals are listed on only one of these tables (e.g., a TRV for cyanide is found on Table 6-2, "Water TRVs for TZW COIs", but not on Table 5-2, "Water TRVs for Surface Water COIs"). Consistent with the SLERA approach, SLERA TRVs for TZW will only be applied to TZW data and SLERA TRVs for surface water will only be applied to surface water data. NW Natural and Siltronic note that, although there is no SLERA TRV for cyanide in surface water data, surface water data is screened against several other cyanide screening levels, including NRWQC for protection of the aquatic life freshwater chronic screening level for cyanide, which is equal to the SLERA TRV value for TZW.

Response to comments on the use of criteria for cyanide:
NW Natural and Siltronic do not consider it appropriate to compare total cyanide data to free cyanide screening levels. A considerable amount of free cyanide data has been collected in sediments and upland media for the purpose of assessing risk associated with this chemical. NW Natural and Siltronic continue to disagree that any form of cyanide other than free cyanide measured at the actual point of exposure where organisms exist in surface water and TZW is indicative of in-water impacts, given that free cyanide is the true measure of actual bioavailable (and toxic) cyanide concentrations.

Consistent with this approach, criteria developed for total cyanide have been used to screen total, free, and available cyanide data while criteria developed for free cyanide have been used to screen free cyanide data only. Table 2-2 has been updated to reflect this approach.

Response to comments on the use of criteria for PCBs:
NW Natural and Siltronic understand this comment as a request to compare individual polychlorinated biphenyl (PCB) congener, individual Aroclor, and summed total PCB results to the National Ambient Water Quality Criterion for total PCBs, which is 0.014 micrograms per liter (µg/L). NW Natural and Siltronic applied this criterion to summed PCB results. NW Natural considers this to be a conservative approach, as the sum of the individual analytes (e.g., Aroclors, congeners) will not be less than the value of each individual analyte. Nevertheless, NW Natural has revised Table 2-2 to include the comparison of individual PCB congener and Aroclor results as well as summed total PCB results against water quality screening levels for total PCBs.

EPA has also requested that an acute water quality criterion for PCBs not be used in the screening. NW Natural and Siltronic consider this criterion to provide useful information regarding the presence of PCBs above acute toxicity concentrations. Nevertheless, to facilitate completion the Project AIR data screening, NW Natural and Siltronic modified the Table 2-2 to remove this criterion.

Response to comments on the use of criteria for DDTs:
NW Natural and Siltronic revised Table 2-2 to reflect that the National Ambient Water Quality Criterion for DDT and its metabolites have been applied to DDD, DDE, and DDT isomers, as well as summed DDD, DDE, DDT, and total DDx.

In addition to the described Table 2-2 revisions, The EPA RSL screening levels were updated to be consistent with the EPA's June 2011 RSL list.

Table 2-4, Uplands Soil Screening Level Table. For many PAHs, DEQ's risk-based concentration (RBC) table indicates that excavation worker, volatilization to outdoor air, and leaching to groundwater values are not provided because the values are greater than saturation or a maximum value of 100,000 milligrams per kilogram (mg/kg). This information (>sat or >max) should be provided in the table rather than leaving the table blank (implying that the RBC has not been evaluated).

Regarding Ecological Upland Soil Screening Values, two sets of screening values are included in Table 2-4:

1. **Sediment Toxicity Values, as represented by DEQ Joint Source Control Strategy (JSCS) values which are based on MacDonald Probable Effects Concentration (PEC) values.**
2. **Sediment Bioaccumulation Values are represented by 2001 bioaccumulation values that have since been replaced by DEQ's 2007 sediment bioaccumulation guidance. The 2001 values are based on the lowest allowable concentration in water for exposure to a piscivorous bird (Great Blue Heron) or piscivorous mammal (mink). DEQ's 2007 value for DDT in sediment is 0.00034 mg/kg for protection of bird egg for Total DDx, and 0.0013 mg/kg dietary bird. Furthermore, the bioaccumulation values for fluoranthene and pyrene are 37 mg/kg and 1.9 mg/kg from DEQ's 2007 guidance. These values should replace the outdated proposed values.**

Labeling this column "Upland Soil and Sediment" is misleading since all the values represent sediment toxicity data. Values for protection of riparian and upland receptors such as plants, invertebrates, shrew and birds should also be included.

NW Natural and Siltronic Response:

Response to EPA comment on the DEQ's RBCs:

NW Natural and Siltronic revised Table 2-4 to indicate when a DEQ RBC is not provided because the value is greater than saturation or a maximum value of 100,000 milligrams per kilogram (mg/kg).

Response to EPA comments on the Ecological Upland Soil Screening Values:

NW Natural and Siltronic revised Table 2-4 consistent with the July 17, 2007, revision of the Joint Source Control Strategy Table 3-1. Note that the sediment bioaccumulation number for total DDT was revised to 0.33 micrograms per kilogram (µg/kg) to be consistent with this table and is the only bioaccumulation screening level value provided for this set of chemicals. In addition, NW Natural and Siltronic revised the title for column containing the Joint Source Control Strategy (JSCS) Table 3-1 screening levels to "Upland Soil / Stormwater Sediment," to be consistent with the title of the column that contains these values in JSCS Table 3-1.

Regarding EPA's request for values for the protection of riparian and upland receptors, please refer to Section 2 and to NW Natural and Siltronic's response to EPA's request for additional values for Table 2-4, provided as follows. These sections detail values for the protection of riparian and upland receptors that were added to Table 2-4.

Regarding the use of DEQ's 2007 sediment bioaccumulation guidance, NW Natural and Siltronic do not agree that these are appropriate screening values for upland soils for this project. Per the SOW, soils along the riverbank are being screened to address upland issues pertaining to: 1) potential sources to the river; and 2) potential upland risks consistent with the upland RA and FS process. Regarding sources, it is NW Natural and Siltronic's understanding that DEQ policy has, and continues to be, to screen bank soils against values contained in JSCS Table 3-1. NW Natural and Siltronic agree that the sediment bioaccumulation values in Table 2-4 will be updated consistent with the July 19, 2007, JSCS Table 3-1. However, NW Natural and Siltronic are unclear that DEQ's current policy is to use other values from the 2007 sediment bioaccumulation guidance in JSCS screening efforts. Regarding upland risks, per the following responses, NW Natural and Siltronic agree to add relevant upland soils risk screening values consistent with the negotiated agreements between NW Natural and DEQ for the uplands portion of the site.

Additional values for Table 2-4: Similar to human health RBCs for upland soil, upland soil values should also be used from the ecological risk assessment to represent riparian and upland exposure. In addition, it will reduce significantly the COCs in Table 2-5 that are identified as being "without screening levels." The following hierarchy for selection of upland ecological soil values is recommended.

1. **EPA Eco SSLs, available at http://www.epa.gov/ecotox/ecossl/: These are the most up to date national soil screening levels, and include metals, DDT and isomers and Total LPAH and Total HPAH values. These soils screening numbers are available for different trophic levels including plants, invertebrates, birds and mammals. The lowest value available from the set of SLVs should be used for screening.**
    a. **Zinc: 46 mg/kg**
    b. **DDT and metabolites (applied as a total and to each isomer): 0.021 mg/kg**
    c. **Total HPAH (based on shrew): 1.1 mg/kg**
    d. **Total LPAH (based on shrew): 100 mg/kg**
2. **EPA Region 5 Soil Screening Level Values: Values are available for water, sediment and soil. However, the values presented below are for soil only, and should be included in addition to sediment values. These values are relevant toxicity and bioaccumulation values based on the shrew. These values are available at http://www.epa.gov/reg5rcra/ca/ESL.pdf.**
    a. **Cyanide: 1.33 mg/kg**

b. **Alpha-HCH: 0.0994 mg/kg**
c. **Beta-HCH: 0.00398 mg/kg**
d. **Delta-HCH: 9.94 mg/kg**
e. **Gamma-HCH (Lindane): 0.005 mg/kg**
f. **Technical-grade HCH: 0.005 mg/kg**
g. **Total PCBs: 0.000332 mg/kg**
h. **Dioxin TEQ (to 2,3,7,8-TCDD): 2E-7 mg/kg**
i. **PCB TEQ: 2E-7 mg/kg**
j. **2-Methynaphalene: 3.24 mg/kg**
k. **Acenapthene: 6820 mg/kg**
l. **Acenapthylene: 6820 mg/kg**
m. **Anthracene: 1480 mg/kg**
n. **Benzo(a)anthracene: 5.21 mg/kg**
o. **Benzo(a)pyrene: 1.52 mg/kg**
p. **Benzo(b)fluoranthene: 59.8 mg/kg**
q. **Benzo(g,h,i)perylene: 11.9 mg/kg**
r. **Benzo(k)fluoranthene: 14.8 mg/kg**
s. **Chrysene: 4.73 mg/kg**
t. **Dibenzo(a,h)anthracene: 18.4 mg/kg**
u. **Fluoranene: 122 mg/kg**
v. **Fluorene: 122 mg/kg**
w. **Indeno(1,2,3-cd)pyrene: 109 mg/kg**
x. **Napthalene: 0.0994 mg/kg**
y. **Phenanthrene: 45.7 mg/kg**
z. **Pyrene: 78.5 mg/kg**

3. **DEQ Soil Screening Levels (2001). These values have been superseded by the new EPA Eco SSLs, and since they do not include the bioaccumulation pathway are not as representatives as (1) and (2) above. However, they are still relevant to address incidental ingestion of soil only for chemical of interest (COIs).**
    a. **Dibenzofuran: 0.002 mg/kg**

NW Natural and Siltronic Response:

Response to EPA requests to include EPA Eco-SSLs in Table 2-4

NW Natural and Siltronic revised Table 2-4 to include the EPA Eco-SSLs for Zinc, DDT and metabolites, total HPAH, and total LPAH.

Response to EPA requests to include EPA Region 5 Soil Screening Levels in Table 2-4
As mentioned in NW Natural and Siltronic's previous responses to comments on Table 2-4 in Section 2, NW Natural and Siltronic continue to have concerns with the use of the EPA Region 5 soil ESLs for ecological soil screening. NW Natural and Siltronic's main concern regarding the use of EPA Region 5 SLVs are that the specific methods and assumptions used to derive these screening levels are not available and, therefore, NW Natural and Siltronic have no ability to evaluate the appropriateness of these screening levels for their intended use as requested by EPA. However, to facilitate completion of the Project AIR data screening, NW Natural and Siltronic have included EPA Region 5 soil ESLs in Table 2-4 where appropriate in accordance with the soil screening level hierarchy presented in the "Human Health, Ecological, and Source Control Screening Criteria" (Upland RA Screening Criteria Table) attached to the Oregon Department of Environmental Quality's (DEQ) January 5, 2012, letter to NW Natural (DEQ 2012).

Response to EPA requests to include the DEQ Soil Screening Level (2001) for Dibenzofuran in Table 2-4
NW Natural and Siltronic revised Table 2-4 to include the alternative ecological screening level for dibenzofuran that that DEQ e-mailed to NW Natural on February 23, 2012 as discussed in Section 2. This revision is consistent with the current Gasco Upland RA agreements between NW Natural and DEQ.

In addition to the above-described Table 2-4 revisions, The EPA RSL screening levels were updated consistent with the EPA's June 2011 RSL list.

Table 2-5, Summary of COCs without Screening Levels. The comments to Table 2-4 reduce the number of COCs listed in this table. Additionally, the Total PCB TEQ concentration should be compared to the value above for 2,3,7,8-TCDD. Recommendations for sources of information regarding additional screening values are provided below by media.

1. **Endrin Ketone, Soil: Use Endrin or Endrin Aldehyde as a surrogate (0.0101 mg/kg from EPA Region 5).**
2. **Total LPAHs and Total HPAHs, Soil: Use EPA Eco-SSLs.**
3. **DDT, DDD, DDE and Total DDX, Soil: Use national EPA soil screening levels applied to each isomer and Total DDX.**
4. **DDT, DDD, DDE and Total DDX, Sediment: Use values in DEQ's bioaccumulation guidance, available at**

(http://www.deq.state.or.us/lq/pubs/docs/cu/GuidanceAssessingBioaccumulative.pdf).

5. **Total PCB TEQ, Soil: Use acceptable soil value for 2,3,7,8-TCDD in soil (2E-7 mg/kg).**
6. **Delta HCH, Water: There is a value presented in Table 5-2 (Appendix G, Attachment 5) for Surface Water COIs or 0.08 ug/L using gamma HCH as a surrogate.**
7. **PCB TEQ, Water: PCP TEQ should be compared to an acceptable level of 2,3,7,8-TCDD in water. That value is 0.00001 ug/L, ambient water quality criteria, USEPA 1993.**
8. **Diesel Range and Residual Range Hydrocarbons, Water and Sediment: Use EPA's water and sediment SLVs for total petroleum hydrocarbons (TPH); please see attached memorandum with values.**

NW Natural and Siltronic Response:

Response to EPA request to screen Total PCB Toxics Equivalent Quotient (TEQ) against 2,3,7,8-TCDD

NW Natural and Siltronic updated Tables 2-1, 2- 2, and 2-4 to screen total PCB TEQ against 2,3,7,8-TCDD screening levels.

Responses to numbered EPA comments on Table 2-4

Comment 1 – Endrin ketone in soil

As discussed in NW Natural's response to EPA comments on Table 2-4, NW Natural does not believe that the EPA Region 5 soil ESLs are appropriate for the Upland RA process. Nevertheless, to facilitate completion the Project AIR screening task, NW Natural and Siltronic have added the Region 5 soil ESL for Endrin to Table 2-4 as a surrogate for Endrin Ketone.

Comment 2 – Total LPAH and total HPAH in soil; Comment 3 – DDT and metabolites in soil

NW Natural and Siltronic revised Table 2-4 to include the EPA Eco-SSLs for Zinc, DDT and metabolites, total HPAH, and total LPAH to Table 2-4. In addition, NW Natural agrees to use the EPA RSLs for sum DDE, DDD, and DDT to screen the individual DDE, DDD, and DDT isomers, respectively. An EPA RSL for total DDx is not available.

Comment 4 – DDT and metabolites in sediment

NW Natural and Siltronic revised Table 2-1 to include the DEQ's bioaccumulation values for DDT and metabolites. The bird egg population value of 0.34 ug/kg was added to this table.

Comment 5 – Total PCB TEQ in soil, Comment 7 – Total PCB TEQ in water
The EPA does not provide the source for the screening level for 2,3,7,8-TCDD in soil referenced in this comment; therefore, NW Natural and Siltronic were unable to evaluate the technical merit for using this level. However, as described above, NW Natural and Siltonic updated Table 2-4 to include 2,3,7,8-TCDD screening levels, including one level, the JSCS Table 3-1 bioaccumulation level of 9.1×10^{-9} mg/kg, that is, lower than the screening level listed in this comment. Total PCB TEQ in soil data will be screened against these screening levels.

Regarding 2003 Ambient Water Quality Criteria listed in this comment, NW Natural and Siltronic do not agree to include screening levels from the 2003 Ambient Water Quality Criteria because this list has been superseded by the *National Recommended Water Quality Criteria for Priority Toxic Pollutants* (EPA 2009). However, NW Natural and Siltronic include several 2,3,7,8-TCDD screening levels from the 2009 NRWQC list in Table 2-2 and will screen total PCB TEQ in water data against these values.

Comment 6 – Delta HCH in water
NW Natural and Siltronic revised Table 2-2 to include the SLERA Table 5-2 screening level for gamma-HCH as a surrogate screening level for delta-HCH in surface water.

Comment 7 – TPH SLVs in water
The specific methods used for the derivation of the TPH SLVs in water were not sufficiently documented or referenced to allow NW Natural to appropriately review the approach for TRV development or allow NW Natural to reproduce the resulting TRVs. It is difficult to follow the information contained in this document. For example, one of the derivation equations (Equation 10) is missing, and several references to tables in the document are either incorrect or the referenced table is missing. Additional documentation and justification of the TRV development methods is necessary to evaluate the appropriateness of these TRVs for their intended use as requested by EPA. No changes were made to Table 2-2.

Table 2-6, Summary of Screening Levels for Preliminary Area Identification. The surface water and transition zone water TRVs presented in the Draft BERA have several COCs identified without screening level values. It should also be noted the review of the Draft BERA is relevant to the in-water project area identification process as follows:

1. **The "Final Benthic SQGs" indicated here state they include the EPA 2009 thresholds, but the LWG analysis using these thresholds does not include the Hyaella growth**

endpoint, and would not be considered appropriate. In addition, the floating point model (FPM) for which these sediment quality guidelines (SQGs) are based has not been reviewed in its entirety and major aspects related to the validity of the model have still not been resolved. To address these concerns, national SQGs should be used as an additional line of evidence for screening. A good compilation of sediment screening values is available from JSCS Table 3-1 or the EPA Region 5 website at http://www.epa.gov/reg5rcra/ca/ESL.pdf

   a. **Zinc: No value is presented in the table because zinc was not included in the FPM. Therefore, a PEC should be used as 460 mg/kg instead of the proposed value from the Calcasieu-calculated number.**

2. **The "Benthic Toxicity Thresholds" are incorrect as presented in the cited *Benthic Toxicity Reanalysis Technical Memorandum*. The correct thresholds should be presented as directed in EPA correspondence.**
3. **"DEQ Criteria" and "JSCS Screening Level Values" are not inclusive of all pathways relevant to evaluating ecological risk, including riparian and upland plant, invertebrate, mammalian and avian receptors.**

NW Natural and Siltronic Response:

Response to EPA's comments on Sediment Quality Guidelines (SQGs) and request to use national SQGs:

NW Natural and Siltronic replaced the SQGs from the *Benthic Toxicity Reanalysis Technical Memorandum* (Windward 2009) from Table 2-1 with SQGs from Sediment Quality Value (SQV) *Report Final June 9, 2010. Table ES-1: Recommended Sediment Quality Guidelines. Development of Benthic SQVs for Freshwater Sediments in Washington, Oregon, and Idaho*.

Response to EPA's comments regarding the benthic toxicity thresholds:

As described previously in Section 1, NW Natural and Siltronic revised Table 2-3 consistent with the EPA methods presented in the *Benthic Toxicity Reanalysis Technical Memorandum* (Windward 2009).

Response to EPA's comments regarding ecological risk:

Please see the response to EPA comments on Table 2-4.

Table 2-7. Summary of Project AIR Screening by SOW Requirement. Similar to comments to Table 2-6, the following information should be noted.

1. **Page 1 through 3: Many of these lines of evidence are currently being reviewed and worked through as a part of the risk assessment. Of particular concern is the use of sediment values from output of the floating percentile model. Using these values is not recommended at this time. Other sediment lines of evidence such as PECs should be considered.**
2. **Page 4: Identification of the need for soils remediation work supports inclusion of appropriate screening level values for soil in the screening step (see comments to Table 2-4 above). Although appropriate human health upland soil screening levels are included here, ecological soil screening numbers are absent. As discussed above, the only values listed are for sediment (see comment on Table 2-4 for a list of soil values).**

NW Natural and Siltronic Response:

Please see the response to EPA comments on Table 2-4 and Table 2-6.

Table 2-10. Subsurface Sediment Screening Table. NW Natural should clarify that the screening value for PCB-126 is a surrogate for the PCB TEQ. Also, the justification for choosing three times the PRG for defining exceedances at depth should be explained.

NW Natural and Siltronic Response:

This table has been removed because the criteria in the table are no longer being used in the Portland Harbor process.

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ATTACHMENT 2
GIS LAYERS (ON CD)

APPENDIX H
DRAFT RIVERBANK SOIL SCREEN

DRAFT
APPENDIX H
RIVERBANK SOIL SCREEN
DRAFT ENGINEERING EVALUATION/COST ANALYSIS
GASCO SEDIMENTS CLEANUP ACTION

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LIST OF ACRONYMS AND ABBREVIATIONS

Abbreviation	Definition
µg/kg	microgram per kilogram
AOC	Administrative Settlement Agreement and Order on Consent
COI	chemical of interest
DDD	dichlorodiphenyltrichloroethane
DEQ	Oregon Department of Environmental Quality
EE/CA	Engineering Evaluation/Cost Analysis
Eco-SSL	Ecological Soil Screening Level
EPA	U.S. Environmental Protection Agency
ESL	Ecological Screening Levels
HPAH	high-molecular-weight polycyclic aromatic hydrocarbon
LPAH	low-molecular-weight polycyclic aromatic hydrocarbon
NAVD88	North American Vertical Datum 1988
OLW	ordinary low water
RA	risk assessment
RBC	Risk-based Concentrations
RBDM	Risk-based Decision Making
RCRA	Resource Conservation and Recovery Act
RSL	Regional Screening Levels
SLV	Screening Level Values
SMA	Sediment Management Area
SOW	Statement of Work

1 INTRODUCTION

This document presents the methodology and results of the evaluation of riverbank soil at the Gasco Sediments Site conducted in support of the *Draft Engineering Estimate and Cost Analysis* (EE/CA) for the Site. NW Natural and the Oregon Department of Environmental Quality (DEQ) recently agreed (DEQ 2012) on the screening levels for 0- to 3.5-foot soils, based on ecological and human health endpoints, and for 0- to 12-foot soils, based on human health endpoints shown on DEQ's January 5, 2012 Matrix of Screening Levels. This evaluation was generally conducted following the screening process outlined in that matrix.

2 METHODS

2.1 Dataset

The riverbank soil dataset used in the riverbank screening is described in Appendix G. This dataset includes samples collected from locations ranging from 13 feet North American Vertical Datum (NAVD88) to the top of bank (see Figure 2-1) based on available survey information. Due to the highly armored nature of the Gasco and Siltronic riverbanks, data density within this zone is limited. For this reason, samples collected in very close proximity of the top of bank elevation (i.e., within approximately five feet) were also included in the dataset to provide additional data density. Note that areas landward of the top of bank will be addressed as part of the upland feasibility study remedy evaluation. In addition, samples collected below the 13 feet NAVD88 contour were included in the riverbank soil data set to be consistent with DEQ direction in the "Draft Meeting Summary and Next Steps" document transmitted by Dana Bayuk of DEQ to Ben Hung of Anchor QEA in an e-mail dated May 12, 2011 (DEQ 2011). However, these samples are located within the in-water portion of the Gasco Sediments Site. Sediment impacts in this area will be addressed consistent with the sediment remedy. Samples collected landward of the riverbank or below the 13 feet NAVD88 contour are indicated on Figure 2-1 (and subsequent figures) by a square symbol.

The dataset was grouped into two categories by depth interval: 0- to 3.5-foot soils and 0- to 12-foot soils. The 0- to 3.5-foot depth category consists of soil samples collected from the 0- to 5-foot depth interval for locations sampled during the Gasco Sediments Site Data Gaps Investigation and samples collected from the 0- to 3.5-foot depth interval for all other locations. Refer to EE/CA Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation (Anchor QEA 2010). The 0- to 12-foot depth category consists of samples collected from the 0- to 12-foot depth interval for all other locations.

2.2 Data Screen

The data were screened against riverbank screening levels for the Gasco Sediments Site chemicals of interest (COIs, as presented in Section 3.3 of the Statement of Work [SOW] attached to the Administrative Settlement Agreement and Order on Consent [AOC; Docket No. CERCLA 10-2009-0255]) presented on Table 2-1. The screening was conducted on a point-by-point basis. However, this is a conservative approach for applying the human health screening levels and some of the ecological soil screening levels. These screening levels are more appropriately applied to exposure point concentrations calculated over specific exposure areas, if those areas

have been identified, for risk characterization purposes. These human health and ecological screening levels were derived generally following the DEQ matrix (DEQ 2012), described as follows.

Table 2-1 presents the riverbank human health soil screening levels derived from the following sources:

- Risk-based Decision Making (RBDM) Risk-based Concentrations (RBCs) are from DEQ Environmental Cleanup and Tanks Program table entitled "Risk-Based Concentrations for Individual Chemicals," November 15, 2011, revision, available at http://www.deq.state.or.us/lq/pubs/docs/RBDMTable.pdf and accessed March 21, 2012.
- U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSLs) are from the EPA Summary Table dated November 2011 (EPA 2011), available at: http://www.epa.gov/region9/superfund/prg/, and accessed March 22, 2012.
- The Upland Remedial Assessment (RA) Ecological Screening Levels (ESLs) presented follow the hierarchy presented in the screening level matrix attached to the letter from Jim Anderson of DEQ to Bob Wyatt of NW Natural regarding: "Summary of Agreements on the Remaining Uplands Risk Assessment Issues, NW Natural "Gasco" Site" dated January 5, 2012. This hierarchy states that the secondary criteria are only used when criteria are unavailable from the previous reference(s).

Table 2-1 presents the riverbank ecological soil screening levels (Eco-SSLs) derived from the following sources:

- EPA Eco-SSLs for low molecular weight polycyclic aromatic hydrocarbons (LPAHs), high molecular weight polycyclic aromatic hydrocarbons (HPAHs), and metals available at: http://www.epa.gov/ecotox/ecossl/
- DEQ Level II Terrestrial Screening Level Values (SLVs) available at: http://www.deq.state.or.us/lq/pubs/docs/cu/GuidanceEcologicalRisk.pdf
- EPA Region 5 Resource Conservation and Recovery Act (RCRA) Ecological Screening Levels for Soil available at: http://epa.gov/region05/waste/cars/pdfs/ecological-screening-levels-200308.pdf

The hierarchy of ESLs follows that provided in the letter from Jim Anderson of DEQ to Bob Wyatt of NW Natural regarding: "Summary of Agreements on the Remaining Uplands Risk Assessment Issues, NW Natural "Gasco" Site" dated January 5, 2012.

A single screening level for each COI was selected according to the following hierarchy:

- 0- to 3.5-foot soils, ecological receptor: the lowest of Upland RA ecological receptor screening levels was applied to screen for ecological exceedances.
- 0- to 3.5-foot soils, human health: the lowest of the occupational worker, construction worker, and volatilization to outdoor air RBCs was applied. If an RBC is not available for a COI, the data were screened against the EPA RSL (if available).
- 0- to 12-foot soils, human health: the lowest of the construction worker, excavation worker, volatilization to outdoor air, and vapor intrusion into buildings RBCs was applied. If an RBC is not available for a COI , the data were screened against the EPA RSL (if available).

3 RESULTS AND DISCUSSION

The results for the riverbank ecological evaluation of 0- to 3.5-foot soil, riverbank human health evaluation of 0- to 3.5-foot soil, and riverbank human health evaluation of 0- to 12-foot soil, are summarized below and in Tables 3-1, 3-2, and 3-3. The locations of screening level exceedances are shown on Figures 3-1, 3-2, and 3-3.

3.1 Riverbank Ecological Receptor (Evaluation of 0- to 3.5-foot Soil)

As presented in Table 3-1 and shown on Figure 3-1, the concentrations of 25 chemicals were detected in soil samples at concentrations above riverbank soil ecological receptor screening levels:

- Zinc was detected in 2 out of 12 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor (defined as the result divided by the screening level) for zinc was 1.93.
- Total cyanide was detected at 3 out of 25 locations at concentrations above its associated soil ecological receptor screening level. The highest exceedance factor for total cyanide was 8.42.
- 2-Methylnaphthalene was detected at 1 out of 12 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for 2-methylnaphthalene was 2.24.
- Acenaphthene was detected at 1 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for acenaphthene was 1.14.
- Acenaphthylene was detected at 1 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for acenaphthylene was 3.45.
- Anthracene was detected at 1 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for anthracene was 4.14.
- Benzo(a)anthracene was detected at 7 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for benzo(a)anthracene was 56.36.
- Benzo(a)pyrene was detected at 10 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for benzo(a)pyrene was 74.55.

- Benzo(b)fluoranthene was detected at 8 out of 17 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for benzo(b)fluoranthene was 38.00.
- Benzo(g,h,i)perylene was detected at 10 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for benzo(g,h,i)perylene was 61.82.
- Benzo(k)fluoranthene was detected at 5 out of 17 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for benzo(k)fluoranthene was 9.07.
- Chrysene was detected at 9 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for chrysene was 72.73.
- Dibenzo(a,h)anthracene was detected at 4 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for dibenzo(a,h)anthracene was 18.18.
- Fluoranthene was detected at 9 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for fluoranthene was 110.91.
- Fluorene was detected at 1 out of 29 locations at concentrations above its associated riverbank screening level. The highest exceedance factor for fluorene was 2.72.
- Indeno(1,2,3-c,d)pyrene was detected at 9 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for indeno(1,2,3-c,d)pyrene was 41.82.
- Total HPAH was detected at 17 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for total HPAH was 690.91.
- Total LPAH was detected at 3 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for total LPAH was 48.28.
- Naphthalene was detected at 1 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for naphthalene was 7.59.
- Phenanthrene was detected at 1 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for phenanthrene was 26.21.

- Pyrene was detected at 13 out of 29 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for pyrene was 181.82.
- Endrin ketone was detected at 1 out of 12 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for endrin ketone was 8.32.
- Sum dichlorodiphenyltrichloroethane (DDD) was detected at 1 out of 12 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for sum DDD was 1.33.
- Total DDx[1] was detected at 1 out of 12 locations at concentrations above its associated riverbank soil ecological receptor screening level. The highest exceedance factor for total DDx was 1.71.

Refer to Figure 3-1 for the locations of these riverbank screening level exceedances.

Dibenzofuran was detected in 2 out of 12 samples at concentrations above its associated riverbank screening level. However, because all detected concentrations of dibenzofuran are below the DEQ's alternative screening level for dibenzofuran (85,000 micrograms per kilogram [µg/kg]), these exceedances are not considered indicative of ecological riverbank screening level exceedances. These exceedances are also not shown on Figure 3-1.

3.2 Riverbank Human Health Receptor (Evaluation of 0- to 3.5-foot Soil)

As presented in Table 3-2 and shown on Figure 3-2, the concentrations of eight chemicals were detected in soil samples at concentrations above riverbank human health screening levels for 0- to 3.5-foot soil.

- Benzo(a)anthracene was detected at 12 out of 29 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for benzo(a)anthracene was 114.81.
- Benzo(a)pyrene was detected at 20 out of 29 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for

[1] DDx is the sum of all six dichlorodiphenyltrichloroethane isomers (2,4′-dichlorodiphenyldichloroethane, 4,4-dichlorodiphenyldichloroethane, 2,4′-dichlorodiphenyldichloroethylene, 4,4-dichlorodiphenyldichloroethylene, 2,4′-dichlorodiphenyltrichloroethane, and 4,4′-dichlorodiphenyltrichloroethane).

benzo(a)pyrene was 1,518.52.

- Benzo(b)fluoranthene was detected at 10 out of 17 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for benzo(b)fluoranthene was 77.41.
- Benzo(k)fluoranthene was detected at 1 out of 17 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for benzo(k)fluoranthene was 1.85.
- Chrysene was detected at 1 out of 29 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for chrysene was 1.6.
- Dibenzo(a,h)anthracene was detected at 16 out of 29 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for dibenzo(a,h)anthracene was 370.37.
- Indeno(1,2,3-c,d)pyrene was detected at 13 out of 29 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for indeno(1,2,3-c,d)pyrene was 85.19.
- Naphthalene was detected at 1 out of 29 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for naphthalene was 9.57.

Refer to Figure 3-2 for the locations of these riverbank screening level exceedances.

3.3 Riverbank Human Health Receptor (Evaluation of 0- to 12-foot Soil)

As presented in Table 3-3 and shown on Figure 3-3, the concentrations of seven chemicals were detected in soil samples at concentrations above riverbank screening levels for 0- to 12-foot soil.

- Total cyanide was detected at 1 out of 36 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for total cyanide was 46.21.
- Naphthalene was detected at 3 out of 39 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for naphthalene was 15.15.
- Benzo(a)anthracene was detected at 5 out of 39 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for benzo(a)anthracene was 14.76.

- Benzo(a)pyrene was detected at 19 out of 39 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for benzo(a)pyrene was 195.24.
- Benzo(b)fluoranthene was detected at 8 out of 27 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for benzo(b)fluoranthene was 9.95.
- Dibenzo(a,h)anthracene was detected at 10 out of 39 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for dibenzo(a,h)anthracene was 47.62.
- Indeno(1,2,3-c,d)pyrene was detected at 9 out of 39 locations at concentrations above its associated riverbank human health screening level. The highest exceedance factor for indeno(1,2,3-c,d)pyrene was 10.95.

Refer to Figure 3-3 for the locations of these riverbank screening level exceedances.

4 REFERENCES

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TABLES

Table 2-1
Screening Levels for Riverbank Soil[1]

Chemicals	Human Health									
	EPA RSLs	DEQ RBDM RBC Soil								
	Industrial Soil[2] (µg/kg)		Occupational Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)		Construction Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)		Excavation Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)		Volatilization to Outdoor Air - Occupational[3] (µg/kg)		Vapor Intrusion into Buildings - Occupational[3] (µg/kg)	
Metals/Inorganics												
Zinc	3.10E+08											
Cyanide	2.00E+07		6.10E+05		1.90E+05		5.10E+06					
Polycyclic Aromatic Hydrocarbons												
2-Methylnaphthalene	4.10E+06											
Acenaphthene	3.30E+07		6.10E+07		1.90E+07		5.20E+08		--	i	--	i
Acenaphthylene												
Anthracene	1.70E+08		3.10E+08		9.30E+07		--	i	--	i	--	i
Benzo(a)anthracene	2.10E+03		2.70E+03		2.10E+04		5.90E+05					
Benzo(a)pyrene	2.10E+02		2.70E+02		2.10E+03		5.90E+04					
Benzo(b)fluoranthene	2.10E+03		2.70E+03		2.10E+04		5.90E+05		--	h	--	h
Benzo(g,h,i)perylene												
Benzo(k)fluoranthene	2.10E+04		2.70E+04		2.10E+05		5.90E+06					
Chrysene	2.10E+05		2.50E+05		2.10E+06		5.70E+07		--	h	--	h
Dibenzo(a,h)anthracene	2.10E+02		2.70E+02		2.10E+03		5.90E+04		--	h		
Fluoranthene	2.20E+07		2.90E+07		8.90E+06		2.50E+08		--	i	--	i
Fluorene	2.20E+07		4.10E+07		1.20E+07		3.40E+08		--	i	--	i
Indeno(1,2,3-cd)pyrene	2.10E+03		2.70E+03		2.10E+04		5.90E+05					
Naphthalene	1.80E+04		2.30E+04		5.80E+05		1.60E+07		9.90E+04		9.90E+04	
Phenanthrene												
LPAH												
HPAH												
Pyrene	1.70E+07		2.10E+07		6.70E+06		1.90E+08		--	i	--	i
Pesticides												
alpha-Hexachlorocyclohexane	2.70E+02		3.10E+02		2.60E+03		7.10E+04		--	h	--	h
beta-Hexachlorocyclohexane	9.60E+02											
delta-Hexachlorocyclohexane												
gamma-Hexachlorocyclohexane (Lindane)	2.10E+03		1.70E+03		1.50E+04		4.00E+05		--	h	--	h
Technical-grade Hexachlorocyclohexane	9.60E+02											
4,4'-Dichlorodiphenyldichloroethane	7.20E+03	a	1.10E+04		8.30E+04		2.30E+06					
2,4'-Dichlorodiphenyldichloroethane	7.20E+03	a										
4,4'-Dichlorodiphenyldichloroethylene	5.10E+03	b	7.60E+03		5.80E+04		1.60E+06		--	i	--	i
2,4'-Dichlorodiphenyldichloroethylene	5.10E+03	b										
4,4'-Dichlorodiphenyltrichloroethane	7.00E+03	c	7.70E+03		5.80E+04		1.60E+06					
2,4'-Dichlorodiphenyltrichloroethane	7.00E+03	c										
Sum Dichlorodiphenyldichloroethane	7.20E+03	a										
Sum Dichlorodiphenyldichloroethylene	5.10E+03	b										
Sum Dichlorodiphenyltrichloroethane	7.00E+03	c										
Total DDx	7.00E+03	c										

Table 2-1
Screening Levels for Riverbank Soil[1]

Chemicals	Ecological Upland RA Ecological Receptor Screening Levels[4] EPA SSLs[5] (µg/kg)		DEQ Alternative Screening Level[6] (µg/kg)		DEQ Level II SLVs for Soil[7] (µg/kg)		Alternative Cyanide Screening Level[8] (µg/kg)		EPA Region 5 RCRA Ecological Screening Levels[9] (µg/kg)	
Metals/Inorganics										
Zinc	1.20E+05									
Cyanide							1.99E+06		6.65E+03	m
Polycyclic Aromatic Hydrocarbons										
2-Methylnaphthalene	2.90E+04	j								
Acenaphthene	2.90E+04	j								
Acenaphthylene	2.90E+04	j								
Anthracene	2.90E+04	j								
Benzo(a)anthracene	5.50E+03	k								
Benzo(a)pyrene	5.50E+03	k								
Benzo(b)fluoranthene	5.50E+03	k								
Benzo(g,h,i)perylene	5.50E+03	k								
Benzo(k)fluoranthene	5.50E+03	k								
Chrysene	5.50E+03	k								
Dibenzo(a,h)anthracene	5.50E+03	k								
Fluoranthene	5.50E+03	k								
Fluorene	2.90E+04	j								
Indeno(1,2,3-cd)pyrene	5.50E+03	k								
Naphthalene	2.90E+04	j								
Phenanthrene	2.90E+04	j								
LPAH	2.90E+04									
HPAH	5.50E+03									
Pyrene	5.50E+03	k								
Pesticides										
alpha-Hexachlorocyclohexane									9.94E+01	
beta-Hexachlorocyclohexane									3.98E+00	
delta-Hexachlorocyclohexane									9.94E+03	
gamma-Hexachlorocyclohexane (Lindane)					4.00E+04					
Technical-grade Hexachlorocyclohexane					1.25E+04					
4,4'-Dichlorodiphenyldichloroethane	1.05E+02	l								
2,4'-Dichlorodiphenyldichloroethane	1.05E+02	l								
4,4'-Dichlorodiphenyldichloroethylene	1.05E+02	l								
2,4'-Dichlorodiphenyldichloroethylene	1.05E+02	l								
4,4'-Dichlorodiphenyltrichloroethane	1.05E+02	l								
2,4'-Dichlorodiphenyltrichloroethane	1.05E+02	l								
Sum Dichlorodiphenyldichloroethane	1.05E+02	l								
Sum Dichlorodiphenyldichloroethylene	1.05E+02	l								
Sum Dichlorodiphenyltrichloroethane	1.05E+02	l								
Total DDx	1.05E+02	l								

Table 2-1
Screening Levels for Riverbank Soil[1]

Chemicals	Human Health											
	EPA RSLs	DEQ RBDM RBC Soil										
	Industrial Soil[2] (µg/kg)		Occupational Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)		Construction Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)		Excavation Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)		Volatilization to Outdoor Air - Occupational[3] (µg/kg)		Vapor Intrusion into Buildings - Occupational[3] (µg/kg)	
Endrin ketone	1.80E+05											
Polychlorinated Biphenyls												
Aroclor 1016	2.10E+04											
Aroclor 1221	5.40E+02											
Aroclor 1232	5.40E+02											
Aroclor 1242	7.40E+02											
Aroclor 1248	7.40E+02											
Aroclor 1254	7.40E+02											
Aroclor 1260	7.40E+02											
Polychlorinated Biphenyl 77	1.10E+02											
Polychlorinated Biphenyl 81	3.80E+01											
Polychlorinated Biphenyl 105	3.80E+02											
Polychlorinated Biphenyl 114	3.80E+02											
Polychlorinated Biphenyl 118	3.80E+02											
Polychlorinated Biphenyl 123	3.80E+02											
Polychlorinated Biphenyl 126	1.10E-01											
Polychlorinated Biphenyl 156	3.80E+02											
Polychlorinated Biphenyl 157	3.80E+02											
Polychlorinated Biphenyl 167	3.80E+02											
Polychlorinated Biphenyl 169	3.80E-01											
Polychlorinated Biphenyl 189	3.80E+02											
Total Polychlorinated Biphenyls	7.40E+02	d	5.60E+02		4.40E+03		1.20E+05		--	h	--	h
Polychlorinated Biphenyl TEQ	1.80E-02	e	1.50E-02	e	1.50E-01	e	4.20E+00	e	--	e,h	--	e,h
Semivolatile Organic Compounds												
Carbazole	1.00E+06	f										
Dibenzofuran	1.00E+06											
Volatile Organic Compounds												
1,1-Dichloroethene	1.10E+06		2.70E+07		1.20E+07		3.40E+08		--	h	6.80E+05	
Benzene	5.40E+03		3.40E+04		3.40E+05		9.50E+06		5.00E+04		1.20E+03	
cis-1,2-Dichloroethene	2.00E+06		2.00E+06		6.20E+05		1.70E+07		--	i	--	i
trans-1,2-Dichloroethene	6.90E+05		9.20E+06		4.50E+06		1.30E+08		--	h	2.00E+05	
Ethylbenzene	2.70E+04		1.40E+05		1.60E+06		4.40E+07		1.60E+05		1.20E+04	
Toluene	4.50E+07		7.70E+07		2.40E+07		6.80E+08		--	h	--	h
Trichloroethene	6.40E+03		4.60E+04		1.20E+05		3.40E+06		9.60E+04		2.70E+03	
Vinyl chloride	1.70E+03		3.90E+03		3.00E+04		8.30E+05		8.90E+04		2.20E+03	
m-Xylene	2.50E+06											
p-Xylene	2.60E+06											
o-Xylene	3.00E+06											
Xylenes	2.70E+06	g	2.50E+07		1.90E+07		5.40E+08		--	h	--	h

Table 2-1
Screening Levels for Riverbank Soil[1]

Chemicals	Ecological: Upland RA Ecological Receptor Screening Levels[4]									
	EPA SSLs[5] (µg/kg)		DEQ Alternative Screening Level[6] (µg/kg)		DEQ Level II SLVs for Soil[7] (µg/kg)		Alternative Cyanide Screening Level[8] (µg/kg)		EPA Region 5 RCRA Ecological Screening Levels[9] (µg/kg)	
Endrin ketone									1.01E+01	
Polychlorinated Biphenyls										
Aroclor 1016					5.00E+05					
Aroclor 1221										
Aroclor 1232										
Aroclor 1242					7.50E+03					
Aroclor 1248										
Aroclor 1254					3.50E+03					
Aroclor 1260										
Polychlorinated Biphenyl 77										
Polychlorinated Biphenyl 81										
Polychlorinated Biphenyl 105										
Polychlorinated Biphenyl 114										
Polychlorinated Biphenyl 118										
Polychlorinated Biphenyl 123										
Polychlorinated Biphenyl 126										
Polychlorinated Biphenyl 156										
Polychlorinated Biphenyl 157										
Polychlorinated Biphenyl 167										
Polychlorinated Biphenyl 169										
Polychlorinated Biphenyl 189										
Total Polychlorinated Biphenyls					2.00E+04					
Polychlorinated Biphenyl TEQ					2.75E-01	e				
Semivolatile Organic Compounds										
Carbazole			8.50E+04	f						
Dibenzofuran			8.50E+04							
Volatile Organic Compounds										
1,1-Dichloroethene					1.88E+07					
Benzene					1.65E+07					
cis-1,2-Dichloroethene					1.25E+07					
trans-1,2-Dichloroethene					1.25E+07					
Ethylbenzene									5.16E+03	
Toluene					2.00E+05					
Trichloroethene					2.00E+05					
Vinyl chloride					1.00E+05					
m-Xylene										
p-Xylene										
o-Xylene					1.00E+03					
Xylenes					1.00E+05					

Table 2-1
Screening Levels for Riverbank Soil[1]

Chemicals	Human Health											
	EPA RSLs	DEQ RBDM RBC Soil										
	Industrial Soil[2] (µg/kg)		Occupational Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)		Construction Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)		Excavation Worker - Ingestion, Dermal Contact, and Inhalation[3] (µg/kg)		Volatilization to Outdoor Air - Occupational[3] (µg/kg)		Vapor Intrusion into Buildings - Occupational[3] (µg/kg)	
Petroleum Hydrocarbons												
Diesel Range			1.40E+07		4.60E+06		--	i	--	i	--	i
Residual Range			3.60E+07		1.10E+07		--	i	--	i	--	i

Table 2-1
Screening Levels for Riverbank Soil[1]

Chemicals	Ecological									
	Upland RA Ecological Receptor Screening Levels[4]									
	EPA SSLs[5] (µg/kg)		DEQ Alternative Screening Level[6] (µg/kg)		DEQ Level II SLVs for Soil[7] (µg/kg)		Alternative Cyanide Screening Level[8] (µg/kg)		EPA Region 5 RCRA Ecological Screening Levels[9] (µg/kg)	
Petroleum Hydrocarbons										
Diesel Range										
Residual Range										

Table 2-1
Screening Levels for Riverbank Soil[1]

Notes:

[a] = EPA RSL for dichlorodiphenyldichloroethane used for screening.

[b] = EPA RSL for dichlorodiphenyldichloroethylene used for screening.

[c] = EPA RSL for dichlorodiphenyltrichloroethane used for screening.

[d] = EPA RSL for PCBs (high risk) used for PCB screening.

[e] = 2,3,7,8 TCDD screening level used for PCB Toxic Equivalent Quotient (TEQ) screening.

[f] = Dibenzofuran screening level used for carbazole as directed by DEQ (DEQ email to NW Natural, February 23, 2012).

[g] = EPA RSL for xylene, mixture used for xylenes screening.

[h] = RBC not available because value exceeds the limit of three-phase equilibrium partitioning.

[i] = RBC not available because the constituent value for this pathway is greater than 100,000 mg/kg or 100,000 mg/l.

[j] = LPAH - PAHs with 2 to 3 benzene rings.

[k] = HPAH - PAHs with 4 to 7 benzene rings.

[l] = Eco-SSL for dichlorodiphenyltrichloroethane and metabolites used for sum dichlorodiphenyldichloroethane, dichlorodiphenyldichloroethylene, and dichlorodiphenyltrichloroethane screening, as well as screening of individual dichlorodiphenyldichloroethane, dichlorodiphenyldichloroethylene, and dichlorodiphenyltrichloroethane isomers.

[m] = Screening level was multiplied by 5 because the screening level is based on a No Observed Adverse Effect Level (NOAEL) endpoint

[1] = Refer to the source tables in the following footnotes for additional notes pertaining to the criteria listed in this table

[2] = EPA RSLs are from EPA Regional Screening Level (RSL) Summary Table November 2011 (EPA 2011). Available at: http://www.epa.gov/region9/superfund/prg/. Accessed March 22, 2012.

[3] = RBDM RBCs are from DEQ Environmental Cleanup and Tanks Program table entitled "*Risk-Based Concentrations for Individual Chemicals,"* November 15, 2011, revision, available at http://www.deq.state.or.us/lq/pubs/docs/RBDMTable.pdf. Accessed March 21, 2012.

[4] = The Upland Risk Assessment (RA) ESLs presented follow the hierarchy presented in the screening level matrix attached to the letter from Jim Anderson of DEQ to Bob Wyatt of NW Natural re: "Summary of Agreements on the Remaining Uplands Risk Assessment Issues, NW Natural "Gasco" Site," dated January 5, 2012. This hierarchy states that the secondary criteria are only used when criteria are unavailable from the previous reference(s).

[5] = Values obtained from EPA Ecological Soil Screening Levels for Dichlorodiphenyltrichloroethane and Metabolites (EPA 2007), EPA Ecological Soil Screening Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Final (EPA 2007), and EPA Ecological Soil Screening Levels for Zinc Interim Final (EPA 2007) (http://www.epa.gov/ecotox/ecossl/). In cases where more than one level is listed, then the most conservative level is used for screening. A 5x multiplier was applied to the bird and mammal screening levels.

[6] = Alternative DEQ screening level for dibenzofuran is from the DEQ e-mail to NW Natural dated February 23, 2012. This level is applied to carbazole as directed by DEQ. The screening level is multiplied by 5 because it is based on a no observed adverse effect level (NOAEL) endpoint.

[7] = DEQ screening values from *Guidance For Ecological Risk Assessment* . Level 2 screening values. "Table 1 Screening Level Values for Plants, Invertebrates, and Wildlife Exposed to Soil and Surface Water" (DEQ revision 2001). When multiple values existed, the lowest was used. A 5x multiplier was applied to the bird and mammal screening levels.

[8] = Alternative cyanide screening level is from the October 31, 2011, memorandum from Mr. Fuji and Ms. Hitchko of Anchor QEA to Mr. Bayuk of DEQ entitled *Proposed Alternative Cyanide Screening Level* . The screening level is multiplied by 5 because it is based on a no observed adverse effect level (NOAEL) endpoint.

[9] = EPA *Region 5 RCRA Ecological Screening Levels (ESLs) for Soil* (2003). Available at: http://www.epa.gov/reg5rcra/ca/pdfs/ecological-screening-levels-200308.pdf. Accessed March 21, 2012.

Data were screened according to the hierarchy in the screening level matrix attached to the letter from Jim Anderson of DEQ to Bob Wyatt of NW Natural regarding: "Summary of Agreements on the Remaining Uplands Risk Assessment Issues, NW Natural "Gasco" Site" dated January 5, 2012. When more than one screening level was indicated, the lowest level was used for the riverbank screen.

Acronyms

DDx = Sum of all six dichlorodiphenyltrichloroethane isomers (2,4′-dichlorodiphenyldichloroethane, 4,4-dichlorodiphenyldichloroethane, 2,4′-dichlorodiphenyldichloroethylene, 4,4-dichlorodiphenyldichloroethylene, 2,4′-dichlorodiphenyltrichloroethane, and 4,4′-dichlorodiphenyltrichloroethane).
DEQ = Oregon Department of Environmental Quality
Eco-SSL = Ecological Soil Screening Level
EPA = U.S. Environmental Protection Agency
HPAH = High-molecular-weight polycyclic aromatic hydrocarbon
kg = kilogram
LPAH = Low-molecular-weight polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyl
RA = Risk Assessment
RBC = Risk-Based Concentrations
RBDM = Risk-Based Decision Making
RCRA = Resource Conservation and Recovery Act
RSL = Regional Screening Level
SLV = Screening Level Value
SSL = Soil Screening Level
TCDD = 2,3,7,8-Tetrachlorodibenzo-p-Dioxin
TEQ = Toxic Equivalent Quotient
µg = microgram

Table 3-1
Data Screen: Ecological Receptor 0- to 3.5-Foot Riverbank Soil

	System Location Code:	B-29	B-31	B-53	B-54	B-56	GSM-07	GSM-08
	Sample Name:	950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013	2708-040601-001	GSM-07SO-0-5-100927	GSM-08SO-0-5-100928
	Sample Date:	9/22/1995	9/25/1995	6/7/2004	6/8/2004	6/1/2004	9/27/2010	9/28/2010
	Depth Interval:	0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm	76.2 - 106.68 cm	0 - 152.4 cm	0 - 152.4 cm
	Screening Level							
Conventional Parameters (mg/kg)								
Cyanide, total	6.65	--	**0.59**	--	--	0.435 U	**0.274**	0.124 U
Metals (mg/kg)								
Zinc	120	--	--	--	--	--	**158 J**	**85 J**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	18800000	--	--	--	--	--	1.2 U	1.5 U
1,2-Dichloroethene, cis-	12500000	--	--	--	--	--	1.2 U	1.5 U
1,2-Dichloroethene, trans-	12500000	--	--	--	--	--	1.2 U	1.5 U
Benzene	16500000	--	300 U	50 U	50 U	50 U	1.2 U	1.5 U
Ethylbenzene	5160	--	300 U	50 U	50 U	50 U	1.2 U	1.5 U
Naphthalene	29000	--	--	--	--	--	--	--
o-Xylene	1000	--	--	--	--	--	1.2 U	1.5 U
Toluene	200000	--	300 U	50 U	50 U	50 U	1.2 U	1.5 U
Trichloroethene (TCE)	200000	--	--	--	--	--	1.2 U	1.5 U
Vinyl chloride	100000	--	--	--	--	--	1.2 U	1.5 U
Total Xylene	100000	--	--	--	--	--	1.2 UT	1.5 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	29000	--	--	--	--	--	62 U	**140**
Acenaphthene	29000	**400**	**110**	670 U	168 U	13.4 U	62 U	**100**
Acenaphthylene	29000	**7300**	**1300**	**745**	168 U	13.4 U	62 U	63 U
Anthracene	29000	**3300**	**590**	**996**	168 U	13.4 U	62 U	**82**
Benzo(a)anthracene	5500	**10500**	**2100**	**4210**	**240**	13.4 U	**190**	**89**
Benzo(a)pyrene	5500	**32500**	**4800**	**6820**	**323**	13.4 U	**350**	**100**
Benzo(b)fluoranthene	5500	**31700**	**5400**	**4970**	**303**	13.4 U	--	--
Benzo(g,h,i)perylene	5500	**41800**	**6800**	**5480**	**306**	**14**	**460**	**87**
Benzo(k)fluoranthene	5500	**11600**	**1800**	**4210**	**211**	13.4 U	--	--
Chrysene	5500	**19300**	**3000**	**5320**	**330**	13.4 U	**300**	**110**
Dibenzo(a,h)anthracene	5500	**4800**	**980**	**1040**	168 U	13.4 U	62 U	63 U
Fluoranthene	5500	**9400**	**1600**	**6430**	**370**	13.4 U	**290**	**170**
Fluorene	29000	**470**	**58**	670 U	168 U	13.4 U	62 U	**67**
Indeno(1,2,3-c,d)pyrene	5500	**28400**	**4900**	**4010**	**233**	13.4 U	**290**	63 U
Naphthalene	29000	**2400**	**300**	670 U	168 U	13.4 U	**160**	**220**
Phenanthrene	29000	**3400**	**710**	**2690**	**290**	13.4 U	**200**	**410**
Pyrene	5500	**22800**	**3700**	**9700**	**454**	13.4 U	**490**	**260**
Total HPAH	5500	**210000 T**	**35000 T**	**52000 T**	**2900 T**	**74 T**	**2800 T**	**1000 T**
Total LPAH	29000	**17000 T**	**3100 T**	**5400 T**	**710 T**	13.4 UT	**510 T**	**1100 T**

Table 3-1
Data Screen: Ecological Receptor 0- to 3.5-Foot Riverbank Soil

	System Location Code:	B-29	B-31	B-53	B-54	B-56	GSM-07	GSM-08
	Sample Name:	950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013	2708-040601-001	GSM-07SO-0-5-100927	GSM-08SO-0-5-100928
	Sample Date:	9/22/1995	9/25/1995	6/7/2004	6/8/2004	6/1/2004	9/27/2010	9/28/2010
	Depth Interval:	0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm	76.2 - 106.68 cm	0 - 152.4 cm	0 - 152.4 cm
	Screening Level							
Semivolatile Organics (µg/kg)								
Carbazole	85000	--	--	--	--	--	62 U	63 U
Dibenzofuran	10	--	--	--	--	--	62 U	63 U
PCB Aroclors (µg/kg)								
Aroclor 1016	500000	--	--	--	--	--	33 U	30 U
Aroclor 1242	7500	--	--	--	--	--	33 U	30 U
Aroclor 1254	3500	--	--	--	--	--	33 U	30 U
Total PCB Aroclors	20000	--	--	--	--	--	33 UT	30 UT
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	105	--	--	--	--	--	3.3 UJ	3.1 UJ
2,4'-DDE (o,p'-DDE)	105	--	--	--	--	--	3.3 U	3.1 U
2,4'-DDT (o,p'-DDT)	105	--	--	--	--	--	3.3 UJ	3.1 UJ
4,4'-DDD (p,p'-DDD)	105	--	--	--	--	--	3.3 UJ	3.1 UJ
4,4'-DDE (p,p'-DDE)	105	--	--	--	--	--	3.3 U	3.1 U
4,4'-DDT (p,p'-DDT)	105	--	--	--	--	--	**5.6 J**	3.1 UJ
alpha-Hexachlorocyclohexane (BHC)	99.4	--	--	--	--	--	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	3.98	--	--	--	--	--	1.6 U	1.6 U
delta-Hexachlorocyclohexane (BHC)	9940	--	--	--	--	--	1.6 U	1.6 U
Endrin ketone	10.1	--	--	--	--	--	3.3 UJ	3.1 UJ
gamma-Hexachlorocyclohexane (BHC) (Lindane)	40000	--	--	--	--	--	1.6 UJ	1.6 U
Sum DDD	105	--	--	--	--	--	3.3 UJT	3.1 UJT
Sum DDE	105	--	--	--	--	--	3.3 UT	3.1 UT
Sum DDT	105	--	--	--	--	--	**7.3 JT**	3.1 UJT
Total DDx	105	--	--	--	--	--	**14 JT**	3.1 UJT

Table 3-1
Data Screen: Ecological Receptor 0- to 3.5-Foot Riverbank Soil

	System Location Code:	GSM-14	GST-01	GST-02	GST-03	GST-04	GST-05	GST-06
	Sample Name:	GSM-14SO-0-5-101015	GST-01SO-0-5-101001	GST-02SO-0-5-101004	GST-03SO-0-5-101005	GST-04SO-0-5-101006	GST-05SO-0-5-101005	GST-06SO-0-5-101007
	Sample Date:	10/15/2010	10/1/2010	10/4/2010	10/5/2010	10/6/2010	10/5/2010	10/7/2010
	Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
	Screening Level							
Conventional Parameters (mg/kg)								
Cyanide, total	6.65	**0.286**	**0.341**	**0.222**	**3.57**	**5.76 J**	**1.37 J**	**1.46 J**
Metals (mg/kg)								
Zinc	120	**77**	**96 J**	**78 J**	**103 J**	**102**	**108**	**232**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	18800000	1 U	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U
1,2-Dichloroethene, cis-	12500000	1 U	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U
1,2-Dichloroethene, trans-	12500000	1 U	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U
Benzene	16500000	1 U	1.1 U	1.2 U	**44**	**2.2**	1.1 U	1.1 U
Ethylbenzene	5160	1 U	1.1 U	1.2 U	**34**	1 U	1.1 U	1.1 U
Naphthalene	29000	--	--	--	--	--	--	--
o-Xylene	1000	1 U	1.1 U	1.2 U	**40**	1 U	1.1 U	1.1 U
Toluene	200000	1 U	1.1 U	1.2 U	**30**	1 U	1.1 U	1.1 U
Trichloroethene (TCE)	200000	1 U	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U
Vinyl chloride	100000	1 U	1.1 U	1.2 U	1.2 U	1 U	1.1 U	1.1 U
Total Xylene	100000	1 UT	1.1 UT	1.2 UT	**95 T**	1 UT	1.1 UT	1.1 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	29000	60 U	60 U	65 U	**65000**	**480**	**1900**	**400**
Acenaphthene	29000	60 U	60 U	65 U	**33000**	310 U	**1300**	**110**
Acenaphthylene	29000	**62**	60 U	65 U	**100000**	**2000**	**6200**	**920**
Anthracene	29000	60 U	60 U	65 U	**120000**	**910**	**4300**	**450**
Benzo(a)anthracene	5500	**100**	60 U	**93**	**310000**	**3600**	**15000**	**2800**
Benzo(a)pyrene	5500	**270**	60 U	**150**	**410000**	**10000**	**43000**	**5500**
Benzo(b)fluoranthene	5500	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	5500	**170**	60 U	**130**	**340000**	**13000 J**	**52000**	**7100**
Benzo(k)fluoranthene	5500	--	--	--	--	--	--	--
Chrysene	5500	**150**	60 U	**120**	**400000**	**6000**	**24000**	**4800**
Dibenzo(a,h)anthracene	5500	60 U	60 U	65 U	**100000**	**2300**	**9200**	**1300**
Fluoranthene	5500	**130**	60 U	**140**	**610000**	**3700**	**19000**	**2800**
Fluorene	29000	60 U	60 U	65 U	**79000**	310 U	**1400**	**96**
Indeno(1,2,3-c,d)pyrene	5500	**140**	60 U	**91**	**230000**	**8300**	**34000**	**4000**
Naphthalene	29000	60 U	60 U	65 U	**220000**	**1800**	**6700**	**1600**
Phenanthrene	29000	60 U	60 U	**110**	**760000**	**3000**	**13000**	**1100**
Pyrene	5500	**190**	60 U	**190**	**1000000**	**5300**	**42000**	**7200**
Total HPAH	5500	**1500 T**	60 UT	**1100 T**	**3800000 T**	**64000 JT**	**280000 T**	**44000 T**
Total LPAH	29000	**240 T**	60 UT	**300 T**	**1400000 T**	**8500 T**	**35000 T**	**4700 T**

Table 3-1
Data Screen: Ecological Receptor 0- to 3.5-Foot Riverbank Soil

	System Location Code:	GSM-14	GST-01	GST-02	GST-03	GST-04	GST-05	GST-06
	Sample Name:	GSM-14SO-0-5-101015	GST-01SO-0-5-101001	GST-02SO-0-5-101004	GST-03SO-0-5-101005	GST-04SO-0-5-101006	GST-05SO-0-5-101005	GST-06SO-0-5-101007
	Sample Date:	10/15/2010	10/1/2010	10/4/2010	10/5/2010	10/6/2010	10/5/2010	10/7/2010
	Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
	Screening Level							
Semivolatile Organics (µg/kg)								
Carbazole	85000	60 U	60 U	65 U	**25000**	310 U	**330**	**84**
Dibenzofuran	10	60 U	60 U	65 U	**8600**	310 U	**240**	64 U
PCB Aroclors (µg/kg)								
Aroclor 1016	500000	31 U	32 U	31 U	32 U	32 U	32 U	31 U
Aroclor 1242	7500	31 U	32 U	31 U	32 U	32 U	32 U	31 U
Aroclor 1254	3500	31 U	32 U	31 U	**58**	32 U	32 U	31 U
Total PCB Aroclors	20000	31 UJT	32 UT	31 UT	**150 T**	32 UT	32 UT	31 UT
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	105	3.2 U	3.2 U	3.1 U	32 U	16 U	16 U	16 U
2,4'-DDE (o,p'-DDE)	105	3.2 U	3.2 U	3.1 U	32 U	16 U	16 U	16 U
2,4'-DDT (o,p'-DDT)	105	3.2 U	3.2 U	3.1 U	32 U	16 U	16 U	16 U
4,4'-DDD (p,p'-DDD)	105	3.2 U	3.2 U	3.1 U	32 U	16 U	16 U	16 U
4,4'-DDE (p,p'-DDE)	105	3.2 U	3.2 U	3.1 U	32 U	16 U	16 U	16 U
4,4'-DDT (p,p'-DDT)	105	3.2 U	3.2 U	3.1 U	50 U	16 U	16 U	16 U
alpha-Hexachlorocyclohexane (BHC)	99.4	1.6 U	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U
beta-Hexachlorocyclohexane (BHC)	3.98	1.6 U	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U
delta-Hexachlorocyclohexane (BHC)	9940	1.6 UJ	1.6 UJ	1.6 UJ	16 UJ	8 U	7.9 U	7.9 U
Endrin ketone	10.1	3.2 U	3.2 U	3.1 U	**84 J**	16 U	16 U	16 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	40000	1.6 U	1.6 U	1.6 U	16 U	8 U	7.9 U	7.9 U
Sum DDD	105	3.2 UT	3.2 UT	3.1 UT	32 UT	16 UT	16 UT	16 UT
Sum DDE	105	3.2 UT	3.2 UT	3.1 UT	32 UT	16 UT	16 UT	16 UT
Sum DDT	105	3.2 UT	3.2 UT	3.1 UT	50 UT	16 UT	16 UT	16 UT
Total DDx	105	3.2 UT	3.2 UT	3.1 UT	50 UT	16 UT	16 UT	16 UT

Table 3-1
Data Screen: Ecological Receptor 0- to 3.5-Foot Riverbank Soil

	System Location Code:	GST-09	GST-11	GST-13	MW-04-101	MW-04-57	SS-1	SS-10	SS-11
	Sample Name:	GST-09SO-0-5-101008	GST-11SO-0-5-101011	GST-13SO-0-5-101012	981014-M4-01	951030-M4-01	981112-SS-01	981112-SS-10	981112-SS-11
	Sample Date:	10/8/2010	10/11/2010	10/12/2010	10/14/1998	10/30/1995	11/12/1998	11/12/1998	11/12/1998
	Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	45.72 - 60.96 cm	0 - 6.1 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
	Screening Level								
Conventional Parameters (mg/kg)									
Cyanide, total	6.65	0.11 U	0.105 U	**2.31**	--	**0.8**	**0.68**	**41**	0.5 U
Metals (mg/kg)									
Zinc	120	**90**	**51**	**75**	--	--	--	--	--
Volatile Organics (µg/kg)									
1,1-Dichloroethene	18800000	1 U	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	12500000	1 U	0.9 U	1 U	--	--	--	--	--
1,2-Dichloroethene, trans-	12500000	1 U	0.9 U	1 U	--	--	--	--	--
Benzene	16500000	1 U	0.9 U	1 U	25 U	--	--	--	--
Ethylbenzene	5160	1 U	0.9 U	1 U	25 U	--	--	--	--
Naphthalene	29000	--	--	--	--	--	--	--	--
o-Xylene	1000	1 U	0.9 U	1 U	--	--	--	--	--
Toluene	200000	1 U	0.9 U	1 U	25 U	--	--	--	--
Trichloroethene (TCE)	200000	1 U	0.9 U	1 U	--	--	--	--	--
Vinyl chloride	100000	1 U	0.9 U	1 U	--	--	--	--	--
Total Xylene	100000	1 UT	0.9 UT	1 UT	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)									
2-Methylnaphthalene	29000	**120**	59 U	**70**	--	--	--	--	--
Acenaphthene	29000	61 U	59 U	63 U	**1100**	5000 U	50 U	**140**	50 U
Acenaphthylene	29000	**340**	59 U	**190**	**25100**	**4400**	**64**	**310**	50 U
Anthracene	29000	**300**	59 U	**160**	**7900**	**2600**	50 U	**360**	50 U
Benzo(a)anthracene	5500	**2000 J**	59 U	**820**	**67800**	**10000**	**210**	**2600**	**61**
Benzo(a)pyrene	5500	**3700 J**	**66**	**2200**	**183000**	**28000**	**440**	50 U	**130**
Benzo(b)fluoranthene	5500	--	--	--	**209000**	**26000**	**460**	**5800**	**140**
Benzo(g,h,i)perylene	5500	**4700 J**	**94**	**2100**	1000 U	**35000**	**500**	**3100**	**150**
Benzo(k)fluoranthene	5500	--	--	--	**49900**	**10000**	**140**	**1600**	50 U
Chrysene	5500	**2400 J**	59 U	**1300**	**82100**	**15000**	**230**	**3500**	**66**
Dibenzo(a,h)anthracene	5500	**890**	59 U	**390**	**21100**	**4000**	**68**	**520**	50 U
Fluoranthene	5500	**3400 J**	59 U	**1000**	**53200**	**12000**	**290**	**5000**	**75**
Fluorene	29000	**89**	59 U	63 U	**1500**	5000 U	50 U	**120**	50 U
Indeno(1,2,3-c,d)pyrene	5500	**3100**	59 U	**1400**	**110000**	**21000**	**350**	**2500**	**100**
Naphthalene	29000	**400**	59 U	**180**	**6100**	**1700**	50 U	**230**	50 U
Phenanthrene	29000	**1300 J**	59 U	**370**	**13600**	**3400**	**100**	**2700**	50 U
Pyrene	5500	**6400**	**63 J**	**1600**	**145000**	**22000**	**370**	**6800**	**99**
Total HPAH	5500	**30000 JT**	**450 JT**	**13000 T**	**920000 T**	**180000 T**	**3100 T**	**31000 T**	**870 T**
Total LPAH	29000	**2600 JT**	59 UT	**1000 T**	**55000 T**	**17000 T**	**260 T**	**3900 T**	50 UT

Table 3-1
Data Screen: Ecological Receptor 0- to 3.5-Foot Riverbank Soil

	System Location Code:	GST-09	GST-11	GST-13	MW-04-101	MW-04-57	SS-1	SS-10	SS-11
	Sample Name:	GST-09SO-0-5-101008	GST-11SO-0-5-101011	GST-13SO-0-5-101012	981014-M4-01	951030-M4-01	981112-SS-01	981112-SS-10	981112-SS-11
	Sample Date:	10/8/2010	10/11/2010	10/12/2010	10/14/1998	10/30/1995	11/12/1998	11/12/1998	11/12/1998
	Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	45.72 - 60.96 cm	0 - 6.1 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
	Screening Level								
Semivolatile Organics (µg/kg)									
Carbazole	85000	**87**	59 U	63 U	--	--	--	--	--
Dibenzofuran	10	61 U	59 U	63 U	--	--	--	--	--
PCB Aroclors (µg/kg)									
Aroclor 1016	500000	31 U	31 U	32 U	--	--	--	--	--
Aroclor 1242	7500	31 U	31 U	32 U	--	--	--	--	--
Aroclor 1254	3500	31 U	31 U	32 U	--	--	--	--	--
Total PCB Aroclors	20000	31 UT	31 UT	32 UT	--	--	--	--	--
Pesticides (µg/kg)									
2,4'-DDD (o,p'-DDD)	105	16 U	3 U	**36**	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	105	16 U	3 U	16 U	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	105	16 U	3 U	16 U	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	105	16 U	3 U	**100**	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	105	16 U	3 U	16 U	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	105	16 U	**7.8**	**16 J**	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	99.4	7.9 U	1.5 U	8 U	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	3.98	7.9 U	1.5 U	8 U	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	9940	7.9 U	1.5 U	8 U	--	--	--	--	--
Endrin ketone	10.1	16 U	3 U	16 U	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	40000	7.9 U	1.5 U	8 U	--	--	--	--	--
Sum DDD	105	16 UT	3 UT	**140 T**	--	--	--	--	--
Sum DDE	105	16 UT	3 UT	16 UT	--	--	--	--	--
Sum DDT	105	16 UT	**9.3 T**	**24 JT**	--	--	--	--	--
Total DDx	105	16 UT	**15 T**	**180 JT**	--	--	--	--	--

Table 3-1
Data Screen: Ecological Receptor 0- to 3.5-Foot Riverbank Soil

	System Location Code:	**SS-2**	**SS-3**	**SS-4**	**SS-5**	**SS-6**	**SS-7**	**SS-8**	**SS-9**
	Sample Name:	**981112-SS-02**	**981112-SS-03**	**981112-SS-04**	**981112-SS-05**	**981112-SS-06**	**981112-SS-07**	**981112-SS-08**	**981112-SS-09**
	Sample Date:	**11/12/1998**	**11/12/1998**	**11/12/1998**	**11/12/1998**	**11/12/1998**	**11/12/1998**	**11/12/1998**	**11/12/1998**
	Depth Interval:	**0 - 6.096 cm**	**0 - 6.096 cm**	**0 - 6.096 cm**	**0 - 6.096 cm**	**0 - 6.096 cm**	**0 - 6.096 cm**	**0 - 6.096 cm**	**0 - 6.096 cm**
	Screening Level								
Conventional Parameters (mg/kg)									
Cyanide, total	6.65	0.5 U	**0.58**	0.5 U	**1.3**	**0.58**	**13**	0.5 U	**56**
Metals (mg/kg)									
Zinc	120	--	--	--	--	--	--	--	--
Volatile Organics (µg/kg)									
1,1-Dichloroethene	18800000	--	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	12500000	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	12500000	--	--	--	--	--	--	--	--
Benzene	16500000	--	--	--	--	--	--	--	--
Ethylbenzene	5160	--	--	--	--	--	--	--	--
Naphthalene	29000	--	--	--	--	--	--	--	--
o-Xylene	1000	--	--	--	--	--	--	--	--
Toluene	200000	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	200000	--	--	--	--	--	--	--	--
Vinyl chloride	100000	--	--	--	--	--	--	--	--
Total Xylene	100000	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)									
2-Methylnaphthalene	29000	--	--	--	--	--	--	--	--
Acenaphthene	29000	50 U	**100**	**83**	**590**	50 U	**640**	50 U	**380**
Acenaphthylene	29000	**200**	**1900**	**500**	**11100**	**78**	**2800**	50 U	**190**
Anthracene	29000	**80**	50 U	**250**	**2000**	50 U	**1300**	50 U	**1300**
Benzo(a)anthracene	5500	**790**	**4700**	**1300**	**21900**	**130**	**12800**	50 U	**3700**
Benzo(a)pyrene	5500	**1500**	**14100**	**2900**	**69100**	**360**	**23700**	50 U	**3400**
Benzo(b)fluoranthene	5500	**1500**	**14200**	**3100**	**60900**	**370**	**25000**	50 U	**6600**
Benzo(g,h,i)perylene	5500	**1600**	**14400**	**3100**	**69900**	**550**	**22200**	50 U	**2500**
Benzo(k)fluoranthene	5500	**470**	**3500**	**880**	**17000**	**110**	**6900**	50 U	**1700**
Chrysene	5500	**930**	**6200**	**1700**	**29700**	**150**	**14300**	50 U	**4300**
Dibenzo(a,h)anthracene	5500	**220**	**1500**	**490**	**9400**	**62**	**1900**	50 U	**500**
Fluoranthene	5500	**1200**	**3400**	**1400**	**16100**	**150**	**15000**	50 U	**10000**
Fluorene	29000	50 U	**130**	**59**	**610**	50 U	**410**	50 U	**390**
Indeno(1,2,3-c,d)pyrene	5500	**1200**	**10300**	**2400**	**47300**	**350**	**23700**	50 U	**2200**
Naphthalene	29000	**88**	**900**	**230**	**5000**	50 U	**1800**	50 U	**550**
Phenanthrene	29000	**220**	**970**	**610**	**4700**	**58**	**6900**	50 U	**7000**
Pyrene	5500	**1600**	**8500**	**2200**	**33200**	**200**	**24200**	50 U	**10800**
Total HPAH	5500	**11000 T**	**81000 T**	**19000 T**	**370000 T**	**2400 T**	**170000 T**	50 UT	**46000 T**
Total LPAH	29000	**640 T**	**4000 T**	**1700 T**	**24000 T**	**240 T**	**14000 T**	50 UT	**9800 T**

Table 3-1
Data Screen: Ecological Receptor 0- to 3.5-Foot Riverbank Soil

	System Location Code:	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9
	Sample Name:	981112-SS-02	981112-SS-03	981112-SS-04	981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-08	981112-SS-09
	Sample Date:	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998
	Depth Interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
	Screening Level								
Semivolatile Organics (µg/kg)									
Carbazole	85000	--	--	--	--	--	--	--	--
Dibenzofuran	10	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)									
Aroclor 1016	500000	--	--	--	--	--	--	--	--
Aroclor 1242	7500	--	--	--	--	--	--	--	--
Aroclor 1254	3500	--	--	--	--	--	--	--	--
Total PCB Aroclors	20000	--	--	--	--	--	--	--	--
Pesticides (µg/kg)									
2,4'-DDD (o,p'-DDD)	105	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	105	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	105	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	105	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	105	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	105	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	99.4	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	3.98	--	--	--	--	--	--	--	--
delta-Hexachlorocyclohexane (BHC)	9940	--	--	--	--	--	--	--	--
Endrin ketone	10.1	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	40000	--	--	--	--	--	--	--	--
Sum DDD	105	--	--	--	--	--	--	--	--
Sum DDE	105	--	--	--	--	--	--	--	--
Sum DDT	105	--	--	--	--	--	--	--	--
Total DDx	105	--	--	--	--	--	--	--	--

Table 3-1
Data Screen: Ecological Receptor 0- to 3.5-Foot Riverbank Soil

Notes:

Detected concentration is greater than riverbank ecological screening level

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R = Rejected

T = Result is the value of a total or calculation

-- = Results not reported or not applicable

N = Normal Field Sample

a= the result is below the Oregon Department of Environmental Quality (DEQ) alternative screening level shown in Table 2-1. Refer to Table 2-1 for additional detail.

The dataset evaluated for riverbank ecological receptor exceedances consists of soil samples collected from the 0- to 5- foot depth interval for locations sampled during the Gasco Sediments Site Data Gaps Investigation (GST-XX and GSM-XX locations) and soil samples collected from the 0- to 3.5- foot depth interval for all other locations shown. Refer to Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation. Appendix G describes the for soil data compared.

Riverbank screening levels are presented on Table 2-1 of Appendix H.

Acronyms:

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)

cm = centimeters

DDD = dichlorodiphenyldichloroethane

DDE = dichlorodiphenyldichloroethylene

DDT = dichlorodiphenyltrichloroethane

HPAH = high molecular weight polycyclic aromatic hydrocarbon

LPAH = low-molecular-weight PAH

PCB = polychlorinated biphenyl

Table 3-2
Data Screen: Human Health 0- to 3.5-Foot Riverbank Soil

System Location Code:		B-29	B-31	B-53	B-54	B-56	GSM-07	GSM-08	GSM-14	GST-01
Sample Name:		950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013	2708-040601-001	SM-07SO-0-5-1009	GSM-08SO-0-5-100928	GSM-14SO-0-5-101015	GST-01SO-0-5-101001
Sample Date:		9/22/1995	9/25/1995	6/7/2004	6/8/2004	6/1/2004	9/27/2010	9/28/2010	10/15/2010	10/1/2010
Depth Interval:		0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm	76.2 - 106.68 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Screening Level:										
Conventional Parameters (mg/kg)										
Cyanide, total	190	--	**0.59**	--	--	0.435 U	**0.274**	0.124 U	**0.286**	**0.341**
Metals (mg/kg)										
Zinc	310000	--	--	--	--	--	**158 J**	**85 J**	**77**	**96 J**
Volatile Organics (µg/kg)										
1,1-Dichloroethene	12000000	--	--	--	--	--	1.2 U	1.5 U	1 U	1.1 U
1,2-Dichloroethene, cis-	620000	--	--	--	--	--	1.2 U	1.5 U	1 U	1.1 U
1,2-Dichloroethene, trans-	4500000	--	--	--	--	--	1.2 U	1.5 U	1 U	1.1 U
Benzene	34000	--	300 U	50 U	50 U	50 U	1.2 U	1.5 U	1 U	1.1 U
Ethylbenzene	140000	--	300 U	50 U	50 U	50 U	1.2 U	1.5 U	1 U	1.1 U
o-Xylene	3000000	--	--	--	--	--	1.2 U	1.5 U	1 U	1.1 U
Toluene	24000000	--	300 U	50 U	50 U	50 U	1.2 U	1.5 U	1 U	1.1 U
Trichloroethene (TCE)	46000	--	--	--	--	--	1.2 U	1.5 U	1 U	1.1 U
Vinyl chloride	3900	--	--	--	--	--	1.2 U	1.5 U	1 U	1.1 U
Total Xylene	19000000	--	--	--	--	--	1.2 UT	1.5 UT	1 UT	1.1 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)										
2-Methylnaphthalene	4100000	--	--	--	--	--	62 U	**140**	60 U	60 U
Acenaphthene	19000000	**400**	**110**	670 U	168 U	13.4 U	62 U	**100**	60 U	60 U
Anthracene	93000000	**3300**	**590**	**996**	168 U	13.4 U	62 U	**82**	60 U	60 U
Benzo(a)anthracene	2700	**10500**	**2100**	**4210**	**240**	13.4 U	**190**	**89**	**100**	60 U
Benzo(a)pyrene	270	**32500**	**4800**	**6820**	**323**	13.4 U	**350**	**100**	**270**	60 U
Benzo(b)fluoranthene	2700	**31700**	**5400**	**4970**	**303**	13.4 U	--	--	--	--
Benzo(k)fluoranthene	27000	**11600**	**1800**	**4210**	**211**	13.4 U	--	--	--	--
Chrysene	250000	**19300**	**3000**	**5320**	**330**	13.4 U	**300**	**110**	**150**	60 U
Dibenzo(a,h)anthracene	270	**4800**	**980**	**1040**	168 U	13.4 U	62 U	63 U	60 U	60 U
Fluoranthene	8900000	**9400**	**1600**	**6430**	**370**	13.4 U	**290**	**170**	**130**	60 U
Fluorene	12000000	**470**	**58**	670 U	168 U	13.4 U	62 U	**67**	60 U	60 U
Indeno(1,2,3-c,d)pyrene	2700	**28400**	**4900**	**4010**	**233**	13.4 U	**290**	63 U	**140**	60 U
Naphthalene	23000	**2400**	**300**	670 U	168 U	13.4 U	**160**	**220**	60 U	60 U
Pyrene	6700000	**22800**	**3700**	**9700**	**454**	13.4 U	**490**	**260**	**190**	60 U
Semivolatile Organics (µg/kg)										
Carbazole	1000000	--	--	--	--	--	62 U	63 U	60 U	60 U
Dibenzofuran	1000000	--	--	--	--	--	62 U	63 U	60 U	60 U
PCB Aroclors (µg/kg)										
Aroclor 1016	21000	--	--	--	--	--	33 U	30 U	31 U	32 U
Aroclor 1221	540	--	--	--	--	--	33 U	30 U	31 UJ	32 U
Aroclor 1232	540	--	--	--	--	--	33 U	30 U	31 U	32 U
Aroclor 1242	740	--	--	--	--	--	33 U	30 U	31 U	32 U
Aroclor 1248	740	--	--	--	--	--	33 U	30 U	31 U	32 U
Aroclor 1254	740	--	--	--	--	--	33 U	30 U	31 U	32 U
Aroclor 1260	740	--	--	--	--	--	33 U	30 U	31 U	32 U
Total PCB Aroclors	560	--	--	--	--	--	33 UT	30 UT	31 UJT	32 UT

Table 3-2
Data Screen: Human Health 0- to 3.5-Foot Riverbank Soil

System Location Code:		B-29	B-31	B-53	B-54	B-56	GSM-07	GSM-08	GSM-14	GST-01
Sample Name:		950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013	2708-040601-001	SM-07SO-0-5-1009	GSM-08SO-0-5-100928	GSM-14SO-0-5-101015	GST-01SO-0-5-101001
Sample Date:		9/22/1995	9/25/1995	6/7/2004	6/8/2004	6/1/2004	9/27/2010	9/28/2010	10/15/2010	10/1/2010
Depth Interval:		0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm	76.2 - 106.68 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Screening Level:										
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	7200	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U	3.2 U
2,4'-DDE (o,p'-DDE)	5100	--	--	--	--	--	3.3 U	3.1 U	3.2 U	3.2 U
2,4'-DDT (o,p'-DDT)	7000	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U	3.2 U
4,4'-DDD (p,p'-DDD)	11000	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U	3.2 U
4,4'-DDE (p,p'-DDE)	7600	--	--	--	--	--	3.3 U	3.1 U	3.2 U	3.2 U
4,4'-DDT (p,p'-DDT)	7700	--	--	--	--	--	**5.6 J**	3.1 UJ	3.2 U	3.2 U
alpha-Hexachlorocyclohexane (BHC)	310	--	--	--	--	--	1.6 U	1.6 U	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	960	--	--	--	--	--	1.6 U	1.6 U	1.6 U	1.6 U
Endrin ketone	180000	--	--	--	--	--	3.3 UJ	3.1 UJ	3.2 U	3.2 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1700	--	--	--	--	--	1.6 UJ	1.6 U	1.6 U	1.6 U
Sum DDD	7200	--	--	--	--	--	3.3 UJT	3.1 UJT	3.2 UT	3.2 UT
Sum DDE	5100	--	--	--	--	--	3.3 UT	3.1 UT	3.2 UT	3.2 UT
Sum DDT	7000	--	--	--	--	--	**7.3 JT**	3.1 UJT	3.2 UT	3.2 UT
Total DDx	7000	--	--	--	--	--	**14 JT**	3.1 UJT	3.2 UT	3.2 UT
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	4600000000	--	--	--	--	--	**42**	6.3 U	6 U	6 U
Residual Range Hydrocarbons	11000000000	--	--	--	--	--	--	--	--	--

Table 3-2
Data Screen: Human Health 0- to 3.5-Foot Riverbank Soil

System Location Code:		GST-02	GST-03	GST-04	GST-05	GST-06	GST-09	GST-11
Sample Name:		GST-02SO-0-5-101004	GST-03SO-0-5-101005	GST-04SO-0-5-101006	GST-05SO-0-5-101005	GST-06SO-0-5-101007	GST-09SO-0-5-101008	GST-11SO-0-5-101011
Sample Date:		10/4/2010	10/5/2010	10/6/2010	10/5/2010	10/7/2010	10/8/2010	10/11/2010
Depth Interval:		0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Screening Level:								
Conventional Parameters (mg/kg)								
Cyanide, total	190	**0.222**	**3.57**	**5.76 J**	**1.37 J**	**1.46 J**	0.11 U	0.105 U
Metals (mg/kg)								
Zinc	310000	**78 J**	**103 J**	**102**	**108**	**232**	**90**	**51**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	12000000	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	--
1,2-Dichloroethene, cis-	620000	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
1,2-Dichloroethene, trans-	4500000	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
Benzene	34000	1.2 U	**44**	**2.2**	1.1 U	1.1 U	1 U	0.9 U
Ethylbenzene	140000	1.2 U	**34**	1 U	1.1 U	1.1 U	1 U	0.9 U
o-Xylene	3000000	1.2 U	**40**	1 U	1.1 U	1.1 U	1 U	0.9 U
Toluene	24000000	1.2 U	**30**	1 U	1.1 U	1.1 U	1 U	0.9 U
Trichloroethene (TCE)	46000	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
Vinyl chloride	3900	1.2 U	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
Total Xylene	19000000	1.2 UT	**95 T**	1 UT	1.1 UT	1.1 UT	1 UT	0.9 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	4100000	65 U	**65000**	**480**	**1900**	**400**	**120**	59 U
Acenaphthene	19000000	65 U	**33000**	310 U	**1300**	**110**	61 U	59 U
Anthracene	93000000	65 U	**120000**	**910**	**4300**	**450**	**300**	59 U
Benzo(a)anthracene	2700	**93**	**310000**	**3600**	**15000**	**2800**	**2000 J**	59 U
Benzo(a)pyrene	270	**150**	**410000**	**10000**	**43000**	**5500**	**3700 J**	**66**
Benzo(b)fluoranthene	2700	--	--	--	--	--	--	--
Benzo(k)fluoranthene	27000	--	--	--	--	--	--	--
Chrysene	250000	**120**	**400000**	**6000**	**24000**	**4800**	**2400 J**	59 U
Dibenzo(a,h)anthracene	270	65 U	**100000**	**2300**	**9200**	**1300**	**890**	59 U
Fluoranthene	8900000	**140**	**610000**	**3700**	**19000**	**2800**	**3400 J**	59 U
Fluorene	12000000	65 U	**79000**	310 U	**1400**	**96**	**89**	59 U
Indeno(1,2,3-c,d)pyrene	2700	**91**	**230000**	**8300**	**34000**	**4000**	**3100**	59 U
Naphthalene	23000	65 U	**220000**	**1800**	**6700**	**1600**	**400**	59 U
Pyrene	6700000	**190**	**1000000**	**5300**	**42000**	**7200**	**6400**	**63 J**
Semivolatile Organics (µg/kg)								
Carbazole	1000000	65 U	**25000**	310 U	**330**	**84**	**87**	59 U
Dibenzofuran	1000000	65 U	**8600**	310 U	**240**	64 U	61 U	59 U
PCB Aroclors (µg/kg)								
Aroclor 1016	21000	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1221	540	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1232	540	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1242	740	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1248	740	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1254	740	31 U	**58**	32 U	32 U	31 U	31 U	31 U
Aroclor 1260	740	31 U	32 U	32 U	32 U	31 U	31 U	31 U
Total PCB Aroclors	560	31 UT	**150 T**	32 UT	32 UT	31 UT	31 UT	31 UT

Table 3-2
Data Screen: Human Health 0- to 3.5-Foot Riverbank Soil

System Location Code:		GST-02	GST-03	GST-04	GST-05	GST-06	GST-09	GST-11
Sample Name:		GST-02SO-0-5-101004	GST-03SO-0-5-101005	GST-04SO-0-5-101006	GST-05SO-0-5-101005	GST-06SO-0-5-101007	GST-09SO-0-5-101008	GST-11SO-0-5-101011
Sample Date:		10/4/2010	10/5/2010	10/6/2010	10/5/2010	10/7/2010	10/8/2010	10/11/2010
Depth Interval:		0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
Screening Level:								
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	7200	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
2,4'-DDE (o,p'-DDE)	5100	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
2,4'-DDT (o,p'-DDT)	7000	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDD (p,p'-DDD)	11000	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDE (p,p'-DDE)	7600	3.1 U	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDT (p,p'-DDT)	7700	3.1 U	50 U	16 U	16 U	16 U	16 U	**7.8**
alpha-Hexachlorocyclohexane (BHC)	310	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
beta-Hexachlorocyclohexane (BHC)	960	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
Endrin ketone	180000	3.1 U	**84 J**	16 U	16 U	16 U	16 U	3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1700	1.6 U	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
Sum DDD	7200	3.1 UT	32 UT	16 UT	16 UT	16 UT	16 UT	3 UT
Sum DDE	5100	3.1 UT	32 UT	16 UT	16 UT	16 UT	16 UT	3 UT
Sum DDT	7000	3.1 UT	50 UT	16 UT	16 UT	16 UT	16 UT	**9.3 T**
Total DDx	7000	3.1 UT	50 UT	16 UT	16 UT	16 UT	16 UT	**15 T**
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	4600000000	5.9 U	**6000**	**270**	**570**	**57**	27 U	5.3 U
Residual Range Hydrocarbons	11000000000	--	--	--	--	--	--	--

Table 3-2
Data Screen: Human Health 0- to 3.5-Foot Riverbank Soil

	System Location Code:	GST-13	MW-04-101	MW-04-57	SS-1	SS-10	SS-11	SS-2	SS-3	SS-4
	Sample Name:	GST-13SO-0-5-101012	981014-M4-01	951030-M4-01	981112-SS-01	981112-SS-10	981112-SS-11	981112-SS-02	981112-SS-03	981112-SS-04
	Sample Date:	10/12/2010	10/14/1998	10/30/1995	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998
	Depth Interval:	0 - 152.4 cm	45.72 - 60.96 cm	0 - 6.1 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
	Screening Level:									
Conventional Parameters (mg/kg)										
Cyanide, total	190	**2.31**	--	**0.8**	**0.68**	**41**	0.5 U	0.5 U	**0.58**	0.5 U
Metals (mg/kg)										
Zinc	310000	**75**	--	--	--	--	--	--	--	--
Volatile Organics (µg/kg)										
1,1-Dichloroethene	12000000	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	620000	1 U	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	4500000	1 U	--	--	--	--	--	--	--	--
Benzene	34000	1 U	25 U	--	--	--	--	--	--	--
Ethylbenzene	140000	1 U	25 U	--	--	--	--	--	--	--
o-Xylene	3000000	1 U	--	--	--	--	--	--	--	--
Toluene	24000000	1 U	25 U	--	--	--	--	--	--	--
Trichloroethene (TCE)	46000	1 U	--	--	--	--	--	--	--	--
Vinyl chloride	3900	1 U	--	--	--	--	--	--	--	--
Total Xylene	19000000	1 UT	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)										
2-Methylnaphthalene	4100000	**70**	--	--	--	--	--	--	--	--
Acenaphthene	19000000	63 U	**1100**	5000 U	50 U	**140**	50 U	50 U	**100**	**83**
Anthracene	93000000	**160**	**7900**	**2600**	50 U	**360**	50 U	**80**	50 U	**250**
Benzo(a)anthracene	2700	**820**	**67800**	**10000**	**210**	**2600**	**61**	**790**	**4700**	**1300**
Benzo(a)pyrene	270	**2200**	**183000**	**28000**	**440**	50 U	**130**	**1500**	**14100**	**2900**
Benzo(b)fluoranthene	2700	--	**209000**	**26000**	**460**	**5800**	**140**	**1500**	**14200**	**3100**
Benzo(k)fluoranthene	27000	--	**49900**	**10000**	**140**	**1600**	50 U	**470**	**3500**	**880**
Chrysene	250000	**1300**	**82100**	**15000**	**230**	**3500**	**66**	**930**	**6200**	**1700**
Dibenzo(a,h)anthracene	270	**390**	**21100**	**4000**	**68**	**520**	50 U	**220**	**1500**	**490**
Fluoranthene	8900000	**1000**	**53200**	**12000**	**290**	**5000**	**75**	**1200**	**3400**	**1400**
Fluorene	12000000	63 U	**1500**	5000 U	50 U	**120**	50 U	50 U	**130**	**59**
Indeno(1,2,3-c,d)pyrene	2700	**1400**	**110000**	**21000**	**350**	**2500**	**100**	**1200**	**10300**	**2400**
Naphthalene	23000	**180**	**6100**	**1700**	50 U	**230**	50 U	**88**	**900**	**230**
Pyrene	6700000	**1600**	**145000**	**22000**	**370**	**6800**	**99**	**1600**	**8500**	**2200**
Semivolatile Organics (µg/kg)										
Carbazole	1000000	63 U	--	--	--	--	--	--	--	--
Dibenzofuran	1000000	63 U	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)										
Aroclor 1016	21000	32 U	--	--	--	--	--	--	--	--
Aroclor 1221	540	32 U	--	--	--	--	--	--	--	--
Aroclor 1232	540	32 U	--	--	--	--	--	--	--	--
Aroclor 1242	740	32 U	--	--	--	--	--	--	--	--
Aroclor 1248	740	32 U	--	--	--	--	--	--	--	--
Aroclor 1254	740	32 U	--	--	--	--	--	--	--	--
Aroclor 1260	740	32 U	--	--	--	--	--	--	--	--
Total PCB Aroclors	560	32 UT	--	--	--	--	--	--	--	--

Table 3-2
Data Screen: Human Health 0- to 3.5-Foot Riverbank Soil

System Location Code:		GST-13	MW-04-101	MW-04-57	SS-1	SS-10	SS-11	SS-2	SS-3	SS-4
Sample Name:		GST-13SO-0-5-101012	981014-M4-01	951030-M4-01	981112-SS-01	981112-SS-10	981112-SS-11	981112-SS-02	981112-SS-03	981112-SS-04
Sample Date:		10/12/2010	10/14/1998	10/30/1995	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998
Depth Interval:		0 - 152.4 cm	45.72 - 60.96 cm	0 - 6.1 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
Screening Level:										
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	7200	**36**	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	5100	16 U	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	7000	16 U	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	11000	**100**	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	7600	16 U	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	7700	**16 J**	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	310	8 U	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	960	8 U	--	--	--	--	--	--	--	--
Endrin ketone	180000	16 U	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1700	8 U	--	--	--	--	--	--	--	--
Sum DDD	7200	**140 T**	--	--	--	--	--	--	--	--
Sum DDE	5100	16 UT	--	--	--	--	--	--	--	--
Sum DDT	7000	**24 JT**	--	--	--	--	--	--	--	--
Total DDx	7000	**180 JT**	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	4600000000	**42**	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	11000000000	--	--	--	--	--	--	--	--	--

Table 3-2
Data Screen: Human Health 0- to 3.5-Foot Riverbank Soil

System Location Code:		SS-5	SS-6	SS-7	SS-8	SS-9
Sample Name:		981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-08	981112-SS-09
Sample Date:		11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998
Depth Interval:		0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
Screening Level:						
Conventional Parameters (mg/kg)						
Cyanide, total	190	**1.3**	**0.58**	**13**	0.5 U	**56**
Metals (mg/kg)						
Zinc	310000	--	--	--	--	--
Volatile Organics (µg/kg)						
1,1-Dichloroethene	12000000	--	--	--	--	--
1,2-Dichloroethene, cis-	620000	--	--	--	--	--
1,2-Dichloroethene, trans-	4500000	--	--	--	--	--
Benzene	34000	--	--	--	--	--
Ethylbenzene	140000	--	--	--	--	--
o-Xylene	3000000	--	--	--	--	--
Toluene	24000000	--	--	--	--	--
Trichloroethene (TCE)	46000	--	--	--	--	--
Vinyl chloride	3900	--	--	--	--	--
Total Xylene	19000000	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	4100000	--	--	--	--	--
Acenaphthene	19000000	**590**	50 U	**640**	50 U	**380**
Anthracene	93000000	**2000**	50 U	**1300**	50 U	**1300**
Benzo(a)anthracene	2700	**21900**	**130**	**12800**	50 U	**3700**
Benzo(a)pyrene	270	**69100**	**360**	**23700**	50 U	**3400**
Benzo(b)fluoranthene	2700	**60900**	**370**	**25000**	50 U	**6600**
Benzo(k)fluoranthene	27000	**17000**	**110**	**6900**	50 U	**1700**
Chrysene	250000	**29700**	**150**	**14300**	50 U	**4300**
Dibenzo(a,h)anthracene	270	**9400**	**62**	**1900**	50 U	**500**
Fluoranthene	8900000	**16100**	**150**	**15000**	50 U	**10000**
Fluorene	12000000	**610**	50 U	**410**	50 U	**390**
Indeno(1,2,3-c,d)pyrene	2700	**47300**	**350**	**23700**	50 U	**2200**
Naphthalene	23000	**5000**	50 U	**1800**	50 U	**550**
Pyrene	6700000	**33200**	**200**	**24200**	50 U	**10800**
Semivolatile Organics (µg/kg)						
Carbazole	1000000	--	--	--	--	--
Dibenzofuran	1000000	--	--	--	--	--
PCB Aroclors (µg/kg)						
Aroclor 1016	21000	--	--	--	--	--
Aroclor 1221	540	--	--	--	--	--
Aroclor 1232	540	--	--	--	--	--
Aroclor 1242	740	--	--	--	--	--
Aroclor 1248	740	--	--	--	--	--
Aroclor 1254	740	--	--	--	--	--
Aroclor 1260	740	--	--	--	--	--
Total PCB Aroclors	560	--	--	--	--	--

Table 3-2
Data Screen: Human Health 0- to 3.5-Foot Riverbank Soil

System Location Code:		SS-5	SS-6	SS-7	SS-8	SS-9
Sample Name:		981112-SS-05	981112-SS-06	981112-SS-07	981112-SS-08	981112-SS-09
Sample Date:		11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998
Depth Interval:		0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
Screening Level:						
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	7200	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	5100	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	7000	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	11000	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	7600	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	7700	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	310	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	960	--	--	--	--	--
Endrin ketone	180000	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	1700	--	--	--	--	--
Sum DDD	7200	--	--	--	--	--
Sum DDE	5100	--	--	--	--	--
Sum DDT	7000	--	--	--	--	--
Total DDx	7000	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	4600000000	--	--	--	--	--
Residual Range Hydrocarbons	11000000000	--	--	--	--	--

Table 3-2
Data Screen: Human Health 0- to 3.5-Foot Riverbank Soil

Notes:

Detected concentration is greater than riverbank human health screening level

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R = Rejected

T = Result is the value of a total or calculation.

-- = Results not reported or not applicable

N = Normal Field Sample

The dataset evaluated for 0- to 3.5- foot potential human health riverbank exceedances consists of soil samples collected from the 0- to 5- foot depth interval for locations sampled during the Gasco Sediments Site Data Gaps Investigation (GST-XX and GSM-XX locations) and soil samples collected from the 0- to 3.5- foot depth interval for all other locations shown. Refer to Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation. Appendix G describes the for soil data screened.

Riverbank screening levels are presented on Table 2-1 of Appendix H.

Acronyms:

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)

cm = centimeters

DDD = dichlorodiphenyldichloroethane

DDE = dichlorodiphenyldichloroethylene

DDT = dichlorodiphenyltrichloroethane

PCB = polychlorinated biphenyl

Table 3-3
Human Health 0- to 12-Foot Riverbank Soil

	System Location Code:	B-08	B-29	B-31	B-53	B-54	B-54	B-56	B-56
	Sample Name:	950918-B8-04	950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013	2708-040608-014	2708-040601-001	2708-040601-003
	Sample Date:	9/18/1995	9/22/1995	9/25/1995	6/7/2004	6/8/2004	6/8/2004	6/1/2004	6/1/2004
	Depth Interval:	289.56 - 304.8 cm	0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm	228.6 - 243.84 cm	76.2 - 106.68 cm	335.28 - 365.76 cm
	Analysis Matrix:	3.5-12 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	3.5-12 soil	0-3.5 soil	3.5-12 soil
	Screening Level:								
Conventional Parameters (mg/kg)									
Cyanide, total	190	--	--	**0.59**	--	--	--	0.435 U	0.379 U
Metals (mg/kg)									
Zinc	310000	--	--	--	--	--	--	--	--
Volatile Organics (µg/kg)									
1,1-Dichloroethene	680000	--	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	620000	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	200000	--	--	--	--	--	--	--	--
Benzene	1200	--	--	300 U	50 U	50 U	50 U	50 U	50 U
Ethylbenzene	12000	--	--	300 U	50 U	50 U	50 U	50 U	50 U
Naphthalene	99000	--	--	--	--	--	--	--	--
o-Xylene	3000000	--	--	--	--	--	--	--	--
Toluene	24000000	--	--	300 U	50 U	50 U	50 U	50 U	50 U
Trichloroethene (TCE)	2700	--	--	--	--	--	--	--	--
Vinyl chloride	2200	--	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	19000000	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)									
2-Methylnaphthalene	4100000	--	--	--	--	--	--	--	--
Acenaphthene	19000000	**480**	**400**	**110**	670 U	168 U	3350 U	13.4 U	13.4 U
Anthracene	93000000	**2800**	**3300**	**590**	**996**	168 U	3350 U	13.4 U	13.4 U
Benzo(a)anthracene	21000	**18000**	**10500**	**2100**	**4210**	**240**	**15700**	13.4 U	**23.1**
Benzo(a)pyrene	2100	**47000**	**32500**	**4800**	**6820**	**323**	**22100**	13.4 U	**35.1**
Benzo(b)fluoranthene	21000	**40000**	**31700**	**5400**	**4970**	**303**	**20900**	13.4 U	**31.4**
Benzo(k)fluoranthene	210000	**12000**	**11600**	**1800**	**4210**	**211**	**11800**	13.4 U	**24.7**
Chrysene	2100000	**24000**	**19300**	**3000**	**5320**	**330**	**20400**	13.4 U	**30.7**
Dibenzo(a,h)anthracene	2100	**6000**	**4800**	**980**	**1040**	168 U	3350 U	13.4 U	13.4 U
Fluoranthene	8900000	**26000**	**9400**	**1600**	**6430**	**370**	**56800**	13.4 U	**41.7**
Fluorene	12000000	**710**	**470**	**58**	670 U	168 U	3350 U	13.4 U	13.4 U
Indeno(1,2,3-c,d)pyrene	21000	**38000**	**28400**	**4900**	**4010**	**233**	**16400**	13.4 U	**25.5**
Naphthalene	99000	**2300**	**2400**	**300**	670 U	168 U	3350 U	13.4 U	13.4 U
Pyrene	6700000	**52000**	**22800**	**3700**	**9700**	**454**	**62100**	13.4 U	**69**
Semivolatile Organics (µg/kg)									
Carbazole	1000000	--	--	--	--	--	--	--	--
Dibenzofuran	1000000	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)									
Aroclor 1016	21000	--	--	--	--	--	--	--	--
Aroclor 1221	540	--	--	--	--	--	--	--	--
Aroclor 1232	540	--	--	--	--	--	--	--	--
Aroclor 1242	740	--	--	--	--	--	--	--	--
Aroclor 1248	740	--	--	--	--	--	--	--	--
Aroclor 1254	740	--	--	--	--	--	--	--	--
Aroclor 1260	740	--	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	4400	--	--	--	--	--	--	--	--

Table 3-3
Human Health 0- to 12-Foot Riverbank Soil

	System Location Code:	B-08	B-29	B-31	B-53	B-54	B-54	B-56	B-56
	Sample Name:	950918-B8-04	950922-B29-01	950925-B31-01	2708-040607-011	2708-040608-013	2708-040608-014	2708-040601-001	2708-040601-003
	Sample Date:	9/18/1995	9/22/1995	9/25/1995	6/7/2004	6/8/2004	6/8/2004	6/1/2004	6/1/2004
	Depth Interval:	289.56 - 304.8 cm	0 - 6.096 cm	0 - 6.1 cm	76.2 - 91.44 cm	60.96 - 76.2 cm	228.6 - 243.84 cm	76.2 - 106.68 cm	335.28 - 365.76 cm
	Analysis Matrix:	3.5-12 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	3.5-12 soil	0-3.5 soil	3.5-12 soil
	Screening Level:								
Pesticides (µg/kg)									
2,4'-DDD (o,p'-DDD)	7200	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	5100	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	7000	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	83000	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	58000	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	58000	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	2600	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	960	--	--	--	--	--	--	--	--
Endrin ketone	180000	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	15000	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	7200	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	5100	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	7000	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	7000	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)									
Diesel Range Hydrocarbons	4600000000	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	11000000000	--	--	--	--	--	--	--	--

Table 3-3
Human Health 0- to 12-Foot Riverbank Soil

	System Location Code:	GP-04	GP-07	GSM-07	GSM-08	GSM-14	GST-01	GST-02
	Sample Name:	GP4-S-7.5	GP7-S-9.0	GSM-07SO-0-5-100927	GSM-08SO-0-5-100928	GSM-14SO-0-5-101015	GST-01SO-0-5-101001	GST-02SO-0-5-101004
	Sample Date:	9/26/2002	10/2/2002	9/27/2010	9/28/2010	10/15/2010	10/1/2010	10/4/2010
	Depth Interval:	167.64 - 228.6 cm	213.36 - 274.32 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
	Analysis Matrix:	3.5-12 soil	3.5-12 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
	Screening Level:							
Conventional Parameters (mg/kg)								
Cyanide, total	190	--	--	**0.274**	0.124 U	**0.286**	**0.341**	**0.222**
Metals (mg/kg)								
Zinc	310000	--	--	**158 J**	**85 J**	**77**	**96 J**	**78 J**
Volatile Organics (µg/kg)								
1,1-Dichloroethene	680000	--	--	1.2 U	1.5 U	1 U	1.1 U	1.2 U
1,2-Dichloroethene, cis-	620000	15000 U	--	1.2 U	1.5 U	1 U	1.1 U	1.2 U
1,2-Dichloroethene, trans-	200000	--	--	1.2 U	1.5 U	1 U	1.1 U	1.2 U
Benzene	1200	15000 U	--	1.2 U	1.5 U	1 U	1.1 U	1.2 U
Ethylbenzene	12000	15000 U	--	1.2 U	1.5 U	1 U	1.1 U	1.2 U
Naphthalene	99000	**1500000 J**	--	--	--	--	--	--
o-Xylene	3000000	--	--	1.2 U	1.5 U	1 U	1.1 U	1.2 U
Toluene	24000000	15000 U	--	1.2 U	1.5 U	1 U	1.1 U	1.2 U
Trichloroethene (TCE)	2700	1200 U	--	1.2 U	1.5 U	1 U	1.1 U	1.2 U
Vinyl chloride	2200	--	--	1.2 U	1.5 U	1 U	1.1 U	1.2 U
LWG RA Total Xylene (Calculated U = 1/2)	19000000	--	--	1.2 UT	1.5 UT	1 UT	1.1 UT	1.2 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)								
2-Methylnaphthalene	4100000	**82000**	**120**	62 U	**140**	60 U	60 U	65 U
Acenaphthene	19000000	**120000**	**18**	62 U	**100**	60 U	60 U	65 U
Anthracene	93000000	**110000**	**380**	62 U	**82**	60 U	60 U	65 U
Benzo(a)anthracene	21000	**72000**	**1400**	**190**	**89**	**100**	60 U	**93**
Benzo(a)pyrene	2100	**78000**	**2100**	**350**	**100**	**270**	60 U	**150**
Benzo(b)fluoranthene	21000	**45000**	**1300**	--	--	--	--	--
Benzo(k)fluoranthene	210000	**45000**	**1200**	--	--	--	--	--
Chrysene	2100000	**79000**	**1700**	**300**	**110**	**150**	60 U	**120**
Dibenzo(a,h)anthracene	2100	**5700**	**270**	62 U	63 U	60 U	60 U	65 U
Fluoranthene	8900000	**250000**	**2500**	**290**	**170**	**130**	60 U	**140**
Fluorene	12000000	**77000**	**3.2**	62 U	**67**	60 U	60 U	65 U
Indeno(1,2,3-c,d)pyrene	21000	**48000**	**2100**	**290**	63 U	**140**	60 U	**91**
Naphthalene	99000	--	**380**	**160**	**220**	60 U	60 U	65 U
Pyrene	6700000	**290000**	**1800**	**490**	**260**	**190**	60 U	**190**
Semivolatile Organics (µg/kg)								
Carbazole	1000000	--	--	62 U	63 U	60 U	60 U	65 U
Dibenzofuran	1000000	**9200**	**14**	62 U	63 U	60 U	60 U	65 U
PCB Aroclors (µg/kg)								
Aroclor 1016	21000	--	--	33 U	30 U	31 U	32 U	31 U
Aroclor 1221	540	--	--	33 U	30 U	31 UJ	32 U	31 U
Aroclor 1232	540	--	--	33 U	30 U	31 U	32 U	31 U
Aroclor 1242	740	--	--	33 U	30 U	31 U	32 U	31 U
Aroclor 1248	740	--	--	33 U	30 U	31 U	32 U	31 U
Aroclor 1254	740	--	--	33 U	30 U	31 U	32 U	31 U
Aroclor 1260	740	--	--	33 U	30 U	31 U	32 U	31 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	4400	--	--	33 UT	30 UT	31 UJT	32 UT	31 UT

Table 3-3
Human Health 0- to 12-Foot Riverbank Soil

	System Location Code:	**GP-04**	**GP-07**	**GSM-07**	**GSM-08**	**GSM-14**	**GST-01**	**GST-02**
	Sample Name:	**GP4-S-7.5**	**GP7-S-9.0**	**GSM-07SO-0-5-100927**	**GSM-08SO-0-5-100928**	**GSM-14SO-0-5-101015**	**GST-01SO-0-5-101001**	**GST-02SO-0-5-101004**
	Sample Date:	**9/26/2002**	**10/2/2002**	**9/27/2010**	**9/28/2010**	**10/15/2010**	**10/1/2010**	**10/4/2010**
	Depth Interval:	**167.64 - 228.6 cm**	**213.36 - 274.32 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**
	Analysis Matrix:	**3.5-12 soil**	**3.5-12 soil**	**0-3.5 soil**	**0-3.5 soil**	**0-3.5 soil**	**0-3.5 soil**	**0-3.5 soil**
	Screening Level:							
Pesticides (µg/kg)								
2,4'-DDD (o,p'-DDD)	7200	--	--	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U
2,4'-DDE (o,p'-DDE)	5100	--	--	3.3 U	3.1 U	3.2 U	3.2 U	3.1 U
2,4'-DDT (o,p'-DDT)	7000	--	--	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U
4,4'-DDD (p,p'-DDD)	83000	--	--	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U
4,4'-DDE (p,p'-DDE)	58000	--	--	3.3 U	3.1 U	3.2 U	3.2 U	3.1 U
4,4'-DDT (p,p'-DDT)	58000	--	--	**5.6 J**	3.1 UJ	3.2 U	3.2 U	3.1 U
alpha-Hexachlorocyclohexane (BHC)	2600	--	--	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
beta-Hexachlorocyclohexane (BHC)	960	--	--	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
Endrin ketone	180000	--	--	3.3 UJ	3.1 UJ	3.2 U	3.2 U	3.1 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	15000	--	--	1.6 UJ	1.6 U	1.6 U	1.6 U	1.6 U
LWG RA Sum DDD (Calculated U = 1/2)	7200	--	--	3.3 UJT	3.1 UJT	3.2 UT	3.2 UT	3.1 UT
LWG RA Sum DDE (Calculated U = 1/2)	5100	--	--	3.3 UT	3.1 UT	3.2 UT	3.2 UT	3.1 UT
LWG RA Sum DDT (Calculated U = 1/2)	7000	--	--	**7.3 JT**	3.1 UJT	3.2 UT	3.2 UT	3.1 UT
LWG RA Total DDx (Calculated U = 1/2)	7000	--	--	**14 JT**	3.1 UJT	3.2 UT	3.2 UT	3.1 UT
Total Petroleum Hydrocarbons (mg/kg)								
Diesel Range Hydrocarbons	4600000000	--	--	**42**	6.3 U	6 U	6 U	5.9 U
Residual Range Hydrocarbons	11000000000	--	--	--	--	--	--	--

Table 3-3
Human Health 0- to 12-Foot Riverbank Soil

	System Location Code:	**GST-03**	**GST-04**	**GST-05**	**GST-06**	**GST-09**	**GST-11**
	Sample Name:	**GST-03SO-0-5-101005**	**GST-04SO-0-5-101006**	**GST-05SO-0-5-101005**	**GST-06SO-0-5-101007**	**GST-09SO-0-5-101008**	**GST-11SO-0-5-101011**
	Sample Date:	**10/5/2010**	**10/6/2010**	**10/5/2010**	**10/7/2010**	**10/8/2010**	**10/11/2010**
	Depth Interval:	**0 - 152.4 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**	**0 - 152.4 cm**
	Analysis Matrix:	**0-3.5 soil**	**0-3.5 soil**	**0-3.5 soil**	**0-3.5 soil**	**0-3.5 soil**	**0-3.5 soil**
	Screening Level:						
Conventional Parameters (mg/kg)							
Cyanide, total	190	**3.57**	**5.76 J**	**1.37 J**	**1.46 J**	0.11 U	0.105 U
Metals (mg/kg)							
Zinc	310000	**103 J**	**102**	**108**	**232**	**90**	**51**
Volatile Organics (µg/kg)							
1,1-Dichloroethene	680000	1.2 U	1 U	1.1 U	1.1 U	1 U	--
1,2-Dichloroethene, cis-	620000	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
1,2-Dichloroethene, trans-	200000	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
Benzene	1200	**44**	**2.2**	1.1 U	1.1 U	1 U	0.9 U
Ethylbenzene	12000	**34**	1 U	1.1 U	1.1 U	1 U	0.9 U
Naphthalene	99000	--	--	--	--	--	--
o-Xylene	3000000	**40**	1 U	1.1 U	1.1 U	1 U	0.9 U
Toluene	24000000	**30**	1 U	1.1 U	1.1 U	1 U	0.9 U
Trichloroethene (TCE)	2700	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
Vinyl chloride	2200	1.2 U	1 U	1.1 U	1.1 U	1 U	0.9 U
LWG RA Total Xylene (Calculated U = 1/2)	19000000	**95 T**	1 UT	1.1 UT	1.1 UT	1 UT	0.9 UT
Polycyclic Aromatic Hydrocarbons (µg/kg)							
2-Methylnaphthalene	4100000	**65000**	**480**	**1900**	**400**	**120**	59 U
Acenaphthene	19000000	**33000**	310 U	**1300**	**110**	61 U	59 U
Anthracene	93000000	**120000**	**910**	**4300**	**450**	**300**	59 U
Benzo(a)anthracene	21000	**310000**	**3600**	**15000**	**2800**	**2000 J**	59 U
Benzo(a)pyrene	2100	**410000**	**10000**	**43000**	**5500**	**3700 J**	**66**
Benzo(b)fluoranthene	21000	--	--	--	--	--	--
Benzo(k)fluoranthene	210000	--	--	--	--	--	--
Chrysene	2100000	**400000**	**6000**	**24000**	**4800**	**2400 J**	59 U
Dibenzo(a,h)anthracene	2100	**100000**	**2300**	**9200**	**1300**	**890**	59 U
Fluoranthene	8900000	**610000**	**3700**	**19000**	**2800**	**3400 J**	59 U
Fluorene	12000000	**79000**	310 U	**1400**	**96**	**89**	59 U
Indeno(1,2,3-c,d)pyrene	21000	**230000**	**8300**	**34000**	**4000**	**3100**	59 U
Naphthalene	99000	**220000**	**1800**	**6700**	**1600**	**400**	59 U
Pyrene	6700000	**1000000**	**5300**	**42000**	**7200**	**6400**	**63 J**
Semivolatile Organics (µg/kg)							
Carbazole	1000000	**25000**	310 U	**330**	**84**	**87**	59 U
Dibenzofuran	1000000	**8600**	310 U	**240**	64 U	61 U	59 U
PCB Aroclors (µg/kg)							
Aroclor 1016	21000	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1221	540	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1232	540	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1242	740	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1248	740	32 U	32 U	32 U	31 U	31 U	31 U
Aroclor 1254	740	**58**	32 U	32 U	31 U	31 U	31 U
Aroclor 1260	740	32 U	32 U	32 U	31 U	31 U	31 U
LWG RA Total PCB Aroclors (Calculated U = 1/2)	4400	**150 T**	32 UT	32 UT	31 UT	31 UT	31 UT

Table 3-3
Human Health 0- to 12-Foot Riverbank Soil

	System Location Code:	GST-03	GST-04	GST-05	GST-06	GST-09	GST-11
	Sample Name:	GST-03SO-0-5-101005	GST-04SO-0-5-101006	GST-05SO-0-5-101005	GST-06SO-0-5-101007	GST-09SO-0-5-101008	GST-11SO-0-5-101011
	Sample Date:	10/5/2010	10/6/2010	10/5/2010	10/7/2010	10/8/2010	10/11/2010
	Depth Interval:	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm	0 - 152.4 cm
	Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
	Screening Level:						
Pesticides (µg/kg)							
2,4'-DDD (o,p'-DDD)	7200	32 U	16 U	16 U	16 U	16 U	3 U
2,4'-DDE (o,p'-DDE)	5100	32 U	16 U	16 U	16 U	16 U	3 U
2,4'-DDT (o,p'-DDT)	7000	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDD (p,p'-DDD)	83000	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDE (p,p'-DDE)	58000	32 U	16 U	16 U	16 U	16 U	3 U
4,4'-DDT (p,p'-DDT)	58000	50 U	16 U	16 U	16 U	16 U	**7.8**
alpha-Hexachlorocyclohexane (BHC)	2600	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
beta-Hexachlorocyclohexane (BHC)	960	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
Endrin ketone	180000	**84 J**	16 U	16 U	16 U	16 U	3 U
gamma-Hexachlorocyclohexane (BHC) (Lindane)	15000	16 U	8 U	7.9 U	7.9 U	7.9 U	1.5 U
LWG RA Sum DDD (Calculated U = 1/2)	7200	32 UT	16 UT	16 UT	16 UT	16 UT	3 UT
LWG RA Sum DDE (Calculated U = 1/2)	5100	32 UT	16 UT	16 UT	16 UT	16 UT	3 UT
LWG RA Sum DDT (Calculated U = 1/2)	7000	50 UT	16 UT	16 UT	16 UT	16 UT	**9.3 T**
LWG RA Total DDx (Calculated U = 1/2)	7000	50 UT	16 UT	16 UT	16 UT	16 UT	**15 T**
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range Hydrocarbons	4600000000	**6000**	**270**	**570**	**57**	27 U	5.3 U
Residual Range Hydrocarbons	11000000000	--	--	--	--	--	--

Table 3-3
Human Health 0- to 12-Foot Riverbank Soil

	System Location Code:	GST-13	MW-04-101	MW-04-101	MW-04-101	MW-04-57	P-03	P-04	P-05
	Sample Name:	GST-13SO-0-5-101012	981014-M4-01	981014-M4-02	981014-M4-03	951030-M4-01	5237-010820-152	5237-010810-79	5237-010813-91
	Sample Date:	10/12/2010	10/14/1998	10/14/1998	10/14/1998	10/30/1995	8/20/2001	8/10/2001	8/13/2001
	Depth Interval:	0 - 152.4 cm	45.72 - 60.96 cm	167.64 - 182.88 cm	304.8 - 320.04 cm	0 - 6.1 cm	198.12 - 198.12 cm	304.8 - 304.8 cm	198.12 - 198.12 cm
	Analysis Matrix:	0-3.5 soil	0-3.5 soil	3.5-12 soil	3.5-12 soil	0-3.5 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
	Screening Level:								
Conventional Parameters (mg/kg)									
Cyanide, total	190	**2.31**	--	--	0.02 U	**0.8**	0.02 U	--	--
Metals (mg/kg)									
Zinc	310000	**75**	--	--	--	--	**42.6**	--	--
Volatile Organics (µg/kg)									
1,1-Dichloroethene	680000	--	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	620000	1 U	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	200000	1 U	--	--	--	--	--	--	--
Benzene	1200	1 U	25 U	25 U	25 U	--	--	--	--
Ethylbenzene	12000	1 U	25 U	25 U	25 U	--	--	--	--
Naphthalene	99000	--	--	--	--	--	--	--	--
o-Xylene	3000000	1 U	--	--	--	--	--	--	--
Toluene	24000000	1 U	25 U	25 U	25 U	--	--	--	--
Trichloroethene (TCE)	2700	1 U	--	--	--	--	--	--	--
Vinyl chloride	2200	1 U	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	19000000	1 UT	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)									
2-Methylnaphthalene	4100000	**70**	--	--	--	--	--	--	--
Acenaphthene	19000000	63 U	**1100**	50 U	50 U	5000 U	--	--	--
Anthracene	93000000	**160**	**7900**	50 U	50 U	**2600**	--	--	--
Benzo(a)anthracene	21000	**820**	**67800**	50 U	**130**	**10000**	--	--	--
Benzo(a)pyrene	2100	**2200**	**183000**	**100**	**230**	**28000**	--	--	--
Benzo(b)fluoranthene	21000	--	**209000**	**100**	**250**	**26000**	--	--	--
Benzo(k)fluoranthene	210000	--	**49900**	50 U	50 U	**10000**	--	--	--
Chrysene	2100000	**1300**	**82100**	**57**	**160**	**15000**	--	--	--
Dibenzo(a,h)anthracene	2100	**390**	**21100**	50 U	50 U	**4000**	--	--	--
Fluoranthene	8900000	**1000**	**53200**	50 U	**210**	**12000**	--	--	--
Fluorene	12000000	63 U	**1500**	50 U	50 U	5000 U	--	--	--
Indeno(1,2,3-c,d)pyrene	21000	**1400**	**110000**	50 U	50 U	**21000**	--	--	--
Naphthalene	99000	**180**	**6100**	50 U	50 U	**1700**	--	--	--
Pyrene	6700000	**1600**	**145000**	**110**	**460**	**22000**	--	--	--
Semivolatile Organics (µg/kg)									
Carbazole	1000000	63 U	--	--	--	--	--	--	--
Dibenzofuran	1000000	63 U	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)									
Aroclor 1016	21000	32 U	--	--	--	--	--	--	--
Aroclor 1221	540	32 U	--	--	--	--	--	--	--
Aroclor 1232	540	32 U	--	--	--	--	--	--	--
Aroclor 1242	740	32 U	--	--	--	--	--	--	--
Aroclor 1248	740	32 U	--	--	--	--	--	--	--
Aroclor 1254	740	32 U	--	--	--	--	--	--	--
Aroclor 1260	740	32 U	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	4400	32 UT	--	--	--	--	--	--	--

Table 3-3
Human Health 0- to 12-Foot Riverbank Soil

		System Location Code:	GST-13	MW-04-101	MW-04-101	MW-04-101	MW-04-57	P-03	P-04	P-05
		Sample Name:	GST-13SO-0-5-101012	981014-M4-01	981014-M4-02	981014-M4-03	951030-M4-01	5237-010820-152	5237-010810-79	5237-010813-91
		Sample Date:	10/12/2010	10/14/1998	10/14/1998	10/14/1998	10/30/1995	8/20/2001	8/10/2001	8/13/2001
		Depth Interval:	0 - 152.4 cm	45.72 - 60.96 cm	167.64 - 182.88 cm	304.8 - 320.04 cm	0 - 6.1 cm	198.12 - 198.12 cm	304.8 - 304.8 cm	198.12 - 198.12 cm
		Analysis Matrix:	0-3.5 soil	0-3.5 soil	3.5-12 soil	3.5-12 soil	0-3.5 soil	3.5-12 soil	3.5-12 soil	3.5-12 soil
		Screening Level:								
Pesticides (µg/kg)										
2,4'-DDD (o,p'-DDD)	7200		**36**	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	5100		16 U	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	7000		16 U	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	83000		**100**	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	58000		16 U	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	58000		**16 J**	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	2600		8 U	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	960		8 U	--	--	--	--	--	--	--
Endrin ketone	180000		16 U	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	15000		8 U	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	7200		**140 T**	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	5100		16 UT	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	7000		**24 JT**	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	7000		**180 JT**	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)										
Diesel Range Hydrocarbons	4600000000		**42**	--	--	--	--	22 U	**37.4**	21.7 U
Residual Range Hydrocarbons	11000000000		--	--	--	--	--	--	--	--

Table 3-3
Human Health 0- to 12-Foot Riverbank Soil

	System Location Code:	P-05	RAA-20	SS-1	SS-10	SS-11	SS-2	SS-3	SS-4	SS-5	SS-6
	Sample Name:	5237-010813-92	RAA-20SD-0506	981112-SS-01	981112-SS-10	981112-SS-11	981112-SS-02	981112-SS-03	981112-SS-04	981112-SS-05	981112-SS-06
	Sample Date:	8/13/2001	7/22/2004	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998
	Depth Interval:	289.56 - 289.56 cm	152.4 - 182.88 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
	Analysis Matrix:	3.5-12 soil	3.5-12 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
	Screening Level:										
Conventional Parameters (mg/kg)											
Cyanide, total	190	**8780**	--	**0.68**	**41**	0.5 U	0.5 U	**0.58**	0.5 U	**1.3**	**0.58**
Metals (mg/kg)											
Zinc	310000	**38.7**	--	--	--	--	--	--	--	--	--
Volatile Organics (µg/kg)											
1,1-Dichloroethene	680000	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, cis-	620000	100 U	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, trans-	200000	--	--	--	--	--	--	--	--	--	--
Benzene	1200	100 U	**400**	--	--	--	--	--	--	--	--
Ethylbenzene	12000	**1380**	**1300**	--	--	--	--	--	--	--	--
Naphthalene	99000	--	--	--	--	--	--	--	--	--	--
o-Xylene	3000000	--	**700**	--	--	--	--	--	--	--	--
Toluene	24000000	**150**	**100 J**	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	2700	100 U	--	--	--	--	--	--	--	--	--
Vinyl chloride	2200	120 U	--	--	--	--	--	--	--	--	--
LWG RA Total Xylene (Calculated U = 1/2)	19000000	--	**1300 T**	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/kg)											
2-Methylnaphthalene	4100000	**553000**	--	--	--	--	--	--	--	--	--
Acenaphthene	19000000	**463000**	--	50 U	**140**	50 U	50 U	**100**	**83**	**590**	50 U
Anthracene	93000000	**322000**	--	50 U	**360**	50 U	**80**	50 U	**250**	**2000**	50 U
Benzo(a)anthracene	21000	**207000**	--	**210**	**2600**	**61**	**790**	**4700**	**1300**	**21900**	**130**
Benzo(a)pyrene	2100	**205000**	--	**440**	50 U	**130**	**1500**	**14100**	**2900**	**69100**	**360**
Benzo(b)fluoranthene	21000	**103000**	--	**460**	**5800**	**140**	**1500**	**14200**	**3100**	**60900**	**370**
Benzo(k)fluoranthene	210000	**103000**	--	**140**	**1600**	50 U	**470**	**3500**	**880**	**17000**	**110**
Chrysene	2100000	**245000**	--	**230**	**3500**	**66**	**930**	**6200**	**1700**	**29700**	**150**
Dibenzo(a,h)anthracene	2100	**24200**	--	**68**	**520**	50 U	**220**	**1500**	**490**	**9400**	**62**
Fluoranthene	8900000	**655000**	--	**290**	**5000**	**75**	**1200**	**3400**	**1400**	**16100**	**150**
Fluorene	12000000	**307000**	--	50 U	**120**	50 U	50 U	**130**	**59**	**610**	50 U
Indeno(1,2,3-c,d)pyrene	21000	**83200**	--	**350**	**2500**	**100**	**1200**	**10300**	**2400**	**47300**	**350**
Naphthalene	99000	**905000**	--	50 U	**230**	50 U	**88**	**900**	**230**	**5000**	50 U
Pyrene	6700000	**772000**	--	**370**	**6800**	**99**	**1600**	**8500**	**2200**	**33200**	**200**
Semivolatile Organics (µg/kg)											
Carbazole	1000000	**68700**	--	--	--	--	--	--	--	--	--
Dibenzofuran	1000000	**40000**	--	--	--	--	--	--	--	--	--
PCB Aroclors (µg/kg)											
Aroclor 1016	21000	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	540	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	540	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	740	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	740	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	740	--	--	--	--	--	--	--	--	--	--
Aroclor 1260	740	--	--	--	--	--	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	4400	--	--	--	--	--	--	--	--	--	--

Table 3-3
Human Health 0- to 12-Foot Riverbank Soil

	System Location Code:	P-05	RAA-20	SS-1	SS-10	SS-11	SS-2	SS-3	SS-4	SS-5	SS-6
	Sample Name:	5237-010813-92	RAA-20SD-0506	981112-SS-01	981112-SS-10	981112-SS-11	981112-SS-02	981112-SS-03	981112-SS-04	981112-SS-05	981112-SS-06
	Sample Date:	8/13/2001	7/22/2004	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998	11/12/1998
	Depth Interval:	289.56 - 289.56 cm	152.4 - 182.88 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm
	Analysis Matrix:	3.5-12 soil	3.5-12 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil	0-3.5 soil
	Screening Level:										
Pesticides (µg/kg)											
2,4'-DDD (o,p'-DDD)	7200	--	--	--	--	--	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	5100	--	--	--	--	--	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	7000	--	--	--	--	--	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	83000	--	--	--	--	--	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	58000	--	--	--	--	--	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	58000	--	--	--	--	--	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	2600	--	--	--	--	--	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	960	--	--	--	--	--	--	--	--	--	--
Endrin ketone	180000	--	--	--	--	--	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	15000	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	7200	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	5100	--	--	--	--	--	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	7000	--	--	--	--	--	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	7000	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)											
Diesel Range Hydrocarbons	4600000000	**14000**	--	--	--	--	--	--	--	--	--
Residual Range Hydrocarbons	11000000000	--	--	--	--	--	--	--	--	--	--

Table 3-3
Human Health 0- to 12-Foot Riverbank Soil

	System Location Code:	SS-7	SS-8	SS-9	GS-08	GS-08
	Sample Name:	981112-SS-07	981112-SS-08	981112-SS-09	WLCGSJ06GS08S34	WLCGSJ06GS08S89
	Sample Date:	11/12/1998	11/12/1998	11/12/1998	10/25/2006	10/25/2006
	Depth Interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	91.44 - 121.9 cm	243.8 - 274.3 cm
	Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	3.5-12 soil	3.5-12 soil
	Screening Level:					
Conventional Parameters (mg/kg)						
Cyanide, total	190	**13**	0.5 U	**56**	**0.34**	**0.21**
Metals (mg/kg)						
Zinc	310000	--	--	--	**66.9**	**66.1**
Volatile Organics (µg/kg)						
1,1-Dichloroethene	680000	--	--	--	1.2 U	1.5 U
1,2-Dichloroethene, cis-	620000	--	--	--	1.2 U	1.5 U
1,2-Dichloroethene, trans-	200000	--	--	--	1.2 U	1.5 U
Benzene	1200	--	--	--	1.2 U	**3.6**
Ethylbenzene	12000	--	--	--	1.2 U	**17**
Naphthalene	99000	--	--	--	--	--
o-Xylene	3000000	--	--	--	1.2 U	**8.9**
Toluene	24000000	--	--	--	**0.14 J**	**0.6 J**
Trichloroethene (TCE)	2700	--	--	--	1.2 U	1.5 U
Vinyl chloride	2200	--	--	--	1.2 U	1.5 U
LWG RA Total Xylene (Calculated U = 1/2)	19000000	--	--	--	2.4 UT	**23 T**
Polycyclic Aromatic Hydrocarbons (µg/kg)						
2-Methylnaphthalene	4100000	--	--	--	**0.53 J**	**200**
Acenaphthene	19000000	**640**	50 U	**380**	**12**	**170**
Anthracene	93000000	**1300**	50 U	**1300**	**5.8**	**17**
Benzo(a)anthracene	21000	**12800**	50 U	**3700**	**20**	**12**
Benzo(a)pyrene	2100	**23700**	50 U	**3400**	**26**	**15**
Benzo(b)fluoranthene	21000	**25000**	50 U	**6600**	**23**	**9.3**
Benzo(k)fluoranthene	210000	**6900**	50 U	**1700**	**17**	**7.6**
Chrysene	2100000	**14300**	50 U	**4300**	**32**	**15**
Dibenzo(a,h)anthracene	2100	**1900**	50 U	**500**	**3.4 J**	**1.1 J**
Fluoranthene	8900000	**15000**	50 U	**10000**	**44**	**52**
Fluorene	12000000	**410**	50 U	**390**	**12**	**45**
Indeno(1,2,3-c,d)pyrene	21000	**23700**	50 U	**2200**	**23**	**9.5**
Naphthalene	99000	**1800**	50 U	**550**	4.9 U	**830**
Pyrene	6700000	**24200**	50 U	**10800**	**65**	**57**
Semivolatile Organics (µg/kg)						
Carbazole	1000000	--	--	--	--	--
Dibenzofuran	1000000	--	--	--	**3.2 J**	**8**
PCB Aroclors (µg/kg)						
Aroclor 1016	21000	--	--	--	--	--
Aroclor 1221	540	--	--	--	--	--
Aroclor 1232	540	--	--	--	--	--
Aroclor 1242	740	--	--	--	--	--
Aroclor 1248	740	--	--	--	--	--
Aroclor 1254	740	--	--	--	--	--
Aroclor 1260	740	--	--	--	--	--
LWG RA Total PCB Aroclors (Calculated U = 1/2)	4400	--	--	--	--	--

Table 3-3
Human Health 0- to 12-Foot Riverbank Soil

	System Location Code:	SS-7	SS-8	SS-9	GS-08	GS-08
	Sample Name:	981112-SS-07	981112-SS-08	981112-SS-09	WLCGSJ06GS08S34	WLCGSJ06GS08S89
	Sample Date:	11/12/1998	11/12/1998	11/12/1998	10/25/2006	10/25/2006
	Depth Interval:	0 - 6.096 cm	0 - 6.096 cm	0 - 6.096 cm	91.44 - 121.9 cm	243.8 - 274.3 cm
	Analysis Matrix:	0-3.5 soil	0-3.5 soil	0-3.5 soil	3.5-12 soil	3.5-12 soil
	Screening Level:					
Pesticides (µg/kg)						
2,4'-DDD (o,p'-DDD)	7200	--	--	--	--	--
2,4'-DDE (o,p'-DDE)	5100	--	--	--	--	--
2,4'-DDT (o,p'-DDT)	7000	--	--	--	--	--
4,4'-DDD (p,p'-DDD)	83000	--	--	--	--	--
4,4'-DDE (p,p'-DDE)	58000	--	--	--	--	--
4,4'-DDT (p,p'-DDT)	58000	--	--	--	--	--
alpha-Hexachlorocyclohexane (BHC)	2600	--	--	--	--	--
beta-Hexachlorocyclohexane (BHC)	960	--	--	--	--	--
Endrin ketone	180000	--	--	--	--	--
gamma-Hexachlorocyclohexane (BHC) (Lindane)	15000	--	--	--	--	--
LWG RA Sum DDD (Calculated U = 1/2)	7200	--	--	--	--	--
LWG RA Sum DDE (Calculated U = 1/2)	5100	--	--	--	--	--
LWG RA Sum DDT (Calculated U = 1/2)	7000	--	--	--	--	--
LWG RA Total DDx (Calculated U = 1/2)	7000	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range Hydrocarbons	4600000000	--	--	--	--	--
Residual Range Hydrocarbons	11000000000	--	--	--	--	--

Table 3-3
Human Health 0- to 12-Foot Riverbank Soil

Notes:

Detected concentration is greater than riverbank human health screening level

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R = Rejected

T = Result is the value of a total or calculation.

-- = Results not reported or not applicable

N = Normal Field Sample

The dataset evaluated for 0- to 12- foot potential human health riverbank screening consists of soil samples collected from the 0- to 12- foot depth interval for all other locations shown. Appendix G describes the for soil data screened.

Riverbank screening levels are presented on Table 2-1 of Appendix H.

Acronyms:

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

BHC = Benzene hexachloride, synonym with HCH (Hexachlorocyclohexane)

cm = centimeters

DDD = dichlorodiphenyldichloroethane

DDE = dichlorodiphenyldichloroethylene

DDT = dichlorodiphenyltrichloroethane

PCB = polychlorinated biphenyl

FIGURES

Soil Sample Location
Soil locations below 13 feet NAVD88
Soil locations landward of the top of bank
Top of Bank
Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

NOTES:
1. Acronyms:
EPA = Environmental Protection Agency
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD83 = North American Datum 1983
2. Arrow indicates direction of flow of river.
3. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
10. Vertical datum is NAVD88.
11. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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ANCHOR QEA

Figure 2-1
Riverbank Soil Sample Locations
Draft Riverbank Soil Screen
Gasco Sediments Cleanup Action

Soil Sample Location

Soil location outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88

Screening Level Exceedance

Screening Level Exceedance outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88

Top of Bank

Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

NOTES:
1. Screening results are presented in Tables 3-1, 3-2, and 3-3 in Appendix H.
2. The data set screened consists of soil samples collected from the 0- to 5- foot depth interval for locations sampled during the Gasco Sediments Site Data Gaps Investigation (GST-XX and GSM-XX locations) and soil samples collected from the 0- to 3.5- foot depth interval for all other locations shown. Refer to Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation.
3. Refer to Table 2-1 in Appendix H for riverbank screening levels.
4. Dibenzofuran screening level exceedances are not shown because all dibenzofuran results are below the DEQ alternative screening level for dibenzofuran of 85.0 milligrams per kilogram. Refer to Table 2-1 in Appendix H for additional details.
5. Acronyms:
EPA = Environmental Protection Agency
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD83 = North American Datum 1983
6. Arrow indicates direction of flow of river.
7. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
8. Vertical datum is NAVD88.
9. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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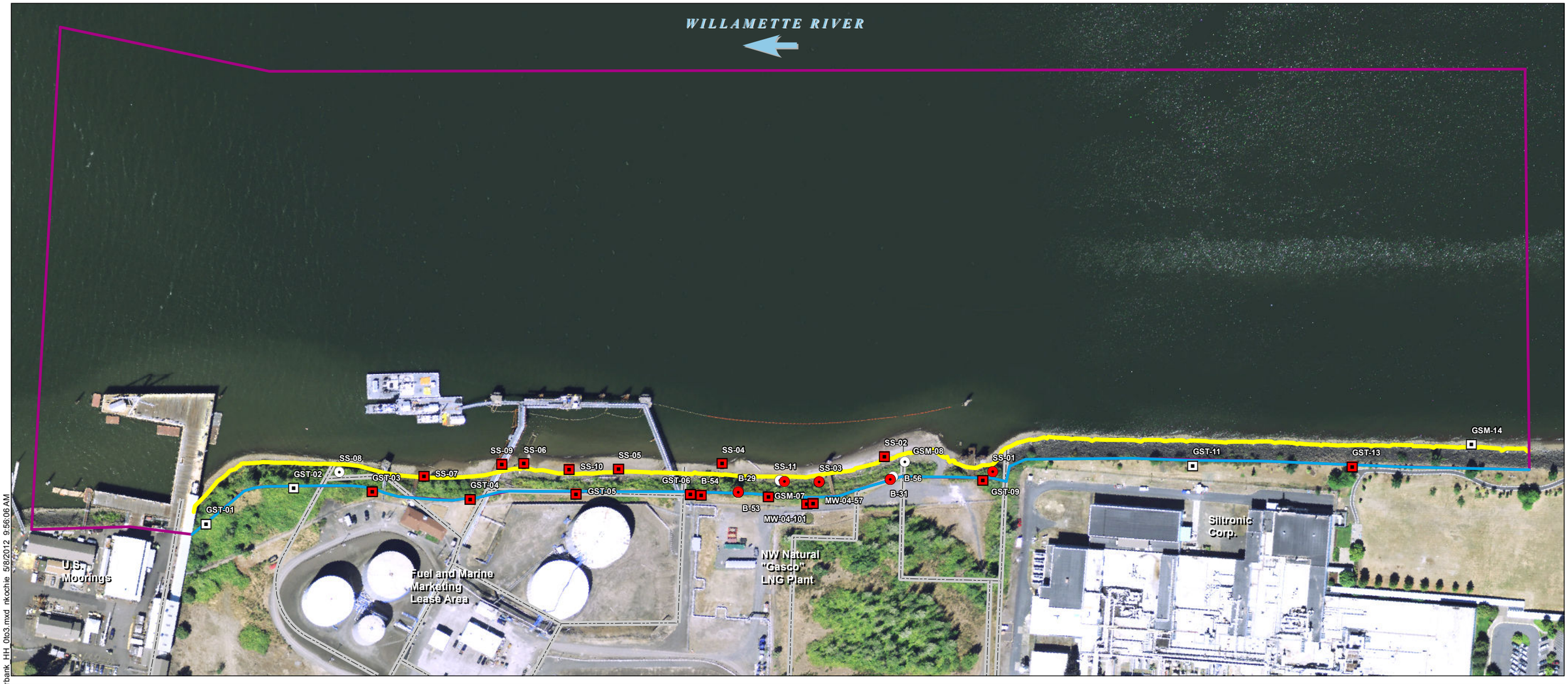
ANCHOR QEA

Figure 3-1
Data Screen: Ecological Receptor 0- to 3.5-Foot Riverbank Soil
Draft Riverbank Soil Screen
Gasco Sediments Cleanup Action



- Soil Sample Location
- Soil location outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Screening Level Exceedance
- Screening Level Exceedance outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Top of Bank
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

NOTES:
1. Screening results are presented in Tables 3-1, 3-2, and 3-3 in Appendix H.
2. The data set screened consists of soil samples collected from the 0- to 5- foot depth interval for locations sampled during the Gasco Sediments Site Data Gaps Investigation (GST-XX and GSM-XX locations) and soil samples collected from the 0- to 3.5- foot depth interval for all other locations shown. Refer to Appendix A for additional detail on the Gasco Sediments Site Data Gaps Investigation.
3. Refer to Table 2-1 in Appendix H for riverbank screening levels.
4. Acronyms:
EPA = Environmental Protection Agency
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD83 = North American Datum 1983
4. Arrow indicates direction of flow of river.
5. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
6. Vertical datum is NAVD88.
7. Aerial imagery from July 2007.

Feet
0 100 200 300 400

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Figure 3-2
Data Screen: Human Health 0- to 3.5-foot Riverbank Soil
Draft Riverbank Soil Screen
Gasco Sediments Cleanup Action

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- Soil Sample Location
- Soil location outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Screening Level Exceedance
- Screening Level Exceedance outside of Gasco Sediment Site Area of Interest or below 13 feet NAVD88
- Top of Bank
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88
- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

NOTES:
1. Screening results are presented in Tables 3-1, 3-2, and 3-3 in Appendix H.
2. The data set screened consists of soil samples collected from the 0- to 12- foot depth interval for all locations shown.
3. Refer to Table 2-1 in Appendix H for riverbank screening levels.
4. Acronyms:
DEQ = Oregon Department of Environmental Quality
NAVD88 = North American Vertical Datum 1988
NAD83 = North American Datum 1983
EPA = Environmental Protection Agency
5. Arrow indicates direction of flow of river.
6. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
7. Vertical datum is NAVD88.
8. Aerial imagery from July 2007.

Feet
0 100 200 300 400

ANCHOR QEA

Figure 3-3
Data Screen: Human Health 0- to 12-foot Riverbank Soil
Draft Riverbank Soil Screen
Gasco Sediments Cleanup Action

APPENDIX I
DRAFT EVALUATION OF ISOLATION CAP EFFECTIVENESS

DRAFT
APPENDIX I
EVALUATION OF ISOLATION CAP EFFECTIVENESS
DRAFT ENGINEERING EVALUATION/COST ANALYSIS
GASCO SEDIMENTS CLEANUP ACTION

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Figure 3-1 Substantial Product Locations Relative to Modeled Groundwater Flux Areas

LIST OF ACRONYMS AND ABBREVIATIONS

Abbreviation	Definition
BaP	benzo(a)pyrene
cm	Centimeter
COI	chemical of interest
DCE	cis-1,2-dichloroethene
DNAPL	dense nonaqueous phase liquid
EE/CA	Engineering Evaluation/Cost Analysis
HC&C	hydraulic control and containment
lb/sf	pounds per square foot
NAPL	nonaqueous phase liquid
PAH	polycyclic aromatic hydrocarbons
Portland Harbor draft FS	Portland Harbor Superfund Site draft Feasibility Study
TCE	Trichloroethylene
TZW	transition zone water
VOC	volatile organic compound

1 INTRODUCTION

This appendix describes a modeling evaluation of the effectiveness of chemical and dense non-aqueous phase liquid (DNAPL) isolation caps conducted to support the draft Engineering Evaluation/Cost Analysis (EE/CA) for the Gasco Sediments Site (Site). Of the six remedial alternatives being evaluated in the draft EE/CA, four (Alternatives 2a, 2b, 3, and 4) include capping or sediment removal followed by capping in portions of the area being considered for remediation (i.e., the interim Project Area). The purpose of the modeling described herein was to identify the properties of a chemical isolation cap (e.g., thickness and sorption characteristics) that would be needed to address dissolved phase contaminant transport such that applicable risk-based criteria would be met at the cap's surface. The methods used in this modeling are generally consistent with the screening-level evaluation that was conducted to evaluate cap effectiveness as part of the Portland Harbor Superfund Site draft Feasibility Study (Portland Harbor draft FS; see Appendix Hc of Anchor QEA 2012).

2 CHEMICAL DISSOLVED PHASE MIGRATION

The following subsections describe the methods used to perform the steady state and transient cap modeling and modeling results.

2.1 Methodology

The subsections below provide a brief summary of the methods used in this evaluation, including descriptions of how the portion of the interim Project Area being considered for capping was divided into sub-areas for the purposes of modeling (Section 2.1); the model framework (Section 2.2); the setup and input parameters used in the model (Section 2.3); and the general approach used to apply the model and how the results were used to assess cap effectiveness (Section 2.4).

2.1.1 Identification of Cap Modeling Sub-areas

To account for varying conditions across the interim Project Area, the modeling evaluation was performed separately for different sub-areas, which were delineated as follows. First, the spatial extents of capping or dredge/cap areas associated with Alternatives 2a, 2b, 3, and 4 were combined to produce a generalized cap footprint, recognizing that the differences in the overall cap and dredge/cap areas among these three alternatives are relatively small. Then, this generalized cap footprint was divided into smaller areas for modeling based on the following two considerations:

- **Spatial distribution of groundwater velocity:** The hydraulic control and containment (HC&C) system proposed for the Gasco and Siltronic properties has been designed based on a groundwater flow model (MODFLOW) that computes groundwater fluxes to and from the river under operation of the HC&C system (Anchor QEA et al. 2012). As discussed in Section 5.4.1 of the draft EE/CA, the flow model is calibrated to both upland gradient data as well as offshore piezometer data. Consequently, the model projections of future groundwater velocities are expected to be accurate. The model predicts hydraulic gradient and groundwater flow reversals within the sediments over a large portion of the interim Project Area. Results from the MODFLOW predictions were used to identify portions of the cap footprint that are expected to have downward flow (downwelling areas) versus those that would have upward flow (upwelling areas) because modeling of contaminant transport in a cap is directly dependent on advective velocity.
- **Contaminant distributions:** As discussed in Section 2.5.1.1 of the draft EE/CA, the

primary chemicals of interest (COIs) at the Site are polycyclic aromatic hydrocarbons (PAHs), which were represented in the modeling by benzo(a)pyrene (BaP) and naphthalene, consistent with the contaminant fate and transport modeling conducted for the draft EE/CA (see Appendix E). Furthermore, there are regions of the interim Project Area within which risk-based criteria are exceeded for volatile organic compounds (VOCs) including benzene, trichloroethylene (TCE), and TCE's degradation byproducts, represented by cis-1,2-dichloroethene (DCE) and vinyl chloride (see Section 2.5.5 in draft EE/CA). Thus, the zones within the generalized capping footprint in which VOCs were delineated to be at levels of concern were also considered in delineation of modeling areas.

Figure 2.1.1-1 shows the division of the generalized capping footprint within the interim Project Area into five modeling subareas. The largest area, referred to as Center (D), covers most of the capping footprint within the interim Project Area and is predicted to contain downward groundwater velocities under operation of the HC&C system. Adjacent to the Center (D) area are two small areas (Area 1 and Area 2) that were identified to detectable transition zone water (TZW) concentrations of chlorinated VOCs. These areas are also characterized by downward groundwater velocities. The remaining two modeling areas (referred to as Upstream [U] and Downstream [U]) were delineated as areas outside the influence of the HC&C system, in which upward groundwater flow is predicted; these areas are located upstream and downstream of the Center (D) area.

2.1.2 Model Framework

The one-dimensional models that simulate contaminant transport within a sediment cap developed by Dr. Danny Reible at the University of Texas were used for this evaluation. These models simulate the fate and transport of contaminants (dissolved and sorbed phases) under the processes of advection, diffusion/dispersion, biodegradation, bioturbation/bioirrigation, and exchange with the overlying surface water. Two versions of the Reible capping models were used in this assessment: a steady state version (Lampert and Reible 2009) and a transient version (Go et al. 2009) that performs time-variable simulations. These models have been used to support the evaluation and design of sediment caps at numerous sites around the United States (e.g., Parsons and Anchor QEA 2012).

2.1.3 Model Setup and Inputs

2.1.3.1 Model Layers

The cap being evaluated in the draft EE/CA consists of an erosion protection (armor) layer placed atop a layer of base cap (chemical isolation) material. Figure 5.4-1 in draft EE/CA shows that the erosion protection layer may also be placed atop a filter layer that overlies the base cap material (assumed to occur in the wave zone area depicted in Section 4.5.3.1 of the draft EE/CA). The purpose of the erosion protection layer is to maintain the cap material in place by resisting erosive forces such as river flow, waves and prop wash. This erosion protection layer normally has some limited sorptive capacity and also provides for some added separation distance from the contaminated sediments, which limits diffusive flux of contaminants by reducing the concentration gradient within the overall cap. However, for the purposes of the chemical isolation modeling, the erosion protection layer was conservatively assumed to not contribute to chemical isolation. Therefore, the cap profile simulated in the model consisted of 12 inches of isolation material. The modeling conservatively assumes an infinite mass of contaminant is present beneath the isolation layer. The upper portion of the cap comprises the bioturbation zone (Lampert and Reible 2009), which is the depth over which benthic mixing processes are anticipated to occur. The bioturbation zone thickness was taken to be 10 centimeters (cm) for this evaluation, consistent with the Portland Harbor draft FS evaluations, which were based on literature and standard practice for cap design (Appendix Hc of Anchor QEA 2012).

2.1.3.2 Model Input Parameters

The input parameters used in the cap modeling assessment are listed in Table 2.1.3.2-1, along with the sources from which they were derived. Many of the parameters are the same as those used in the Portland Harbor draft FS capping evaluation (Appendix Hc of Anchor QEA 2012), several of which are either literature-based, chemical-specific properties (such as partition coefficients) or typical values recommended for capping evaluation/design from Reible (2012). Two of the key model input parameters used in this evaluation are based on site-specific information from the interim Project Area: 1) the porewater concentration underlying the cap; and 2) the groundwater Darcy velocity. Details on how these two inputs were developed are provided in the following two subsections.

2.1.3.2.1 Underlying Porewater Concentrations

The underlying porewater concentration defines the source term (boundary condition) in the model and represents the concentration of each COI within the sediment beneath the cap. The porewater concentration of each modeling area was defined based on samples collected at

depths considered representative of conditions that would be present following cap placement. These sample depths were defined based on TZW samples collected from depths of 0 to 10 feet below the sediment/water interface (which would be representative of conditions for a cap placed at grade) and from groundwater samples collected from depths of 20 to 30 feet (which would be representative of conditions in which there was 20 feet of sediment removal prior to capping). The porewater concentrations used for each modeling area were then conservatively defined based on the maximum concentration from the TZW/groundwater data from within these depth intervals within the given area. The initial porewater concentrations associated with each modeling area and contaminant are presented in Table 2.1.3.2.1-1; these values indicate that of the five model areas, Center (D), and the Area 2 VOCs area generally have the highest concentrations.

2.1.3.2.2 Groundwater Darcy Velocity

As described above, anticipated large-scale variations in groundwater velocity within the interim Project Area associated with the limits of the HC&C system capture zone (i.e., regions of upwelling versus downwelling) were used to delineate the major modeling areas (Upstream [U], Center [D], Downstream [U]) used in this evaluation. The Darcy velocity used to characterize each of these areas in the modeling was based on a spatial average of the values predicted by the MODFLOW model over the boundaries of each area. A spatial average was judged to be an appropriately conservative value for use in this evaluation because: 1) a number of conservative assumptions were made during development and use of the MODFLOW model during design of the HC&C system (Anchor QEA et al. 2012); and 2) each model area is already conservatively characterized by use of the maximum concentration measured within the area. For the two smaller model areas (Area 1 VOCs and Area 2 VOCs; Figure 2.1.1-1) that correspond to the localized regions of detectable concentrations of chlorinated VOCs, the Darcy velocity was specified based on a spatial average calculated over a smaller region that encompasses both areas. Darcy velocities used in the cap evaluations are presented in Table 2.1.3.2.1-1. As shown in the table, the downwelling velocities in the Center (D) and Area 1 and Area 2 VOCs areas were similar, at approximately -50 cm/year, while the upwelling velocity in the Upstream (U) area (170 cm/year) was approximately 2.5 times higher than in the Downstream (U) area (70 cm/year).

2.1.4 Model Application Approach

Based on the setup and input values described above, the model was used to predict sorbed-phase and porewater concentrations within the cap. To evaluate cap effectiveness, the model

results were compared to performance criteria, which consisted of 1) sediment-based criteria consistent with those used in the Portland Harbor draft FS (Appendix Hc of Anchor QEA 2012); and 2) water quality-based criteria as identified in the Portland Harbor Baseline Ecological Risk Assessment (Windward 2011). Model-predicted sorbed-phase concentrations within the cap's 10-cm bioturbation zone (which characterizes benthic exposure) were compared to the sediment-based criteria; concentrations at the bottom of the bioturbation zone were conservatively used in these comparisons, consistent with the Portland Harbor draft FS. For the water quality-based criteria, model-predicted porewater concentrations at the cap surface (defined based on a depth of 1 cm) were used because these criteria are applicable to surface water.

For the cap effectiveness evaluation, the steady-state model was initially used to assess whether a 1-foot-thick chemical isolation cap composed of sand would meet the performance criteria. These steady-state evaluations were conducted for each of the six modeled chemicals (i.e., BaP, naphthalene, benzene, TCE, DCE, and vinyl chloride) within each of the five model areas discussed above. For cases where the model predicted that a 1-foot sand cap would not meet the performance criteria at steady-state, a secondary evaluation of an amended cap was conducted, in which the transient model was used to estimate the amount of sorptive amendment within a 1-foot cap that would be needed to meet the performance criteria throughout a 100-year simulation period.

2.2 Model Results

The results of the steady-state modeling for a 1-foot-thick cap are presented in Table 2.1.3.2.1-1. This table contains, for each modeling area and chemical, the initial porewater concentrations and upwelling velocities used in the model, the performance criteria, and the steady-state concentrations calculated by the model in porewater and the sorbed phase within the cap surface. Table 2.1.3.2.1-1 shows that under steady-state conditions, a 1-foot sand cap would be effective for modeling areas within the HC&C capture zone (i.e., negative/downward groundwater velocities), which include the Center (D) and Area 1 and Area 2 VOCs areas. However, in modeling areas Upstream (U) and Downstream (U), in which upward groundwater velocities are anticipated, the steady-state concentrations of BaP and naphthalene exceed the performance criteria and, therefore, additional simulations with the transient model were conducted for these cases to evaluate the performance of an amended cap.

The transient modeling was performed by iteratively increasing the effective organic carbon fraction (foc) of the 1-foot-thick chemical isolation material until the performance criteria were met throughout the 100-year model simulation period. The transient modeling indicated that naphthalene was the driving contaminant, which was expected due to its greater mobility than BaP (i.e., the partition coefficient of naphthalene is nearly three orders of magnitude lower than that of BaP; Table 2.1.3.2-1). The results from the transient modeling, which are presented in Table 2.2-1, suggest that for both the sediment- and surface water-based performance criteria, the foc needed to amend a 1-foot-thick sand cap is approximately 20 percent to 25 percent in the Upstream (U) area, and twice that (40 percent) in the Downstream (U) modeling area. Based on studies that measured partitioning of PAHs to organoclay (Reible et al. 2011), the equivalent amounts of organoclay that would produce the same effective sorptive capacity as these foc values were calculated to be 10 percent by weight (approximately 6 pounds per square foot [lb/sf]) for the Upstream (U) area and 15 percent by weight (approximately 10 lb/sf) for the Downstream (U) area (Table 2.2-1). These percent by weight organoclay amendments are within the typical range used for capping applications.

3 DNAPL MIGRATION

As discussed in Section 4.4.1 of the draft EE/CA, portions of the interim Project Area contain sediments with substantial product (as defined in Section 3.6.2.1 of the Scope of Work [SOW]), some of which contain DNAPL at variable depths below the sediment surface. Active caps that focus on the adsorption of DNAPL may be applicable in these areas.

An estimate of the DNAPL mobility and migration rate is required for evaluating effectiveness of a sorbent cap and for identifying remedial design requirements. The amount of mobile DNAPL that could migrate to the cap should not exceed the adsorbent capacity of the cap within the target service life of the cap. The bioturbation zone above the cap should remain free of DNAPL, and DNAPL-related chemical concentrations should be protective of ecological receptors for the 100-year service life (the assumption for the draft EE/CA) of the cap.

For DNAPL to mobilize, the DNAPL must be present in an amount that exceeds the DNAPL residual saturation. Residual saturation in a DNAPL-water-soil combination is defined as a ratio between the threshold volume of DNAPL and the volume of pore space in sediment above which DNAPL will flow (i.e., water displaces DNAPL) when external forces are applied. For coal tar based DNAPL, residual saturation has been reported to range from approximately 8 to 23 percent (EPRI 2004). This means that about 8 to 23 percent of the available pore space is occupied by DNAPL. Other forms of DNAPL have reported residual saturations outside this range.

Both tar and DNAPL have been identified at variable depths below mudline in the initial Project Area, as summarized in Tables 4.4.1-1 and 4.4.1-2 in draft EE/CA and Figure 3.0-1 (DNAPL can be conservatively designated as visual observations of liquid substantial product identified in the legend). The shown depth intervals in Figure 3.0-1 are the deepest depth interval where substantial product was identified. Tables 4.4.1-1 and 4.4.1-2 show that in some areas the DNAPL is present in the surface extending to some depth below mudline and in other areas the DNAPL is only present at depth with overlying DNAPL-containing materials. Tar is a solid and not mobile[1], and is therefore not considered to have the potential capacity to migrate to shallow sediment or the water column. Therefore, capping evaluations do not need to be

[1] By definition for the draft EE/CA, tar is identified through visual observations of solid or mostly solid product materials and therefore cannot migrate in liquid form.

designed to account for and protect against tar migration. DNAPL observations are summarized in Section 3.1.

The active cap considered for managing dissolved organic compounds in groundwater may also require additional capacity for potential adsorption of mobile/migrating DNAPL identified within the interim Project Area. A summary of the DNAPL characteristics identified through review of all core and boring logs, examples of sediment caps that have been constructed at other sites with DNAPL, and results of an active cap that was constructed as part of the 2005 Removal Action in an area with observed DNAPL is provided in the following subsections.

3.1 Summary of DNAPL Observations in Interim Project Area

The amount of DNAPL observed in sediment samples was described as ranging from light sheen to observations of a higher amount of DNAPL in the sample (i.e., saturated sediment, liquid DNAPL, product, etc.). Liquid DNAPL was typically described in terms of color (black to brown) and relative viscosity (less viscous to viscous). Several lines of evidence suggest that DNAPL, although present in the interim Project Area, is not actively seeping or migrating to the surface of sediments or surface water. These lines of evidence include:

- Much of the DNAPL is located at depths below the top 3 feet of sediment, and has not been observed to migrate into the shallow sediment overlying the deeper DNAPL (i.e., areas are showing natural recovery and burial of DNAPL by incoming cleaner sediments; see Section 5.1 in the draft EE/CA).
- Unlike some other manufactured gas plant or creosote sites, seeps of DNAPL have not been observed along the Gasco Sediments Site shoreline in hundreds of site visits by various private and public entity staff over the last 15 years, even during inspections during periods of extreme low water.
- Widespread sheens (a common feature at sites that have ongoing underwater seeps and require sorbent capping) are not commonly observed at the Gasco Sediments Site. Some periodic and spotty sheens have been observed over the years along the shoreline at the Gasco and Siltronic property line. However, extensive documentation and photographic inspections of these sheens (Anchor QEA 2010) indicate these tend to be spotty (rather than continuous) in nature and most clearly related to periodic physical disturbance (such as wave action) of the shallow shoreline sediments rather than active unassisted migration.
- No DNAPL was observed in offshore piezometers installed at the Gasco Sediments Site.

- No DNAPL seepage has been observed into the hydraulic low spot developed just channelward of the 2005 Removal Action, an area of some of highest incidence of product observations prior to that removal. Long-term diver monitoring of this area was performed several times per year for four years with the express objective of visual monitoring for potential DNAPL seepage and no such seepage was identified.

Figure 3.0-1 depicts the locations where substantial product was identified within the interim Project Area. Only two cores (locations GTC-10 and C11-D) with DNAPL (designated as liquid substantial product on the figure) were identified in the Upstream (U) positive groundwater flux area. In all other areas within the substantial product boundary, the upland groundwater source control system will provide downwelling of groundwater away from the cap and surface water.

3.2 Summary of Sorbent Cap Placement at DNAPL Sites

Sorbent caps have been installed and have been functioning successfully, containing DNAPL at numerous sites (see Table 5.5.1.2-1 in the draft EE/CA). These sites have sediment DNAPL that is usually more mobile and migrates to shallow sediment and surface water to a greater extent than has been observed at the Gasco Sediments Site. Many of the sites listed in Table 5.5.1.2-1 of the draft EE/CA have used reactive core mats or bulk adsorbents. Consequently, both the conditions at the Gasco Sediments Site and experience at other sites, including within Portland Harbor at the McCormick and Baxter site, indicate that areas of DNAPL can be effectively capped using absorbent cap amendments or similar technologies.

Further evaluation of DNAPL mobility, potential migration rates, and sorbent capacity of candidate cap materials would be needed to confirm an appropriate sorbent cap design. Based on experience at other sites, it is likely the active cap for management of dissolved phase contaminants in groundwater could be supplemented to achieve both dissolved phase treatment and DNAPL containment consistent with the remedial action objectives.

3.3 Summary of Sorbent Cap Placed for 2005 Removal Action

A reactive core mat using organoclay was installed in a portion of the nearshore area addressed during the Early Action described in Section 2.2.5 of the draft EE/CA. The 2005 Removal Action Completion Report (Anchor 2006) contains a detailed description of the reasons why EPA required the placement of a reactive core mat along a small portion of the shoreline adjacent to

the 2005 Early Action remedial footprint and construction techniques. In summary, following removal along the toe of slope portion of the remedial footprint, some localized areas of DNAPL was encountered. Due to this finding, NW Natural installed a reactive core mat along the entire toe of slope removal area to minimize the potential migration of DNAPL to sediments and surface water. As part of 2005 Removal Action post-construction monitoring requirements, approximately monthly visual observations has been conducted of this portion of the shoreline from late 2005 to the present. This monitoring has shown that the reactive core mat has remained in place and controlled the releases of any potential sheen from the underlying sediment (i.e., no sheens were observed during post removal action monitoring).

3.4 Consolidation and Gas Ebullition-induced DNAPL Migration

Design of active caps intended to minimize DNAPL migration should also consider potential consolidation or gas ebullition-induced DNAPL migration. Per the matrix in Table 5.5.1.2-1 of the draft EE/CA, these are the primary two forces expected to cause a potential for upward migration of DNAPL through a cap. Given the DNAPL is heavier than water, by definition, upward movement due to density issues is not possible. The only other potential force for DNAPL migration would be upward groundwater movement through a cap. As described in Section 3.1, there are only two cores within the Upstream (U) upwelling area that contain DNAPL. The upland groundwater source control system will provide downwelling of groundwater away from the cap and surface water in throughout the remainder of the initial Project Area.

Consolidation-induced DNAPL mobilization is of most concern during and shortly after cap construction. Consolidation of fine-grained, cohesive sediment can occur in the short term following cap construction or in the longer term as sediment deposits over the area and increases the weight on top of the sediment (Ma et al. 2010). Cap construction occurs relatively rapidly and is controlled by placing the cap in multiple thin layers. The gradual application of weight allows for slow buildup and release of pore pressure, minimizing potential DNAPL mobilization. Longer-term consolidation associated with sedimentation is similarly unlikely to significantly mobilize DNAPL, because of slow increase and release of pore pressure. Per Table 5.5.1.2-1 in the draft EE/CA, caps have been successfully placed avoiding significant consolidation-induced DNAPL migration at numerous sites, indicating such caps can likely be designed at the Gasco Sediments Site. To determine exact cap requirements, remedial design would need to include modeling of consolidation under a cap based on laboratory

measurements of DNAPL properties and estimated consolidation properties of Gasco Sediments Site sediment.

Gas ebullition can mobilize DNAPL and result in movement of DNAPL vertically upward, contrary to the normal downward movement of the denser than water DNAPL. Gas bubbles form as a result of degradation of organic materials (Barabas et al. 2009) and vaporization of DNAPL constituents (Ma et al. 2010). Ebullition generally occurs in shallow sediments where temperatures are relatively higher, and pressures are relatively lower, both conditions conducive to sediment gas formation. Ebullition is dependent on sediment temperature (and therefore, to seasonal fluctuation) and hydrostatic pressure. Gas bubbles modify the sediment by increasing the porosity and creating channels for migration of bubbles that also transport DNAPL. As the gas bubble migrates through the sediment, DNAPL can adhere to the gas bubble surface and be transported to surface water. This mode of transport has been observed at sites such as Island End River in Boston Harbor in Massachusetts; the Pine Street Barge Canal in Burlington, Vermont; Stryker Bay in Duluth, Minnesota; and Bangor Landing in Bangor, Maine.

Gas ebullition has not been observed to extensively exist at the Gasco Sediments Site during the various long-term visual monitoring events and construction activities that have been completed. However, this potential DNAPL migration path should be considered an uncertainty until additional information can be collected during design to fully assess the potential for gas ebullition and associated DNAPL migration. As with consolidation-induced migration, caps have been successfully placed at DNAPL sites with gas ebullition, indicating such caps can likely be designed here even if ebuliation is identified as a pertinent factor. If the Gasco Sediments Site is found to have a high potential for this type of ebullition movement, the potential for DNAPL migration can be addressed in remedial design by including features such as gas venting under the cap or using permeable materials that allow passage of gas but capture DNAPL.

4 SUMMARY

One-dimensional models were used to simulate chemical transport within caps that are being evaluated for the Gasco Sediments Site interim Project Area as part of the draft EE/CA. A conservative approach for specifying model inputs was used; it included specification of maximum measured porewater/groundwater concentrations within the interim Project Area and use of model predictions (using conservative model input parameters) of groundwater velocities under future operation of the HC&C system based on conservative assumptions.

Results of steady-state modeling indicated that a 1-foot sand cap would be effective in meeting risk-based performance criteria at the cap's surface over a majority of the interim Project Area (i.e., the portion in which the HC&C system is expected to produce downward groundwater flux). Figure 5.4-1 of the draft EE/CA shows the two conceptual cap sections assumed. The Armored Cap B section has a minimum 1-foot sand cap and the Armored Class 200 section has a minimum 1.5-foot sand cap (i.e., 6-inch base cap and 12-inch filter layer). Transient modeling was used to estimate the sorptive capacity of 1-foot caps needed to meet criteria throughout a 100-year simulation period within the portions of the interim Project Area capping footprint that are predicted to contain upward groundwater flux. The model results indicated that these areas would require amended caps containing 6 to 10 lb/sf of organoclay.

DNAPL has been observed at variable depths within portions of the interim Project Area and only within one area exhibiting groundwater upwelling that will not be controlled by the upland groundwater source control system. Other potential DNAPL migration pathways at the Gasco Sediments Site include consolidation-induced and/or gas ebullition-induced DNAPL migration. There are number of cleanup site throughout the country and in Portland Harbor that have successfully placed active sediment caps that are designed to contain DNAPL migration through these pathways. The 2005 Removal Action included the placement of a reactive core mat at the Gasco Sediments Site with organoclay and long-term monitoring has shown the mat has remained in place and no sheen releases have been observed. The exact cap requirements for areas where these pathways may exist would be further evaluated during the remedial design.

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TABLES

Table 2-1
Input Parameter Values for the Chemical Isolation Cap Model

Input Parameters	Units	Contaminant						Data Sources/Notes
		PAHs		VOCs				
		BaP	Naph	Benzene	TCE	DCE	VC	
Contaminant Properties								
Organic Carbon Partition Coefficient, log K_{OC}	log L/kg	6.01	3.30	1.77	1.97	1.77	1.27	Appendix Hc of Anchor QEA 2012; EPA 1996 for TCE and DCE
Water Diffusivity, D_w	cm^2/s	6.13E-06	8.39E-06	1.03E-05	8.20E-06	1.04E-05	1.20E-05	
Cap Decay Rate, λ_1	yr^{-1}	0.02	0.07	0.35	0.15	1.46	0.35	Represents anaerobic rates; Anchor QEA 2012 (Appendix Hc); Howard et al. 1991 for TCE and DCE
Bioturbation Layer Decay Rate, λ_2	yr^{-1}	0.39	1.95	15.81	0.69	1.39	1.41	Represents aerobic rates; Anchor QEA 2012 (Appendix Hc); Howard et al. 1991 for TCE and DCE
Colloidal Organic Carbon Partition Coefficient, log K_{DOC}	log L/kg	5.31	3.00	NA	NA	NA	NA	Anchor QEA 2012 (Appendix Hc); sorption to DOC not simulated for VOCs
Colloidal Organic Carbon Concentration, r_{DOC}	mg/L	10	10	NA	NA	NA	NA	
Biological Active Zone fraction organic carbon, $(f_{oc})_{bio}$	%	2.0						Average calculated from 0-12" Gasco Sediments Site data
Mass Transport Properties								
Boundary Layer Mass Transfer Coefficient, k_{bl}	cm/hr	0.75						Anchor QEA 2012 (Appendix Hc)
Depositional Velocity, V_{dep}	cm/yr	0						
Bioturbation Layer Thickness, h_{bio}	cm	10						
Porewater Biodiffusion Coefficient, D_{bio}^{pw}	cm^2/yr	100						
Particle Biodiffusion Coefficient, D_{bio}^{p}	cm^2/yr	1						
Cap Properties								
Type of Cap Material	unitless	Granular						Anchor QEA 2012 (Appendix Hc)
Cap Consolidation Depth	cm	0						
Cap Porosity, e	unitless	0.4						
Cap Particle Density, ρ_P	g/cm^3	2.6						
Fraction Organic Carbon of Cap Material, $(f_{oc})_{eff}$	%	0.06						
Underlying Sediment Consolidation	cm	0 cm in downwelling areas; 16 cm in upwelling areas with 1-foot cap						For upwelling areas, consolidation depth was based on cap thickness as per Anchor QEA 2012 (Appendix Hc). For transient modeling, majority of consolidation assumed to occur within 1 year. For downwelling areas, assumed that hydraulic control system would counteract porewater migration due to consolidation.
Compliance Criteria								
Water Quality-based Criteria	µg/L	0.014	12	130	47	590	23400	Anchor QEA 2012 (Appendix Hc); Windward 2011
Sediment-based Criteria	µg/kg	1156	2000	-	-	-	-	

Notes:
µg/kg = micrograms per kilogram
cm/hr = centimeters per hour
cm/yr = centimeters per year
BaP = Benzo(a)pyrene
DCE = cis-1,2-Dichloroethene
DOC = dissolved organic carbon
NA = not applicable
Naph = Naphthalene
L/kg =
PAHs = polycyclic aromatic hydrocarbons
TCE = Trichloroethene
EPA = U.S. Environmental Protection Agency
VC = Vinyl chloride
VOCs = volatile organic compounds

Table 2-2
Results of Steady State Cap Modeling for Gasco Sediments Site

Area	Contaminant	Contaminant Porewater Concentration Beneath the Cap (µg/L)	Darcy Velocity Direction	Darcy Velocity (cm/yr)	Performance Criteria at Evaluation Depth*		Predicted Concentration at Evaluation Depth for 1-foot Cap*		Analytes Exceeding Criteria for 1-foot Cap
					Water Quality-based (µg/L)	Sediment-based (µg/kg)	Porewater (µg/L)	Sorbed Phase (µg/kg)	
Area 1 VOCs	Benzo(a)pyrene	11	Downwelling	-49	0.014	1,156	0.00002	0.39	None
	Naphthalene	67			12	2,000	0.02	0.75	
	Benzene	1.6			130	-	0.0010	0.001	
	TCE	0.2			47	-	0.0001	0.000	
	DCE	73			590	-	0.05	0.058	
	Vinyl chloride	19			23,400	-	0.03	0.01	
Area 2 VOCs	Benzo(a)pyrene	0.8	Downwelling	-49	0.014	1,156	0.000001	0.03	None
	Naphthalene	11200			12	2,000	3.1	125	
	Benzene	2550			130	-	1.5	1.8	
	TCE	29			47	-	0.01	0.01	
	DCE	570			590	-	0.39	0.46	
	Vinyl chloride	88			23,400	-	0.13	0.05	
Center (D)	Benzo(a)pyrene	170	Downwelling	-54	0.014	1,156	0.00020	4.0	None
	Naphthalene	7200			12	2,000	1.3	53	
	Benzene	560			130	-	0.23	0.27	
	TCE	25			47	-	0.00	0.01	
	DCE	29			590	-	0.01	0.02	
	Vinyl chloride	25			23,400	-	0.03	0.01	
Upstream (U)	Benzo(a)pyrene	22	Upwelling	69	0.014	1,156	**0.69**	**14,106**	Benzo(a)pyrene
	Naphthalene	678			12	2,000	**587**	**23,409**	Naphthalene
	Benzene	1.6			130	-	2.1	2.5	
	TCE	0.2			47	-	0.22	0.4	
	DCE	0.2			590	-	0.24	0.3	
	Vinyl chloride	0.8			23,400	-	0.91	0.3	
Downstream (U)	Benzo(a)pyrene	29	Upwelling	167	0.014	1,156	**2.1**	**43,927**	Benzo(a)pyrene
	Naphthalene	250			12	2,000	**243**	**9,701**	Naphthalene
	Benzene	42			130	-	46	54	
	TCE	0.3			47	-	0.27	0.5	
	DCE	0.2			590	-	0.26	0.3	
	Vinyl chloride	0.08			23,400	-	0.09	0.03	

Notes:

*Criteria evaluated at the bottom of the bioturbation layer at 10 cm

Bold values indicate model results above criteria

µg/L = micrograms per liter

µg/kg = micrograms per kilogram

cm/yr = centimeters per year

VOCs = volatile organic compounds

DCE = cis-1,2-Dichloroethene

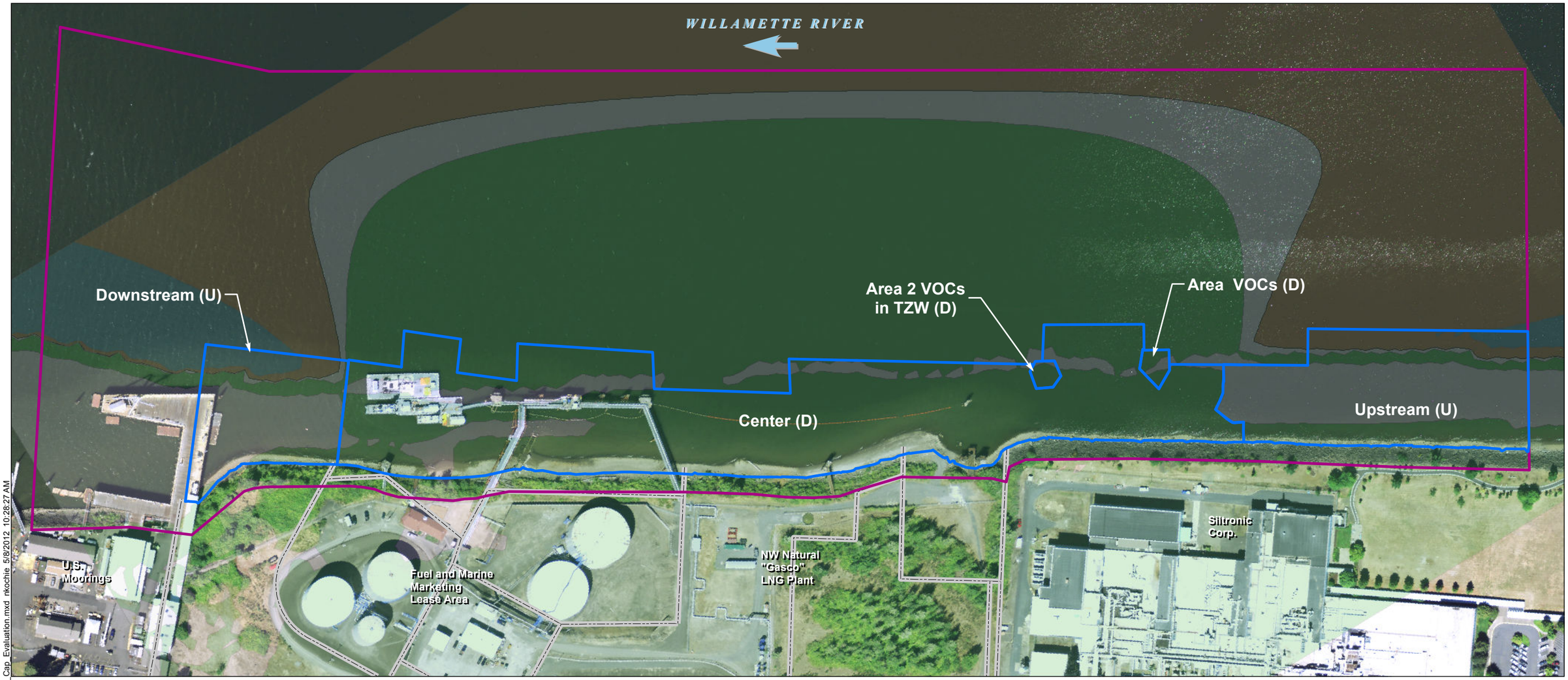
TCE = Trichloroethene

Table 2-3
Results of Transient Cap Modeling for Gasco Sediments Site

Modeling Area	Transient Model Results for 1-foot Cap						
	Driving Contaminant	Darcy Velocity (cm/yr)	Performance Criteria	Evaluation Depth (cm)	Required foc (%)	Equivalent Organoclay (%)	Organoclay Loading (lb/sf)
Upstream (U)	Naphthalene	69	Porewater	1	20%	8%	5
			Sorbed Phase	10	25%	10%	6
Downstream (U)		167	Porewater	1	40%	15%	10
			Sorbed Phase	10	40%	15%	10

Notes:
cm = centimeters
cm/yr = centimeters per year
foc = fraction organic carbon
lb/sf = pounds per square foot

FIGURES



Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])

Cap Modeling Areas

Groundwater fluxes

- flux from river to groundwater
- flux to river with velocity less than <10^(-6) cm/s
- flux to river with velocity >10^(-6) cm/s, but <10^(-5) cm/s
- flux to river with velocity >10^(-5) cm/s

NOTES:
1. Arrow indicates direction of flow of river.
2. Aerial imagery from July 2007.

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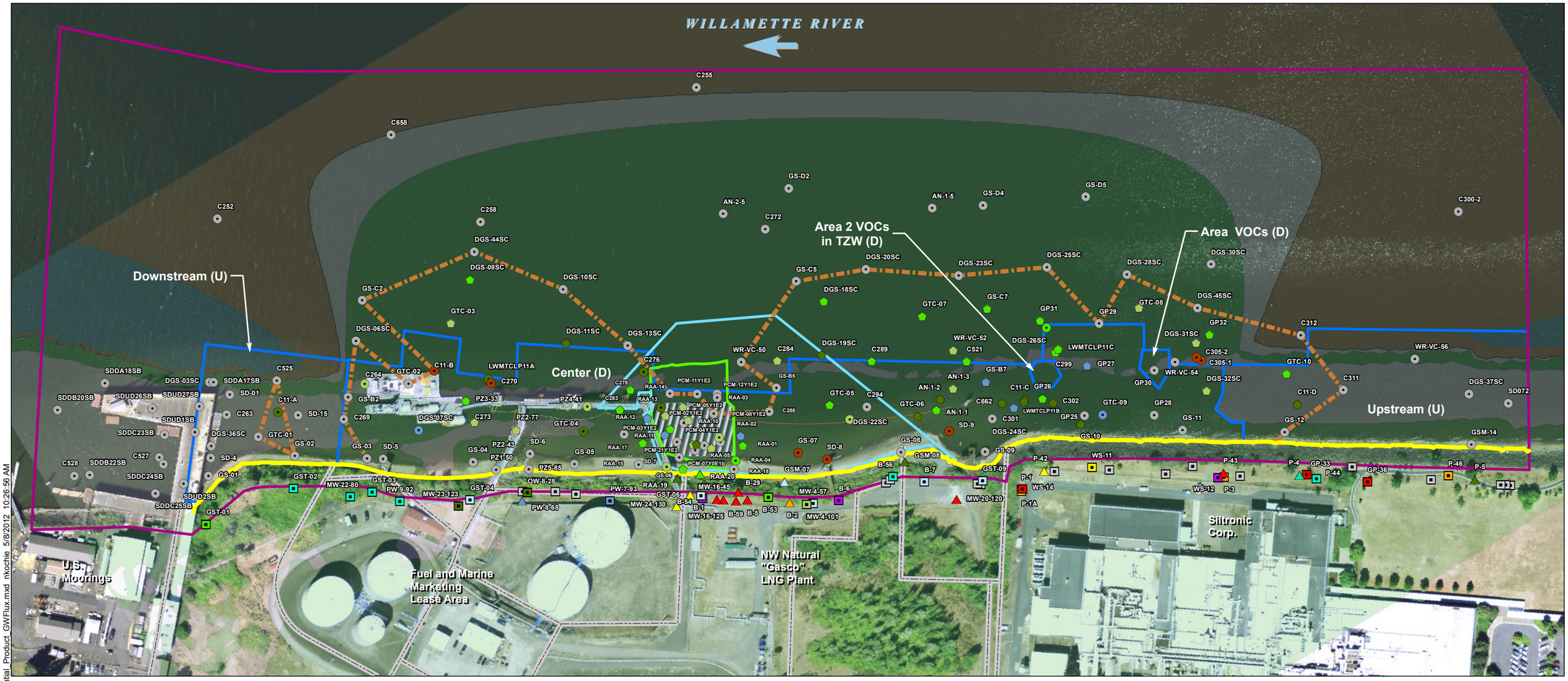
ANCHOR QEA

Feet
0 100 200 300 400

Figure 2-1
Delineation of Modeling Areas for Cap Evaluation
Draft Evaluation of Isolation Cap Effectiveness
Gasco Sediments Cleanup Action



- Sediment Coring Location
- Core with Liquid Substantial Product
- Shoreline Soil Boring Location
- Boring with Potential Mobile Product
- Inconclusive Substantial Product
- No Substantial Product
- Substantial Product from 0-4 feet Below Mudline
- Substantial Product from 4-8 feet Below Mudline
- Substantial Product from 8-12 feet Below Mudline
- Substantial Product from 12-16 feet Below Mudline
- Substantial Product from 16-20 feet Below Mudline
- Substantial Product from 20-24 feet Below Mudline
- Substantial Product from 24-28 feet Below Mudline
- Substantial Product from 28-32 feet Below Mudline
- Substantial Product from 32-36 feet Below Mudline
- Substantial Product >36 feet Below Mudline

- Gasco Sediment Site Area of Interest (Final Work Plan [Anchor QEA 2009])
- Substantial Product Area
- Tar Body Removal Action 6-inch Fringe Cover Placement
- Tar Body Removal Action Area (RAPP [Anchor 2005])
- Tar Body Removal Action Pilot Cap
- Boundary of EPA Managed Sediments and DEQ Managed Uplands – 13 feet NAVD88

- Cap Modeling Areas

Groundwater fluxes

- flux from river to groundwater
- flux to river with velocity less than <10^(-6) cm/s
- flux to river with velocity >10^(-6) cm/s, but <10^(-5) cm/s
- flux to river with velocity >10^(-5) cm/s

NOTES:
1. Arrow indicates direction of flow of river.
2. Horizontal datum is NAD83 HARN Oregon State Plane North, Intl. Feet.
3. Vertical datum is NAVD88.
4. Aerial imagery from July 2007.
5. Review of the core logs at the locations designated as Inconclusive Substantial Product provided insufficient information to confirm the presence of substantial product using the definition in the Statement of Work (e.g., stained sediments noted in an interval but no thickness provided).
6. The designated depths of substantial product are the deepest depth of substantial product observed in the core/boring log. Shallower depths may not contain substantial product.
7. Locations designated as containing liquid substantial product contain liquid substantial product in at least one depth interval. These locations may also contain non-liquid substantial product and the shown deepest depth interval designation may be driven by either liquid substantial or non-liquid substantial product.
8. Per the SOW, the definition of substantial product does not apply landward of the top of the riverbank. The shown top of riverbank borings were screened against the SOW substantial product definition solely to support evaluation of substantial product in the riverbank.

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Feet
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Figure 3-1
Substantial Product Locations Relative to Modeled Groundwater Flux Areas
Draft Evaluation of Isolation Cap Effectiveness
Gasco Sediments Cleanup Action

APPENDIX J
DRAFT REMEDIAL ALTERNATIVES PROBABLE COST SUMMARY

DRAFT

APPENDIX J
REMEDIAL ALTERNATIVES PROBABLE COST SUMMARY

DRAFT ENGINEERING EVALUATION/COST ANALYSIS

GASCO SEDIMENTS CLEANUP ACTION

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May 2012

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Figure 2-1 Typical Armored Cap Sections

LIST OF ACRONYMS AND ABBREVIATIONS

3H:1V	3Horizontal:1Vertical
CAD	Confined Aquatic Disposal
CDF	Confined Disposal Facility
cy	cubic yards
DSL	Oregon State Department of Lands
EE/CA	Engineering Evaluation/Cost Analysis
ft^2	square feet
MNR	Monitored Natural Recovery
SES	Sevenson Environmental Service
Sub-SMA	Sub-Sediment Management Area
USEPA	U.S. Environmental Protection Agency

1 PURPOSE AND ORGANIZATION

This appendix presents the tools and approaches that were used to develop opinion of probable sediment remediation cost estimates for the draft Engineering Evaluation/Cost Analysis (EE/CA) alternatives. Consistent with the EE/CA, all costs provided in the tables and text of this appendix will be based on a net present value analysis, unless otherwise explicitly stated.

U.S. Environmental Protection Agency (USEPA) guidance (2000) was followed to develop the cost estimates. This guidance was supplemented with professional judgment where appropriate in estimating daily costs and production rates. Sevenson Environmental Services (SES), which completed the 2005 Removal Action, prepared the cost estimate. Professional judgment drew on recently completed Portland area projects including the Gasco 2005 Removal Action (Anchor 2006), and Terminal 4 Phase I Removal Action (Anchor Environmental 2008). The cost work was completed consistent with the Portland Harbor Site draft Feasibility Study (Portland Harbor draft FS) (Anchor QEA 2012) whenever possible. In providing opinions of probable construction cost, there is no control over the cost or availability of labor, equipment or materials, or over market condition or the Contractor's method of pricing, and opinions of probable construction costs are made on the basis of professional judgment and experience.

Table 1-1 shows the total net present value cost by alternative. All costs are present day costs except for long-term monitoring and maintenance costs, which are net present value costs. Table 1-2 shows quantities and provides discounted and non-discounted costs by alternative. Table 1-3 presents the detailed probable cost estimate prepared by SES. Two costs are prepared for each alternative reflecting the high and low removal volumes, with the exception of Alternative 2a which includes no removal.

The remainder of this appendix discusses the method for building up unit costs for the different construction elements.

It should be noted that the technologies presented in the cost estimate are representative of possible technologies that will eventually be implemented. As final design proceeds and more site specific information is gathered, the selected technologies will be refined.

2 UNIT COST DEVELOPMENT

This section presents the following:

- Construction tasks used as the basis for developing costs
- Methods used for developing quantities for the different construction tasks
- Cost approach used for each construction task

2.1 Construction Tasks

There are a number of common tasks for all of the cost estimates, as well as construction tasks specific to each unique remediation technology. This section describes both the common and unique construction tasks.

2.1.1 Direct and Indirect Cost Elements

The costs are broken into direct and indirect construction tasks. The common elements that are used to build up the cost estimates are as follows:

2.1.1.1 Direct Construction Tasks

- **Mobilization/demobilization:** The costs associated with mobilizing and demobilizing personnel and equipment is assumed to be a lump sum estimate based on professional experience.
- **Specific technology:** Subsection 2.1.2 describes each technology, the tasks required, and the associated costs in more detail.
- **Mitigation**: In areas where the surface elevation and/or texture are modified from the existing condition due to remedial actions, there may be a mitigation cost associated with the modification. The 404 of the EE/CA discusses the anticipated mitigation acreage ranges based on work done in the Portland Harbor draft FS (Anchor QEA 2012). Based on this review anticipated mitigation acreages are predicted to range from 0.4 to 1.8 acres. The Portland Harbor draft FS (Anchor QEA 2012) estimated mitigation cost ranges from $350,000 to $2.2 million per acre. Therefore, the potential range of mitigation costs used for this EE/CA ranges from $150,000 to $4 million.

2.1.1.2 Indirect Construction Tasks

- **Project management and design**. The costs associated with completing the remedial

design are assumed to be 5 percent of the direct construction costs.

- **Construction management and daily oversight.** During construction, personnel and equipment will be required to monitor the construction activities for quality assurance. Staffing is assumed to include an office project manager, support staff, and four field representatives (one field manager and three technicians). Costs are assumed to be 3 percent of the direct construction costs.
- **Daily agency oversight and project management**. USEPA will also be providing oversight to monitor personnel and equipment during construction. Costs are estimated from historical agency oversight costs experienced by Lower Willamette Group (LWG) to date. Costs are assumed to be 5 percent of the direct construction costs.
- **Engineering support during construction.** During construction, personnel will be required to provide engineering support as issues arise and to support the construction management. Staffing is assumed to cover an office project engineer and support and a resident engineer and support. Costs are assumed to be a lump sum based on professional experience.
- **Special insurance and bonding.** The costs associated with special insurance and bonding are assumed to be 2 percent of the direct construction costs.

2.1.1.3 *Contingency*

EPA (2000) states that contingencies for alternatives screening and/or detailed analysis of alternatives can be as high as 50 percent. This EE/CA assumes a contingency of 25 percent of the total direct construction costs.

2.1.1.4 *Long-term Monitoring and Maintenance*

Each technology has an assumed unique cost needed for long-term monitoring of that technology. Long-term maintenance costs are developed for appropriate technologies. Long-term monitoring and maintenance assumptions include the following:

- Monitoring for monitored natural recovery (MNR) and engineered caps occurs in years 1 through 10, 15, 20, 25, and 30
- Monitoring for dredge areas occurs in years 1 through 5, 10, 15, 20, 25, and 30
- Long-term maintenance of 5 percent of the total cap areas in years 5 and 10 after construction
- Long-term maintenance of 5 percent of the MNR area with 50 percent of the area being covered with an engineered cap

2.1.2 *Specific Technology Cost Elements*

Six different technologies were evaluated for cost including:

- Monitored natural recovery[1]
- Enhanced monitored natural recovery
- Engineered cap
- Engineered active capping
- In situ treatment
- Full removal and residuals cover
- Partial removal and engineered cap
- Disposal

2.2 Quantity Estimates for Each Construction Task

Quantities were determined for each of the technologies using the following approaches:

- **Capping**: Volumes and weights are determined assuming the different typical sections presented in Figure 2-1 multiplied by the corresponding area of the Sub-Sediment Management Area (Sub-SMA) in question. Allowances for overplacement are presented in Figure 2-1. Confined and/or underpier areas are differentiated from open water areas by physical characteristics. Final cap sections and extents will be refined as part of final design.
- **Dredging and Disposal**: Methods of volume determination area discussed in Section 4.7 of the EE/CA. Confined areas or areas with water-side access were differentiated from open water areas by physical characteristics. As discussed in more detail below, the assumed process option for residuals management is one additional pass and placement of a residuals cover. Other process option assumptions for residuals management, such as multiple cleanup passes, could significantly affect volumes, dredging duration, and overall costing approaches in this appendix.

[1] There are no construction-related direct costs associated with MNR.

2.3 Cost Approach for Each Construction Task

Material prices were obtained from vendors or suppliers. Unit prices are developed by taking the ratio of daily construction costs to the daily production rates. Daily construction costs are developed from the following sources:

- Material pricing obtained from local vendors and suppliers
- Estimates from similar projects
- Professional experience

Estimated daily production rates are based on professional judgment and site conditions (such as water depth, site access, dredge cuts, or cap thicknesses).

Specific assumptions used to develop costs for each technology are presented in the following subsections.

2.3.1 Monitored Natural Recovery

The costs associated with MNR are for long-term monitoring as there are no construction costs. Long-term monitoring net present value costs were developed using the monitoring types, event frequencies, and number of samples presented in Section 2.1.1 above.

2.3.2 Capping

Direct construction costs for capping were developed using the following assumptions:

- Armor cap material varies depending on the level of erosive force the cap is resisting (Figure 2-1 shows the different types of armoring)
- Base cap material is placed mechanically
- Armor material is placed mechanically
- No physical water quality control measures are assumed to be needed during cap placement, but operational BMPs are included in the production rates
- Equipment needed is assumed to consist of derrick rig and clam bucket, material scow, tug, and work boats
- Capping long-term monitoring net present value costs are developed using the parameters presented in section 2.1.1 above

Final cap sections and extents will be determined as part of final design.

2.3.3 Active Capping

The assumptions used to develop the direct construction costs for active capping are almost identical to the capping costs presented above. The only difference is the placement of an organoclay mat prior to cap placement or mixture of bulk organoclay in the base cap material. Assumptions used for the organoclay placement are:

- Debris removal will take place prior to mat placement
- Active capping long-term monitoring net present value costs are developed using the parameters presented in Appendix T of the Portland Harbor draft FS (Anchor QEA 2012)

The actual amounts and types of materials used in active caps will be determined as part of final design.

2.3.4 Full Removal and Residuals Cover

Direct construction costs for dredging are developed using the following assumptions:

- Debris within the dredge area will be removed prior to dredging.
- Piling or floating docks (i.e., light structures) within the dredge area will be removed prior to dredging and placed back after dredging. For Alternative 5, costs associated with demolition and replacing the existing heavy pier structure are included.
- Alternative 5 includes the removal and replacement of the Gasco dock as well as installation of a rigid containment barrier (i.e., sheetpile wall).
- Silt curtains or sheetpile water quality control structures are used as discussed in the EE/CA for certain alternatives in addition to operational BMPs are included in the production rates provided below.
- Dredging will be completed with a clamshell bucket.
- Residuals management for the cost estimate is assumed to include one additional 6-inch residuals dredge pass and a 6-inch residuals cover over dredge areas where dredge cuts are equal to the full depth of impact. Where dredge cuts are less than the full depth of impact, an engineered cap is assumed to be constructed.
- Dredged material will be placed onto a barge and hauled to a centrally located offloading facility (for transloading to upland disposal facility transportation) or to an in-water combined disposal facility (CDF) located within Portland Harbor.

- Equipment needed is assumed to consist of a derrick rig and clam bucket, material scow, and work boat.

Removal long-term monitoring net present value costs are developed using the parameters presented in section 2.1.1 above.

2.3.5 Partial Removal and Engineered Cap

Direct construction costs for partial removal and engineered cap are developed using the following assumptions:

- For removal-related activities, all of the direct removal cost assumptions described in Section 2.3.4 apply.
- For capping-related activities, all of the direct removal cost assumptions described in Section 2.3.2 apply.

Removal and capping long-term monitoring net present value costs are developed using the parameters presented in section 2.1.1 above.

2.3.6 Disposal

A range of disposal options for both upland and in-water are presented to bracket the likely costs for disposal of sediments. Upland disposal estimates assume sediment offloading at a) transload facility outside of the harbor, similar to what was used in the Gasco Time Critical Removal Action (Gasco TCRA). Although this approach is different than assumed in the Portland Harbor draft FS, the costs should be comparable to the Portland Harbor draft FS approach of using a centrally located transload facility with rail shipment.
The upland disposal costs will be based on the following assumptions:

- A Subtitle D transportation and disposal.
- In limited cases, Subtitle C transportation and disposal.

As an EECA level assumption, in-water disposal costs use the CDF costs presented in Appendix K of the Portland Harbor draft FS (Anchor QEA 2012). This assumption will be revised in remedial design to explore the potential alternatives to CDF disposal including confined aquifer disposal (CAD).

2.4 Institutional Controls

As stated in Section 6.3.9 of the EE/CA, a detailed institutional control plan is not proposed, because there are too many design level issues to integrate at the EE/CA level. Consequently, institutional control costs were estimated based on Appendix K of the Portland Harbor draft FS (Anchor QEA 2012).

3 REFERENCES

Anchor Environmental, 2006. *Removal Action Completion Report*. Removal Action NW Natural "Gasco" Site. Prepared for NW Natural. April 2006.

Anchor Environmental, 2008. *Removal Action Closure Report*. Terminal 4 Phase I Removal Action. Prepared for Port of Portland. December 2008.

Anchor QEA, 2012. *Feasibility Study*. Portland Harbor RI/FS, Feasibility Study. Prepared for The Lower Willamette Group. March 2012.

EPA (U.S. Environmental Protection Agency), 2000. *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study*. OSE 9355.0-75. EPA 540/R-00/002. July 2000.

TABLES

Table 1-1
Summary of Probable Costs for the
Gasco Sediments Site Remedial Alternatives

Alternative	Total Direct and Indirect Construction Costs, and Contingency		Institutional Controls ($M)	Long Term Monitoring and Maintenance ($M)	Total Net Present Value Costs [3]	
	Low ($M) [1]	High ($M) [2]			Low ($M)	High ($M)
1	0	0	0	0	0	0
2a	23	28	1	10	34	40
2b	62	111	1	10	73	123
3	80	140	1	10	92	152
4	121	190	1	12	134	202
54	239	343	1	6	245	350

Notes:

[1] = Assumes Habitat Mitigation Costs are $150,000.

[2] = Assumes Habitat Mitigation Costs are $4,000,000.

[3] = Net Present Value Costs are the sum of the Discounted Direct and Indirect Construction Costs , Contingency Costs, Long Term Monitoring and Maintenance, and Institutional Controls.

[4] = These costs include sheetpile wall construction, and demolition/replacement of the existing heavy pier structure.

Table 1-2
Summary of Quantities and Costs

Dredge Quantities

Alternative	Cost SubAlt	Dredge Volume (cubic yards [cy]) (1)			Residuals Dredge Volume (cy) (2)	Disposal (cy)			
		Riverbank Materials	In-water Materials	Total		Subtitle C	Subtitle D	CDF or CAD	TOTAL
2a	Low	0	0	0	0	0	0	0	0
	High	0	0	0	0	0	0	0	0
2b	Low	0	164,000	164,000	13,000	6,000	0	171,000	176,000
	High	0	220,000	220,000	13,000	7,000	226,000	0	233,000
3	Low	0	193,000	193,000	13,000	5,000	79,000	123,000	206,000
	High	0	259,000	259,000	13,000	60,000	212,000	0	272,000
4	Low	15,000	255,000	270,000	16,000	29,000	161,000	97,000	286,000
	High	15,000	350,000	365,000	16,000	95,000	285,000	0	380,000
5(3)	Low	69,000	420,000	489,000	31,000	65,000	195,000	259,000	519,000
	High	69,000	542,000	611,000	31,000	135,000	506,000	0	641,000

Engineered Cap Quantities

Alternative	Non-Wave Zone Engineered Cap Area (acres) (4)	Wave Zone Engineered Cap Area (acres) (5)	Total Removal and Cover Area (acres)	Base Cap (tons)	Filter Layer (tons)	Cap B Armor (tons)	ODOT 200 (tons)	Residuals Cover (tons) (6)
2a	4	4	0	23,000	16,000	9,000	26,000	0
2b	4	4	8	23,000	16,000	9,000	26,000	10,000
3	4	4	8	24,000	16,000	9,000	27,000	10,000
4	5	5	9	28,000	20,000	11,000	34,000	12,000
5	1	1	19	8,000	6,000	3,000	9,000	23,000

Riverbank Engineered Cap and Armor Quantities

Alternative	Riverbank Engineered Cap Area (8) (acres)	Base Cap (tons)	Filter Layer (tons)	ODOT 200 (tons)	Backfill (9) (tons)
2a	0	0	0	0	0
2b	0	0	0	0	0
3	0	0	0	0	8,000
4	1	2,000	3,000	4,000	41,000
5	2	6,000	11,000	17,000	254,000

Riverbank Geomembrane Material Quantities

Alternative	Riprap and Debris/Vegetation Removal (acres)	Geomembrane Placement (square feet)	Bedding Sand - 1 foot thick (tons)	Filter Sand - 1 foot thick (tons)
2a	2	88,700	5,000	5,000
2b	2	88,700	5,000	5,000
3	2	90,800	6,000	6,000
4	2	107,300	6,000	6,000
5	3	142,700	8,000	8,000

Active Capping Treatment Material Quantities

Alternative	Organoclay Mat Area (square feet)	Underpier Bulk Organoclay (tons) (10)	Non-underpier Bulk Organoclay Coverage in Square Feet	Non-Underpier Bulk Organoclay (tons) (11)
2a	50,000	4	101,000	388
2b	50,000	4	101,000	388
3	1,300	4	101,000	390
4	1,300	4	116,000	375
5	0	0	58,000	153

Import Material Quantity Assumptions

Engineered Cap in Wave Zone - ODOT 200				Engineered Cap in Non-Wave Zone - Armor Cap B			
	Base Sand Layer	Filter Layer (7)	Armor Layer		Base Sand Layer	Filter Layer	Armor Layer
Thickness (ft)	1	1.5	2.5	Thickness (ft)	1.50	0.00	0.75
tons/cy	1.5	1.8	1.8	tons/cy	1.50	1.50	1.80

Notes:
[1] = Using the LWG Preferred Method for determining dredge volumes
[2] = Residuals dredge volume assumes one, 12-inch dredge pass in dredge and cover areas only.
[3] = Percentage within sheetpile wall:
Bank Material: Aprroximately 95%, all bank volume is inside the sheetpile wall boundary, with the exception of the volume Bank Material near Cross Section E-E'.
Non-Bank Material: 30% - this includes all sub-SMAs in Open Water, Limited Access, and Under Structure Areas (all areas inside the sheetpile footprint).
[4] = Armored Cap B section
[5] = Armored Cap Class 200 section
[6] = Residuals cover volume assumes a 6-inch cover.
[7] = Same Gradation as armor Layer of Armored Cap B
[8] = Engineered Cap Quantites are calculated estimated using the area between the crest of the slope (typically El. +30) and the edge of the project boundary (El. +13).
[9] = Backfill quantities generally assume a 3H:1V grade from the crest of the existing slope, extending down to the base of the dredge prism. Backfill quantities assume 1.5 Tons per cubic yard. Engineered Capping for sideslopes below El. 13 is included in the non-bank area.
[10] = Assumes 1.6 pouds per square foot application rate.
[11] = Assumes 5 pounds/square foot application rate at Siltronics; 10 pounds/square foot application rate at Gasco

Table 1-3
Summary of Contractor Remedial Alternative Probable Cost Estimates

Task		Alternative 2a		Alternative 2b		Alternative 3		Alternative 4		Alternative 5	
		Low Cost Option	High Cost Option	Low Cost Option	High Cost Option	Low Cost Option	High Cost Option	Low Cost Option	High Cost Option	Low Cost Option	High Cost Option
Direct Construction Costs[1]											
1 **Mobilization/Demobilization**											
Mobilization/Demobilization		$ 3,368,000	$ 3,368,000	$ 4,490,000	$ 4,490,000	$ 5,613,000	$ 5,613,000	$ 5,613,000	$ 5,613,000	$ 6,735,000	$ 6,735,000
Site Preparation		$ 159,000	$ 159,000	$ 159,000	$ 159,000	$ 159,000	$ 159,000	$ 159,000	$ 159,000	$ 159,000	$ 159,000
Survey and Grade Control		$ 91,000	$ 91,000	$ 91,000	$ 91,000	$ 91,000	$ 91,000	$ 91,000	$ 91,000	$ 91,000	$ 91,000
Contractor Work Plans		$ 164,000	$ 164,000	$ 164,000	$ 164,000	$ 164,000	$ 164,000	$ 164,000	$ 164,000	$ 164,000	$ 164,000
	Subtotal	**$ 3,782,000**	**$ 3,782,000**	**$ 4,904,000**	**$ 4,904,000**	**$ 6,027,000**	**$ 6,027,000**	**$ 6,027,000**	**$ 6,027,000**	**$ 7,149,000**	**$ 7,149,000**
2 **Overwater Structure, Pile, and Miscellaneous Structure Work**											
Catwalk removal & replacement		$ -	$ -	$ 253,000	$ 253,000	$ 253,000	$ 253,000	$ 253,000	$ 253,000	$ -	$ -
Miscellaneous structure demo allowance		$ 100,000	$ 100,000	$ 253,000	$ 253,000	$ 253,000	$ 253,000	$ 253,000	$ 253,000	$ -	$ -
Full Pier Demo		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,121,000	$ 1,121,000
Full Pier Rebuild		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 9,647,000	$ 9,647,000
	Subtotal	**$ 100,000**	**$ 100,000**	**$ 506,000**	**$ 506,000**	**$ 506,000**	**$ 506,000**	**$ 506,000**	**$ 506,000**	**$ 10,768,000**	**$ 10,768,000**
3 **Stormwater and Outfall Structure(s) Stabilization During Construction**											
Stabilization of Siltronic's outfall		$ 98,000	$ 98,000	$ 98,000	$ 98,000	$ 98,000	$ 98,000	$ 98,000	$ 98,000	$ 98,000	$ 98,000
Stabilization of Gasco outfall		$ 52,000	$ 52,000	$ 52,000	$ 52,000	$ 52,000	$ 52,000	$ 52,000	$ 52,000	$ 52,000	$ 52,000
	Subtotal	**$ 150,000**	**$ 150,000**	**$ 150,000**	**$ 150,000**	**$ 150,000**	**$ 150,000**	**$ 150,000**	**$ 150,000**	**$ 150,000**	**$ 150,000**
4 **Dredging & Disposal**											
Open Water Dredging		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mechanical Dredging		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
No Bulkhead		$ -	$ -	$ 11,316,000	$ 15,180,000	$ 13,317,000	$ 17,871,000	$ 17,595,000	$ 24,150,000	$ -	$ -
Inside Bulkhead		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,183,000	$ 23,702,000
Outside Bulkhead		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,286,000	$ 26,427,000
Residual Dredging		$ -	$ -	$ 1,278,000	$ 1,278,000	$ 1,325,000	$ 1,325,000	$ 1,656,000	$ 1,656,000	$ 3,209,000	$ 3,209,000
Shoreline Excavation		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Long-Reach Excavator Removal From Land		$ -	$ -	$ -	$ -	$ -	$ -	$ 570,000	$ 570,000	$ 2,622,000	$ 2,622,000
Stabilization		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Dredging and Shoreline Material		$ -	$ -	$ 486,000	$ 18,873,000	$ 6,804,000	$ 22,032,000	$ 15,390,000	$ 30,726,000	$ 21,141,000	$ 51,921,000
Transport & Disposal Subtitle C Landfill		$ -	$ -	$ 1,566,000	$ 1,827,000	$ 1,305,000	$ 15,660,000	$ 7,569,000	$ 24,795,000	$ 16,965,000	$ 35,235,000
Transport & Disposal Subtitle D Landfill		$ -	$ -	$ -	$ 17,289,000	$ 6,044,000	$ 16,218,000	$ 12,317,000	$ 21,777,000	$ 14,994,000	$ 38,709,000
Portland Harbor CDF/CAD Pump out		$ -	$ -	$ 2,052,000	$ -	$ 1,476,000	$ -	$ 1,140,000	$ -	$ 3,108,000	$ -
Portland Harbor CDF/CAD Disposal Fee		$ -	$ -	$ 7,695,000	$ -	$ 5,535,000	$ -	$ 4,275,000	$ -	$ 11,655,000	$ -
Water Quality Control Measures		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Install and Remove Silt Curtains - 5 - Foot		$ -	$ -	$ 198,000	$ 198,000	$ 198,000	$ 198,000	$ 198,000	$ 198,000	$ 198,000	$ 198,000
Install and Remove Hard Structures (AZ Sheetpile)		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,854,000	$ 10,854,000
	Subtotal	**$ -**	**$ -**	**$ 24,591,000**	**$ 54,645,000**	**$ 36,004,000**	**$ 73,304,000**	**$ 60,710,000**	**$ 103,872,000**	**$ 125,215,000**	**$ 192,877,000**
5 **Capping**											
Open Water Cap											
Purchase Dredging Residuals Sand Cover 6"		$ -	$ -	$ 269,000	$ 269,000	$ 279,000	$ 279,000	$ 322,000	$ 322,000	$ 667,000	$ 667,000
Place 6" Sand Cover after Dredging		$ -	$ -	$ 260,000	$ 260,000	$ 269,000	$ 269,000	$ 311,000	$ 311,000	$ 644,000	$ 644,000
Non Wave Zone Purchase Base Cap Sand		$ 401,000	$ 401,000	$ 406,000	$ 406,000	$ 419,000	$ 419,000	$ 489,000	$ 489,000	$ 136,000	$ 136,000
Non Wave Zone Place Base Cap Sand		$ 387,000	$ 387,000	$ 392,000	$ 392,000	$ 405,000	$ 405,000	$ 472,000	$ 472,000	$ 132,000	$ 132,000
Non Wave Zone Purchase Cap Filter Layer		$ 274,000	$ 274,000	$ 277,000	$ 277,000	$ 287,000	$ 287,000	$ 334,000	$ 334,000	$ 93,000	$ 93,000
Non Wave Zone Place Cap Filter Layer		$ 274,000	$ 274,000	$ 277,000	$ 277,000	$ 287,000	$ 287,000	$ 334,000	$ 334,000	$ 93,000	$ 93,000
Wave Zone Purchase Base Cap Sand		$ 246,000	$ 246,000	$ 248,000	$ 248,000	$ 257,000	$ 257,000	$ 321,000	$ 321,000	$ 83,000	$ 83,000
Wave Zone Place Base Cap Sand		$ 285,000	$ 285,000	$ 287,000	$ 287,000	$ 298,000	$ 298,000	$ 372,000	$ 372,000	$ 96,000	$ 96,000
Zone Purchase Cap Filter Layer		$ 504,000	$ 504,000	$ 506,000	$ 506,000	$ 527,000	$ 527,000	$ 657,000	$ 657,000	$ 169,000	$ 169,000
Wave Zone Place Cap Filter Layer		$ 604,000	$ 604,000	$ 608,000	$ 608,000	$ 632,000	$ 632,000	$ 789,000	$ 789,000	$ 202,000	$ 202,000
Purchase Cap Amor Stone Class 200		$ 1,296,000	$ 1,296,000	$ 1,304,000	$ 1,304,000	$ 1,356,000	$ 1,356,000	$ 1,693,000	$ 1,693,000	$ 434,000	$ 434,000
Place Armor Stone		$ 1,093,000	$ 1,093,000	$ 1,099,000	$ 1,099,000	$ 1,143,000	$ 1,143,000	$ 1,427,000	$ 1,427,000	$ 366,000	$ 366,000
Purchase Organoclay Mat 0.8 lbs/sf		$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 6,000	$ 6,000	$ 6,000	$ 6,000	$ -	$ -
Place Organoclay Mat		$ 350,000	$ 350,000	$ 350,000	$ 350,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ -	$ -
Under Pier Caps											
Purchase Cap Sand Cover 6" with Mixed Bulk Organoclay 1.5lbs/sf		$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ 116,000	$ -	$ -
Place Cap Sand and Blended Organoclay Under Pier		$ 76,000	$ 76,000	$ 76,000	$ 76,000	$ 76,000	$ 76,000	$ 76,000	$ 76,000	$ -	$ -
Purchase Fine Gravel 1.5" Stone (same as Filter Layer)		$ 33,000	$ 33,000	$ 33,000	$ 33,000	$ 33,000	$ 33,000	$ 33,000	$ 33,000	$ -	$ -
Place Fine Gravel		$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ -	$ -
Membrane on Slope											
Membrane Liner		$ 178,000	$ 178,000	$ 178,000	$ 178,000	$ 182,000	$ 182,000	$ 215,000	$ 215,000	$ 285,000	$ 285,000

Table 1-3
Summary of Contractor Remedial Alternative Probable Cost Estimates

Task		Alternative 2a		Alternative 2b		Alternative 3		Alternative 4		Alternative 5	
		Low Cost Option	High Cost Option	Low Cost Option	High Cost Option	Low Cost Option	High Cost Option	Low Cost Option	High Cost Option	Low Cost Option	High Cost Option
Membrane Bedding Sand		$ 171,000	$ 171,000	$ 171,000	$ 171,000	$ 206,000	$ 206,000	$ 206,000	$ 206,000	$ 274,000	$ 274,000
Membrane Filter Sand		$ 171,000	$ 171,000	$ 171,000	$ 171,000	$ 206,000	$ 206,000	$ 206,000	$ 206,000	$ 274,000	$ 274,000
River Bank Restoration											
Purchase Base Cap (Sand)		$ -	$ -	$ -	$ -	$ -	$ -	$ 58,000	$ 58,000	$ 174,000	$ 174,000
Place base Cap Sand		$ -	$ -	$ -	$ -	$ -	$ -	$ 28,000	$ 28,000	$ 84,000	$ 84,000
Purchase Base Cap Armor/Filter 1.5" Stone		$ -	$ -	$ -	$ -	$ -	$ -	$ 99,000	$ 99,000	$ 363,000	$ 363,000
Place Base Cap Armor/Filter		$ -	$ -	$ -	$ -	$ -	$ -	$ 50,000	$ 50,000	$ 182,000	$ 182,000
Purchase ODOT Class 200 Stone		$ -	$ -	$ -	$ -	$ -	$ -	$ 204,000	$ 204,000	$ 867,000	$ 867,000
Place ODOT Class 200 Stone		$ -	$ -	$ -	$ -	$ -	$ -	$ 86,000	$ 86,000	$ 366,000	$ 366,000
Purchase Backfill		$ -	$ -	$ -	$ -	$ 232,000	$ 232,000	$ 1,189,000	$ 1,189,000	$ 7,366,000	$ 7,366,000
Place backfill		$ -	$ -	$ -	$ -	$ 112,000	$ 112,000	$ 574,000	$ 574,000	$ 3,556,000	$ 3,556,000
Organo Clay											
Purchase		$ 2,231,000	$ 2,231,000	$ 2,231,000	$ 2,231,000	$ 2,243,000	$ 2,243,000	$ 2,157,000	$ 2,157,000	$ 880,000	$ 880,000
Mix with other Sand materials		$ 388,000	$ 388,000	$ 388,000	$ 388,000	$ 390,000	$ 390,000	$ 375,000	$ 375,000	$ 153,000	$ 153,000
	Subtotal	**$ 9,328,000**	**$ 9,328,000**	**$ 9,897,000**	**$ 9,897,000**	**$ 10,021,000**	**$ 10,021,000**	**$ 13,259,000**	**$ 13,259,000**	**$ 17,939,000**	**$ 17,939,000**
6 **Miscellaneous Construction-Related Direct Costs**											
Short-Term Water Quality Monitoring		$ 1,750,000	$ 1,750,000	$ 1,750,000	$ 1,750,000	$ 1,750,000	$ 1,750,000	$ 1,750,000	$ 1,750,000	$ 1,750,000	$ 1,750,000
Habitat and other Mitigation		$ 350,000	$ 4,000,000	$ 350,000	$ 4,000,000	$ 350,000	$ 4,000,000	$ 350,000	$ 4,000,000	$ 350,000	$ 4,000,000
Tenant Disruption Cost		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Subtotal	$ 2,100,000	$ 5,750,000	$ 2,100,000	$ 5,750,000	$ 2,100,000	$ 5,750,000	$ 2,100,000	$ 5,750,000	$ 2,100,000	$ 5,750,000
Total Direct Capital Costs		$ 15,460,000	$ 19,110,000	$ 42,148,000	$ 75,852,000	$ 54,808,000	$ 95,758,000	$ 82,752,000	$ 129,564,000	$ 163,321,000	$ 234,633,000
Construction Contingency (25%)		**$ 3,865,000**	**$ 4,778,000**	**$ 10,537,000**	**$ 18,963,000**	**$ 13,702,000**	**$ 23,940,000**	**$ 20,688,000**	**$ 32,391,000**	**$ 40,831,000**	**$ 58,659,000**
Indirect Construction Costs											
Project Design											
Project Management & Design[2]		$ 773,000	$ 773,000	$ 2,107,000	$ 3,793,000	$ 2,740,000	$ 4,788,000	$ 4,137,000	$ 6,478,000	$ 8,166,000	$ 11,732,000
	Subtotal	**$ 773,000**	**$ 773,000**	**$ 2,107,000**	**$ 3,793,000**	**$ 2,740,000**	**$ 4,788,000**	**$ 4,137,000**	**$ 6,478,000**	**$ 8,166,000**	**$ 11,732,000**
Project Development Construction Costs											
Construction Management and Daily Oversight[3]		$ 464,000	$ 464,000	$ 2,107,000	$ 3,793,000	$ 2,740,000	$ 4,788,000	$ 4,137,000	$ 6,478,000	$ 8,166,000	$ 11,732,000
Daily Agency Oversight and Project Management[4]		$ 773,000	$ 773,000	$ 1,265,000	$ 2,276,000	$ 1,644,000	$ 2,873,000	$ 2,483,000	$ 3,887,000	$ 4,900,000	$ 7,039,000

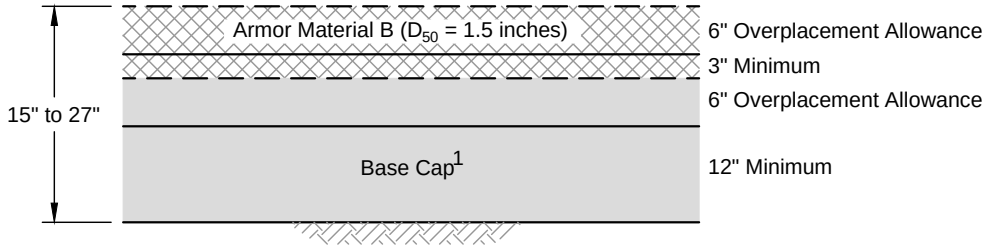
Table 1-3
Summary of Contractor Remedial Alternative Probable Cost Estimates

Task		Alternative 2a		Alternative 2b		Alternative 3		Alternative 4		Alternative 5	
		Low Cost Option	High Cost Option	Low Cost Option	High Cost Option	Low Cost Option	High Cost Option	Low Cost Option	High Cost Option	Low Cost Option	High Cost Option
Sevenson Construction Management and Project Management Team[5]		$ 928,000	$ 928,000	$ 2,529,000	$ 4,551,000	$ 3,288,000	$ 5,745,000	$ 4,965,000	$ 7,774,000	$ 9,799,000	$ 14,078,000
Engineering Support During Construction[6]		$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000
Special Insurance, Bonding[7]		$ 310,000	$ 310,000	$ 843,000	$ 1,517,000	$ 1,096,000	$ 1,915,000	$ 1,655,000	$ 2,592,000	$ 3,267,000	$ 4,693,000
	Subtotal	**$ 2,975,000**	**$ 2,975,000**	**$ 7,244,000**	**$ 12,637,000**	**$ 9,268,000**	**$ 15,821,000**	**$ 13,740,000**	**$ 21,231,000**	**$ 26,632,000**	**$ 38,042,000**
Total Indirect Capital Costs		**$ 3,748,000**	**$ 3,748,000**	**$ 9,351,000**	**$ 16,430,000**	**$ 12,008,000**	**$ 20,609,000**	**$ 17,877,000**	**$ 27,709,000**	**$ 34,798,000**	**$ 49,774,000**
Total Capital Costs		**$ 23,073,000**	**$ 27,636,000**	**$ 62,036,000**	**$ 111,245,000**	**$ 80,518,000**	**$ 140,307,000**	**$ 121,317,000**	**$ 189,664,000**	**$ 238,950,000**	**$ 343,066,000**

Acronyms:
CDF = confined disposal facility
CAD = confined aquatic disposal
CY = cubic yards
LS = lump sum
ODOT = Oregon Department of Transportation
SF = square feet

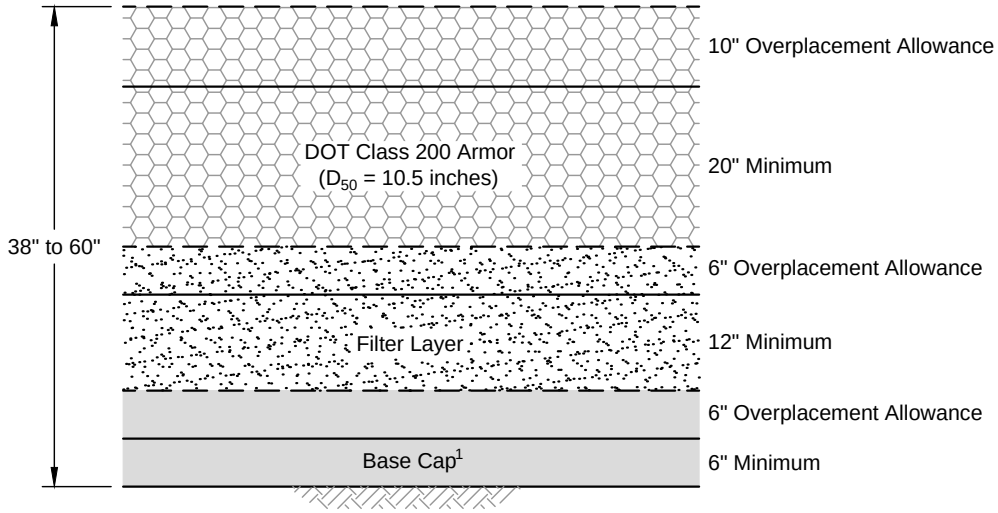
Notes
[1] 1 = Engineer's Opinion of Probable Cost is based on professional experience and regional rates on similar cleanup projects around the United States. Costs are presented in 2012 dollars.
[2] Project Management & Design2 costs are assumed to be 5 percent of the Total Direct Construction Costs.
[3] Construction Management and Daily Oversight3 costs are assumed to be 5 percent of the Total Direct Construction Costs.
[4] Daily Agency Oversight and Project Management4 costs are assumed to be 3 percent of the Total Direct Construction Costs.
[5] Sevenson Construction Management and Project Management Team5 costs are assumed to be 6 percent of the Total Direct Construction Costs.
[6] Engineering Support During Construction6 costs are assumed to be of the Total Direct Construction Costs.
[7] Special Insurance, Bonding7 costs are assumed to be 2 percent of the Total Direct Construction Costs.

FIGURES



Armored Cap B

Not to Scale



Armored Cap Class 200

Not to Scale

1. Active materials, including either an organoclay mat or bulk organoclay, may be necessary in some areas. See report for more details.

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ANCHOR QEA

Figure 2-1
Typical Armored Cap Sections
Remedial Alternatives Probable Cost Summary
Gasco Sediments Cleanup Action