LWG
LOWER WILLAMETTE GROUP

PORTLAND HARBOR RI/FS
ROUND 2A SURFACE WATER SITE CHARACTERIZATION SUMMARY REPORT

DRAFT

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April 24, 2006

Prepared for
Lower Willamette Group

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LIST OF ACRONYMS

CAS	Columbia Analytical Services
cfs	cubic feet per second
CLP	Contract Laboratory Program
COI	chemicals of interest
DecaCB	decachlorobiphenyl
DiCB	dichlorobiphenyl
DOC	dissolved organic carbon
EDD	electronic data deliverable
EDI	equal discharge increment
EPA	U.S. Environmental Protection Agency
EPC	exposure point concentration
EQuIS	Environmental Quality Information System
FOD	frequency of detection
FSP	field sampling plan
FSR	field sampling report
HeptaCB	heptachlorobiphenyl
HeptaCDD	heptachlorodibenzo-p-dioxin
HexaCB	hexachlorobiphenyl
HPAH	high molecular weight polycyclic aromatic hydrocarbon
ICP	inductively coupled plasma spectrometry
LCS/LCSD	laboratory control sample/laboratory control sample duplicate
LDC	Laboratory Data Consultants, Inc.
LPAH	low molecular weight polycyclic aromatic hydrocarbon
LWG	Lower Willamette Group
MonoCB	monochlorobiphenyl
MS/MSD	matrix spike/matrix spike duplicate
NEA	Northeast Analytical Laboratories
OctaCB	octachlorobiphenyl
OctaCDD	octachlorodibenzo-p-dioxin
ORP	oxidation-reduction potential
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyls
PCDD/Fs	polychlorinated dibenzo-p-dioxins and furans
PentaCB	pentachlorobiphenyl
QA	quality assurance
QAPP	quality assurance project plan
QC	quality control
RI/FS	remedial investigation and feasibility study
RM	river mile
SCRA	site characterization and risk assessment
SIM	selected ion monitoring
SOP	standard operating procedure

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SVOC	semivolatile organic compound
TetraCB	tetrachlorobiphenyl
TEF	toxic equivalency factor
TEQ	toxicity equivalent quotient
TOC	total organic carbon
TriCB	trichlorobiphenyl
TSS	total suspended solids

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1.0 INTRODUCTION

This Round 2A Surface Water Site Characterization Summary Report presents the results of surface water sampling performed by the Lower Willamette Group (LWG) for the Portland Harbor Remedial Investigation and Feasibility Study (RI/FS) during the fall of 2004, winter of 2005, and summer of 2005 (hereafter referred to as Round 2A). The Round 2A Surface Water Field Sampling Report, and the Round 2A Winter 2005 and Summer 2005 surface water field sampling reports, which detail the surface water sample collection and handling procedures, were submitted to the U.S. Environmental Protection Agency (EPA) on January 31, May 16, and August 30, 2005, respectively (Integral 2005a,b,c). The Round 2A Surface Water Data Report for November 2004 and March 2005 Sampling Events was submitted to EPA on October 17, 2005 (Integral 2005d).

The required content of this site characterization summary report is specified in the EPA-approved Portland Harbor RI/FS Programmatic Work Plan (Work Plan) (Table 6-1; Integral et al. 2004), where the purpose of the report is described as:

> Provides validated sample analysis results in tabular format. Provides chemical concentration maps showing the distribution of sample analysis results for selected [chemicals of interest] COIs. Data validation reports and a summary of data validation results also will be included in each site characterization summary report. [Exposure point concentrations] EPCs for human health will be submitted as interim deliverables with site characterization summary reports.[1]

This Round 2A Surface Water Site Characterization Summary Report summarizes the data collection activities and describes the laboratory analyses, data validation, and data management procedures used to generate the Round 2A chemical and physical surface water characterization data. All Round 2A surface water data are summarized in tables, and selected COI results are geographically depicted on maps. This report consists of six sections and one appendix. The remaining sections of this report include the following information:

- **Section 2: Sample Collection Activities.** Section 2 summarizes the objectives and methodologies used in the surface water sample collection. Detailed sample acquisition information is provided in the field sampling reports (Integral 2005a,b,c). Section 2 also notes deviations from the approved Round 2 field sampling plans that occurred during Round 2A.
- **Section 3: Sample Analyses and Data Management.** Section 3 provides a detailed account of the sample processing and laboratory analyses, highlighting deviations from the Round 2 Quality Assurance Project Plan (QAPP; Integral and Windward 2004) and Round 2 QAPP Addendum 1 (Integral 2004a). The chemical data validation and database management processes are detailed,

[1] EPCs for human health will be submitted as an interim deliverable 90 days after EPA approval of the Exposure Point Concentration Approach and Summary of Exposure Factors Interim Deliverable.

including the development of the Round 2 site characterization and risk assessment (SCRA) database from the full Round 2 database.

- **Section 4: Round 2A Results.** Section 4 presents the Round 2A surface water chemistry and physical characterization results.
- **Section 5: Summary of Round 2A Surface Water Sampling Efforts and Recommendations for Future Surface Water Sampling.** Section 5 summarizes the Round 2A surface water sampling effort and discusses remaining data gaps.
- **Section 6: References.** Citations noted in the text are provided in Section 6.
- **Appendix A.** Appendix A presents a summary of the data quality review and validation process. This appendix also includes Attachments A1–A3, which contain data validation reports from EcoChem and Laboratory Data Consultants (LDC), and the full SCRA database, respectively (on CD).

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2.0 SAMPLE COLLECTION ACTIVITIES

The purpose of Round 2A sampling was to collect surface water data for the RI and risk assessments and initiate data collection for the FS, including the following types of data:

- Surface water chemistry to characterize the nature and extent of contamination, including contaminant distribution and identification of potential source effects to the river
- Surface water chemistry adjacent to amphibian habitats, to support the ecological risk assessment
- Surface water chemistry in generally quiescent areas adjacent to beaches that are used by swimmers to support the human health risk assessment
- Surface water chemistry and conventional water quality parameters to support the feasibility study.

The objectives of the Round 2A surface water sampling program, detailed in the field sampling plan (FSP; Integral 2004b), were to 1) assess water quality conditions in the initial study area and adjacent areas under different flow conditions; 2) provide water quality data for use in the ecological and human health risk assessments, including food-web modeling; and 3) provide water quality data for assessment of recontamination potential during the FS. In addition, according to the FSP, the surface water samples collected near potential upland sources will be used to determine the usefulness of surface water sampling in assessing source contribution to the river.

Surface water samples were collected during three sampling events, as described in the Round 2A FSP:

- During low-flow conditions in the early fall, when groundwater discharge effects to the water column were anticipated to be most pronounced
- During early rainy season in mid-to-late fall, to represent the time of potential elevated concentrations in the river from rainfall runoff events
- During late winter high-flow conditions, scheduled to coincide with the early exposure of amphibian egg masses.

The actual sample collection events are displayed on Figure 2-1. The first event of Round 2A, initiated in November 2004, was collected as the mid-to-late fall/early rainy season event. The lower than normal rainfall during the 3-week sample collection event resulted in decreasing discharge during this sample collection event and lower than historical average (1975 – 2003) and recent historical average (1998 – 2003) discharge [Q ranged from 15,400 to 24,700 cubic feet per second (cfs)] of the Willamette River for the early rainfall season. The schedule for the second Round 2A event, conducted in early March 2005, was selected by EPA to coincide with release of amphibian egg masses. The discharge for this event (Q ranged from 8,390 – 11,900 cfs) was

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significantly lower than the historical average or recent historical average (see Figure 2-1). The third Round 2A sampling event, the low-flow sampling event, conducted in July 2005 was representative of typical low-flow conditions (Q ranged from 5,720 – 11,300 cfs) and was consistent with historical average and recent historical average conditions (see Figure 2-1) for low-flow conditions.

As noted in Table 2-1, there were several rainfall events that occurred during the November 2004 sampling event, and one day of measurable rainfall each during the March and July 2005 sampling events. The samples collected on days with measurable rainfall are footnoted on Tables 2-3a–c to indicate those samples that may be impacted by the associated rainfall event.

The following sections briefly describe sampling methods used for the collection of surface water. Detailed descriptions of the data collection methods associated with each type of data were included in the surface water field sampling reports (Integral 2005a,b,c).

Surface water samples were collected in three separate events at 23 target locations from river mile (RM) 2 to RM 11 in the Willamette River during the following time periods: November 8 – December 2, 2004, March 1–17, 2005, and July 5–20, 2005. The 23 target locations included 12 amphibian habitat stations, 2 amphibian habitat/source area stations, 3 source area stations, 3 human-use contact areas, and 3 site characterization cross-sectional river transects (see Table 2-2). Figure 2-2 shows the geographical locations for all Round 2A surface water sampling stations.

2.1 PERISTALTIC PUMP METHOD

Round 2A peristaltic pump surface water sample collection and processing generally followed the procedures specified in the Surface Water FSP (Integral 2004b), the Round 2 QAPP (Integral and Windward 2004), and QAPP Addendum 1 (Integral 2004a). Deviations from the FSP and QAPP are discussed in Sections 3.1 and 3.2.

River stage and river flows on the Willamette River at Portland, as well as local precipitation levels that occurred during the three surface water sampling periods, are shown in Table 2-1.

Surface water samples for standard chemical and conventional analyses were collected using a peristaltic pump with an extended Teflon™ sampling tube lowered to the desired depth. The peristaltic pump's water intake was secured with plastic zip-ties to the vane of the water sampler. The water sampler was then lowered to the appropriate depth by a calibrated electrical winch attached to a davit near the bow of the sampling vessel. The water sampler was tethered to the winch with a Technora™ cable. The davit extended 10 feet from the bow with an additional 4 to 5 feet of sampling tube, placing the intake tubing approximately 15 feet away from the bow of the sampling vessel.

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The outflow of the pump was directed through a Kynar™ Y-splitter into two composite mixing carboys. Equal volumes were pumped into two large, pre-cleaned, 20-liter mixing carboys containing a Teflon™-coated magnetic stir bar and placed over magnetic stirring plates. The first carboy, made of polycarbonate, was used for compositing and mixing samples for subsequent analysis of trace metals, butyltins, and conventionals; samples for dissolved metals and dissolved organic carbon (DOC) analyses were filtered using a 0.45-µm filter placed inline near the tubing outlet to filter samples immediately before the water was discharged into the sample bottle. The second carboy, made of glass, was used for compositing and mixing samples for subsequent analysis of organic compounds. Following sample compositing in the mixing carboys, appropriate sample bottles were filled using a second peristaltic pump, with the outflow directed into the sample bottle. The sample containers were capped, labeled, and placed inside a cooler.

Surface water samples were collected at the three cross-sectional stations using the flow-weighted method (see Surface Water FSP, Appendix B, Integral 2004b). Water was collected with the peristaltic pump, as described above, at each of the equal-discharge-increment (EDI) locations. A vertically integrated water column sample was collected by lowering and raising the sample tubing intake while pumping water from near-surface to near-bottom and back for a predetermined period at a predetermined rate. The water sampled at each EDI was composited across all EDIs to generate the vertically and horizontally integrated transect sample.

In addition to surface water collection, general water quality parameters [temperature, pH, dissolved oxygen, oxidation-reduction potential (ORP), conductivity, and depth] were measured *in situ* at all sampling stations using a YSI 600R or 600QL sonde and a YSI 650 MDS monitor attached to the water sampler, or a CS304 multiprobe. Water quality data from each station are included in Tables 2-3a–c.

Surface water was collected at 23 stations during each sampling event using the peristaltic pump method (see Table 2-2). A summary of the total number of samples collected, including field quality control (QC) samples (i.e., field replicates, equipment rinse blanks) per sampling event, is provided in Table 2-4. Tables 2-5a–c list each surface water station sampled per event and the specific analyses conducted on each sample.

2.2 HIGH-VOLUME XAD SAMPLING METHOD

Round 2A high-volume surface water sample collection and processing generally followed the procedures specified in the Surface Water FSP (Integral 2004b), the Round 2 QAPP (Integral and Windward 2004), and QAPP Addendum 1 (Integral 2004a). Deviations from the FSP and QAPP are discussed in Sections 3.1 and 3.2.

Large volumes of water were pumped through Teflon™-lined polypropylene tubing, a 140-µm stainless-steel pre-filter, 0.5-µm glass fiber filter cartridges, and XAD-2 resin beads packed inside stainless-steel canisters using an Infiltrex 300 pump system provided

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by Axys Analytical Services, Ltd. (Axys). Organic compounds associated with the particulate phase were collected with 0.5-µm glass fiber filters, and the dissolved, particulate, and colloidal organic compounds less than 0.5 µm were adsorbed onto XAD resin columns. A total volume of approximately 1,000 liters was pumped at each high-volume sample station at a flow rate of approximately 1.25 liters per minute. The total volume for each XAD sample collected at the transect stations is included in Tables 2-6a–c.

The Teflon™-lined polypropylene tubing intake for the XAD samples was secured to the vane of the water sampler together with the Teflon™ sampling tube for the peristaltic pump samples. Glass fiber filters (0.5 µm) were used to filter out the particulate-bound hydrophobic analytes from the water at each XAD station. Once the desired volume was pumped, the column and filter assemblies were removed from the Infiltrex unit, and any residual water was drained out. The columns and filters were analyzed individually to determine, respectively, the dissolved and particulate concentrations of analytes in the samples.

High-volume samples were collected at seven of the 23 stations during the three sampling events. The XAD transect samples at RM 11, 6.3, and 4 were spatially integrated across the entire width and depth of the river channel based on a flow-weighted average method (USGS 2000). The XAD samples at the other four stations (W013, W015, W016 and W018) were collected as single-point, near-bottom samples. A summary of the total number of high-volume samples collected per event, including field QC samples, is provided in Table 2-4. Tables 2-5a–c include each high-volume surface water station sampled, the sample date, and the specific analyses conducted on each sample.

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3.0 SAMPLE ANALYSES AND DATA MANAGEMENT

This section describes the sample processing and laboratory methods used to analyze the surface water samples. Any deviations from the analytical methods detailed in the QAPP are described below. The data management subsection details how the data validation process occurred from the laboratory data package receipt to a final validated electronic data deliverable (EDD). Furthermore, it describes how the SCRA database was compiled into a series of compatible Excel tables, which were then distributed to the SCRA data users. The EcoChem (Seattle, WA) and LDC (Carlsbad, CA) data validation reports are provided as Attachments A1 and A2, respectively, to Appendix A.

3.1 SURFACE WATER SAMPLE COLLECTION AND DEVIATIONS

A detailed description of surface water sample handling and processing between the field collection and the analytical laboratory, including any deviations from the QAPP and FSP, is included in the Round 2A surface water field sampling reports (FSRs) (Integral 2005a,b,c). A tabular summary is provided in Table 3-1. These minor deviations did not impact the overall objectives and goals of the sampling program.

3.2 CHEMICAL ANALYSES AND DEVIATIONS

Surface water samples were collected and analyzed for organic, inorganic, and physical/conventional parameters according to the laboratory methods indicated in Table 3-2. The following subsections describe the analyses conducted and the laboratories responsible for the analyses for the two types of surface water samples collected.

3.2.1 Peristaltic Pump Samples

Two laboratories conducted the chemical analyses of samples collected using the peristaltic pump. Columbia Analytical Services (CAS; Kelso, WA) conducted the conventionals, metals, butyltin compounds, semivolatile organic compounds (SVOCs), hexavalent chromium, perchlorate, and chlorinated herbicide analyses. Northeast Analytical Laboratories (NEA; Schenectady, NY) conducted the analyses for organochlorine pesticides and polychlorinated biphenyls (PCB) Aroclors.

3.2.2 High-Volume XAD Samples

Axys (Sydney, BC, Canada) extracted the XAD-2 resins and the 0.5-µm glass fiber filters, and conducted the analyses for polychlorinated dibenzo-p-dioxins and furans (PCDD/Fs), phthalate esters, and polycyclic aromatic hydrocarbons (PAHs) on the XAD resin/filter extracts. Analyses for PCB Aroclors in XAD samples were intended under the QAPP to be completed by NEA using a portion of the extracts prepared by Axys from the XAD column and filter samples (Integral 2004a). However, difficulties were encountered by NEA related to the solvent prescribed by the QAPP for extraction (toluene) and to petroleum interferences present in the sample matrix. After discussion with EPA, the portions of the extracts remaining after the XAD pesticide analysis were

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subsequently analyzed for PCB congeners by Axys, which is a deviation from the QAPP. Axys used the PCB congener patterns to identify Aroclors and quantitated Aroclor concentrations using various combinations of congeners, depending on the identified Aroclors. With respect to the XAD samples, only the data from Axys are included in the database and in the data summary tables and figures in Section 4 of this report. The NEA PCB Aroclor data were excluded from the database because of difficulties with the toluene matrix and the interferences encountered during analysis. The data validation report for the NEA analysis of PCB Aroclors in the XAD samples is included in Appendix A.

3.2.3 Laboratory Deviations from the Round 2 FSPs and QAPP

Samples were analyzed as described in the Round 2 QAPP (Integral and Windward 2004), and QAPP Addendum 1 (Integral 2004a), with the exceptions noted in Table 3-1 and in the FSRs (Integral 2005a,b,c).

3.3 DATA VALIDATION

As required by the Round 2 QAPP (Integral and Windward 2004), approximately 10% of the surface water data were fully validated, and the remaining data were subjected to Level 3 data validation, which includes the evaluation and assessment of the sample results and applicable quality control results reported by the laboratory. The data validation subcontractors for the Round 2 surface water data were EcoChem, Inc. (Seattle, WA), and LDC (Carlsbad, CA).

The inorganic, organic, PCB, and PCDD/F data were validated in accordance with guidance specified by the *USEPA Contract Laboratory Program* [CLP] *National Functional Guidelines for Inorganic and Organic Data Review*, by EPA Region 10 Standard Operating Procedures (SOPs) for validation of PCB data and PCDD/F data (EPA 1994, 1995, 1996, 1999), and by *Guidance on Environmental Data Verification and Validation* (EPA 2002). Modifications were made to the Functional Guidelines to accommodate quality assurance/quality control (QA/QC) requirements of the non-CLP methods that were used for this project. Data qualifiers were assigned during data validation if applicable control limits were not met, in accordance with the EPA data validation guidelines and the QC requirements included in the referenced methods. The data validation qualifiers and definitions are summarized in Table 3-3.

The following laboratory deliverables were reviewed during Level 3 and full data validation:

- The case narrative discussing analytical problems (if any) and procedures
- Chain-of-custody documentation and laboratory sample receipt logs
- Instrument calibration results
- Method blank results

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- Results for laboratory quality control samples required by the referenced method, including laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses, matrix spike/matrix spike duplicate (MS/MSD) analyses, surrogate recoveries, and other method specific quality control samples [e.g., serial dilutions for inductively coupled plasma spectrometry (ICP) analyses]
- Results for field quality control samples (i.e., equipment blanks and field duplicates)
- Analytical results for the surface water samples.

In addition, all chromatograms were reviewed for PCBs to verify the identity of the reported Aroclors, and for pesticides to evaluate any effects of interference by PCBs and other sample constituents. Chromatograms were reviewed for Level 3 and full validation.

For data packages subjected to full validation, in addition to review and assessment of the documentation identified above, the validation included verification of reported concentrations for the field and QC samples, verification of intermediate transcriptions, and review of instrument data such as mass spectra to verify analyte identification procedures.

After completing the data validation activities for each surface water sample type, a data quality report and a tabular summary of qualified data were generated by EcoChem and LDC. The EcoChem and LDC data quality reports are included as Attachments A1 and A2, respectively, of Appendix A. EcoChem and LDC chemists added data validation qualifiers assigned during validation to the laboratory report forms and to the laboratory EDDs. The revised EDDs and the hard-copy data validation reports were submitted as the project deliverable. The revised EDDs were then incorporated into the project database, as described in Section 3.5 below.

3.4 DATA QUALITY

Selected data not meeting the data quality criteria were qualified as undetected, estimated, tentatively identified, or rejected during validation, in accordance with the QAPP. A summary of the qualified data by parameter group, including the reasons for qualification, is included in Table 3-4. Additional detail is provided in Appendix A. Data qualified as undetected are usable for all intended purposes. Data qualified as estimated or tentatively identified are usable for all intended purposes, with the knowledge that these data may be less precise or less accurate than unqualified data. Rejected data are not usable for any purpose. The numbers of rejected data points per analyte group are listed in Table A-2 in Appendix A. Overall, the data quality is acceptable and meets program objectives and goals for the RI/FS.

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3.5 DATA MANAGEMENT

The laboratories exported sample, test, batch, and result information into comma-delimited text files with data columns arranged in an order that was recognized by the Environmental Quality Information System (EQuIS). These EDDs were emailed to Integral where they were checked for proper EQuIS structure and appended with specific information that was unknown or hidden from the labs, such as sampling location, composite information, and field replicate information. If any problems were found in the structure of the EDDs, then the laboratory was notified and asked to correct the problem and resubmit the EDD. Each email EDD transmission, with the original, unaltered EDD attachment, was stored to document and track the laboratories' delivery of electronic data to Integral.

When the EDD structure checked out satisfactorily and the appended information was completed, the EDDs were checked electronically by loading them into the temporary section of Integral's LWG project database. In the process of loading, EQuIS checked the EDDs for correct lookup codes (such as for analytes, test methods, and sample matrices), proper relationships for results, tests, batches, and samples (to ensure all results match with a test, tests with samples, and sample/test pairs with batches), and that all derived samples (such as replicates and matrix spikes) had corresponding parent samples. In addition to these checks, EQuIS also checked "less important" characteristics, such as date and time formats and text field lengths, to ensure consistency throughout the database.

Any error prevented the EDD from loading until the error was corrected. If errors were found that related to the way the lab was reporting the data or constructing the EDD, then the laboratory was notified and asked to correct the problem and resubmit the EDD. If errors were related to Excel automatically formatting date and time fields, for example, then the error was corrected and steps taken to avoid repeats of the problem (such as changing default settings in the software). Each successfully loaded EDD was saved to document and track the data that were loaded into Integral's LWG project database.

In the temporary section of the project database, the newly loaded data were flagged as unvalidated and merged into the permanent section of the project database where they could be queried and examined. As EcoChem and LDC completed their validation, the validated data, which included the validator qualifiers, reason codes, and final qualifiers, were loaded into the temporary section of the project database. An update merge was used to apply the validation to the data in the permanent section of the project database and at the same time changed the unvalidated flags to validated flags.

Integral's LWG project database contains all of the data reported by the analytical laboratories. This includes field and lab replicates, lab dilutions, results for the same analyte from multiple analytical methods (SW8270 and SW8270-SIM, for example), and laboratory QA samples such as matrix spikes, surrogates, and method blanks. The data handling rules described in *Guidelines for Data Averaging and Treatment of Non-detected Values for the Round 1 Database* (Kennedy/Jenks et al. 2004) were used to

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create a data set for the SCRA data users that was simpler: the data set contained only one result per analyte per sample and excluded all of the laboratory QA results. This involved creating a SCRA database that excluded lab QA results, contained only the most appropriate dilution result and analytical method for each analyte, and contained the average of replicates. Excluding the lab QA results was a simple database querying step. Selection of the most appropriate dilution was either done by the reporting laboratory or by the data validator. Selection of the most appropriate analytical method was described in the guidelines document and was accomplished by flagging the appropriate method in the project database. The guidelines document described the rules used for averaging data and carrying qualifiers. Because it was the most data-manipulative procedure, the data were divided into subgroups and approximately 40% of each subgroup was verified. If any problems were found with the averaging, then 100% of the subgroup was verified and problems were corrected.

The preliminary SCRA database was compiled into a series of database-compatible Excel tables and distributed to the SCRA data users over the period between April 7, 2005 and May 17, 2005 for the first two sampling events, and on February 15, 2006 for the third Round 2A sampling event.

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4.0 ROUND 2A SURFACE WATER RESULTS

Round 2A results for the surface water chemistry and physical analyses are presented in this section. Review and evaluation of these data in conjunction with other data types (e.g., sediment), evaluation of spatial trends in the distribution of contaminants in surface water, source evaluation, and preliminary risk analyses will be presented in the Comprehensive Round 2 Site Characterization Summary and Data Gaps Analysis Report.

The complete Round 2A surface water data set containing all results is provided as an Excel cross-tab table in Appendix A. Summary statistics for all analytical results in the Round 2A November 2004, March 2005, and July 2005 surface water samples are compiled in Tables 4-1a–c. The summary statistics tabulated include the frequency of detection (FOD), and the minimum, maximum, mean, median, and 95th percentile values for detected values only, on an analyte-by-analyte basis. Analytical chemistry results are tabulated by sampling methods.

Surface water samples collected by peristaltic pump are displayed in Tables 4-2, 4-3, and 4-4 for the November 2004, March 2005, and July 2005 sampling events, respectively. Surface water samples were collected at the three transect stations using the flow-weighted method (see Surface Water FSP, Appendix B, Integral 2004b). Water was collected with the peristaltic pump at each of the EDI locations.

Results for surface water samples collected using high-volume XAD methods are shown in Tables 4-5, 4-6, and 4-7 for the November 2004, March 2005, and July 2005 sampling events, respectively. The XAD transect samples at RM 11, 6.3, and 4 were spatially integrated across the entire width and depth of the river channel based on a flow-weighted average method (USGS 2000). The XAD samples at the other four stations (W013, W015, W016 and W018) were collected as single-point near bottom samples.

When calculating summed analyte concentration values such as total PCB Aroclors, total PCB congeners, total low molecular weight polycyclic aromatic hydrocarbon (LPAHs), total high molecular weight polycyclic aromatic hydrocarbon (HPAHs), and total 4,4'-DDTs (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for non-detects on an individual analyte basis. The summed LPAHs included naphthalene, 2-methylnaphthalene, acenaphthylene, acenapthene, fluorene, phenanthrene, and anthracene. Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) fluoranthenes, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene. Toxicity equivalent quotient (TEQ) values for 2,3,7,8-tetrachlorodibenzo-p-dioxin were calculated with World Health Organization 1997 toxic equivalency factors (TEFs) for mammals.

Results for selected parameter groups for the peristaltic and XAD sample collection methods are discussed below. Selected physical and chemical parameters for the Round 2A sampling events are summarized in Table 4-8. Total organic carbon (TOC) ranged from 1.4 to 2.4 mg/L and DOC ranged from 1.1 to 2.0 mg/L for the Round 2A sampling events. Total dissolved solids ranged from 47 to 105 mg/L and total suspended solids

(TSS) ranged from 5 to 16 mg/L. Figure 4-1 summarized the TSS results for the three Round 2A sampling events.

4.1 METALS

Twelve priority pollutant metals and hexavalent chromium were included in the analyte lists for the Round 2A surface water sampling events. The twelve priority pollutant metals included aluminum, antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc. During the November 2004 event, thallium was accidentally included in the analyte list and aluminum was excluded by the laboratory; this was a deviation from the QAPP (see Table 3-1). With the exception of mercury, most of the priority pollutant metals were detected during each sampling event. Total and dissolved mercury and hexavalent chromium were not detected in any samples collected during the three sampling events (see Tables 4-2 through 4-4).

Total and dissolved arsenic concentrations are presented in Figure 4-2. Concentrations of total and dissolved arsenic were similar in each of the three sampling events at each sampling station. Arsenic concentrations ranged from 0.33 to 0.75 µg/L at all stations for all three sampling events. Seasonal variability was evident during the July 2005 event, based on higher arsenic concentrations for each station, compared to the November 2004 and March 2005 events; however, the magnitude of the differences in concentration is small, typically less than 0.3 µg/L.

For the three transect stations at RM 11, 6.3, and 4, the arsenic concentrations are comparable at the upstream, mid-stream, and downstream transect locations for each Round 2A sampling event (Figure 4-3).

4.2 PHTHALATE ESTERS

Phthalate esters were collected and analyzed at each sampling location for each sampling event using both peristaltic pump and XAD sampling methods. Tables 4-1a–c provide summary statistics for detected concentrations of phthalate esters in each sampling event.

All phthalate results for the November 2004 and March 2005 peristaltic sampling events were restated as undetected at the reported concentration because phthalates were also found in associated laboratory and/or equipment blanks. Butylbenzyl phthalate was the only phthalate detected during the July 2005 sampling event, with an estimated concentration of 0.027 µg/L at peristaltic pump station W007.

Target phthalate ester compounds were detected in each XAD column and 0.5-µm filter sample from the November 2004 and July 2005 sampling events. However, 93% of the phthalate results were qualified as undetected during laboratory analysis or through validation. All phthalate data for XAD column and 0.5-µm filter samples collected in March 2005 were restated as undetected, or estimated, due to field and laboratory blank contamination. Selected phthalate results for each of the Round 2A events were reported

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as estimated or detected. The detected concentrations of total phthalates ranged from estimated concentrations of 1,770 pg/L (W016, March 2005 event) to 60,000 pg/L (W015, November 2004 event). Both the detected and estimated results for phthalate esters reported from the XAD analyses may be biased high, based on the frequency of detections of phthalate esters in the associated lab and field blanks. Phthalate ester compounds are not mapped because of the infrequency of detection in the three Round 2A events.

4.3 CHLORINATED DIOXIN/FURANS

Chlorinated dioxins and furans were analyzed at five of the seven XAD sampling stations (W005, W011, W013, W015, and W023). Figures 4-4 and 4-5 compare total concentrations of PCDD/Fs in the water column (represented by XAD column) and particulate phase (represented by 0.5-µm filter) at each sampling station, during each sampling event. As indicated in Table 4-9, on average for the Round 2A sampling events, 94% of the total PCDD/Fs were observed in the particulate phase of the sample collected on the XAD 0.5-µm filter, and 6% of the total PCDD/Fs were observed in the water column.

For the five PCDD/F XAD stations, the total PCDD/F concentrations ranged from 16.7 pg/L (W023, March 2005 event) to 163 pg/L (W013, July 2005 event). Concentrations of PCDD/Fs were similar in each of the three sampling events at each sampling station, except for an elevated concentration during the July 2005 event at station W013. There was not a consistent pattern of seasonal variability for PCDD/Fs for the three Round 2A sampling events. Somewhat elevated total PCDD/F concentrations were observed during each sampling event at stations W013 and W015 compared to the other XAD sampling stations.

For the three transect stations at RM 11, 6.3, and 4, the concentrations of total PCDD/Fs for each of the three Round 2A sampling events show little variability between transect stations (Figures 4-4 and 4-5). The July downriver transect result was approximately 2.5 times higher than any of the other transect results for all three sampling events. The total PCDD/F concentrations observed in the upstream and downstream transects were slightly higher in the July 2005 event than in the November 2004 and March 2005 events.

Figure 4-6 shows the PCDD/F homolog distribution for the Round 2A sampling events. Octachlorodibenzo-p-dioxin (OctaCDD) was the predominant homolog in the study area, followed by heptachlorodibenzo-p-dioxin (HeptaCDD).

4.4 PESTICIDES

Organochlorine pesticides were collected and analyzed at each sampling location for each sampling event using both peristaltic pump and XAD sampling methods. Tables 4-1a–c provide summary statistics for detected concentrations of organochlorine pesticides in each sampling event.

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Most pesticides were undetected in the peristaltic pump samples for each sampling event. The few compounds that were detected using this sampling method were frequently qualified as estimated or tentatively identified.

Almost all target pesticide compounds were detected in the XAD column and 0.5-µm filter samples for each Round 2A sampling event. This discussion will focus on the concentration and distribution of total 4,4'-DDTs throughout the initial study area for each of the three Round 2A sampling events. The term total 4,4'-DDTs is defined as the summed concentrations of 4,4'-DDT, 4,4'-DDE, and 4,4'-DDD. For more information on additional pesticides analyzed using the XAD sampling method, refer to Tables 4-1a–c and Tables 4-5 through 4-7. Table 4-9 shows that, on average, 35% of total 4,4'-DDTs are present as dissolved constituents in the water column, and 65% of total 4,4'-DDTs are adsorbed onto particulate matter in the study area.

Figures 4-7 and 4-8 compare the concentrations of total 4,4'-DDTs in the water column (represented by XAD column) and particulate phase (represented by 0.5-µm filter) at each sampling station, during each sampling event. Total 4,4'-DDTs were detected in XAD samples at concentrations of less than 200 pg/L for all sampling events at all stations, with the exception of stations W015 and W016. For the three sampling events, total XAD results (column plus filter) at station W015 ranged from 2,600 to 5,250 pg/L, and total XAD results (column plus filter) at station W016 ranged from 898 to 7,775 pg/L. For the three transect samples, the total DDT concentrations ranged from a low of 44.3 pg/L (November upriver transect) to a high of 187.7 pg/L (July mid-river transect). The concentrations observed at each transect for each event were comparable upstream and downstream, with slightly elevated concentrations observed in the mid-stream transect. The total XAD concentrations from the July 2005 sampling event were generally higher compared to the November 2004 and March 2005 events, indicating a seasonal variability for the three transect stations and stations W013 and W016.

Figure 4-9 shows the distribution of the 4,4'-DDD, -DDE, -and DDT at each sampling location for the Round 2A sampling events. As shown in the figure, the relative proportion of DDT/DDT/DDD was fairly constant at a given station, but varied at individual stations. The distribution pattern for stations W015 and W016 differs from the other XAD stations, due to larger contributions from DDD and DDT, and smaller contributions of DDE. For each of the sampling events, DDD had the highest contribution at station W015, and DDT had the highest contribution at station W016. DDE was more prevalent at stations W005 (downstream transect), W018, and W023 (upstream transect).

4.5 POLYCHLORINATED BIPHENYLS

PCB Aroclors were collected and analyzed at each peristaltic pump sampling location during each sampling event. PCB Aroclors in peristaltic pump samples had low frequencies of detection (5–13%; see Tables 4-1a–c) and low concentrations (see Tables

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4-2 through 4-4) during each event. The remainder of this discussion will focus on the PCB analytical results of the seven XAD sampling locations.

Samples were collected and analyzed for all 209 PCB congeners at each XAD sampling location during each sampling event. Tables 4-5 through 4-7 show the analytical results for all 209 PCB congeners, along with results for PCB homologs (subdivision of congeners based on degree of chlorination) and PCB Aroclors (derived from concentrations of individual congeners, see Section 3.2.2).

Figures 4-10 and 4-11 compare the concentration of total PCBs in the water column (represented by the concentration from the XAD column) and particulate phase (represented by the concentration from the 0.5-µm filter) at each XAD sampling station, during each sampling event. The term "total PCBs" is defined as the sum of detected compounds for all 209 congeners in both the XAD column and 0.5-µm filter. Figures 4-10 and 4-11 and Tables 4-5 through 4-7 show that, on average, 30% of total PCBs are present as dissolved constituents in the water column, and 70% of total PCBs are adsorbed onto particulate matter in the study area (see Table 4-9).

Concentrations of total PCBs (3,340 – 12,000 pg/L) were elevated at station W013 compared to the other stations during each sampling event. There was not a consistent pattern of seasonal variability for total PCBs for the three Round 2A sampling events.

For the three transect samples, the total PCB concentration ranged from a low of 171 pg/L (March, upriver transect) to a high of 609 pg/L (November, upriver transect). For the March and July 2005 events, the concentrations in the upstream transect were lower than the concentrations observed in the mid-stream and downstream transects. For the November 2004 event, the concentration in the upstream transect was elevated compared to all of the transect results for all three sampling events. For the March 2005 sampling event, the mid-river and downriver transect concentrations were approximately 2 to 3 times the concentration of the upriver transect concentrations. For the July event, the upriver and downriver transects showed an increase in total PCB concentrations compared to March, whereas the mid-river concentration in July was slightly less than the total PCB concentration in March.

Figure 4-12 depicts the distribution of PCB homolog groups at each sampling location for each sampling event. Distributions of the 10 PCB homolog groups were similar across each sampling event for stations W005 (downstream transect), W011 (midstream transect), W013, W016, and W018. PCB homolog distributions varied during the November 2004 sampling event for stations W015 and W023 compared to their respective distributions during the March and July 2005 sampling events. At upstream transect station W023, the proportional contribution of dichlorobiphenyl (DiCB), TriCB, tetrachlorobiphenyl (TetraCB), and PentaCB were 2 to 10 times lower than their respective contributions during the March and July 2005 events and contributions of HexaCB, HeptaCB, and octachlorobiphenyl (OctaCB) were 2 to 5 times greater than their respective contributions during the March and July 2005 events. A 0.37-inch

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rainfall event on the day that samples were collected at station W023 (see Table 2-1) may explain the differences in the PCB distributions between events for station W023; however, the TSS concentration at this station does not indicate increased suspended solids during the November sample collection.

4.6 POLYCYCLIC AROMATIC HYDROCARBONS

PAHs were collected at all 23 peristaltic pump stations and all seven XAD stations. Figure 4-13 depicts the concentrations of total PAHs at each sampling station for each sampling event for the peristaltic pump stations. Station W012 had the highest concentrations of total PAHs during the November 2004 and July 2005 sampling events. Relatively higher concentrations of total PAHs were also detected at stations W004, W009, and W022 during the November 2004 sampling event, and at station W021 during the July 2005 event. Overall concentrations of total PAHs for the March 2005 sampling event were lower than both the November 2004 and July 2005 sampling events.

Figure 4-14 compares the concentration of total PAHs in the water column (represented by the concentration from the XAD column) and particulate phase (represented by the concentration from the 0.5-µm filter) at each XAD sampling station, during each sampling event. The total PAH concentrations are presented as LPAHs and HPAHs for the XAD columns and filters for each sampling event. Total LPAHs are defined as the sum of detected concentrations of 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene. Total HPAHs are defined as the sum of detected concentrations of dibenz(a,h)anthracene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, and pyrene. As indicated in Table 4-9, on average for the Round 2A sampling events, 27% of the PAH concentrations originate from the particulate phase of the sample, collected on the XAD 0.5-µm filter, and 73% of the total PAH concentration originates from the water-column

PAHs were detected at all seven XAD sampling stations during each sampling event. Concentrations of total PAHs ranged from 6.13 ng/L (W023, November 2004 event) to 231 ng/L (W015, July 2005 event). The highest total PAH concentrations were detected at station W015 for each event. Concentrations at stations W005 (downstream transect), W015, W016, and W018 were higher for the July 2005 event, compared to the March 2005 and November 2004 events. At stations W013 and W023 (upstream transect), the March 2005 event concentrations were higher than the July or November events. There was not a consistent pattern of seasonal variability for PAHs for the three Round 2A sampling events. For the three transect stations, the total PAH concentration ranged from 6.14 ng/L (November, upriver transect) to 66 ng/L (March, upriver transect). For the November and July sampling events, the total PAH concentration increased from the upriver transect to the downriver transect. For the March 2005 event, PAH concentrations decreased from upriver to downriver. There was not a consistent pattern of seasonal variability for the three transect samples for the Round 2A sampling events.

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Figure 4-15 expands on the information in Figure 4-14 by presenting the total concentrations of LPAHs and HPAHs in the XAD columns and filters at each station and each sampling event. The distribution of LPAHs and HPAHs in the XAD columns and filters is generally consistent between events at an individual station and across stations. The LPAHs were collected predominantly in the XAD columns, whereas the HPAHs were collected in the both the XAD columns and filters. There was no clear pattern of distribution between LPAHs and HPAHs over the three sampling events.

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5.0 SUMMARY OF ROUND 2A SURFACE WATER SAMPLING EFFORTS AND RECOMMENDATIONS FOR FUTURE SURFACE WATER SAMPLING

The objectives of the Round 2A surface water sampling program were generally met by collection of surface water samples during the three Round 2A sampling events. The three Round 2A sampling events took place in the same discharge range (typically less than 20,000 cfs); however, the range and mean temperatures of the river during the three Round 2A events were variable, as expected. The peristaltic sample collection method was adequate in meeting analytical concentration goals for conventionals, metals, and selected organic parameter groups. For characterization of PCB or organochlorine pesticide concentrations in the water column, the peristaltic sample collection volumes and associated laboratory analysis typically resulted in undetected results for most of the PCB Aroclors and many organochlorine pesticides in the surface water samples. The collection of high-volume XAD column and filter samples allowed the detection of PCDD/Fs, PCBs, organochlorine pesticides, and PAHs at all targeted locations. Analysis of phthalate esters was problematic using either the peristaltic or XAD sample collection techniques due to the frequency and magnitude of detections of target compounds in associated laboratory and field blanks.

Because of the lack of rainfall in the fall and winter of 2004 and 2005, the discharge range was lower than average for the November 2004 and March 2005 Round 2A sampling events, and sample collection was not conducted during typical seasonal high-flow conditions for the Round 2A sampling events. However, the March 2005 event did coincide with the timing of amphibian egg mass releases, which also was an objective for that sampling event. The Round 3 surface water program will include collection of samples during a high-flow event. The Round 3 surface water program also will include a sampling event designed to collect samples impacted by a stormwater runoff event. Attempts will be made to change the analytical scheme for the Round 3 surface water program to optimize the analysis for phthalate esters for future sampling events. The objectives for the Round 3 surface water program will be presented in a Round 3 FSP. The Round 2A surface water results will be analyzed further and reported in the Comprehensive Round 2 Site Characterization Summary and Data Gaps Analysis Report.

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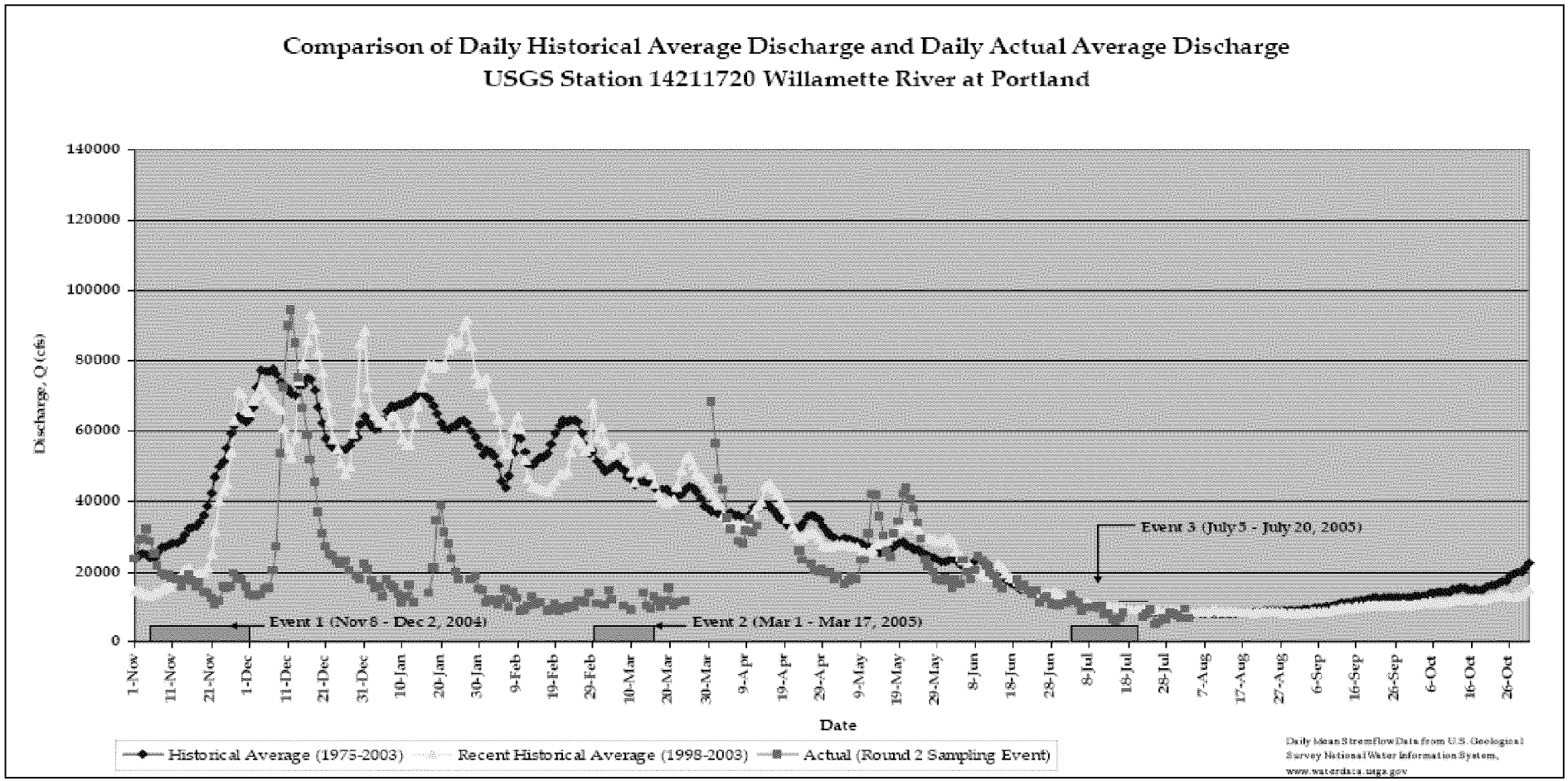

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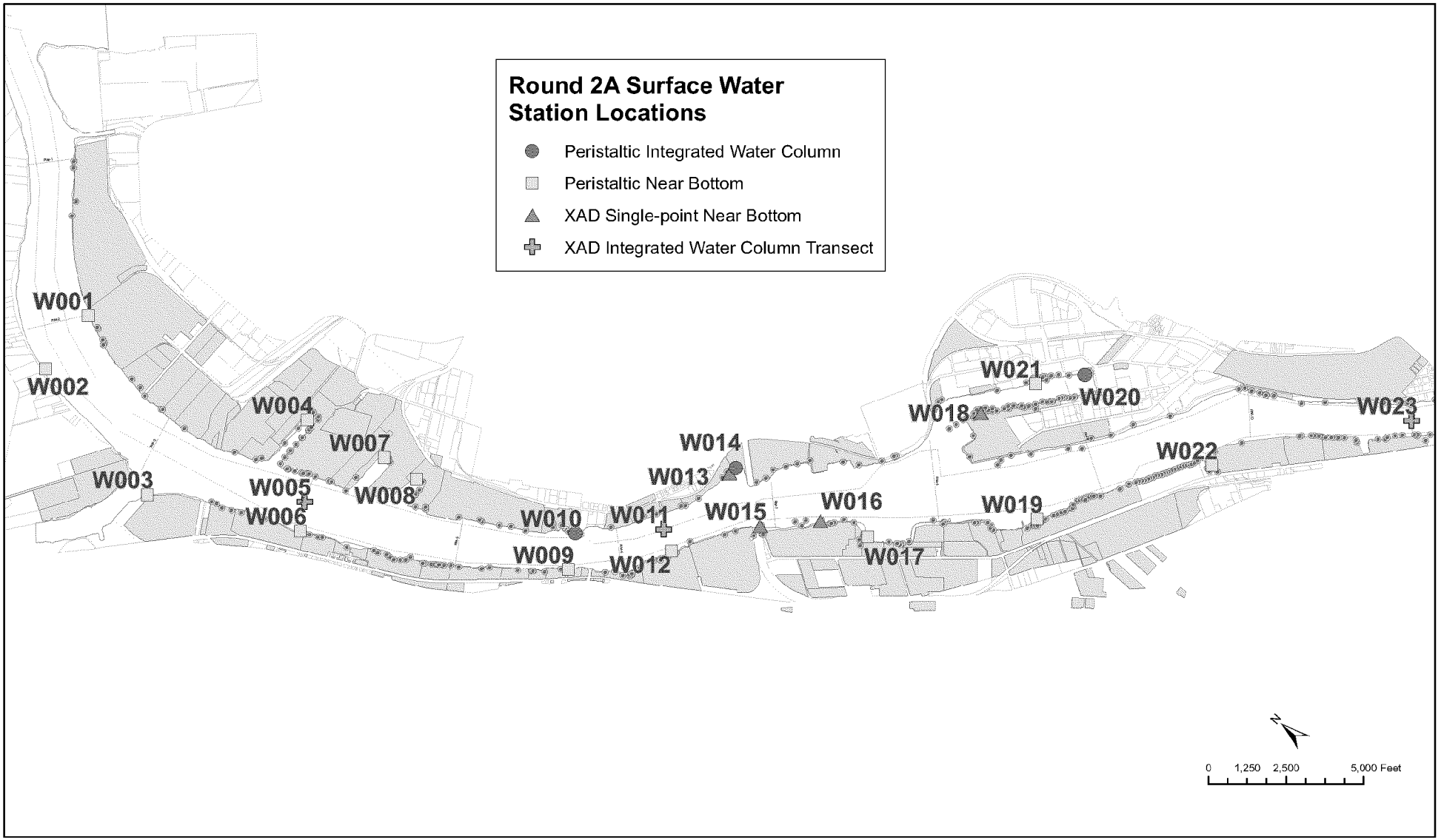
Figure 2-1
Portland Harbor RI/FS
Round 2A Surface Water Site Characterization Summary Report
Comparison of Historical Discharge

ANC04366
BZTO104(e)004366



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LWG Lower Willamette Group

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS. Channel & River miles: Developed from US Army Corps of Engineers information.
River Edge: created by heads-up digitizing from the October 2001 0.33 ft. resolution color orthophotos.

Navigation Channel
Rivermiles
Outfalls

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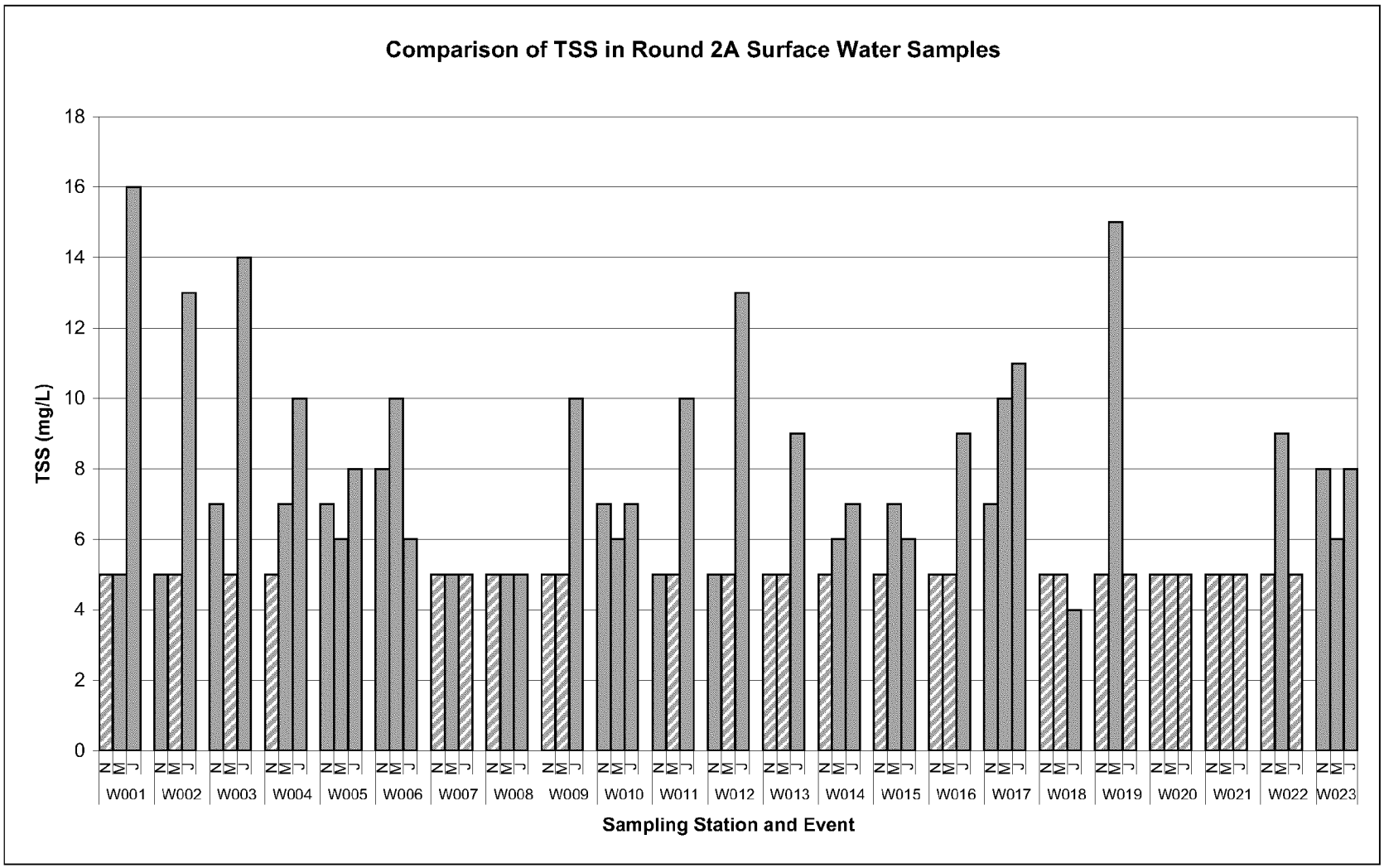
Figure 2-2
Round 2A Surface Water
Site Characterization Summary Report
Station Locations

ANC04367
BZT0104(e)004367



Notes: Diagonally shaded bars represent undetected TSS concentrations with a reported detection limit of 5 mg/L.

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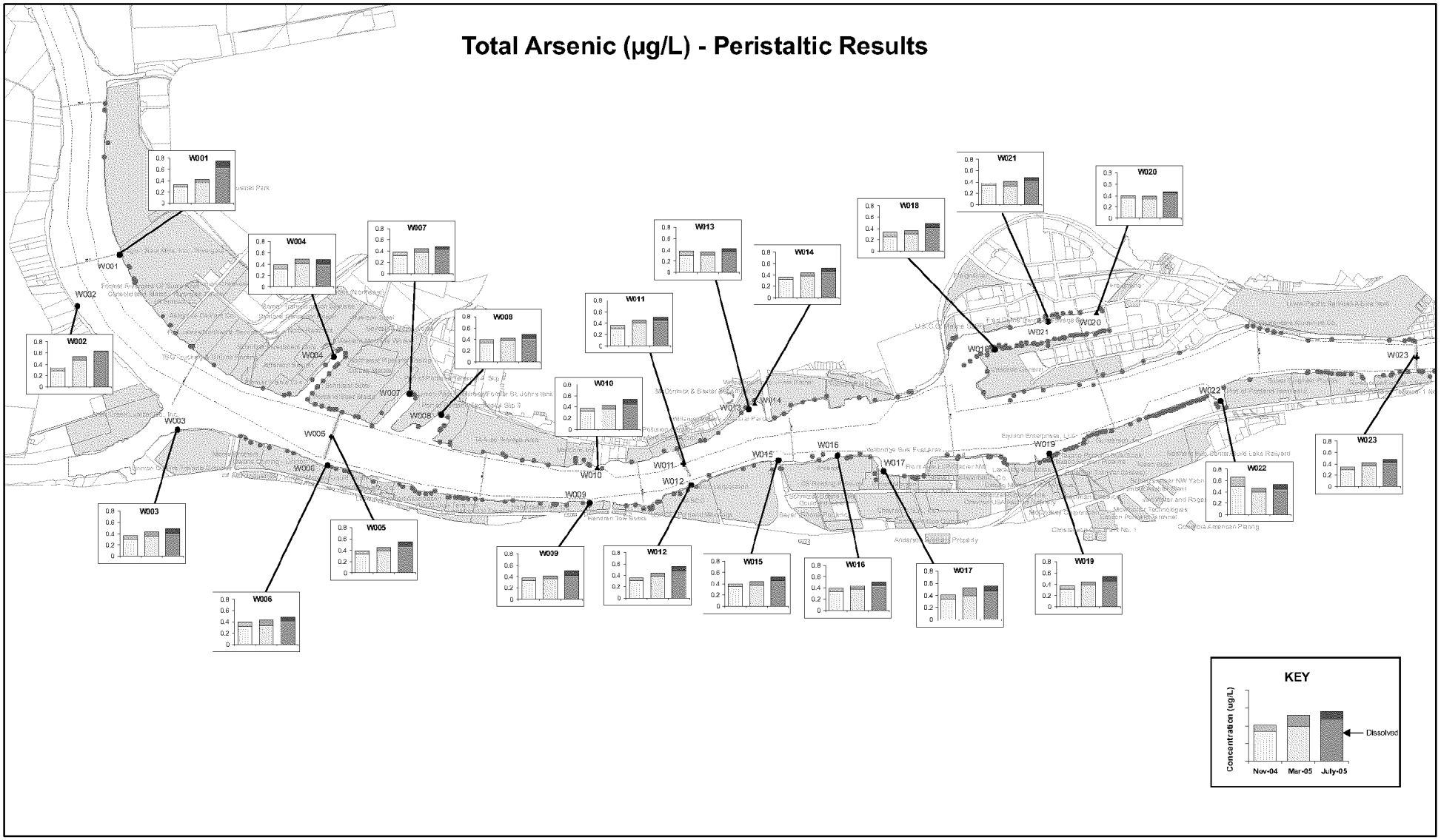
Figure 4-1
Portland Harbor RI/FS
Round 2A Surface Water Site Characterization Summary Report
Comparison of TSS in Round 2A Surface Water Samples

ANC04368
BZTO104(e)004368

Total Arsenic (µg/L) - Peristaltic Results



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LWG LOWER WILLAMETTE GROUP

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS. Channel & River miles: Developed from US Army Corps of Engineers information. River Edge: Referencing the October 2001 9.33 ft. resolution color orthophotos.

0 1,250 2,500 5,000 Feet

- Near Bottom
- Integrated Water Column
- Integrated Water ColumnTransect
- Sample Transect
- Rivermiles
- Navigation Channel
- Outfalls

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Figure 4-2
Round 2A Surface Water
Site Characterization Summary Report
Total Arsenic (µg/L) - Peristaltic Results
Concentrations in Surface Water

Map Document: (O:\Projects\Portland_Harbor\LWG-Map-Projects\Surface\swsite-2MXDs\EPA_SW_Arsenic_PP_mil_fourlc.mxd)
3/22/2006 -- 4:58:25 PM

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BZTO104(e)004369

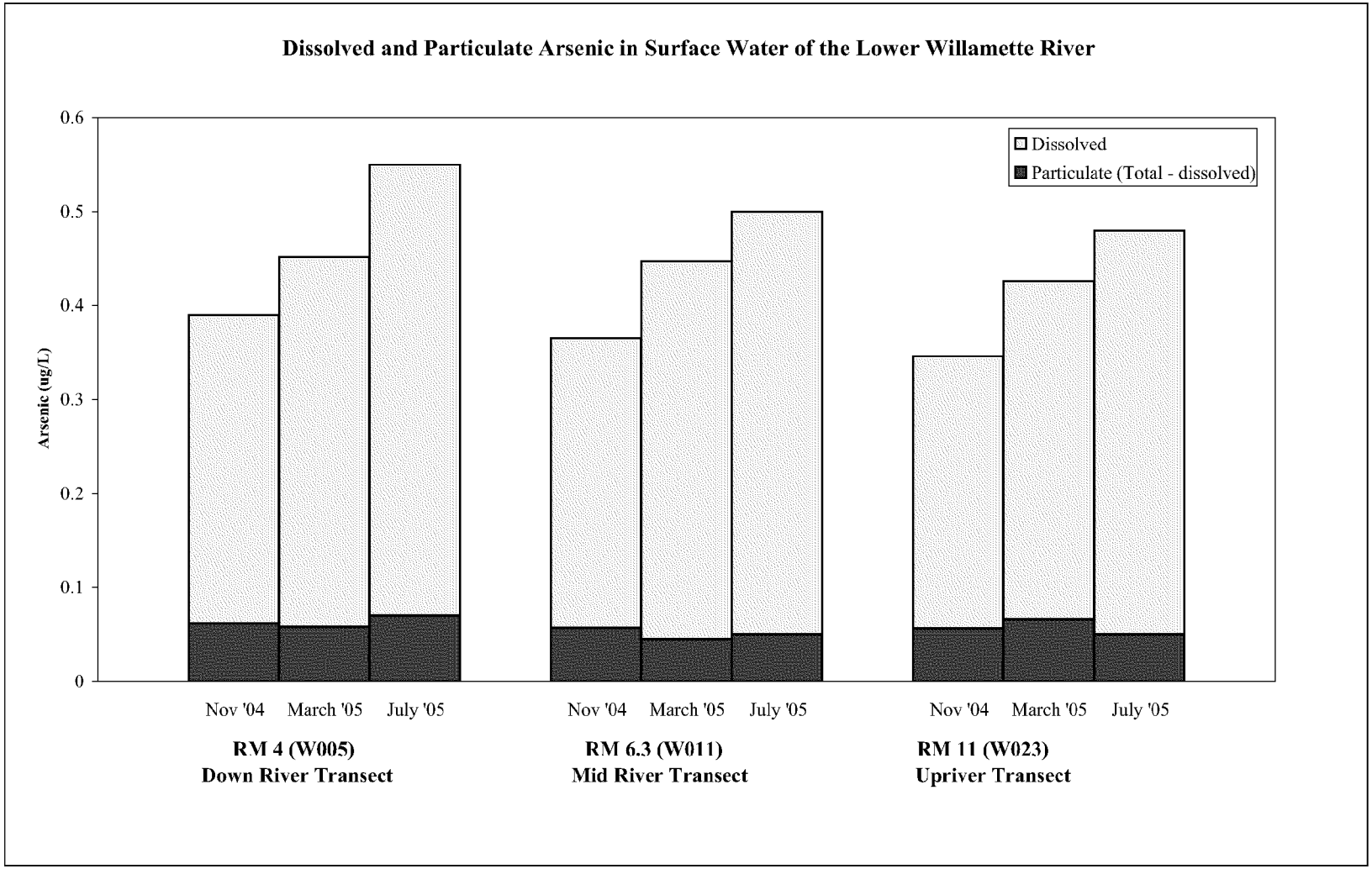

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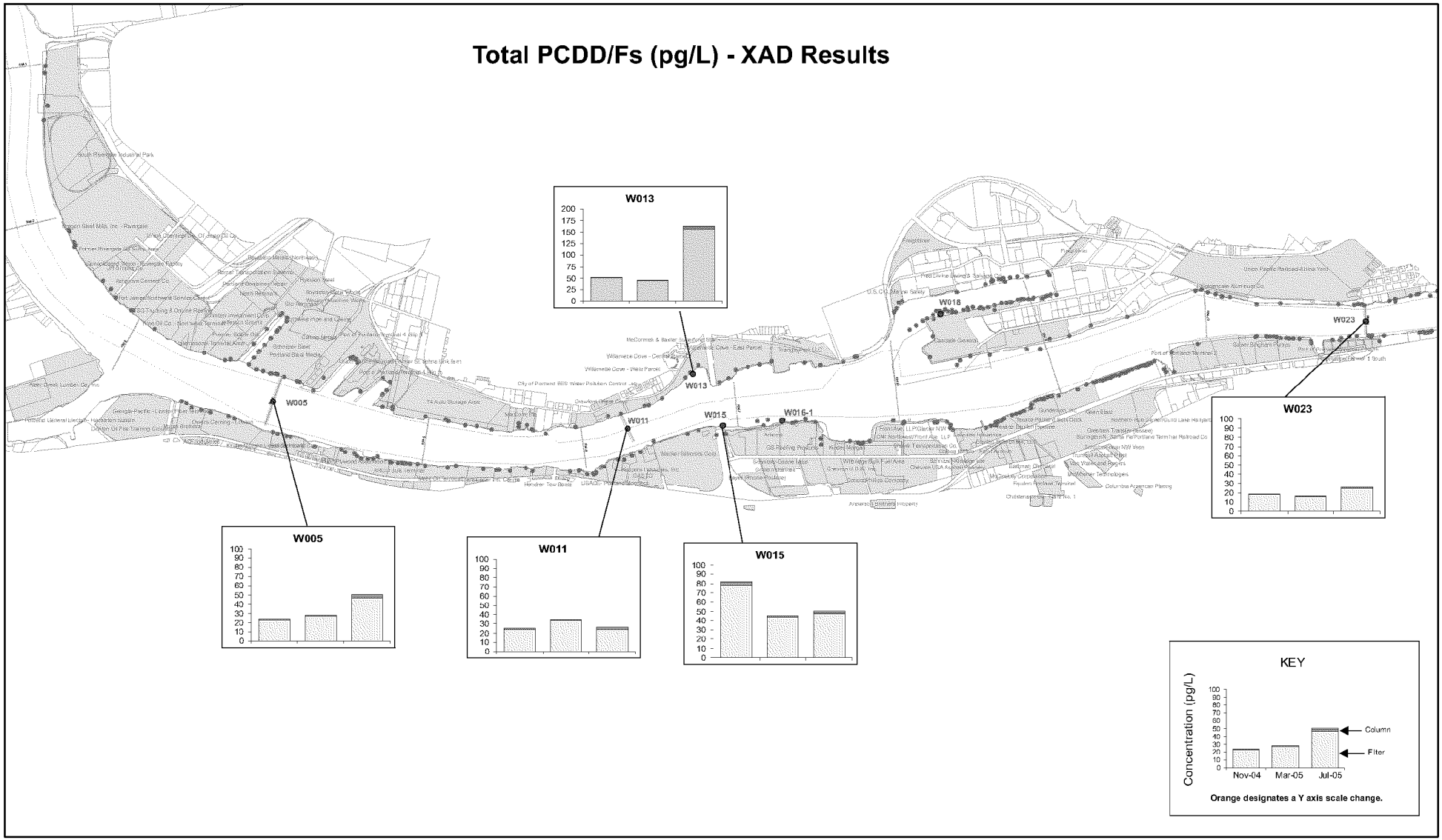
Figure 4-3
Portland Harbor RI/FS
Round 2A Surface Water Site Characterization Summary Report
Comparison of Arsenic in Round 2A Surface Water Samples

ANC04370
BZTO104(e)004370



Map Document: (O:\Projects\Portland_Harbor\LWG-Map-Projects\Surfacewater-2\MXDs\EPA_SW_PCDD_F_Total_Bars_.mxd)
4/3/2006 -- 2:11:15 PM

integral consulting inc.

LWG LOWER WILLAMETTE GROUP

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 Feet

- XAD Sample Location
- Sample Transect
- Outfalls
- Rivermiles
- Navigation Channel

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Figure 4-4
Round 2A Surface Water
Site Characterization Summary Report
Total PCDD/Fs (pg/L) - XAD Results
Concentrations in Surface Water

Total PCDD/F Concentrations in XAD Columns and 0.5µm Filters in Round 2A Surface Water Samples

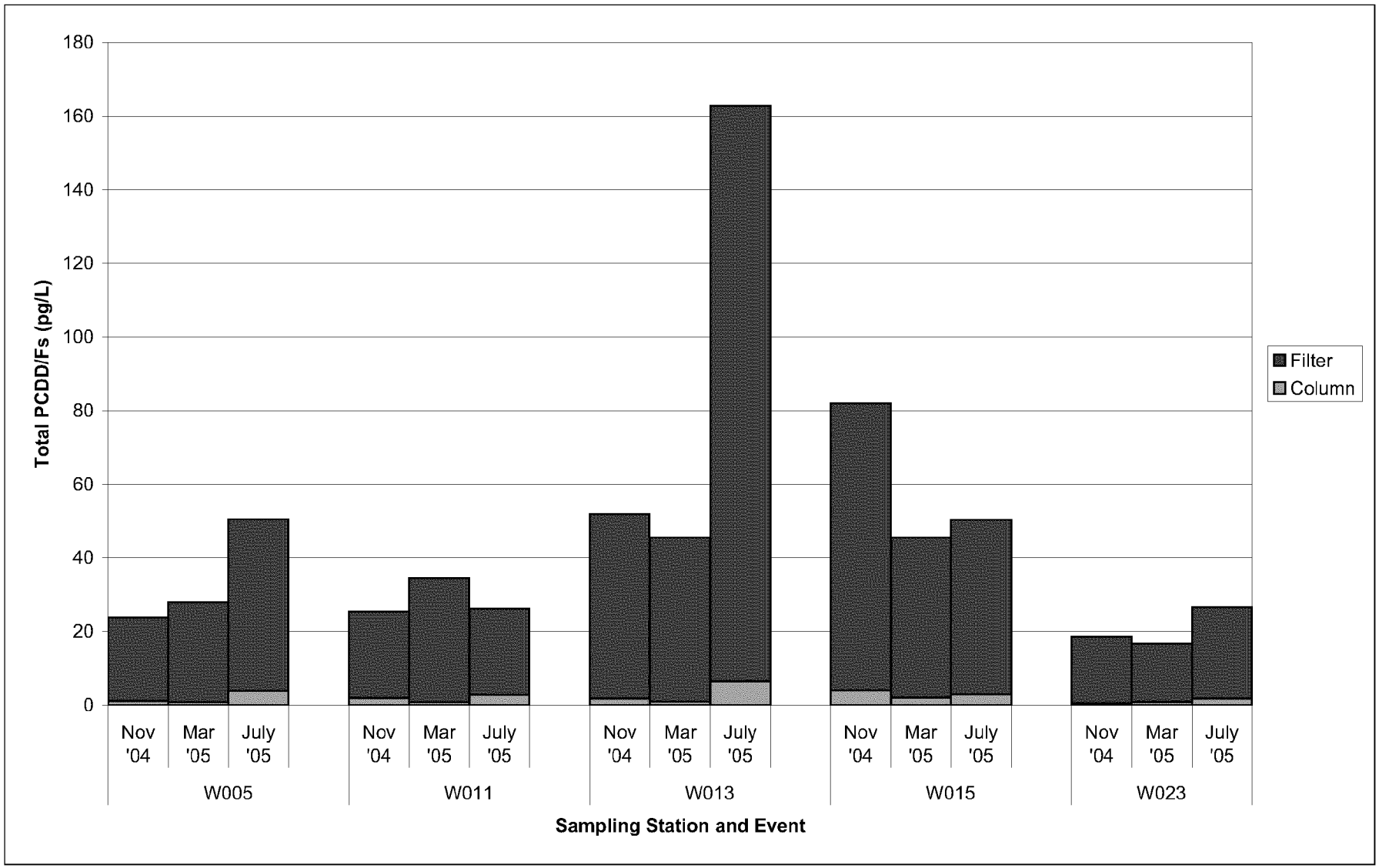

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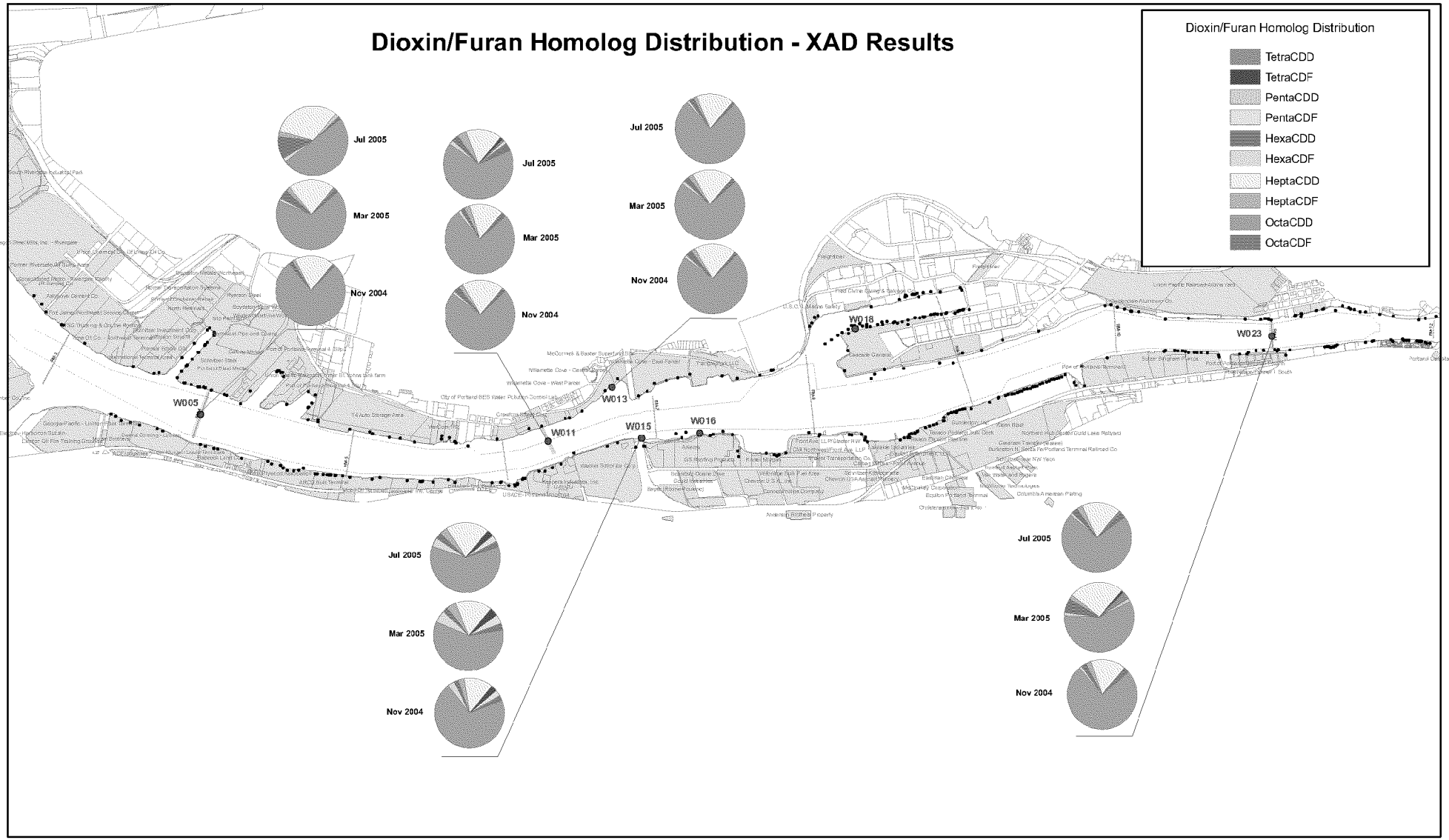
Figure 4-5
Portland Harbor RI/FS
Round 2A Surface Water Site Characterization Summary Report
Total PCDD/F Concentrations in XAD Columns and 0.5µm Filters in Round 2A Surface Water Samples



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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 Feet

- XAD Sample Locations
- Sample Transect
- Outfalls
- Rivermiles
- Navigation Channel

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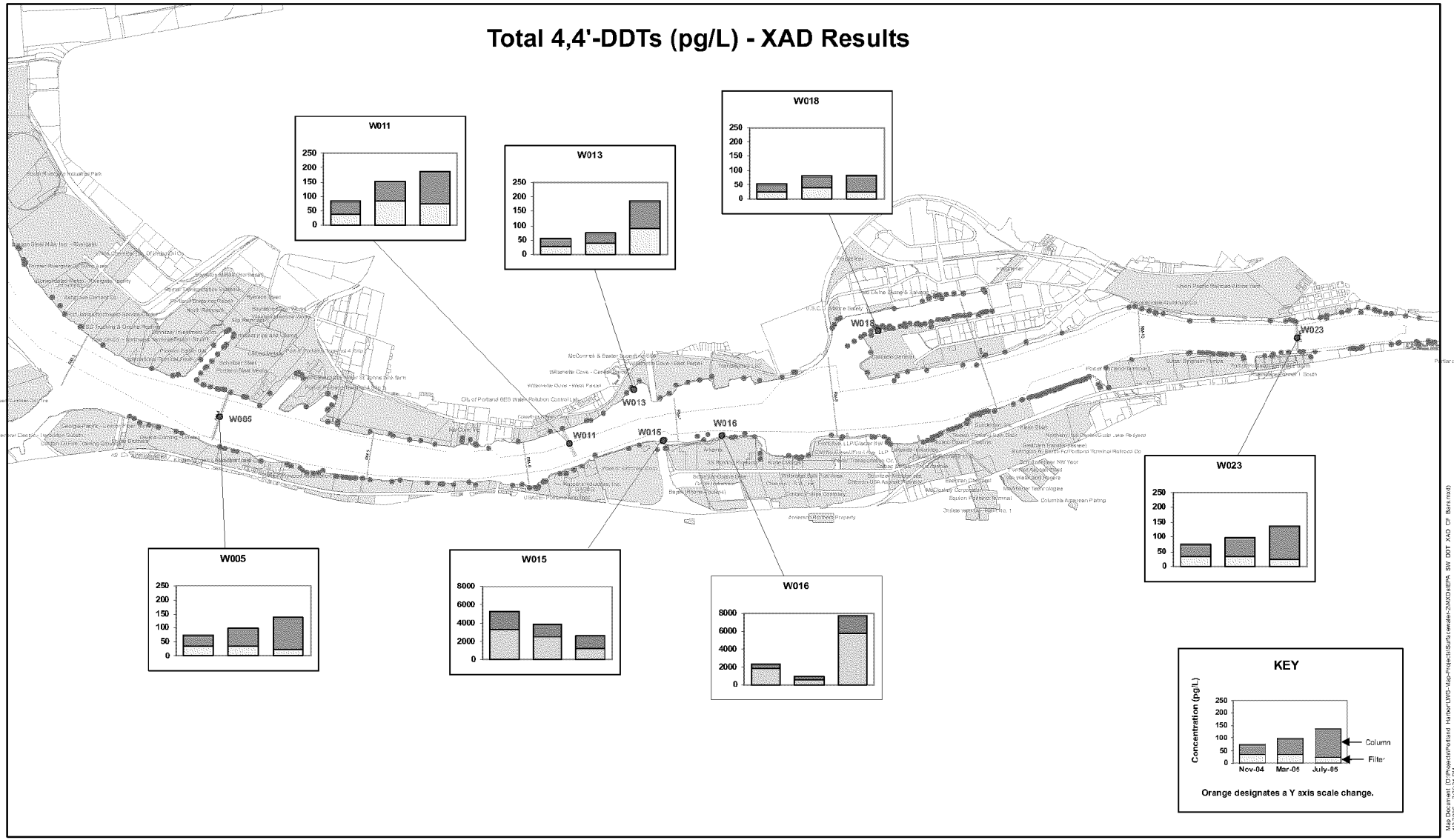
Figure 4-6
Round 2A Surface Water
Site Characterization Summary Report
Dioxin/Furan Homolog Distribution - XAD Results
Concentrations in Surface Water

Map Document: (O:\Projects\Portland_Harbor\LWG-Map-Projects\Surfacewater-2\MXDs\EPA_SW_PCDD-F_Homolog_PieCharts.mxd)
4/3/2006 2:26:07 PM

ANC04373
BZTO104(e)004373

Total 4,4'-DDTs (pg/L) - XAD Results



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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 Feet

- XAD Sample Locations
- Sample Transect
- Outfalls
- River miles
- Navigation Channel

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Figure 4-7
Round 2A Surface Water
Site Characterization Summary Report
Total 4,4'-DDTs (pg/L) - XAD Results
Concentrations in Surface Water

Map Document: (O:\Projects\Portland Harbor\LWG-Map-Files\SurfaceWater-2\MXDs\EPA SW DDT XAD CF Bars.mxd)
4/3/2006 - 2:21:34 PM

ANC04374
BZTO104(e)004374

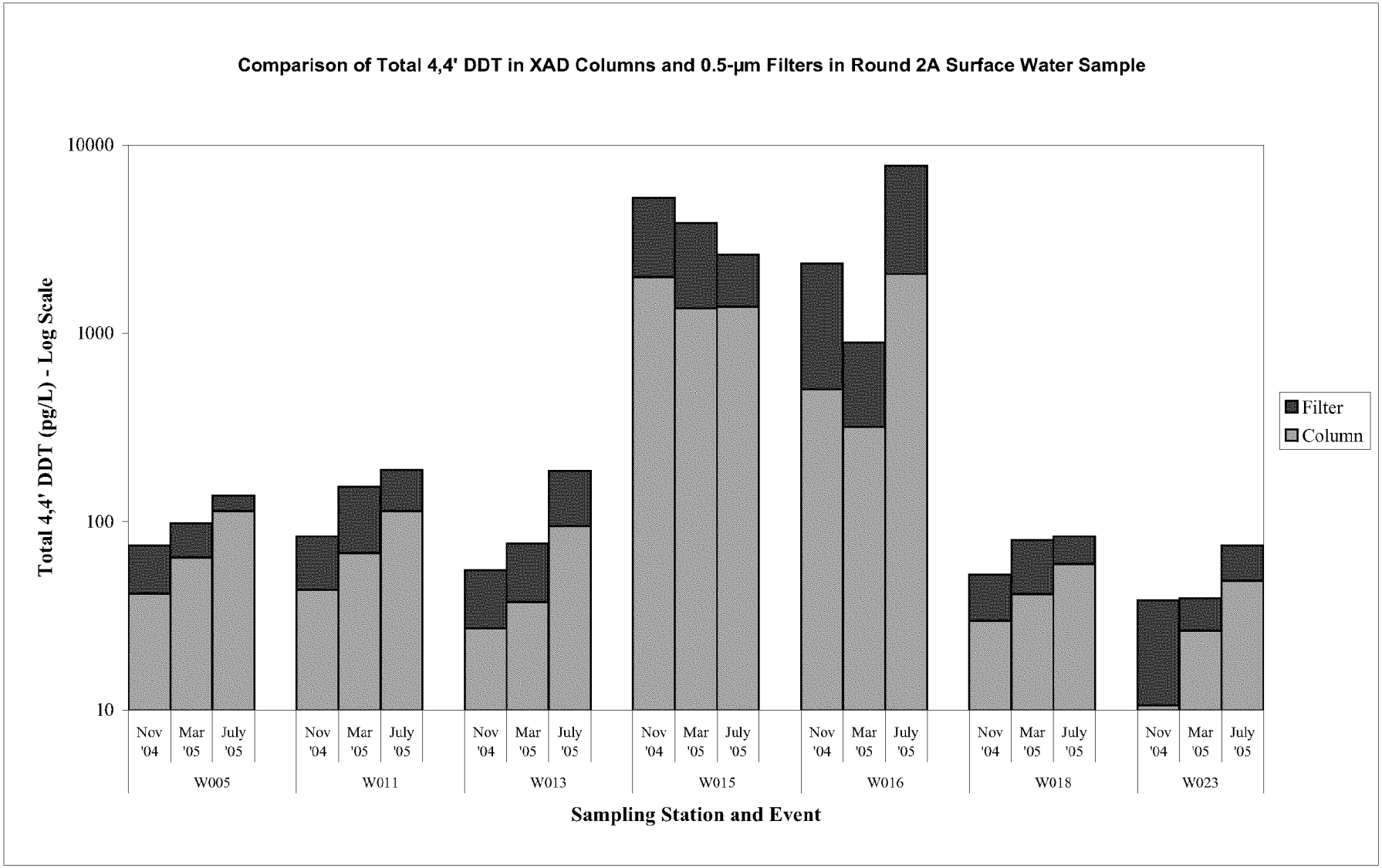

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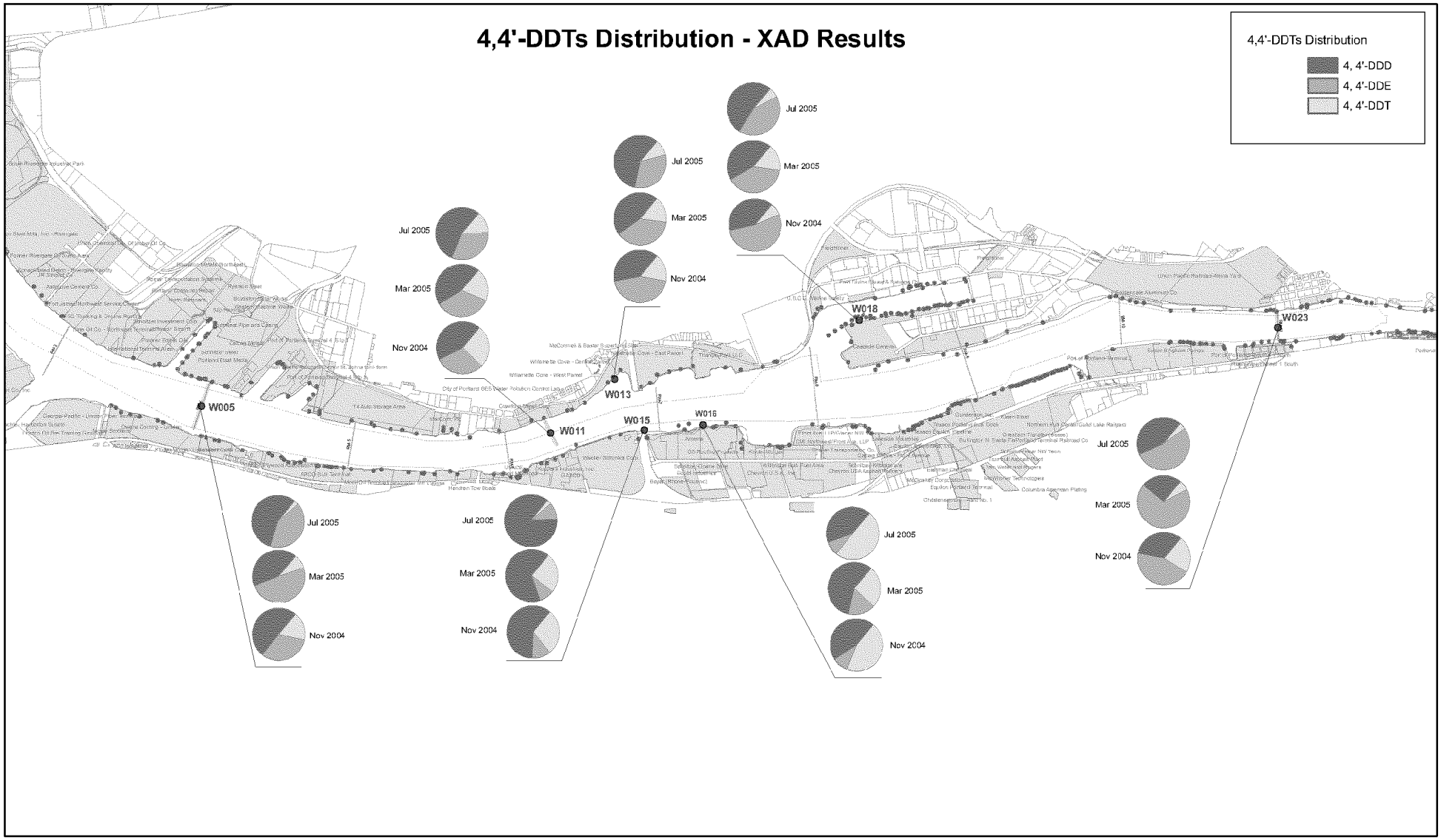
Figure 4-8
Portland Harbor RI/FS
Round 2A Surface Water Site Characterization Summary Report
Comparison of Total 4,4' DDT in XAD Columns and 0.5-µm Filters in Round 2A Surface Water Sample

ANC04375
BZTO104(e)004375

4,4'-DDTs Distribution - XAD Results



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FEATURE SOURCES:
Transportation, Property, and Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

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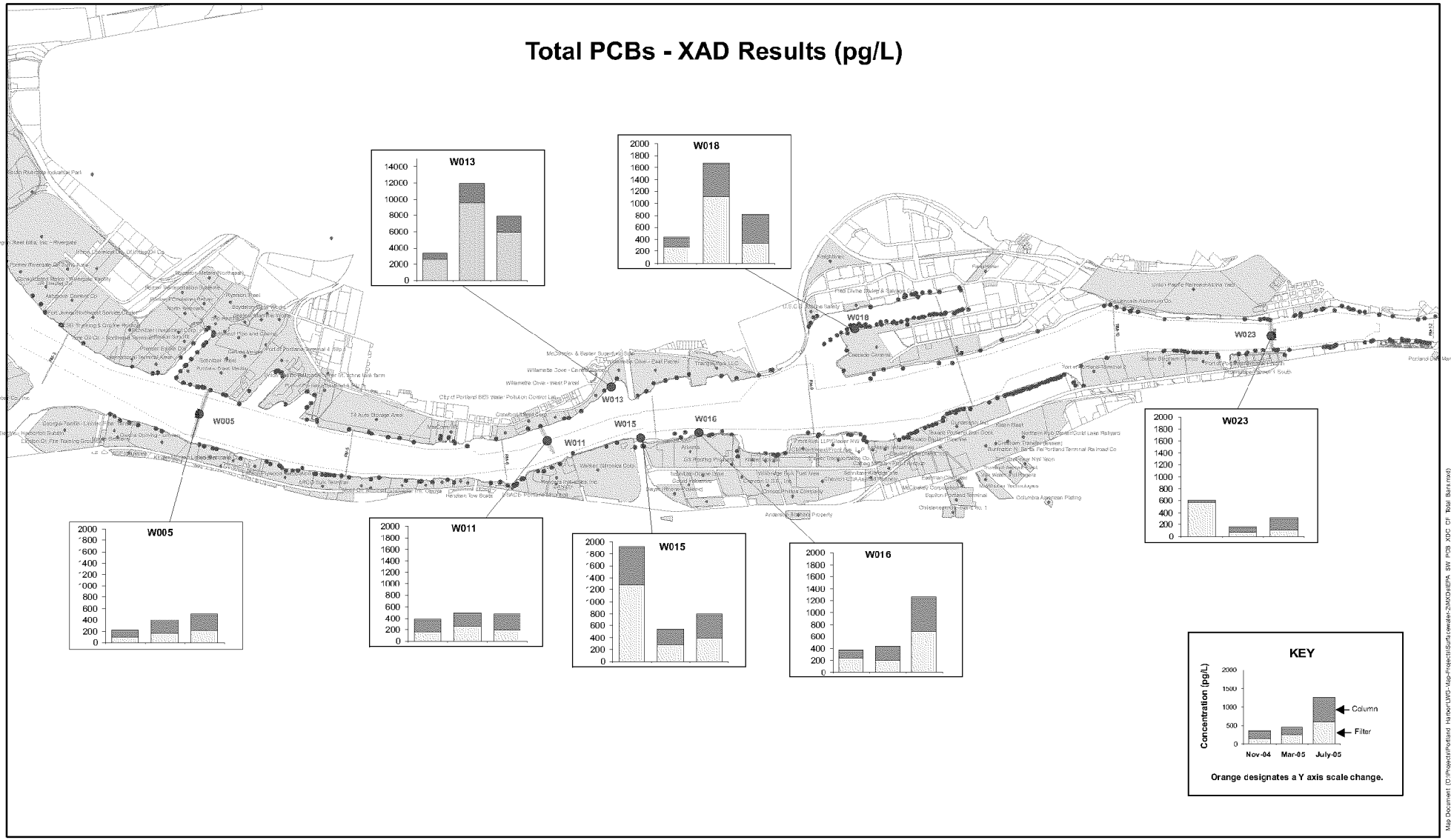
Figure 4-9
Round 2A Surface Water
Site Characterization Summary Report
4,4'-DDTs Distribution - XAD Results
Concentrations in Surface Water

Map Document: (I:\Projects\Portland_Harbor\LWG-Map-Projects\Surfacewater-2A\MXD\EPA_SW_DDT_Distro+RES_NEW.mxd)
4/3/2006 -- 2:23:59 PM

ANC04376
BZTO104(e)004376

Total PCBs - XAD Results (pg/L)



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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 Feet

- XAD Sample Locations
- Sample Transect
- Outfalls
- Rivermiles
- Navigation Channel

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Figure 4-10
Round 2A Surface Water
Site Characterization Summary Report
Total PCBs - XAD Results (pg/L)
Concentrations in Surface Water

Map Document (O:\Projects\Portland Harbor\LWG-Map-Projects\Surfacewater-2\MXDs\EPA_SW_PCB_XDC_CF_Total_Bars.mxd)
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ANC04377
BZTO104(e)004377

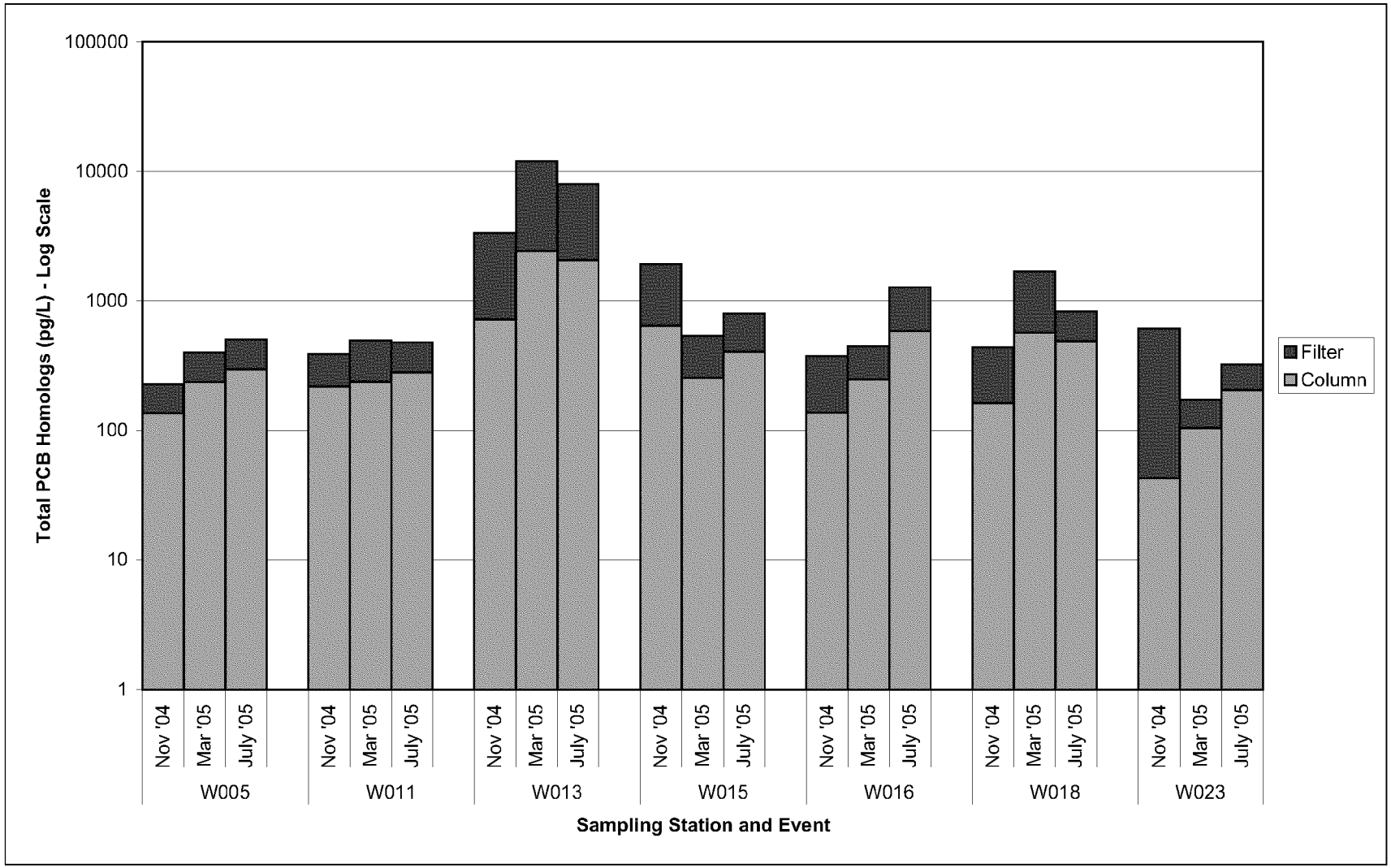

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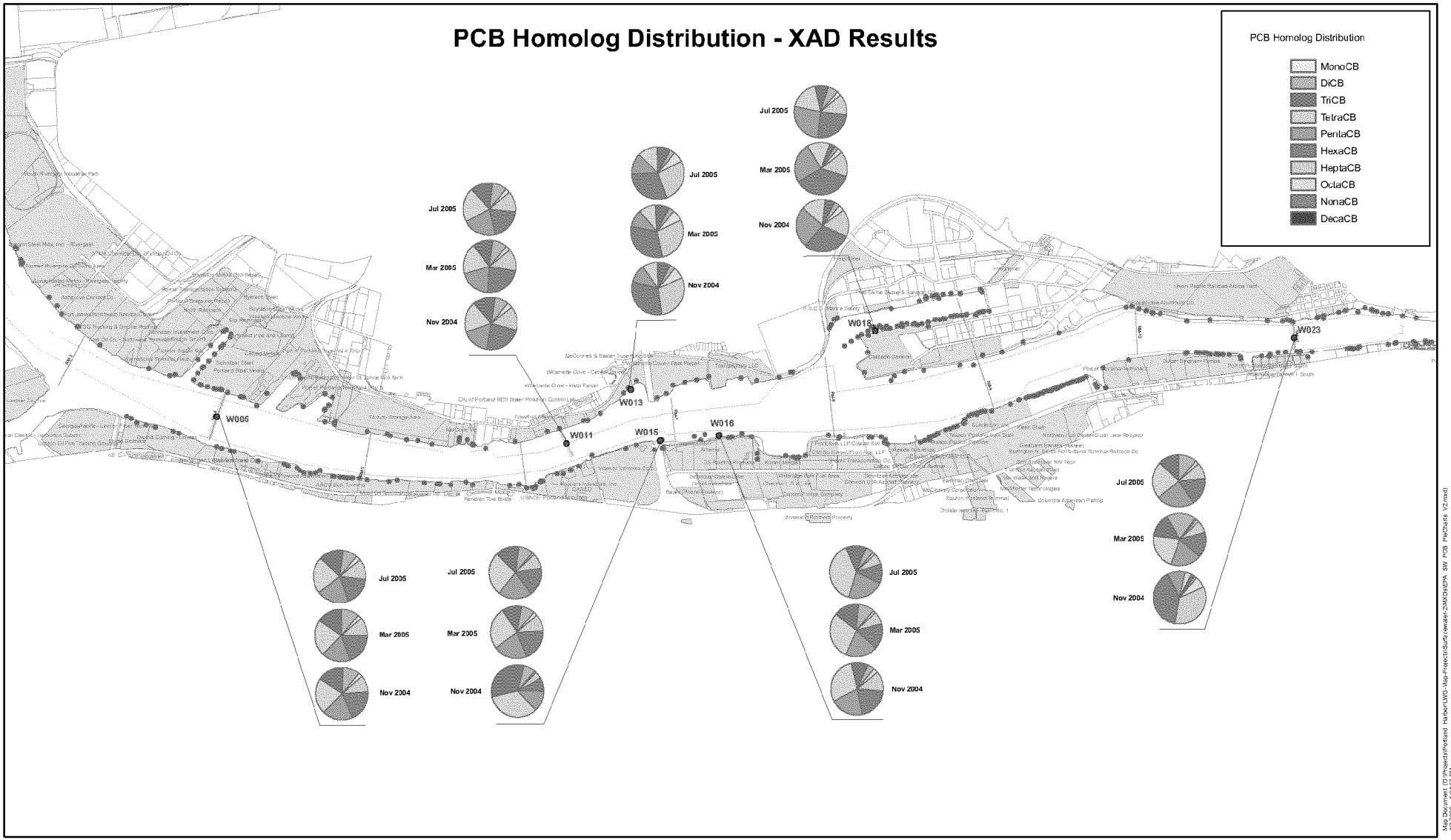
Figure 4-11
Portland Harbor RI/FS
Round 2A Surface Water Site Characterization Summary Report
Total PCB Homologs in XAD Columns and 0.5-µm Filters in Round 2A Surface Water Samples

ANC04378
BZTO104(e)004378



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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 Feet

- XAD Sample Locations
- Sample Transect
- Outfalls
- River miles
- Navigation Channel

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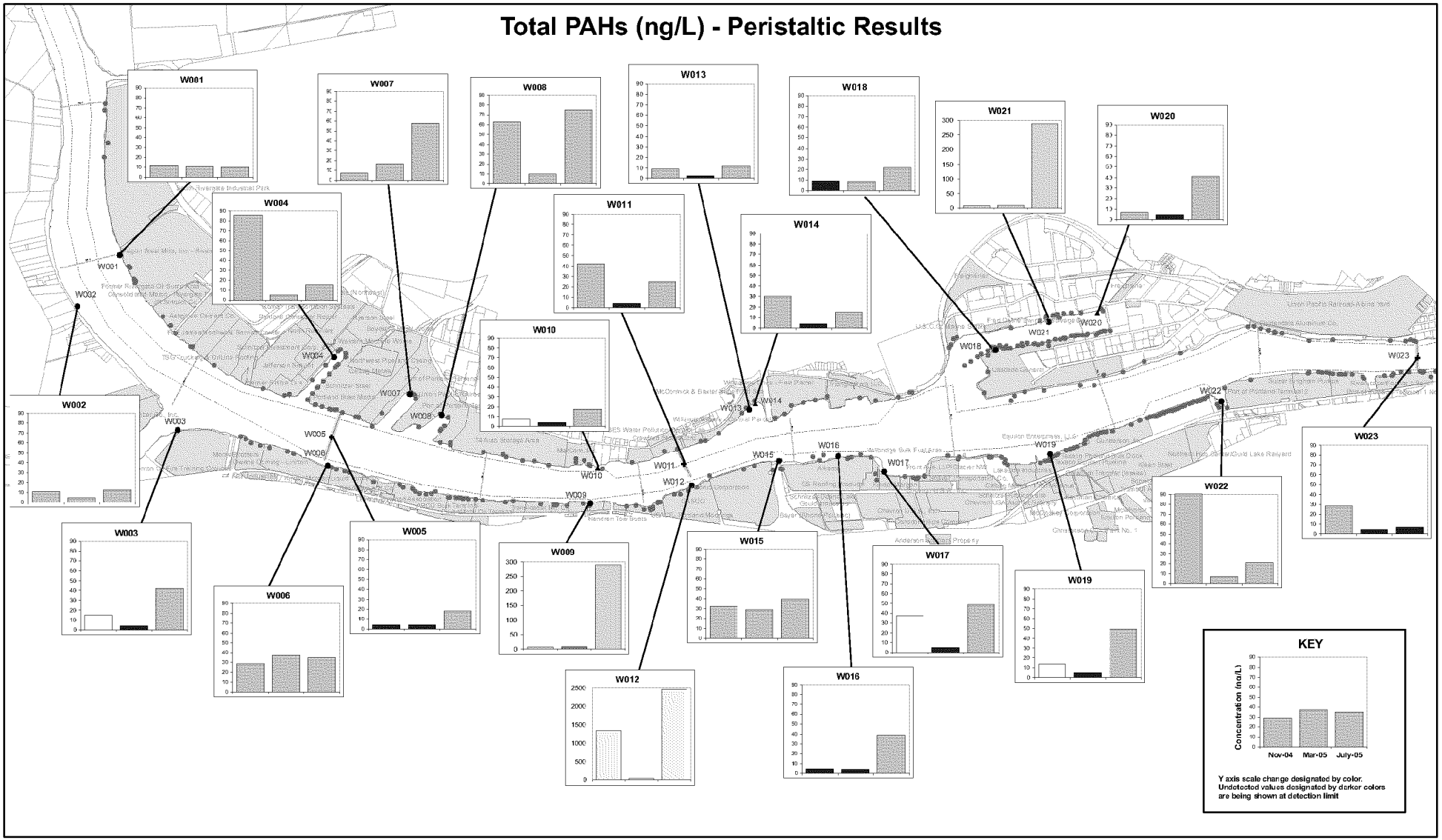
Figure 4-12
Round 2A Surface Water
Site Characterization Summary Report
PCB Homolog Distribution - XAD Results
Concentrations in Surface Water

Map Document (O:\Projects\Portland Harbor\LWG-Map-Projects\Surfacewater-2\MXDs\EPA_SW_PCB_PieCharts_V2.mxd)
4/3/2006 -- 1:04:52 PM

ANC04379
BZTO104(e)004379

Total PAHs (ng/L) - Peristaltic Results



Map Document: (D:\Projects\Portland_Harbor\LWG-Map-Projects\Surfacewater-2MX08\EPA_SW_TotalPAH_PP_Bars.mxd)
3/23/2006 -- 9:43:42 AM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS. Channel & River miles: Developed from US Army Corps of Engineers information. River Edge: Referencing the October 2001 9.33 ft. resolution color orthophotos.

0 1,250 2,500 5,000 Feet

- Near Bottom
- Integrated Water Column
- Integrated Water Column Transect
- Sample Transect
- Rivermiles
- Navigation Channel
- Outfalls

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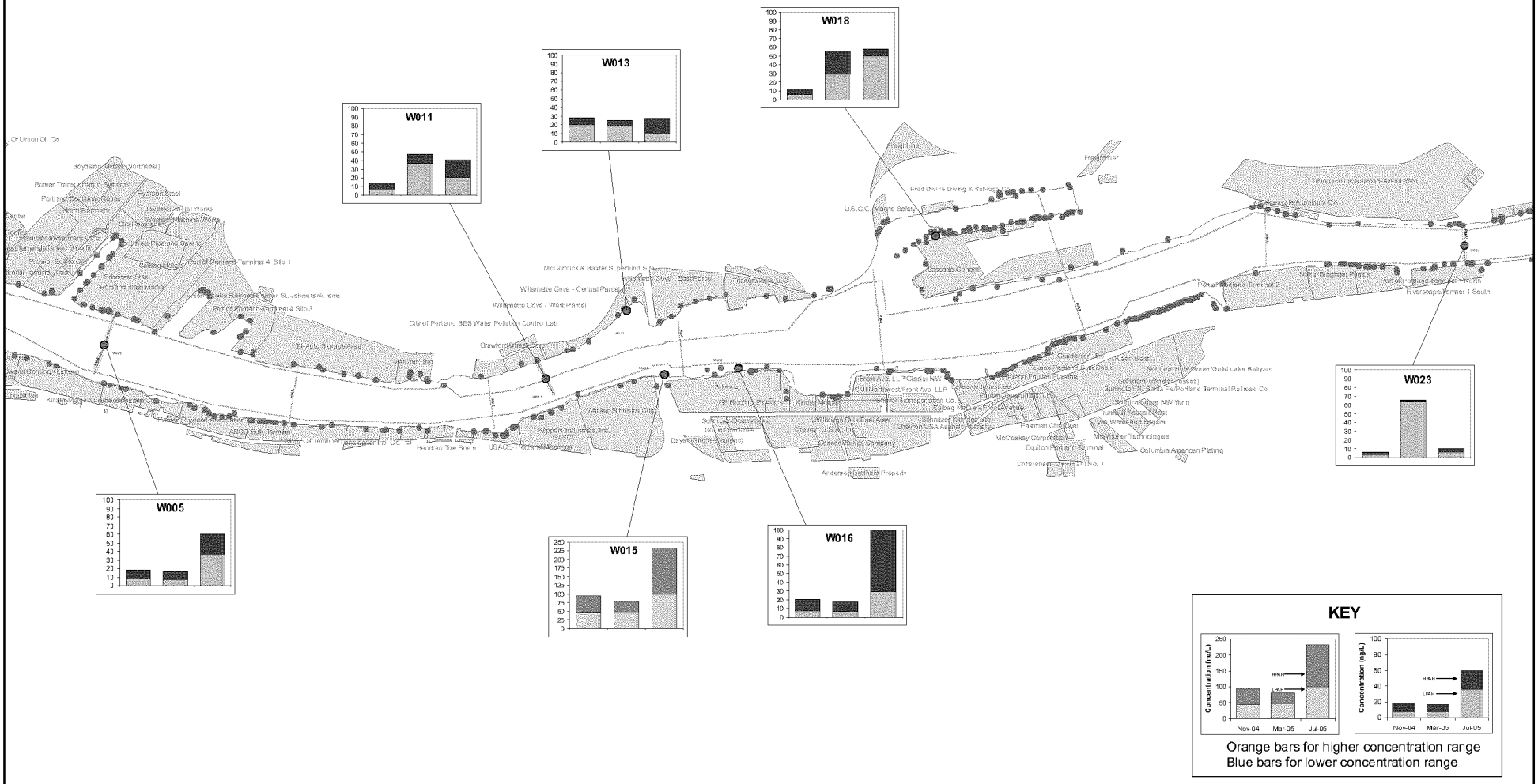
Figure 4-13
Round 2A Surface Water
Site Characterization Summary Report
Total PAHs (ng/L) - Peristaltic Results
Concentrations in Surface Water

ANC04380
BZTO104(e)004380

Total PAHs - XAD Results (ng/L)



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LWG LOWER WILLAMETTE GROUP

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS. Channel &
River miles: Developed from US Army Corps of Engineers information.
River Edge: Referencing the October 2001 0.33 ft. resolution color orthophotos.

0 1,000 2,000 3,000 Feet

- Surface Water Sample Location
- Sample Transect
- Outfalls
- River mile
- Navigation Channel

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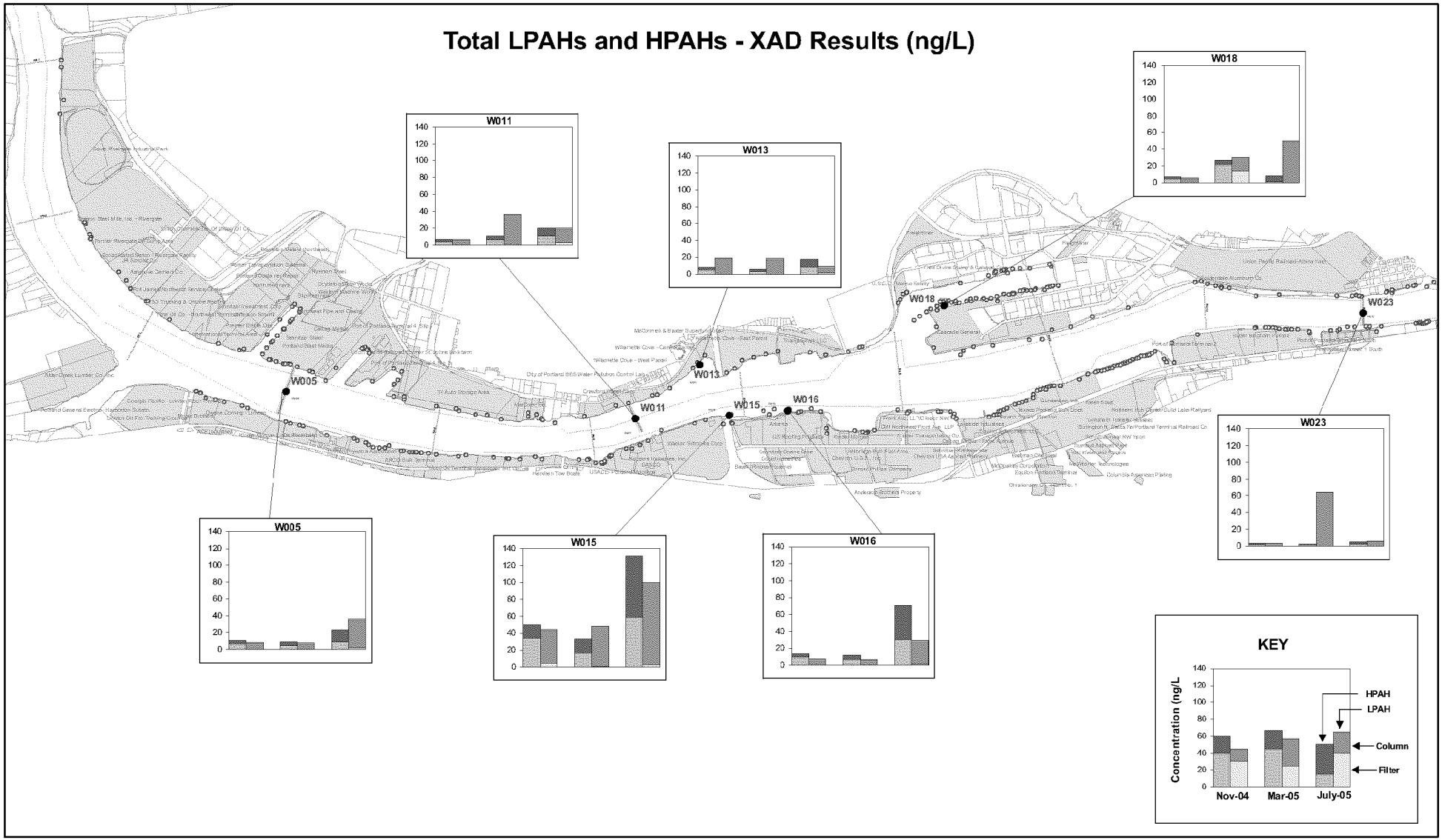
Figure 4-14
Round 2A Surface Water
Site Characterization Summary Report
Total PAHs - XAD Results (ng/L)
Concentrations in Surface Water

Map Document: (D:\Projects\Portland_Harbor\LWG-Map-Projects\Surfacewater-2MXDs\EPA_SW_Total_PAH_XAD_Bars.mxd)
4/10/2006 -- 1:01:31 PM

ANC04381
BZTO104(e)004381



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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 Feet

- XAD Sample Locations
- Sample Transect
- Outfalls
- River mile
- Navigation Channel

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Figure 4-15
Round 2A Surface Water
Site Characterization Summary Report
Total LPAHs and HPAHs - XAD Results (ng/L)
Concentrations in Surface Water

Map Document: (O:\Projects\Portland_Harbor\LWG-Map-Projects\Surfacewater-2\MXDs\EPA_SW_Total_HPAH_LPAH_XAD_Bars.mxd)
4/10/2006 -- 12:19:29 PM

ANC04382
BZTO104(e)004382

Table 2-1. Gage Height, Stream Velocity, Precipitation, and River Flow for the Round 2A Surface Water Sampling Events.

Sampling Dates	Gage Height (ft)[1]			Average Stream Velocity (ft/s)[1]	Precipitation (in)[2]	River Flow (ft^3/s)[3,4]
	Min	Max	Avg.			
November 2004 Sampling Event						
11/8/2004	--	--	3.06	--	0.00	26400
11/9/2004	--	--	3.38	--	Trace	25100
11/10/2004	--	--	3.74	--	0.04	24500
11/11/2004	--	--	3.98	--	0.00	23900
11/12/2004	2.66	6.27	4.08	0.70	0.01	22900
11/15/2004	2.71	6.72	4.44	0.77	0.37	19600
11/16/2004	2.89	6.24	4.19	0.72	0.05	19600
11/17/2004	2.46	5.52	3.81	0.66	Trace	18600
11/18/2004	2.24	4.98	3.51	0.78	0.35	18300
11/19/2004	2.27	4.30	3.21	0.75	Trace	18300
11/22/2004	1.6	4.91	2.93	0.70	0.01	15900
11/23/2004	1.95	5.30	3.22	0.79	0.15	15600
11/29/2004	1.88	4.80	3.00	0.79	0.24	20800
11/30/2004	2.02	4.83	3.24	0.74	0.07	20000
12/1/2004	2.54	4.62	3.44	0.68	0.02	19600
12/2/2004	2.22	3.89	3.04	--	0.00	19200
March 2005 Sampling Event						
3/1/2005	2.48	5.88	3.84	0.29	0.00	10900
3/2/2005	2.6	5.87	3.99	0.31	Trace	11600
3/3/2005	2.32	5.46	3.4	0.28	0.00	10400
3/4/2005	2.25	5.4	3.44	0.39	0.00	14700
3/7/2005	1.62	5.43	3.28	0.30	0.00	10100
3/8/2005	1.76	5.56	3.4	0.27	0.00	10000
3/9/2005	1.89	5.82	3.48	0.23	Trace	--
3/10/2005	2.14	5.75	3.73	0.23	0.00	8950
3/11/2005	2.75	6.22	4.24	0.22	0.00	--
3/14/2005	2.15	5.66	3.51	0.28	0.00	10300
3/15/2005	2.02	5.39	3.27	0.25	0.00	9350
3/16/2005	2.02	5.09	3.17	0.34	0.13	12800
3/17/2005	1.62	4.59	2.89	0.32	0.00	11800
July 2005 Sampling Event						
7/5/2005	2.22	5.68	3.79	0.30	0.00	11300
7/6/2005	3.31	6.52	4.64	0.23	0.01	8750
7/7/2005	2.48	5.89	4.03	0.26	0.00	9720
7/8/2005	3.40	6.25	4.65	0.25	0.24	9720
7/11/2005	3.01	5.31	4.18	0.27	0.00	10300
7/12/2005	2.82	5.32	4	0.20	0.00	7830
7/13/2005	2.62	5.17	3.7	0.21	0.00	7900
7/14/2005	2.89	5.42	3.77	0.17	0.00	6200
7/15/2005	3.54	5.59	4.14	0.15	0.00	5720
7/18/2005	--	--	--	0.22	0.00	--
7/19/2005	--	--	--	--	0.00	--
7/20/2005	--	--	--	--	0.00	--

Notes:

[1] USGS Water Resources Web Page - USGS 14211720 Willamete River at Portland, OR - http://waterdata.usgs.gov/nwis

[2] National Weather Service Forecast Office, Portland, OR - http://newweb.wrh.noaa.gov/climate/index.php?wfo=pqr

[3] River flow data are estimated daily mean values.

[4] USGS Water Resources Department, Portland, OR.

-- Data not available for these dates.

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ANC04383
BZTO104(e)004383

Table 2-2. Round 2A Surface Water Sampling Stations and Sampling Methods.

Station ID	River Mile	Sampling Station Description	Sampling Method	
			Peristaltic Pump	High-Volume XAD-2 Column
W001	MILE 2-3	Amphibian Habitat - Downstream East Bank, Oregon Steel Mills	X	
W002[2,3]	MILE 2-3	Amphibian Habitat - Sauvie Island	X	
W003	MILE 3-4	Amphibian Habitat - near Multnomah Channel	X	
W004[2]	MILE 3-4	Amphibian Habitat - International Slip	X	
W005	MILE 3-4	Downstream Transect - (RM 4.0)	X	X
W006	MILE 4-5	Amphibian Habitat - Linnton, Kinder Morgan	X	
W007	MILE 4-5	Amphibian Habitat - T4/Slip 1	X	
W008	MILE 4-5	Amphibian Habitat - T4/Slip 3	X	
W009	MILE 5-6	Amphibian Habitat - Downstream from St. Johns Bridge	X	
W010	MILE 5-6	Human Use Contact Area - Cathedral Park	X	
W011[4]	MILE 6-7	Midstream Transect - (RM 6.3)	X	X
W012	MILE 6-7	Beach Area/Source Area - Gasco	X	
W013[1,2,3]	MILE 6-7	Amphibian Habitat - Willamette Cove	X	X
W014	MILE 6-7	Human Use Contact Area - Willamette Cove	X	
W015	MILE 6-7	Beach Area/Source Area - Rhone Polenc	X	X
W016[1,2,3]	MILE 7-8	Beach Area/Source Area - Arkema (ATOFINA)	X	X
W017	MILE 7-8	Amphibian Habitat - Saltzman Creek, Willbridge	X	
W018	MILE 8-9	Amphibian Habitat/Source Area - Cascade General (RM 8.4)	X	X
W019	MILE 8-9	Amphibian Habitat/Source Area - Gunderson (RM 8.6)	X	
W020	MILE 8-9	Human Use Contact Area - Swan Island Lagoon	X	
W021	MILE 9-10	Amphibian Habitat - Swan Island Lagoon	X	
W022	MILE 9-10	Amphibian Habitat - Terminal 2	X	
W023	MILE 10-11	Upstream Transect - (RM 11)	X	X

Notes:

[1] Field replicates were collected at stations W013 and W016 for peristaltic pump, and W013 for XAD-2 during the November 2004 sampling event.

[2] Field replicates were collected at stations W002, W004, W013, and W016 for peristaltic pump, and W013 for XAD-2 during the March 2005 sampling event.

[3] Field replicates were collected at stations W002 and W016 for peristaltic pump, and W013 for XAD-2 during the July 2005 sampling event.

[4] Additional set of surface water standard volume samples were collected at W011 during the March 2005 sampling event because of presence of sediment in carboys when first set of samples were collected.

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ANC04384
BZTO104(e)004384

Table 2-3a. November 2004 Water Quality Data.

Station ID	Date	Start Time	End Time	Anchored	State Plane Coordinates Oregon North Zone		YSI/Multimeter	Parameters			
					Northing	Easting		DO (mg/L)	Temperature (°C)	EC (mS/cm)	pH
Peristaltic Samples											
LW2-W001	11/12/2004	11/12/2004 11:00	11/12/2004 11:49	Yes	724810.36	7617743.68	Multimeter	–	9.31	78.7	6.31
LW2-W002	11/12/2004	11/12/2004 13:41	11/12/2004 14:30	Yes	724784.88	7615555.58	Multimeter	11.56	9.33	74.4	6.76
LW2-W003	11/12/2004	11/12/2004 15:55	11/12/2004 16:37	Yes	719665.66	7614560.19	Multimeter	11.47	9.34	85.8	6.75
LW2-W004	11/19/2004	11/19/2004 10:17	11/19/2004 13:18	Yes	717279.94	7619698.57	Multimeter	9.16	10.44	--	6.86
LW2-W005											
EDI 6 (Round 1)	11/22/2004	11/22/2004 10:11	11/22/2004 11:56	No	715663.98	7618233.67	YSI	11.12	10.16	60.0	6.64
EDI 5 (Round 1)	11/22/2004	11/22/2004 13:02	11/22/2004 13:35	Yes	715760.62	7617916.26	YSI	11.11	10.19	63.0	7.43
EDI 4 (Round 1)	11/22/2004	11/22/2004 14:33	11/22/2004 15:10	No	715688.81	7617691.39	YSI	11.10	10.19	62.0	7.46
EDI 3 (Round 1)	11/22/2004	11/22/2004 15:43	11/22/2004 16.18	No	715621.43	7617582.95	YSI	11.14	10.17	59.0	7.52
EDI 2 (Round 1)	11/22/2004	11/22/2004 17:06	11/22/2004 17:42	No	715551.09	7617412.16	YSI	11.14	10.17	57.0	7.54
EDI 1 (Round 1)	11/22/2004	11/22/2004 18:57	11/22/2004 19:20	Yes	715423.02	7617087.45	YSI	11.15	10.16	57.0	7.55
LW2-W006	11/19/2004	11/19/2004 14:38	11/19/2004 15:09	Yes	715147.51	7616829.01	Multimeter	9.30	10.75	7.6	6.93
LW2-W007	11/19/2004	11/19/2004 16:19	11/19/2004 16:43	Yes	714594.66	7620368.80	Multimeter	9.45	10.55	7.6	6.8
LW2-W008[1]	11/23/2004	11/23/2004 09:37	11/23/2004 10:00	Yes	713368.42	7620499.87	YSI	10.71	10.10	62.0	6.75
LW2-W009[1]	12/1/2004	12/1/2004 9:54	12/1/2004 10:30	Yes	707763.04	7621416.98	Multimeter	8.07	8.75	87.1	6.6
LW2-W010[1]	11/23/2004	11/23/2004 11:40	11/23/2004 12:00	Yes	708324.67	7622460.17	YSI	10.95	9.84	57.0	7.16
LW2-W011											
EDI 5 (Round 1)	11/17/2004	11/17/2004 11:22	11/17/2004 13:08	No	706445.05	7624507.53	Multimeter	7.87	10.33	90.1	6.90
EDI 4 (Round 1)	11/17/2004	11/17/2004 13:32	11/17/2004 14:33	No	706186.01	7624343.46	Multimeter	7.82	10.39	85.8	6.95
EDI 3 (Round 1)	11/17/2004	11/17/2004 14:54	11/17/2004 15:44	No	706089.50	7624289.12	Multimeter	7.83	10.38	92.5	7.22
EDI 2 (Round 1)	11/17/2004	11/17/2004 16:02	11/17/2004 16:46	No	705866.67	7624159.47	Multimeter	7.87	10.32	92.4	7.27
EDI 1 (Round 1)	11/17/2004	11/17/2004 16:57	11/17/2004 17:50	No	705775.25	7624124.04	Multimeter	7.87	10.33	91.1	6.98
LW2-W012	12/2/2004	12/2/2004 9:57	12/2/2004 10:25	Yes	705597.42	7624005.09	Multimeter	12.07	7.89	92.7	6.81
LW2-W013-1	11/8/2004	11/8/2004 14:50	11/8/2004 15:42	Yes	705760.04	7627111.89	YSI	11.96	9.58	50.0	7.01
LW2-W013-2	11/9/2004	11/9/2004 11:55	--	Yes	705761.09	7627115.05	YSI	–	9.20	–	7.24
LW2-W014	12/1/2004	12/1/2004 11:50	12/1/2004 12:18	Yes	705733.57	7627386.07	Multimeter	8.17	8.79	87.4	7.08
LW2-W015[1]	11/29/2004	11/29/2004 10:58	11/29/2004 11:48	Yes	703929.23	7626447.05	YSI	12.06	9.02	56.0	6.93
LW2-W016-1[1]	11/30/2004	11/30/2004 12:03	11/30/2004 13:35	Yes	702551.16	7627821.50		–	–	–	–
LW2-W016-2[1]	11/30/2004	--	--	Yes	--	--		–	–	–	–
LW2-W017[1]	12/1/2004	12/1/2004 14:05	12/1/2004 14:30	Yes	701061.47	7628400.98	Multimeter	8.24	8.68	89.5	7.04
LW2-W018[1]	11/10/2004	11/10/2004 10:30	11/10/2004 11:15	Yes	700824.33	7633797.55	YSI	–	9.25	–	7.17
LW2-W019	12/2/2004	12/2/2004 13:00	12/2/2004 13:25	Yes	697268.01	7632339.64	Multimeter	12.17	7.91	91.2	7.12
LW2-W020[1]	12/1/2004	12/1/2004 15:30	12/1/2004 15:45	Yes	699060.17	7636874.77	Multimeter	8.07	9.02	89.1	7.17
LW2-W021[1]	12/1/2004	12/1/2004 16:41	12/1/2004 17:05	Yes	700080.72	7635641.84	Multimeter	8.18	8.87	89.5	7.14
LW2-W022	12/2/2004	12/2/2004 11:30	12/2/2004 11:55	Yes	694072.05	7637266.93	Multimeter	12.08	7.94	101.2	7.02
LW2-W023[1]											
EDI 4 (Round 1-a)*	11/15/2004	11/15/2004 12:55	11/15/2004 13:20	No	690342.03	7642747.76	Multimeter	8.23	10.15	90.0	7.18
EDI 4 (Round 1-b)*	11/15/2004	11/15/2004 15:14	11/15/2004 15:36	No	690312.25	7642765.81		--	--	--	--
EDI 3 (Round 1)	11/15/2004	11/15/2004 19:07	11/15/2004 19:37	No	--	--	Multimeter	8.31	10.15	90.0	7.62
EDI 2 (Round 1)	11/15/2004	11/15/2004 20:25	11/15/2004 21:04	No	--	--	Multimeter	8.12	10.17	87.0	7.53
EDI 1 (Round 1)	11/15/2004	11/15/2004 21:57	11/15/2004 22:35	No	--	--	Multimeter	8.04	10.17	88.0	7.39
XAD Samples											
LW2-W005[1]											
EDI 6 (Round 1)	11/22/2004	11/22/2004 10:11	11/22/2004 11:56	No	715663.98	7618233.67	YSI	11.10	10.17	60.0	6.93
EDI 6 (Round 2)	11/22/2004	11/22/2004 20:13	11/22/2004 21:38	Yes	715827.25	7618145.65	YSI	11.17	11.10	57.0	7.57
EDI 5 (Round 1)	11/22/2004	11/22/2004 13:02	11/22/2004 13:35	Yes	715760.62	7617916.26	YSI	11.13	10.19	63.0	7.42
EDI 5 (Round 2)	11/22/2004	11/22/2004 22:08	11/22/2004 23:25	Yes	715790.63	7617889.52	YSI	11.22	10.02	56.0	7.59
EDI 4 (Round 1)	11/22/2004	11/22/2004 14:33	11/22/2004 15:10	No	715688.81	7617691.39	YSI	11.10	10.19	62.0	7.46

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Table 2-3a. November 2004 Water Quality Data.

Station ID	Date	Start Time	End Time	Anchored	State Plane Coordinates Oregon North Zone		YSI/Multimeter	Parameters			
					Northing	Easting		DO (mg/L)	Temperature (°C)	EC (mS/cm)	pH
EDI 4 (Round 2)	11/23/2004	11/23/2004 00:00	11/23/2004 01:03	No	715646.42	7617711.01	YSI	11.20	10.01	56.0	7.58
EDI 3 (Round 1)	11/22/2004	11/22/2004 15:43	11/22/2004 16.18	No	715621.43	7617582.95	YSI	11.14	10.17	59.0	7.52
EDI 3 (Round 2)	11/23/2004	11/23/2004 01:21	11/23/2004 02:27	No	715552.95	7617590.90	YSI	11.23	10.03	56.0	7.58
EDI 2 (Round 1)	11/22/2004	11/22/2004 17:06	11/22/2004 17:42	No	715551.09	7617412.16	YSI	11.13	10.17	58.0	7.55
EDI 2 (Round 2)	11/23/2004	11/23/2004 03:22	11/23/2004 04:42	No	715586.28	7617342.85	YSI	11.24	10.02	56.0	7.58
EDI 1 (Round 1)	11/22/2004	11/22/2004 18:57	11/22/2004 19:20	Yes	715423.02	7617087.45	YSI	11.15	10.16	57.0	7.56
EDI 1 (Round 2)	11/23/2004	11/23/2004 05:22	11/23/2004 06:25	Yes	715398.22	7617054.58	YSI	11.21	10.01	56.0	7.59
LW2-W011[1]											
EDI 5 (Round 1)	11/17/2004	11/17/2004 11:22	11/17/2004 13:08	No	706405.36	7624480.79	Multimeter	7.86	10.33	91.2	7.19
EDI 5 (Round 2)	11/18/2004	11/17/2004 18:42	11/18/2004 09:27	No	706485.97	7624534.05	Multimeter	7.87	10.53	63.6	6.39
EDI 4 (Round 1)	11/17/2004	11/17/2004 13:32	11/17/2004 14:33	No	706165.96	7624317.67	Multimeter	7.83	10.37	92.8	7.27
EDI 4 (Round 2)	11/18/2004	11/18/2004 10:18	11/18/2004 12:02	No	--	--	Multimeter	7.76	10.39	87.9	7.17
EDI 3 (Round 1)	11/17/2004	11/17/2004 14:54	11/17/2004 15:44	No	706079.53	7624281.91	Multimeter	7.83	10.38	92.5	7.22
EDI 3 (Round 2)	11/18/2004	11/18/2004 12:21	11/18/2004 14:09	No	--	--	Multimeter	7.81	10.43	89.5	7.31
EDI 2 (Round 1)	11/17/2004	11/17/2004 16:02	11/17/2004 16:46	No	705895.32	7624158.86	Multimeter	7.87	10.32	92.4	7.27
EDI 2 (Round 2)	11/18/2004	11/18/2004 14:55	11/18/2004 16:32	No	--	--	Multimeter	7.80	10.45	87.0	7.09
EDI 1 (Round 1)	11/17/2004	11/17/2004 16:57	11/17/2004 17:50	No	705799.94	7624164.14	Multimeter	7.87	10.32	91.3	7.24
EDI 1 (Round 2)	11/18/2004	11/18/2004 16:55	11/18/2004 18:23	No	--	--	Multimeter	7.86	10.43	89.5	7.17
LW2-W013-1	11/8/2004	11/8/2004 14:50	11/9/2004 3:35	Yes	705760.04	7627111.89	YSI	11.72	9.56	48.0	7.23
LW2-W013-2	11/9/2004	11/9/2004 11:55	11/9/2004 23:06	Yes	705761.09	7627115.05	YSI	2.39	9.21	267.0	7.31
LW2-W015[1]	11/29/2004	11/29/2004 10:58	11/30/2004 0:55	Yes	703929.23	7626447.05	YSI	11.76	8.89	56.0	7.47
LW2-W016-1	11/30/2004	11/30/2004 12:03	11/30/2004 13:35	Yes	702551.16	7627821.50	Multimeter	8.67	8.98	94.0	7.06
LW2-W018[1]	11/10/2004	11/10/2004 10:30	11/11/2004 0:04	Yes	700824.33	7633797.55	YSI	3.73	9.14	245.1	7.35
LW2-W023[1]											
EDI 4 (Round 1-a)*	11/15/2004	11/15/2004 12:55	11/15/2004 13:20	No	690342.03	7642747.76	Multimeter	8.23	10.15	89.8	7.18
EDI 4 (Round 1-b)*	11/15/2004	11/15/2004 15:14	11/15/2004 15:36	No	690312.25	7642765.81					
EDI 4 (Round 2-a)**	11/15/2004	11/15/2004 22:38	11/15/2004 22:44	No	--	--	Multimeter	8.03	10.27	86.7	6.89
EDI 4 (Round 2-b)**	11/16/2004	11/16/2004 0:49	11/16/2004 1:52	No	--	--					
EDI 4 (Round 3)	11/16/2004	11/16/2004 13:08	11/16/2004 13:46	Yes	690331.35	7642718.26	Multimeter	7.46	10.40	90.0	7.27
EDI 4 (Round 4)	11/16/2004	11/16/2004 18:46	11/16/2004 19:55	No	--	--	Multimeter	7.88	10.38	95.8	7.22
EDI 3 (Round 1)	11/15/2004	11/15/2004 19:05	11/15/2004 20:09	No	--	--	Multimeter	8.31	10.15	89.8	7.62
EDI 3 (Round 2)	11/16/2004	11/16/2004 9:35	11/16/2004 10:40	No	690225.79	7642582.73	Multimeter	7.62	10.33	147.8	7.45
EDI 3 (Round 3)	11/16/2004	11/16/2004 14:06	11/16/2004 14:44	Yes	690544.18	7642496.88	Multimeter	7.84	10.40	83.3	7.27
EDI 3 (Round 4)	11/16/2004	11/16/2004 20:14	11/16/2004 21:25	No	--	--	Multimeter	7.66	10.39	95.7	7.14
EDI 2 (Round 1)	11/15/2004	11/15/2004 20:23	11/15/2004 21:34	No	--	--	Multimeter	8.12	10.17	87.1	7.53
EDI 2 (Round 2)	11/16/2004	11/16/2004 10:51	11/16/2004 11:25	No	689987.22	7642496.65	Multimeter	7.94	10.33	110.1	7.32
EDI 2 (Round 3)	11/16/2004	11/16/2004 15:00	11/16/2004 15:42	No	690032.51	7642450.52	Multimeter	7.88	10.37	111.5	7.36
EDI 2 (Round 4)	11/16/2004	11/16/2004 21:32	11/16/2004 22:42	No	--	--	Multimeter	7.92	10.40	87.8	7.21
EDI 1 (Round 1)	11/15/2004	11/15/2004 21:56	11/15/2004 22:34	No	--	--	Multimeter	8.04	10.17	88.3	7.39
EDI 1 (Round 2)	11/16/2004	11/16/2004 12:06	11/16/2004 12:57	Yes	689945.27	7642361.84	Multimeter	7.73	10.38	121.4	7.36
EDI 1 (Round 3)	11/16/2004	11/16/2004 16:02	11/16/2004 16:49	Yes	689867.84	7642272.15	Multimeter	7.89	10.38	108.0	7.4
EDI 1 (Round 4)	11/16/2004	11/16/2004 22:55	11/17/2004 0:03	No	--	--	Multimeter	7.92	10.40	87.8	7.21

Notes:

[1] Measurable rainfall (>0.01 inch) occurred during this day of sample collection.

-- Data not available or anomalous water meter reading deleted from table.

Multimeter = CS304 multiprobe from Stevens Water Monitoring Systems, Inc. Beaverton, OR.

YSI = Sonde 600QL and 650 monitor.

* = EDI 4 had to be resampled because of kink on peristaltic pump Teflon tubing.

Round 1-a sampled Infiltrex from bottom up. Round 1-b sampled Infiltrex from surface to bottom and peristaltic pump from bottom up.

** = Redeployment of sampler after unclogging tubing.

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Table 2-3b. March 2005 Water Quality Data.

Station ID	Date	Start Time	End Time	Anchored	State Plane Coordinates Oregon North Zone		Water Quality Parameters Measured with YSI [1]					
					Northing	Easting	Depth (m)	DO (mg/L)	Temperature (°C)	EC (uS/cm)	pH	ORP (mV)
Peristaltic Samples												
W001	3/4/2005	8:30	9:04	Yes	724623	7617637	0.59	13.10	8.22	120	7.55	150
W002	3/4/2005	10:03	10:41	Yes	724781	7615558	1.55	13.64	7.48	148	7.90	145
W002	3/4/2005	11:30	11:56	Yes	724781	7615558	0.56	13.30	7.50	156	7.95	155
W003	3/4/2005	13:00	13:35	Yes	719621	7614609	0.56	12.31	8.96	113	7.43	125
W004	3/17/2005	8:08	8:38	Yes	717255	7619767	1.79	10.62	11.25	120	7.47	124
W004	3/17/2005	9:12	9:24	Yes	717255	7619767	1.79	10.62	11.25	120	7.47	124
W005												
EDI 1 (Round 1)	3/10/2005	8:16	8:59	No	715424	7617048	11.92	10.48	9.81	107	7.61	145
EDI 2 (Round 1)	3/10/2005	9:04	9:32	No	715557	7617383	10.43	10.28	10.08	113	7.59	145
EDI 3 (Round 1)	3/10/2005	9:40	10:07	No	715618	7617559	8.53	10.27	10.18	108	7.60	145
EDI 4 (Round 1)	3/10/2005	10:13	11:10	No	715677	7617692	16.98	10.85	9.90	111	7.76	151
EDI 5 (Round 1)	3/10/2005	11:18	11:50	No	715773	7617885	15.78	10.48	10.03	118	7.64	142
EDI 6 (Round 1)	3/10/2005	12:06	12:41	No	715834	7618129	11.28	10.33	10.27	102	7.59	142
W006	3/4/2005	15:29	15:57	Yes	715131	7616818	0.22	13.36	9.67	110	7.56	112
W007	3/11/2005	8:22	8:48	Yes	714600	7620366	2.27	11.78	10.75	106	7.31	135
W008	3/11/2005	9:56	10:26	Yes	713282	7620489	1.29	10.65	10.85	104	7.54	142
W009	3/11/2005	11:29	11:59	Yes	707778	7621408	1.28	9.66	10.88	107	7.54	147
W010	3/9/2005	22:09	22:49	Yes	708307	7622425	4.40	9.77	10.67	100	7.51	177
W011												
EDI 1 (Round 1)	3/8/2005	18:36	19:01	No	705758	7624159	9.78	10.20	10.21	102	7.68	53
EDI 2 (Round 1)[2]	3/8/2005	19:09	19:47	No	706021	7624075	12.17	9.94	10.26	--	7.69	69
EDI 3 (Round 1)	3/8/2005	19:51	20:31	No	706101	7624288	9.5	9.91	10.32	102	7.67	77
EDI 4 (Round 1)	3/8/2005	20:37	21:17	No	706292	7624336	13.5	9.92	10.29	101	7.67	92
EDI 5 (Round 1)	3/8/2005	21:22	22:02	No	706477	7624494	5.32	9.93	10.48	100	7.68	92
W011												
EDI 1 (Round 1)[6]	3/17/2005	12:33	12:48	No	705773	7624108	12.37	12.84	12.02	115	7.59	120
EDI 2 (Round 1)[6]	3/17/2005	12:51	13:10	No	705941	7624205	13.70	9.93	11.74	114	7.56	123
EDI 3 (Round 1)[6]	3/17/2005	13:13	13:31	No	706081	7624291	14.96	9.95	11.58	120	7.57	126
EDI 4 (Round 1)[6]	3/17/2005	13:33	13:50	No	706250	7624384	13.50	9.86	11.78	114	7.55	126
EDI 5 (Round 1)[6]	3/17/2005	13:54	14:12	No	706473	7624517	7.26	9.86	12.09	105	7.56	126
W012	3/17/2005	14:52	15:18	Yes	705594	7624020	0.10	10.11	12.23	110	7.72	138
W013	3/1/2005	10:39	11:04	Yes	705748	7627110	2.31	10.86	8.49	73	7.60	147
W013	3/2/2005	8:50	10:00	Yes	705750	7627108	2.60	10.52	8.69	93	7.46	171
W014	3/17/2005	10:45	11:09	Yes	706250	7624384	0.84	10.04	12.00	99	7.61	118
W015	3/14/2005	8:54	9:11	Yes	706473	7624517	0.26	10.61	12.44	114	7.69	237

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Table 2-3b. March 2005 Water Quality Data.

Station ID	Date	Start Time	End Time	Anchored	State Plane Coordinates Oregon North Zone		Water Quality Parameters Measured with YSI [1]					
					Northing	Easting	Depth (m)	DO (mg/L)	Temperature (°C)	EC (uS/cm)	pH	ORP (mV)
W016	3/15/2005	9:06	9:23	Yes	702548	7627842	2.90	11.15	11.74	108	7.59	160
W016	3/15/2005	9:49	9:52	Yes	702548	7627842	2.90	11.15	11.74	108	7.59	160
W017[7]	3/16/2005	11:33	12:00	Yes	701104	7628422	0.50	10.45	11.95	108	7.83	160
W018	3/3/2005	8:39	8:56	Yes	700818	7633802	8.62	10.90	8.59	95	7.48	143
W019[7]	3/16/2005	8:42	9:12	Yes	697280	7632334	1.37	10.48	12.03	107	7.36	143
W020[7]	3/16/2005	13:15	13:35	Yes	699067	7636836	0.72	11.19	12.39	104	7.76	163
W021[7]	3/16/2005	14:44	15:15	Yes	700092	7635621	0.30	12.69	11.62	78	7.74	153
W022[7]	3/16/2005	10:02	10:25	Yes	694085	7637299	3.14	10.19	12.08	108	7.53	149
W023												
EDI 1 (Round 1)	3/7/2005	9:10	9:59	No	689801	7642262	12.59	10.08	10.25	98	7.51	125
EDI 2 (Round 1)	3/7/2005	10:38	11:10	No	690050	7642460	12.92	9.76	10.30	98	7.52	135
EDI 3 (Round 1)	3/7/2005	11:28	12:15	No	690179	7642631	16.89	9.57	10.28	98	7.50	151
EDI 4 (Round 1)	3/7/2005	12:32	13:10	No	690314	7642761	13.02	9.52	10.45	99	7.51	150
XAD Samples												
W005												
EDI 1 (Round 1)	3/10/2005	8:15	8:55	No	715424	7617048	11.92	10.48	9.81	107	7.61	145
EDI 2 (Round 1)	3/10/2005	9:07	9:32	No	715557	7617383	10.43	10.28	10.08	113	7.59	145
EDI 3 (Round 1)	3/10/2005	9:43	10:08	No	715618	7617559	8.53	10.27	10.18	108	7.60	145
EDI 4 (Round 1)	3/10/2005	10:13	10:45	No	715677	7617692	16.98	10.85	9.90	111	7.76	151
EDI 5 (Round 1)	3/10/2005	11:00	11:49	No	715773	7617885	15.78	10.48	10.03	118	7.64	142
EDI 6 (Round 1)	3/10/2005	12:16	12:41	No	715834	7618129	11.28	10.33	10.27	102	7.59	142
EDI 1 (Round 2)	3/10/2005	12:50	14:35	No	715381	7617047	11.37	10.25	10.64	97	7.61	144
EDI 2 (Round 2)	3/10/2005	14:36	16:06	No	715550	7617378	10.52	10.38	10.31	112	7.63	144
EDI 3 (Round 2)	3/10/2005	16:19	17:40	No	715615	7617549	14.00	10.79	9.59	130	7.85	145
EDI 4 (Round 2)	3/10/2005	17:47	19:13	No	715710	7617650	16.90	10.29	9.36	136	7.92	145
EDI 5 (Round 2)	3/10/2005	19:31	20:58	No	715765	7617887	15.03	9.57	9.38	121	7.73	146
EDI 6 (Round 2)	3/10/2005	21:05	22:30	No	715855	7618124	10.05	9.33	10.50	110	7.60	147
W011												
EDI 1 (Round 1)[4]	3/8/2005	--	--	No	705758	7624159	9.78	10.20	10.21	102	7.68	53
EDI 2 (Round 1)[4]	3/8/2005	--	--	No	706021	7624075	12.17	9.94	10.26	57	7.69	69
EDI 3 (Round 1)[5]	3/8/2005	19:51	20:33	No	706101	7624288	9.5	9.91	10.32	102	7.67	77
EDI 4 (Round 1)	3/8/2005	20:37	21:17	No	706292	7624336	13.5	9.92	10.29	101	7.67	92
EDI 5 (Round 1)[4]	3/8/2005	--	--	No	706477	7624494	5.32	9.93	10.48	100	7.68	92
EDI 1 (Round 2)	03/08-09/2005	22:13	0:31	No	705757	7624095	10.97	9.84	10.36	101	7.67	100
EDI 1 (Round 2)[3]	3/9/2005	08:24	11:12	No	705757	7624095	13.11	10.64	10.43	95	7.50	139
EDI 2 (Round 2)	3/9/2005	11:52	14:12	No	705938	7624220	13.48	10.11	10.64	92	7.52	137

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BZTO104(e)004388

Table 2-3b. March 2005 Water Quality Data.

Station ID	Date	Start Time	End Time	Anchored	State Plane Coordinates Oregon North Zone		Water Quality Parameters Measured with YSI [1]					
					Northing	Easting	Depth (m)	DO (mg/L)	Temperature (°C)	EC (uS/cm)	pH	ORP (mV)
EDI 3 (Round 2)	3/9/2005	14:23	16:35	No	706095	7624303	13.94	10.02	10.89	89	7.54	142
EDI 4 (Round 2)	3/9/2005	17:14	19:04	No	706244	7624388	13.50	10.01	10.56	102	7.55	146
EDI 5 (Round 2)	3/9/2005	19:16	21:26	No	706479	7624494	7.53	9.92	10.66	99	7.53	146
W013	03/01-02/2005	10:31	1:20	Yes	705748	7627110	2.31	10.86	8.49	73	7.60	147
W013	3/2/2005	8:20	21:55	Yes	705750	7627108	2.60	10.52	8.69	93	7.46	171
W015	3/14/2005	8:55	22:48	Yes	706473	7624517	0.26	10.61	12.44	114	7.69	237
W016	3/15/2005	7:51	23:13	Yes	702548	7627842	2.94	11.13	11.77	109	7.59	160
W018	3/3/2005	8:44	22:32	Yes	700818	7633802	8.62	10.90	8.59	95	7.48	143
W023												
EDI 1 (Round 1)	3/7/2005	9:10	9:59	No	689801	7642262	12.59	10.08	10.25	98	7.51	125
EDI 2 (Round 1)	3/7/2005	10:38	11:10	No	690050	7642460	12.92	9.76	10.30	98	7.52	135
EDI 3 (Round 1)	3/7/2005	11:28	12:15	No	690179	7642631	16.89	9.57	10.28	98	7.50	151
EDI 4 (Round 1)	3/7/2005	12:32	13:10	No	690314	7642761	13.02	9.52	10.45	99	7.51	150
EDI 1 (Round 2)	3/7/2005	13:33	17:03	No	689872	7642261	15.75	9.24	10.46	98	7.18	140
EDI 2 (Round 2)	3/7/2005	17:21	21:49	No	690058	7642458	12.34	9.02	10.41	98	7.51	142
EDI 3 (Round 2)	03/07-08/2005	22:08	1:55	No	690271	7642524	15.17	8.66	10.43	99	7.49	157
EDI 4 (Round 2)	3/8/2005	11:45	13:28	No	690328	7642763	12.96	10.77	10.55	99	7.67	150

Notes:

[1] Averaged data were collected with a YSI 600XLM sonde and a 650 monitor.

[2] Drifted 400 ft from site.

[3] Remaining volume needed at EDI1 was pumped the following day.

[4] Water samples at these EDIs were not collected by XAD during first pass of transect due to technical difficulties.

[5] Initial 4L of sampled water was collected during failed attempt to sample EDI-1 and EDI-2.

[6] Additional set of surface water standard volume samples were collected at W011 because of presence of sediment in carboys when first set of samples was collected.

[7] Measurable rainfall (>0.01 inch) occurred during this day of sample collection.

-- Data not available due to water quality meter malfunction.

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Table 2-3c. July 2005 Water Quality Data.

Station ID	Date	Start Time	End Time	Anchored	State Plane Coordinates Oregon North Zone		Water Quality Parameters Measured with YSI[1]					
					Northing	Easting	Depth (m)	DO (mg/L)	Temperature (°C)	EC (uS/cm)	pH	ORP (mV)
Peristaltic Samples												
W001[2]	7/5/2005	10:33	11:14	Yes	7617739	724791	0.27	10.99	20.43	143	8.17	201
W002-1	7/5/2005	12:14	12:45	Yes	7615565	724826	0.75	11.63	21.10	138	8.49	180
W002-2	7/5/2005	13:18	13:32	Yes	7615565	724826	0.66	11.95	21.53	138	8.60	186
W003	7/5/2005	16:03	16:38	Yes	7614549	719696	0.12	10.81	20.36	84	7.87	203
W004	7/5/2005	14:38	15:10	Yes	7619716	717272	0.17	11.54	23.67	89	8.68	183
W005												
EDI 1 (Round 1)	7/13/2005	7:43	8:31	No	7617059	715428	10.70	7.44	20.90	102	7.11	225
EDI 2 (Round 1)	7/13/2005	8:37	9:19	No	7617407	715508	13.82	7.41	20.79	107	7.12	230
EDI 3 (Round 1)	7/13/2005	9:35	10:25	No	7617583	715606	14.54	7.48	20.78	109	7.14	231
EDI 4 (Round 1)	7/13/2005	10:28	11:27	No	7617696	715640	16.61	7.57	20.66	116	7.17	235
EDI 5 (Round 1)	7/13/2005	11:31	12:16	No	7617885	715744	16.20	7.48	20.69	117	7.15	234
EDI 6 (Round 1)	7/13/2005	12:25	12:51	No	7618139	715834	11.85	7.47	20.92	107	7.13	230
W006[3]	7/8/2005	8:10	8:38	Yes	7616804	715175	0.82	8.83	19.98	103	7.33	253
W007[3]	7/8/2005	10:09	10:35	Yes	7620363	714595	2.57	9.24	20.54	101	7.54	240
W008[3]	7/8/2005	11:17	11:50	Yes	7620488	713287	1.51	8.66	20.43	99	7.42	244
W009[3]	7/8/2005	12:20	12:50	Yes	7621400	707777	0.31	8.50	20.55	100	7.43	242
W010	7/15/2005	14:42	15:12	Yes	7622445	708320	2.22	8.43	21.47	105	7.35	190
W011												
EDI 1 (Round 1)	7/12/2005	7:19	8:06	No	7624125	705765	13.13	7.15	20.97	103	7.00	214
EDI 2 (Round 1)	7/12/2005	8:11	9:03	No	7624231	705924	14.30	7.26	20.93	105	7.03	219
EDI 3 (Round 1)	7/12/2005	9:09	9:51	No	7624308	706091	13.85	7.29	20.83	106	7.05	222
EDI 4 (Round 1)	7/12/2005	10:10	10:46	No	7624333	706232	16.58	7.34	20.82	106	7.06	200
EDI 5 (Round 1)	7/12/2005	10:52	11:36	No	7624471	706490	13.01	7.47	21.06	102	7.06	211
W012	7/15/2005	11:51	12:34	Yes	7624020	705590	0.36	8.77	22.33	109	7.46	169
W013-1	7/6/2005	9:33	9:45	Yes	7627101	705744	3.21	9.76	20.12	148	7.56	210
W014	7/15/2005	10:25	10:53	Yes	7627364	705690	1.14	8.44	21.26	95	7.34	169
W015	7/19/2005	9:06	9:20	Yes	7626439	703923	0.62	9.08	21.39	109	7.39	192
W016-1	7/18/2005	8:48	9:03	Yes	7627819	702528	2.43	9.39	21.19	107	7.36	190
W016-2	7/18/2005	9:26	9:29	Yes	7627819	702528	2.39	9.50	21.25	106	7.43	187
W017	7/15/2005	8:56	9:26	Yes	7628432	701094	1.36	7.81	21.19	113	7.30	193
W018	7/14/2005	8:26	8:55	Yes	7633820	700793	7.72	7.20	21.04	96	6.98	185
W019	7/20/2005	8:01	8:30	Yes	7632345	697271	1.66	8.64	21.65	106	7.64	173
W020	7/20/2005	10:13	10:40	Yes	7636829	699088	1.34	9.70	23.19	106	8.46	176
W021	7/20/2005	9:10	9:40	Yes	7635614	700121	0.23	9.50	23.17	107	8.26	168
W022	7/20/2005	6:52	7:05	Yes	7637247	694087	0.45	8.97	21.90	112	7.54	184
W023												
EDI 1 (Round 1)	7/11/2005	9:53	10:42	No	7642345	689904	5.40	8.14	20.90	95	7.19	191
EDI 2 (Round 1)	7/11/2005	10:50	11:39	No	7642535	690110	15.52	8.15	20.89	99	7.19	202
EDI 3 (Round 1)	7/11/2005	11:53	13:12	No	7642649	690236	13.94	8.25	20.94	96	7.20	214
EDI 4 (Round 1)	7/11/2005	13:41	14:10	No	7642779	690350	12.50	8.32	21.10	96	7.22	208

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Table 2-3c. July 2005 Water Quality Data.

Station ID	Date	Start Time	End Time	Anchored	State Plane Coordinates Oregon North Zone		Water Quality Parameters Measured with YSI[1]					
					Northing	Easting	Depth (m)	DO (mg/L)	Temperature (°C)	EC (uS/cm)	pH	ORP (mV)
XAD Samples												
W005												
EDI 1 (Round 1)	7/13/2005	7:46	8:27	No	7617059	715428	10.70	7.44	20.90	102	7.11	225
EDI 2 (Round 1)	7/13/2005	8:38	9:18	No	7617407	715508	13.82	7.41	20.79	107	7.12	230
EDI 3 (Round 1)	7/13/2005	9:37	10:24	No	7617583	715606	14.54	7.48	20.78	109	7.14	231
EDI 4 (Round 1)	7/13/2005	10:32	11:26	No	7617696	715640	16.61	7.57	20.66	116	7.17	235
EDI 5 (Round 1)	7/13/2005	11:36	12:15	No	7617885	715744	16.20	7.48	20.69	117	7.15	234
EDI 6 (Round 1)	7/13/2005	12:26	12:51	No	7618139	715834	11.85	7.47	20.92	107	7.13	230
EDI 1 (Round 2)	7/13/2005	13:21	14:52	Yes	7616999	715398	10.02	7.35	20.86	105	7.11	232
EDI 2 (Round 2)	7/13/2005	15:38	16:38	No	--	--	13.50	7.53	20.82	109	7.16	227
EDI 3 (Round 2)	7/13/2005	16:47	17:52	No	7617547	715619	13.81	7.69	20.91	110	7.18	234
EDI 4 (Round 2)	7/13/2005	17:54	19:24	No	7617715	715679	16.32	7.61	20.80	115	7.17	236
EDI 5 (Round 2)	7/13/2005	19:28	20:53	No	7617919	715765	15.11	7.62	20.97	109	7.16	237
EDI 6 (Round 2)	7/13/2005	20:59	22:23	No	7618147	715825	12.36	7.54	20.96	111	7.14	242
W011												
EDI 1 (Round 1)	7/12/2005	7:24	7:43	No	7624125	705765	13.13	7.15	20.97	103	7.00	214
EDI 2 (Round 1)	7/12/2005	8:15	9:01	No	7624231	705924	14.30	7.26	20.93	105	7.03	219
EDI 3 (Round 1)	7/12/2005	9:11	9:50	No	7624308	706091	13.85	7.29	20.83	106	7.05	222
EDI 4 (Round 1)	7/12/2005	10:10	10:46	No	7624333	706232	16.58	7.34	20.82	106	7.06	200
EDI 5 (Round 1)	7/12/2005	10:54	11:35	No	7624471	706490	13.01	7.47	21.06	102	7.06	211
EDI 1 (Round 2)	7/12/2005	11:53	13:46	No	7624122	705797	12.59	7.43	21.06	99	7.06	221
EDI 2 (Round 2)	7/12/2005	19:51	21:41	No	7624228	705959	12.72	7.77	21.08	94	7.13	231
EDI 3 (Round 2)	7/12/2005	18:04	19:45	No	7624283	706084	13.32	7.33	20.83	105	7.07	225
EDI 4 (Round 2)	7/12/2005	16:33	17:56	No	7624378	706245	12.84	8.06	21.21	99	7.18	221
EDI 5 (Round 2)	7/12/2005	14:14	16:10	Yes	7624521	706469	13.01	7.47	21.06	102	7.06	211
W013-1	7/6/2005	8:18	21:29	Yes	7627101	705744	2.98	10.09	--	156	7.66	218
W013-2	7/7/2005	7:55	21:53	Yes	7627101	705744	2.43	9.22	20.74	91	7.47	238
W015	7/19/2005	8:34	23:27	Yes	7626439	703923	0.43	10.30	22.91	110	8.30	185
W016-1	7/18/2005	8:49	22:54	Yes	7627819	702528	2.27	10.18	21.85	107	7.87	200
W018	7/14/2005	8:13	21:53	Yes	7633820	700793	7.54	7.19	20.97	103	6.98	129
W023												
EDI 1 (Round 1)	7/11/2005	9:53	10:42	No	7642345	689904	5.40	8.14	20.90	95	7.19	191
EDI 2 (Round 1)	7/11/2005	10:50	11:39	No	7642535	690110	15.52	8.15	20.89	99	7.19	202
EDI 3 (Round 1)	7/11/2005	11:53	13:12	No	7642649	690236	13.94	8.25	20.94	96	7.20	214
EDI 4 (Round 1)	7/11/2005	13:41	14:10	No	7642779	690350	12.50	8.32	21.10	96	7.22	208
EDI 1 (Round 2)	7/11/2005	14:31	17:01	No	7642292	689905	8.38	8.23	21.06	96	7.20	214
EDI 2 (Round 2)	7/11/2005	17:14	19:26	No	7642501	690065	16.30	8.15	20.91	100	7.19	204
EDI 3 (Round 2)	7/11/2005	19:33	22:00	No	7642635	690170	13.40	8.27	21.17	94	7.24	220
EDI 4 (Round 2)	07/11-12/2005	22:10	0:30	No	7642758	690350	10.93	8.31	21.09	96	7.23	212

Note:

[1] Averaged data was collected with a YSI 600 QS sonde and a 650 MDS monitor.

[2] Peristaltic pump was turned on and off numerous times to prevent pumping in bottom debris disturbed by boat wakes in shallow water. Start time and end time do not reflect total pumping time. Total pumping time is calculated on last column.

[3] Measurable rainfall (>0.01 inch) occurred during this day of sample collection.

-- No GPS data available, or no water quality reading available.

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Table 2-4. Summary of Round 2A Surface Water Field QC Samples.

Parameter	Samples	Blind Field Replicates[1]	Blind Field Sample Splits[2]	Field Rinsate Blanks[3,4]	Decon Blank[5]	Total Number of Field Samples
November 2004 Sampling Event						
Peristaltic Pump						
Metals (unfiltered)	24	2	0	2	1	29
Metals (filtered)	24	2	0	2	1	29
PCB Aroclors	24	1	0	2	1	28
Chlorinated Herbicides	25	2	0	2	1	30
Organochlorine Pesticides	25	1	0	2	1	29
SVOCs	25	2	0	2	1	30
Butyltin compounds	25	2	0	2	1	30
Hexavalent chromium	1	1	0	1	1	4
Perchlorate	1	1	0	1	1	4
TSS	25	2	0	0	0	27
TDS	25	2	0	0	0	27
DOC	23	2	0	2	0	27
TOC	23	2	0	2	0	27
XAD-2 Resin						
PCB Aroclors[6]	7	1	0	1	0	9
Organochlorine Pesticides	7	1	0	1	0	9
Phthalate Esters	7	1	0	1	0	9
PAHs	7	1	0	1	0	9
Dioxins/Furans	5	1	0	1	0	7
March 2005 Sampling Event						
Peristaltic Pump						
Metals (unfiltered)	24	2	0	2	1	29
Metals (filtered)	24	2	0	2	1	29
PCB Aroclors	16	1	0	2	1	20
Chlorinated Herbicides	24	2	0	2	1	29
Organochlorine Pesticides	16	1	0	2	1	20
SVOCs	24	2	0	2	1	29
Butyltin compounds	24	2	0	2	1	29
Hexavalent chromium	1	1	0	1	1	4
Perchlorate	1	1	0	1	1	4
TSS	24	2	0	0	0	26
TDS	24	2	0	0	0	26
DOC	24	2	0	2	0	28
TOC	24	2	0	2	0	28

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Table 2-4. Summary of Round 2A Surface Water Field QC Samples.

Parameter	Samples	Blind Field Replicates[1]	Blind Field Sample Splits[2]	Field Rinsate Blanks[3,4]	Decon Blank[5]	Total Number of Field Samples
XAD-2 Resin						
PCB Aroclors[6]	7	1	0	1	0	9
Organochlorine Pesticides	7	1	0	1	0	9
Phthalate Esters	7	1	0	1	0	9
PAHs	7	1	0	1	0	9
Dioxins/Furans	5	1	0	1	0	7
July 2005 Sampling Event						
Peristaltic Pump						
Metals (unfiltered)	23	1	0	2	1	27
Metals (filtered)	23	1	0	2	1	27
PCB Aroclors	15	0	0	2	1	18
Chlorinated Herbicides	23	1	0	2	1	27
Organochlorine Pesticides	15	0	0	2	1	18
SVOCs	23	1	0	2	1	27
Butyltin compounds	23	1	0	2	1	27
Hexavalent chromium	1	1	0	1	0	3
Perchlorate	1	1	0	1	1	4
TSS	23	1	0	0	0	24
TDS	23	1	0	0	0	24
DOC	23	1	0	2	1	27
TOC	23	1	0	2	1	27
XAD-2 Resin						
PCB Aroclors[6]	7	1	0	1	0	9
Organochlorine Pesticides	7	1	0	1	0	9
Phthalate Esters	7	1	0	1	0	9
PAHs	7	1	0	1	0	9
Dioxins/Furans	5	1	0	1	0	7

Notes:

[1] Field QC sample numbers were based on a frequency of 5%.

[2] Field split samples were not requested by EPA or any other parties.

[3] A field rinsate blank was collected near the beginning and end of each sampling event for the peristaltic pump.

[4] Prior to start of sampling event, 4 liters of certified ultra clean water (Axys) were passed through a new XAD-2 resin column and a new 0.5-um filter at the field lab. The column and filter were sent to Axys as field rinsate blanks.

[5] Prior to the start of sample collection activities, a decon blank of the peristaltic pump sampling equipment was generated by Battelle's laboratory.

[6] An aliquot of the XAD extracts was archived for potential PCB congener analysis and ultimately analyzed for PCB congeners.

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Table 2-5a. November 2004 Surface Water Sample Locations and Analyses.

Date Sampled	Sample ID	XAD-2 Resin & Prefilter					Peristaltic Pump											
		Dioxin/ Furans	PCB Congeners	Phthalate Esters	Pesticides	PAHs	TSS & TDS	TOC	DOC	Metals Unfiltered	Metals Filtered & Hardness	Cr VI	TBT	Perchlorate	Herbicides	SVOCs	PCB Aroclors	Pesticides
11/12/2004	**LW2-W001**						X	X	X	X	X		X		X	X	X	X
11/12/2004	**LW2-W002**						X	X	X	X	X		X		X	X	X	X
11/12/2004	**LW2-W003**						X	X	X	X	X		X		X	X	X	X
11/18/2004	**LW2-W004**						X	X	X	X	X		X		X	X	X	X
11/22/2004	**LW2-W005**	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X
11/19/2004	**LW2-W006**						X	X	X	X	X		X		X	X	X	X
11/19/2004	**LW2-W007**						X	X	X	X	X		X		X	X	X	X
11/23/2004	**LW2-W008**						X	X	X	X	X		X		X	X	X	X
12/1/2004	**LW2-W009**						X	X	X	X	X		X		X	X	X	X
11/23/2004	**LW2-W010**						X	X	X	X	X		X		X	X	X	X
11/17/2004	**LW2-W011**	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X
12/2/2004	**LW2-W012**						X	X	X	X	X		X		X	X	X	X
11/8/2004	**LW2-W013-1**[1]	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X
11/9/2004	**LW2-W013-2**[1]	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X
12/1/2004	**LW2-W014**						X	X	X	X	X		X		X	X	X	X
11/29/2004	**LW2-W015**	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X
11/30/2004	**LW2-W016-1**[1]		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11/30/2004	**LW2-W016-2**[1]						X	X	X	X	X	X	X	X	X	X		
12/1/2004	**LW2-W017**						X	X	X	X	X		X		X	X	X	X
11/10/2004	**LW2-W018**		X	X	X	X	X	X	X	X	X		X		X	X	X	X
12/2/2004	**LW2-W019**						X	X	X	X	X		X		X	X	X	X
12/1/2004	**LW2-W020**						X	X	X	X	X		X		X	X	X	X
12/1/2004	**LW2-W021**						X	X	X	X	X		X		X	X	X	X
12/2/2004	**LW2-W022**						X	X	X	X	X		X		X	X	X	X
11/15/2004	**LW2-W023**	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X
11/9/2004	**LW2-W901***							X	X	X	X		X		X	X	X	X
11/7/2004	**LW2-W902****	X	X	X	X	X												
11/30/2004	**LW2-W903***							X	X	X	X	X	X	X	X	X	X	X

Notes:

[1] Field replicate samples were collected at stations W013 and W016.

* Field peristaltic pump sampling system rinsate.

** Field Infiltrex pump sampling system blank collected in XAD-2 column and 0.5-mm filter.

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Table 2-5b. March 2005 Surface Water Sample Locations and Analyses.

Date Sampled	Sample ID	XAD-2 Resin & Prefilter					Peristaltic Pump											
		Dioxin/ Furans	PCB Congeners	Phthalate Esters	Pesticides	PAHs	TSS & TDS	TOC	DOC	Metals Unfiltered	Metals Filtered & Hardness	Cr VI	TBT	Perchlorate	Herbicides	SVOCs	PCB Aroclors	Pesticides
3/4/2005	**LW2-W2001**						X	X	X	X	X		X		X	X	X	X
3/4/2005	**LW2-W2002-1**[1]						X	X	X	X	X		X		X	X	X	X
3/4/2005	**LW2-W2002-2**[1]						X	X	X	X	X		X		X	X		
3/4/2005	**LW2-W2003**						X	X	X	X	X		X		X	X	X	X
3/17/2005	**LW2-W2004-1**[1]						X	X	X	X	X		X		X	X	X	X
3/17/2005	**LW2-W2004-2**[1]																X	X
3/10/2005	**LW2-W2005**	X	X	X	X	X	X	X	X	X	X		X		X	X		
3/4/2005	**LW2-W2006**						X	X	X	X	X		X		X	X	X	X
3/11/2005	**LW2-W2007**						X	X	X	X	X		X		X	X	X	X
3/11/2005	**LW2-W2008**						X	X	X	X	X		X		X	X	X	X
3/11/2005	**LW2-W2009**						X	X	X	X	X		X		X	X	X	X
3/9/2005	**LW2-W2010**						X	X	X	X	X		X		X	X	X	X
3/08-09/2005	**LW2-W2011**[1]	X	X	X	X	X	X	X	X	X	X		X		X	X		
3/17/2005	**LW2-W2011B**[1]						X	X	X	X	X		X		X	X		
3/17/2005	**LW2-W2012**						X	X	X	X	X		X		X	X	X	X
3/01-02/2005	**LW2-W2013-1**[1]	X	X	X	X	X	X	X	X	X	X		X		X	X		
3/2/2005	**LW2-W2013-2**[1]	X	X	X	X	X	X	X	X	X	X		X		X	X		
3/17/2005	**LW2-W2014**						X	X	X	X	X		X		X	X	X	X
3/14/2005	**LW2-W2015**	X	X	X	X	X	X	X	X	X	X		X		X	X		
3/15/2005	**LW2-W2016-1**[1]		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
3/15/2005	**LW2-W2016-2**[1]											X		X				
3/16/2005	**LW2-W2017**						X	X	X	X	X		X		X	X	X	X
3/3/2005	**LW2-W2018**		X	X	X	X	X	X	X	X	X		X		X	X		
3/16/2005	**LW2-W2019**						X	X	X	X	X		X		X	X	X	X
3/16/2005	**LW2-W2020**						X	X	X	X	X		X		X	X	X	X
3/16/2005	**LW2-W2021**						X	X	X	X	X		X		X	X	X	X
3/16/2005	**LW2-W2022**						X	X	X	X	X		X		X	X	X	X
3/07-08/2005	**LW2-W2023**	X	X	X	X	X	X	X	X	X	X		X		X	X		
3/1/2005	**LW2-W2901***							X	X	X	X		X		X	X	X	X
3/24/2005	**LW2-W2902****	X	X	X	X	X												
3/15/2005	**LW2-W2903***							X	X	X	X	X	X	X	X	X	X	X

Notes:

[1] Field replicate samples were collected at stations W002, W004, W013 and W016.

* Field peristaltic pump sampling system rinsate.

** Field Infiltrex pump sampling system blank collected in XAD-2 column and 0.5-mm filter.

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Table 2-5c. July 2005 Surface Water Sample Locations and Analyses.

Date Sampled	Sample ID	XAD-2 Resin & Prefilter					Peristaltic Pump											
		Dioxin/ Furans	PCB Congeners	Phthalate Esters	Pesticides	PAHs	TSS & TDS	TOC	DOC	Metals Unfiltered	Metals Filtered & Hardness	Cr VI	TBT	Perchlorate	Herbicides	SVOCs	PCB Aroclors	Pesticides
7/5/2005	**LW2-W3001**						X	X	X	X	X		X		X	X	X	X
7/5/2005	**LW2-W3002-1**[1]						X	X	X	X	X		X		X	X	X	X
7/5/2005	**LW2-W3002-2**[1]						X	X	X	X	X		X		X	X		
7/5/2005	**LW2-W3003**						X	X	X	X	X		X		X	X	X	X
7/5/2005	**LW2-W3004**						X	X	X	X	X		X		X	X	X	X
7/13/2005	**LW2-W3005**	X	X	X	X	X	X	X	X	X	X		X		X	X		
7/8/2005	**LW2-W3006**						X	X	X	X	X		X		X	X	X	X
7/8/2005	**LW2-W3007**						X	X	X	X	X		X		X	X	X	X
7/8/2005	**LW2-W3008**						X	X	X	X	X		X		X	X	X	X
7/8/2005	**LW2-W3009**						X	X	X	X	X		X		X	X	X	X
7/15/2005	**LW2-W3010**						X	X	X	X	X		X		X	X	X	X
7/12-7/13/2005	**LW2-W3011**	X	X	X	X	X	X	X	X	X	X		X		X	X		
7/15/2005	**LW2-W3012**						X	X	X	X	X		X		X	X	X	X
7/6/2005	**LW2-W3013-1**[1]	X	X	X	X	X	X	X	X	X	X		X		X	X		
7/7/2005	**LW2-W3013-2**[1]	X	X	X	X	X												
7/15/2005	**LW2-W3014**						X	X	X	X	X		X		X	X	X	X
7/19/2005	**LW2-W3015**	X	X	X	X	X	X	X	X	X	X		X		X	X		
7/18/2005	**LW2-W3016-1**[1]		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
7/18/2005	**LW2-W3016-2**[1]											X		X				
7/15/2005	**LW2-W3017**						X	X	X	X	X		X		X	X	X	X
7/14/2005	**LW2-W3018**		X	X	X	X	X	X	X	X	X		X		X	X		
7/20/2005	**LW2-W3019**						X	X	X	X	X		X		X	X	X	X
7/20/2005	**LW2-W3020**						X	X	X	X	X		X		X	X	X	X
7/20/2005	**LW2-W3021**						X	X	X	X	X		X		X	X	X	X
7/20/2005	**LW2-W3022**						X	X	X	X	X		X		X	X	X	X
7/11-7/12/2005	**LW2-W3023**	X	X	X	X	X	X	X	X	X	X		X		X	X		
7/6/2005	**LW2-W3901***							X	X	X	X		X		X	X	X	X
7/1/2005	**LW2-W3902****	X	X	X	X	X												
7/19/2005	**LW2-W3903***							X	X	X	X	X	X	X	X	X	X	X

Note:

[1] Field replicate samples were collected at stations W002, W013, and W016.

* Field persitaltic pump sampling system rinsate.

** Field Infiltrex pump sampling system blank collected in XAD-2 column and 0.5-um filter.

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Table 2-6a. November 2004 Surface Water Sampling Data from River Transects Using the Infiltrex 300 System.

Equal Discharge Increment (EDI)	Actual Depth (m)[1]	Estimated Total Sampling Time per EDI (hour)[2]	Actual Total Sampling Time per EDI (hour)[3]	Estimated Rate of descent (m/min)[2]	Actual rate of Descent (m/min)[4]	Estimated Rate of Ascent (m/min)[2]	Actual Rate of Ascent (m/min)[4]	Infiltrex 300 Average Pumping Rate (mL/min)[5]	Horizontal Variability of EDI (ft)[6]	Total Volume Pumped per Station (L)
River Mile 4, LW2-W005										
EDI 1 (Round 1)	11.7	2.2	0.6	0.6	0.5	0.6	0.6	1269	~200	1000.4
EDI 1 (Round 2)	11.2		1.1	0.6	0.2	0.6	0.5	1264		
EDI 2 (Round 1)	13.8	2.2	0.6	0.7	0.8	0.7	0.7	1242	~250	
EDI 2 (Round 2)	13.7		1.4	0.7	0.5	0.7	0.2	1245		
EDI 3 (Round 1)	15.6	2.2	0.6	0.8	0.7	0.8	0.9	1244	~300	
EDI 3 (Round 2)	14.9		1.4	0.8	0.4	0.8	0.3	1249		
EDI 4 (Round 1)	17.1	2.2	0.8	0.9	0.8	0.9	0.6	1236	~300	
EDI 4 (Round 2)	16.6		1.3	0.9	0.6	0.9	0.3	1252		
EDI 5 (Round 1)	15.6	2.2	0.6	0.8	0.8	0.8	0.8	1264	~250	
EDI 5 (Round 2)	14.3		1.4	0.8	0.2	0.8	–	1256		
EDI 6 (Round 1)	14.4	2.2	2.1	0.6	1.4	0.6	0.3	1246	~400	
EDI 6 (Round 2)	11.3		1.4	0.6	0.2	0.6	0.5	1253		
River Mile 6.3, LW2-W011										
EDI 1 (Round 1)	14.1	2.6	0.9	0.6	0.5	0.6	0.5	1248	~150	1000.0
EDI 1 (Round 2)	12.7		1.5	0.6	0.3	0.6	0.2	1230		
EDI 2 (Round 1)	14.1	2.6	0.7	0.7	0.7	0.7	0.6	1253	~200	
EDI 2 (Round 2)	13.9		1.6	0.7	0.4	0.7	0.2	1243		
EDI 3 (Round 1)	15.0	2.6	0.8	0.7	0.6	0.7	0.7	1257	~300	
EDI 3 (Round 2)	14.9		1.8	0.7	0.3	0.7	0.3	1249		
EDI 4 (Round 1)	15.4	2.6	1.0	0.6	0.5	0.6	0.5	1264	~200	
EDI 4 (Round 2)	14.2		1.7	0.6	0.3	0.6	0.2	1253		
EDI 5 (Round 1)	13.9	2.6	1.7	0.2	0.3	0.2	0.3	1193	~350	
EDI 5 (Round 2)	–		–	0.2	–	0.2	–	–		

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Table 2-6a. November 2004 Surface Water Sampling Data from River Transects Using the Infiltrex 300 System.

Equal Discharge Increment (EDI)	Actual Depth (m)[1]	Estimated Total Sampling Time per EDI (hour)[2]	Actual Total Sampling Time per EDI (hour)[3]	Estimated Rate of descent (m/min)[2]	Actual rate of Descent (m/min)[4]	Estimated Rate of Ascent (m/min)[2]	Actual Rate of Ascent (m/min)[4]	Infiltrex 300 Average Pumping Rate (mL/min)[5]	Horizontal Variability of EDI (ft)[6]	Total Volume Pumped per Station (L)
River Mile 11, LW2-W023										
EDI 1 (Round 1)	13.8	3.3	0.6	0.5	0.7	0.5	0.2	1156	~200	1000.0
EDI 1 (Round 2)	9.0		0.9	0.5	0.4	0.5	0.3	1241		
EDI 1 (Round 3)	10.1		0.8	0.5	0.4	0.5	0.4	1230		
EDI 1 (Round 4)	10.5		1.1	0.5	0.3	0.5	0.3	1222		
EDI 2 (Round 1)	14.2	3.3	1.2	0.6	0.3	0.6	0.6	1156	~250	
EDI 2 (Round 2)	10.0		0.6	0.6	0.5	0.6	0.7	1227		
EDI 2 (Round 3)	10.1		0.7	0.6	0.5	0.6	0.5	1242		
EDI 2 (Round 4)	10.8		1.2	0.6	0.3	0.6	0.3	1234		
EDI 3 (Round 1)	15.2	3.3	1.1	0.7	0.4	0.7	0.6	1246	~200	
EDI 3 (Round 2)	13.6		1.1	0.7	0.3	0.7	0.6	1109		
EDI 3 (Round 3)	10.9		0.6	0.7	0.6	0.7	0.6	1250		
EDI 3 (Round 4)	10.5		1.2	0.7	0.4	0.7	0.3	1251		
EDI 4 (Round 1)	10.8	3.3	0.8	0.5	0.5	0.5	0.5	1248	~400	
EDI 4 (Round 2)	10.8		1.1	0.5	0.5	0.5	0.3	621		
EDI 4 (Round 3)	10.5		0.6	0.5	0.6	0.5	0.6	1237		
EDI 4 (Round 4)	10.5		1.2	0.5	0.2	0.5	0.5	1238		
Non-Transect Stations										
W013-1	2.0	--	--	--	--	--	--	1284	--	1002.9
W013-2	1.4	--	--	--	--	--	--	1299	--	1010.0
W015	0.6	--	--	--	--	--	--	1234	--	1000.0
W016-1	2.4	--	--	--	--	--	--	1252	--	1000.0
W018	6.7	--	--	--	--	--	--	1254	--	1004.0

Notes:

Cells including dashed lines indicate that the station/EDI data were not available.

[1] Actual depth was measured with a YSI 600QS sonde as the water sampler touched bottom.

[2] Estimated sampling time and rates of ascent and descent are from Table B-1 of Appendix B in the Round 2A Surface Water FSP (Integral 2004c).

[3] Actual total sampling time is found in the Infiltrex 300 log sheets in Appendix B of the Round 2A Surface Water Field Sampling Report (Integral 2005b).

[4] Rates of ascent and descent were calibrated with a stop watch and depth readings from the YSI 600QS sonde.

[5] Average pumping rate was calculated from entries in the Infiltrex 300 log sheets in Appendix B in the Round 2A Surface Water Field Sampling Report (Integral 2005b).

[6] Distance was determined by a visual estimation of the plotted navigation files on GIS maps.

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Table 2-6b. March 2005 Surface Water Sampling Data from River Transects Using the Infiltrex 300 System.

Equal Discharge Increment (EDI)	Actual Depth (m)[1]	Estimated Total Sampling Time per EDI (hour)[2]	Actual Total Sampling Time per EDI (hour:min)[3]	Estimated rate of descent/ascent (m/min)[2]	Measured rate of descent/ascent (m/min)[4]	Infiltrex 300 Average pumping rate (mL/min)[5]	Horizontal variability of EDI (m)[6]	Total Volume Pumped per Station (L)[7]
River Mile 4, LW2-W005								
EDI 1 (Round 1)	11.92	1.7	0:40	0.64	0.60	1218	70	1003
EDI 1 (Round 2)	11.37		1:45		0.22	1250	116	
EDI 2 (Round 1)	10.43	1.7	0:25	0.73	0.83	1250	30	
EDI 2 (Round 2)	10.52		1:30		0.23	1244	40	
EDI 3 (Round 1)	8.53	1.7	0:25	0.82	0.68	1273	55	
EDI 3 (Round 2)	14.00		1:21		0.35	1278	55	
EDI 4 (Round 1)	16.98	1.7	0:32	0.91	1.06	1275	46	
EDI 4 (Round 2)	16.90		1:26		0.39	1228	49	
EDI 5 (Round 1)	15.78	1.7	0:49	0.82	0.64	1240	30	
EDI 5 (Round 2)	15.03		1:27		0.35	1292	30	
EDI 6 (Round 1)	11.28	1.7	0:25	0.55	0.90	1260	46	
EDI 6 (Round 2)	10.05		1:25		0.24	1250	91	
River Mile 6.3, LW2-W011								
EDI 1 (Round 1)	9.78	2.0	--	0.61	--	--	41	1018
EDI 1 (Round 2)	10.97		2:18		0.16	1249	85	
EDI 1 (Round 2)[8]	13.11		2:48		0.16	1223	85	
EDI 2 (Round 1)	12.17	2.0	--	0.69	--	--	27	
EDI 2 (Round 2)	13.48		2:20		0.19	1257	30	
EDI 3 (Round 1)	9.50	2.0	0:42	0.69	0.45	1221	30	
EDI 3 (Round 2)	13.94		2:12		0.21	1256	61	
EDI 4 (Round 1)	13.50	2.0	0:40	0.53	0.68	1260	24	
EDI 4 (Round 2)	13.50		1:50		0.25	1268	30	
EDI 5 (Round 1)	5.32	2.0	--	0.23	--	--	55	
EDI 5 (Round 2)	7.53		2:10		0.12	1251	40	
River Mile 11, LW2-W023								
EDI 1 (Round 1)	12.59	2.5	0:49	0.49	0.51	1250	46	1004
EDI 1 (Round 2)	15.75		3:30		0.15	1221	79	
EDI 2 (Round 1)	12.92	2.5	0:32	0.61	0.81	1250	24	
EDI 2 (Round 2)	12.34		4:28		0.09	1308	30	
EDI 3 (Round 1)	16.89	2.5	0:47	0.67	0.72	1250	30	
EDI 3 (Round 2)	15.17		3:47		0.13	1325	30	
EDI 4 (Round 1)	13.02	2.5	0:38	0.49	0.69	1250	34	
EDI 4 (Round 2)	12.96		1:43		0.25	1264	18	

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Table 2-6b. March 2005 Surface Water Sampling Data from River Transects Using the Infiltrex 300 System.

Equal Discharge Increment (EDI)	Actual Depth (m)[1]	Estimated Total Sampling Time per EDI (hour)[2]	Actual Total Sampling Time per EDI (hour:min)[3]	Estimated rate of descent/ascent (m/min)[2]	Measured rate of descent/ascent (m/min)[4]	Infiltrex 300 Average pumping rate (mL/min)[5]	Horizontal variability of EDI (m)[6]	Total Volume Pumped per Station (L)[7]
Non-Transect Stations								
W013-1	2.31	13.3	14:49	stationary	stationary	1270	3	1123
W013-2	2.60	13.3	13:35	stationary	stationary	1250	3	1008
W015	0.26	13.3	13:53	stationary	stationary	1240	21	1003
W016-1	2.94	13.3	15:22	stationary	stationary	1240	3	1012
W018	8.62	13.3	13:48	stationary	stationary	1220	15	1012

Notes:

Cells including dashed lines indicate that the station/EDI data were not available.

[1] Actual depth was measured with a YSI 600XLM sonde. For transect stations, depth is an average of the bottom depth readings. At nontransect stations, a mean water depth that varied with tidal range is given.

[2] Estimated sampling time and rates of ascent and descent are from Table B-1 of Appendix B in the Round 2A Surface Water FSP (Integral 2004c).

[3] Actual total sampling time is found in the Infiltrex 300 log sheets in Appendix B of the Round 2A Winter 2005 Surface Water Field Sampling Report (Integral 2005c).

[4] Measured rates of ascent and descent were calculated from actual depth and sampling time at each EDI. Boat winch was calibrated with a stop watch, and depth readings were taken from the YSI 600XLM sonde.

[5] Average pumping rate was calculated from field-calibrated entries in the Infiltrex 300 log sheets in Appendix B of the Round 2A Winter 2005 Surface Water Field Sampling Report (Integral 2005c).

[6] Distance was determined by a visual estimation of the plotted navigation files on GIS maps.

[7] Total volume reported is a field-calibrated value determined from field pumping rate measurements. The % error between Infiltrex flow meter volume readings and calibrated flow measurements varied between 6% and 8%.

[8] Remaining volume needed at EDI1 was pumped the following day.

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Table 2-6c. July 2005 Surface Water Sampling Data from River Transects Using the Infiltrex 300 System.

Equal Discharge Increment (EDI)	Actual Depth (m)[1]	Estimated Total Sampling Time per EDI (hour)[2]	Actual Total Sampling Time per EDI (hour:min)[3]	Estimated rate of descent/ascent (m/min)[2]	Measured rate of descent/ascent (m/min)[4]	Infiltrex 300 Average pumping rate (mL/min)[5]	Horizontal variability of EDI (m)[6]	Total Volume Pumped per Station (L)[7]
River Mile 4, LW2-W3005								
EDI 1 (Round 1)	10.7	1.7	0:52	0.64	0.64	1240	46	1002
EDI 1 (Round 2)	10.0		1:32		0.42	1260	38	
EDI 2 (Round 1)	13.8	1.7	0:42	0.73	0.65	1230	61	
EDI 2 (Round 2)	12.8		0:59		0.29	1270	--	
EDI 3 (Round 1)	14.5	1.7	0:56	0.82	0.62	1260	18	
EDI 3 (Round 2)	13.8		1:05		0.45	1260	27	
EDI 4 (Round 1)	16.6	1.7	0:56	0.91	0.60	1240	40	
EDI 4 (Round 2)	16.3		1:25		0.41	1290	58	
EDI 5 (Round 1)	16.2	1.7	0:39	0.82	0.77	1250	9	
EDI 5 (Round 2)	15.1		1:25		0.43	1270	82	
EDI 6 (Round 1)	11.9	1.7	0:25	0.55	0.83	1260	21	
EDI 6 (Round 2)	12.4		1:24		0.46	1240	73	
River Mile 6.3, LW2-W3011								
EDI 1 (Round 1)	13.1	2.0	0:42	0.61	0.59	1280	27	1001
EDI 1 (Round 2)	12.6		1:54		0.66	1260	55	
EDI 2 (Round 1)	14.3	2.0	0:47	0.69	0.61	1280	55	
EDI 2 (Round 2)	12.7		1:50		0.36	1280	88	
EDI 3 (Round 1)	13.9	2.0	0:38	0.69	0.59	1290	43	
EDI 3 (Round 2)	13.3		1:42		0.33	1270	43	
EDI 4 (Round 1)	16.6	2.0	0:35	0.53	0.88	1270	55	
EDI 4 (Round 2)	12.8		1:22		0.43	1300	46	
EDI 5 (Round 1)	13.0	2.0	0:34	0.23	0.82	1290	52	
EDI 5 (Round 2)	6.0		1:46		0.27	1280	18	
River Mile 11, LW2-W3023								
EDI 1 (Round 1)	15.3	2.5	0:52	0.49	0.53	1250	55	1001
EDI 1 (Round 2)	8.4		2:30		0.36	1280	67	
EDI 2 (Round 1)	15.5	2.5	0:49	0.61	0.97	1290	140	
EDI 2 (Round 2)	16.3		2:12		0.38	1270	52	
EDI 3 (Round 1)	13.9	2.5	0:58	0.67	0.66	1290	76	
EDI 3 (Round 2)	13.1		2:27		0.53	1280	91	
EDI 4 (Round 1)	12.5	2.5	0:29	0.49	0.55	1280	52	
EDI 4 (Round 2)	10.9		2:02		0.41	1320	43	

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ANC04401
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Table 2-6c. July 2005 Surface Water Sampling Data from River Transects Using the Infiltrex 300 System.

Equal Discharge Increment (EDI)	Actual Depth (m)[1]	Estimated Total Sampling Time per EDI (hour)[2]	Actual Total Sampling Time per EDI (hour:min)[3]	Estimated rate of descent/ascent (m/min)[2]	Measured rate of descent/ascent (m/min)[4]	Infiltrex 300 Average pumping rate (mL/min)[5]	Horizontal variability of EDI (m)[6]	Total Volume Pumped per Station (L)[7]
Non-Transect Stations								
W3013-1	3.0	13.3	13:12	stationary	stationary	1270	NA	1005
W3013-2	2.4	13.3	13:30	stationary	stationary	1260	NA	1016
W3015	0.4	13.3	14:18	stationary	stationary	1200	NA	1005
W3016	2.3	13.3	13:18	stationary	stationary	1260	NA	1008
W3018	7.5	13.3	13:18	stationary	stationary	1260	NA	1005

Notes:

Cells including dashed lines indicated that the station/EDI data were not available.

[1] Actual depth was measured with a YSI 600R sonde. For transect stations, depth is an average of the bottom depth readings. At non-transect stations, a mean water depth that varied with tidal range is given.

[2] Estimated sampling time and rates of ascent and descent are from Table B-1 of Appendix B in the Round 2A Surface Water FSP (Integral 2004c).

[3] Actual total sampling time was calculated from entries in the Infiltrex 300 log sheets in Appendix B of the Round 2A Summer 2005 Field Sampling Report (Integral 2005a).

[4] Measured rates of ascent and descent were calculated from actual depth and sampling time at each EDI. Boat winch was calibrated with a stop watch and depth readings from the YSI 600R sonde.

[5] Average pumping rate was calculated from field calibrated entries in the Infiltrex 300 log sheets in Appendix B of the Round 2A Summer 2005 Field Sampling Report (Integral 2005a).

[6] Distance was determined by a visual estimation of the plotted navigation files on GIS maps.

[7] Total volume reported is field calibrated value determined from field pumping rate measurements. The % error between Infiltrex flow meter volume readings and calibrated flow measurements varied between 6% and 8%.

NA = not applicable

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BZTO104(e)004402 ANC04402

Table 3-1. Summary of Deviations for Sample Collection and Analysis.

Sampling Event	Deviation	Stations/Samples Affected	Impact of Deviation
November 2004, March 2005, July 2005	Transect sample collection scheme was modified from FSR to include 2 passes instead of 4 passes at each EDI, as specified in the FSP.	W023, W011, W005	No impact to investigation completeness. Modification to sample collection process.
November 2004	The peristaltic pump sample was recollected because the sampling tube inlet contacted the bottom, and sediment was pumped into the carboy on the first attempt	W004	No impact to the investigation because sample was recollected.
November 2004	The peristaltic pump sample was not depth-integrated for the HHRA station, as required by the FSP.	W010	No impact to investigation completeness. Deviation should be included in data evaluation since samples from other Round 2 events at this station were depth- integrated.
November 2004	The outlet stainless-steel tubing that connects to the XAD-2 column inlet connector was unprotected with aluminum foil for approximatley 4 hours before a new XAD-2 column was installed. During the collection of the replicate at this station, the Teflon™-lined polyethlene tubing was cut to remove a kink that was blocking the passage of sampled water.	W013	No impact to investigation completeness. Potential for contamination evaluated by comparability of data, since this is a replicate station. No impact from this deviation found during data evaluation of comparability of the replicate results.
November 2004	Initial sample collection was postponed due to malfunction of water quality multi-meter. Sample inlet tubing was rinsed with river water prior to resuming sample collection.	W015	No impact to investigation completeness or data evaluation. Potential for contamination is very low due to limited time of exposure of sample tubing and 5- minute rinse prior to sample collection.
November 2004, March 2005, July 2005	There were several equipment decontamination deviations from SOP in the QAPP. These deviations are provided in detail in the FSRs (Integral 2005a-c)	All stations, all samples	No impact on investigation based on results of decon blanks. Levels of detection in the decon blanks were less than the level of contamination in the field and laboratory blanks.
November 2004	The YSI multi-probe malfunctioned on November 11, 2004. A replacment YSI multi-probe was used in combination with an alternate probe, which did not have a water depth meter or an ORP meter.	All stations, all samples	Water depth and ORP were incomplete for the November 2004 sampling event. This deviation has a minor impact on the completeness of the investigation.

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ANC04403
BZTO104(e)004403

Table 3-1. Summary of Deviations for Sample Collection and Analysis.

Sampling Event	Deviation	Stations/Samples Affected	Impact of Deviation
November 2004, March 2005, July 2005	Sample bottles were not contained within double zip-locked bags after collection, as noted in the FSP.	All stations, all samples	This deviation does not have an impact on the data collected for this investigation.
November 2004	Excess water was present in jar with the XAD-2 glass fiber prefilter, and particulate matter on filter became dislodged. Axys centrifuged the remaining water in the sample jar once the filter was removed. The supernatant water was extracted for organics and added to the results for the parent sample. The particulate matter was extracted along with the filter.	All XAD-2 stations	This deviation does not impact the data collected for this investigation.
November 2004	Aliquot for DOC was not collected in field.	W001	This deviation has a slight impact to the completeness of the investigation.
March 2005	A visible amount of sediment was taken into the peristaltic sampling carboys at station W011. The carboys were thoroughly cleaned and the sampling crew reoccupied the station the following day, noting the new sample as LW2-W2011B.	W011	No impact to the investigation because sample was recollected.
July 2005	A trace amount of resuspended sediment caused by the sampler touching the river bottom was observed in the carboys before the peristaltic pump was turned off.	W014	This deviation has little to no impact on the data collected from this site since the presence of sediment (trace) was observed at the end of the sampling cycle.
July 2005	A large boat wake disturbed the river bottom and temporarily ceased the pumping of water due to a power outage. Field crew monitored resuspended sediment with the underwater camera and waited for resuspended sediment to settle down before resuming pumping. Field crew noticed that the carboys showed darker water discoloration than usual, paired with strong odors of petroleum. Tar stains and smears were noticed at the base of the sampler after retrieval from the water.	W012	The impact is unknown.

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Table 3-1. Summary of Deviations for Sample Collection and Analysis.

Sampling Event	Deviation	Stations/Samples Affected	Impact of Deviation
November 2004, March 2005, July 2005	Problems were encountered by NEA when attempting to analyze the XAD-2 extracts for PCB Aroclors during the November 2004 and March 2005 sampling events. A PCB congener analysis was conducted on the remaining portion of the extracts after the XAD pesticides analysis were conducted. Axys used the PCB congener patterns to identify Aroclors and quantitated Aroclor concentrations using various combinations of congeners, depending on the identified Aroclor. For the July 2005 XAD samples, Axys performed PCB congener analysis on the XAD column and filter extracts. Because the extracts were not slated for PCB Aroclor analysis, solvent exchange from toluene to hexane was not necessary.	All XAD-2 stations	This deviation from the QAPP does not impact the completeness of the investigation because PCB data were generated by an alternate method.
November 2004, March 2005	The laboratory reported the TSS results using a MDL of 5 mg/L instead of the 1-mg/L MDL required in the QAPP.	All stations	This deviation from the QAPP has a minor impact on the usability of the TSS data for selected data users.
November 2004	The laboratory included thallium instead of aluminum in the metals analyte list.	All stations	This deviation has a slight impact to the completeness of the investigation.

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Table 3-2. Laboratory Methods for Round 2A Surface Water Samples.

Analytes	Laboratory	Sample Preparation		Quantitative Analysis	
		Protocol	Procedure	Protocol	Procedure
Peristaltic Pump Samples					
Conventional Analyses	CAS				
Total suspended solids		EPA 160.2	Filtration and drying	EPA 160.2	Balance
Total dissolved solids		EPA 160.1	Filtration and drying	EPA 160.1	Balance
Total organic carbon		EPA 415.1	Chemical oxidation	EPA 415.1	Infrared detector
Dissolved organic carbon		EPA 415.1	Filtration, chemical oxidation	EPA 415.1	Infrared detector
Perchlorate		EPA 314.0	Filtration, 0.45-um filter	EPA 314.0	Ion chromatography
Metals	CAS				
Aluminum, antimony, cadmium, total chromium, copper, lead, nickel, selenium, silver, zinc		EPA 3005	Acid digestion	EPA 200.8	ICP/MS
Arsenic		EPA 3005A (Modified)	Acid Digestion/pre-concentration	EPA 200.8	ICP/MS
Hexavalent chromium		EPA 7195	Coprecipitation	EPA 6010B	ICP/OES
Mercury		EPA 7470	Acid digestion/oxidation	EPA 7470	CVAA
Hardness as $CaCO_3$		EPA 3005	Acid digestion	EPA 200.8 or 6010B SM2340B	ICP/MS or ICP/OES Calculation
Butyltins	CAS	Unger et al. 1988	Solvent extraction Derivatization	M.A. Unger et al. 1988	GC/FPD
PCBs Aroclors	NEA	EPA 3545 EPA 3640A EPA 3630C EPA 3665A	Pressurized fluid extraction Gel permeation chromatography Florisil® cleanup Sulfuric acid cleanup	EPA 8082	GC/ECD
Chlorinated Herbicides	CAS	EPA 8151A	Solvent extraction Esterification	EPA 8151A	GC/ECD
Organochlorine Pesticides	NEA	EPA 3545 EPA 3640A EPA 3660B EPA 3630C	Pressurized fluid extraction Gel permeation chromatography Sulfur cleanup (as needed) Florisil® cleanup	EPA 8081A	GC/ECD
Semivolatile Organic Compounds	CAS	EPA 3520C	Continuous liquid-liquid extraction	EPA 8270C	GC/MS with LVI GC/MS-SIM (PAHs only)
XAD-2 Column Extracts					
Column Extraction	Axys	EPA 3540	Soxhlet extraction	--	--
Organochlorine Pesticides	Axys	AXYS SOP MLA-028	Florisil® cleanup Extract fractionation	AXYS SOP MLA-028	HRGC/HRMS

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Table 3-2. Laboratory Methods for Round 2A Surface Water Samples.

Analytes	Laboratory	Sample Preparation		Quantitative Analysis	
		Protocol	Procedure	Protocol	Procedure
Polycyclic Aromatic Hydrocarbons	Axys	AXYS SOP MLA-021	Extract fractionation	AXYS SOP MLA-021	HRGC/LRMS
Phthalate Esters	Axys	AXYS SOP MLA-027	Extract fractionation	AXYS SOP MLA-027	HRGC/LRMS
Chlorinated Dioxins and Furans	Axys	EPA 1613B[1]	Layered Acid/Base/SiO_3 column Florisil® cleanup Carbon/Celite clean-up column 1% deactivated basic Alumina	EPA 1613B	HRGC/HRMS
PCB congeners [2]	Axys	EPA 1668A	Florisil® cleanup Extract fractionation Layered Acid/Base SiO_3 Alumina	EPA 1668A	IIRGC/IIRMS

Notes:

[1]Cleanup procedures indicated in this table will be used as needed for chlorinated dioxin and furan analyses.

[2] PCB Aroclors and homologs were derived from the PCB congener analysis.

CAS - Columbia Analytical Services
EPA - U.S. Environmental Protection Agency
GC/ECD - gas chromatography/electron capture detection
GC/MS - gas chromatography/mass spectrometry
HRGC/HRMS - high resolution gas chromatography/high resolution mass spectrometry
ICP/OES - inductively coupled plasma/optical emission spectrometry
ICP/MS - inductively coupled plasma - mass spectrometry
LVI - large-volume injector
NEA - Northeast Analytical
SIM - selected ion monitoring
SOP - standard operating procedures

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ANC04407
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Table 3-3. Data Validation Qualifiers and Definitions.

Data Qualifier	Definition
U	The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
J	The associated numerical value is an estimated quantity.
R	The data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification. (Overrides all quals and their codes.)
N	Presumptive evidence of presence of material.
NJ	Presumptive evidence of the presence of the material at an estimated quantity.
UJ	The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.
T	The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

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ANC04408
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Table 3-4. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
November 2004 Event							
Peristaltic Samples							
Conventionals	93	153	0	153	100	detected	
					0	undetected	
Total Metals	47	328	45	373	88	detected	
					12	undetected	
					1	J	LB, Precision/reps.
					9	U	LB
					3	UJ	LB, Precision/reps.
Dissolved Metals	47	249	51	300	83	detected	
					17	undetected	
					4	J	Other
					11	U	FB, LB
					2	UJ	LB, Precision/reps., Other
Butyltins	23	100	0	100	100	detected	
					0	undetected	
PCB Aroclors	20	153	27	180	85	detected	
					15	undetected	
					1	J	Comp. confirm.
					15	UJ	Surr. rec.
Organochlorine Pesticides	18	425	105	530	80	detected	
					20	undetected	
					< 1	J	Comp. confirm.
					< 1	NJ	Comp. confirm.
					20	UJ	CC, MS/MSD rec., LCS rec., Surr. rec.
Semivolatile Organic Compounds	23	809	48	857	94	detected	
					6	undetected	
					1	J	Comp. confirm., Precision/reps., Surr. rec.
					< 1	NJ	Comp. confirm.
					< 1	U	LB
					5	UJ	HT/samp. preservation, LCS rec., Surr. rec.
Phenols	23	325	25	350	93	detected	
					7	undetected	
					< 1	J	HT/samp. preservation
					4	U	LB
					3	UJ	HT/samp. preservation
Phthalate Esters	23	0	150	150	0	detected	
					100	undetected	
					96	U	FB, LB
					4	UJ	HT/samp. preservation, LB
Polycyclic Aromatic Hydrocarbons	23	344	81	425	81	detected	
					19	undetected	
					1	J	HT/samp. preservation
					8	U	FB, LB
					11	UJ	HT/samp. preservation, FB

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BZTO104(e)004409 ANC04409

Table 3-4. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
Chlorinated Herbicides	23	237	13	250	95	detected	
					5	undetected	
					1	U	LB
					4	UJ	Other
XAD Samples							
PCB Aroclors	14	112	0	112	100	detected	
					0	undetected	
					38	NJ	Other
Organochlorine Pesticides	16	324	92	416	78	detected	
					22	undetected	
					< 1	J	Surr. reps.
					13	U	FB, LB, Other
					10	UJ	Other
Semivolatile Organic Compounds	16	24	8	32	75	detected	
					25	undetected	
					16	U	LB
					9	UJ	Other
Phthalate Esters	16	6	90	96	6	detected	
					94	undetected	
					94	U	FB, LB, Other
Polycyclic Aromatic Hydrocarbons	16	184	88	272	68	detected	
					32	undetected	
					32	U	FB, LB, Other
					< 1	UJ	Other
PCB Homologs	14	139	5	144	97	detected	
					3	undetected	
					3	U	LB
PCB Congeners	14	2468	92	2560	96	detected	
					4	undetected	
					1	J	Other
					4	U	FB, LB, PFPs
Chlorinated Dioxin/Furan Homologs	12	106	14	120	88	detected	
					12	undetected	
					12	U	FB, LB
Chlorinated Dioxin/Furans	12	104	76	180	58	detected	
					42	undetected	
					42	U	FB, LB

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ANC04410
BZTO104(e)004410

Table 3-4. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
March 2005 Event							
Peristaltic Samples							
Conventionals	97	161	0	161	100	detected	
					0	undetected	
					2	J	MS/MSD rec.
Total Metals	49	307	46	353	87	detected	
					13	undetected	
					1	J	LB, Other
					9	U	FB, LB
					4	UJ	LB
Dissolved Metals	49	287	35	322	89	detected	
					11	undetected	
					7	J	CC, LB, Other
					7	U	FB, LB
					3	UJ	LB
Butyltins	24	104	0	104	100	detected	
					0	undetected	
PCB Aroclors	16	153	0	153	100	detected	
					0	undetected	
					1	J	Comp. confirm.
Organochlorine Pesticides	16	453	14	467	97	detected	
					3	undetected	
					< 1	NJ	Comp. confirm.
					3	UJ	CC
Semivolatile Organic Compounds	24	834	11	845	99	detected	
					1	undetected	
					1	UJ	HT/samp. preservation, LCS rec., Surr. rec.
Phenols	24	370	5	375	99	detected	
					1	undetected	
					1	U	LB, Other
Phthalate Esters	24	0	144	144	0	detected	
					100	undetected	
					100	U	FB, LB, Other
Polycyclic Aromatic Hydrocarbons	24	408	34	442	92	detected	
					8	undetected	
					2	J	Surr. rec.
					6	U	FB, LB
					2	UJ	LB, Surr. rec.
Chlorinated Herbicides	24	234	26	260	90	detected	
					10	undetected	
					10	UJ	Other

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ANC04411
BZTO104(e)00411

Table 3-4. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
XAD Samples							
PCB Aroclors	14	112	0	112	100	detected	
					0	undetected	
					38	NJ	Other
Organochlorine Pesticides	16	356	60	416	86	detected	
					14	undetected	
					< 1	J	LCS rec.
					14	U	FB, LB, PFPs
Semivolatile Organic Compounds	16	24	8	32	75	detected	
					25	undetected	
					25	J	IC., CC, LCS rec.
					25	UJ	IC, CC, LB, LCS rec., PFPs
Phthalate Esters	16	0	96	96	0	detected	
					100	undetected	
					100	U	FB, LB, PFPs, Other
Polycyclic Aromatic Hydrocarbons	16	162	110	272	60	detected	
					40	undetected	
					40	U	FB, LB, PFPs
PCB Homologs	14	139	5	144	97	detected	
					3	undetected	
					3	U	FB
PCB Congeners	14	2403	157	2560	94	detected	
					6	undetected	
					< 1	J	Other
					6	U	FB, LB, PFPs
Chlorinated Dioxin/Furan Homologs	12	60	0	60	100	detected	
					0	undetected	
Chlorinated Dioxin/Furans	12	152	28	180	84	detected	
					16	undetected	
					16	U	FB, LB, PFPs
July 2005 Event							
Peristaltic Samples							
Conventionals	93	142	0	142	100	detected	
					0	undetected	
Total Metals	47	269	60	329	82	detected	
					18	undetected	
					23	J	LB, ICP Serial Dilution %D
					12	U	FB, LB
					6	UJ	LB, Other

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ANC04412
BZTO104(e)004412

Table 3-4. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
Dissolved Metals	47	192	96	288	67	detected	
					33	undetected	
					14	J	LB, ICP Serial Dilution %D
					18	U	FB, LB
					16	UJ	LB, Other, ICP Serial Dilution %D
Butyltins	23	58	38	96	60	detected	
					40	undetected	
					9	J	HT/samp. preservation, Comp. confirm., LCS rec.
					15	U	LB
					25	UJ	HT/samp. preservation, LCS rec.
PCB Aroclors	16	110	34	144	76	detected	
					24	undetected	
					2	J	HT/samp. preservation, Comp. confirm., LCS rec.
					24	UJ	HT/samp. preservation
Organochlorine Pesticides	16	304	144	448	68	detected	
					32	undetected	
					1	J	HT/samp. preservation, Comp. confirm., LCS rec.
					32	UJ	HT/samp. preservation, CC
Semivolatile Organic Compounds	23	771	37	808	95	detected	
					5	undetected	
					< 1	U	FB
					4	UJ	HT/samp. preservation, MS/MSD rec., Surr. rec.
Phenols	23	347	13	360	96	detected	
					4	undetected	
					4	U	LB
Phthalate Esters	23	1	143	144	1	detected	
					99	undetected	
					96	U	FB, LB
					3	UJ	Surr. rec.
Polycyclic Aromatic Hydrocarbons	23	385	23	408	94	detected	
					6	undetected	
					6	U	FB, ICP Interference Check Std. Rec.
Chlorinated Herbicides	23	240	0	240	100	detected	
					0	undetected	
XAD Samples							
PCB Aroclors	14	105	0	105	100	detected	
					0	undetected	
					38	NJ	Other

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ANC04413
BZTO104(e)004413

Table 3-4. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
Organochlorine Pesticides	16	331	85	416	80	detected	
					20	undetected	
					5	J	LCS rec., Surr. rec.
					6	U	FB, LB, PFPs
					14	UJ	LCS rec., Surr. rec., PFPs
Semivolatile Organic Compounds	16	26	6	32	81	detected	
					19	undetected	
					34	J	IC, CC, LCS rec.
					3	U	LB
					16	UJ	IC., CC., LCS rec.
Phthalate Esters	16	55	41	96	57	detected	
					43	undetected	
					43	U	FB, LB, PFPs
Polycyclic Aromatic Hydrocarbons	16	194	78	272	71	detected	
					29	undetected	
					29	U	FB, LB, PFPs
PCB Homologs	14	135	0	135	100	detected	
					0	undetected	
PCB Congeners	14	2183	217	2400	91	detected	
					9	undetected	
					9	U	FB, LB, PFPs
Chlorinated Dioxin/Furan Homologs	12	110	10	120	92	detected	
					8	undetected	
					8	U	LB
Chlorinated Dioxin/Furans	12	106	74	180	59	detected	
					41	undetected	
					41	U	FB, LB, PFPs

Notes:

Includes replicates and splits, excludes field blanks.

The analyte groupings for SVOCs, phenols, PAHs, and phthalates are as defined in the Round 2 QAPP Addendum 1, Table A6-2 (see Integral 2004c).

CC - continuing calibration
FB - field blank contamination
HT - holding time
IC - initial calibration
ICP - inductively coupled plasma
LB - lab blank contamination (e.g. method blank, instrument, etc.)
LCS - laboratory control sample
MS/MSD - matrix spike/matrix spike duplicate
PCB - polychlorinated biphenyl
PFPs - potential false positives

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ANC04414
BZTO104(e)00414

Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Peristaltic Samples									
PCB Aroclors									
Aroclor 1016	ug/L	20	0	0	--	--	--	--	--
Aroclor 1221	ug/L	20	0	0	--	--	--	--	--
Aroclor 1232	ug/L	20	0	0	--	--	--	--	--
Aroclor 1242	ug/L	20	0	0	--	--	--	--	--
Aroclor 1248	ug/L	20	1	5	0.00212 J	0.00212 J	0.0021	0.00212 J	0.00212 J
Aroclor 1254	ug/L	20	2	10	0.00244	0.00377	0.0031	0.00244	0.00244
Aroclor 1260	ug/L	20	1	5	0.013	0.013	0.013	0.013	0.013
Aroclor 1262	ug/L	20	0	0	--	--	--	--	--
Aroclor 1268	ug/L	20	0	0	--	--	--	--	--
Butyltins									
Butyltin ion	ug/L	25	1	4	0.02 J	0.02 J	0.020	0.02 J	0.02 J
Dibutyltin ion	ug/L	25	1	4	0.0073 J	0.0073 J	0.0073	0.0073 J	0.0073 J
Tributyltin ion	ug/L	25	0	0	--	--	--	--	--
Tetrabutyltin	ug/L	25	0	0	--	--	--	--	--
Conventionals									
Dissolved organic carbon	mg/L	25	25	100	1.2	2	1.5	1.50	2
Hardness as $CaCO_3$	mg/L	25	25	100	22.5	35.2	25.0	24.6	26.7
Perchlorate	ug/L	2	1	50	16.1	16.1	16.1	16.1	16.1
Total dissolved solids	mg/L	25	25	100	47	84	65.2	67.0	80
Total organic carbon	mg/L	25	25	100	1.4	2.4	1.8	1.70	2.1
Total suspended solids	mg/L	25	10	40	5	8	6.6	7.00	8.00
Chlorinated Herbicides									
2,4,5-T	ug/L	25	0	0	--	--	--	--	--
2,4-D	ug/L	25	1	4	0.14 J	0.14 J	0.14	0.14 J	0.14 J
2,4-DB	ug/L	25	0	0	--	--	--	--	--
Dalapon	ug/L	25	0	0	--	--	--	--	--
Dicamba	ug/L	25	0	0	--	--	--	--	--
Dichloroprop	ug/L	25	0	0	--	--	--	--	--
Dinoseb	ug/L	25	0	0	--	--	--	--	--
MCPA	ug/L	25	0	0	--	--	--	--	--
MCPP	ug/L	25	0	0	--	--	--	--	--
Silvex	ug/L	25	0	0	--	--	--	--	--

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ANC04415
BZTO104(e)004415

Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Total Metals									
Antimony	ug/L	25	2	8	0.03 J	0.06	0.045	0.03 J	0.03 J
Arsenic	ug/L	25	25	100	0.33	0.668	0.39	0.379	0.407
Cadmium	ug/L	25	12	48	0.011 J	0.06	0.031	0.03	0.05
Chromium hexavalent	mg/L	2	0	0	--	--	--	--	--
Chromium	ug/L	25	25	100	0.2 J	0.51	0.31	0.3	0.37
Copper	ug/L	25	25	100	0.69	1.13	0.86	0.85	1
Lead	ug/L	25	25	100	0.083	0.901	0.21	0.155	0.318
Mercury	ug/L	25	0	0	--	--	--	--	--
Nickel	ug/L	25	25	100	0.56	1.15	0.68	0.66	0.75
Selenium	ug/L	25	5	20	0.2 J	0.3 J	0.24	0.2 J	0.3 J
Silver	ug/L	25	1	4	0.025	0.025	0.025	0.025	0.025
Thallium	ug/L	25	8	32	0.004 J	0.046 J	0.014	0.006 J	0.025
Zinc	ug/L	25	25	100	1.6	57.9	4.5	2.1	3.1
Dissolved Metals									
Antimony	ug/L	25	1	4	0.05 J	0.05 J	0.050	0.05 J	0.05 J
Arsenic	ug/L	25	25	100	0.249	0.493	0.32	0.319	0.353
Cadmium	ug/L	25	10	40	0.01 J	0.03	0.025	0.03	0.03
Chromium	ug/L	25	20	80	0.12 J	0.2 J	0.15	0.14 J	0.19 J
Copper	ug/L	25	24	96	0.37	0.93	0.52	0.46	0.65
Lead	ug/L	25	22	88	0.01 J	0.091	0.023	0.015 J	0.046
Mercury	ug/L	25	0	0	--	--	--	--	--
Nickel	ug/L	25	22	88	0.43	1.04	0.58	0.54	0.67
Selenium	ug/L	25	5	20	0.2 J	0.3 J	0.24	0.2 J	0.3 J
Silver	ug/L	25	0	0	--	--	--	--	--
Thallium	ug/L	25	0	0	--	--	--	--	--
Zinc	ug/L	25	22	88	0.9	41.9	3.8	1.7	3.2
Polycyclic Aromatic Hydrocarbons									
2-Methylnaphthalene	ug/L	25	6	24	0.0054 J	0.22	0.051	0.0068 J	0.062
Acenaphthene	ug/L	25	4	16	0.0034 J	0.038	0.013	0.0046 J	0.0071 J
Acenaphthylene	ug/L	25	6	24	0.0024 J	0.012 J	0.0081	0.0078 J	0.0095 J
Anthracene	ug/L	25	0	0	--	--	--	--	--
Benz(a)anthracene	ug/L	25	7	28	0.0043 J	0.019	0.0094	0.01 J	0.012 J
Benzo(a)pyrene	ug/L	25	2	8	0.0033 J	0.02	0.012	0.0033 J	0.0033 J
Benzo(b)fluoranthene	ug/L	25	3	12	0.004 J	0.021	0.011	0.009 J	0.009 J
Benzo(g,h,i)perylene	ug/L	25	1	4	0.02	0.02	0.020	0.02	0.02
Benzo(k)fluoranthene	ug/L	25	3	12	0.0067 J	0.008 J	0.0073	0.0072 J	0.0072 J
Chrysene	ug/L	25	8	32	0.0026 J	0.026	0.0076	0.004 J	0.0089 J

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ANC04416
BZTO104(e)00416

Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Dibenz(a,h)anthracene	ug/L	25	0	0	--	--	--	--	--
Fluoranthene	ug/L	25	6	24	0.0054 J	0.049	0.016	0.0061 J	0.018
Fluorene	ug/L	25	3	12	0.0028 J	0.017	0.0088	0.0065 J	0.0065 J
Indeno(1,2,3-cd)pyrene	ug/L	25	2	8	0.0048 J	0.019	0.012	0.0048 J	0.0048 J
Naphthalene	ug/L	25	1	4	0.77	0.77	0.77	0.77	0.77
Phenanthrene	ug/L	25	1	4	0.039	0.039	0.039	0.039	0.039
Pyrene	ug/L	25	11	44	0.0031 J	0.055	0.012	0.007 J	0.016
Organochlorine Pesticides									
2,4'-DDD	ug/L	19	0	0	--	--	--	--	--
2,4'-DDE	ug/L	19	0	0	--	--	--	--	--
2,4'-DDT	ug/L	19	0	0	--	--	--	--	--
4,4'-DDD	ug/L	19	0	0	--	--	--	--	--
4,4'-DDE	ug/L	19	0	0	--	--	--	--	--
4,4'-DDT	ug/L	19	0	0	--	--	--	--	--
Aldrin	ug/L	19	0	0	--	--	--	--	--
alpha-Endosulfan	ug/L	19	0	0	--	--	--	--	--
alpha-Hexachlorocyclohexane	ug/L	19	0	0	--	--	--	--	--
beta-Endosulfan	ug/L	19	0	0	--	--	--	--	--
beta-Hexachlorocyclohexane	ug/L	19	0	0	--	--	--	--	--
cis-Chlordane	ug/L	19	0	0	--	--	--	--	--
cis-Nonachlor	ug/L	19	0	0	--	--	--	--	--
delta-Hexachlorocyclohexane	ug/L	19	3	16	0.000811 J	0.00167 NJ	0.0011	0.00093	0.00093
Dieldrin	ug/L	19	0	0	--	--	--	--	--
Endosulfan sulfate	ug/L	19	1	5	0.00077 J	0.00077 J	0.00077	0.00077 J	0.00077 J
Endrin	ug/L	17	0	0	--	--	--	--	--
Endrin aldehyde	ug/L	19	0	0	--	--	--	--	--
Endrin ketone	ug/L	19	0	0	--	--	--	--	--
gamma-Hexachlorocyclohexane	ug/L	19	0	0	--	--	--	--	--
Heptachlor	ug/L	19	0	0	--	--	--	--	--
Heptachlor epoxide	ug/L	19	0	0	--	--	--	--	--
Methoxychlor	ug/L	19	1	5	0.0111	0.0111	0.011	0.0111	0.0111
Mirex	ug/L	19	0	0	--	--	--	--	--
Oxychlordane	ug/L	19	0	0	--	--	--	--	--
Toxaphene	ug/L	19	0	0	--	--	--	--	--
trans-Chlordane	ug/L	19	0	0	--	--	--	--	--
trans-Nonachlor	ug/L	19	0	0	--	--	--	--	--
Phenols									
2,4,5-Trichlorophenol	ug/L	25	0	0	--	--	--	--	--
2,4,6-Trichlorophenol	ug/L	25	0	0	--	--	--	--	--

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ANC04417
BZTO104(e)00417

Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,4-Dichlorophenol	ug/L	25	0	0	--	--	--	--	--
2,4-Dimethylphenol	ug/L	25	0	0	--	--	--	--	--
2,4-Dinitrophenol	ug/L	25	0	0	--	--	--	--	--
2-Chlorophenol	ug/L	25	0	0	--	--	--	--	--
2-Methylphenol	ug/L	25	0	0	--	--	--	--	--
2-Nitrophenol	ug/L	25	0	0	--	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	25	0	0	--	--	--	--	--
4-Chloro-3-methylphenol	ug/L	25	3	12	0.068 J	0.091 J	0.080	0.082 J	0.082 J
4-Methylphenol	ug/L	25	0	0	--	--	--	--	--
4-Nitrophenol	ug/L	25	0	0	--	--	--	--	--
Pentachlorophenol	ug/L	25	0	0	--	--	--	--	--
Phenol	ug/L	25	1	4	0.051 J	0.051 J	0.051	0.051 J	0.051 J
Phthalate Esters									
Bis(2-ethylhexyl) phthalate	ug/L	25	0	0	--	--	--	--	--
Butylbenzyl phthalate	ug/L	25	0	0	--	--	--	--	--
Dibutyl phthalate	ug/L	25	0	0	--	--	--	--	--
Diethyl phthalate	ug/L	25	0	0	--	--	--	--	--
Dimethyl phthalate	ug/L	25	0	0	--	--	--	--	--
Di-n-octyl phthalate	ug/L	25	0	0	--	--	--	--	--
Semivolatile Organic Compounds									
1,2,4-Trichlorobenzene	ug/L	25	0	0	--	--	--	--	--
1,2-Dichlorobenzene	ug/L	25	0	0	--	--	--	--	--
1,3-Dichlorobenzene	ug/L	25	0	0	--	--	--	--	--
1,4-Dichlorobenzene	ug/L	25	1	4	0.019 J	0.019 J	0.019	0.019 J	0.019 J
2,4-Dinitrotoluene	ug/L	25	0	0	--	--	--	--	--
2,6-Dinitrotoluene	ug/L	25	0	0	--	--	--	--	--
2-Chloronaphthalene	ug/L	25	0	0	--	--	--	--	--
2-Nitroaniline	ug/L	25	0	0	--	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	25	0	0	--	--	--	--	--
3-Nitroaniline	ug/L	25	0	0	--	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	25	0	0	--	--	--	--	--
4-Chloroaniline	ug/L	25	0	0	--	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	25	0	0	--	--	--	--	--
4-Nitroaniline	ug/L	25	0	0	--	--	--	--	--
Aniline	ug/L	25	0	0	--	--	--	--	--
Azobenzene	ug/L	25	0	0	--	--	--	--	--
Benzoic acid	ug/L	25	4	16	1.8 J	2.2 J	2.1	2 J	2.2 J
Benzyl alcohol	ug/L	25	0	0	--	--	--	--	--
Bis(2-chloroethoxy) methane	ug/L	25	0	0	--	--	--	--	--

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ANC04418
BZTO104(e)00418

Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Bis(2-chloroethyl) ether	ug/L	25	0	0	--	--	--	--	--
Bis(2-chloroisopropyl) ether	ug/L	25	0	0	--	--	--	--	--
Carbazole	ug/L	25	1	4	0.024 J	0.024 J	0.024	0.024 J	0.024 J
Dibenzofuran	ug/L	25	0	0	--	--	--	--	--
Hexachlorobenzene	ug/L	25	4	16	0.000906 J	0.00211 J	0.0013	0.00105	0.00129 J
Hexachlorobutadiene	ug/L	25	1	4	0.00256	0.00256	0.0026	0.00256	0.00256
Hexachlorocyclopentadiene	ug/L	25	0	0	--	--	--	--	--
Hexachloroethane	ug/L	25	0	0	--	--	--	--	--
Isophorone	ug/L	25	1	4	0.018 J	0.018 J	0.018	0.018 J	0.018 J
Nitrobenzene	ug/L	25	0	0	--	--	--	--	--
N-Nitrosodimethylamine	ug/L	25	0	0	--	--	--	--	--
N-Nitrosodiphenylamine	ug/L	25	0	0	--	--	--	--	--
N-Nitrosodipropylamine	ug/L	25	0	0	--	--	--	--	--
XAD Column Samples									
PCB Aroclors									
Aroclor 1016	pg/L	8	0	0	--	--	--	--	--
Aroclor 1221	pg/L	8	0	0	--	--	--	--	--
Aroclor 1232	pg/L	8	0	0	--	--	--	--	--
Aroclor 1242	pg/L	8	5	63	12.5 NJ	513 NJ	125	33.5 NJ	40.2 NJ
Aroclor 1248	pg/L	8	3	38	107 NJ	380 NJ	279	349 NJ	349 NJ
Aroclor 1254	pg/L	8	5	63	12.7 NJ	72.2 NJ	47.7	50.8 NJ	67.9 NJ
Aroclor 1260	pg/L	8	8	100	2.56 NJ	74.4 NJ	23.6	15.4 NJ	45.5 NJ
Chlorinated Dioxin/Furan Homologs									
Tetrachlorodibenzofuran homologs	pg/L	6	6	100	0.0231	0.454	0.11	0.0387	0.0605
Tetrachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.0253	0.166	0.069	0.05	0.07
Pentachlorodibenzofuran homologs	pg/L	6	3	50	0.0345	0.226	0.10	0.0382	0.0382
Pentachlorodibenzo-p-dioxin homologs	pg/L	6	5	83	0.00934	0.0614	0.029	0.0184	0.0417
Hexachlorodibenzofuran homologs	pg/L	6	3	50	0.0393	0.147	0.078	0.0469	0.0469
Hexachlorodibenzo-p-dioxin homologs	pg/L	6	5	83	0.0308	0.117	0.074	0.0657	0.104
Heptachlorodibenzofuran homologs	pg/L	6	3	50	0.0451	0.117	0.072	0.0553	0.0553
Heptachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.0957	0.583	0.29	0.251	0.34
Octachlorodibenzofuran	pg/L	6	3	50	0.0296 J	0.0672	0.043	0.0328 J	0.0328 J
Octachlorodibenzo-p-dioxin	pg/L	6	6	100	0.346	2.1	1.0	0.768	1.13
Chlorinated Dioxin/Furans									
2,3,7,8-Tetrachlorodibenzofuran	pg/L	6	2	33	0.0055 J	0.0961	0.051	0.0055 J	0.0055 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/L	6	0	0	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran	pg/L	6	1	17	0.0595	0.0595	0.060	0.0595	0.0595
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/L	6	0	0	--	--	--	--	--

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BZTO104(e)004419 ANC04419

Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,3,4,7,8-Pentachlorodibenzofuran	pg/L	6	1	17	0.031	0.031	0.031	0.031	0.031
1,2,3,4,7,8-Hexachlorodibenzofuran	pg/L	6	1	17	0.0564	0.0564	0.056	0.0564	0.0564
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/L	6	0	0	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran	pg/L	6	1	17	0.0199 J	0.0199 J	0.020	0.0199 J	0.0199 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/L	6	2	33	0.0109 J	0.011 J	0.011	0.0109 J	0.0109 J
1,2,3,7,8,9-Hexachlorodibenzofuran	pg/L	6	0	0	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/L	6	0	0	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran	pg/L	6	0	0	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/L	6	3	50	0.014 J	0.0399	0.024	0.0174 J	0.0174 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/L	6	6	100	0.0454	0.267	0.14	0.113	0.163
1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/L	6	1	17	0.0258 J	0.0258 J	0.026	0.0258 J	0.0258 J
Polycyclic Aromatic Hydrocarbons									
2-Methylnaphthalene	pg/L	8	8	100	1630	5770	3199	2540	4300
Acenaphthene	pg/L	8	8	100	207	7810	1780	998	1490
Acenaphthylene	pg/L	8	8	100	282	889	520	495	639
Anthracene	pg/L	8	7	88	278	2150	605	351	441
Benz(a)anthracene	pg/L	8	8	100	52 J	572	158	106 J	149 J
Benzo(a)pyrene	pg/L	8	6	75	26.3 J	143 J	53.2	36.7 J	40.1 J
Benzo(b+j)fluoranthene	pg/L	8	8	100	20.6 J	211	61.6	38.8 J	74.2 J
Benzo(g,h,i)perylene	pg/L	8	1	13	96.9 J	96.9 J	96.9	96.9 J	96.9 J
Benzo(k)fluoranthene	pg/L	8	4	50	25.4 J	128 J	55.1	27.8 J	39.3 J
Chrysene	pg/L	8	8	100	94.5 J	902	268	194	260
Dibenz(a,h)anthracene	pg/L	8	0	0	--	--	--	--	--
Fluoranthene	pg/L	8	8	100	416	7480	1886	1110	1500
Fluorene	pg/L	8	8	100	414	4540	1337	983	1150
Indeno(1,2,3-cd)pyrene	pg/L	8	0	0	--	--	--	--	--
Naphthalene	pg/L	8	3	38	10100	10900	10400	10200	10200
Phenanthrene	pg/L	8	8	100	788	10800	2660	1720	1970
Pyrene	pg/L	8	8	100	432	6150	1659	990	1520
PCB Congeners									
2-Chlorobiphenyl (PCB 1)	pg/L	8	8	100	0.29	1.83	0.79	0.689	0.917
3-Chlorobiphenyl (PCB 2)	pg/L	8	8	100	0.132	0.357	0.21	0.184	0.262
4-Chlorobiphenyl (PCB 3)	pg/L	8	8	100	0.201	1.1	0.40	0.34	0.387
2,2'-Dichlorobiphenyl (PCB 4)	pg/L	8	8	100	2.67	87.2	27.7	9.19	81.4
2,3'-Dichlorobiphenyl (PCB 6)	pg/L	8	8	100	0.167	8.03	1.4	0.461	0.581
2,3-Dichlorobiphenyl (PCB 5)	pg/L	8	8	100	0.0174 J	0.907	0.14	0.0309	0.0493
2,4'-Dichlorobiphenyl (PCB 8)	pg/L	8	8	100	0.667	39	6.2	1.51	2.12
2,4-Dichlorobiphenyl (PCB 7)	pg/L	8	4	50	0.121	1.44	0.47	0.161	0.165
2,5-Dichlorobiphenyl (PCB 9)	pg/L	8	8	100	0.0555	2.52	0.44	0.135	0.207

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ANC04420
BZTO104(e)004420

Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,6-Dichlorobiphenyl (PCB 10)	pg/L	8	8	100	0.0802	4.71	1.4	0.364	4.46
3,3'-Dichlorobiphenyl (PCB 11)	pg/L	8	8	100	2.95	9.61	5.5	3.88	8.44
3,5-Dichlorobiphenyl (PCB 14)	pg/L	8	0	0	--	--	--	--	--
4,4'-Dichlorobiphenyl (PCB 15)	pg/L	8	8	100	0.384	17.9	3.2	1.2	1.43
2,2',3-Trichlorobiphenyl (PCB 16)	pg/L	8	8	100	0.435	21.7	3.7	1.05	1.56
2,2',4-Trichlorobiphenyl (PCB 17)	pg/L	8	8	100	0.708	20.9	8.5	2.79	18.6
2,2',6-Trichlorobiphenyl (PCB 19)	pg/L	8	8	100	2.07	139	39.0	8.51	127
2,3',4-Trichlorobiphenyl (PCB 25)	pg/L	8	8	100	0.124	3.62	1.1	0.444	1.65
2,3,4'-Trichlorobiphenyl (PCB 22)	pg/L	8	8	100	0.438	19.6	3.3	0.888	1.74
2,3',5'-Trichlorobiphenyl (PCB 34)	pg/L	8	8	100	0.0067 J	0.159	0.045	0.028	0.0523
2,3,5-Trichlorobiphenyl (PCB 23)	pg/L	8	5	63	0.0053 J	0.0795	0.027	0.0213 J	0.0214 J
2,3,6-Trichlorobiphenyl (PCB 24)	pg/L	8	6	75	0.0165 J	0.799	0.17	0.0458	0.0603
2,3',6-Trichlorobiphenyl (PCB 27)	pg/L	8	8	100	0.183	10.9	3.5	0.929	9.87
2,4',5-Trichlorobiphenyl (PCB 31)	pg/L	8	8	100	1.19	43.2	7.8	2.51	4.3
2,4',6-Trichlorobiphenyl (PCB 32)	pg/L	8	8	100	0.389	16	4.4	1.83	5.99
3,3',4-Trichlorobiphenyl (PCB 35)	pg/L	8	8	100	0.0373	0.647	0.14	0.0729	0.0976
3,3',5-Trichlorobiphenyl (PCB 36)	pg/L	8	5	63	0.006 J	0.0153 J	0.012	0.0136 J	0.0149 J
3,4,4'-Trichlorobiphenyl (PCB 37)	pg/L	8	8	100	0.251	9.56	1.7	0.562	1.14
3,4,5-Trichlorobiphenyl (PCB 38)	pg/L	8	6	75	0.0112 J	0.0606	0.033	0.0221 J	0.0492
3,4',5-Trichlorobiphenyl (PCB 39)	pg/L	8	8	100	0.0185 J	0.225	0.061	0.0381	0.0598
2,2',3,4'-Tetrachlorobiphenyl (PCB 42)	pg/L	8	8	100	0.267	6.74	1.8	0.989	2.03
2,2',3,5-Tetrachlorobiphenyl (PCB 43)	pg/L	8	7	88	0.119	1.59	0.71	0.361	1.31
2,2',3,6'-Tetrachlorobiphenyl (PCB 46)	pg/L	8	8	100	0.0857	2.51	0.84	0.511	1.24
2,2',4,5-Tetrachlorobiphenyl (PCB 48)	pg/L	8	8	100	0.182	5.74	1.3	0.721	1.27
2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	pg/L	8	8	100	2.05	26.7	12.1	9.37	18.3
2,2',6,6'-Tetrachlorobiphenyl (PCB 54)	pg/L	8	8	100	0.2	17.6	4.8	0.543	15.7
2,3,3',4'-Tetrachlorobiphenyl (PCB 56)	pg/L	8	8	100	0.355	6.22	1.7	0.953	2.6
2,3,3',4-Tetrachlorobiphenyl (PCB 55)	pg/L	8	5	63	0.0234 J	0.263	0.084	0.0314	0.0705
2,3,3',5'-Tetrachlorobiphenyl (PCB 58)	pg/L	8	4	50	0.0111 J	0.0397	0.022	0.0174 J	0.0217 J
2,3,3',5-Tetrachlorobiphenyl (PCB 57)	pg/L	8	7	88	0.0124 J	0.367	0.13	0.0563	0.326
2,3,4,4'-Tetrachlorobiphenyl (PCB 60)	pg/L	8	8	100	0.181	3.09	0.79	0.397	1.11
2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	pg/L	8	8	100	0.749	11.4	3.4	2.17	4.82
2,3',4,5'-Tetrachlorobiphenyl (PCB 68)	pg/L	8	8	100	0.0229 J	0.423	0.14	0.0506	0.383
2,3',4,5-Tetrachlorobiphenyl (PCB 67)	pg/L	8	7	88	0.0741	0.506	0.22	0.13	0.337
2,3,4',5-Tetrachlorobiphenyl (PCB 63)	pg/L	8	8	100	0.0375	0.588	0.20	0.134	0.201
2,3,4',6-Tetrachlorobiphenyl (PCB 64)	pg/L	8	8	100	0.487	10.4	2.6	1.41	3.24
2,3',5,5'-Tetrachlorobiphenyl (PCB 72)	pg/L	8	5	63	0.0884	0.323	0.20	0.178	0.296
2,3',5',6-Tetrachlorobiphenyl (PCB 73)	pg/L	8	8	100	0.0219 J	2.4	0.66	0.0987	2.13
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	pg/L	8	8	100	0.0575	0.745	0.23	0.15	0.313
3,3',4,5'-Tetrachlorobiphenyl (PCB 79)	pg/L	8	7	88	0.0175 J	0.1	0.071	0.0732	0.0964
3,3',4,5-Tetrachlorobiphenyl (PCB 78)	pg/L	8	0	0	--	--	--	--	--

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ANC04421
BZTO104(e)004421

Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
3,3',5,5'-Tetrachlorobiphenyl (PCB 80)	pg/L	8	0	0	--	--	--	--	--
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	pg/L	8	1	13	0.0363	0.0363	0.036	0.0363	0.0363
2,2',3,3',4-Pentachlorobiphenyl (PCB 82)	pg/L	8	8	100	0.14	0.951	0.43	0.327	0.55
2,2',3,3',6-Pentachlorobiphenyl (PCB 84)	pg/L	8	8	100	0.406	4.08	2.1	1.62	3.6
2,2',3,4,6'-Pentachlorobiphenyl (PCB 89)	pg/L	8	8	100	0.0168 J	0.18	0.077	0.059	0.0976
2,2',3,5,5'-Pentachlorobiphenyl (PCB 92)	pg/L	8	8	100	0.291	8.69	3.0	1.77	7.51
2,2',3,5,6'-Pentachlorobiphenyl (PCB 94)	pg/L	8	8	100	0.0273	3.35	0.92	0.206	2.84
2,2',3,6,6'-Pentachlorobiphenyl (PCB 96)	pg/L	8	8	100	0.03	1.22	0.39	0.175	1.03
2,2',4,5',6-Pentachlorobiphenyl (PCB 103)	pg/L	8	8	100	0.0694	2.12	0.70	0.286	1.82
2,2',4,6,6'-Pentachlorobiphenyl (PCB 104)	pg/L	8	8	100	0.0099 J	0.653	0.19	0.0401	0.584
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	pg/L	8	8	100	0.296	1.83	0.84	0.652	1.02
2,3,3',4',5'-Pentachlorobiphenyl (PCB 122)	pg/L	8	7	88	0.0226 J	0.0616	0.032	0.0265	0.0352
2,3,3',4,5-Pentachlorobiphenyl (PCB 106)	pg/L	8	2	25	0.0374	0.049	0.043	0.0374	0.0374
2,3,3',4,6-Pentachlorobiphenyl (PCB 109)	pg/L	8	8	100	0.0683	0.423	0.26	0.226	0.337
2,3,3',5,5'-Pentachlorobiphenyl (PCB 111)	pg/L	8	6	75	0.0109 J	0.0685	0.030	0.0144 J	0.0572
2,3,3',5,6-Pentachlorobiphenyl (PCB 112)	pg/L	8	6	75	0.0256	2.26	0.75	0.099	1.82
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	pg/L	8	7	88	0.0392	0.11	0.068	0.0638	0.0818
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	pg/L	8	6	75	0.0407	0.119	0.063	0.0517	0.0611
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	pg/L	8	8	100	0.8	4.26	2.6	2.45	3.62
2,3',4,5,5'-Pentachlorobiphenyl (PCB 120)	pg/L	8	8	100	0.0066 J	0.116	0.047	0.0308	0.0923
2,3',4,5',6-Pentachlorobiphenyl (PCB 121)	pg/L	8	8	100	0.0048 J	0.251	0.073	0.0166 J	0.222
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	pg/L	8	4	50	0.0089 J	0.0213 J	0.013	0.0097 J	0.013 J
3,3',4,5,5'-Pentachlorobiphenyl (PCB 127)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4,5'-Hexachlorobiphenyl (PCB 130)	pg/L	8	8	100	0.0542	0.646	0.30	0.254	0.52
2,2',3,3',4,6'-Hexachlorobiphenyl (PCB 132)	pg/L	8	8	100	0.318	5.54	2.2	1.9	4.18
2,2',3,3',4,6-Hexachlorobiphenyl (PCB 131)	pg/L	8	8	100	0.0124 J	0.148	0.062	0.0543	0.112
2,2',3,3',5,5'-Hexachlorobiphenyl (PCB 133)	pg/L	8	8	100	0.0218 J	0.778	0.26	0.153	0.61
2,2',3,3',6,6'-Hexachlorobiphenyl (PCB 136)	pg/L	8	8	100	0.187	5.68	1.9	1.18	4.46
2,2',3,4,4',5-Hexachlorobiphenyl (PCB 137)	pg/L	8	7	88	0.0598	0.168	0.11	0.115	0.159
2,2',3,4,5,5'-Hexachlorobiphenyl (PCB 141)	pg/L	8	8	100	0.152	4.64	1.6	1.03	3.6
2,2',3,4',5,5'-Hexachlorobiphenyl (PCB 146)	pg/L	8	8	100	0.167	4.07	1.5	1.18	3.21
2,2',3,4',5,6'-Hexachlorobiphenyl (PCB 148)	pg/L	8	7	88	0.0059 J	0.283	0.10	0.0478	0.24
2,2',3,4,5,6-Hexachlorobiphenyl (PCB 142)	pg/L	8	1	13	0.0089 J	0.0089 J	0.0089	0.0089 J	0.0089 J
2,2',3,4,5',6-Hexachlorobiphenyl (PCB 144)	pg/L	8	8	100	0.0502	1.27	0.47	0.33	1.03
2,2',3,4,6,6'-Hexachlorobiphenyl (PCB 145)	pg/L	8	3	38	0.0019 J	0.0155 J	0.010	0.014 J	0.014 J
2,2',3,4',6,6'-Hexachlorobiphenyl (PCB 150)	pg/L	8	8	100	0.0085 J	0.216	0.073	0.0311	0.172
2,2',3,5,6,6'-Hexachlorobiphenyl (PCB 152)	pg/L	8	7	88	0.0035 J	0.33	0.10	0.0266	0.265
2,2',4,4',6,6'-Hexachlorobiphenyl (PCB 155)	pg/L	8	7	88	0.0019 J	0.0489	0.017	0.0061 J	0.0415
2,3,3',4,4',6-Hexachlorobiphenyl (PCB 158)	pg/L	8	8	100	0.0779	1.33	0.54	0.446	1.03
2,3,3',4,5,5'-Hexachlorobiphenyl (PCB 159)	pg/L	8	7	88	0.02 J	0.249	0.094	0.0723	0.148
2,3,3',4',5,5'-Hexachlorobiphenyl (PCB 162)	pg/L	8	6	75	0.0051 J	0.0171 J	0.011	0.0095 J	0.0127 J

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ANC04422
BZTO104(e)004422

Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,3,3',4,5',6-Hexachlorobiphenyl (PCB 161)	pg/L	8	0	0	--	--	--	--	--
2,3,3',4',5',6-Hexachlorobiphenyl (PCB 164)	pg/L	8	8	100	0.0711	1.53	0.57	0.443	1.17
2,3,3',5,5',6-Hexachlorobiphenyl (PCB 165)	pg/L	8	5	63	0.0031 J	0.0775	0.034	0.0096 J	0.069
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	pg/L	8	7	88	0.0527	0.331	0.15	0.122	0.247
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	pg/L	8	8	100	0.111	3.15	0.99	0.668	1.82
2,2',3,3',4,5,5'-Heptachlorobiphenyl (PCB 172)	pg/L	8	8	100	0.0228 J	0.663	0.21	0.132	0.397
2,2',3,3',4,5',6'-Heptachlorobiphenyl (PCB 177)	pg/L	8	8	100	0.102	3.05	1.0	0.612	2.01
2,2',3,3',4,5',6-Heptachlorobiphenyl (PCB 175)	pg/L	8	8	100	0.0067 J	0.188	0.066	0.0438	0.139
2,2',3,3',4,5,6'-Heptachlorobiphenyl (PCB 174)	pg/L	8	8	100	0.184	5.8	1.8	1.07	3.28
2,2',3,3',4,6,6'-Heptachlorobiphenyl (PCB 176)	pg/L	8	7	88	0.0227 J	0.673	0.25	0.186	0.461
2,2',3,3',5,5',6-Heptachlorobiphenyl (PCB 178)	pg/L	8	8	100	0.0529	1.3	0.43	0.27	0.922
2,2',3,3',5,6,6'-Heptachlorobiphenyl (PCB 179)	pg/L	8	8	100	0.0982	2.94	0.94	0.571	1.98
2,2',3,4,4',5,6'-Heptachlorobiphenyl (PCB 182)	pg/L	8	7	88	0.0018 J	0.0318	0.012	0.0082 J	0.0217 J
2,2',3,4,4',5,6-Heptachlorobiphenyl (PCB 181)	pg/L	8	3	38	0.0109 J	0.0362	0.023	0.0206 J	0.0206 J
2,2',3,4,4',6,6'-Heptachlorobiphenyl (PCB 184)	pg/L	8	0	0	--	--	--	--	--
2,2',3,4',5,5',6-Heptachlorobiphenyl (PCB 187)	pg/L	8	8	100	0.255	6.25	2.1	1.41	4.33
2,2',3,4,5,6,6'-Heptachlorobiphenyl (PCB 186)	pg/L	8	0	0	--	--	--	--	--
2,2',3,4',5,6,6'-Heptachlorobiphenyl (PCB 188)	pg/L	8	5	63	0.0032 J	0.0259	0.012	0.0077 J	0.0169 J
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	pg/L	8	7	88	0.0036 J	0.0994	0.037	0.0316	0.0628
2,3,3',4,4',5,6-Heptachlorobiphenyl (PCB 190)	pg/L	8	8	100	0.0282	0.688	0.22	0.152	0.409
2,3,3',4,4',5',6-Heptachlorobiphenyl (PCB 191)	pg/L	8	8	100	0.005 J	0.152	0.048	0.033	0.0893
2,3,3',4,5,5',6-Heptachlorobiphenyl (PCB 192)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (PCB 194)	pg/L	8	7	88	0.0635	0.925	0.32	0.306	0.39
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (PCB 196)	pg/L	8	6	75	0.0529	0.546	0.23	0.194	0.264
2,2',3,3',4,4',5,6-Octachlorobiphenyl (PCB 195)	pg/L	8	8	100	0.0178 J	0.392	0.12	0.0714	0.185
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (PCB 201)	pg/L	8	6	75	0.0161 J	0.14	0.065	0.0622	0.0721
2,2',3,3',5,5',6,6'-Octachlorobiphenyl (PCB 202)	pg/L	8	7	88	0.02 J	0.235	0.10	0.105	0.129
2,2',3,4,4',5,5',6-Octachlorobiphenyl (PCB 203)	pg/L	8	6	75	0.0614	0.636	0.26	0.242	0.308
2,2',3,4,4',5,6,6'-Octachlorobiphenyl (PCB 204)	pg/L	8	0	0	--	--	--	--	--
2,3,3',4,4',5,5',6-Octachlorobiphenyl (PCB 205)	pg/L	8	6	75	0.0048 J	0.0498	0.020	0.0171 J	0.0212 J
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB 206)	pg/L	8	5	63	0.0667	0.245	0.13	0.106	0.162
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (PCB 207)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (PCB 208)	pg/L	8	1	13	0.0853	0.0853	0.085	0.0853	0.0853
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)	pg/L	8	8	100	0.017 J	0.156	0.045	0.0296	0.0459
PCB012 & 013	pg/L	8	8	100	0.0926	2.6	0.56	0.226	0.496
PCB018 & 030	pg/L	8	8	100	0.982	42.6	8.0	3.59	4.21
PCB020 & 028	pg/L	8	8	100	1.31	46.2	8.7	3.34	5.3
PCB021 & 033	pg/L	8	8	100	0.477	28.5	4.7	1.36	1.82
PCB026 & 029	pg/L	8	8	100	0.263	9.25	2.0	0.901	1.78
PCB040 & 041 & 071	pg/L	8	8	100	0.661	15.4	4.3	2.58	4.43

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BZTO104(e)004423 ANC04423

Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
PCB044 & 047 & 065	pg/L	8	8	100	1.55	45.7	18.4	8.03	42.4
PCB045 & 051	pg/L	8	8	100	0.425	20.6	7.1	2.35	18
PCB049 & 069	pg/L	8	8	100	0.975	14.8	7.6	4.74	13.9
PCB050 & 053	pg/L	8	8	100	0.568	20.9	7.2	2.55	18.1
PCB059 & 062 & 075	pg/L	8	8	100	0.104	3.31	1.4	0.654	2.99
PCB061 & 070 & 074 & 076	pg/L	8	8	100	1.65	21.1	6.4	4.2	7.72
PCB083 & 099	pg/L	8	8	100	0.705	8.46	4.0	3.34	7.02
PCB085 & 116 & 117	pg/L	8	8	100	0.215	1.24	0.78	0.736	1.08
PCB086 & 087 & 097 & 108 & 119 & 125	pg/L	8	7	88	0.883 J	5.58 J	3.6	4.18 J	5.02 J
PCB088 & 091	pg/L	8	8	100	0.29	5.12	2.1	1.48	4.28
PCB090 & 101 & 113	pg/L	8	8	100	1.45	20.5	9.1	6.97	17.1
PCB093 & 095 & 098 & 100 & 102	pg/L	8	8	100	1.54	34.3	13.0	9.25	30
PCB107 & 124	pg/L	8	8	100	0.0291 J	0.218	0.11	0.0984	0.127
PCB110 & 115	pg/L	8	8	100	1.54	8.06	5.6	4.96	8.02
PCB128 & 166	pg/L	8	8	100	0.107	0.825	0.43	0.403	0.602
PCB129 & 138 & 160 & 163	pg/L	8	8	100	0.871	17.2	7.1	5.37	16.3
PCB134 & 143	pg/L	8	8	100	0.0575	1.87	0.63	0.357	1.52
PCB135 & 151 & 154	pg/L	8	8	100	0.481	18	6.0	3.44	14.7
PCB139 & 140	pg/L	8	8	100	0.0158 J	0.224	0.10	0.0882	0.165
PCB147 & 149	pg/L	8	8	100	0.929	24.5	9.1	6.47	20.2
PCB153 & 168	pg/L	8	8	100	0.798	20.7	7.6	5.75	15.9
PCB156 & 157	pg/L	8	8	100	0.0561	0.701	0.30	0.256	0.483
PCB171 & 173	pg/L	8	7	88	0.0874	1.17	0.44	0.331	0.739
PCB180 & 193	pg/L	8	8	100	0.29	8.57	2.7	1.68	5.16
PCB183 & 185	pg/L	8	8	100	0.111	3.16	1.1	0.719	2.13
PCB197 & 200	pg/L	8	7	88	0.0191 J	0.21	0.08	0.0785	0.0967
PCB198 & 199	pg/L	8	5	63	0.304	1.07	0.55	0.445	0.551
Total polychlorinated biphenyl congeners	pg/L	8	8	100	42.7	720	335	162	639
PCB Homologs									
Monochlorobiphenyl	pg/L	8	8	100	0.623	3.29	1.4	1.27	1.53
Dichlorobiphenyl	pg/L	8	8	100	7.48	99.9	46.7	20.3	99.8
Trichlorobiphenyl	pg/L	8	8	100	8.91	275	96.9	30.1	192
Tetrachlorobiphenyl	pg/L	8	8	100	10.7	167	84.2	55.7	162
Pentachlorobiphenyl	pg/L	8	8	100	8.87	110	50.3	39.5	93.5
Hexachlorobiphenyl	pg/L	8	8	100	4.45	111	41.4	30.4	91.1
Heptachlorobiphenyl	pg/L	8	8	100	1.29	37.9	12.2	7.8	24
Octachlorobiphenyl	pg/L	8	8	100	0.266	4.21	1.4	0.977	2.02
Nonachlorobiphenyl	pg/L	8	3	38	0.169	0.369	0.26	0.235	0.235

ANC04424
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Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Organochlorine Pesticides									
2,4'-DDD	pg/L	8	8	100	1.69 J	1270	190	4.69 J	215
2,4'-DDE	pg/L	8	8	100	0.154 J	56.6	8.6	0.433 J	9.85
2,4'-DDT	pg/L	8	7	88	0.807 J	145	29.5	2.42 J	53.4
4,4'-DDD	pg/L	8	8	100	4.15 J	1290	212	12.6	324
4,4'-DDE	pg/L	8	8	100	4.98 J	292	52.8	13.4	60.9
4,4'-DDT	pg/L	8	8	100	1.45 J	402	68.0	3.88 J	118
Aldrin	pg/L	8	5	63	0.537 J	3.27 J	1.2	0.702 J	0.871 J
alpha-Endosulfan	pg/L	8	7	88	3.94 J	8.54	6.9	7.01	8.3
alpha-Hexachlorocyclohexane	pg/L	8	8	100	10.6 J	44.5	21.7	18.7	24.4
beta-Endosulfan	pg/L	8	2	25	20.1	24.1	22.1	20.1	20.1
beta-Hexachlorocyclohexane	pg/L	8	8	100	1.73 J	33.7	7.1	3.14 J	5.91 J
cis-Chlordane	pg/L	8	8	100	3.09 J	22.9	7.5	5.45 J	6.91 J
cis-Nonachlor	pg/L	8	8	100	0.617 J	2.87 J	1.3	1.11 J	1.42 J
delta-Hexachlorocyclohexane	pg/L	8	1	13	6.25	6.25	6.3	6.25	6.25
Dieldrin	pg/L	8	8	100	14.3	46.8	28.4	27.5	30.6
Endosulfan sulfate	pg/L	8	8	100	53.1	136	96.3	88.6	122
Endrin	pg/L	8	1	13	1.57 J	1.57 J	1.6	1.57 J	1.57 J
Endrin aldehyde	pg/L	8	0	0	--	--	--	--	--
Endrin ketone	pg/L	8	7	88	0.339 J	2.33 J	0.79	0.551 J	0.756 J
gamma-Hexachlorocyclohexane	pg/L	8	8	100	11.8 J	51.4	25.0	22.3	26.8
Heptachlor	pg/L	8	5	63	0.13 J	5.64 J	1.3	0.22 J	0.305 J
Heptachlor epoxide	pg/L	8	8	100	2.11 J	4.56 J	3.8	3.59 J	4.49 J
Methoxychlor	pg/L	8	3	38	1.7 J	90.6	31.5	2.13 J	2.13 J
Oxychlordane	pg/L	8	3	38	0.832 J	1.2 J	1.1	1.17 J	1.17 J
trans-Chlordane	pg/L	8	8	100	2.21 J	19.4	5.8	3.89 J	4.99 J
trans-Nonachlor	pg/L	8	8	100	1.95 J	9.09 J	4.1	3.39 J	4.32 J
Hexachlorobenzene	pg/L	8	8	100	15.7	54	32.1	31.7	37.3
Hexachlorobutadiene	pg/L	8	6	75	0.28 J	104	25.0	1.55 J	42.1
Phthalate Esters									
Bis(2-ethylhexyl) phthalate	pg/L	8	0	0	--	--	--	--	--
Butylbenzyl phthalate	pg/L	8	1	13	7330	7330	7330	7330	7330
Dibutyl phthalate	pg/L	8	1	13	5980 J	5980 J	5980	5980 J	5980 J
Diethyl phthalate	pg/L	8	1	13	6650	6650	6650	6650	6650
Dimethyl phthalate	pg/L	8	1	13	4830	4830	4830	4830	4830
Di-n-octyl phthalate	pg/L	8	0	0	--	--	--	--	--

ANC04425
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Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
XAD Filter Samples									
PCB Aroclors									
Aroclor 1016	pg/L	8	0	0	--	--	--	--	--
Aroclor 1221	pg/L	8	0	0	--	--	--	--	--
Aroclor 1232	pg/L	8	0	0	--	--	--	--	--
Aroclor 1242	pg/L	8	5	63	5.58 NJ	570 NJ	120	8.5 NJ	8.6 NJ
Aroclor 1248	pg/L	8	3	38	108 NJ	484 NJ	297	300 NJ	300 NJ
Aroclor 1254	pg/L	8	5	63	23.8 NJ	302 NJ	101	53.8 NJ	90.8 NJ
Aroclor 1260	pg/L	8	8	100	44.1 NJ	2140 NJ	595	152 NJ	1580 NJ
Chlorinated Dioxin/Furan Homologs									
Tetrachlorodibenzofuran homologs	pg/L	6	6	100	0.0917	1.74	0.37	0.0978	0.104
Tetrachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.0703	0.204	0.10	0.0849	0.09
Pentachlorodibenzofuran homologs	pg/L	6	6	100	0.107	2.06	0.48	0.129	0.237
Pentachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.0413	0.29	0.12	0.0703	0.142
Hexachlorodibenzofuran homologs	pg/L	6	6	100	0.207	2.5	0.72	0.273	0.55
Hexachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.394	1.47	0.87	0.593	1.38
Heptachlorodibenzofuran homologs	pg/L	6	6	100	0.341	2.29	0.90	0.473	0.943
Heptachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	2.87	10.5	6.7	4.51	9.78
Octachlorodibenzofuran	pg/L	6	6	100	0.246	1.86	0.73	0.464	0.73
Octachlorodibenzo-p-dioxin	pg/L	6	6	100	13.3	55.1	29.2	17.2	36.4
Chlorinated Dioxin/Furans									
2,3,7,8-Tetrachlorodibenzofuran	pg/L	6	6	100	0.00752	0.453	0.085	0.00904	0.0161
2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/L	6	1	17	0.0133	0.0133	0.013	0.0133	0.0133
1,2,3,7,8-Pentachlorodibenzofuran	pg/L	6	6	100	0.00385 J	0.67	0.12	0.00747 J	0.0132 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/L	6	6	100	0.00545 J	0.0327	0.014	0.00739 J	0.0167 J
2,3,4,7,8-Pentachlorodibenzofuran	pg/L	6	5	83	0.00928 J	0.285	0.065	0.00961 J	0.00981 J
1,2,3,4,7,8-Hexachlorodibenzofuran	pg/L	6	6	100	0.0123 J	1.15	0.22	0.0287 J	0.0442
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/L	6	6	100	0.00917 J	0.0602	0.027	0.018 J	0.0333
1,2,3,6,7,8-Hexachlorodibenzofuran	pg/L	6	6	100	0.00815 J	0.311	0.062	0.0108 J	0.0177 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/L	6	6	100	0.0463	0.185	0.11	0.0705	0.172
1,2,3,7,8,9-Hexachlorodibenzofuran	pg/L	6	1	17	0.0229 J	0.0229 J	0.023	0.0229 J	0.0229 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/L	6	6	100	0.0256 J	0.161	0.073	0.0383	0.0989
2,3,4,6,7,8-Hexachlorodibenzofuran	pg/L	6	6	100	0.00546 J	0.0657	0.018	0.00717 J	0.0118 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/L	6	6	100	0.12	0.969	0.33	0.16	0.297
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/L	6	6	100	1.46	5.31	3.4	2.3	4.88
1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/L	6	6	100	0.0105 J	0.226	0.055	0.0153 J	0.0351

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ANC04426
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Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Polycyclic Aromatic Hydrocarbons									
2-Methylnaphthalene	pg/L	8	0	0	--	--	--	--	--
Acenaphthene	pg/L	8	1	13	219	219	219	219	219
Acenaphthylene	pg/L	8	1	13	331	331	331	331	331
Anthracene	pg/L	8	5	63	176	799	326	222	242
Benz(a)anthracene	pg/L	8	6	75	311	2780	855	436	707
Benzo(a)pyrene	pg/L	8	6	75	336	2890	900	384	852
Benzo(b+j)fluoranthene	pg/L	8	8	100	294	3210	868	452	1250
Benzo(g,h,i)perylene	pg/L	8	8	100	330	2940	797	449	872
Benzo(k)fluoranthene	pg/L	8	8	100	193	2430	618	291	846
Chrysene	pg/L	8	7	88	435	4260	1227	665	1300
Dibenz(a,h)anthracene	pg/L	8	2	25	170 J	509	340	170 J	170 J
Fluoranthene	pg/L	8	8	100	666	6120	1679	931	1510
Fluorene	pg/L	8	5	63	83.5 J	321	144	107 J	120 J
Indeno(1,2,3-cd)pyrene	pg/L	8	8	100	240	2430	625	307	767
Naphthalene	pg/L	8	0	0	--	--	--	--	--
Phenanthrene	pg/L	8	1	13	2420	2420	2420	2420	2420
Pyrene	pg/L	8	7	88	1010	6410	2049	1310	1790
PCB Congeners									
2-Chlorobiphenyl (PCB 1)	pg/L	8	7	88	0.046	0.222	0.12	0.109	0.169
3-Chlorobiphenyl (PCB 2)	pg/L	8	8	100	0.0532	0.131	0.078	0.059	0.0956
4-Chlorobiphenyl (PCB 3)	pg/L	8	8	100	0.0639	0.394	0.18	0.0854	0.301
2,2'-Dichlorobiphenyl (PCB 4)	pg/L	8	8	100	0.199	13.8	3.6	0.504	10.5
2,3'-Dichlorobiphenyl (PCB 6)	pg/L	8	8	100	0.0404	2.18	0.35	0.0714	0.143
2,3-Dichlorobiphenyl (PCB 5)	pg/L	8	1	13	0.155	0.155	0.16	0.155	0.155
2,4'-Dichlorobiphenyl (PCB 8)	pg/L	8	8	100	0.175	11.1	1.6	0.275	0.333
2,4-Dichlorobiphenyl (PCB 7)	pg/L	8	7	88	0.0082 J	0.358	0.071	0.0178 J	0.0467
2,5-Dichlorobiphenyl (PCB 9)	pg/L	8	8	100	0.013 J	0.607	0.10	0.0188 J	0.0417
2,6-Dichlorobiphenyl (PCB 10)	pg/L	8	8	100	0.009 J	0.694	0.19	0.0235 J	0.627
3,3'-Dichlorobiphenyl (PCB 11)	pg/L	8	8	100	1.66	4.18	2.4	2.26	2.43
3,5-Dichlorobiphenyl (PCB 14)	pg/L	8	1	13	0.0076 J	0.0076 J	0.0076	0.0076 J	0.0076 J
4,4'-Dichlorobiphenyl (PCB 15)	pg/L	8	8	100	0.317	15	2.6	0.542	1.86
2,2',3-Trichlorobiphenyl (PCB 16)	pg/L	8	8	100	0.0815	14.3	1.9	0.157	0.38
2,2',4-Trichlorobiphenyl (PCB 17)	pg/L	8	8	100	0.255	17	4.0	0.487	8.14
2,2',6-Trichlorobiphenyl (PCB 19)	pg/L	8	8	100	0.299	40.8	9.5	0.943	28.7
2,3',4-Trichlorobiphenyl (PCB 25)	pg/L	8	8	100	0.0872	5.5	1.0	0.148	1.3
2,3,4'-Trichlorobiphenyl (PCB 22)	pg/L	8	8	100	0.198	28.8	3.9	0.286	0.775
2,3',5'-Trichlorobiphenyl (PCB 34)	pg/L	8	8	100	0.004 J	0.237	0.041	0.0075 J	0.0329
2,3,5-Trichlorobiphenyl (PCB 23)	pg/L	8	5	63	0.002 J	0.0883	0.022	0.006 J	0.0123 J
2,3,6-Trichlorobiphenyl (PCB 24)	pg/L	8	4	50	0.0033 J	0.457	0.12	0.0051 J	0.0057 J

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ANC04427

Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,3',6-Trichlorobiphenyl (PCB 27)	pg/L	8	8	100	0.0763	4.78	1.4	0.125	3.38
2,4',5-Trichlorobiphenyl (PCB 31)	pg/L	8	8	100	0.611	67.9	9.4	0.882	2.11
2,4',6-Trichlorobiphenyl (PCB 32)	pg/L	8	8	100	0.125	12.3	2.2	0.265	2.3
3,3',4-Trichlorobiphenyl (PCB 35)	pg/L	8	8	100	0.0364	1.57	0.24	0.0462	0.0642
3,3',5-Trichlorobiphenyl (PCB 36)	pg/L	8	7	88	0.0043 J	0.0112 J	0.0070	0.0065 J	0.0083 J
3,4,4'-Trichlorobiphenyl (PCB 37)	pg/L	8	8	100	0.357	26.1	3.7	0.479	1.12
3,4,5-Trichlorobiphenyl (PCB 38)	pg/L	8	8	100	0.0047 J	0.0712	0.026	0.006 J	0.0606
3,4',5-Trichlorobiphenyl (PCB 39)	pg/L	8	8	100	0.0087 J	0.526	0.084	0.0184 J	0.0348 J
2,2',3,4'-Tetrachlorobiphenyl (PCB 42)	pg/L	8	8	100	0.214	18.8	2.9	0.445	1.69
2,2',3,5-Tetrachlorobiphenyl (PCB 43)	pg/L	8	8	100	0.0281	2.96	0.73	0.0725	1.51
2,2',3,6'-Tetrachlorobiphenyl (PCB 46)	pg/L	8	8	100	0.0495	4.21	0.77	0.112	0.764
2,2',4,5-Tetrachlorobiphenyl (PCB 48)	pg/L	8	8	100	0.131	17.2	2.5	0.2	0.899
2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	pg/L	8	8	100	1.61	56.2	12.4	4.25	15.5
2,2',6,6'-Tetrachlorobiphenyl (PCB 54)	pg/L	8	8	100	0.0608	11.5	2.5	0.183	7.37
2,3,3',4'-Tetrachlorobiphenyl (PCB 56)	pg/L	8	8	100	0.467	21.5	3.6	0.592	3.4
2,3,3',4-Tetrachlorobiphenyl (PCB 55)	pg/L	8	6	75	0.0113 J	1.07	0.20	0.019 J	0.0729
2,3,3',5'-Tetrachlorobiphenyl (PCB 58)	pg/L	8	2	25	0.0205 J	0.102	0.061	0.0205 J	0.0205 J
2,3,3',5-Tetrachlorobiphenyl (PCB 57)	pg/L	8	6	75	0.0117 J	0.63	0.25	0.0261	0.43
2,3,4,4'-Tetrachlorobiphenyl (PCB 60)	pg/L	8	8	100	0.203	13	2.0	0.265	1.63
2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	pg/L	8	8	100	1.43	47.2	8.2	1.76	7.42
2,3',4,5'-Tetrachlorobiphenyl (PCB 68)	pg/L	8	8	100	0.0201 J	0.774	0.20	0.0417	0.502
2,3',4,5-Tetrachlorobiphenyl (PCB 67)	pg/L	8	8	100	0.0332	2.24	0.48	0.0583	0.741
2,3,4',5-Tetrachlorobiphenyl (PCB 63)	pg/L	8	8	100	0.0449	2.35	0.41	0.0865	0.29
2,3,4',6-Tetrachlorobiphenyl (PCB 64)	pg/L	8	8	100	0.43	29.4	4.4	0.512	2.85
2,3',5,5'-Tetrachlorobiphenyl (PCB 72)	pg/L	8	7	88	0.0343	0.357	0.16	0.0838	0.276
2,3',5',6-Tetrachlorobiphenyl (PCB 73)	pg/L	8	6	75	0.0226 J	2.47	0.71	0.0567	1.57
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	pg/L	8	8	100	0.169	4.34	0.81	0.215	0.824
3,3',4,5'-Tetrachlorobiphenyl (PCB 79)	pg/L	8	8	100	0.0303	0.252	0.12	0.0772	0.223
3,3',4,5-Tetrachlorobiphenyl (PCB 78)	pg/L	8	0	0	--	--	--	--	--
3,3',5,5'-Tetrachlorobiphenyl (PCB 80)	pg/L	8	0	0	--	--	--	--	--
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	pg/L	8	2	25	0.0358 J	0.212	0.12	0.0358 J	0.0358 J
2,2',3,3',4-Pentachlorobiphenyl (PCB 82)	pg/L	8	8	100	0.259	5.05	1.1	0.502	1.07
2,2',3,3',6-Pentachlorobiphenyl (PCB 84)	pg/L	8	8	100	0.576	9.64	3.5	1.93	6.74
2,2',3,4,6'-Pentachlorobiphenyl (PCB 89)	pg/L	8	7	88	0.0233 J	0.789	0.18	0.108	0.156
2,2',3,5,5'-Pentachlorobiphenyl (PCB 92)	pg/L	8	8	100	0.651	22	6.3	1.93	15.8
2,2',3,5,6'-Pentachlorobiphenyl (PCB 94)	pg/L	8	8	100	0.0412	6.17	1.4	0.174	4.01
2,2',3,6,6'-Pentachlorobiphenyl (PCB 96)	pg/L	8	8	100	0.0475	1.91	0.52	0.0948	1.24
2,2',4,5',6-Pentachlorobiphenyl (PCB 103)	pg/L	8	8	100	0.114	4.65	1.1	0.245	3.11
2,2',4,6,6'-Pentachlorobiphenyl (PCB 104)	pg/L	8	7	88	0.0106 J	1.34	0.34	0.0323	0.897
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	pg/L	8	8	100	0.835	12	3.0	1.49	3
2,3,3',4',5'-Pentachlorobiphenyl (PCB 122)	pg/L	8	8	100	0.0244	0.407	0.10	0.0492	0.101

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ANC04428
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Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,3,3',4,5-Pentachlorobiphenyl (PCB 106)	pg/L	8	2	25	0.141	0.189	0.17	0.141	0.141
2,3,3',4,6-Pentachlorobiphenyl (PCB 109)	pg/L	8	8	100	0.169	1.71	0.71	0.532	1.16
2,3,3',5,5'-Pentachlorobiphenyl (PCB 111)	pg/L	8	7	88	0.0052 J	0.252	0.073	0.0155 J	0.195
2,3,3',5,6-Pentachlorobiphenyl (PCB 112)	pg/L	8	4	50	0.0542	5.81	2.5	0.161	4.17
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	pg/L	8	8	100	0.0417	0.601	0.16	0.0998	0.135
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	pg/L	8	8	100	0.0453	0.772	0.18	0.0819	0.172
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	pg/L	8	8	100	2.03	23.2	8.3	6.63	10.2
2,3',4,5,5'-Pentachlorobiphenyl (PCB 120)	pg/L	8	8	100	0.0207 J	0.569	0.16	0.0436	0.393
2,3',4,5',6-Pentachlorobiphenyl (PCB 121)	pg/L	8	8	100	0.0069 J	0.647	0.15	0.014 J	0.469
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	pg/L	8	8	100	0.0106 J	0.133	0.041	0.0252	0.0412
3,3',4,5,5'-Pentachlorobiphenyl (PCB 127)	pg/L	8	7	88	0.0052 J	0.077	0.031	0.02 J	0.0485
2,2',3,3',4,5'-Hexachlorobiphenyl (PCB 130)	pg/L	8	8	100	0.286	6.25	2.1	1.06	4.65
2,2',3,3',4,6'-Hexachlorobiphenyl (PCB 132)	pg/L	8	8	100	1.7	40	13.7	6.46	30.6
2,2',3,3',4,6-Hexachlorobiphenyl (PCB 131)	pg/L	8	8	100	0.0459	0.939	0.33	0.156	0.693
2,2',3,3',5,5'-Hexachlorobiphenyl (PCB 133)	pg/L	8	8	100	0.137	6.21	1.6	0.457	4.3
2,2',3,3',6,6'-Hexachlorobiphenyl (PCB 136)	pg/L	8	8	100	0.807	28.1	8.4	2.89	21.1
2,2',3,4,4',5-Hexachlorobiphenyl (PCB 137)	pg/L	8	8	100	0.129	2.13	0.77	0.37	1.28
2,2',3,4,5,5'-Hexachlorobiphenyl (PCB 141)	pg/L	8	8	100	1.18	47	14.1	3.81	34.6
2,2',3,4',5,5'-Hexachlorobiphenyl (PCB 146)	pg/L	8	8	100	1.08	43	11.9	4.3	30.4
2,2',3,4',5,6'-Hexachlorobiphenyl (PCB 148)	pg/L	8	8	100	0.0378	1.88	0.45	0.072	1.29
2,2',3,4,5,6-Hexachlorobiphenyl (PCB 142)	pg/L	8	2	25	0.0224 J	0.0398 J	0.031	0.0224 J	0.0224 J
2,2',3,4,5',6-Hexachlorobiphenyl (PCB 144)	pg/L	8	8	100	0.248	8.95	2.8	0.846	6.72
2,2',3,4,6,6'-Hexachlorobiphenyl (PCB 145)	pg/L	8	5	63	0.0049 J	0.0798	0.030	0.0058 J	0.0543
2,2',3,4',6,6'-Hexachlorobiphenyl (PCB 150)	pg/L	8	8	100	0.0323	1.38	0.33	0.0606	0.884
2,2',3,5,6,6'-Hexachlorobiphenyl (PCB 152)	pg/L	8	8	100	0.0115 J	1.77	0.39	0.0332	1.13
2,2',4,4',6,6'-Hexachlorobiphenyl (PCB 155)	pg/L	8	7	88	0.0052 J	0.345	0.092	0.0104 J	0.253
2,3,3',4,4',6-Hexachlorobiphenyl (PCB 158)	pg/L	8	8	100	0.457	13.6	4.3	1.68	9.91
2,3,3',4,5,5'-Hexachlorobiphenyl (PCB 159)	pg/L	8	8	100	0.107	5.1	1.4	0.345	3.81
2,3,3',4',5,5'-Hexachlorobiphenyl (PCB 162)	pg/L	8	8	100	0.0104 J	0.153	0.062	0.0374	0.121
2,3,3',4,5',6-Hexachlorobiphenyl (PCB 161)	pg/L	8	0	0	--	--	--	--	--
2,3,3',4',5',6-Hexachlorobiphenyl (PCB 164)	pg/L	8	8	100	0.388	13.5	4.0	1.49	9.74
2,3,3',5,5',6-Hexachlorobiphenyl (PCB 165)	pg/L	8	6	75	0.0118 J	0.615	0.19	0.0274	0.411
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	pg/L	8	8	100	0.162	4.54	1.5	0.626	3.35
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	pg/L	8	8	100	2.26	101	28.6	7.58	77.8
2,2',3,3',4,5,5'-Heptachlorobiphenyl (PCB 172)	pg/L	8	8	100	0.385	19.9	5.4	1.29	14.1
2,2',3,3',4,5',6'-Heptachlorobiphenyl (PCB 177)	pg/L	8	8	100	1.43	64	18.0	4.78	47.1
2,2',3,3',4,5',6-Heptachlorobiphenyl (PCB 175)	pg/L	8	8	100	0.0904	4.14	1.2	0.304	3.05
2,2',3,3',4,5,6'-Heptachlorobiphenyl (PCB 174)	pg/L	8	8	100	2.38	111	31.2	7.23	83.1
2,2',3,3',4,6,6'-Heptachlorobiphenyl (PCB 176)	pg/L	8	8	100	0.311	14.2	4.0	0.979	10.6
2,2',3,3',5,5',6-Heptachlorobiphenyl (PCB 178)	pg/L	8	8	100	0.536	26	7.0	1.69	18.7

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ANC04429
BZTO104(e)004429

Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,2',3,3',5,6,6'-Heptachlorobiphenyl (PCB 179)	pg/L	8	8	100	1.11	50.5	14.1	3.42	37.7
2,2',3,4,4',5,6'-Heptachlorobiphenyl (PCB 182)	pg/L	8	7	88	0.0153 J	0.646	0.19	0.0584	0.456
2,2',3,4,4',5,6-Heptachlorobiphenyl (PCB 181)	pg/L	8	8	100	0.0155 J	0.526	0.21	0.0646	0.34
2,2',3,4,4',6,6'-Heptachlorobiphenyl (PCB 184)	pg/L	8	7	88	0.0029 J	0.0527	0.018	0.0089 J	0.0356
2,2',3,4',5,5',6-Heptachlorobiphenyl (PCB 187)	pg/L	8	8	100	3.12	154	42.4	10.6	112
2,2',3,4,5,6,6'-Heptachlorobiphenyl (PCB 186)	pg/L	8	4	50	0.0106 J	0.0302	0.017	0.012 J	0.0167 J
2,2',3,4',5,6,6'-Heptachlorobiphenyl (PCB 188)	pg/L	8	8	100	0.0093 J	0.429	0.10	0.0195 J	0.286
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	pg/L	8	8	100	0.079	4.09	1.1	0.288	2.85
2,3,3',4,4',5,6-Heptachlorobiphenyl (PCB 190)	pg/L	8	8	100	0.457	20.7	5.9	1.61	15.8
2,3,3',4,4',5',6-Heptachlorobiphenyl (PCB 191)	pg/L	8	8	100	0.0815	4.07	1.1	0.306	3.03
2,3,3',4,5,5',6-Heptachlorobiphenyl (PCB 192)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (PCB 194)	pg/L	8	8	100	1.08	58.9	15.6	3.52	42.5
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (PCB 196)	pg/L	8	8	100	0.664	31.2	8.5	2.08	22.2
2,2',3,3',4,4',5,6-Octachlorobiphenyl (PCB 195)	pg/L	8	8	100	0.446	24.2	6.6	1.42	18.6
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (PCB 201)	pg/L	8	8	100	0.153	6.96	1.9	0.47	4.68
2,2',3,3',5,5',6,6'-Octachlorobiphenyl (PCB 202)	pg/L	8	8	100	0.244	9.17	2.6	0.737	6.49
2,2',3,4,4',5,5',6-Octachlorobiphenyl (PCB 203)	pg/L	8	8	100	0.837	35	9.8	2.63	24.7
2,2',3,4,4',5,6,6'-Octachlorobiphenyl (PCB 204)	pg/L	8	4	50	0.0085 J	0.0187 J	0.015	0.0158 J	0.016 J
2,3,3',4,4',5,5',6-Octachlorobiphenyl (PCB 205)	pg/L	8	8	100	0.0517	3.02	0.81	0.186	2.12
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB 206)	pg/L	8	8	100	0.529	11.2	4.1	1.57	7.86
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (PCB 207)	pg/L	8	8	100	0.0887	1.58	0.57	0.294	1.18
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (PCB 208)	pg/L	8	8	100	0.199	1.9	0.90	0.501	1.76
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)	pg/L	8	8	100	0.549	9.17	2.0	0.804	1.81
PCB012 & 013	pg/L	8	8	100	0.054	1.72	0.37	0.0857	0.474
PCB018 & 030	pg/L	8	8	100	0.221	30.3	4.3	0.42	1.19
PCB020 & 028	pg/L	8	7	88	0.854	80.6	12.7	1.36	1.9
PCB021 & 033	pg/L	8	8	100	0.246	42.6	5.8	0.44	1.01
PCB026 & 029	pg/L	8	8	100	0.148	12.8	2.0	0.243	1.15
PCB040 & 041 & 071	pg/L	8	8	100	0.512	41.5	6.7	1.11	3.53
PCB044 & 047 & 065	pg/L	8	8	100	1.5	60.7	21.9	4.07	59.7
PCB045 & 051	pg/L	8	8	100	0.328	16.4	5.5	0.951	12.6
PCB049 & 069	pg/L	8	8	100	0.987	36.1	9.1	2.43	16.4
PCB050 & 053	pg/L	8	8	100	0.448	14.6	4.5	0.822	9.82
PCB059 & 062 & 075	pg/L	8	8	100	0.0911	6.5	1.7	0.216	3.48
PCB061 & 070 & 074 & 076	pg/L	8	8	100	2.24	82.2	13.7	2.78	9.77
PCB083 & 099	pg/L	8	8	100	1.5	26.5	9.6	4.18	17.5
PCB085 & 116 & 117	pg/L	8	8	100	0.404	6.47	1.9	1.21	2.59
PCB086 & 087 & 097 & 108 & 119 & 125	pg/L	8	8	100	1.48	21.6 J	7.8	5.05	13 J
PCB088 & 091	pg/L	8	8	100	0.511	11.9	3.9	1.21	8.07
PCB090 & 101 & 113	pg/L	8	8	100	2.7	52	20.1	11.1	38.2
PCB093 & 095 & 098 & 100 & 102	pg/L	8	8	100	2.43	64.1	21.3	8.71	46.5

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ANC04430
BZTO104(e)004430

Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
PCB107 & 124	pg/L	8	8	100	0.0782	0.996	0.30	0.223	0.291
PCB110 & 115	pg/L	8	8	100	2.73	30.7	11.8	9.61	16
PCB128 & 166	pg/L	8	8	100	0.607	7.84	3.3	2.12	5.96
PCB129 & 138 & 160 & 163	pg/L	8	8	100	5.53	195	55.8	19.9	126
PCB134 & 143	pg/L	8	8	100	0.3	12.4	3.4	0.992	9.24
PCB135 & 151 & 154	pg/L	8	8	100	2.64	113	31.8	9.01	85.7
PCB139 & 140	pg/L	8	8	100	0.0678	1.64	0.51	0.163	1.1
PCB147 & 149	pg/L	8	8	100	4.74	169	50.4	17.9	122
PCB153 & 168	pg/L	8	8	100	5.36	206	60.1	20	150
PCB156 & 157	pg/L	8	8	100	0.433	10.2	3.5	1.59	7.73
PCB171 & 173	pg/L	8	8	100	0.678	31.1	8.7	2.34	22.8
PCB180 & 193	pg/L	8	8	100	5	250	68.8	17.3	182
PCB183 & 185	pg/L	8	8	100	1.58	78.1	21.8	5.27	57
PCB197 & 200	pg/L	8	8	100	0.221 J	10.1 J	2.7	0.591 J	6.55 J
PCB198 & 199	pg/L	8	8	100	1.35	55.3	15.6	4.1	39
Polychlorinated biphenyls	pg/L	8	8	100	92.9	2620	893	277	1890
PCB Homologs									
Monochlorobiphenyl	pg/L	8	8	100	0.123	0.712	0.36	0.216	0.565
Dichlorobiphenyl	pg/L	8	8	100	3.26	37.8	11.3	3.77	19.5
Trichlorobiphenyl	pg/L	8	8	100	3.82	346	61.2	7.27	64.5
Tetrachlorobiphenyl	pg/L	8	8	100	12.4	469	106	24.3	158
Pentachlorobiphenyl	pg/L	8	8	100	16.9	251	106	56.8	197
Hexachlorobiphenyl	pg/L	8	8	100	26.5	941	277	97	674
Heptachlorobiphenyl	pg/L	8	8	100	19.5	935	260	65.4	689
Octachlorobiphenyl	pg/L	8	8	100	5.04	234	64.1	15.7	167
Nonachlorobiphenyl	pg/L	8	8	100	0.816	14.7	5.5	2.37	10.4
Organochlorine Pesticides									
2,4'-DDD	pg/L	8	8	100	1.57 J	787	123	2.98 J	176
2,4'-DDE	pg/L	8	8	100	0.234 J	33.1	6.0	0.329 J	12.5
2,4'-DDT	pg/L	8	7	88	0.847 J	160	41.2	1.72 J	122
4,4'-DDD	pg/L	8	8	100	7.44	1820	296	10.4	480
4,4'-DDE	pg/L	8	8	100	10.7	266	59.9	12.4	139
4,4'-DDT	pg/L	8	8	100	0.884 J	1220	305	7.49	1180
Aldrin	pg/L	8	6	75	0.296 J	13	2.5	0.332 J	0.406 J
alpha-Endosulfan	pg/L	8	0	0	--	--	--	--	--
alpha-Hexachlorocyclohexane	pg/L	8	2	25	0.193 J	1.28 J	0.74	0.193 J	0.193 J
beta-Endosulfan	pg/L	8	0	0	--	--	--	--	--
beta-Hexachlorocyclohexane	pg/L	8	1	13	1.04 J	1.04 J	1.0	1.04 J	1.04 J
cis-Chlordane	pg/L	8	8	100	1.09 J	61.6	8.9	1.32 J	2 J

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ANC04431
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Table 4-1a. November 2004 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
cis-Nonachlor	pg/L	8	8	100	0.43 J	12.9	2.2	0.621 J	0.899 J
delta-Hexachlorocyclohexane	pg/L	8	0	0	--	--	--	--	--
Dieldrin	pg/L	8	4	50	2 J	15.7	5.6	2.14 J	2.43 J
Endosulfan sulfate	pg/L	8	0	0	--	--	--	--	--
Endrin	pg/L	8	1	13	0.168 J	0.168 J	0.17	0.168 J	0.168 J
Endrin aldehyde	pg/L	8	0	0	--	--	--	--	--
Endrin ketone	pg/L	8	0	0	--	--	--	--	--
gamma-Hexachlorocyclohexane	pg/L	8	2	25	0.258 J	0.862 J	0.56	0.258 J	0.258 J
Heptachlor	pg/L	8	2	25	0.135 J	2.24 J	1.2	0.135 J	0.135 J
Heptachlor epoxide	pg/L	8	5	63	0.121 J	0.702 J	0.25	0.144 J	0.146 J
Methoxychlor	pg/L	8	3	38	1.65 J	40	14.5	1.91 J	1.91 J
Oxychlordane	pg/L	8	1	13	0.443 J	0.443 J	0.44	0.443 J	0.443 J
trans-Chlordane	pg/L	8	8	100	1.11 J	70.1	10.1	1.37 J	2.39 J
trans-Nonachlor	pg/L	8	8	100	1.1 J	39.7	6.3	1.5 J	2.1 J
Hexachlorobenzene	pg/L	8	8	100	3.06 J	13	5.0	3.14 J	7.84
Hexachlorobutadiene	pg/L	8	2	25	3.07 J	5.75 J	4.4	3.07 J	3.07 J
Phthalate Esters									
Bis(2-ethylhexyl) phthalate	pg/L	8	1	13	33000	33000	33000	33000	33000
Butylbenzyl phthalate	pg/L	8	1	13	2170	2170	2170	2170	2170
Dibutyl phthalate	pg/L	8	0	0	--	--	--	--	--
Diethyl phthalate	pg/L	8	0	0	--	--	--	--	--
Dimethyl phthalate	pg/L	8	0	0	--	--	--	--	--
Di-n-octyl phthalate	pg/L	8	0	0	--	--	--	--	--

Notes:

[1] Number of samples includes normal environmental samples and field QC samples

ANC04432
BZTO104(e)004432

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Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Peristaltic Samples									
PCB Aroclors									
Aroclor 1016	ug/L	17	0	0	--	--	--	--	--
Aroclor 1221	ug/L	17	0	0	--	--	--	--	--
Aroclor 1232	ug/L	17	0	0	--	--	--	--	--
Aroclor 1242	ug/L	17	0	0	--	--	--	--	--
Aroclor 1248	ug/L	17	2	12	0.00458	0.00705 J	0.0058	0.00458	0.00458
Aroclor 1254	ug/L	17	2	12	0.00636	0.00657	0.0065	0.00636	0.00636
Aroclor 1260	ug/L	17	0	0	--	--	--	--	--
Aroclor 1262	ug/L	17	0	0	--	--	--	--	--
Aroclor 1268	ug/L	17	0	0	--	--	--	--	--
Butyltins									
Butyltin ion	ug/L	25	4	16	0.002 J	0.0036 J	0.0027	0.002 J	0.003 J
Dibutyltin ion	ug/L	25	4	16	0.00061 J	0.0019 J	0.0011	0.00084 J	0.001 J
Tributyltin ion	ug/L	25	2	8	0.00095 J	0.0023 J	0.0016	0.00095 J	0.00095 J
Tetrabutyltin	ug/L	25	0	0	--	--	--	--	--
Conventionals									
Dissolved organic carbon	mg/L	25	25	100	1.1	1.6	1.3	1.3	1.5
Hardness as $CaCO_3$	mg/L	25	25	100	29.2	48.4	33.3	32.2	37.1
Perchlorate	ug/L	2	2	100	1.3 J	3.4 J	2.4	1.3 J	1.3 J
Total dissolved solids	mg/L	25	25	100	58	105	78.0	76	96
Total organic carbon	mg/L	25	25	100	1.4	2.1	1.8	1.7	2
Total suspended solids	mg/L	25	14	56	5	15	7.7	6	11
Chlorinated Herbicides									
2,4,5-T	ug/L	25	0	0	--	--	--	--	--
2,4-D	ug/L	25	0	0	--	--	--	--	--
2,4-DB	ug/L	25	0	0	--	--	--	--	--
Dalapon	ug/L	25	0	0	--	--	--	--	--
Dicamba	ug/L	25	0	0	--	--	--	--	--
Dichloroprop	ug/L	25	0	0	--	--	--	--	--
Dinoseb	ug/L	25	0	0	--	--	--	--	--
MCPA	ug/L	25	0	0	--	--	--	--	--
MCPP	ug/L	25	0	0	--	--	--	--	--
Silvex	ug/L	25	0	0	--	--	--	--	--
Total Metals									
Aluminum	ug/L	25	25	100	41	647	158	142	247
Antimony	ug/L	25	17	68	0.03 J	0.08	0.042	0.04 J	0.08
Arsenic	ug/L	25	25	100	0.362	0.557	0.44	0.435	0.52
Cadmium	ug/L	25	3	12	0.02	0.05	0.033	0.03	0.03

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ANC04433
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Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Chromium hexavalent	mg/L	2	0	0	--	--	--	--	--
Chromium	ug/L	25	21	84	0.21	0.91	0.41	0.38	0.61
Copper	ug/L	25	25	100	0.82	2.09	1.1	0.99	1.48
Lead	ug/L	25	25	100	0.077	1.12	0.19	0.126	0.369
Mercury	ug/L	25	0	0	--	--	--	--	--
Nickel	ug/L	25	18	72	0.9	1.54	1.2	1.17	1.45
Selenium	ug/L	25	22	88	0.3 J	0.9 J	0.54	0.5 J	0.8 J
Silver	ug/L	25	0	0	--	--	--	--	--
Zinc	ug/L	25	24	96	2	8.8	3.0	2.5	4.8
Dissolved Metals									
Aluminum	ug/L	25	24	96	2.1	42.8	4.8	2.7	5.4
Antimony	ug/L	25	14	56	0.03 J	0.06	0.040	0.04 J	0.04 J
Arsenic	ug/L	25	25	100	0.298	0.508	0.37	0.373	0.406
Cadmium	ug/L	25	5	20	0.02	0.03	0.022	0.02	0.02
Chromium	ug/L	25	18	72	0.1 J	0.33	0.19	0.19 J	0.29
Copper	ug/L	25	24	96	0.52	0.95	0.69	0.64	0.89
Lead	ug/L	25	23	92	0.009 J	0.036 J	0.018	0.015 J	0.034
Mercury	ug/L	25	0	0	--	--	--	--	--
Nickel	ug/L	25	18	72	0.78	1.12	0.98	0.97	1.11
Selenium	ug/L	25	24	96	0.2 J	1	0.49	0.5 J	0.8 J
Silver	ug/L	25	0	0	--	--	--	--	--
Zinc	ug/L	25	25	100	1.1	4.7	2.1	1.8	4.2
Polycyclic Aromatic Hydrocarbons									
2-Methylnaphthalene	ug/L	25	0	0	--	--	--	--	--
Acenaphthene	ug/L	25	0	0	--	--	--	--	--
Acenaphthylene	ug/L	25	7	28	0.0023 J	0.0069 J	0.0047	0.0049 J	0.005 J
Anthracene	ug/L	25	4	16	0.0011 J	0.0038 J	0.0025	0.0018 J	0.0034 J
Benz(a)anthracene	ug/L	25	1	4	0.0028 J	0.0028 J	0.0028	0.0028 J	0.0028 J
Benzo(a)pyrene	ug/L	25	1	4	0.0024 J	0.0024 J	0.0024	0.0024 J	0.0024 J
Benzo(b)fluoranthene	ug/L	25	0	0	--	--	--	--	--
Benzo(g,h,i)perylene	ug/L	25	1	4	0.01 J	0.01 J	0.010	0.01 J	0.01 J
Benzo(k)fluoranthene	ug/L	25	1	4	0.0017 J	0.0017 J	0.0017	0.0017 J	0.0017 J
Chrysene	ug/L	25	3	12	0.0028 J	0.0034 J	0.0030	0.0029 J	0.0029 J
Dibenz(a,h)anthracene	ug/L	25	2	8	0.0044 J	0.0072 J	0.0058	0.0044 J	0.0044 J
Fluoranthene	ug/L	25	4	16	0.0026 J	0.016 J	0.0094	0.0069 J	0.012 J
Fluorene	ug/L	25	0	0	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L	25	2	8	0.0055 J	0.0094 J	0.0075	0.0055 J	0.0055 J
Naphthalene	ug/L	25	2	8	0.0065 J	0.0068 J	0.0067	0.0065 J	0.0065 J
Phenanthrene	ug/L	25	0	0	--	--	--	--	--
Pyrene	ug/L	25	7	28	0.0031 J	0.013 J	0.0088	0.0089 J	0.011 J

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ANC04434
BZTO104(e)004434

Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Organochlorine Pesticides									
2,4'-DDD	ug/L	17	0	0	--	--	--	--	--
2,4'-DDE	ug/L	17	0	0	--	--	--	--	--
2,4'-DDT	ug/L	17	1	5.9	0.0187 NJ	0.0187 NJ	0.019	0.0187 NJ	0.0187 NJ
4,4'-DDD	ug/L	17	0	0	--	--	--	--	--
4,4'-DDE	ug/L	17	0	0	--	--	--	--	--
4,4'-DDT	ug/L	17	1	5.9	0.00115	0.00115	0.0012	0.00115	0.00115
Aldrin	ug/L	17	0	0	--	--	--	--	--
alpha-Endosulfan	ug/L	17	0	0	--	--	--	--	--
alpha-Hexachlorocyclohexane	ug/L	17	0	0	--	--	--	--	--
beta-Endosulfan	ug/L	17	0	0	--	--	--	--	--
beta-Hexachlorocyclohexane	ug/L	17	0	0	--	--	--	--	--
cis-Chlordane	ug/L	17	0	0	--	--	--	--	--
cis-Nonachlor	ug/L	17	0	0	--	--	--	--	--
delta-Hexachlorocyclohexane	ug/L	17	0	0	--	--	--	--	--
Dieldrin	ug/L	17	0	0	--	--	--	--	--
Endosulfan sulfate	ug/L	17	0	0	--	--	--	--	--
Endrin	ug/L	8	0	0	--	--	--	--	--
Endrin aldehyde	ug/L	17	0	0	--	--	--	--	--
Endrin ketone	ug/L	17	0	0	--	--	--	--	--
gamma-Hexachlorocyclohexane	ug/L	17	1	5.9	0.00077	0.00077	0.00077	0.00077	0.00077
Heptachlor	ug/L	17	0	0	--	--	--	--	--
Heptachlor epoxide	ug/L	17	0	0	--	--	--	--	--
Methoxychlor	ug/L	17	1	5.9	0.0022 NJ	0.0022 NJ	0.0022	0.0022 NJ	0.0022 NJ
Mirex	ug/L	17	0	0	--	--	--	--	--
Oxychlordane	ug/L	17	0	0	--	--	--	--	--
Toxaphene	ug/L	17	0	0	--	--	--	--	--
trans-Chlordane	ug/L	17	0	0	--	--	--	--	--
trans-Nonachlor	ug/L	17	0	0	--	--	--	--	--
Phenols									
2,3,4,6-Tetrachlorophenol	ug/L	24	0	0	--	--	--	--	--
2,4,5-Trichlorophenol	ug/L	24	0	0	--	--	--	--	--
2,4,6-Trichlorophenol	ug/L	24	0	0	--	--	--	--	--
2,4-Dichlorophenol	ug/L	24	0	0	--	--	--	--	--
2,4-Dimethylphenol	ug/L	24	0	0	--	--	--	--	--
2,4-Dinitrophenol	ug/L	24	0	0	--	--	--	--	--
2-Chlorophenol	ug/L	24	0	0	--	--	--	--	--
2-Methylphenol	ug/L	24	0	0	--	--	--	--	--
2-Nitrophenol	ug/L	24	0	0	--	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	24	0	0	--	--	--	--	--
4-Chloro-3-methylphenol	ug/L	24	3	13	0.074 J	0.65	0.35	0.32 J	0.32 J
4-Methylphenol	ug/L	24	0	0	--	--	--	--	--

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ANC04435
BZTO104(e)004435

Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
4-Nitrophenol	ug/L	24	0	0	--	--	--	--	--
Pentachlorophenol	ug/L	24	0	0	--	--	--	--	--
Phenol	ug/L	24	1	4.2	0.17 J	0.17 J	0.17	0.17 J	0.17 J
Phthalate Esters									
Bis(2-ethylhexyl) phthalate	ug/L	24	0	0	--	--	--	--	--
Butylbenzyl phthalate	ug/L	24	0	0	--	--	--	--	--
Dibutyl phthalate	ug/L	24	0	0	--	--	--	--	--
Diethyl phthalate	ug/L	24	0	0	--	--	--	--	--
Dimethyl phthalate	ug/L	24	0	0	--	--	--	--	--
Di-n-octyl phthalate	ug/L	24	0	0	--	--	--	--	--
Semivolatile Organic Compounds									
1,2,4-Trichlorobenzene	ug/L	24	0	0	--	--	--	--	--
1,2-Dichlorobenzene	ug/L	24	0	0	--	--	--	--	--
1,3-Dichlorobenzene	ug/L	24	0	0	--	--	--	--	--
1,4-Dichlorobenzene	ug/L	24	0	0	--	--	--	--	--
2,4-Dinitrotoluene	ug/L	24	0	0	--	--	--	--	--
2,6-Dinitrotoluene	ug/L	24	0	0	--	--	--	--	--
2-Chloronaphthalene	ug/L	24	0	0	--	--	--	--	--
2-Nitroaniline	ug/L	24	0	0	--	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	23	0	0	--	--	--	--	--
3-Nitroaniline	ug/L	24	0	0	--	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	24	0	0	--	--	--	--	--
4-Chloroaniline	ug/L	24	0	0	--	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	24	0	0	--	--	--	--	--
4-Nitroaniline	ug/L	24	0	0	--	--	--	--	--
Aniline	ug/L	22	0	0	--	--	--	--	--
Azobenzene	ug/L	24	0	0	--	--	--	--	--
Benzoic acid	ug/L	22	0	0	--	--	--	--	--
Benzyl alcohol	ug/L	24	0	0	--	--	--	--	--
Bis(2-chloroethoxy) methane	ug/L	24	0	0	--	--	--	--	--
Bis(2-chloroethyl) ether	ug/L	24	0	0	--	--	--	--	--
Bis(2-chloroisopropyl) ether	ug/L	24	0	0	--	--	--	--	--
Carbazole	ug/L	24	0	0	--	--	--	--	--
Dibenzofuran	ug/L	25	0	0	--	--	--	--	--
Hexachlorobenzene	ug/L	25	2	8	0.0056	0.0070	0.0063	0.0056	0.0056
Hexachlorobutadiene	ug/L	24	0	0	--	--	--	--	--
Hexachlorocyclopentadiene	ug/L	23	0	0	--	--	--	--	--
Hexachloroethane	ug/L	25	0	0	--	--	--	--	--
Isophorone	ug/L	24	0	0	--	--	--	--	--
Nitrobenzene	ug/L	24	0	0	--	--	--	--	--
N-Nitrosodimethylamine	ug/L	24	0	0	--	--	--	--	--

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ANC04436
BZTO104(e)004436

Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
N-Nitrosodiphenylamine	ug/L	24	0	0	--	--	--	--	--
N-Nitrosodipropylamine	ug/L	24	0	0	--	--	--	--	--
XAD Column Samples									
PCB Aroclors									
Aroclor 1016	pg/L	8	0	0	--	--	--	--	--
Aroclor 1221	pg/L	8	0	0	--	--	--	--	--
Aroclor 1232	pg/L	8	0	0	--	--	--	--	--
Aroclor 1242	pg/L	8	5	63	32.4 NJ	72.3 NJ	54.4	56.9 NJ	63 NJ
Aroclor 1248	pg/L	8	3	38	161 NJ	1420 NJ	648	364 NJ	364 NJ
Aroclor 1254	pg/L	8	5	63	24.6 NJ	236 NJ	86.5	56.8 NJ	65.2 NJ
Aroclor 1260	pg/L	8	8	100	4.33 NJ	132 NJ	37.2	12.7 NJ	62.2 NJ
Chlorinated Dioxin/Furan Homologs									
Tetrachlorodibenzofuran homologs	pg/L	6	6	100	0.0598	0.335	0.14	0.0694	0.259
Tetrachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.0962	6.1	1.1	0.111	0.215
Pentachlorodibenzofuran homologs	pg/L	6	6	100	0.0238	0.188	0.069	0.0334	0.107
Pentachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.0325	0.783	0.17	0.0434	0.076
Hexachlorodibenzofuran homologs	pg/L	6	6	100	0.021	0.195	0.058	0.0253	0.059
Hexachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.0515	0.969	0.21	0.0558	0.0914
Heptachlorodibenzofuran homologs	pg/L	6	6	100	0.0167	0.162	0.046	0.0191	0.0377
Heptachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.14	1.9	0.46	0.165	0.249
Octachlorodibenzofuran	pg/L	6	6	100	0.00671 J	0.0109 J	0.0085	0.00807 J	0.00889 J
Octachlorodibenzo-p-dioxin	pg/L	6	6	100	0.276	2.32	0.68	0.324	0.487
Chlorinated Dioxin/Furans									
2,3,7,8-Tetrachlorodibenzofuran	pg/L	6	6	100	0.0026 J	0.0641	0.015	0.00391 J	0.00784
2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/L	6	0	0	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran	pg/L	6	6	100	0.00114 J	0.0472	0.010	0.00242 J	0.00495 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/L	6	4	67	0.0015 J	0.00968 J	0.0038	0.00175 J	0.00224 J
2,3,4,7,8-Pentachlorodibenzofuran	pg/L	6	1	17	0.0142 J	0.0142 J	0.014	0.0142 J	0.0142 J
1,2,3,4,7,8-Hexachlorodibenzofuran	pg/L	6	6	100	0.00268 J	0.0245 J	0.0080	0.00291 J	0.012 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/L	6	2	33	0.0036 J	0.0127 J	0.0082	0.0036 J	0.0036 J
1,2,3,6,7,8-Hexachlorodibenzofuran	pg/L	6	6	100	0.0021 J	0.026 J	0.0067	0.00225 J	0.00477 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/L	6	6	100	0.00541 J	0.0839	0.020	0.00654 J	0.00875 J
1,2,3,7,8,9-Hexachlorodibenzofuran	pg/L	6	1	17	0.004 J	0.004 J	0.0040	0.004 J	0.004 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/L	6	6	100	0.0036 J	0.0483	0.012	0.00402 J	0.00543 J
2,3,4,6,7,8-Hexachlorodibenzofuran	pg/L	6	6	100	0.000658 J	0.00192 J	0.0011	0.000815 J	0.00192 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/L	6	6	100	0.00481 J	0.0167 J	0.0091	0.00593 J	0.0154 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/L	6	6	100	0.0747	1.03	0.25	0.0829	0.123
1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/L	6	5	83	0.00301 J	0.0507	0.013	0.00415 J	0.00487 J

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ANC04437
BZTO104(e)004437

Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Polycyclic Aromatic Hydrocarbons									
2-Methylnaphthalene	pg/L	8	8	100	2590	24100	9185	6050	12300
Acenaphthene	pg/L	8	8	100	832	10500	2685	1730	2390
Acenaphthylene	pg/L	8	5	63	421	1410	1026	1000	1380
Anthracene	pg/L	8	3	38	423	860	590	486	486
Benz(a)anthracene	pg/L	8	8	100	75.3 J	461	181	164	178
Benzo(a)pyrene	pg/L	8	6	75	18.3 J	63.2 J	37.4	31.6 J	48.4 J
Benzo(b+j)fluoranthene	pg/L	8	8	100	23.7 J	177	59.8	45.3 J	65.7 J
Benzo(g,h,i)perylene	pg/L	8	1	13	31.3 J	31.3 J	31.3	31.3 J	31.3 J
Benzo(k)fluoranthene	pg/L	8	8	100	15.7 J	96.4 J	35.0	26.8 J	37.8 J
Chrysene	pg/L	8	8	100	133 J	904	348	303	374
Dibenz(a,h)anthracene	pg/L	8	0	0	--	--	--	--	--
Fluoranthene	pg/L	8	8	100	591	7430	2206	1680	1920
Fluorene	pg/L	8	8	100	972	4720	1830	1350	2020
Indeno(1,2,3-cd)pyrene	pg/L	8	1	13	62.1 J	62.1 J	62.1	62.1 J	62.1 J
Naphthalene	pg/L	8	5	63	6850	34500	18310	16900	18000
Phenanthrene	pg/L	8	8	100	1610	5970	2600	2030	3170
Pyrene	pg/L	8	8	100	708	5880	2259	1960	2720
PCB Congeners									
2-Chlorobiphenyl (PCB 1)	pg/L	8	8	100	0.481	2.44	0.95	0.814	1.02
3-Chlorobiphenyl (PCB 2)	pg/L	8	8	100	0.182	0.383	0.28	0.263	0.378
4-Chlorobiphenyl (PCB 3)	pg/L	8	8	100	0.264	0.781	0.44	0.396	0.492
2,2'-Dichlorobiphenyl (PCB 4)	pg/L	8	8	100	7.24	332	60.4	13.6	76.1
2,3'-Dichlorobiphenyl (PCB 6)	pg/L	8	8	100	0.373	1.95	0.71	0.467	0.77
2,3-Dichlorobiphenyl (PCB 5)	pg/L	8	8	100	0.0315	0.065	0.046	0.0422	0.0542
2,4'-Dichlorobiphenyl (PCB 8)	pg/L	8	8	100	1.45	3.8	2.05	1.66	2.35
2,4-Dichlorobiphenyl (PCB 7)	pg/L	8	2	25	0.25	0.637	0.44	0.25	0.25
2,5-Dichlorobiphenyl (PCB 9)	pg/L	8	8	100	0.123	0.737	0.24	0.164	0.254
2,6-Dichlorobiphenyl (PCB 10)	pg/L	8	8	100	0.259	17.5	3.1	0.457	4.79
3,3'-Dichlorobiphenyl (PCB 11)	pg/L	8	8	100	9.8	21	16.0	14.7	19.7
3,5-Dichlorobiphenyl (PCB 14)	pg/L	8	1	13	0.0167 J	0.0167 J	0.017	0.0167 J	0.0167 J
4,4'-Dichlorobiphenyl (PCB 15)	pg/L	8	8	100	1.09	3.95	2.1	1.8	2.46
2,2',3-Trichlorobiphenyl (PCB 16)	pg/L	8	8	100	1.16	3.55	2.2	1.88	2.93
2,2',4-Trichlorobiphenyl (PCB 17)	pg/L	8	8	100	2.14	85.5	16.2	5.13	17
2,2',6-Trichlorobiphenyl (PCB 19)	pg/L	8	8	100	4.16	564	95.6	12.8	130
2,3',4-Trichlorobiphenyl (PCB 25)	pg/L	8	8	100	0.339	6.57	1.7	0.818	1.94
2,3,4'-Trichlorobiphenyl (PCB 22)	pg/L	8	8	100	0.983	2.6	1.7	1.28	2.51
2,3',5'-Trichlorobiphenyl (PCB 34)	pg/L	8	8	100	0.0261	0.231	0.070	0.0442	0.0704
2,3,5-Trichlorobiphenyl (PCB 23)	pg/L	8	6	75	0.0098 J	0.102	0.030	0.0123 J	0.0299
2,3,6-Trichlorobiphenyl (PCB 24)	pg/L	8	6	75	0.0476	0.129	0.084	0.0756	0.0988
2,3',6-Trichlorobiphenyl (PCB 27)	pg/L	8	8	100	0.537	47.3	8.2	1.6	9.94

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ANC04438
BZTO104(e)004438

Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,4',5-Trichlorobiphenyl (PCB 31)	pg/L	8	8	100	2.86	7.93	5.3	5.15	6.72
2,4',6-Trichlorobiphenyl (PCB 32)	pg/L	8	8	100	1.23	25.2	6.3	3.56	6.48
3,3',4-Trichlorobiphenyl (PCB 35)	pg/L	8	8	100	0.102	0.207	0.14	0.13	0.181
3,3',5-Trichlorobiphenyl (PCB 36)	pg/L	8	7	88	0.0216 J	0.0695	0.045	0.0404	0.0685
3,4,4'-Trichlorobiphenyl (PCB 37)	pg/L	8	8	100	0.561	1.61	1.0	0.865	1.42
3,4,5-Trichlorobiphenyl (PCB 38)	pg/L	8	8	100	0.0179 J	0.286	0.071	0.0303	0.115
3,4',5-Trichlorobiphenyl (PCB 39)	pg/L	8	0	0	--	--	--	--	--
2,2',3,4'-Tetrachlorobiphenyl (PCB 42)	pg/L	8	8	100	0.745	3.36	2.1	1.68	2.84
2,2',3,5-Tetrachlorobiphenyl (PCB 43)	pg/L	8	8	100	0.126	5.78	1.2	0.415	1.69
2,2',3,6'-Tetrachlorobiphenyl (PCB 46)	pg/L	8	8	100	0.279	4.92	1.4	1	1.43
2,2',4,5-Tetrachlorobiphenyl (PCB 48)	pg/L	8	8	100	0.553	2.55	1.4	1.16	1.84
2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	pg/L	8	8	100	5.01	67.2	21.6	14.2	27.7
2,2',6,6'-Tetrachlorobiphenyl (PCB 54)	pg/L	8	8	100	0.325	62.5	10.7	1.86	14.8
2,3,3',4'-Tetrachlorobiphenyl (PCB 56)	pg/L	8	8	100	0.88	3.38	1.9	1.63	3.04
2,3,3',4-Tetrachlorobiphenyl (PCB 55)	pg/L	8	3	38	0.0401	0.0975	0.061	0.045	0.045
2,3,3',5'-Tetrachlorobiphenyl (PCB 58)	pg/L	8	4	50	0.023 J	0.119	0.051	0.0294	0.0319
2,3,3',5-Tetrachlorobiphenyl (PCB 57)	pg/L	8	7	88	0.0134 J	1.65	0.32	0.0692	0.356
2,3,4,4'-Tetrachlorobiphenyl (PCB 60)	pg/L	8	8	100	0.412	1.43	0.77	0.579	1.3
2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	pg/L	8	8	100	1.89	6.53	4.4	3.72	6.45
2,3',4,5'-Tetrachlorobiphenyl (PCB 68)	pg/L	8	3	38	0.41	1.47	0.82	0.581	0.581
2,3',4,5-Tetrachlorobiphenyl (PCB 67)	pg/L	8	8	100	0.0682	1.12	0.33	0.201	0.366
2,3,4',5-Tetrachlorobiphenyl (PCB 63)	pg/L	8	8	100	0.0948	0.621	0.30	0.244	0.41
2,3,4',6-Tetrachlorobiphenyl (PCB 64)	pg/L	8	8	100	1.29	4.41	2.8	2.38	4.25
2,3',5,5'-Tetrachlorobiphenyl (PCB 72)	pg/L	8	8	100	0.0312	0.83	0.26	0.116	0.508
2,3',5',6-Tetrachlorobiphenyl (PCB 73)	pg/L	8	8	100	0.0444	9.05	1.6	0.331	1.97
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	pg/L	8	8	100	0.131	0.444	0.26	0.199	0.38
3,3',4,5'-Tetrachlorobiphenyl (PCB 79)	pg/L	8	8	100	0.0375	0.363	0.15	0.0915	0.274
3,3',4,5-Tetrachlorobiphenyl (PCB 78)	pg/L	8	0	0	--	--	--	--	--
3,3',5,5'-Tetrachlorobiphenyl (PCB 80)	pg/L	8	1	13	0.016 J	0.016 J	0.016	0.016 J	0.016 J
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	pg/L	8	1	13	0.0257	0.0257	0.026	0.0257	0.0257
2,2',3,3',4-Pentachlorobiphenyl (PCB 82)	pg/L	8	8	100	0.259	1.26	0.60	0.439	0.796
2,2',3,3',6-Pentachlorobiphenyl (PCB 84)	pg/L	8	8	100	0.878	11.8	3.8	2.06	5.86
2,2',3,4,6'-Pentachlorobiphenyl (PCB 89)	pg/L	8	8	100	0.0386	0.226	0.11	0.0913	0.149
2,2',3,5,5'-Pentachlorobiphenyl (PCB 92)	pg/L	8	8	100	0.573	25.5	6.1	1.81	8.84
2,2',3,5,6'-Pentachlorobiphenyl (PCB 94)	pg/L	8	8	100	0.0469	9.78	1.8	0.338	2.68
2,2',3,6,6'-Pentachlorobiphenyl (PCB 96)	pg/L	8	8	100	0.0569	3.87	0.84	0.198	1.06
2,2',4,5',6-Pentachlorobiphenyl (PCB 103)	pg/L	8	8	100	0.103	6.57	1.5	0.426	2.39
2,2',4,6,6'-Pentachlorobiphenyl (PCB 104)	pg/L	8	8	100	0.0127 J	1.9	0.36	0.0762	0.533
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	pg/L	8	8	100	0.584	2.24	1.2	0.993	1.62
2,3,3',4',5'-Pentachlorobiphenyl (PCB 122)	pg/L	8	8	100	0.0205 J	0.106	0.052	0.0408	0.0606
2,3,3',4,5-Pentachlorobiphenyl (PCB 106)	pg/L	8	2	25	0.0343	0.116	0.075	0.0343	0.0343
2,3,3',4,6-Pentachlorobiphenyl (PCB 109)	pg/L	8	8	100	0.131	1.19	0.44	0.287	0.661

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ANC04439
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Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,3,3',5,5'-Pentachlorobiphenyl (PCB 111)	pg/L	8	6	75	0.0067 J	0.156	0.051	0.0134 J	0.0665
2,3,3',5,6-Pentachlorobiphenyl (PCB 112)	pg/L	8	2	25	1.65	6.77	4.2	1.65	1.65
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	pg/L	8	8	100	0.0682	0.132	0.095	0.0857	0.11
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	pg/L	8	8	100	0.0444	0.131	0.079	0.0757	0.115
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	pg/L	8	8	100	1.53	9.52	4.1	3.03	6.1
2,3',4,5,5'-Pentachlorobiphenyl (PCB 120)	pg/L	8	6	75	0.0242	0.302	0.13	0.0354	0.296
2,3',4,5',6-Pentachlorobiphenyl (PCB 121)	pg/L	8	4	50	0.0316	0.704	0.25	0.104	0.178
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	pg/L	8	4	50	0.0077 J	0.0209 J	0.016	0.0167 J	0.0179 J
3,3',4,5,5'-Pentachlorobiphenyl (PCB 127)	pg/L	8	4	50	0.0045 J	0.032	0.018	0.0132 J	0.0238
2,2',3,3',4,5'-Hexachlorobiphenyl (PCB 130)	pg/L	8	8	100	0.108	1.41	0.52	0.248	0.999
2,2',3,3',4,6'-Hexachlorobiphenyl (PCB 132)	pg/L	8	8	100	0.577	12.4	3.9	1.48	7.65
2,2',3,3',4,6-Hexachlorobiphenyl (PCB 131)	pg/L	8	8	100	0.0206 J	0.328	0.11	0.0469	0.206
2,2',3,3',5,5'-Hexachlorobiphenyl (PCB 133)	pg/L	8	8	100	0.0443	1.68	0.45	0.151	0.707
2,2',3,3',6,6'-Hexachlorobiphenyl (PCB 136)	pg/L	8	8	100	0.33	14.1	3.6	1.06	5.77
2,2',3,4,4',5-Hexachlorobiphenyl (PCB 137)	pg/L	8	8	100	0.0495	0.476	0.20	0.12	0.346
2,2',3,4,5,5'-Hexachlorobiphenyl (PCB 141)	pg/L	8	8	100	0.267	10.8	2.9	0.951	4.46
2,2',3,4',5,5'-Hexachlorobiphenyl (PCB 146)	pg/L	8	8	100	0.33	9.53	2.9	1.17	5.59
2,2',3,4',5,6'-Hexachlorobiphenyl (PCB 148)	pg/L	8	7	88	0.0085 J	0.661	0.18	0.0441	0.241
2,2',3,4,5,6-Hexachlorobiphenyl (PCB 142)	pg/L	8	0	0	--	--	--	--	--
2,2',3,4,5',6-Hexachlorobiphenyl (PCB 144)	pg/L	8	8	100	0.0885	3.28	0.88	0.298	1.42
2,2',3,4,6,6'-Hexachlorobiphenyl (PCB 145)	pg/L	8	1	13	0.0388	0.0388	0.039	0.0388	0.0388
2,2',3,4',6,6'-Hexachlorobiphenyl (PCB 150)	pg/L	8	8	100	0.0076 J	0.533	0.14	0.0394	0.285
2,2',3,5,6,6'-Hexachlorobiphenyl (PCB 152)	pg/L	8	8	100	0.0045 J	0.817	0.17	0.0327	0.245
2,2',4,4',6,6'-Hexachlorobiphenyl (PCB 155)	pg/L	8	5	63	0.0067 J	0.105	0.035	0.0154 J	0.0393
2,3,3',4,4',6-Hexachlorobiphenyl (PCB 158)	pg/L	8	8	100	0.144	2.91	0.92	0.384	1.61
2,3,3',4,5,5'-Hexachlorobiphenyl (PCB 159)	pg/L	8	8	100	0.0208 J	0.53	0.15	0.0503	0.24
2,3,3',4',5,5'-Hexachlorobiphenyl (PCB 162)	pg/L	8	6	75	0.0059 J	0.034	0.019	0.0141 J	0.0323
2,3,3',4,5',6-Hexachlorobiphenyl (PCB 161)	pg/L	8	0	0	--	--	--	--	--
2,3,3',4',5',6-Hexachlorobiphenyl (PCB 164)	pg/L	8	8	100	0.118	3.4	1.00	0.343	1.8
2,3,3',5,5',6-Hexachlorobiphenyl (PCB 165)	pg/L	8	5	63	0.0062 J	0.202	0.068	0.0526	0.0678
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	pg/L	8	8	100	0.0411	0.632	0.22	0.104	0.381
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	pg/L	8	8	100	0.167	5.35	1.5	0.506	2.54
2,2',3,3',4,5,5'-Heptachlorobiphenyl (PCB 172)	pg/L	8	7	88	0.0863	1.15	0.38	0.136	0.574
2,2',3,3',4,5',6'-Heptachlorobiphenyl (PCB 177)	pg/L	8	8	100	0.173	4.94	1.4	0.484	2.34
2,2',3,3',4,5',6-Heptachlorobiphenyl (PCB 175)	pg/L	8	8	100	0.0126 J	0.369	0.11	0.0399	0.168
2,2',3,3',4,5,6'-Heptachlorobiphenyl (PCB 174)	pg/L	8	8	100	0.24	9.42	2.6	0.822	4.28
2,2',3,3',4,6,6'-Heptachlorobiphenyl (PCB 176)	pg/L	8	8	100	0.0371	1.31	0.36	0.114	0.559
2,2',3,3',5,5',6-Heptachlorobiphenyl (PCB 178)	pg/L	8	8	100	0.0786	2.52	0.70	0.237	1.12
2,2',3,3',5,6,6'-Heptachlorobiphenyl (PCB 179)	pg/L	8	8	100	0.145	5.65	1.5	0.484	2.27
2,2',3,4,4',5,6'-Heptachlorobiphenyl (PCB 182)	pg/L	8	4	50	0.0093 J	0.055	0.031	0.0251	0.0336
2,2',3,4,4',5,6-Heptachlorobiphenyl (PCB 181)	pg/L	8	4	50	0.0055 J	0.0288	0.015	0.01 J	0.0162 J
2,2',3,4,4',6,6'-Heptachlorobiphenyl (PCB 184)	pg/L	8	3	38	0.0037 J	0.0072 J	0.0050	0.0042 J	0.0042 J

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Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,2',3,4',5,5',6-Heptachlorobiphenyl (PCB 187)	pg/L	8	8	100	0.444	11.7	3.4	1.19	5.32
2,2',3,4,5,6,6'-Heptachlorobiphenyl (PCB 186)	pg/L	8	0	0	--	--	--	--	--
2,2',3,4',5,6,6'-Heptachlorobiphenyl (PCB 188)	pg/L	8	6	75	0.0055 J	0.0427	0.016	0.0059 J	0.0189 J
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	pg/L	8	5	63	0.0177 J	0.142	0.062	0.0565	0.0722
2,3,3',4,4',5,6-Heptachlorobiphenyl (PCB 190)	pg/L	8	8	100	0.0383	1.21	0.35	0.118	0.577
2,3,3',4,4',5',6-Heptachlorobiphenyl (PCB 191)	pg/L	8	7	88	0.0171 J	0.296	0.093	0.0273	0.141
2,3,3',4,5,5',6-Heptachlorobiphenyl (PCB 192)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (PCB 194)	pg/L	8	7	88	0.107	1	0.37	0.157	0.596
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (PCB 196)	pg/L	8	3	38	0.344	0.725	0.50	0.422	0.422
2,2',3,3',4,4',5,6-Octachlorobiphenyl (PCB 195)	pg/L	8	8	100	0.0255	0.491	0.15	0.0584	0.272
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (PCB 201)	pg/L	8	4	50	0.0782	0.2	0.13	0.109	0.129
2,2',3,3',5,5',6,6'-Octachlorobiphenyl (PCB 202)	pg/L	8	3	38	0.17	0.337	0.24	0.202	0.202
2,2',3,4,4',5,5',6-Octachlorobiphenyl (PCB 203)	pg/L	8	3	38	0.391	0.827	0.57	0.489	0.489
2,2',3,4,4',5,6,6'-Octachlorobiphenyl (PCB 204)	pg/L	8	1	13	0.0014 J	0.0014 J	0.0014	0.0014 J	0.0014 J
2,3,3',4,4',5,5',6-Octachlorobiphenyl (PCB 205)	pg/L	8	5	63	0.0101 J	0.0561	0.026	0.0234 J	0.0288
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB 206)	pg/L	8	7	88	0.0494	0.139	0.10	0.105	0.122
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (PCB 207)	pg/L	8	7	88	0.0166 J	0.0673	0.033	0.0282	0.0423
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (PCB 208)	pg/L	8	8	100	0.0337	0.0882	0.053	0.0467	0.064
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)	pg/L	8	6	75	0.0236	0.0411	0.032	0.032	0.0335
PCB012 & 013	pg/L	8	8	100	0.316	2.2	0.70	0.425	0.965
PCB018 & 030	pg/L	8	8	100	3.01	16	6.9	5.67	8.08
PCB020 & 028	pg/L	8	8	100	3.37	9.96	6.8	5.84	9.09
PCB021 & 033	pg/L	8	8	100	0.856	4.31	2.1	1.92	2.19
PCB026 & 029	pg/L	8	8	100	0.694	7.49	2.3	1.52	2.09
PCB040 & 041 & 071	pg/L	8	8	100	1.67	12.2	5.8	4.8	8.13
PCB044 & 047 & 065	pg/L	8	8	100	3.79	172	37.6	12.1	42.2
PCB045 & 051	pg/L	8	8	100	1.08	83.8	17.2	4.1	20
PCB049 & 069	pg/L	8	8	100	2.45	56.8	15.4	7.29	20.7
PCB050 & 053	pg/L	8	8	100	1.57	91.3	18.9	5.3	24.5
PCB059 & 062 & 075	pg/L	8	8	100	0.297	13	2.7	0.974	3.43
PCB061 & 070 & 074 & 076	pg/L	8	8	100	3.72	12.4	7.9	7.05	10.6
PCB083 & 099	pg/L	8	8	100	1.42	22.5	7.9	3.67	17.6
PCB085 & 116 & 117	pg/L	8	8	100	0.42	2.41	1.2	0.953	2.15
PCB086 & 087 & 097 & 108 & 119 & 125	pg/L	8	8	100	1.65	12.8	5.7	3.53	11.9
PCB088 & 091	pg/L	8	8	100	0.532	14.8	4.3	1.49	8.99
PCB090 & 101 & 113	pg/L	8	8	100	2.7	58.2	18.0	7.3	36.8
PCB093 & 095 & 098 & 100 & 102	pg/L	8	8	100	3.31	112	27.7	9.07	41.5
PCB107 & 124	pg/L	8	8	100	0.0624	0.348	0.16	0.141	0.194
PCB110 & 115	pg/L	8	8	100	2.84	23.7	9.4	6.01	17.2
PCB128 & 166	pg/L	8	8	100	0.192	1.48	0.67	0.339	1.41
PCB129 & 138 & 160 & 163	pg/L	8	8	100	1.61	38.2	11.5	4.28	20.1
PCB134 & 143	pg/L	8	8	100	0.102	4.69	1.2	0.36	1.58
PCB135 & 151 & 154	pg/L	8	8	100	0.852	45	11.1	3.25	16.8

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Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
PCB139 & 140	pg/L	8	8	100	0.0261 J	0.428	0.16	0.0784	0.393
PCB147 & 149	pg/L	8	8	100	1.64	61.1	16.8	5.35	30.1
PCB153 & 168	pg/L	8	8	100	1.49	49.2	13.7	4.7	24
PCB156 & 157	pg/L	8	8	100	0.105	1.37	0.50	0.254	0.911
PCB171 & 173	pg/L	8	8	100	0.0722	2.21	0.63	0.225	1.05
PCB180 & 193	pg/L	8	8	100	0.501	14.8	4.2	1.44	7.14
PCB183 & 185	pg/L	8	8	100	0.198	6.2	1.8	0.605	2.77
PCB197 & 200	pg/L	8	3	38	0.104	0.235	0.16	0.134	0.134
PCB198 & 199	pg/L	8	3	38	0.668	1.48	1.0	0.85	0.85
Total polychlorinated biphenyl congeners	pg/L	8	8	100	105	2420	594	248	681
PCB Homologs									
Monochlorobiphenyl	pg/L	8	8	100	0.952	3.6	1.7	1.46	1.86
Dichlorobiphenyl	pg/L	8	8	100	24.7	376	85.6	38.8	99.9
Trichlorobiphenyl	pg/L	8	8	100	22.2	776	157	52.3	187
Tetrachlorobiphenyl	pg/L	8	8	100	26.6	605	157	82.9	165
Pentachlorobiphenyl	pg/L	8	8	100	17.3	316	96.8	41.6	178
Hexachlorobiphenyl	pg/L	8	8	100	8.18	265	73.9	25.3	127
Heptachlorobiphenyl	pg/L	8	8	100	2.11	67.5	18.9	6.36	31
Octachlorobiphenyl	pg/L	8	3	38	2.42	5.36	3.6	3.13	3.13
Nonachlorobiphenyl	pg/L	8	8	100	0.05	0.26	0.17	0.175	0.215
Organochlorine Pesticides									
2,4'-DDD	pg/L	8	8	100	3.8	649	106	8.87	140
2,4'-DDE	pg/L	8	8	100	0.393 J	25	4.7	0.795 J	7.64 J
2,4'-DDT	pg/L	8	7	88	0.977 J	62	14.4	2.73	27.9
4,4'-DDD	pg/L	8	8	100	6.56	1110	184	23.8	228
4,4'-DDE	pg/L	8	8	100	12.4	111	31.9	14.7	48.2
4,4'-DDT	pg/L	8	8	100	0.744 J	138	25.9	4.38	42.3
Aldrin	pg/L	8	8	100	0.646 J	1.44 J	1.1	1.07 J	1.42 J
alpha-Endosulfan	pg/L	8	7	88	5.13	18	9.7	8.62	13.5
alpha-Hexachlorocyclohexane	pg/L	8	8	100	3.75	16.5	11.0	10.7	14.1
beta-Endosulfan	pg/L	8	7	88	3.7 J	11.1	7.6	7.43	8.2
beta-Hexachlorocyclohexane	pg/L	8	8	100	1.84 J	23.4	6.7	3.73	8.96
cis-Chlordane	pg/L	8	8	100	4.67	8.14	6.9	6.92	7.88
cis-Nonachlor	pg/L	8	8	100	0.654 J	1.61 J	1.3	1.39 J	1.59 J
delta-Hexachlorocyclohexane	pg/L	8	1	13	1.38 J	1.38 J	1.4	1.38 J	1.38 J
Dieldrin	pg/L	8	8	100	22.7	37.3	31.2	29.1	36
Endosulfan sulfate	pg/L	8	8	100	5.23	77.9	56.3	66	74.8
Endrin	pg/L	8	5	63	0.787 J	1.04 J	0.93	0.978 J	0.999 J
Endrin aldehyde	pg/L	8	0	0	--	--	--	--	--
Endrin ketone	pg/L	8	7	88	0.481 J	1.14 J	0.68	0.575 J	0.803 J
gamma-Hexachlorocyclohexane	pg/L	8	8	100	7.23	30.7	26.3	29.4	30.3

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Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Heptachlor	pg/L	8	1	13	0.266 J	0.266 J	0.27	0.266 J	0.266 J
Heptachlor epoxide	pg/L	8	8	100	3.41 J	5.2	4.5	4.25 J	5.11
Methoxychlor	pg/L	8	7	88	1.91 J	3.44 J	2.7	2.69 J	3.07 J
Oxychlordane	pg/L	8	8	100	1.08 J	1.56 J	1.3	1.3 J	1.51 J
trans-Chlordane	pg/L	8	8	100	3.59	6.19	5.2	5.37	6
trans-Nonachlor	pg/L	8	8	100	2.56	4.99	4.1	4.07	4.51
Hexachlorobenzene	pg/L	8	8	100	37.7	55.4	45.8	44.2	51.5
Hexachlorobutadiene	pg/L	8	6	75	0.582 J	73.2 J	24.2	0.808 J	66.6 J
Phthalate Esters									
Bis(2-ethylhexyl) phthalate	pg/L	8	0	0	--	--	--	--	--
Butylbenzyl phthalate	pg/L	8	0	0	--	--	--	--	--
Dibutyl phthalate	pg/L	8	0	0	--	--	--	--	--
Diethyl phthalate	pg/L	8	0	0	--	--	--	--	--
Dimethyl phthalate	pg/L	8	0	0	--	--	--	--	--
Di-n-octyl phthalate	pg/L	8	0	0	--	--	--	--	--
XAD Filter Samples									
PCB Aroclors									
Aroclor 1016	pg/L	8	0	0	--	--	--	--	--
Aroclor 1221	pg/L	8	0	0	--	--	--	--	--
Aroclor 1232	pg/L	8	0	0	--	--	--	--	--
Aroclor 1242	pg/L	8	5	63	4.12 NJ	21.1 NJ	11.3	9.49 NJ	14 NJ
Aroclor 1248	pg/L	8	3	38	91.7 NJ	1850 NJ	724	229 NJ	229 NJ
Aroclor 1254	pg/L	8	5	63	21.9 NJ	331 NJ	114	76.4 NJ	93.4 NJ
Aroclor 1260	pg/L	8	8	100	23.5 NJ	8100 NJ	1266	113 NJ	1070 NJ
Chlorinated Dioxin/Furan Homologs									
Tetrachlorodibenzofuran homologs	pg/L	6	6	100	0.112	1.38	0.34	0.139	0.173
Tetrachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.111	0.497	0.23	0.181	0.226
Pentachlorodibenzofuran homologs	pg/L	6	6	100	0.11	1.75	0.47	0.226	0.342
Pentachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.0886	0.296	0.18	0.139	0.221
Hexachlorodibenzofuran homologs	pg/L	6	6	100	0.213	2.42	0.77	0.465	0.652
Hexachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.593	1.59	1.1	1.02	1.17
Heptachlorodibenzofuran homologs	pg/L	6	6	100	0.341	1.75	0.87	0.672	1.04
Heptachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	3.98	8.57	6.6	5.83	8.5
Octachlorodibenzofuran	pg/L	6	6	100	0.131	1.4	0.62	0.358	0.877
Octachlorodibenzo-p-dioxin	pg/L	6	6	100	9.23	31.9	22.8	25.2	26.4

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ANC04443
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Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Chlorinated Dioxin/Furans									
2,3,7,8-Tetrachlorodibenzofuran	pg/L	6	6	100	0.0117	0.555	0.11	0.0131	0.0403
2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/L	6	1	17	0.00518 J	0.00518 J	0.0052	0.00518 J	0.00518 J
1,2,3,7,8-Pentachlorodibenzofuran	pg/L	6	6	100	0.00579 J	0.657	0.12	0.00919 J	0.0353
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/L	6	6	100	0.0104 J	0.0169 J	0.013	0.0123 J	0.0147 J
2,3,4,7,8-Pentachlorodibenzofuran	pg/L	6	5	83	0.0118 J	0.256	0.063	0.0139 J	0.0196 J
1,2,3,4,7,8-Hexachlorodibenzofuran	pg/L	6	6	100	0.0127 J	1.34	0.27	0.0398	0.106
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/L	6	6	100	0.016 J	0.0346	0.026	0.0247 J	0.0311
1,2,3,6,7,8-Hexachlorodibenzofuran	pg/L	6	6	100	0.00983 J	0.323	0.070	0.0186 J	0.0306
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/L	6	6	100	0.0842	0.192	0.13	0.13	0.135
1,2,3,7,8,9-Hexachlorodibenzofuran	pg/L	6	3	50	0.00127 J	0.0235 J	0.009	0.00178 J	0.00178 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/L	6	6	100	0.0475	0.0995	0.077	0.0745	0.0956
2,3,4,6,7,8-Hexachlorodibenzofuran	pg/L	6	5	83	0.00865 J	0.0577	0.021	0.0113 J	0.0137 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/L	6	6	100	0.135	0.776	0.33	0.25	0.336
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/L	6	6	100	2.09	4.61	3.3	3.06	4.4
1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/L	6	6	100	0.0101 J	0.258	0.067	0.0213 J	0.0662
Polycyclic Aromatic Hydrocarbons									
2-Methylnaphthalene	pg/L	8	1	13	5380	5380	5380	5380	5380
Acenaphthene	pg/L	8	1	13	664	664	664	664	664
Acenaphthylene	pg/L	8	0	0	--	--	--	--	--
Anthracene	pg/L	8	2	25	450	1550	1000	450	450
Benz(a)anthracene	pg/L	8	6	75	453	1410	745	478	1140
Benzo(a)pyrene	pg/L	8	5	63	678	1690	1091	755	1610
Benzo(b+j)fluoranthene	pg/L	8	6	75	621	2300	1192	716	1860
Benzo(g,h,i)perylene	pg/L	8	6	75	483	1850	1071	787	1790
Benzo(k)fluoranthene	pg/L	8	7	88	264	1680	817	554	1540
Chrysene	pg/L	8	8	100	297	2670	1102	813	2030
Dibenz(a,h)anthracene	pg/L	8	3	38	101 J	337	180	103 J	103 J
Fluoranthene	pg/L	8	3	38	1230	3600	2463	2560	2560
Fluorene	pg/L	8	1	13	2180	2180	2180	2180	2180
Indeno(1,2,3-cd)pyrene	pg/L	8	8	100	185	1500	678	519	1450
Naphthalene	pg/L	8	0	0	--	--	--	--	--
Phenanthrene	pg/L	8	1	13	3640	3640	3640	3640	3640
Pyrene	pg/L	8	3	38	1580	4480	3093	3220	3220
PCB Congeners									
2-Chlorobiphenyl (PCB 1)	pg/L	8	4	50	0.114	0.98	0.49	0.187	0.689
3-Chlorobiphenyl (PCB 2)	pg/L	8	6	75	0.0773	2.43	0.49	0.103	0.134
4-Chlorobiphenyl (PCB 3)	pg/L	8	5	63	0.114	1.24	0.59	0.327	1.08
2,2'-Dichlorobiphenyl (PCB 4)	pg/L	8	8	100	0.147	31.6	4.8	0.36	4.7
2,3'-Dichlorobiphenyl (PCB 6)	pg/L	8	8	100	0.0272	0.607	0.18	0.0966	0.355

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ANC04444
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Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,3-Dichlorobiphenyl (PCB 5)	pg/L	8	0	0	--	--	--	--	--
2,4'-Dichlorobiphenyl (PCB 8)	pg/L	8	8	100	0.125	0.669	0.35	0.256	0.612
2,4-Dichlorobiphenyl (PCB 7)	pg/L	8	6	75	0.0178 J	0.116	0.051	0.0257	0.0751
2,5-Dichlorobiphenyl (PCB 9)	pg/L	8	8	100	0.0105 J	0.241	0.059	0.0216 J	0.109
2,6-Dichlorobiphenyl (PCB 10)	pg/L	8	6	75	0.015 J	2.78	0.57	0.0276	0.516
3,3'-Dichlorobiphenyl (PCB 11)	pg/L	8	8	100	1.75	8.93	3.5	2.5	4.37
3,5-Dichlorobiphenyl (PCB 14)	pg/L	8	2	25	0.0214 J	0.0243	0.023	0.0214 J	0.0214 J
4,4'-Dichlorobiphenyl (PCB 15)	pg/L	8	8	100	0.245	5.02	1.3	0.679	1.28
2,2',3-Trichlorobiphenyl (PCB 16)	pg/L	8	7	88	0.125	0.41	0.24	0.186	0.402
2,2',4-Trichlorobiphenyl (PCB 17)	pg/L	8	8	100	0.188	20.9	3.3	0.474	2.98
2,2',6-Trichlorobiphenyl (PCB 19)	pg/L	8	8	100	0.529	183	26.8	1.11	25
2,3',4-Trichlorobiphenyl (PCB 25)	pg/L	8	8	100	0.0641	3.91	0.72	0.253	0.585
2,3,4'-Trichlorobiphenyl (PCB 22)	pg/L	8	8	100	0.148	0.804	0.33	0.267	0.484
2,3',5'-Trichlorobiphenyl (PCB 34)	pg/L	8	5	63	0.007 J	0.0543	0.025	0.0143 J	0.0375
2,3,5-Trichlorobiphenyl (PCB 23)	pg/L	8	1	13	0.0157 J	0.0157 J	0.016	0.0157 J	0.0157 J
2,3,6-Trichlorobiphenyl (PCB 24)	pg/L	8	5	63	0.0044 J	0.0181 J	0.010	0.0095 J	0.0095 J
2,3',6-Trichlorobiphenyl (PCB 27)	pg/L	8	8	100	0.0696	19.9	3.0	0.17	2.64
2,4',5-Trichlorobiphenyl (PCB 31)	pg/L	8	8	100	0.428	2.23	1.1	1.01	1.39
2,4',6-Trichlorobiphenyl (PCB 32)	pg/L	8	8	100	0.0897	6.25	1.1	0.292	0.966
3,3',4-Trichlorobiphenyl (PCB 35)	pg/L	8	8	100	0.0486	0.137	0.076	0.0609	0.122
3,3',5-Trichlorobiphenyl (PCB 36)	pg/L	8	6	75	0.0091 J	0.0474	0.022	0.0155 J	0.0314
3,4,4'-Trichlorobiphenyl (PCB 37)	pg/L	8	8	100	0.278	1.29	0.68	0.58	0.988
3,4,5-Trichlorobiphenyl (PCB 38)	pg/L	8	5	63	0.0168 J	0.434	0.13	0.0623	0.0952
3,4',5-Trichlorobiphenyl (PCB 39)	pg/L	8	6	75	0.0075 J	0.103	0.041	0.0267	0.0553
2,2',3,4'-Tetrachlorobiphenyl (PCB 42)	pg/L	8	8	100	0.234	3.48	1.2	0.651	1.69
2,2',3,5-Tetrachlorobiphenyl (PCB 43)	pg/L	8	8	100	0.0327	6.74	1.1	0.155	0.86
2,2',3,6'-Tetrachlorobiphenyl (PCB 46)	pg/L	8	8	100	0.0554	3.45	0.65	0.316	0.468
2,2',4,5-Tetrachlorobiphenyl (PCB 48)	pg/L	8	8	100	0.133	2.12	0.67	0.396	0.963
2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	pg/L	8	8	100	1.5	69.4	14.1	6.09	13.9
2,2',6,6'-Tetrachlorobiphenyl (PCB 54)	pg/L	8	8	100	0.108	54.3	7.8	0.319	6.16
2,3,3',4'-Tetrachlorobiphenyl (PCB 56)	pg/L	8	8	100	0.481	3.46	1.5	0.883	2.79
2,3,3',4-Tetrachlorobiphenyl (PCB 55)	pg/L	8	3	38	0.0216 J	0.11	0.056	0.0363	0.0363
2,3,3',5'-Tetrachlorobiphenyl (PCB 58)	pg/L	8	2	25	0.0121 J	0.0584	0.035	0.0121 J	0.0121 J
2,3,3',5-Tetrachlorobiphenyl (PCB 57)	pg/L	8	5	63	0.0283	1.94	0.48	0.0417	0.361
2,3,4,4'-Tetrachlorobiphenyl (PCB 60)	pg/L	8	8	100	0.237	1.49	0.62	0.403	1.24
2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	pg/L	8	8	100	1.13	6.83	3.8	2.55	5.89
2,3',4,5'-Tetrachlorobiphenyl (PCB 68)	pg/L	8	8	100	0.0172 J	2.83	0.48	0.058	0.404
2,3',4,5-Tetrachlorobiphenyl (PCB 67)	pg/L	8	8	100	0.0362	2.87	0.52	0.159	0.426
2,3,4',5-Tetrachlorobiphenyl (PCB 63)	pg/L	8	8	100	0.0435	0.905	0.25	0.177	0.254
2,3,4',6-Tetrachlorobiphenyl (PCB 64)	pg/L	8	8	100	0.382	2.69	1.3	0.841	2.43
2,3',5,5'-Tetrachlorobiphenyl (PCB 72)	pg/L	8	7	88	0.0384	1.47	0.34	0.0778	0.404
2,3',5',6-Tetrachlorobiphenyl (PCB 73)	pg/L	8	8	100	0.0206 J	3.94	0.71	0.0905	1.24
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	pg/L	8	8	100	0.151	0.769	0.42	0.308	0.712

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Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
3,3',4,5'-Tetrachlorobiphenyl (PCB 79)	pg/L	8	8	100	0.0327	1.01	0.27	0.113	0.502
3,3',4,5-Tetrachlorobiphenyl (PCB 78)	pg/L	8	1	13	0.0357	0.0357	0.036	0.0357	0.0357
3,3',5,5'-Tetrachlorobiphenyl (PCB 80)	pg/L	8	0	0	--	--	--	--	--
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4-Pentachlorobiphenyl (PCB 82)	pg/L	8	8	100	0.252	2.32	1.0	0.69	1.77
2,2',3,3',6-Pentachlorobiphenyl (PCB 84)	pg/L	8	8	100	0.494	29	5.8	1.89	6.44
2,2',3,4,6'-Pentachlorobiphenyl (PCB 89)	pg/L	8	8	100	0.0227 J	0.549	0.16	0.0799	0.19
2,2',3,5,5'-Pentachlorobiphenyl (PCB 92)	pg/L	8	8	100	0.466	82.7	14.0	2.03	11.4
2,2',3,5,6'-Pentachlorobiphenyl (PCB 94)	pg/L	8	8	100	0.0356	22.2	3.4	0.194	2.83
2,2',3,6,6'-Pentachlorobiphenyl (PCB 96)	pg/L	8	7	88	0.0397	7.29	1.3	0.138	0.761
2,2',4,5',6-Pentachlorobiphenyl (PCB 103)	pg/L	8	8	100	0.103	15.5	2.6	0.227	2.11
2,2',4,6,6'-Pentachlorobiphenyl (PCB 104)	pg/L	8	7	88	0.0158 J	4.98	0.85	0.0842	0.63
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	pg/L	8	8	100	0.881	6.33	2.9	2.62	3.71
2,3,3',4',5'-Pentachlorobiphenyl (PCB 122)	pg/L	8	7	88	0.0353	0.271	0.14	0.115	0.258
2,3,3',4,5-Pentachlorobiphenyl (PCB 106)	pg/L	8	2	25	0.182	0.97	0.58	0.182	0.182
2,3,3',4,6-Pentachlorobiphenyl (PCB 109)	pg/L	8	8	100	0.193	4.09	1.2	0.581	2.53
2,3,3',5,5'-Pentachlorobiphenyl (PCB 111)	pg/L	8	6	75	0.0044 J	0.833	0.18	0.0151 J	0.122
2,3,3',5,6-Pentachlorobiphenyl (PCB 112)	pg/L	8	4	50	0.138	22.1	6.5	0.255	3.46
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	pg/L	8	6	75	0.0564	0.305	0.15	0.128	0.196
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	pg/L	8	8	100	0.0548	0.307	0.16	0.158	0.227
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	pg/L	8	8	100	2.09	38.2	12.1	6.94	23.8
2,3',4,5,5'-Pentachlorobiphenyl (PCB 120)	pg/L	8	7	88	0.0445	1.82	0.41	0.0684	0.554
2,3',4,5',6-Pentachlorobiphenyl (PCB 121)	pg/L	8	6	75	0.0068 J	2.14	0.43	0.0414	0.256
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	pg/L	8	7	88	0.0145 J	0.209	0.069	0.0375	0.11
3,3',4,5,5'-Pentachlorobiphenyl (PCB 127)	pg/L	8	4	50	0.019 J	0.307	0.11	0.0298	0.0907
2,2',3,3',4,5'-Hexachlorobiphenyl (PCB 130)	pg/L	8	8	100	0.257	22	4.2	1	4.6
2,2',3,3',4,6'-Hexachlorobiphenyl (PCB 132)	pg/L	8	8	100	1.23	160	29.4	5.15	31.2
2,2',3,3',4,6-Hexachlorobiphenyl (PCB 131)	pg/L	8	8	100	0.0364	3.9	0.75	0.158	0.769
2,2',3,3',5,5'-Hexachlorobiphenyl (PCB 133)	pg/L	8	8	100	0.107	20.7	3.5	0.378	3.64
2,2',3,3',6,6'-Hexachlorobiphenyl (PCB 136)	pg/L	8	8	100	0.526	106	18.1	2.11	15.8
2,2',3,4,4',5-Hexachlorobiphenyl (PCB 137)	pg/L	8	8	100	0.133	6.87	1.5	0.544	1.77
2,2',3,4,5,5'-Hexachlorobiphenyl (PCB 141)	pg/L	8	8	100	0.742	192	31.8	3.86	29.8
2,2',3,4',5,5'-Hexachlorobiphenyl (PCB 146)	pg/L	8	8	100	0.745	129	22.9	3.08	21.9
2,2',3,4',5,6'-Hexachlorobiphenyl (PCB 148)	pg/L	8	8	100	0.0237 J	5.42	0.92	0.0782	0.82
2,2',3,4,5,6-Hexachlorobiphenyl (PCB 142)	pg/L	8	1	12.5	0.223	0.223	0.22	0.223	0.223
2,2',3,4,5',6-Hexachlorobiphenyl (PCB 144)	pg/L	8	8	100	0.167	31.7	5.4	0.769	4.78
2,2',3,4,6,6'-Hexachlorobiphenyl (PCB 145)	pg/L	8	4	50	0.008 J	0.284	0.081	0.0089 J	0.0233 J
2,2',3,4',6,6'-Hexachlorobiphenyl (PCB 150)	pg/L	8	8	100	0.0261	4.1	0.73	0.0644	0.829
2,2',3,5,6,6'-Hexachlorobiphenyl (PCB 152)	pg/L	8	8	100	0.0103 J	5.95	0.92	0.0528	0.842
2,2',4,4',6,6'-Hexachlorobiphenyl (PCB 155)	pg/L	8	7	88	0.0079 J	1.13	0.20	0.0247	0.155
2,3,3',4,4',6-Hexachlorobiphenyl (PCB 158)	pg/L	8	8	100	0.368	54.4	9.5	1.5	8.56
2,3,3',4,5,5'-Hexachlorobiphenyl (PCB 159)	pg/L	8	8	100	0.0927	20.8	3.5	0.368	3.52
2,3,3',4',5,5'-Hexachlorobiphenyl (PCB 162)	pg/L	8	8	100	0.0184 J	0.635	0.14	0.047	0.173

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ANC04446
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Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,3,3',4,5',6-Hexachlorobiphenyl (PCB 161)	pg/L	8	0	0	--	--	--	--	--
2,3,3',4',5',6-Hexachlorobiphenyl (PCB 164)	pg/L	8	8	100	0.296	51.1	8.9	1.22	8.6
2,3,3',5,5',6-Hexachlorobiphenyl (PCB 165)	pg/L	8	6	75	0.0232 J	2.08	0.45	0.0376	0.368
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	pg/L	8	8	100	0.142	16.3	3.0	0.577	2.73
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	pg/L	8	8	100	1.09	406	63.1	5.2	52
2,2',3,3',4,5,5'-Heptachlorobiphenyl (PCB 172)	pg/L	8	8	100	0.226	61.7	9.7	0.965	8.35
2,2',3,3',4,5',6'-Heptachlorobiphenyl (PCB 177)	pg/L	8	8	100	0.82	232	36.9	3.57	31.6
2,2',3,3',4,5',6-Heptachlorobiphenyl (PCB 175)	pg/L	8	8	100	0.0561	13.6	2.2	0.263	1.95
2,2',3,3',4,5,6'-Heptachlorobiphenyl (PCB 174)	pg/L	8	8	100	1.29	440	68.2	6.13	54.7
2,2',3,3',4,6,6'-Heptachlorobiphenyl (PCB 176)	pg/L	8	8	100	0.168	46.4	7.4	0.764	6.32
2,2',3,3',5,5',6-Heptachlorobiphenyl (PCB 178)	pg/L	8	8	100	0.334	86	13.7	1.36	11.9
2,2',3,3',5,6,6'-Heptachlorobiphenyl (PCB 179)	pg/L	8	8	100	0.609	174	27.7	2.53	24.9
2,2',3,4,4',5,6'-Heptachlorobiphenyl (PCB 182)	pg/L	8	7	88	0.0301	1.77	0.35	0.0567	0.289
2,2',3,4,4',5,6-Heptachlorobiphenyl (PCB 181)	pg/L	8	8	100	0.0098 J	1.54	0.31	0.146	0.25
2,2',3,4,4',6,6'-Heptachlorobiphenyl (PCB 184)	pg/L	8	5	63	0.0081 J	0.142	0.042	0.0192 J	0.028
2,2',3,4',5,5',6-Heptachlorobiphenyl (PCB 187)	pg/L	8	8	100	1.77	450	71.7	7.51	61
2,2',3,4,5,6,6'-Heptachlorobiphenyl (PCB 186)	pg/L	8	4	50	0.011 J	0.11	0.038	0.0129 J	0.018 J
2,2',3,4',5,6,6'-Heptachlorobiphenyl (PCB 188)	pg/L	8	7	88	0.0133 J	1.29	0.24	0.0253	0.188
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	pg/L	8	8	100	0.0431	13.3	2.2	0.202	2.28
2,3,3',4,4',5,6-Heptachlorobiphenyl (PCB 190)	pg/L	8	8	100	0.237	76.2	12.1	1.16	10.6
2,3,3',4,4',5',6-Heptachlorobiphenyl (PCB 191)	pg/L	8	8	100	0.0484	14	2.3	0.234	2.04
2,3,3',4,5,5',6-Heptachlorobiphenyl (PCB 192)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (PCB 194)	pg/L	8	8	100	0.641	221	35.3	2.9	36.4
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (PCB 196)	pg/L	8	8	100	0.368	104	16.8	1.6	17.7
2,2',3,3',4,4',5,6-Octachlorobiphenyl (PCB 195)	pg/L	8	8	100	0.245	88.2	14.3	1.3	15.9
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (PCB 201)	pg/L	8	8	100	0.113	21.5	3.5	0.477	3.3
2,2',3,3',5,5',6,6'-Octachlorobiphenyl (PCB 202)	pg/L	8	8	100	0.215	28.4	4.8	0.69	4.8
2,2',3,4,4',5,5',6-Octachlorobiphenyl (PCB 203)	pg/L	8	8	100	0.509	120	19.6	2.17	20.6
2,2',3,4,4',5,6,6'-Octachlorobiphenyl (PCB 204)	pg/L	8	3	38	0.0014 J	0.0423	0.020	0.017 J	0.017 J
2,3,3',4,4',5,5',6-Octachlorobiphenyl (PCB 205)	pg/L	8	8	100	0.0274	9.5	1.5	0.161	1.58
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB 206)	pg/L	8	8	100	0.477	32.8	6.3	1.46	6.08
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (PCB 207)	pg/L	8	8	100	0.0857	4.91	0.95	0.265	0.987
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (PCB 208)	pg/L	8	8	100	0.191	5.44	1.3	0.473	1.13
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)	pg/L	8	8	100	0.452	4.01	1.5	1.15	1.72
PCB012 & 013	pg/L	8	8	100	0.0878	1.5	0.37	0.118	0.542
PCB018 & 030	pg/L	8	8	100	0.173	3.08	0.91	0.569	1.22
PCB020 & 028	pg/L	8	8	100	0.648	3.71	2.0	1.49	3.51
PCB021 & 033	pg/L	8	8	100	0.173	3.02	0.83	0.544	0.804
PCB026 & 029	pg/L	8	8	100	0.115	2.87	0.72	0.383	0.873
PCB040 & 041 & 071	pg/L	8	8	100	0.522	13.7	3.6	2.19	3.52
PCB044 & 047 & 065	pg/L	8	8	100	1.32	234	37.3	5.76	27.6
PCB045 & 051	pg/L	8	8	100	0.296	67.4	10.7	1.19	7.96

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ANC04447
BZTO104(e)004447

Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
PCB049 & 069	pg/L	8	8	100	0.874	65	11.7	3.38	8.22
PCB050 & 053	pg/L	8	8	100	0.43	61.6	9.7	1.14	7.38
PCB059 & 062 & 075	pg/L	8	8	100	0.0937	15.9	2.5	0.467	1.93
PCB061 & 070 & 074 & 076	pg/L	8	8	100	1.94	10.2	5.9	4.42	8.87
PCB083 & 099	pg/L	8	8	100	1.32	89.7	18.1	5.16	24
PCB085 & 116 & 117	pg/L	8	8	100	0.417	8.52	2.5	1.38	3.94
PCB086 & 087 & 097 & 108 & 119 & 125	pg/L	8	8	100	1.42	44.3	11.0	4.67	17.4
PCB088 & 091	pg/L	8	8	100	0.44	41.2	7.7	1.54	9.89
PCB090 & 101 & 113	pg/L	8	8	100	2.3	214	40.3	8.82	48.1
PCB093 & 095 & 098 & 100 & 102	pg/L	8	8	100	1.93	267	45.5	7.57	38
PCB107 & 124	pg/L	8	8	100	0.0932	1.16	0.44	0.281	0.829
PCB110 & 115	pg/L	8	8	100	2.59	59.6	17.6	8.51	36.5
PCB128 & 166	pg/L	8	8	100	0.546	29.8	6.2	1.91	8.05
PCB129 & 138 & 160 & 163	pg/L	8	8	100	4.15	662	116	16.5	105
PCB134 & 143	pg/L	8	8	100	0.206	49	8.1	0.941	7.75
PCB135 & 151 & 154	pg/L	8	8	100	1.55	428	70.1	6.51	63.2
PCB139 & 140	pg/L	8	8	100	0.0662	5.23	1.0	0.275	1.52
PCB147 & 149	pg/L	8	8	100	3.28	647	113	14	111
PCB153 & 168	pg/L	8	8	100	3.54	775	131	14.9	116
PCB156 & 157	pg/L	8	8	100	0.383	37.8	7.0	1.38	6.32
PCB171 & 173	pg/L	8	8	100	0.375	114	18.1	1.79	15.1
PCB180 & 193	pg/L	8	8	100	2.74	932	146	13.2	125
PCB183 & 185	pg/L	8	8	100	0.878	282	44.2	4.17	36.3
PCB197 & 200	pg/L	8	8	100	0.129	28.4	4.6	0.634	4.51
PCB198 & 199	pg/L	8	8	100	0.921	190	30.7	3.65	29.9
Polychlorinated biphenyls	pg/L	8	8	100	67.5	9550	1629	259	1380
PCB Homologs									
Monochlorobiphenyl	pg/L	8	8	100	0.148	4.66	1.1	0.296	1.87
Dichlorobiphenyl	pg/L	8	8	100	3.83	43.8	11.1	5.03	13
Trichlorobiphenyl	pg/L	8	8	100	3.15	250	42.0	8.91	36.4
Tetrachlorobiphenyl	pg/L	8	8	100	10.1	627	117	45.5	82.2
Pentachlorobiphenyl	pg/L	8	8	100	15.2	964	193	53.3	237
Hexachlorobiphenyl	pg/L	8	8	100	18.7	3470	598	77.5	532
Heptachlorobiphenyl	pg/L	8	8	100	10.7	3340	525	49.3	445
Octachlorobiphenyl	pg/L	8	8	100	3.17	810	131	13.7	135
Nonachlorobiphenyl	pg/L	8	8	100	0.754	43.2	8.5	2.2	8.19

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ANC04448
BZTO104(e)00448

Table 4-1b. March 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Organochlorine Pesticides									
2,4'-DDD	pg/L	8	8	100	1.02 J	485	76.2	4.45	97.9
2,4'-DDE	pg/L	8	8	100	0.313 J	37.5	6.6	0.769 J	10.6 J
2,4'-DDT	pg/L	8	5	63	1.84	107	35.0	6.91	54.5
4,4'-DDD	pg/L	8	8	100	1.3	1270	199	12	252
4,4'-DDE	pg/L	8	8	100	11.6	252	58.0	16.7	106
4,4'-DDT	pg/L	8	7	88	0.598 J	964	177	10.1	222
Aldrin	pg/L	8	8	100	0.197 J	0.693 J	0.48	0.406 J	0.652 J
alpha-Endosulfan	pg/L	8	0	0	--	--	--	--	--
alpha-Hexachlorocyclohexane	pg/L	8	3	38	0.077 J	0.447 J	0.26	0.251 J	0.251 J
beta-Endosulfan	pg/L	8	1	13	1.11 J	1.11 J	1.1	1.11 J	1.11 J
beta-Hexachlorocyclohexane	pg/L	8	2	25	0.499 J	0.597 J	0.55	0.499 J	0.499 J
cis-Chlordane	pg/L	8	8	100	0.945 J	3.64	2.0	1.67 J	2.6
cis-Nonachlor	pg/L	8	7	88	0.227 J	1.42 J	0.81	0.873 J	1.02 J
delta-Hexachlorocyclohexane	pg/L	8	0	0	--	--	--	--	--
Dieldrin	pg/L	8	7	88	1.25 J	3.87 J	2.5	2.35 J	3.37 J
Endosulfan sulfate	pg/L	8	2	25	0.395 J	2.69 J	1.5	0.395 J	0.395 J
Endrin	pg/L	8	0	0	--	--	--	--	--
Endrin aldehyde	pg/L	8	0	0	--	--	--	--	--
Endrin ketone	pg/L	8	0	0	--	--	--	--	--
gamma-Hexachlorocyclohexane	pg/L	8	3	38	0.109 J	0.296 J	0.19	0.154 J	0.154 J
Heptachlor	pg/L	8	0	0	--	--	--	--	--
Heptachlor epoxide	pg/L	8	0	0	--	--	--	--	--
Methoxychlor	pg/L	8	1	13	3.28 J	3.28 J	3.3	3.28 J	3.28 J
Oxychlordane	pg/L	8	6	75	0.102 J	0.303 J	0.19	0.168 J	0.266 J
trans-Chlordane	pg/L	8	8	100	0.799 J	3.8	2.0	1.66 J	2.67
trans-Nonachlor	pg/L	8	8	100	0.714 J	3.8	2.1	1.83 J	2.85
Hexachlorobenzene	pg/L	8	8	100	3.68	25	9.6	6.09	17.4
Hexachlorobutadiene	pg/L	8	2	25	4.05 J	8.52 J	6.3	4.05 J	4.05 J
Phthalate Esters									
Bis(2-ethylhexyl) phthalate	pg/L	8	0	0	--	--	--	--	--
Butylbenzyl phthalate	pg/L	8	0	0	--	--	--	--	--
Dibutyl phthalate	pg/L	8	0	0	--	--	--	--	--
Diethyl phthalate	pg/L	8	0	0	--	--	--	--	--
Dimethyl phthalate	pg/L	8	0	0	--	--	--	--	--
Di-n-octyl phthalate	pg/L	8	0	0	--	--	--	--	--

Notes:

[1] Number of samples includes normal environmental samples and field QC samples

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ANC04449
BZTO104(e)004449

Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Peristaltic Samples									
PCB Aroclors									
Aroclor 1016	ug/L	16	0	0	--	--	--	--	--
Aroclor 1221	ug/L	16	0	0	--	--	--	--	--
Aroclor 1232	ug/L	16	0	0	--	--	--	--	--
Aroclor 1242	ug/L	16	0	0	--	--	--	--	--
Aroclor 1248	ug/L	16	2	13	0.00217	0.00358 J	0.0029	0.00217	0.00217
Aroclor 1254	ug/L	16	2	13	0.0025 J	0.00272 J	0.0026	0.0025 J	0.0025 J
Aroclor 1260	ug/L	16	0	0	--	--	--	--	--
Aroclor 1262	ug/L	16	0	0	--	--	--	--	--
Aroclor 1268	ug/L	16	0	0	--	--	--	--	--
Butyltins									
Butyltin ion	ug/L	24	2	8	0.002 J	0.015 J	0.0085	0.002 J	0.002 J
Dibutyltin ion	ug/L	24	7	29	0.00061 J	0.001 J	0.00081	0.00079 J	0.001 J
Tetrabutyltin	ug/L	24	0	0	--	--	--	--	--
Tributyltin ion	ug/L	24	4	17	0.00099 J	0.0012 J	0.0011	0.0011 J	0.0011 J
Conventionals									
Dissolved organic carbon	mg/L	24	24	100	1.4	1.7	1.5	1.5	1.7
Hardness as $CaCO_3$	mg/L	24	24	100	28.2	54.8	32.6	29.4	52.5
Perchlorate	ug/L	2	2	100	0.9 J	1.7 J	1.3	0.9 J	0.9 J
Total dissolved solids	mg/L	24	24	100	57	102	74.7	73	92
Total organic carbon	mg/L	24	24	100	1.7	2.3	1.9	1.9	2.2
Total suspended solids	mg/L	25	20	80	4	16	9.4	9	14
Chlorinated Herbicides									
2,4,5-T	ug/L	24	0	0	--	--	--	--	--
2,4-D	ug/L	24	0	0	--	--	--	--	--
2,4-DB	ug/L	24	0	0	--	--	--	--	--
Dalapon	ug/L	24	1	4	0.23	0.23	0.23	0.23	0.23
Dicamba	ug/L	24	0	0	--	--	--	--	--
Dichloroprop	ug/L	24	0	0	--	--	--	--	--
Dinoseb	ug/L	24	0	0	--	--	--	--	--
MCPA	ug/L	24	0	0	--	--	--	--	--
MCPP	ug/L	24	0	0	--	--	--	--	--
Silvex	ug/L	24	0	0	--	--	--	--	--
Total Metals									
Aluminum	ug/L	24	24	100	83.9 J	353	187	165 J	313

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BZTO104(e)004450
ANC04450

Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Antimony	ug/L	24	24	100	0.02 J	0.13	0.053	0.04 J	0.11
Arsenic	ug/L	24	24	100	0.43	0.75	0.53	0.5	0.64
Cadmium	ug/L	24	10	42	0.02	0.03	0.027	0.03	0.03
Chromium hexavalent	ug/L	2	0	0	--	--	--	--	--
Chromium	ug/L	24	6	25	0.51	0.66	0.56	0.54	0.59
Copper	ug/L	24	24	100	1.02 J	1.93 J	1.4	1.38	1.71 J
Lead	ug/L	24	24	100	0.16	1.8	0.33	0.25	0.45
Mercury	ug/L	24	0	0	--	--	--	--	--
Nickel	ug/L	24	22	92	0.6	1.36	0.89	0.84	1.26
Selenium	ug/L	24	21	88	0.1 J	0.4 J	0.27	0.3 J	0.4 J
Silver	ug/L	24	0	0	--	--	--	--	--
Zinc	ug/L	24	24	100	2.32	6.77	3.5	3.2 J	4.56
Dissolved Metals									
Aluminum	ug/L	24	0	0	--	--	--	--	--
Antimony	ug/L	24	24	100	0.02 J	0.11	0.047	0.04 J	0.1
Arsenic	ug/L	24	24	100	0.37	0.64	0.46	0.45	0.62
Cadmium	ug/L	24	5	21	0.02	0.03	0.026	0.03	0.03
Chromium	ug/L	24	4	17	0.25	0.29	0.27	0.26	0.28
Copper	ug/L	24	24	100	0.73	1.64 J	0.91	0.84	1.19 J
Lead	ug/L	24	15	63	0.02	0.152	0.041	0.029	0.08
Mercury	ug/L	24	0	0	--	--	--	--	--
Nickel	ug/L	24	16	67	0.6	0.88	0.73	0.71	0.87
Selenium	ug/L	24	20	83	0.1 J	0.4 J	0.24	0.2 J	0.4 J
Silver	ug/L	24	1	4	0.061	0.061	0.061	0.061	0.061
Zinc	ug/L	24	20	83	1.6 J	4.7 J	2.1	1.88 J	2.7
Polycyclic Aromatic Hydrocarbons									
2-Methylnaphthalene	ug/L	24	0	0	--	--	--	--	--
Acenaphthene	ug/L	24	2	8	0.021	0.21	0.12	0.021	0.021
Acenaphthylene	ug/L	24	4	17	0.0042 J	0.043	0.014	0.0046 J	0.0057 J
Anthracene	ug/L	24	5	21	0.0013 J	0.072	0.018	0.0022 J	0.011 J
Benz(a)anthracene	ug/L	24	4	17	0.003 J	0.11	0.032	0.0065 J	0.0078 J
Benzo(a)pyrene	ug/L	24	4	17	0.0027 J	0.15	0.041	0.004 J	0.0075 J
Benzo(b)fluoranthene	ug/L	24	4	17	0.0028 J	0.11	0.031	0.004 J	0.008 J
Benzo(g,h,i)perylene	ug/L	24	1	4	0.14	0.14	0.14	0.14	0.14
Benzo(k)fluoranthene	ug/L	24	4	17	0.0018 J	0.1	0.028	0.0039 J	0.006 J
Chrysene	ug/L	24	14	58	0.002 J	0.19	0.017	0.0037 J	0.0081 J
Dibenz(a,h)anthracene	ug/L	24	1	4	0.011 J	0.011 J	0.011	0.011 J	0.011 J

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ANC04451
BZTO104(e)004451

Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Fluoranthene	ug/L	24	23	96	0.0036 J	0.4	0.034	0.016 J	0.024
Fluorene	ug/L	24	3	13	0.007 J	0.063	0.030	0.021	0.021
Indeno(1,2,3-cd)pyrene	ug/L	24	2	8	0.0057 J	0.11	0.058	0.0057 J	0.0057 J
Naphthalene	ug/L	24	1	4	0.13	0.13	0.13	0.13	0.13
Phenanthrene	ug/L	24	4	17	0.0071 J	0.17	0.070	0.0073 J	0.096
Pyrene	ug/L	24	23	96	0.0038 J	0.45	0.031	0.0094 J	0.017
Organochlorine Pesticides									
2,4'-DDD	ug/L	16	0	0	--	--	--	--	--
2,4'-DDE	ug/L	16	0	0	--	--	--	--	--
2,4'-DDT	ug/L	16	0	0	--	--	--	--	--
4,4'-DDD	ug/L	16	1	6	0.000839	0.000839	0.00084	0.000839	0.000839
4,4'-DDE	ug/L	16	0	0	--	--	--	--	--
4,4'-DDT	ug/L	16	1	6	0.000693 J	0.000693 J	0.00069	0.000693 J	0.000693 J
Aldrin	ug/L	16	0	0	--	--	--	--	--
alpha-Endosulfan	ug/L	16	1	6	0.000569	0.000569	0.00057	0.000569	0.000569
alpha-Hexachlorocyclohexane	ug/L	16	0	0	--	--	--	--	--
beta-Endosulfan	ug/L	16	0	0	--	--	--	--	--
beta-Hexachlorocyclohexane	ug/L	16	0	0	--	--	--	--	--
cis-Chlordane	ug/L	16	1	6	0.00104 J	0.00104 J	0.0010	0.00104 J	0.00104 J
cis-Nonachlor	ug/L	16	0	0	--	--	--	--	--
delta-Hexachlorocyclohexane	ug/L	16	0	0	--	--	--	--	--
Dieldrin	ug/L	16	0	0	--	--	--	--	--
Endosulfan sulfate	ug/L	16	0	0	--	--	--	--	--
Endrin	ug/L	16	0	0	--	--	--	--	--
Endrin aldehyde	ug/L	16	0	0	--	--	--	--	--
Endrin ketone	ug/L	16	0	0	--	--	--	--	--
gamma-Hexachlorocyclohexane	ug/L	16	0	0	--	--	--	--	--
Heptachlor	ug/L	16	0	0	--	--	--	--	--
Heptachlor epoxide	ug/L	16	0	0	--	--	--	--	--
Methoxychlor	ug/L	16	0	0	--	--	--	--	--
Mirex	ug/L	16	0	0	--	--	--	--	--
Oxychlordane	ug/L	16	0	0	--	--	--	--	--
Toxaphene	ug/L	16	0	0	--	--	--	--	--
trans-Chlordane	ug/L	16	1	6	0.00108 J	0.00108 J	0.0011	0.00108 J	0.00108 J
trans-Nonachlor	ug/L	16	0	0	--	--	--	--	--
Phenols									
2,3,4,6-Tetrachlorophenol	ug/L	24	0	0	--	--	--	--	--
2,4,5-Trichlorophenol	ug/L	24	0	0	--	--	--	--	--

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ANC04452
BZTO104(e)004452

Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,4,6-Trichlorophenol	ug/L	24	0	0	--	--	--	--	--
2,4-Dichlorophenol	ug/L	24	0	0	--	--	--	--	--
2,4-Dimethylphenol	ug/L	24	0	0	--	--	--	--	--
2,4-Dinitrophenol	ug/L	24	0	0	--	--	--	--	--
2-Chlorophenol	ug/L	24	0	0	--	--	--	--	--
2-Methylphenol	ug/L	24	0	0	--	--	--	--	--
2-Nitrophenol	ug/L	24	0	0	--	--	--	--	--
4,6-Dinitro-2-methylphenol	ug/L	24	0	0	--	--	--	--	--
4-Chloro-3-methylphenol	ug/L	24	1	4	0.075 J	0.075 J	0.075	0.075 J	0.075 J
4-Methylphenol	ug/L	24	0	0	--	--	--	--	--
4-Nitrophenol	ug/L	24	0	0	--	--	--	--	--
Pentachlorophenol	ug/L	24	0	0	--	--	--	--	--
Phenol	ug/L	24	4	17	0.059 J	0.067 J	0.064	0.064 J	0.067 J
Phthalate Esters									
Bis(2-ethylhexyl) phthalate	ug/L	24	0	0	--	--	--	--	--
Butylbenzyl phthalate	ug/L	24	1	4	0.027 J	0.027 J	0.027	0.027 J	0.027 J
Dibutyl phthalate	ug/L	24	0	0	--	--	--	--	--
Diethyl phthalate	ug/L	24	0	0	--	--	--	--	--
Dimethyl phthalate	ug/L	24	0	0	--	--	--	--	--
Di-n-octyl phthalate	ug/L	24	0	0	--	--	--	--	--
Semivolatile Organic Compounds									
1,2,4-Trichlorobenzene	ug/L	24	0	0	--	--	--	--	--
1,2-Dichlorobenzene	ug/L	24	0	0	--	--	--	--	--
1,3-Dichlorobenzene	ug/L	24	0	0	--	--	--	--	--
1,4-Dichlorobenzene	ug/L	24	0	0	--	--	--	--	--
2,4-Dinitrotoluene	ug/L	24	0	0	--	--	--	--	--
2,6-Dinitrotoluene	ug/L	24	0	0	--	--	--	--	--
2-Chloronaphthalene	ug/L	24	0	0	--	--	--	--	--
2-Nitroaniline	ug/L	24	0	0	--	--	--	--	--
3,3'-Dichlorobenzidine	ug/L	23	0	0	--	--	--	--	--
3-Nitroaniline	ug/L	24	0	0	--	--	--	--	--
4-Bromophenyl phenyl ether	ug/L	24	0	0	--	--	--	--	--
4-Chloroaniline	ug/L	23	0	0	--	--	--	--	--
4-Chlorophenyl phenyl ether	ug/L	24	0	0	--	--	--	--	--
4-Nitroaniline	ug/L	24	0	0	--	--	--	--	--
Aniline	ug/L	18	0	0	--	--	--	--	--
Azobenzene	ug/L	24	0	0	--	--	--	--	--
Benzoic acid	ug/L	24	0	0	--	--	--	--	--

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Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Benzyl alcohol	ug/L	24	0	0	--	--	--	--	--
Bis(2-chloroethoxy) methane	ug/L	24	0	0	--	--	--	--	--
Bis(2-chloroethyl) ether	ug/L	24	0	0	--	--	--	--	--
Bis(2-chloroisopropyl) ether	ug/L	24	0	0	--	--	--	--	--
Carbazole	ug/L	24	2	8	0.03 J	0.06 J	0.045	0.03 J	0.03 J
Dibenzofuran	ug/L	24	0	0	--	--	--	--	--
Hexachlorobenzene	ug/L	40	0	0	--	--	--	--	--
Hexachlorobutadiene	ug/L	40	0	0	--	--	--	--	--
Hexachlorocyclopentadiene	ug/L	24	0	0	--	--	--	--	--
Hexachloroethane	ug/L	40	0	0	--	--	--	--	--
Isophorone	ug/L	24	0	0	--	--	--	--	--
Nitrobenzene	ug/L	24	0	0	--	--	--	--	--
N-Nitrosodimethylamine	ug/L	24	0	0	--	--	--	--	--
N-Nitrosodiphenylamine	ug/L	24	0	0	--	--	--	--	--
N-Nitrosodipropylamine	ug/L	24	0	0	--	--	--	--	--
XAD Column Samples									
PCB Aroclors									
Aroclor 1016	pg/L	8	0	0	--	--	--	--	--
Aroclor 1221	pg/L	8	0	0	--	--	--	--	--
Aroclor 1232	pg/L	8	0	0	--	--	--	--	--
Aroclor 1242	pg/L	8	5	63	36.2 NJ	122 NJ	71.6	65.8 NJ	72.6 NJ
Aroclor 1248	pg/L	8	3	38	492 NJ	1270 NJ	984	1190 NJ	1190 NJ
Aroclor 1254	pg/L	8	5	63	71.2 NJ	180 NJ	102	80.9 NJ	99.2 NJ
Aroclor 1260	pg/L	8	8	100	12.6 NJ	333 NJ	89.9	20.1 NJ	246 NJ
Chlorinated Dioxin/Furan Homologs									
Tetrachlorodibenzofuran homologs	pg/L	6	6	100	0.0859	0.324	0.15	0.12	0.14
Tetrachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.109	0.166	0.13	0.116	0.146
Pentachlorodibenzofuran homologs	pg/L	6	6	100	0.0442	0.202	0.10	0.0666	0.128
Pentachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.0523	0.146	0.080	0.0696	0.0732
Hexachlorodibenzofuran homologs	pg/L	6	2	33	0.131	0.246	0.19	0.131	0.131
Hexachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.103	0.307	0.20	0.165	0.268
Heptachlorodibenzofuran homologs	pg/L	6	6	100	0.0378	0.197	0.081	0.053	0.0914
Heptachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.339	1.19	0.78	0.616	1.14
Octachlorodibenzofuran	pg/L	6	0	0	--	--	--	--	--
Octachlorodibenzo-p-dioxin	pg/L	6	6	100	0.935	4.24	2.1	1.53	2.86
Chlorinated Dioxin/Furans									
2,3,7,8-Tetrachlorodibenzofuran	pg/L	6	4	67	0.0106	0.0754	0.027	0.0113	0.0118

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Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/L	6	0	0	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran	pg/L	6	1	17	0.0491	0.0491	0.049	0.0491	0.0491
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/L	6	0	0	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran	pg/L	6	1	17	0.0156 J	0.0156 J	0.016	0.0156 J	0.0156 J
1,2,3,4,7,8-Hexachlorodibenzofuran	pg/L	6	1	17	0.0323	0.0323	0.032	0.0323	0.0323
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/L	6	0	0	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran	pg/L	6	1	17	0.0314	0.0314	0.031	0.0314	0.0314
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/L	6	3	50	0.0173 J	0.0254 J	0.020	0.0181 J	0.0181 J
1,2,3,7,8,9-Hexachlorodibenzofuran	pg/L	6	0	0	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/L	6	2	33	0.0137 J	0.0148 J	0.014	0.0137 J	0.0137 J
2,3,4,6,7,8-Hexachlorodibenzofuran	pg/L	6	0	0	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/L	6	1	17	0.0256 J	0.0256 J	0.026	0.0256 J	0.0256 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/L	6	6	100	0.177	0.569	0.38	0.3	0.55
1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/L	6	1	17	0.0699	0.0699	0.070	0.0699	0.0699
Polycyclic Aromatic Hydrocarbons									
2-Methylnaphthalene	pg/L	8	8	100	1770	6120	3344	3250	3780
Acenaphthene	pg/L	8	8	100	433	26200	7474	4020	17200
Acenaphthylene	pg/L	8	6	75	304	1730	713	523	736
Anthracene	pg/L	8	6	75	707	3210	1711	1490	1870
Benz(a)anthracene	pg/L	8	8	100	121 J	2360	754	321	1670
Benzo(a)pyrene	pg/L	8	4	50	45.5 J	336	157	121 J	125 J
Benzo(b+j)fluoranthene	pg/L	8	5	63	123 J	758	383	156	736
Benzo(g,h,i)perylene	pg/L	8	7	88	43 J	136 J	68.6	54.4 J	83.5 J
Benzo(k)fluoranthene	pg/L	8	5	63	80.6 J	795	393	476	526
Chrysene	pg/L	8	8	100	238	4990	1453	685	3060
Dibenz(a,h)anthracene	pg/L	8	2	25	25.5 J	45.4 J	35.5	25.5 J	25.5 J
Fluoranthene	pg/L	8	8	100	873	37500	9730	3620	20200
Fluorene	pg/L	8	8	100	615	12100	4484	2750	10500
Indeno(1,2,3-cd)pyrene	pg/L	8	0	0	--	--	--	--	--
Naphthalene	pg/L	8	2	25	16500	27600	22050	16500	16500
Phenanthrene	pg/L	8	8	100	1050	30900	8359	5470	13600
Pyrene	pg/L	8	8	100	899	25300	7410	3270	13600
PCB Congeners									
2-Chlorobiphenyl (PCB 1)	pg/L	8	8	100	0.696	2.96	1.3	0.836	1.78
3-Chlorobiphenyl (PCB 2)	pg/L	8	8	100	0.215	0.49	0.32	0.243	0.457
4-Chlorobiphenyl (PCB 3)	pg/L	8	8	100	0.287	1.15	0.58	0.42	0.853
2,2'-Dichlorobiphenyl (PCB 4)	pg/L	8	8	100	13.1	198	56.6	21.2	135
2,3'-Dichlorobiphenyl (PCB 6)	pg/L	8	8	100	0.487	1.6	1.1	0.939	1.51

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Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,3-Dichlorobiphenyl (PCB 5)	pg/L	8	1	13	0.0682	0.0682	0.068	0.0682	0.0682
2,4'-Dichlorobiphenyl (PCB 8)	pg/L	8	8	100	1.65	4.65	3.3	3.06	4.52
2,4-Dichlorobiphenyl (PCB 7)	pg/L	8	7	88	0.0977	0.328	0.22	0.228	0.286
2,5-Dichlorobiphenyl (PCB 9)	pg/L	8	7	88	0.195	0.455	0.29	0.29	0.313
2,6-Dichlorobiphenyl (PCB 10)	pg/L	8	8	100	0.441	11.4	3.0	0.73	7.9
3,3'-Dichlorobiphenyl (PCB 11)	pg/L	8	8	100	13.8	30.2	19.0	15.8	22.7
3,5-Dichlorobiphenyl (PCB 14)	pg/L	8	0	0	--	--	--	--	--
4,4'-Dichlorobiphenyl (PCB 15)	pg/L	8	8	100	1.17	3.95	2.7	2.58	3.56
2,2',3-Trichlorobiphenyl (PCB 16)	pg/L	8	8	100	1.39	5.83	3.2	2.48	5.03
2,2',4-Trichlorobiphenyl (PCB 17)	pg/L	8	8	100	3.27	48	15.6	6.19	40.7
2,2',6-Trichlorobiphenyl (PCB 19)	pg/L	8	8	100	13.2	393	104	20.8	317
2,3',4-Trichlorobiphenyl (PCB 25)	pg/L	8	8	100	0.518	5.54	2.2	1.11	5.07
2,3,4'-Trichlorobiphenyl (PCB 22)	pg/L	8	8	100	1.23	6.38	2.9	2.11	4.98
2,3',5'-Trichlorobiphenyl (PCB 34)	pg/L	8	6	75	0.0522	0.158	0.10	0.0554	0.158
2,3,5-Trichlorobiphenyl (PCB 23)	pg/L	8	2	25	0.0188 J	0.0408	0.030	0.0188 J	0.0188 J
2,3,6-Trichlorobiphenyl (PCB 24)	pg/L	8	5	63	0.12	0.263	0.18	0.147	0.259
2,3',6-Trichlorobiphenyl (PCB 27)	pg/L	8	8	100	0.95	33	8.9	1.89	28.3
2,4',5-Trichlorobiphenyl (PCB 31)	pg/L	8	8	100	3.27	16.7	7.8	5.79	11.3
2,4',6-Trichlorobiphenyl (PCB 32)	pg/L	8	8	100	1.6	16.5	6.8	4.15	14.4
3,3',4-Trichlorobiphenyl (PCB 35)	pg/L	8	6	75	0.141	0.329	0.21	0.168	0.293
3,3',5-Trichlorobiphenyl (PCB 36)	pg/L	8	1	13	0.062	0.062	0.062	0.062	0.062
3,4,4'-Trichlorobiphenyl (PCB 37)	pg/L	8	8	100	0.796	3.28	1.7	1.3	2.73
3,4,5-Trichlorobiphenyl (PCB 38)	pg/L	8	4	50	0.0169 J	0.202	0.11	0.0512	0.165
3,4',5-Trichlorobiphenyl (PCB 39)	pg/L	8	5	63	0.059	0.234	0.12	0.131	0.137
2,2',3,4'-Tetrachlorobiphenyl (PCB 42)	pg/L	8	8	100	1.5	9.16	3.8	2.69	4.52
2,2',3,5-Tetrachlorobiphenyl (PCB 43)	pg/L	8	8	100	0.251	4.47	1.5	0.433	3.99
2,2',3,6'-Tetrachlorobiphenyl (PCB 46)	pg/L	8	8	100	0.547	5.68	2.3	1.29	4.91
2,2',4,5-Tetrachlorobiphenyl (PCB 48)	pg/L	8	8	100	0.871	5.29	2.2	1.51	2.69
2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	pg/L	8	8	100	10.7	56.7	29.3	19.2	56.5
2,2',6,6'-Tetrachlorobiphenyl (PCB 54)	pg/L	8	8	100	1.21	54.1	14.6	2.04	50.8
2,3,3',4'-Tetrachlorobiphenyl (PCB 56)	pg/L	8	8	100	1.52	12.7	3.8	2.26	5.34
2,3,3',4-Tetrachlorobiphenyl (PCB 55)	pg/L	8	2	25	0.0622	0.237	0.15	0.0622	0.0622
2,3,3',5'-Tetrachlorobiphenyl (PCB 58)	pg/L	8	5	63	0.0253	1.4	0.57	0.518	0.826
2,3,3',5-Tetrachlorobiphenyl (PCB 57)	pg/L	8	4	50	0.0409	0.965	0.48	0.0904	0.816
2,3,4,4'-Tetrachlorobiphenyl (PCB 60)	pg/L	8	8	100	0.737	5.36	1.6	0.899	2.22
2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	pg/L	8	8	100	3.5	22.7	7.9	5.75	9.43
2,3',4,5'-Tetrachlorobiphenyl (PCB 68)	pg/L	8	6	75	0.112	1.47	0.57	0.136	1.24
2,3',4,5-Tetrachlorobiphenyl (PCB 67)	pg/L	8	7	88	0.118	0.921	0.37	0.247	0.573
2,3,4',5-Tetrachlorobiphenyl (PCB 63)	pg/L	8	7	88	0.165	1.02	0.44	0.31	0.586
2,3,4',6-Tetrachlorobiphenyl (PCB 64)	pg/L	8	8	100	2.3	14.7	5.1	3.45	6.44

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Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,3',5,5'-Tetrachlorobiphenyl (PCB 72)	pg/L	8	8	100	0.0932	0.794	0.30	0.15	0.648
2,3',5',6-Tetrachlorobiphenyl (PCB 73)	pg/L	8	7	88	0.117	7.17	1.7	0.437	2.7
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	pg/L	8	8	100	0.256	1.38	0.51	0.33	0.665
3,3',4,5'-Tetrachlorobiphenyl (PCB 79)	pg/L	8	7	88	0.0931	0.387	0.22	0.246	0.305
3,3',4,5-Tetrachlorobiphenyl (PCB 78)	pg/L	8	0	0	--	--	--	--	--
3,3',5,5'-Tetrachlorobiphenyl (PCB 80)	pg/L	8	0	0	--	--	--	--	--
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4-Pentachlorobiphenyl (PCB 82)	pg/L	8	8	100	0.657	2.5	1.2	0.968	1.65
2,2',3,3',6-Pentachlorobiphenyl (PCB 84)	pg/L	8	8	100	2.59	14.5	6.4	3.57	12
2,2',3,4,6'-Pentachlorobiphenyl (PCB 89)	pg/L	8	8	100	0.107	0.452	0.22	0.189	0.301
2,2',3,5,5'-Pentachlorobiphenyl (PCB 92)	pg/L	8	8	100	1.75	28.8	8.3	2.43	20.8
2,2',3,5,6'-Pentachlorobiphenyl (PCB 94)	pg/L	8	8	100	0.205	10.9	2.7	0.308	8.57
2,2',3,6,6'-Pentachlorobiphenyl (PCB 96)	pg/L	8	7	88	0.236	4.65	1.5	0.401	4.12
2,2',4,5',6-Pentachlorobiphenyl (PCB 103)	pg/L	8	8	100	0.425	7.17	2.0	0.548	5.67
2,2',4,6,6'-Pentachlorobiphenyl (PCB 104)	pg/L	8	7	88	0.0515	2.5	0.70	0.108	1.97
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	pg/L	8	8	100	1.27	3.72	2.0	1.68	2.68
2,3,3',4',5'-Pentachlorobiphenyl (PCB 122)	pg/L	8	6	75	0.0515	0.191	0.10	0.0878	0.105
2,3,3',4,5-Pentachlorobiphenyl (PCB 106)	pg/L	8	2	25	0.111	0.167	0.14	0.111	0.111
2,3,3',4,6-Pentachlorobiphenyl (PCB 109)	pg/L	8	8	100	0.31	1.11	0.65	0.546	0.854
2,3,3',5,5'-Pentachlorobiphenyl (PCB 111)	pg/L	8	3	38	0.0146 J	0.226	0.13	0.139	0.139
2,3,3',5,6-Pentachlorobiphenyl (PCB 112)	pg/L	8	4	50	0.156	7.51	3.3	0.244	5.37
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	pg/L	8	7	88	0.0908	0.238	0.16	0.151	0.215
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	pg/L	8	6	75	0.0828	0.246	0.13	0.105	0.133
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	pg/L	8	8	100	3.32	10.1	6.4	4.99	8.7
2,3',4,5,5'-Pentachlorobiphenyl (PCB 120)	pg/L	8	7	88	0.0442	0.43	0.15	0.0563	0.27
2,3',4,5',6-Pentachlorobiphenyl (PCB 121)	pg/L	8	5	63	0.0365	0.719	0.27	0.0578	0.489
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	pg/L	8	1	13	0.0236 J	0.0236 J	0.024	0.0236 J	0.0236 J
3,3',4,5,5'-Pentachlorobiphenyl (PCB 127)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4,5'-Hexachlorobiphenyl (PCB 130)	pg/L	8	7	88	0.228	2.78	1.0	0.476	1.98
2,2',3,3',4,6'-Hexachlorobiphenyl (PCB 132)	pg/L	8	8	100	1.58	22.3	7.1	2.8	15.8
2,2',3,3',4,6-Hexachlorobiphenyl (PCB 131)	pg/L	8	6	75	0.0409	0.556	0.22	0.101	0.391
2,2',3,3',5,5'-Hexachlorobiphenyl (PCB 133)	pg/L	8	7	88	0.199	2.74	0.83	0.227	1.79
2,2',3,3',6,6'-Hexachlorobiphenyl (PCB 136)	pg/L	8	8	100	1.25	21.1	6.0	1.8	14.9
2,2',3,4,4',5-Hexachlorobiphenyl (PCB 137)	pg/L	8	7	88	0.145	0.97	0.40	0.216	0.724
2,2',3,4,5,5'-Hexachlorobiphenyl (PCB 141)	pg/L	8	8	100	0.722	19.6	5.4	1.52	13.7
2,2',3,4',5,5'-Hexachlorobiphenyl (PCB 146)	pg/L	8	8	100	0.869	15.8	4.6	1.54	10.8
2,2',3,4',5,6'-Hexachlorobiphenyl (PCB 148)	pg/L	8	5	63	0.0498	0.961	0.36	0.0641	0.643
2,2',3,4,5,6-Hexachlorobiphenyl (PCB 142)	pg/L	8	1	13	0.0233 J	0.0233 J	0.023	0.0233 J	0.0233 J
2,2',3,4,5',6-Hexachlorobiphenyl (PCB 144)	pg/L	8	8	100	0.257	5.24	1.5	0.49	3.72
2,2',3,4,6,6'-Hexachlorobiphenyl (PCB 145)	pg/L	8	4	50	0.0058 J	0.0551	0.025	0.0082 J	0.0312

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ANC04457
BZTO104(e)004457

Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,2',3,4',6,6'-Hexachlorobiphenyl (PCB 150)	pg/L	8	8	100	0.049	0.774	0.22	0.0648	0.523
2,2',3,5,6,6'-Hexachlorobiphenyl (PCB 152)	pg/L	8	5	63	0.0366	1.21	0.43	0.0679	0.815
2,2',4,4',6,6'-Hexachlorobiphenyl (PCB 155)	pg/L	8	4	50	0.00858 J	0.179	0.078	0.00914 J	0.116
2,3,3',4,4',6-Hexachlorobiphenyl (PCB 158)	pg/L	8	8	100	0.361	5.69	1.7	0.653	3.97
2,3,3',4,5,5'-Hexachlorobiphenyl (PCB 159)	pg/L	8	7	88	0.0537	1.08	0.33	0.0797	0.793
2,3,3',4',5,5'-Hexachlorobiphenyl (PCB 162)	pg/L	8	0	0	--	--	--	--	--
2,3,3',4,5',6-Hexachlorobiphenyl (PCB 161)	pg/L	8	0	0	--	--	--	--	--
2,3,3',4',5',6-Hexachlorobiphenyl (PCB 164)	pg/L	8	8	100	0.316	6.48	1.9	0.637	4.48
2,3,3',5,5',6-Hexachlorobiphenyl (PCB 165)	pg/L	8	2	25	0.186	0.295	0.24	0.186	0.186
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	pg/L	8	8	100	0.114	1.3	0.41	0.162	0.949
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	pg/L	8	7	88	0.541	14.8	4.5	1.06	11.4
2,2',3,3',4,5,5'-Heptachlorobiphenyl (PCB 172)	pg/L	8	6	75	0.171	3.01	1.0	0.23	2.26
2,2',3,3',4,5',6'-Heptachlorobiphenyl (PCB 177)	pg/L	8	8	100	0.495	12.7	3.4	0.981	9.02
2,2',3,3',4,5',6-Heptachlorobiphenyl (PCB 175)	pg/L	8	6	75	0.0433	0.922	0.32	0.0936	0.67
2,2',3,3',4,5,6'-Heptachlorobiphenyl (PCB 174)	pg/L	8	8	100	0.879	24.5	6.6	1.77	17.3
2,2',3,3',4,6,6'-Heptachlorobiphenyl (PCB 176)	pg/L	8	8	100	0.132	3.11	0.86	0.262	2.2
2,2',3,3',5,5',6-Heptachlorobiphenyl (PCB 178)	pg/L	8	8	100	0.247	5.88	1.6	0.507	4.12
2,2',3,3',5,6,6'-Heptachlorobiphenyl (PCB 179)	pg/L	8	8	100	0.451	12.5	3.4	0.913	8.67
2,2',3,4,4',5,6'-Heptachlorobiphenyl (PCB 182)	pg/L	8	4	50	0.0174 J	0.156	0.072	0.0204 J	0.0951
2,2',3,4,4',5,6-Heptachlorobiphenyl (PCB 181)	pg/L	8	3	38	0.00762 J	0.0931	0.057	0.069	0.069
2,2',3,4,4',6,6'-Heptachlorobiphenyl (PCB 184)	pg/L	8	1	13	0.00404 J	0.00404 J	0.0040	0.00404 J	0.00404 J
2,2',3,4',5,5',6-Heptachlorobiphenyl (PCB 187)	pg/L	8	8	100	1.19	27.3	7.5	2.37	19.2
2,2',3,4,5,6,6'-Heptachlorobiphenyl (PCB 186)	pg/L	8	0	0	--	--	--	--	--
2,2',3,4',5,6,6'-Heptachlorobiphenyl (PCB 188)	pg/L	8	7	88	0.00723 J	0.0982	0.030	0.0127 J	0.0636
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	pg/L	8	6	75	0.0137 J	0.352	0.12	0.0241	0.272
2,3,3',4,4',5,6-Heptachlorobiphenyl (PCB 190)	pg/L	8	7	88	0.188	3.11	0.95	0.226	2.32
2,3,3',4,4',5',6-Heptachlorobiphenyl (PCB 191)	pg/L	8	8	100	0.0179 J	0.7	0.19	0.0512	0.503
2,3,3',4,5,5',6-Heptachlorobiphenyl (PCB 192)	pg/L	8	0	0	--	--	--	--	--
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (PCB 194)	pg/L	8	7	88	0.155	2.83	0.87	0.223	2.24
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (PCB 196)	pg/L	8	7	88	0.131	2.15	0.71	0.28	1.71
2,2',3,3',4,4',5,6-Octachlorobiphenyl (PCB 195)	pg/L	8	7	88	0.0717	1.48	0.48	0.135	1.23
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (PCB 201)	pg/L	8	5	63	0.135	0.638	0.33	0.204	0.529
2,2',3,3',5,5',6,6'-Octachlorobiphenyl (PCB 202)	pg/L	8	2	25	0.649	0.86	0.75	0.649	0.649
2,2',3,4,4',5,5',6-Octachlorobiphenyl (PCB 203)	pg/L	8	7	88	0.2	2.38	0.83	0.346	1.97
2,2',3,4,4',5,6,6'-Octachlorobiphenyl (PCB 204)	pg/L	8	1	13	0.000764 J	0.000764 J	0.00076	0.000764 J	0.000764 J
2,3,3',4,4',5,5',6-Octachlorobiphenyl (PCB 205)	pg/L	8	4	50	0.0149 J	0.144	0.073	0.0233 J	0.111
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB 206)	pg/L	8	6	75	0.0885	0.309	0.18	0.138	0.29
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (PCB 207)	pg/L	8	5	63	0.0315	0.146	0.075	0.0731	0.0877
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (PCB 208)	pg/L	8	7	88	0.0529	0.148	0.083	0.0658	0.111

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ANC04458
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Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)	pg/L	8	5	63	0.0345	0.0722	0.055	0.0571	0.0603
PCB012 & 013	pg/L	8	3	38	0.355	1.35	0.93	1.09	1.09
PCB018 & 030	pg/L	8	8	100	3.06	14.1	8.6	6.55	13.2
PCB020 & 028	pg/L	8	8	100	4.1	21.2	10.2	7.99	14.1
PCB021 & 033	pg/L	8	8	100	1.2	6.18	3.8	2.89	5.78
PCB026 & 029	pg/L	8	8	100	0.975	6	3.0	1.81	5.05
PCB040 & 041 & 071	pg/L	8	8	100	3.3	20.5	10.3	6.49	17
PCB044 & 047 & 065	pg/L	8	8	100	8.63	151	50.2	18.8	139
PCB045 & 051	pg/L	8	8	100	2.81	73.2	22.4	5.89	71.5
PCB049 & 069	pg/L	8	8	100	5.74	51.7	21.1	11.1	49.7
PCB050 & 053	pg/L	8	8	100	4.17	80	24.1	6.22	73.2
PCB059 & 062 & 075	pg/L	8	8	100	0.582	10.9	3.7	1.08	10.6
PCB061 & 070 & 074 & 076	pg/L	8	8	100	6.98	32.8	13.3	9.36	16.5
PCB083 & 099	pg/L	8	8	100	4.17	32.6	12.1	5.65	24.7
PCB085 & 116 & 117	pg/L	8	8	100	1.14	3.53	2.2	1.77	3.16
PCB086 & 087 & 097 & 108 & 119 & 125	pg/L	8	8	100	4.72	19.2	9.8	6.75	15.2
PCB088 & 091	pg/L	8	8	100	1.84	17.5	6.0	2.32	13.5
PCB090 & 101 & 113	pg/L	8	8	100	8.14	70.6	24.9	10.3	53.7
PCB093 & 095 & 098 & 100 & 102	pg/L	8	8	100	10.1	117	37.9	12.2	93.4
PCB107 & 124	pg/L	8	7	88	0.149	0.39	0.28	0.277	0.389
PCB110 & 115	pg/L	8	8	100	7.34	26.4	15.3	11	23.4
PCB128 & 166	pg/L	8	8	100	0.49	3.66	1.4	0.832	2.74
PCB129 & 138 & 160 & 163	pg/L	8	8	100	4.13	72.7	21.3	7.43	50.6
PCB134 & 143	pg/L	8	8	100	0.325	7.4	2.0	0.525	5.14
PCB135 & 151 & 154	pg/L	8	8	100	2.69	67	17.9	4.7	45.4
PCB139 & 140	pg/L	8	8	100	0.0886	0.761	0.27	0.138	0.526
PCB147 & 149	pg/L	8	8	100	4.89	97.3	27.5	8.24	66.3
PCB153 & 168	pg/L	8	8	100	3.8	82.8	23.2	6.85	56.9
PCB156 & 157	pg/L	8	8	100	0.248	2.77	0.91	0.381	2.09
PCB171 & 173	pg/L	8	8	100	0.261	6.1	1.7	0.483	4.39
PCB180 & 193	pg/L	8	8	100	1.42	37	10.0	2.63	27.3
PCB183 & 185	pg/L	8	8	100	0.557	14.8	4.0	1.17	10.6
PCB197 & 200	pg/L	8	8	100	0.0479 J	0.818	0.26	0.114	0.656
PCB198 & 199	pg/L	8	8	100	0.352	4.47	1.4	0.627	3.52
Total polychlorinated biphenyl congeners	pg/L	8	8	100	204	2160	809	404	2060
PCB Homologs									
Monochlorobiphenyl	pg/L	8	8	100	1.24	3.95	2.2	1.48	3.09
Dichlorobiphenyl	pg/L	8	8	100	32.8	241	86.5	49	172
Trichlorobiphenyl	pg/L	8	8	100	35.5	548	179	66.3	446

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Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Tetrachlorobiphenyl	pg/L	8	8	100	56.2	529	221	124	527
Pentachlorobiphenyl	pg/L	8	8	100	48.5	380	143	66.2	297
Hexachlorobiphenyl	pg/L	8	8	100	22.5	443	126	39.1	306
Heptachlorobiphenyl	pg/L	8	8	100	6.25	167	45.1	12.2	120
Octachlorobiphenyl	pg/L	8	8	100	1.12	15.8	4.8	1.49	12.6
Nonachlorobiphenyl	pg/L	8	7	88	0.057	0.507	0.29	0.204	0.45
Organochlorine Pesticides									
2,4'-DDD	pg/L	8	8	100	8.05	749	177	31.2	536
2,4'-DDE	pg/L	8	8	100	0.646 J	35.8	8.2	1.28 J	21.7
2,4'-DDT	pg/L	8	8	100	0.644 J	123	20.9	2.39 J	33.3
4,4'-DDD	pg/L	8	8	100	23.3	1630	394	66.2	1210
4,4'-DDE	pg/L	8	8	100	20.7	197	57.1	22.9	107
4,4'-DDT	pg/L	8	8	100	2.27 J	232	40.9	3.68 J	71.1
Aldrin	pg/L	8	6	75	1.15 J	2.2 J	1.5	1.28 J	1.98 J
alpha-Endosulfan	pg/L	8	8	100	40.9	54.3	49.2	50.6	52.1
alpha-Hexachlorocyclohexane	pg/L	8	8	100	22.3	94.2	67.8	67.6	89.8
beta-Endosulfan	pg/L	8	8	100	22.2	35.7	28.8	27.5	33.1
beta-Hexachlorocyclohexane	pg/L	8	8	100	5.06 J	19.4	9.8	7.99 J	15.9
cis-Chlordane	pg/L	8	8	100	8.64 J	12.5	9.7	9.28 J	10 J
cis-Nonachlor	pg/L	8	5	63	1.92 J	2.54 J	2.2	2.03 J	2.49 J
delta-Hexachlorocyclohexane	pg/L	8	8	100	0.935 J	3.31 J	1.9	1.53 J	3.24 J
Dieldrin	pg/L	8	8	100	37.2	44.1	40.6	40	42.4
Endosulfan sulfate	pg/L	8	8	100	221	352	284	270	340
Endrin	pg/L	8	1	13	0.723 J	0.723 J	0.72	0.723 J	0.723 J
Endrin aldehyde	pg/L	8	0	0	--	--	--	--	--
Endrin ketone	pg/L	8	5	63	0.432 J	1.1 J	0.74	0.846 J	0.872 J
gamma-Hexachlorocyclohexane	pg/L	8	8	100	24.9	71.1	39.2	27.7	60.5
Heptachlor	pg/L	8	0	0	--	--	--	--	--
Heptachlor epoxide	pg/L	8	8	100	4.15 J	4.78 J	4.4	4.36 J	4.63 J
Methoxychlor	pg/L	8	0	0	--	--	--	--	--
Oxychlordane	pg/L	8	3	38	1.32 J	2.67 J	1.8	1.46 J	1.46 J
trans-Chlordane	pg/L	8	8	100	6.19 J	7.65 J	7.1	6.83 J	7.65 J
trans-Nonachlor	pg/L	8	8	100	4.86 J	7.3 J	6.1	5.9 J	6.73 J
Hexachlorobenzene	pg/L	8	8	100	30.6	53.4	37.9	37.2	39.5
Hexachlorobutadiene	pg/L	8	6	75	0.573 J	140 J	29.8	2.84 J	30.7 J
Phthalate Esters									
Bis(2-ethylhexyl) phthalate	pg/L	8	8	100	3510 J	19800	8840	4350 J	17100
Butylbenzyl phthalate	pg/L	8	7	88	889 J	2060	1498	1440 J	1990

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ANC04460
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Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Dibutyl phthalate	pg/L	8	8	100	1490 J	2170 J	1791	1780 J	1950 J
Diethyl phthalate	pg/L	8	8	100	1240 J	2480	1951	1990	2330
Dimethyl phthalate	pg/L	8	0	0	--	--	--	--	--
Di-n-octyl phthalate	pg/L	8	2	25	116 J	142 J	129	116 J	116 J
XAD Filter Samples									
PCB Aroclors									
Aroclor 1016	pg/L	7	0	0	--	--	--	--	--
Aroclor 1221	pg/L	7	0	0	--	--	--	--	--
Aroclor 1232	pg/L	7	0	0	--	--	--	--	--
Aroclor 1242	pg/L	7	5	71	4.64 NJ	38.3 NJ	15.7	13.1 NJ	15.4 NJ
Aroclor 1248	pg/L	7	2	29	495 NJ	1300 NJ	898	495 NJ	495 NJ
Aroclor 1254	pg/L	7	5	71	38.4 NJ	145 NJ	83.7	62.6 NJ	113 NJ
Aroclor 1260	pg/L	7	7	100	57.1 NJ	4360 NJ	737	148 NJ	197 NJ
Chlorinated Dioxin/Furan Homologs									
Tetrachlorodibenzofuran homologs	pg/L	6	6	100	0.108	1.16	0.41	0.304	0.339
Tetrachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.151	1.99	0.52	0.215	0.337
Pentachlorodibenzofuran homologs	pg/L	6	6	100	0.14	1.35	0.59	0.397	0.885
Pentachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.0864	3.19	0.78	0.151	0.81
Hexachlorodibenzofuran homologs	pg/L	6	6	100	0.306	1.8	0.94	0.564	1.76
Hexachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	0.604	4.77	2.4	1.28	3.95
Heptachlorodibenzofuran homologs	pg/L	6	6	100	0.315	2.74	1.3	1.08	1.66
Heptachlorodibenzo-p-dioxin homologs	pg/L	6	6	100	3.78	27	10.7	5.16	14.5
Octachlorodibenzofuran	pg/L	6	6	100	0.203	1.97	0.95	0.642	1.31
Octachlorodibenzo-p-dioxin	pg/L	6	6	100	10.4	118	35.6	17.7	28.8
Chlorinated Dioxin/Furans									
2,3,7,8-Tetrachlorodibenzofuran	pg/L	6	6	100	0.011	0.435	0.095	0.0319	0.0393
2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/L	6	2	33	0.00454 J	0.26	0.13	0.00454 J	0.00454 J
1,2,3,7,8-Pentachlorodibenzofuran	pg/L	6	6	100	0.00456 J	0.457	0.097	0.0323	0.0387
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/L	6	6	100	0.0103 J	0.505	0.11	0.0162 J	0.0872
2,3,4,7,8-Pentachlorodibenzofuran	pg/L	6	5	83	0.0137 J	0.188	0.056	0.0217 J	0.0372
1,2,3,4,7,8-Hexachlorodibenzofuran	pg/L	6	6	100	0.0152 J	0.856	0.20	0.0801	0.146
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/L	6	6	100	0.0216 J	0.165	0.080	0.0332	0.154
1,2,3,6,7,8-Hexachlorodibenzofuran	pg/L	6	6	100	0.0123 J	0.23	0.066	0.0298 J	0.0569
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/L	6	6	100	0.0826	0.479	0.28	0.149	0.45
1,2,3,7,8,9-Hexachlorodibenzofuran	pg/L	6	6	100	0.00131 J	0.0157 J	0.0049	0.00328 J	0.00377 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/L	6	6	100	0.0537	0.604	0.25	0.0967	0.449
2,3,4,6,7,8-Hexachlorodibenzofuran	pg/L	6	6	100	0.00924 J	0.0439	0.023	0.0153 J	0.0389

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ANC04461
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Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/L	6	6	100	0.118	0.876	0.46	0.375	0.689
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/L	6	6	100	1.86	14.3	5.4	2.59	6.91
1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/L	6	6	100	0.0122 J	0.185	0.062	0.0318	0.0855
Polycyclic Aromatic Hydrocarbons									
2-Methylnaphthalene	pg/L	8	0	0	--	--	--	--	--
Acenaphthene	pg/L	8	1	13	257	257	257	257	257
Acenaphthylene	pg/L	8	0	0	--	--	--	--	--
Anthracene	pg/L	8	5	63	395	1430	698	484	752
Benz(a)anthracene	pg/L	8	7	88	215	3770	1214	703	2070
Benzo(a)pyrene	pg/L	8	6	75	275	6300	1971	908	2570
Benzo(b+j)fluoranthene	pg/L	8	8	100	267	6010	1723	883	4160
Benzo(g,h,i)perylene	pg/L	8	8	100	267	7510	1808	838	3050
Benzo(k)fluoranthene	pg/L	8	8	100	181	5430	1440	655	3440
Chrysene	pg/L	8	6	75	399	8110	2753	1180	4340
Dibenz(a,h)anthracene	pg/L	8	2	25	542	865	704	542	542
Fluoranthene	pg/L	8	7	88	603	6810	2247	1390	3370
Fluorene	pg/L	8	7	88	31.6 J	278	184	201	219
Indeno(1,2,3-cd)pyrene	pg/L	8	8	100	198	6080	1464	625	2810
Naphthalene	pg/L	8	6	75	742	1010	870	836	930
Phenanthrene	pg/L	8	1	13	1290	1290	1290	1290	1290
Pyrene	pg/L	8	5	63	1870	8150	3618	2040	4070
PCB Congeners									
2-Chlorobiphenyl (PCB 1)	pg/L	7	5	71	0.0431	0.381	0.15	0.0675	0.19
3-Chlorobiphenyl (PCB 2)	pg/L	7	6	86	0.0705	0.887	0.24	0.0758	0.215
4-Chlorobiphenyl (PCB 3)	pg/L	7	5	71	0.0792	0.802	0.26	0.101	0.237
2,2'-Dichlorobiphenyl (PCB 4)	pg/L	7	5	71	0.264	14.3	3.3	0.656	0.703
2,3'-Dichlorobiphenyl (PCB 6)	pg/L	7	2	29	0.226	0.276	0.25	0.226	0.226
2,3-Dichlorobiphenyl (PCB 5)	pg/L	7	0	0	--	--	--	--	--
2,4'-Dichlorobiphenyl (PCB 8)	pg/L	7	6	86	0.175	0.829	0.45	0.286	0.683
2,4-Dichlorobiphenyl (PCB 7)	pg/L	7	1	14	0.0816	0.0816	0.082	0.0816	0.0816
2,5-Dichlorobiphenyl (PCB 9)	pg/L	7	2	29	0.0498	0.0671	0.058	0.0498	0.0498
2,6-Dichlorobiphenyl (PCB 10)	pg/L	7	1	14	1.09	1.09	1.1	1.09	1.09
3,3'-Dichlorobiphenyl (PCB 11)	pg/L	7	7	100	1.06	4.06	2.6	2.67	3.66
3,5-Dichlorobiphenyl (PCB 14)	pg/L	7	0	0	--	--	--	--	--
4,4'-Dichlorobiphenyl (PCB 15)	pg/L	7	7	100	0.32	3.15	1.1	0.683	1.76
2,2',3-Trichlorobiphenyl (PCB 16)	pg/L	7	7	100	0.0897	1.34	0.49	0.276	0.921
2,2',4-Trichlorobiphenyl (PCB 17)	pg/L	7	7	100	0.214	11.6	2.4	0.53	1.84
2,2',6-Trichlorobiphenyl (PCB 19)	pg/L	7	7	100	0.485	61.1	9.7	1.08	1.74

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Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,3',4-Trichlorobiphenyl (PCB 25)	pg/L	7	7	100	0.0962	2.31	0.64	0.221	0.993
2,3,4'-Trichlorobiphenyl (PCB 22)	pg/L	7	7	100	0.157	2.51	0.83	0.518	1.51
2,3',5'-Trichlorobiphenyl (PCB 34)	pg/L	7	5	71	0.00856 J	0.0665	0.033	0.0314	0.049
2,3,5-Trichlorobiphenyl (PCB 23)	pg/L	7	2	29	0.00702 J	0.0125 J	0.010	0.00702 J	0.00702 J
2,3,6-Trichlorobiphenyl (PCB 24)	pg/L	7	4	57	0.00699 J	0.0517	0.031	0.0227 J	0.0431
2,3',6-Trichlorobiphenyl (PCB 27)	pg/L	7	7	100	0.0826	8.36	1.4	0.196	0.405
2,4',5-Trichlorobiphenyl (PCB 31)	pg/L	7	7	100	0.513	7.31	2.6	1.66	4.17
2,4',6-Trichlorobiphenyl (PCB 32)	pg/L	7	7	100	0.139	2.64	0.78	0.308	1.21
3,3',4-Trichlorobiphenyl (PCB 35)	pg/L	7	6	86	0.0424	0.187	0.10	0.0675	0.17
3,3',5-Trichlorobiphenyl (PCB 36)	pg/L	7	5	71	0.00682 J	0.0466	0.019	0.0134 J	0.0147 J
3,4,4'-Trichlorobiphenyl (PCB 37)	pg/L	7	7	100	0.348	3.14	1.2	0.887	1.91
3,4,5-Trichlorobiphenyl (PCB 38)	pg/L	7	3	43	0.0272	0.0926	0.065	0.0742	0.0742
3,4',5-Trichlorobiphenyl (PCB 39)	pg/L	7	5	71	0.0197 J	0.152	0.061	0.0575	0.0577
2,2',3,4'-Tetrachlorobiphenyl (PCB 42)	pg/L	7	7	100	0.329	8.51	2.4	0.752	3.64
2,2',3,5-Tetrachlorobiphenyl (PCB 43)	pg/L	7	7	100	0.045	4.02	0.85	0.133	1.17
2,2',3,6'-Tetrachlorobiphenyl (PCB 46)	pg/L	7	7	100	0.0906	2.8	0.80	0.21	1.55
2,2',4,5-Tetrachlorobiphenyl (PCB 48)	pg/L	7	7	100	0.189	4.5	1.3	0.472	1.9
2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	pg/L	7	7	100	2.81	45	14.7	4.69	29.4
2,2',6,6'-Tetrachlorobiphenyl (PCB 54)	pg/L	7	7	100	0.145	19.7	3.0	0.269	0.384
2,3,3',4'-Tetrachlorobiphenyl (PCB 56)	pg/L	7	7	100	0.616	16	3.7	1.22	4.25
2,3,3',4-Tetrachlorobiphenyl (PCB 55)	pg/L	7	1	14	0.0694	0.0694	0.069	0.0694	0.0694
2,3,3',5'-Tetrachlorobiphenyl (PCB 58)	pg/L	7	0	0	--	--	--	--	--
2,3,3',5-Tetrachlorobiphenyl (PCB 57)	pg/L	7	3	43	0.0372	1.4	0.52	0.124	0.124
2,3,4,4'-Tetrachlorobiphenyl (PCB 60)	pg/L	7	7	100	0.254	6.84	1.6	0.532	1.88
2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	pg/L	7	7	100	1.58	32.2	8.3	2.88	8.98
2,3',4,5'-Tetrachlorobiphenyl (PCB 68)	pg/L	7	6	86	0.0411	2.12	0.41	0.0638	0.114
2,3',4,5-Tetrachlorobiphenyl (PCB 67)	pg/L	7	7	100	0.0489	1.88	0.47	0.128	0.756
2,3,4',5-Tetrachlorobiphenyl (PCB 63)	pg/L	7	7	100	0.0593	1.26	0.39	0.125	0.717
2,3,4',6-Tetrachlorobiphenyl (PCB 64)	pg/L	7	7	100	0.518	14.1	3.5	1.24	4.45
2,3',5,5'-Tetrachlorobiphenyl (PCB 72)	pg/L	7	7	100	0.0407	1.01	0.24	0.0732	0.272
2,3',5',6-Tetrachlorobiphenyl (PCB 73)	pg/L	7	6	86	0.0301	5.95	1.1	0.0697	0.267
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	pg/L	7	7	100	0.243	3.07	0.87	0.428	1.04
3,3',4,5'-Tetrachlorobiphenyl (PCB 79)	pg/L	7	4	57	0.14	0.598	0.32	0.152	0.377
3,3',4,5-Tetrachlorobiphenyl (PCB 78)	pg/L	7	0	0	--	--	--	--	--
3,3',5,5'-Tetrachlorobiphenyl (PCB 80)	pg/L	7	0	0	--	--	--	--	--
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	pg/L	7	1	14	0.116	0.116	0.12	0.116	0.116
2,2',3,3',4-Pentachlorobiphenyl (PCB 82)	pg/L	7	7	100	0.378	4.9	1.7	1.09	2.1
2,2',3,3',6-Pentachlorobiphenyl (PCB 84)	pg/L	7	7	100	0.764	22.2	5.9	3.25	8.36
2,2',3,4,6'-Pentachlorobiphenyl (PCB 89)	pg/L	7	5	71	0.0325	0.796	0.29	0.0639	0.489
2,2',3,5,5'-Pentachlorobiphenyl (PCB 92)	pg/L	7	7	100	0.89	55.7	10.2	2.98	4.96

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Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,2',3,5,6'-Pentachlorobiphenyl (PCB 94)	pg/L	7	6	86	0.142	18.1	3.2	0.206	0.365
2,2',3,6,6'-Pentachlorobiphenyl (PCB 96)	pg/L	7	7	100	0.0916	6.7	1.1	0.165	0.469
2,2',4,5',6-Pentachlorobiphenyl (PCB 103)	pg/L	7	7	100	0.275	13.9	2.4	0.464	0.666
2,2',4,6,6'-Pentachlorobiphenyl (PCB 104)	pg/L	7	6	86	0.0332	3.4	0.60	0.0447	0.0616
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	pg/L	7	7	100	1.51	10.8	4.1	2.93	4.68
2,3,3',4',5'-Pentachlorobiphenyl (PCB 122)	pg/L	7	5	71	0.0454	0.432	0.18	0.173	0.206
2,3,3',4,5-Pentachlorobiphenyl (PCB 106)	pg/L	7	1	14	0.444	0.444	0.44	0.444	0.444
2,3,3',4,6-Pentachlorobiphenyl (PCB 109)	pg/L	7	7	100	0.331	2.56	1.0	0.716	1.67
2,3,3',5,5'-Pentachlorobiphenyl (PCB 111)	pg/L	7	4	57	0.0126 J	0.59	0.16	0.0256	0.0288
2,3,3',5,6-Pentachlorobiphenyl (PCB 112)	pg/L	7	1	14	13.3	13.3	13.3	13.3	13.3
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	pg/L	7	4	57	0.151	0.61	0.36	0.272	0.422
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	pg/L	7	7	100	0.0803	0.692	0.23	0.14	0.285
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	pg/L	7	7	100	3.65	29.6	11.9	8.43	20.7
2,3',4,5,5'-Pentachlorobiphenyl (PCB 120)	pg/L	7	5	71	0.0548	1.24	0.32	0.11	0.12
2,3',4,5',6-Pentachlorobiphenyl (PCB 121)	pg/L	7	4	57	0.0243	1.53	0.40	0.0301	0.0327
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	pg/L	7	5	71	0.0411	0.109	0.064	0.0531	0.0696
3,3',4,5,5'-Pentachlorobiphenyl (PCB 127)	pg/L	7	0	0	--	--	--	--	--
2,2',3,3',4,5'-Hexachlorobiphenyl (PCB 130)	pg/L	7	7	100	0.387	14.6	2.9	1.18	1.6
2,2',3,3',4,6'-Hexachlorobiphenyl (PCB 132)	pg/L	7	7	100	1.86	91.6	17.3	6.18	8.22
2,2',3,3',4,6-Hexachlorobiphenyl (PCB 131)	pg/L	7	6	86	0.0917	2.22	0.52	0.195	0.275
2,2',3,3',5,5'-Hexachlorobiphenyl (PCB 133)	pg/L	7	7	100	0.196	12	2.1	0.526	0.575
2,2',3,3',6,6'-Hexachlorobiphenyl (PCB 136)	pg/L	7	7	100	0.894	70.7	12.1	3.28	3.66
2,2',3,4,4',5-Hexachlorobiphenyl (PCB 137)	pg/L	7	5	71	0.205	1.08	0.51	0.333	0.62
2,2',3,4,5,5'-Hexachlorobiphenyl (PCB 141)	pg/L	7	7	100	1.18	112	19.0	4.19	5.32
2,2',3,4',5,5'-Hexachlorobiphenyl (PCB 146)	pg/L	7	7	100	1.46	70.3	12.7	3.86	4.56
2,2',3,4',5,6'-Hexachlorobiphenyl (PCB 148)	pg/L	7	6	86	0.0595	3.78	0.71	0.112	0.141
2,2',3,4,5,6-Hexachlorobiphenyl (PCB 142)	pg/L	7	2	29	0.0215 J	0.154	0.088	0.0215 J	0.0215 J
2,2',3,4,5',6-Hexachlorobiphenyl (PCB 144)	pg/L	7	7	100	0.271	21.5	3.7	0.984	1.16
2,2',3,4,6,6'-Hexachlorobiphenyl (PCB 145)	pg/L	7	2	29	0.00961 J	0.0197 J	0.015	0.00961 J	0.00961 J
2,2',3,4',6,6'-Hexachlorobiphenyl (PCB 150)	pg/L	7	7	100	0.0619	2.9	0.50	0.115	0.147
2,2',3,5,6,6'-Hexachlorobiphenyl (PCB 152)	pg/L	7	5	71	0.0339	4.05	0.85	0.0559	0.0646
2,2',4,4',6,6'-Hexachlorobiphenyl (PCB 155)	pg/L	7	4	57	0.01 J	0.698	0.19	0.0147 J	0.0189 J
2,3,3',4,4',6-Hexachlorobiphenyl (PCB 158)	pg/L	7	7	100	0.667	35.3	6.4	1.77	2.56
2,3,3',4,5,5'-Hexachlorobiphenyl (PCB 159)	pg/L	7	7	100	0.139	9.27	1.6	0.294	0.359
2,3,3',4',5,5'-Hexachlorobiphenyl (PCB 162)	pg/L	7	1	14	0.0262	0.0262	0.026	0.0262	0.0262
2,3,3',4,5',6-Hexachlorobiphenyl (PCB 161)	pg/L	7	0	0	--	--	--	--	--
2,3,3',4',5',6-Hexachlorobiphenyl (PCB 164)	pg/L	7	7	100	0.503	37.1	6.4	1.39	2.21
2,3,3',5,5',6-Hexachlorobiphenyl (PCB 165)	pg/L	7	2	29	0.0307	1.1	0.57	0.0307	0.0307
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	pg/L	7	7	100	0.261	10.3	2.0	0.643	0.897
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	pg/L	7	0	0	--	--	--	--	--

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Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	pg/L	7	7	100	2.53	201	34.1	6.9	10.3
2,2',3,3',4,5,5'-Heptachlorobiphenyl (PCB 172)	pg/L	7	6	86	0.541	47.4	9.0	1.28	1.76
2,2',3,3',4,5',6'-Heptachlorobiphenyl (PCB 177)	pg/L	7	7	100	1.93	144	24.1	4.13	5.73
2,2',3,3',4,5',6-Heptachlorobiphenyl (PCB 175)	pg/L	7	7	100	0.126	10.8	1.8	0.377	0.492
2,2',3,3',4,5,6'-Heptachlorobiphenyl (PCB 174)	pg/L	7	7	100	3.14	255	42.3	7.06	9.44
2,2',3,3',4,6,6'-Heptachlorobiphenyl (PCB 176)	pg/L	7	7	100	0.323	35.3	5.8	1.01	1.43
2,2',3,3',5,5',6-Heptachlorobiphenyl (PCB 178)	pg/L	7	7	100	0.831	64.2	10.6	1.92	2.45
2,2',3,3',5,6,6'-Heptachlorobiphenyl (PCB 179)	pg/L	7	7	100	1.21	113	18.6	3.38	4.13
2,2',3,4,4',5,6'-Heptachlorobiphenyl (PCB 182)	pg/L	7	4	57	0.0345	1.43	0.40	0.0576	0.0893
2,2',3,4,4',5,6-Heptachlorobiphenyl (PCB 181)	pg/L	7	5	71	0.0236 J	1.55	0.59	0.239	1.05
2,2',3,4,4',6,6'-Heptachlorobiphenyl (PCB 184)	pg/L	7	4	57	0.011 J	0.123	0.045	0.0152 J	0.0302
2,2',3,4',5,5',6-Heptachlorobiphenyl (PCB 187)	pg/L	7	7	100	4.29	315	52.9	10.4	12.8
2,2',3,4,5,6,6'-Heptachlorobiphenyl (PCB 186)	pg/L	7	0	0	--	--	--	--	--
2,2',3,4',5,6,6'-Heptachlorobiphenyl (PCB 188)	pg/L	7	4	57	0.0265	0.776	0.21	0.0271	0.0286
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	pg/L	7	6	86	0.0858	8.08	1.5	0.206	0.322
2,3,3',4,4',5,6-Heptachlorobiphenyl (PCB 190)	pg/L	7	7	100	0.524	55.1	9.1	1.47	2.21
2,3,3',4,4',5',6-Heptachlorobiphenyl (PCB 191)	pg/L	7	6	86	0.107	11.2	2.1	0.245	0.458
2,3,3',4,5,5',6-Heptachlorobiphenyl (PCB 192)	pg/L	7	2	29	0.00262 J	1.43	0.72	0.00262 J	0.00262 J
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (PCB 194)	pg/L	7	7	100	1.45	120	19.7	2.96	4
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (PCB 196)	pg/L	7	7	100	0.764	72.6	11.9	1.95	2.64
2,2',3,3',4,4',5,6-Octachlorobiphenyl (PCB 195)	pg/L	7	7	100	0.6	46.4	7.7	1.18	1.94
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (PCB 201)	pg/L	7	7	100	0.264	15.8	2.7	0.526	0.779
2,2',3,3',5,5',6,6'-Octachlorobiphenyl (PCB 202)	pg/L	7	7	100	0.449	18.5	3.3	0.796	1.1
2,2',3,4,4',5,5',6-Octachlorobiphenyl (PCB 203)	pg/L	7	7	100	1.17	77	13.2	2.34	4.06
2,2',3,4,4',5,6,6'-Octachlorobiphenyl (PCB 204)	pg/L	7	1	14	0.0822	0.0822	0.082	0.0822	0.0822
2,3,3',4,4',5,5',6-Octachlorobiphenyl (PCB 205)	pg/L	7	7	100	0.07	5.79	0.97	0.153	0.336
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB 206)	pg/L	7	7	100	0.838	21.4	4.9	1.74	4.44
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (PCB 207)	pg/L	7	7	100	0.141	3.65	0.87	0.306	1.15
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (PCB 208)	pg/L	7	7	100	0.289	3.75	1.1	0.612	1.37
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)	pg/L	7	7	100	0.934	7.25	3.0	1.72	6.29
PCB012 & 013	pg/L	7	4	57	0.134	0.723	0.32	0.156	0.273
PCB018 & 030	pg/L	7	7	100	0.229	3.8	1.5	0.709	2.81
PCB020 & 028	pg/L	7	7	100	0.806	11	3.9	2.48	5.71
PCB021 & 033	pg/L	7	7	100	0.203	2.26	1.1	0.633	1.85
PCB026 & 029	pg/L	7	7	100	0.135	2.1	0.81	0.399	1.54
PCB040 & 041 & 071	pg/L	7	7	100	0.748	16.9	5.9	1.62	13.8
PCB044 & 047 & 065	pg/L	7	7	100	2.42	157	30.5	4.43	30.4
PCB045 & 051	pg/L	7	7	100	0.728	48.8	8.6	1.16	4.81
PCB049 & 069	pg/L	7	7	100	1.76	48.2	12.0	2.62	18.5
PCB050 & 053	pg/L	7	7	100	0.95	42.8	7.7	1.18	4.07

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Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
PCB059 & 062 & 075	pg/L	7	7	100	0.137	10.1	2.1	0.342	2.52
PCB061 & 070 & 074 & 076	pg/L	7	7	100	2.82	42.8	12.1	5.03	14.6
PCB083 & 099	pg/L	7	7	100	2.43	76.7	17.3	7.27	17.9
PCB085 & 116 & 117	pg/L	7	7	100	0.647	7.13	2.9	1.69	6.52
PCB086 & 087 & 097 & 108 & 119 & 125	pg/L	7	7	100	2.36	39.8	12.2	6.86	19.9
PCB088 & 091	pg/L	7	7	100	0.842	33.3	6.9	2.64	5.61
PCB090 & 101 & 113	pg/L	7	7	100	4.17	148	31.5	13.2	25.3
PCB093 & 095 & 098 & 100 & 102	pg/L	7	7	100	3.64	206	39.1	13.2	23.1
PCB107 & 124	pg/L	7	6	86	0.149	0.902	0.49	0.338	0.882
PCB110 & 115	pg/L	7	7	100	4.4	50.4	17.9	14.4	28
PCB128 & 166	pg/L	7	7	100	1	19.6	4.7	2.32	3.39
PCB129 & 138 & 160 & 163	pg/L	7	7	100	7.18	415	74.5	20.1	27.7
PCB134 & 143	pg/L	7	7	100	0.293	27	4.5	0.928	1.3
PCB135 & 151 & 154	pg/L	7	7	100	2.59	246	41.0	9.35	10.6
PCB139 & 140	pg/L	7	7	100	0.114	3.12	0.67	0.315	0.439
PCB147 & 149	pg/L	7	7	100	5.15	370	64.4	16.9	21.9
PCB153 & 168	pg/L	7	7	100	6.12	463	79.8	19.4	25.6
PCB156 & 157	pg/L	7	7	100	0.728	23.9	4.7	1.62	2.22
PCB171 & 173	pg/L	7	7	100	0.899	72.2	12.2	2.17	3.08
PCB180 & 193	pg/L	7	7	100	6.81	486	82.6	16.4	22.1
PCB183 & 185	pg/L	7	7	100	2.08	185	30.7	5.43	7.1
PCB197 & 200	pg/L	7	7	100	0.32	20.9	3.6	0.727	1.29
PCB198 & 199	pg/L	7	6	86	1.78	137	26.1	3.43	5.93
Polychlorinated biphenyls	pg/L	7	7	100	118	5920	1126	341	695
PCB Homologs									
Monochlorobiphenyl	pg/L	7	7	100	0.114	1.4	0.51	0.244	0.887
Dichlorobiphenyl	pg/L	7	7	100	1.4	22.8	6.9	4.76	6.86
Trichlorobiphenyl	pg/L	7	7	100	3.51	101	27.4	9.92	39.4
Tetrachlorobiphenyl	pg/L	7	7	100	16.9	436	123	29.2	241
Pentachlorobiphenyl	pg/L	7	7	100	26.7	739	173	80.3	183
Hexachlorobiphenyl	pg/L	7	7	100	31.3	2070	364	96.4	124
Heptachlorobiphenyl	pg/L	7	7	100	25.5	2010	337	63.4	83.8
Octachlorobiphenyl	pg/L	7	7	100	6.86	514	85.5	13.3	22.2
Nonachlorobiphenyl	pg/L	7	7	100	1.27	28.8	6.9	2.63	6.97

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Table 4-1c. July 2005 Event - Summary Statistics of Chemical Concentrations in Surface Water Samples.

Analyte	Units	Number of Samples[1]	Number Detected	% Detected	Detected Concentrations				
					Minimum	Maximum	Mean	Median	95th Percentile
Organochlorine Pesticides									
2,4'-DDD	pg/L	8	8	100	0.249 J	621	125	2.27 J	347
2,4'-DDE	pg/L	8	8	100	0.184 J	54.3	10.2	0.938 J	22.3
2,4'-DDT	pg/L	8	5	63	0.242 J	402	81.4	2.24 J	2.28 J
4,4'-DDD	pg/L	8	8	100	0.405 J	1620	347	9.05	1070
4,4'-DDE	pg/L	8	8	100	4.78 J	466	95.3	23.7	171
4,4'-DDT	pg/L	8	5	63	0.648 J	3630	733	10.3	19.9
Aldrin	pg/L	8	8	100	0.107 J	1.26 J	0.63	0.451 J	0.979 J
alpha-Endosulfan	pg/L	8	4	50	0.552 J	6.2 J	2.5	0.772 J	2.34 J
alpha-Hexachlorocyclohexane	pg/L	8	7	88	0.042 J	1.05 J	0.44	0.357 J	0.651 J
beta-Endosulfan	pg/L	8	0	0	--	--	--	--	--
beta-Hexachlorocyclohexane	pg/L	8	3	38	0.17 J	1.24 J	0.74	0.823 J	0.823 J
cis-Chlordane	pg/L	8	7	88	0.299 J	5.14 J	2.8	2.24 J	4.41 J
cis-Nonachlor	pg/L	8	5	63	0.666 J	1.65 J	1.2	1.1 J	1.58 J
delta-Hexachlorocyclohexane	pg/L	8	1	13	0.508 J	0.508 J	0.51	0.508 J	0.508 J
Dieldrin	pg/L	8	7	88	0.24 J	6.85 J	3.1	2.46 J	4.56 J
Endosulfan sulfate	pg/L	8	6	75	1.57 J	5.32 J	3.0	2.77 J	3.68 J
Endrin	pg/L	8	0	0	--	--	--	--	--
Endrin aldehyde	pg/L	8	0	0	--	--	--	--	--
Endrin ketone	pg/L	8	0	0	--	--	--	--	--
gamma-Hexachlorocyclohexane	pg/L	8	6	75	0.147 J	1.28 J	0.37	0.21 J	0.21 J
Heptachlor	pg/L	8	1	13	0.162 J	0.162 J	0.16	0.162 J	0.162 J
Heptachlor epoxide	pg/L	8	3	38	0.164 J	0.405 J	0.28	0.281 J	0.281 J
Methoxychlor	pg/L	8	0	0	--	--	--	--	--
Oxychlordane	pg/L	8	3	38	0.236 J	0.9 J	0.55	0.503 J	0.503 J
trans-Chlordane	pg/L	8	8	100	0.101 J	5.15 J	2.4	1.73 J	4.53 J
trans-Nonachlor	pg/L	8	7	88	0.332 J	4.94 J	3.0	2.78 J	4.82 J
Hexachlorobenzene	pg/L	8	7	88	3.57 J	32	10.2	7.49	10.7
Hexachlorobutadiene	pg/L	8	5	63	0.113 J	21.2 J	5.0	0.342 J	3.21 J
Phthalate Esters									
Bis(2-ethylhexyl) phthalate	pg/L	8	7	88	4240 J	5930 J	5153	5200 J	5890 J
Butylbenzyl phthalate	pg/L	8	0	0	--	--	--	--	--
Dibutyl phthalate	pg/L	8	0	0	--	--	--	--	--
Diethyl phthalate	pg/L	8	0	0	--	--	--	--	--
Dimethyl phthalate	pg/L	8	1	13	34.4 J	34.4 J	34.4	34.4 J	34.4 J
Di-n-octyl phthalate	pg/L	8	0	0	--	--	--	--	--

Notes:

[1] Number of samples includes normal environmental samples and field QC samples

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Table 4-2. November 2004 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W001D		LW2-W002		LW2-W003		LW2-W003D		LW2-W004		LW2-W004D		LW2-W005		LW2-W006		LW2-W006D
			Sample Date/Time		11/12/2004, 1149		11/12/2004, 1430		11/12/2004, 1637		11/12/2004, 1637		11/18/2004, 1239		11/18/2004, 1239		11/22/2004, 1940		11/19/2004, 1509		11/19/2004, 1509
			X Coordinate		7617743.68		7615555.57		7614560.19		7614560.19		7619698.56		7619698.56		7617639.07		7616829		7616829
			Y Coordinate		724810.36		724784.88		719665.65		719665.65		717279.94		717279.94		715650.05		715147.5		715147.5
PCB Aroclors																					
Aroclor 1016	12674-11-2	ug/l	0.0025	UJ	--		--		0.0025	UJ	--		0.00253	U	--		0.0026	U	0.00256	U	--
Aroclor 1242	53469-21-9	ug/l	0.0025	UJ	--		--		0.0025	UJ	--		0.00253	U	--		0.0026	U	0.00256	U	--
Aroclor 1248	12672-29-6	ug/l	0.00125	UJ	--		--		0.00125	UJ	--		0.00212	J	--		0.0013	U	0.00128	U	--
Aroclor 1254	11097-69-1	ug/l	0.00125	UJ	--		--		0.00125	UJ	--		0.00377		--		0.0013	U	0.00128	U	--
Aroclor 1260	11096-82-5	ug/l	0.0025	UJ	--		--		0.0025	UJ	--		0.00253	U	--		0.0026	U	0.00256	U	--
Aroclor 1262	37324-23-5	ug/l	0.0025	UJ	--		--		0.0025	UJ	--		0.00253	U	--		0.0026	U	0.00256	U	--
Aroclor 1268	11100-14-4	ug/l	0.0025	UJ	--		--		0.0025	UJ	--		0.00253	U	--		0.0026	U	0.00256	U	--
Aroclor 1221	11104-28-2	ug/l	0.0025	UJ	--		--		0.0025	UJ	--		0.00253	U	--		0.0026	U	0.00256	U	--
Aroclor 1232	11141-16-5	ug/l	0.0025	UJ	--		--		0.0025	UJ	--		0.00253	U	--		0.0026	U	0.00256	U	--
Butyltins																					
Butyltin ion	78763-54-9	ug/l	0.0047	U	--		0.0047	U	0.0047	U	--		0.0047	U	--		0.0047	U	0.0047	U	--
Dibutyltin ion	14488-53-0	ug/l	0.005	U	--		0.005	U	0.005	U	--		0.005	U	--		0.005	U	0.005	U	--
Tributyltin ion	36643-28-4	ug/l	0.0071	U	--		0.0071	U	0.0071	U	--		0.0071	U	--		0.0071	U	0.0071	U	--
Tetrabutyltin	1461-25-2	ug/l	0.0032	U	--		0.0032	U	0.0032	U	--		0.0032	U	--		0.0032	U	0.0032	U	--
Conventionals																					
Total organic carbon	TOC	mg/l	1.7		--		1.5		1.4		1.4		1.6		--		1.6		1.4		1.6
Total suspended solids	TSS	mg/l	5	U	--		5		7		--		5	U	--		7		8		--
Dissolved organic carbon	DOC	mg/l	1.7		1.7		1.5		1.5		--		1.4		1.3		1.3		1.4		--
Hardness as CaCO3	HARD	mg/l	23.6		--		23.4		23.1		--		25.7		--		25.8		25.6		--
Total dissolved solids	TDS	mg/l	59		--		51		47		--		50		--		70		47		--
Perchlorate	14797-73-0	ug/l	--		--		--		--		--		--		--		--		--		--
Herbicides																					
Dalapon	75-99-0	ug/l	0.39	UJ	--		0.39	UJ	0.42	UJ	--		0.4	UJ	--		0.42	U	0.4	UJ	--
Dicamba	1918-00-9	ug/l	0.08	U	--		0.08	U	0.084	U	--		0.08	U	--		0.083	U	0.08	U	--
MCPA	94-74-6	ug/l	7.8	U	--		7.8	U	8.2	U	--		7.8	U	--		8.1	U	7.8	U	--
Dichloroprop	120-36-5	ug/l	0.066	U	--		0.066	U	0.069	U	--		0.066	U	--		0.069	U	0.066	U	--
2,4-D	94-75-7	ug/l	0.056	U	--		0.056	U	0.059	U	--		0.056	U	--		0.14	J	0.056	U	--
Silvex	93-72-1	ug/l	0.053	U	--		0.053	U	0.056	U	--		0.053	U	--		0.055	U	0.053	U	--
2,4,5-T	93-76-5	ug/l	0.063	U	--		0.063	U	0.066	U	--		0.063	U	--		0.065	U	0.063	U	--
2,4-DB	94-82-6	ug/l	0.11	U	--		0.11	U	0.12	U	--		0.11	U	--		0.12	U	0.11	U	--
Dinoseb	88-85-7	ug/l	0.066	U	--		0.066	U	0.069	U	--		0.066	U	--		0.069	U	0.066	U	--
MCPP	93-65-2	ug/l	15	U	--		15	U	16	U	--		15	U	--		16	U	15	U	--
Metals																					
Antimony	7440-36-0	ug/l	0.02	U	0.02	U	0.02	U	0.02	U	--		0.06		--		0.02	U	0.03	J	--
Antimony (dissolved)	7440-36-0	ug/l	0.02	U	--		0.02	U	0.02	U	--		0.05	J	--		0.02	U	0.02	U	--
Arsenic	7440-38-2	ug/l	0.33		0.326		0.35		0.355		--		0.39		--		0.39		0.399		--
Arsenic (dissolved)	7440-38-2	ug/l	0.286		--		0.285		0.299		--		0.315		--		0.328		0.319		--
Cadmium	7440-43-9	ug/l	0.008	U	0.02		0.011	U	0.024	U	--		0.027		--		0.051	U	0.017	U	--
Cadmium (dissolved)	7440-43-9	ug/l	0.013	U	--		0.015	U	0.017	U	--		0.017	U	--		0.023	U	0.025	U	--
Chromium	7440-47-3	ug/l	0.29		0.32		0.36		0.33		--		0.51		--		0.3		0.37		--
Chromium (dissolved)	7440-47-3	ug/l	0.13	J	--		0.13	J	0.13	J	--		0.13	J	--		0.2	J	0.13	J	--
Copper	7440-50-8	ug/l	0.78		0.82		0.92		0.87		--		1.13		--		0.84		1		--
Copper (dissolved)	7440-50-8	ug/l	0.45		--		0.51		0.46		--		0.61		--		0.7		0.93		--
Lead	7439-92-1	ug/l	0.137		0.135		0.155		0.166		--		0.598		--		0.202		0.246		--
Lead (dissolved)	7439-92-1	ug/l	0.012	J	--		0.015	J	0.012	J	--		0.038		--		0.031	J	0.091		--
Mercury	7439-97-6	ug/l	0.04	UJ	0.04	U	0.04	UJ	0.04	UJ	--		0.04	U	--		0.04	U	0.04	U	--
Mercury (dissolved)	7439-97-6	ug/l	0.04	UJ	--		0.04	UJ	0.04	UJ	--		0.04	U	--		0.04	U	0.04	U	--
Nickel	7440-02-0	ug/l	0.61		0.65		0.67		0.67		--		0.71		--		0.75		0.72		--
Nickel (dissolved)	7440-02-0	ug/l	0.48		--		0.5		0.52		--		0.51		--		0.54		0.94		--
Selenium	7782-49-2	ug/l	0.2	U	0.2	U	0.2	U	0.2	J	--		0.2	U	--		0.3	J	0.2	U	--
Selenium (dissolved)	7782-49-2	ug/l	0.2	U	--		0.2	U	0.2	U	--		0.2	U	--		0.3	J	0.2	J	--
Silver	7440-22-4	ug/l	0.009	U	0.009	U	0.009	U	0.009	U	--		0.009	U	--		0.025		0.009	U	--
Silver (dissolved)	7440-22-4	ug/l	0.009	U	--		0.009	U	0.009	U	--		0.009	U	--		0.009	U	0.009	U	--

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Table 4-2. November 2004 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name	LW2-W001		LW2-W001D		LW2-W002		LW2-W003		LW2-W003D	LW2-W004		LW2-W004D	LW2-W005		LW2-W006		LW2-W006D
			Sample Date/Time	11/12/2004, 1149		11/12/2004, 1149		11/12/2004, 1430		11/12/2004, 1637		11/12/2004, 1637	11/18/2004, 1239		11/18/2004, 1239	11/22/2004, 1940		11/19/2004, 1509		11/19/2004, 1509
			X Coordinate	7617743.68		7617743.68		7615555.57		7614560.19		7614560.19	7619698.56		7619698.56	7617639.07		7616829		7616829
			Y Coordinate	724810.36		724810.36		724784.88		719665.65		719665.65	717279.94		717279.94	715650.05		715147.5		715147.5
Thallium	7440-28-0	ug/l		0.006	J	0.004	U	0.004	J	0.006	J	--	0.004	U	--	0.025		0.004	U	--
Thallium (dissolved)	7440-28-0	ug/l		0.004	U	--		0.004	U	0.004	U	--	0.004	U	--	0.004	U	0.004	U	--
Zinc	7440-66-6	ug/l		1.6		1.7		1.8		1.8		--	4.4		--	2.2		2.5		--
Zinc (dissolved)	7440-66-6	ug/l		1.4		--		2.3		0.9		--	2.5		--	1.5		2.8		--
Chromium hexavalent	18540-29-9	mg/L		--		--		--		--		--	--		--	--		--		--
PAHs																				
2-Methylnaphthalene	91-57-6	ug/l		0.011	U	--		0.0027	U	0.011	U	--	0.011	U	--	0.0054	U	0.0054	UJ	--
Acenaphthene	83-32-9	ug/l		0.008	U	--		0.002	U	0.008	U	--	0.008	U	--	0.004	U	0.004	UJ	--
Acenaphthylene	208-96-8	ug/l		0.012	J	--		0.0024	J	0.0095	J	--	0.0078	J	--	0.0036	U	0.0036	UJ	--
Anthracene	120-12-7	ug/l		0.0042	U	--		0.002	J	0.0042	U	--	0.0062	J	--	0.0021	U	0.0021	UJ	--
Fluorene	86-73-7	ug/l		0.011	U	--		0.0026	U	0.011	U	--	0.011	U	--	0.0052	U	0.0052	UJ	--
Naphthalene	91-20-3	ug/l		0.013	U	--		0.0056	U	0.013	U	--	0.013	U	--	0.0064	U	0.0079	J	--
Phenanthrene	85-01-8	ug/l		0.013	U	--		0.0032	J	0.013	U	--	0.013	U	--	0.0064	U	0.0064	UJ	--
Dibenz(a,h)anthracene	53-70-3	ug/l		0.0065	U	--		0.0017	U	0.0065	U	--	0.0065	U	--	0.0033	U	0.0033	UJ	--
Benz(a)anthracene	56-55-3	ug/l		0.0084	U	--		0.0021	U	0.0084	U	--	0.012	J	--	0.0042	U	0.0059	J	--
Benzo(a)pyrene	50-32-8	ug/l		0.0064	U	--		0.0016	U	0.0064	U	--	0.0064	U	--	0.0032	U	0.0032	UJ	--
Benzo(b)fluoranthene	205-99-2	ug/l		0.0078	U	--		0.002	U	0.0078	U	--	0.009	J	--	0.0039	U	0.0039	UJ	--
Benzo(g,h,i)perylene	191-24-2	ug/l		0.015	U	--		0.0037	U	0.015	U	--	0.015	U	--	0.0074	U	0.0074	UJ	--
Benzo(k)fluoranthene	207-08-9	ug/l		0.0054	U	--		0.0014	U	0.0054	U	--	0.008	J	--	0.0027	U	0.0027	UJ	--
Chrysene	218-01-9	ug/l		0.005	U	--		0.0013	U	0.0055	J	--	0.0089	J	--	0.0025	U	0.003	J	--
Fluoranthene	206-44-0	ug/l		0.0096	U	--		0.0024	U	0.0096	U	--	0.018		--	0.0048	U	0.0056	J	--
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l		0.0084	U	--		0.0021	U	0.0084	U	--	0.0084	U	--	0.0042	U	0.0042	UJ	--
Pyrene	129-00-0	ug/l		0.0089	U	--		0.0031	J	0.0089	U	--	0.016		--	0.0045	U	0.0065	J	--
Organochlorine Pesticides																				
2,4'-DDD	53-19-0	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
2,4'-DDE	3424-82-6	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
2,4'-DDT	789-02-6	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
4,4'-DDD	72-54-8	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
4,4'-DDE	72-55-9	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
4,4'-DDT	50-29-3	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	UJ	--	--		0.0005	UJ	--
Aldrin	309-00-2	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
alpha-Hexachlorocyclohexane	319-84-6	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
beta-Hexachlorocyclohexane	319-85-7	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
delta-Hexachlorocyclohexane	319-86-8	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
gamma-Hexachlorocyclohexane	58-89-9	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
cis-Chlordane	5103-71-9	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
trans-Chlordane	5103-74-2	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
Oxychlordane	27304-13-8	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
cis-Nonachlor	5103-73-1	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
trans-Nonachlor	39765-80-5	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
Dieldrin	60-57-1	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
alpha-Endosulfan	959-98-8	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
beta-Endosulfan	33213-65-9	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
Endosulfan sulfate	1031-07-8	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
Endrin	72-20-8	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	UJ	--	--		0.0005	R	--
Endrin aldehyde	7421-93-4	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	UJ	--	--		0.0005	U	--
Endrin ketone	53494-70-5	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
Heptachlor	76-44-8	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
Heptachlor epoxide	1024-57-3	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
Hexachlorobenzene	118-74-1	ug/l		0.000906	J	--		0.00211	J	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
Hexachlorobutadiene	87-68-3	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
Hexachloroethane	67-72-1	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.019	U	--	0.019	U	0.0005	U	--
Methoxychlor	72-43-5	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	UJ	--	--		0.0005	UJ	--
Mirex	2385-85-5	ug/l		0.000472	UJ	--		0.000481	UJ	0.00049	UJ	--	0.0005	U	--	--		0.0005	U	--
Toxaphene	8001-35-2	ug/l		0.118	UJ	--		0.12	UJ	0.123	UJ	--	0.125	U	--	--		0.125	U	--

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Table 4-2. November 2004 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W001D		LW2-W002		LW2-W003		LW2-W003D		LW2-W004		LW2-W004D		LW2-W005		LW2-W006		LW2-W006D	
			Sample Date/Time		11/12/2004, 1149		11/12/2004, 1430		11/12/2004, 1637		11/12/2004, 1637		11/18/2004, 1239		11/18/2004, 1239		11/22/2004, 1940		11/19/2004, 1509		11/19/2004, 1509	
			X Coordinate		7617743.68		7615555.57		7614560.19		7614560.19		7619698.56		7619698.56		7617639.07		7616829		7616829	
			Y Coordinate		724810.36		724784.88		719665.65		719665.65		717279.94		717279.94		715650.05		715147.5		715147.5	
Phenols																						
2,3,4,6-Tetrachlorophenol	58-90-2	ug/l	--		--		--		--		--		--		--		--		--		--	
2,4,5-Trichlorophenol	95-95-4	ug/l	0.026	U	--		0.026	U	0.027	U	--		0.026	U	--		0.026	U	0.026	U	--	
2,4,6-Trichlorophenol	88-06-2	ug/l	0.037	U	--		0.037	U	0.039	U	--		0.037	U	--		0.037	U	0.037	U	--	
2,4-Dichlorophenol	120-83-2	ug/l	0.024	U	--		0.024	U	0.025	U	--		0.024	U	--		0.024	U	0.024	U	--	
2,4-Dimethylphenol	105-67-9	ug/l	0.32	U	--		0.32	U	0.34	U	--		0.32	U	--		0.32	U	0.32	U	--	
2,4-Dinitrophenol	51-28-5	ug/l	0.53	U	--		0.53	U	0.56	U	--		0.53	U	--		0.53	U	0.53	U	--	
2-Chlorophenol	95-57-8	ug/l	0.015	U	--		0.015	U	0.016	U	--		0.015	U	--		0.015	U	0.015	U	--	
2-Methylphenol	95-48-7	ug/l	0.06	U	--		0.06	U	0.063	U	--		0.06	U	--		0.06	U	0.06	U	--	
2-Nitrophenol	88-75-5	ug/l	0.014	U	--		0.014	U	0.015	U	--		0.014	U	--		0.014	U	0.014	U	--	
4,6-Dinitro-2-methylphenol	534-52-1	ug/l	0.013	U	--		0.013	U	0.014	U	--		0.013	U	--		0.013	U	0.013	U	--	
4-Chloro-3-methylphenol	59-50-7	ug/l	0.029	U	--		0.029	U	0.091	J	--		0.029	U	--		0.11	U	0.068	J	--	
4-Methylphenol	106-44-5	ug/l	0.051	U	--		0.051	U	0.054	U	--		0.051	U	--		0.051	U	0.051	U	--	
4-Nitrophenol	100-02-7	ug/l	0.54	U	--		0.54	U	0.57	U	--		0.54	U	--		0.54	U	0.54	U	--	
Pentachlorophenol	87-86-5	ug/l	0.029	U	--		0.029	U	0.03	U	--		0.029	U	--		0.029	U	0.029	U	--	
Phenol	108-95-2	ug/l	0.02	U	--		0.02	U	0.021	U	--		0.02	U	--		0.02	U	0.02	U	--	
Phthalate Esters																						
Dimethyl phthalate	131-11-3	ug/l	0.013	U	--		0.013	U	0.014	U	--		0.013	U	--		0.013	U	0.013	U	--	
Diethyl phthalate	84-66-2	ug/l	0.044	U	--		0.046	U	0.037	U	--		0.05	U	--		0.066	U	0.06	U	--	
Dibutyl phthalate	84-74-2	ug/l	0.084	U	--		0.084	U	0.071	U	--		0.12	U	--		0.19	U	0.089	U	--	
Butylbenzyl phthalate	85-68-7	ug/l	0.026	U	--		0.026	U	0.027	U	--		0.026	U	--		0.026	U	0.026	U	--	
Di-n-octyl phthalate	117-84-0	ug/l	0.032	U	--		0.032	U	0.034	U	--		0.032	U	--		0.032	U	0.032	U	--	
Bis(2-ethylhexyl) phthalate	117-81-7	ug/l	0.47	U	--		0.56	U	0.32	U	--		0.69	U	--		0.38	U	0.45	U	--	
SVOCs																						
1,2,4-Trichlorobenzene	120-82-1	ug/l	0.016	U	--		0.016	U	0.017	U	--		0.016	U	--		0.016	U	0.016	U	--	
1,2-Dichlorobenzene	95-50-1	ug/l	0.015	U	--		0.015	U	0.015	U	--		0.015	U	--		0.015	U	0.015	U	--	
1,3-Dichlorobenzene	541-73-1	ug/l	0.011	U	--		0.011	U	0.012	U	--		0.011	U	--		0.011	U	0.011	U	--	
1,4-Dichlorobenzene	106-46-7	ug/l	0.014	U	--		0.014	U	0.014	U	--		0.014	U	--		0.014	U	0.014	U	--	
Azobenzene	103-33-3	ug/l	0.012	U	--		0.012	U	0.013	U	--		0.012	U	--		0.012	U	0.012	U	--	
2,4-Dinitrotoluene	121-14-2	ug/l	0.02	U	--		0.02	U	0.021	U	--		0.02	U	--		0.02	U	0.02	U	--	
2,6-Dinitrotoluene	606-20-2	ug/l	0.0088	U	--		0.0088	U	0.0093	U	--		0.0088	U	--		0.0088	U	0.0088	U	--	
2-Chloronaphthalene	91-58-7	ug/l	0.016	U	--		0.016	U	0.016	U	--		0.016	U	--		0.016	U	0.016	U	--	
2-Nitroaniline	88-74-4	ug/l	0.015	U	--		0.015	U	0.016	U	--		0.015	U	--		0.015	U	0.015	U	--	
3,3'-Dichlorobenzidine	91-94-1	ug/l	0.43	U	--		0.43	U	0.46	U	--		0.43	U	--		0.43	UJ	0.43	U	--	
3-Nitroaniline	99-09-2	ug/l	0.23	U	--		0.23	U	0.24	U	--		0.23	U	--		0.23	U	0.23	U	--	
4-Bromophenyl phenyl ether	101-55-3	ug/l	0.018	U	--		0.018	U	0.019	U	--		0.018	U	--		0.018	U	0.018	U	--	
4-Chloroaniline	106-47-8	ug/l	0.018	U	--		0.018	U	0.019	U	--		0.018	U	--		0.018	U	0.018	U	--	
4-Chlorophenyl phenyl ether	7005-72-3	ug/l	0.0085	U	--		0.0085	U	0.0089	U	--		0.0085	U	--		0.0085	U	0.0085	U	--	
4-Nitroaniline	100-01-6	ug/l	0.17	U	--		0.17	U	0.18	U	--		0.17	U	--		0.17	U	0.17	U	--	
Aniline	62-53-3	ug/l	1	U	--		1	U	1.1	U	--		1	U	--		1	U	1	U	--	
Benzoic acid	65-85-0	ug/l	1.8	U	--		1.8	U	1.9	U	--		1.8	U	--		1.8	U	1.8	U	--	
Benzyl alcohol	100-51-6	ug/l	0.98	U	--		0.98	U	1.1	U	--		0.98	U	--		0.98	U	0.98	U	--	
Bis(2-chloroethoxy) methane	111-91-1	ug/l	0.012	U	--		0.012	U	0.012	U	--		0.012	U	--		0.012	U	0.012	U	--	
Bis(2-chloroethyl) ether	111-44-4	ug/l	0.015	U	--		0.015	U	0.015	U	--		0.015	U	--		0.015	U	0.015	U	--	
Carbazole	86-74-8	ug/l	0.013	U	--		0.013	U	0.014	U	--		0.013	U	--		0.013	U	0.013	U	--	
Dibenzofuran	132-64-9	ug/l	0.029	U	--		0.0071	U	0.029	U	--		0.029	U	--		0.015	U	0.015	UJ	--	
Hexachlorobenzene	118-74-1	ug/l	0.015	U	--		0.015	U	0.015	U	--		0.015	U	--		0.015	U	0.015	U	--	
Hexachlorobutadiene	87-68-3	ug/l	0.02	U	--		0.02	U	0.021	U	--		0.02	U	--		0.02	U	0.02	U	--	
Hexachlorocyclopentadiene	77-47-4	ug/l	0.041	U	--		0.041	U	0.043	U	--		0.041	U	--		0.041	U	0.041	U	--	
Hexachloroethane	67-72-1	ug/l	0.019	U	--		0.019	U	0.02	U	--		0.0005	U	--		--		0.019	U	--	
Isophorone	78-59-1	ug/l	0.0085	U	--		0.0085	U	0.0089	U	--		0.0085	U	--		0.0085	U	0.0085	U	--	
Nitrobenzene	98-95-3	ug/l	0.0074	U	--		0.0074	U	0.0078	U	--		0.0074	U	--		0.0074	U	0.0074	U	--	
N-Nitrosodimethylamine	62-75-9	ug/l	0.42	U	--		0.42	U	0.45	U	--		0.42	U	--		0.42	U	0.42	U	--	
N-Nitrosodipropylamine	621-64-7	ug/l	0.033	U	--		0.033	U	0.034	U	--		0.033	U	--		0.033	U	0.033	U	--	
N-Nitrosodiphenylamine	86-30-6	ug/l	0.028	U	--		0.028	U	0.03	U	--		0.028	U	--		0.028	U	0.028	U	--	
Bis(2-chloroisopropyl) ether	39638-32-9	ug/l	0.017	U	--		0.017	U	0.018	U	--		0.017	U	--		0.017	U	0.017	U	--	

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Table 4-2. November 2004 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W007		LW2-W007D		LW2-W008		LW2-W008D		LW2-W009		LW2-W010		LW2-W010D		LW2-W011		LW2-W011D		LW2-W012		LW2-W012D	
			Sample Date/Time		11/19/2004, 1655		11/19/2004, 1655		11/23/2004, 1000		11/23/2004, 1000		12/1/2004, 1030		11/23/2004, 1200		11/23/2004, 1200		11/17/2004, 1731		11/17/2004, 1731		12/2/2004, 1025		12/2/2004, 1025	
			X Coordinate		7620368.8		7620368.8		7620499.86		7620499.86		7621416.97		7622460.17		7622460.17		7624381.08		7624381.08		7624005.08		7624005.08	
			Y Coordinate		714594.66		714594.66		713368.41		713368.41		707763.03		708324.67		708324.67		706235.85		706235.85		705597.41		705597.41	
PCB Aroclors																										
Aroclor 1016	12674-11-2	ug/l		0.0026	U	--		0.0025	U	--		0.0025	U	0.00267	U	--		0.0025	U	--		0.0025	UJ	--		
Aroclor 1242	53469-21-9	ug/l		0.0026	U	--		0.0025	U	--		0.0025	U	0.00267	U	--		0.0025	U	--		0.0025	UJ	--		
Aroclor 1248	12672-29-6	ug/l		0.0013	U	--		0.00125	U	--		0.00125	U	0.00134	U	--		0.00125	U	--		0.00125	UJ	--		
Aroclor 1254	11097-69-1	ug/l		0.0013	U	--		0.00125	U	--		0.00125	U	0.00134	U	--		0.00125	U	--		0.00125	UJ	--		
Aroclor 1260	11096-82-5	ug/l		0.0026	U	--		0.0025	U	--		0.0025	U	0.00267	U	--		0.0025	U	--		0.0025	UJ	--		
Aroclor 1262	37324-23-5	ug/l		0.0026	U	--		0.0025	U	--		0.0025	U	0.00267	U	--		0.0025	U	--		0.0025	UJ	--		
Aroclor 1268	11100-14-4	ug/l		0.0026	U	--		0.0025	U	--		0.0025	U	0.00267	U	--		0.0025	U	--		0.0025	UJ	--		
Aroclor 1221	11104-28-2	ug/l		0.0026	U	--		0.0025	U	--		0.0025	U	0.00267	U	--		0.0025	U	--		0.0025	UJ	--		
Aroclor 1232	11141-16-5	ug/l		0.0026	U	--		0.0025	U	--		0.0025	U	0.00267	U	--		0.0025	U	--		0.0025	UJ	--		
Butyltins																										
Butyltin ion	78763-54-9	ug/l		0.0047	U	--		0.0047	U	--		0.02	J	0.0047	U	--		0.0047	U	--		0.0047	U	--		
Dibutyltin ion	14488-53-0	ug/l		0.005	U	--		0.005	U	--		0.0073	J	0.005	U	--		0.005	U	--		0.005	U	--		
Tributyltin ion	36643-28-4	ug/l		0.0071	U	--		0.0071	U	--		0.0071	U	0.0071	U	--		0.0071	U	--		0.0071	U	--		
Tetrabutyltin	1461-25-2	ug/l		0.0032	U	--		0.0032	U	--		0.0032	U	0.0032	U	--		0.0032	U	--		0.0032	U	--		
Conventionals																										
Total organic carbon	TOC	mg/l		1.5		--		1.6		--		1.9		1.7		1.7		1.5		1.6		1.9		1.9		
Total suspended solids	TSS	mg/l		5	U	5	U	5	U	6		5	U	7		--		5		--		5		--		
Dissolved organic carbon	DOC	mg/l		1.3		1.3		1.3		1.3		1.5		1.3		--		1.2		--		1.5		--		
Hardness as CaCO3	HARD	mg/l		24.6		25.4		26.7		--		24.1		27		--		24.7		--		24.7		--		
Total dissolved solids	TDS	mg/l		62		--		54		--		73		56		57		69		--		70		70		
Perchlorate	14797-73-0	ug/l		--		--		--		--		--		--		--		--		--		--		--		
Herbicides																										
Dalapon	75-99-0	ug/l		0.43	UJ	--		0.43	U	--		0.4	U	0.43	U	--		0.4	UJ	--		0.48	U	--		
Dicamba	1918-00-9	ug/l		0.085	U	--		0.085	U	--		0.08	U	0.086	U	--		0.08	U	--		0.08	U	--		
MCPA	94-74-6	ug/l		8.3	U	--		8.3	U	--		7.8	U	8.3	U	--		7.8	U	--		7.8	U	--		
Dichloroprop	120-36-5	ug/l		0.07	U	--		0.07	U	--		0.066	U	0.071	U	--		0.066	U	--		0.066	U	--		
2,4-D	94-75-7	ug/l		0.059	U	--		0.059	U	--		0.056	U	0.06	U	--		0.056	U	--		0.056	U	--		
Silvex	93-72-1	ug/l		0.056	U	--		0.056	U	--		0.053	U	0.057	U	--		0.053	U	--		0.053	U	--		
2,4,5-T	93-76-5	ug/l		0.067	U	--		0.067	U	--		0.063	U	0.068	U	--		0.063	U	--		0.063	U	--		
2,4-DB	94-82-6	ug/l		0.12	U	--		0.12	U	--		0.11	U	0.12	U	--		0.11	U	--		0.11	U	--		
Dinoseb	88-85-7	ug/l		0.07	U	--		0.07	U	--		0.066	U	0.071	U	--		0.066	U	--		0.066	U	--		
MCPP	93-65-2	ug/l		16	U	--		16	U	--		15	U	16	U	--		15	U	--		15	U	--		
Metals																										
Antimony	7440-36-0	ug/l		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	--		0.02	U	--		0.02	U	0.02	U	
Antimony (dissolved)	7440-36-0	ug/l		0.02	U	--		0.02	U	--		0.02	U	0.02	U	--		0.02	U	--		0.02	U	--		
Arsenic	7440-38-2	ug/l		0.38		0.381		0.389		--		0.374		0.38		--		0.365		--		0.354		0.351		
Arsenic (dissolved)	7440-38-2	ug/l		0.315		--		0.333		--		0.329		0.322		--		0.308		--		0.31		--		
Cadmium	7440-43-9	ug/l		0.02	U	0.02		0.027	U	0.029		0.02		0.028	U	--		0.017	U	--		0.03		0.03		
Cadmium (dissolved)	7440-43-9	ug/l		0.016	U	--		0.023	U	--		0.02		0.018	U	--		0.022	U	--		0.02		--		
Chromium	7440-47-3	ug/l		0.13	J	0.2		0.32		0.29		0.3		0.32		--		0.3		--		0.28		0.29		
Chromium (dissolved)	7440-47-3	ug/l		0.2	J	--		0.14	J	--		0.16	J	0.14	J	--		0.12	J	--		0.17	J	--		
Copper	7440-50-8	ug/l		0.73		0.81		0.8		0.8		0.8		0.9		--		0.8		--		0.78		0.78		
Copper (dissolved)	7440-50-8	ug/l		0.51		--		0.46		--		0.5		0.5		--		0.45		--		0.42		--		
Lead	7439-92-1	ug/l		0.127		0.139		0.901		0.812		0.139		0.174		--		0.14		--		0.1		0.11		
Lead (dissolved)	7439-92-1	ug/l		0.022	J	--		0.047		--		0.015	J	0.046		--		0.017	J	--		0.037		--		
Mercury	7439-97-6	ug/l		0.04	U	--		0.04	U	0.04	U	0.04	U	0.04	U	--		0.04	U	--		0.04	U	0.04	U	
Mercury (dissolved)	7439-97-6	ug/l		0.04	U	--		0.04	U	--		0.04	U	0.04	U	--		0.04	U	--		0.04	U	--		
Nickel	7440-02-0	ug/l		0.56		0.69		0.67		0.64		0.66		0.64		--		0.65		--		0.68		0.73		
Nickel (dissolved)	7440-02-0	ug/l		0.51		--		0.56		--		0.57		0.56		--		0.5		--		0.64		--		
Selenium	7782-49-2	ug/l		0.2	U	0.2	U	0.2	U	0.3		0.4	U	0.2	U	--		0.2	J	--		0.3	U	0.4		
Selenium (dissolved)	7782-49-2	ug/l		0.2	J	--		0.3	J	--		0.3	U	0.2	J	--		0.2	J	--		0.4	U	--		
Silver	7440-22-4	ug/l		0.009	U	0.009	U	0.009	U	0.009	U	0.009	U	0.009	U	--		0.009	U	--		0.009	U	0.009	U	
Silver (dissolved)	7440-22-4	ug/l		0.009	U	--		0.009	U	--		0.009	U	0.009	U	--		0.009	U	--		0.009	U	--		

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Table 4-2. November 2004 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W007		LW2-W007D		LW2-W008		LW2-W008D		LW2-W009		LW2-W010		LW2-W010D		LW2-W011		LW2-W011D		LW2-W012		LW2-W012D	
			Sample Date/Time		11/19/2004, 1655		11/19/2004, 1655		11/23/2004, 1000		11/23/2004, 1000		12/1/2004, 1030		11/23/2004, 1200		11/23/2004, 1200		11/17/2004, 1731		11/17/2004, 1731		12/2/2004, 1025		12/2/2004, 1025	
			X Coordinate		7620368.8		7620368.8		7620499.86		7620499.86		7621416.97		7622460.17		7622460.17		7624381.08		7624381.08		7624005.08		7624005.08	
			Y Coordinate		714594.66		714594.66		713368.41		713368.41		707763.03		708324.67		708324.67		706235.85		706235.85		705597.41		705597.41	
Thallium	7440-28-0	ug/l		0.004	U	0.004	U	0.004	U	0.004	U	0.004	UJ	0.004	U	--		0.004	U	--		0.004	UJ	0.004	U
Thallium (dissolved)	7440-28-0	ug/l		0.004	U	--		0.004	U	--		0.004	UJ	0.004	U	--		0.004	U	--		0.004	UJ	--	
Zinc	7440-66-6	ug/l		1.9		2		3		2.8		2.3		2.1		--		2.1		--		2.1		2.1	
Zinc (dissolved)	7440-66-6	ug/l		1.5		--		1.9		--		1.7		1.7		--		1.5		--		1.5		--	
Chromium hexavalent	18540-29-9	mg/L		--		--		--		--		--		--		--		--		--		--		--	
PAHs																										
2-Methylnaphthalene	91-57-6	ug/l		0.0054	UJ	--		0.006	J	--		0.062		0.0054	U	--		0.011	U	--		0.22		--	
Acenaphthene	83-32-9	ug/l		0.004	UJ	--		0.004	U	--		0.0046	J	0.004	U	--		0.008	U	--		0.038		--	
Acenaphthylene	208-96-8	ug/l		0.0036	UJ	--		0.0036	U	--		0.0094	U	0.0036	U	--		0.0078	J	--		0.027	U	--	
Anthracene	120-12-7	ug/l		0.0021	UJ	--		0.0029	J	--		0.0021	U	0.0021	U	--		0.0042	U	--		0.015	J	--	
Fluorene	86-73-7	ug/l		0.0052	UJ	--		0.0065	J	--		0.0052	U	0.0052	U	--		0.011	U	--		0.017		--	
Naphthalene	91-20-3	ug/l		0.0075	J	--		0.012	J	--		0.099		0.0074	J	--		0.013	U	--		0.77		--	
Phenanthrene	85-01-8	ug/l		0.0064	UJ	--		0.007	J	--		0.0081	J	0.0064	U	--		0.013	U	--		0.039		--	
Dibenz(a,h)anthracene	53-70-3	ug/l		0.0033	UJ	--		0.0033	U	--		0.0033	U	0.0033	U	--		0.0065	U	--		0.0033	U	--	
Benz(a)anthracene	56-55-3	ug/l		0.0042	UJ	--		0.0046	J	--		0.0043	J	0.0042	U	--		0.01	J	--		0.019		--	
Benzo(a)pyrene	50-32-8	ug/l		0.0032	UJ	--		0.0033	J	--		0.0032	U	0.0032	U	--		0.0064	U	--		0.02		--	
Benzo(b)fluoranthene	205-99-2	ug/l		0.0039	UJ	--		0.004	J	--		0.0039	U	0.0039	U	--		0.0078	U	--		0.021		--	
Benzo(g,h,i)perylene	191-24-2	ug/l		0.0074	UJ	--		0.0074	U	--		0.0074	U	0.0074	U	--		0.015	U	--		0.02		--	
Benzo(k)fluoranthene	207-08-9	ug/l		0.0027	UJ	--		0.0027	U	--		0.0027	U	0.0027	U	--		0.0067	J	--		0.0072	J	--	
Chrysene	218-01-9	ug/l		0.0025	UJ	--		0.0028	J	--		0.0025	U	0.0025	U	--		0.0077	J	--		0.026		--	
Fluoranthene	206-44-0	ug/l		0.0048	UJ	--		0.0061	J	--		0.0048	U	0.0048	U	--		0.01	J	--		0.049		--	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l		0.0042	UJ	--		0.0042	U	--		0.0042	U	0.0042	U	--		0.0084	U	--		0.019		--	
Pyrene	129-00-0	ug/l		0.0045	UJ	--		0.0078	J	--		0.007	J	0.0045	U	--		0.0089	U	--		0.055		--	
Organochlorine Pesticides																										
2,4'-DDD	53-19-0	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
2,4'-DDE	3424-82-6	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
2,4'-DDT	789-02-6	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
4,4'-DDD	72-54-8	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
4,4'-DDE	72-55-9	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
4,4'-DDT	50-29-3	ug/l		0.000495	UJ	--		0.000472	UJ	--		0.0005	U	0.0005	UJ	--		--		--		0.0005	U	--	
Aldrin	309-00-2	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
alpha-Hexachlorocyclohexane	319-84-6	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
beta-Hexachlorocyclohexane	319-85-7	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
delta-Hexachlorocyclohexane	319-86-8	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
gamma-Hexachlorocyclohexane	58-89-9	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
cis-Chlordane	5103-71-9	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
trans-Chlordane	5103-74-2	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
Oxychlordane	27304-13-8	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
cis-Nonachlor	5103-73-1	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
trans-Nonachlor	39765-80-5	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
Dieldrin	60-57-1	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
alpha-Endosulfan	959-98-8	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
beta-Endosulfan	33213-65-9	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
Endosulfan sulfate	1031-07-8	ug/l		0.000495	U	--		0.000472	UJ	--		0.0005	U	0.0005	UJ	--		--		--		0.0005	U	--	
Endrin	72-20-8	ug/l		0.000495	R	--		0.000472	UJ	--		0.0005	U	0.0005	UJ	--		--		--		0.0005	U	--	
Endrin aldehyde	7421-93-4	ug/l		0.000495	U	--		0.000472	UJ	--		0.0005	U	0.0005	UJ	--		--		--		0.0005	U	--	
Endrin ketone	53494-70-5	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
Heptachlor	76-44-8	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
Heptachlor epoxide	1024-57-3	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
Hexachlorobenzene	118-74-1	ug/l		0.000495	U	--		0.000472	U	--		0.00129	J	0.0005	U	--		--		--		0.0005	U	--	
Hexachlorobutadiene	87-68-3	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
Hexachloroethane	67-72-1	ug/l		0.000495	U	--		0.019	U	--		0.019	U	0.019	U	--		0.02	U	--		0.02	U	--	
Methoxychlor	72-43-5	ug/l		0.000495	UJ	--		0.000472	UJ	--		0.0005	U	0.0005	UJ	--		--		--		0.0005	U	--	
Mirex	2385-85-5	ug/l		0.000495	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
Toxaphene	8001-35-2	ug/l		0.124	U	--		0.118	U	--		0.125	U	0.125	U	--		--		--		0.125	U	--	

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Table 4-2. November 2004 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W007		LW2-W007D		LW2-W008		LW2-W008D		LW2-W009		LW2-W010		LW2-W010D		LW2-W011		LW2-W011D		LW2-W012		LW2-W012D
			Sample Date/Time		11/19/2004, 1655		11/19/2004, 1655		11/23/2004, 1000		11/23/2004, 1000		12/1/2004, 1030		11/23/2004, 1200		11/23/2004, 1200		11/17/2004, 1731		11/17/2004, 1731		12/2/2004, 1025		12/2/2004, 1025
			X Coordinate		7620368.8		7620368.8		7620499.86		7620499.86		7621416.97		7622460.17		7622460.17		7624381.08		7624381.08		7624005.08		7624005.08
			Y Coordinate		714594.66		714594.66		713368.41		713368.41		707763.03		708324.67		708324.67		706235.85		706235.85		705597.41		705597.41
Phenols																									
2,3,4,6-Tetrachlorophenol	58-90-2	ug/l		--		--		--		--		--		--		--		--		--		--		--	
2,4,5-Trichlorophenol	95-95-4	ug/l		0.027	U	--		0.026	U	--		0.026	U	0.026	U	--		0.027	U	--		0.027	U	--	
2,4,6-Trichlorophenol	88-06-2	ug/l		0.039	U	--		0.037	U	--		0.037	U	0.037	U	--		0.039	U	--		0.039	U	--	
2,4-Dichlorophenol	120-83-2	ug/l		0.025	U	--		0.024	U	--		0.024	U	0.024	U	--		0.025	U	--		0.025	U	--	
2,4-Dimethylphenol	105-67-9	ug/l		0.34	U	--		0.32	U	--		0.32	U	0.32	U	--		0.34	U	--		0.34	U	--	
2,4-Dinitrophenol	51-28-5	ug/l		0.56	U	--		0.53	U	--		0.53	U	0.53	U	--		0.56	U	--		0.56	U	--	
2-Chlorophenol	95-57-8	ug/l		0.016	U	--		0.015	U	--		0.015	U	0.015	U	--		0.016	U	--		0.016	U	--	
2-Methylphenol	95-48-7	ug/l		0.063	U	--		0.06	U	--		0.06	U	0.06	U	--		0.063	U	--		0.063	U	--	
2-Nitrophenol	88-75-5	ug/l		0.015	U	--		0.014	U	--		0.014	U	0.014	U	--		0.015	U	--		0.015	U	--	
4,6-Dinitro-2-methylphenol	534-52-1	ug/l		0.014	U	--		0.013	U	--		0.013	U	0.013	U	--		0.014	U	--		0.014	U	--	
4-Chloro-3-methylphenol	59-50-7	ug/l		0.082	J	--		0.13	U	--		0.07	U	0.12	U	--		0.031	U	--		0.051	U	--	
4-Methylphenol	106-44-5	ug/l		0.054	U	--		0.051	U	--		0.051	U	0.051	U	--		0.054	U	--		0.054	U	--	
4-Nitrophenol	100-02-7	ug/l		0.57	U	--		0.54	U	--		0.54	U	0.54	U	--		0.57	U	--		0.57	U	--	
Pentachlorophenol	87-86-5	ug/l		0.03	U	--		0.029	U	--		0.029	U	0.029	U	--		0.03	U	--		0.03	U	--	
Phenol	108-95-2	ug/l		0.021	U	--		0.02	U	--		0.02	U	0.02	U	--		0.021	U	--		0.021	U	--	
Phthalate Esters																									
Dimethyl phthalate	131-11-3	ug/l		0.014	U	--		0.013	U	--		0.013	U	0.013	U	--		0.014	U	--		0.014	U	--	
Diethyl phthalate	84-66-2	ug/l		0.046	U	--		0.051	U	--		0.076	U	0.076	U	--		0.056	U	--		0.06	U	--	
Dibutyl phthalate	84-74-2	ug/l		0.1	U	--		0.14	U	--		0.27	U	0.29	U	--		0.1	U	--		0.1	U	--	
Butylbenzyl phthalate	85-68-7	ug/l		0.027	U	--		0.026	U	--		0.026	U	0.026	U	--		0.027	U	--		0.027	U	--	
Di-n-octyl phthalate	117-84-0	ug/l		0.034	U	--		0.032	U	--		0.032	U	0.032	U	--		0.034	U	--		0.034	U	--	
Bis(2-ethylhexyl) phthalate	117-81-7	ug/l		0.44	U	--		0.44	U	--		0.41	U	0.84	U	--		1.3	U	--		0.43	U	--	
SVOCs																									
1,2,4-Trichlorobenzene	120-82-1	ug/l		0.017	U	--		0.016	U	--		0.016	U	0.016	U	--		0.017	U	--		0.017	U	--	
1,2-Dichlorobenzene	95-50-1	ug/l		0.015	U	--		0.015	U	--		0.015	U	0.015	U	--		0.015	U	--		0.015	U	--	
1,3-Dichlorobenzene	541-73-1	ug/l		0.012	U	--		0.011	U	--		0.011	U	0.011	U	--		0.012	U	--		0.012	U	--	
1,4-Dichlorobenzene	106-46-7	ug/l		0.014	U	--		0.014	U	--		0.014	U	0.014	U	--		0.014	U	--		0.014	U	--	
Azobenzene	103-33-3	ug/l		0.013	U	--		0.012	U	--		0.012	U	0.012	U	--		0.013	U	--		0.013	U	--	
2,4-Dinitrotoluene	121-14-2	ug/l		0.021	U	--		0.02	U	--		0.02	U	0.02	U	--		0.021	U	--		0.021	U	--	
2,6-Dinitrotoluene	606-20-2	ug/l		0.0093	U	--		0.0088	U	--		0.0088	U	0.0088	U	--		0.0093	U	--		0.0093	U	--	
2-Chloronaphthalene	91-58-7	ug/l		0.016	U	--		0.016	U	--		0.016	U	0.016	U	--		0.016	U	--		0.016	U	--	
2-Nitroaniline	88-74-4	ug/l		0.016	U	--		0.015	U	--		0.015	U	0.015	U	--		0.016	U	--		0.016	U	--	
3,3'-Dichlorobenzidine	91-94-1	ug/l		0.46	U	--		0.43	UJ	--		0.43	U	0.43	UJ	--		0.46	U	--		0.46	U	--	
3-Nitroaniline	99-09-2	ug/l		0.24	U	--		0.23	U	--		0.23	U	0.23	U	--		0.24	U	--		0.24	U	--	
4-Bromophenyl phenyl ether	101-55-3	ug/l		0.019	U	--		0.018	U	--		0.018	U	0.018	U	--		0.019	U	--		0.019	U	--	
4-Chloroaniline	106-47-8	ug/l		0.019	U	--		0.018	U	--		0.018	U	0.018	U	--		0.019	U	--		0.019	U	--	
4-Chlorophenyl phenyl ether	7005-72-3	ug/l		0.0089	U	--		0.0085	U	--		0.0085	U	0.0085	U	--		0.0089	U	--		0.0089	U	--	
4-Nitroaniline	100-01-6	ug/l		0.18	U	--		0.17	U	--		0.17	U	0.17	U	--		0.18	U	--		0.18	U	--	
Aniline	62-53-3	ug/l		1.1	U	--		1	U	--		1	U	1	U	--		1.1	U	--		1.1	U	--	
Benzoic acid	65-85-0	ug/l		1.9	U	--		1.8	U	--		1.8	U	1.8	U	--		1.9	U	--		1.9	U	--	
Benzyl alcohol	100-51-6	ug/l		1.1	U	--		0.98	U	--		0.98	U	0.98	U	--		1.1	U	--		1.1	U	--	
Bis(2-chloroethoxy) methane	111-91-1	ug/l		0.012	U	--		0.012	U	--		0.012	U	0.012	U	--		0.012	U	--		0.012	U	--	
Bis(2-chloroethyl) ether	111-44-4	ug/l		0.015	U	--		0.015	U	--		0.015	U	0.015	U	--		0.015	U	--		0.015	U	--	
Carbazole	86-74-8	ug/l		0.014	U	--		0.013	U	--		0.013	U	0.013	U	--		0.014	U	--		0.024	J	--	
Dibenzofuran	132-64-9	ug/l		0.015	UJ	--		0.015	U	--		0.015	U	0.015	U	--		0.029	U	--		0.015	U	--	
Hexachlorobenzene	118-74-1	ug/l		0.015	U	--		0.015	U	--		0.015	U	0.015	U	--		0.015	U	--		0.015	U	--	
Hexachlorobutadiene	87-68-3	ug/l		0.021	U	--		0.02	U	--		0.02	U	0.02	U	--		0.021	U	--		0.021	U	--	
Hexachlorocyclopentadiene	77-47-4	ug/l		0.043	U	--		0.041	U	--		0.041	U	0.041	U	--		0.043	U	--		0.043	U	--	
Hexachloroethane	67-72-1	ug/l		0.02	U	--		0.000472	U	--		0.0005	U	0.0005	U	--		--		--		0.0005	U	--	
Isophorone	78-59-1	ug/l		0.0089	U	--		0.0085	U	--		0.0085	U	0.0085	U	--		0.0089	U	--		0.0089	U	--	
Nitrobenzene	98-95-3	ug/l		0.0078	U	--		0.0074	U	--		0.0074	U	0.0074	U	--		0.0078	U	--		0.0078	U	--	
N-Nitrosodimethylamine	62-75-9	ug/l		0.45	U	--		0.42	U	--		0.42	U	0.42	U	--		0.45	U	--		0.45	U	--	
N-Nitrosodipropylamine	621-64-7	ug/l		0.034	U	--		0.033	U	--		0.033	U	0.033	U	--		0.034	U	--		0.034	U	--	
N-Nitrosodiphenylamine	86-30-6	ug/l		0.03	U	--		0.028	U	--		0.028	U	0.028	U	--		0.03	U	--		0.03	U	--	
Bis(2-chloroisopropyl) ether	39638-32-9	ug/l		0.018	U	--		0.017	U	--		0.017	U	0.017	U	--		0.018	U	--		0.018	U	--	

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Table 4-2. November 2004 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W013-1		LW2-W013-1D		LW2-W013-2		LW2-W014		LW2-W014D		LW2-W015		LW2-W015D		LW2-W016-1		LW2-W016-2		LW2-W016-2D
			Sample Date/Time		11/8/2004, 1542		11/8/2004, 1542		11/9/2004, 1243		12/1/2004, 1218		12/1/2004, 1218		11/29/2004, 1148		11/29/2004, 1148		11/30/2004, 1335		11/30/2004, 1430		11/30/2004, 1430
			X Coordinate		7627111.88		7627111.88		7627115.05		7627386.07		7627386.07		7626447.04		7626447.04		7627821.5		7627821.5		7627821.5
			Y Coordinate		705760.03		705760.03		705761.09		705733.57		705733.57		703929.23		703929.23		702551.16		702551.16		702551.16
PCB Aroclors																							
Aroclor 1016	12674-11-2	ug/l		0.0025	U	--		0.0025	U	0.00256	U	--		--		--		--		--		--	
Aroclor 1242	53469-21-9	ug/l		0.0025	U	--		0.0025	U	0.00256	U	--		--		--		--		--		--	
Aroclor 1248	12672-29-6	ug/l		0.00125	U	--		0.00132	U	0.00256	U	--		--		--		--		--		--	
Aroclor 1254	11097-69-1	ug/l		0.00125	U	--		0.00132	U	0.00244		--		--		--		--		--		--	
Aroclor 1260	11096-82-5	ug/l		0.0025	U	--		0.0025	U	0.013		--		--		--		--		--		--	
Aroclor 1262	37324-23-5	ug/l		0.0025	U	--		0.0025	U	0.00256	U	--		--		--		--		--		--	
Aroclor 1268	11100-14-4	ug/l		0.0025	U	--		0.0025	U	0.00256	U	--		--		--		--		--		--	
Aroclor 1221	11104-28-2	ug/l		0.0025	U	--		0.0025	U	0.00256	U	--		--		--		--		--		--	
Aroclor 1232	11141-16-5	ug/l		0.0025	U	--		0.0025	U	0.00256	U	--		--		--		--		--		--	
Butyltins																							
Butyltin ion	78763-54-9	ug/l		0.0047	U	--		0.0047	U	0.0047	U	--		0.0047	U	--		0.0047	U	0.0047	U	--	
Dibutyltin ion	14488-53-0	ug/l		0.005	U	--		0.005	U	0.005	U	--		0.005	U	--		0.005	U	0.005	U	--	
Tributyltin ion	36643-28-4	ug/l		0.0071	U	--		0.0071	U	0.0071	U	--		0.0071	U	--		0.0071	U	0.0071	U	--	
Tetrabutyltin	1461-25-2	ug/l		0.0032	U	--		0.0032	U	0.0032	U	--		0.0032	U	--		0.0032	U	0.0032	U	--	
Conventionals																							
Total organic carbon	TOC	mg/l		2.2		--		2		1.9		--		1.6		--		1.8		1.8		1.9	
Total suspended solids	TSS	mg/l		5	U	--		5	U	5	U	--		5	U	--		5	U	7		--	
Dissolved organic carbon	DOC	mg/l		1.7		1.6		2		1.5		--		1.3		1.3		1.4		1.5		--	
Hardness as CaCO3	HARD	mg/l		23.3		--		23.9		24.2		--		24.4		24.3		22.5		24.2		--	
Total dissolved solids	TDS	mg/l		58		--		76		79		87		64		58		63		67		--	
Perchlorate	14797-73-0	ug/l		--		--		--		--		--		--		--		1	U	16.1		15.3	
Herbicides																							
Dalapon	75-99-0	ug/l		0.4	UJ	--		0.44	UJ	0.4	U	--		0.41	U	--		0.4	U	0.41	U	--	
Dicamba	1918-00-9	ug/l		0.08	U	--		0.087	U	0.08	U	--		0.082	U	--		0.08	U	0.082	U	--	
MCPA	94-74-6	ug/l		7.8	U	--		8.4	U	7.8	U	--		8	U	--		9.5	U	8	U	--	
Dichloroprop	120-36-5	ug/l		0.066	U	--		0.071	U	0.066	U	--		0.068	U	--		0.066	U	0.068	U	--	
2,4-D	94-75-7	ug/l		0.056	U	--		0.061	U	0.056	U	--		0.058	U	--		0.056	U	0.058	U	--	
Silvex	93-72-1	ug/l		0.053	U	--		0.057	U	0.053	U	--		0.055	U	--		0.053	U	0.055	U	--	
2,4,5-T	93-76-5	ug/l		0.063	U	--		0.068	U	0.063	U	--		0.065	U	--		0.063	U	0.065	U	--	
2,4-DB	94-82-6	ug/l		0.13	U	--		0.12	U	0.11	U	--		0.12	U	--		0.11	U	0.12	U	--	
Dinoseb	88-85-7	ug/l		0.066	U	--		0.071	U	0.066	U	--		0.068	U	--		0.066	U	0.068	U	--	
MCPP	93-65-2	ug/l		15	U	--		17	U	15	U	--		16	U	--		35	U	16	U	--	
Metals																							
Antimony	7440-36-0	ug/l		0.02	U	0.02	U	0.02	U	0.03	U	--		0.06	U	0.03		0.04	U	0.03	U	--	
Antimony (dissolved)	7440-36-0	ug/l		0.02	U	--		0.02	U	0.02	U	--		0.02	U	--		0.02	U	0.02	U	--	
Arsenic	7440-38-2	ug/l		0.379		0.359		0.359		0.365		--		0.4		0.398		0.386		0.373		--	
Arsenic (dissolved)	7440-38-2	ug/l		0.291		--		0.252		0.322		--		0.353		--		0.333		0.33		--	
Cadmium	7440-43-9	ug/l		0.008	U	0.008		0.02	J	0.03		--		0.06		0.04		0.02	U	0.02		--	
Cadmium (dissolved)	7440-43-9	ug/l		0.008	U	--		0.008	U	0.03		--		0.03		--		0.02	U	0.02	U	--	
Chromium	7440-47-3	ug/l		0.33		0.32		0.31		0.3		--		0.35		0.3		0.3		0.29		--	
Chromium (dissolved)	7440-47-3	ug/l		0.13	J	--		0.16	U	0.17	J	--		0.15	U	--		0.16	U	0.15	U	--	
Copper	7440-50-8	ug/l		0.96		0.97		0.98		0.87		--		0.7		0.67		0.69		0.73		--	
Copper (dissolved)	7440-50-8	ug/l		0.53		--		0.44	U	0.45		--		0.42		--		0.37		0.4		--	
Lead	7439-92-1	ug/l		0.148		0.148		0.136		0.277		--		0.174		0.152		0.187		0.122		--	
Lead (dissolved)	7439-92-1	ug/l		0.013	J	--		0.012	U	0.011	J	--		0.012	J	--		0.01	J	0.009	U	--	
Mercury	7439-97-6	ug/l		0.04	U	0.04	U	0.04	U	0.04	U	--		0.04	U	--		0.04	U	0.04	U	--	
Mercury (dissolved)	7439-97-6	ug/l		0.04	U	--		0.04	U	0.04	U	--		0.04	U	--		0.04	U	0.04	U	--	
Nickel	7440-02-0	ug/l		0.59		0.62		0.64		0.73		--		0.64		0.65		0.62		0.61		--	
Nickel (dissolved)	7440-02-0	ug/l		0.46		--		0.43		0.61		--		0.58	UJ	--		0.55	UJ	0.55	UJ	--	
Selenium	7782-49-2	ug/l		0.2	U	0.2	U	0.3	J	0.3	U	--		0.4	U	0.4		0.4	U	0.2	U	--	
Selenium (dissolved)	7782-49-2	ug/l		0.2	U	--		0.2	U	0.3	U	--		0.4	U	--		0.3	U	0.3	U	--	
Silver	7440-22-4	ug/l		0.009	U	0.009	U	0.009	U	0.009	U	--		0.009	U	0.009	U	0.009	U	0.009	U	--	
Silver (dissolved)	7440-22-4	ug/l		0.009	U	--		0.009	U	0.009	U	--		0.009	U	--		0.009	U	0.009	U	--	

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Table 4-2. November 2004 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name	LW2-W013-1		LW2-W013-1D		LW2-W013-2		LW2-W014		LW2-W014D	LW2-W015		LW2-W015D	LW2-W016-1		LW2-W016-2		LW2-W016-2D
			Sample Date/Time	11/8/2004, 1542		11/8/2004, 1542		11/9/2004, 1243		12/1/2004, 1218		12/1/2004, 1218	11/29/2004, 1148		11/29/2004, 1148	11/30/2004, 1335		11/30/2004, 1430		11/30/2004, 1430
			X Coordinate	7627111.88		7627111.88		7627115.05		7627386.07		7627386.07	7626447.04		7626447.04	7627821.5		7627821.5		7627821.5
			Y Coordinate	705760.03		705760.03		705761.09		705733.57		705733.57	703929.23		703929.23	702551.16		702551.16		702551.16
Thallium	7440-28-0	ug/l		0.005	J	0.007		0.005	J	0.004	UJ	--	0.046	J	0.018	0.004	UJ	0.004	UJ	--
Thallium (dissolved)	7440-28-0	ug/l		0.004	U	--		0.004	U	0.004	UJ	--	0.004	UJ		0.004	UJ	0.004	UJ	--
Zinc	7440-66-6	ug/l		1.7		1.6		1.9		2.6		--	2		2	2.1		2		--
Zinc (dissolved)	7440-66-6	ug/l		0.9	J	--		2.2	U	1.6		--	2.2			1.4	U	1.6	U	--
Chromium hexavalent	18540-29-9	mg/L		--		--		--		--		--	--		--	0.007	U	0.007	U	--
PAHs																				
2-Methylnaphthalene	91-57-6	ug/l		0.011	U	--		0.011	U	0.0068	J	--	0.0054	U	--	0.0054	U	0.0054	UJ	--
Acenaphthene	83-32-9	ug/l		0.008	U	--		0.008	U	0.004	U	--	0.004	U	--	0.004	U	0.004	UJ	--
Acenaphthylene	208-96-8	ug/l		0.016	U	--		0.012	U	0.0085	U	--	0.0036	U	--	0.0036	U	0.0036	UJ	--
Anthracene	120-12-7	ug/l		0.0042	U	--		0.0042	U	0.0021	U	--	0.0021	U	--	0.0021	U	0.0021	UJ	--
Fluorene	86-73-7	ug/l		0.011	U	--		0.011	U	0.0052	U	--	0.0052	U	--	0.0052	U	0.0052	UJ	--
Naphthalene	91-20-3	ug/l		0.013	U	--		0.013	U	0.015	J	--	0.015	J	--	0.012	U	0.0071	UJ	--
Phenanthrene	85-01-8	ug/l		0.013	U	--		0.013	U	0.0064	U	--	0.0064	U	--	0.0067	U	0.0064	UJ	--
Dibenz(a,h)anthracene	53-70-3	ug/l		0.0065	U	--		0.0065	U	0.0033	U	--	0.0033	U	--	0.0033	U	0.0033	UJ	--
Benz(a)anthracene	56-55-3	ug/l		0.0084	U	--		0.0084	U	0.0042	U	--	0.0042	U	--	0.0042	U	0.0042	UJ	--
Benzo(a)pyrene	50-32-8	ug/l		0.0064	U	--		0.0064	U	0.0032	U	--	0.0032	U	--	0.0032	U	0.0032	UJ	--
Benzo(b)fluoranthene	205-99-2	ug/l		0.0078	U	--		0.0078	U	0.0039	U	--	0.0039	U	--	0.0039	U	0.0039	UJ	--
Benzo(g,h,i)perylene	191-24-2	ug/l		0.015	U	--		0.015	U	0.0074	U	--	0.0074	U	--	0.0074	U	0.0074	UJ	--
Benzo(k)fluoranthene	207-08-9	ug/l		0.0054	U	--		0.0054	U	0.0027	U	--	0.0027	U	--	0.0027	U	0.0027	UJ	--
Chrysene	218-01-9	ug/l		0.005	U	--		0.005	U	0.004	J	--	0.0025	U	--	0.0025	U	0.0025	UJ	--
Fluoranthene	206-44-0	ug/l		0.0096	U	--		0.0096	U	0.0048	U	--	0.0054	J	--	0.0048	U	0.0048	UJ	--
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l		0.0084	U	--		0.0084	U	0.0042	U	--	0.0048	J	--	0.0042	U	0.0042	UJ	--
Pyrene	129-00-0	ug/l		0.0089	U	--		0.0089	U	0.0047	J	--	0.007	J	--	0.0045	U	0.0045	UJ	--
Organochlorine Pesticides																				
2,4'-DDD	53-19-0	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
2,4'-DDE	3424-82-6	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
2,4'-DDT	789-02-6	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
4,4'-DDD	72-54-8	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
4,4'-DDE	72-55-9	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
4,4'-DDT	50-29-3	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
Aldrin	309-00-2	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
alpha-Hexachlorocyclohexane	319-84-6	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
beta-Hexachlorocyclohexane	319-85-7	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
delta-Hexachlorocyclohexane	319-86-8	ug/l		0.00167	NJ	--		0.000526	U	0.000811	J	--	--		--	--		--		--
gamma-Hexachlorocyclohexane	58-89-9	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
cis-Chlordane	5103-71-9	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
trans-Chlordane	5103-74-2	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
Oxychlordane	27304-13-8	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
cis-Nonachlor	5103-73-1	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
trans-Nonachlor	39765-80-5	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
Dieldrin	60-57-1	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
alpha-Endosulfan	959-98-8	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
beta-Endosulfan	33213-65-9	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
Endosulfan sulfate	1031-07-8	ug/l		0.00077	J	--		0.000526	U	0.00049	U	--	--		--	--		--		--
Endrin	72-20-8	ug/l		0.000472	UJ	--		0.000526	UJ	0.00049	U	--	--		--	--		--		--
Endrin aldehyde	7421-93-4	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
Endrin ketone	53494-70-5	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
Heptachlor	76-44-8	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
Heptachlor epoxide	1024-57-3	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
Hexachlorobenzene	118-74-1	ug/l		0.000709	U	--		0.00171	U	0.00049	U	--	--		--	--		--		--
Hexachlorobutadiene	87-68-3	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
Hexachloroethane	67-72-1	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	0.019		--	0.019	U	0.02	UJ	--
Methoxychlor	72-43-5	ug/l		0.000472	U	--		0.0111		0.00049	U	--	--		--	--		--		--
Mirex	2385-85-5	ug/l		0.000472	U	--		0.000526	U	0.00049	U	--	--		--	--		--		--
Toxaphene	8001-35-2	ug/l		0.118	U	--		0.132	U	0.123	U	--	--		--	--		--		--

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Table 4-2. November 2004 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W013-1		LW2-W013-1D		LW2-W013-2		LW2-W014		LW2-W014D		LW2-W015		LW2-W015D		LW2-W016-1		LW2-W016-2		LW2-W016-2D
			Sample Date/Time		11/8/2004, 1542		11/8/2004, 1542		11/9/2004, 1243		12/1/2004, 1218		12/1/2004, 1218		11/29/2004, 1148		11/29/2004, 1148		11/30/2004, 1335		11/30/2004, 1430		11/30/2004, 1430
			X Coordinate		7627111.88		7627111.88		7627115.05		7627386.07		7627386.07		7626447.04		7626447.04		7627821.5		7627821.5		7627821.5
			Y Coordinate		705760.03		705760.03		705761.09		705733.57		705733.57		703929.23		703929.23		702551.16		702551.16		702551.16
Phenols																							
2,3,4,6-Tetrachlorophenol	58-90-2	ug/l		--		--		--		--		--		--		--		--		--		--	
2,4,5-Trichlorophenol	95-95-4	ug/l		0.026	U	--		0.026	U	0.026	U		--		0.026	U	--		0.026	U	0.027	U	--
2,4,6-Trichlorophenol	88-06-2	ug/l		0.037	U	--		0.037	U	0.037	U		--		0.037	U	--		0.037	U	0.039	U	--
2,4-Dichlorophenol	120-83-2	ug/l		0.024	U	--		0.024	U	0.024	U		--		0.024	U	--		0.024	U	0.025	UJ	--
2,4-Dimethylphenol	105-67-9	ug/l		0.32	U	--		0.32	U	0.32	U		--		0.32	U	--		0.32	U	0.34	UJ	--
2,4-Dinitrophenol	51-28-5	ug/l		0.53	U	--		0.53	U	0.53	U		--		0.53	U	--		0.53	U	0.56	UJ	--
2-Chlorophenol	95-57-8	ug/l		0.015	U	--		0.015	U	0.015	U		--		0.015	U	--		0.015	U	0.016	UJ	--
2-Methylphenol	95-48-7	ug/l		0.06	U	--		0.06	U	0.06	U		--		0.06	U	--		0.06	U	0.063	UJ	--
2-Nitrophenol	88-75-5	ug/l		0.014	U	--		0.014	U	0.014	U		--		0.014	U	--		0.014	U	0.015	UJ	--
4,6-Dinitro-2-methylphenol	534-52-1	ug/l		0.013	U	--		0.013	U	0.013	U		--		0.013	U	--		0.013	U	0.014	UJ	--
4-Chloro-3-methylphenol	59-50-7	ug/l		0.029	U	--		0.029	U	0.034	U		--		0.12	U	--		0.088	U	0.031	UJ	--
4-Methylphenol	106-44-5	ug/l		0.051	U	--		0.051	U	0.051	U		--		0.051	U	--		0.051	U	0.054	UJ	--
4-Nitrophenol	100-02-7	ug/l		0.54	U	--		0.54	U	0.54	U		--		0.54	U	--		0.54	U	0.57	UJ	--
Pentachlorophenol	87-86-5	ug/l		0.029	U	--		0.029	U	0.029	U		--		0.029	U	--		0.029	U	0.03	U	--
Phenol	108-95-2	ug/l		0.02	U	--		0.02	U	0.02	U		--		0.02	U	--		0.02	U	0.051	J	--
Phthalate Esters																							
Dimethyl phthalate	131-11-3	ug/l		0.013	U	--		0.013	U	0.013	U		--		0.013	U	--		0.013	U	0.014	UJ	--
Diethyl phthalate	84-66-2	ug/l		0.059	U	--		0.026	U	0.049	U		--		0.033	U	--		0.043	U	0.072	UJ	--
Dibutyl phthalate	84-74-2	ug/l		0.11	U	--		0.041	U	0.11	U		--		0.076	U	--		0.063	U	0.086	UJ	--
Butylbenzyl phthalate	85-68-7	ug/l		0.026	U	--		0.026	U	0.026	U		--		0.026	U	--		0.026	U	0.027	UJ	--
Di-n-octyl phthalate	117-84-0	ug/l		0.032	U	--		0.032	U	0.032	U		--		0.032	U	--		0.032	U	0.034	UJ	--
Bis(2-ethylhexyl) phthalate	117-81-7	ug/l		0.47	U	--		0.27	U	0.45	U		--		0.87	U	--		0.27	U	0.29	UJ	--
SVOCs																							
1,2,4-Trichlorobenzene	120-82-1	ug/l		0.016	U	--		0.016	U	0.016	U		--		0.016	U	--		0.016	U	0.017	UJ	--
1,2-Dichlorobenzene	95-50-1	ug/l		0.015	U	--		0.015	U	0.015	U		--		0.015	U	--		0.015	U	0.015	UJ	--
1,3-Dichlorobenzene	541-73-1	ug/l		0.011	U	--		0.011	U	0.011	U		--		0.011	U	--		0.011	U	0.012	UJ	--
1,4-Dichlorobenzene	106-46-7	ug/l		0.014	U	--		0.014	U	0.014	U		--		0.014	U	--		0.014	U	0.014	UJ	--
Azobenzene	103-33-3	ug/l		0.012	U	--		0.012	U	0.012	U		--		0.012	U	--		0.012	U	0.013	UJ	--
2,4-Dinitrotoluene	121-14-2	ug/l		0.02	U	--		0.02	U	0.02	U		--		0.02	U	--		0.02	U	0.021	UJ	--
2,6-Dinitrotoluene	606-20-2	ug/l		0.0088	U	--		0.0088	U	0.0088	U		--		0.0088	U	--		0.0088	U	0.0093	UJ	--
2-Chloronaphthalene	91-58-7	ug/l		0.016	U	--		0.016	U	0.016	U		--		0.016	U	--		0.016	U	0.016	UJ	--
2-Nitroaniline	88-74-4	ug/l		0.015	U	--		0.015	U	0.015	U		--		0.015	U	--		0.015	U	0.016	UJ	--
3,3'-Dichlorobenzidine	91-94-1	ug/l		0.43	U	--		0.43	U	0.43	U		--		0.43	UJ	--		0.43	UJ	0.46	UJ	--
3-Nitroaniline	99-09-2	ug/l		0.23	U	--		0.23	U	0.23	U		--		0.23	U	--		0.23	U	0.24	UJ	--
4-Bromophenyl phenyl ether	101-55-3	ug/l		0.018	U	--		0.018	U	0.018	U		--		0.018	U	--		0.018	U	0.019	UJ	--
4-Chloroaniline	106-47-8	ug/l		0.018	U	--		0.018	U	0.018	U		--		0.018	U	--		0.018	U	0.019	UJ	--
4-Chlorophenyl phenyl ether	7005-72-3	ug/l		0.0085	U	--		0.0085	U	0.0085	U		--		0.0085	U	--		0.0085	U	0.0089	UJ	--
4-Nitroaniline	100-01-6	ug/l		0.17	U	--		0.17	U	0.17	U		--		0.17	U	--		0.17	U	0.18	UJ	--
Aniline	62-53-3	ug/l		1	U	--		1	U	1	U		--		1	U	--		1	U	1.1	UJ	--
Benzoic acid	65-85-0	ug/l		1.8	U	--		1.8	U	1.8	U		--		1.8	U	--		1.8	U	1.9	UJ	--
Benzyl alcohol	100-51-6	ug/l		0.98	U	--		0.98	U	0.98	U		--		0.98	U	--		0.98	U	1.1	UJ	--
Bis(2-chloroethoxy) methane	111-91-1	ug/l		0.012	U	--		0.012	U	0.012	U		--		0.012	U	--		0.012	U	0.012	UJ	--
Bis(2-chloroethyl) ether	111-44-4	ug/l		0.015	U	--		0.015	U	0.015	U		--		0.015	U	--		0.015	U	0.015	UJ	--
Carbazole	86-74-8	ug/l		0.013	U	--		0.013	U	0.013	U		--		0.013	U	--		0.013	U	0.014	UJ	--
Dibenzofuran	132-64-9	ug/l		0.029	U	--		0.029	U	0.015	U		--		0.015	U	--		0.015	U	0.015	UJ	--
Hexachlorobenzene	118-74-1	ug/l		0.015	U	--		0.015	U	0.015	U		--		0.015	U	--		0.015	U	0.015	UJ	--
Hexachlorobutadiene	87-68-3	ug/l		0.02	U	--		0.02	U	0.02	U		--		0.02	U	--		0.02	U	0.021	UJ	--
Hexachlorocyclopentadiene	77-47-4	ug/l		0.041	U	--		0.041	U	0.041	U		--		0.041	U	--		0.041	U	0.043	UJ	--
Hexachloroethane	67-72-1	ug/l		0.019	U	--		0.019	U	0.019	U		--		--		--		--		--	UJ	--
Isophorone	78-59-1	ug/l		0.0085	U	--		0.0085	U	0.0085	U		--		0.0085	U	--		0.0085	U	0.0089	UJ	--
Nitrobenzene	98-95-3	ug/l		0.0074	U	--		0.0074	U	0.0074	U		--		0.0074	U	--		0.0074	U	0.0078	UJ	--
N-Nitrosodimethylamine	62-75-9	ug/l		0.42	U	--		0.42	U	0.42	U		--		0.42	U	--		0.42	U	0.45	UJ	--
N-Nitrosodipropylamine	621-64-7	ug/l		0.033	U	--		0.033	U	0.033	U		--		0.033	U	--		0.033	U	0.034	UJ	--
N-Nitrosodiphenylamine	86-30-6	ug/l		0.028	U	--		0.028	U	0.028	U		--		0.028	U	--		0.028	U	0.03	UJ	--
Bis(2-chloroisopropyl) ether	39638-32-9	ug/l		0.017	U	--		0.017	U	0.017	U		--		0.017	U	--		0.017	U	0.018	UJ	--

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Table 4-2. November 2004 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W017		LW2-W017D		LW2-W018		LW2-W018D		LW2-W019		LW2-W020		LW2-W021		LW2-W022		LW2-W023		LW2-W023D	
			Sample Date/Time		12/1/2004, 1420		12/1/2004, 1420		11/10/2004, 1115		11/10/2004, 1115		12/2/2004, 1325		12/1/2004, 1545		12/1/2004, 1705		12/2/2004, 1155		11/15/2004, 2234		11/15/2004, 2234	
			X Coordinate		7628400.97		7628400.97		7633797.55		7633797.55		7632339.63		7636874.77		7635641.84		7637266.93		7642505.89		7642505.89	
			Y Coordinate		701061.47		701061.47		700824.33		700824.33		697268		699060.17		700080.71		694072.04		690067.93		690067.93	
PCB Aroclors																								
Aroclor 1016	12674-11-2	ug/l		0.0025	R	--		0.0025	U	--		0.00253	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	--	
Aroclor 1242	53469-21-9	ug/l		0.0025	R	--		0.0025	U	--		0.00253	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	--	
Aroclor 1248	12672-29-6	ug/l		0.00125	R	--		0.00125	U	--		0.00127	U	0.00125	U	0.00125	U	0.00125	U	0.00125	U	--	
Aroclor 1254	11097-69-1	ug/l		0.00125	R	--		0.00125	U	--		0.00127	U	0.00125	U	0.00125	U	0.00125	U	0.00125	U	--	
Aroclor 1260	11096-82-5	ug/l		0.0025	R	--		0.0025	U	--		0.00253	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	--	
Aroclor 1262	37324-23-5	ug/l		0.0025	R	--		0.0025	U	--		0.00253	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	--	
Aroclor 1268	11100-14-4	ug/l		0.0025	R	--		0.0025	U	--		0.00253	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	--	
Aroclor 1221	11104-28-2	ug/l		0.0025	R	--		0.0025	U	--		0.00253	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	--	
Aroclor 1232	11141-16-5	ug/l		0.0025	R	--		0.0025	U	--		0.00253	U	0.0025	U	0.0025	U	0.0025	U	0.0025	U	--	
Butyltins																								
Butyltin ion	78763-54-9	ug/l		0.0047	U	--		0.0047	U	--		0.0047	U	0.0047	U	0.0047	U	0.0047	U	0.0047	U	--	
Dibutyltin ion	14488-53-0	ug/l		0.005	U	--		0.005	U	--		0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	--	
Tributyltin ion	36643-28-4	ug/l		0.0071	U	--		0.0071	U	--		0.0071	U	0.0071	U	0.0071	U	0.0071	U	0.0071	U	--	
Tetrabutyltin	1461-25-2	ug/l		0.0032	U	--		0.0032	U	--		0.0032	U	0.0032	U	0.0032	U	0.0032	U	0.0032	U	--	
Conventionals																								
Total organic carbon	TOC	mg/l		2.1		--		2		2.1		1.9		1.6		1.7		2.4		1.6		1.6	
Total suspended solids	TSS	mg/l		7		--		5	U	--		5	U	5	U	5	U	5	U	8		5	U
Dissolved organic carbon	DOC	mg/l		1.6		1.6		2		--		1.5		1.2		1.3		2		1.3		1.3	
Hardness as CaCO3	HARD	mg/l		25.1		--		23.3		--		24.8		26.4		25.5		35.2		23.7		--	
Total dissolved solids	TDS	mg/l		80		--		58		--		68		70		82		84		74		--	
Perchlorate	14797-73-0	ug/l		--		--		--		--		--		--		--		--		--		--	
Herbicides																								
Dalapon	75-99-0	ug/l		0.44	U	--		0.24	UJ	--		0.51	U	0.41	U	0.39	U	0.42	U	0.42	UJ	--	
Dicamba	1918-00-9	ug/l		0.081	U	--		0.08	U	--		0.082	U	0.08	U	0.08	U	0.08	U	0.084	U	--	
MCPA	94-74-6	ug/l		7.9	U	--		7.8	U	--		8	U	7.8	U	7.8	U	7.8	U	8.2	U	--	
Dichloroprop	120-36-5	ug/l		0.067	U	--		0.066	U	--		0.068	U	0.066	U	0.066	U	0.066	U	0.069	U	--	
2,4-D	94-75-7	ug/l		0.057	U	--		0.056	U	--		0.058	U	0.056	U	0.056	U	0.056	U	0.059	U	--	
Silvex	93-72-1	ug/l		0.054	U	--		0.053	U	--		0.055	U	0.053	U	0.053	U	0.053	U	0.056	U	--	
2,4,5-T	93-76-5	ug/l		0.064	U	--		0.063	U	--		0.065	U	0.063	U	0.063	U	0.063	U	0.066	U	--	
2,4-DB	94-82-6	ug/l		0.12	U	--		0.19	U	--		0.12	U	0.11	U	0.11	U	0.11	U	0.12	U	--	
Dinoseb	88-85-7	ug/l		0.067	U	--		0.066	U	--		0.068	U	0.066	U	0.066	U	0.066	U	0.069	U	--	
MCPP	93-65-2	ug/l		16	U	--		15	U	--		16	U	15	U	15	U	15	U	16	U	--	
Metals																								
Antimony	7440-36-0	ug/l		0.02	U	--		0.02	U	--		0.03	U	0.02	U	0.03	U	0.07	U	0.03	U	--	
Antimony (dissolved)	7440-36-0	ug/l		0.02	U	--		0.02	U	--		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	--	
Arsenic	7440-38-2	ug/l		0.41		--		0.337		--		0.368		0.407		0.383		0.668		0.346		0.352	
Arsenic (dissolved)	7440-38-2	ug/l		0.337		--		0.249		--		0.307		0.359		0.342		0.493		0.29		--	
Cadmium	7440-43-9	ug/l		0.04		--		0.011	J	--		0.03		0.03		0.03		0.05		0.02	U	--	
Cadmium (dissolved)	7440-43-9	ug/l		0.02		--		0.01	J	--		0.03		0.03		0.03		0.03		0.02	U	--	
Chromium	7440-47-3	ug/l		0.34		--		0.31		--		0.3		0.2		0.23		0.37		0.29		--	
Chromium (dissolved)	7440-47-3	ug/l		0.17	J	--		0.12	J	--		0.16	J	0.16	J	0.16	J	0.19	J	0.14	U	--	
Copper	7440-50-8	ug/l		0.86		--		0.98		--		0.8		0.8		0.86		1.05		0.85		--	
Copper (dissolved)	7440-50-8	ug/l		0.46		--		0.61		--		0.44		0.61		0.65		0.49		0.46		--	
Lead	7439-92-1	ug/l		0.19		--		0.163		--		0.147		0.087		0.083		0.318		0.15		--	
Lead (dissolved)	7439-92-1	ug/l		0.012	J	--		0.019	J	--		0.009	U	0.015	J	0.012	J	0.015	J	0.013	J	--	
Mercury	7439-97-6	ug/l		0.04	U	--		0.04	U	--		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U
Mercury (dissolved)	7439-97-6	ug/l		0.04	U	--		0.04	U	--		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	--	
Nickel	7440-02-0	ug/l		0.88		--		0.63		--		0.68		0.63		0.73		1.15		0.58		--	
Nickel (dissolved)	7440-02-0	ug/l		0.59		--		0.48		--		0.67		0.67		0.63		1.04		0.45		--	
Selenium	7782-49-2	ug/l		0.4	U	--		0.2	U	--		0.3	U	0.3	U	0.3	U	0.5	U	0.2	U	--	
Selenium (dissolved)	7782-49-2	ug/l		0.3	U	--		0.2	U	--		0.4	U	0.4	U	0.3	U	0.5	U	0.2	U	--	
Silver	7440-22-4	ug/l		0.009	U	--		0.009	U	--		0.009	U	0.009	U	0.009	U	0.026	U	0.052	U	--	
Silver (dissolved)	7440-22-4	ug/l		0.009	U	--		0.009	U	--		0.009	U	0.009	U	0.009	U	0.009	U	0.009	U	--	

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Table 4-2. November 2004 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W017		LW2-W017D		LW2-W018		LW2-W018D		LW2-W019		LW2-W020		LW2-W021		LW2-W022		LW2-W023		LW2-W023D
			Sample Date/Time		12/1/2004, 1420		12/1/2004, 1420		11/10/2004, 1115		11/10/2004, 1115		12/2/2004, 1325		12/1/2004, 1545		12/1/2004, 1705		12/2/2004, 1155		11/15/2004, 2234		11/15/2004, 2234
			X Coordinate		7628400.97		7628400.97		7633797.55		7633797.55		7632339.63		7636874.77		7635641.84		7637266.93		7642505.89		7642505.89
			Y Coordinate		701061.47		701061.47		700824.33		700824.33		697268		699060.17		700080.71		694072.04		690067.93		690067.93
Thallium	7440-28-0	ug/l		0.004	UJ	--		0.004	U	--		0.004	UJ	0.004	UJ	0.004	UJ	0.013	J	0.004	U	--	
Thallium (dissolved)	7440-28-0	ug/l		0.004	UJ	--		0.004	U	--		0.004	UJ	0.004	UJ	0.004	UJ	0.004	UJ	0.004	U	--	
Zinc	7440-66-6	ug/l		2.4		--		2		--		2.2		3.1		3		57.9		2.8		--	
Zinc (dissolved)	7440-66-6	ug/l		1.6		--		4.9		--		1.6		2.5		3.2		41.9		2.2		--	
Chromium hexavalent	18540-29-9	mg/L		--		--		--		--		--		--		--		--		--		--	
PAHs																							
2-Methylnaphthalene	91-57-6	ug/l		0.0054	J	--		0.011	U	--		0.0054	U	0.0054	U	0.0054	U	0.008	J	0.011	U	--	
Acenaphthene	83-32-9	ug/l		0.0034	J	--		0.008	U	--		0.004	U	0.004	U	0.004	U	0.0071	J	0.008	U	--	
Acenaphthylene	208-96-8	ug/l		0.0018	U	--		0.013	U	--		0.0094	U	0.0088	U	0.0075	U	0.012	U	0.0091	J	--	
Anthracene	120-12-7	ug/l		0.0047	J	--		0.0042	U	--		0.0021	U	0.0021	J	0.0021	U	0.0038	J	0.0042	U	--	
Fluorene	86-73-7	ug/l		0.0028	J	--		0.011	U	--		0.0052	U	0.0052	U	0.0052	U	0.0052	U	0.011	U	--	
Naphthalene	91-20-3	ug/l		0.014		--		0.013	U	--		0.011	J	0.0064	U	0.0067	J	0.057		0.013	U	--	
Phenanthrene	85-01-8	ug/l		0.0069	J	--		0.013	U	--		0.0064	U	0.0064	U	0.0064	U	0.0089	J	0.013	U	--	
Dibenz(a,h)anthracene	53-70-3	ug/l		0.0017	U	--		0.0065	U	--		0.0033	U	0.0033	U	0.0033	U	0.0033	U	0.0065	U	--	
Benz(a)anthracene	56-55-3	ug/l		0.0021	U	--		0.0084	U	--		0.0042	U	0.0042	U	0.0042	U	0.0042	U	0.01	J	--	
Benzo(a)pyrene	50-32-8	ug/l		0.0016	U	--		0.0064	U	--		0.0032	U	0.0032	U	0.0032	U	0.0032	U	0.0064	U	--	
Benzo(b)fluoranthene	205-99-2	ug/l		0.002	U	--		0.0078	U	--		0.0039	U	0.0039	U	0.0039	U	0.0039	U	0.0078	U	--	
Benzo(g,h,i)perylene	191-24-2	ug/l		0.0037	U	--		0.015	U	--		0.0074	U	0.0074	U	0.0074	U	0.0074	U	0.015	U	--	
Benzo(k)fluoranthene	207-08-9	ug/l		0.0014	U	--		0.0054	U	--		0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0054	U	--	
Chrysene	218-01-9	ug/l		0.0013	U	--		0.005	U	--		0.0026	J	0.0025	U	0.0025	U	0.0025	U	0.005	U	--	
Fluoranthene	206-44-0	ug/l		0.0024	U	--		0.0096	U	--		0.0048	U	0.0048	U	0.0048	U	0.0048	U	0.0096	U	--	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l		0.0021	U	--		0.0084	U	--		0.0042	U	0.0042	U	0.0042	U	0.0042	U	0.0084	U	--	
Pyrene	129-00-0	ug/l		0.0023	U	--		0.0089	U	--		0.0045	U	0.0049	J	0.0045	U	0.0056	J	0.0092	J	--	
Organochlorine Pesticides																							
2,4'-DDD	53-19-0	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
2,4'-DDE	3424-82-6	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
2,4'-DDT	789-02-6	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
4,4'-DDD	72-54-8	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
4,4'-DDE	72-55-9	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
4,4'-DDT	50-29-3	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
Aldrin	309-00-2	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
alpha-Hexachlorocyclohexane	319-84-6	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
beta-Hexachlorocyclohexane	319-85-7	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
delta-Hexachlorocyclohexane	319-86-8	ug/l		0.00051	U	--		0.000481	U	--		0.00093		0.00049	U	0.000481	U	0.00049	U	--		--	
gamma-Hexachlorocyclohexane	58-89-9	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
cis-Chlordane	5103-71-9	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
trans-Chlordane	5103-74-2	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
Oxychlordane	27304-13-8	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
cis-Nonachlor	5103-73-1	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
trans-Nonachlor	39765-80-5	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
Dieldrin	60-57-1	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
alpha-Endosulfan	959-98-8	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
beta-Endosulfan	33213-65-9	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
Endosulfan sulfate	1031-07-8	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
Endrin	72-20-8	ug/l		0.00051	U	--		0.000481	UJ	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
Endrin aldehyde	7421-93-4	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
Endrin ketone	53494-70-5	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
Heptachlor	76-44-8	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
Heptachlor epoxide	1024-57-3	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
Hexachlorobenzene	118-74-1	ug/l		0.00105		--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
Hexachlorobutadiene	87-68-3	ug/l		0.00256		--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
Hexachloroethane	67-72-1	ug/l		0.00413	NJ	--		0.000481	U	--		0.019	U	0.00049	U	0.000481	U	0.00049	U	0.02	U	--	
Methoxychlor	72-43-5	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
Mirex	2385-85-5	ug/l		0.00051	U	--		0.000481	U	--		0.000481	U	0.00049	U	0.000481	U	0.00049	U	--		--	
Toxaphene	8001-35-2	ug/l		0.128	U	--		0.12	U	--		0.12	U	0.123	U	0.12	U	0.123	U	--		--	

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Table 4-2. November 2004 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W017D		LW2-W018		LW2-W018D		LW2-W019		LW2-W020		LW2-W021		LW2-W022		LW2-W023		LW2-W023D	
			Sample Date/Time		12/1/2004, 1420		11/10/2004, 1115		11/10/2004, 1115		12/2/2004, 1325		12/1/2004, 1545		12/1/2004, 1705		12/2/2004, 1155		11/15/2004, 2234		11/15/2004, 2234	
			X Coordinate		7628400.97		7633797.55		7633797.55		7632339.63		7636874.77		7635641.84		7637266.93		7642505.89		7642505.89	
			Y Coordinate		701061.47		700824.33		700824.33		697268		699060.17		700080.71		694072.04		690067.93		690067.93	
Phenols																						
2,3,4,6-Tetrachlorophenol	58-90-2	ug/l	--		--		--		--		--		--		--		--		--		--	
2,4,5-Trichlorophenol	95-95-4	ug/l	0.026	U	--		0.026	U	--		0.026	U	0.026	U	0.026	U	0.026	U	0.027	U	--	
2,4,6-Trichlorophenol	88-06-2	ug/l	0.037	U	--		0.037	U	--		0.037	U	0.037	U	0.037	U	0.037	U	0.039	U	--	
2,4-Dichlorophenol	120-83-2	ug/l	0.024	U	--		0.024	U	--		0.024	U	0.024	U	0.024	U	0.024	U	0.025	U	--	
2,4-Dimethylphenol	105-67-9	ug/l	0.32	U	--		0.32	U	--		0.32	U	0.32	U	0.32	U	0.32	U	0.34	U	--	
2,4-Dinitrophenol	51-28-5	ug/l	0.53	U	--		0.53	U	--		0.53	U	0.53	U	0.53	U	0.53	U	0.56	U	--	
2-Chlorophenol	95-57-8	ug/l	0.015	U	--		0.015	U	--		0.015	U	0.015	U	0.015	U	0.015	U	0.016	U	--	
2-Methylphenol	95-48-7	ug/l	0.06	U	--		0.06	U	--		0.06	U	0.06	U	0.06	U	0.06	U	0.063	U	--	
2-Nitrophenol	88-75-5	ug/l	0.014	U	--		0.014	U	--		0.014	U	0.014	U	0.014	U	0.014	U	0.015	U	--	
4,6-Dinitro-2-methylphenol	534-52-1	ug/l	0.013	U	--		0.013	U	--		0.013	U	0.013	U	0.013	U	0.013	U	0.014	U	--	
4-Chloro-3-methylphenol	59-50-7	ug/l	0.044	U	--		0.029	U	--		0.041	U	0.034	U	0.034	U	0.046	U	0.096	U	--	
4-Methylphenol	106-44-5	ug/l	0.051	U	--		0.051	U	--		0.051	U	0.051	U	0.051	U	0.051	U	0.054	U	--	
4-Nitrophenol	100-02-7	ug/l	0.54	U	--		0.54	U	--		0.54	U	0.54	U	0.54	U	0.54	U	0.57	U	--	
Pentachlorophenol	87-86-5	ug/l	0.029	U	--		0.029	U	--		0.029	U	0.029	U	0.029	U	0.029	U	0.03	U	--	
Phenol	108-95-2	ug/l	0.02	U	--		0.02	U	--		0.02	U	0.02	U	0.02	U	0.043	U	0.021	U	--	
Phthalate Esters																						
Dimethyl phthalate	131-11-3	ug/l	0.013	U	--		0.013	U	--		0.013	U	0.013	U	0.013	U	0.013	U	0.014	U	--	
Diethyl phthalate	84-66-2	ug/l	0.058	U	--		0.026	U	--		0.04	U	0.065	U	0.064	U	0.051	U	0.057	U	--	
Dibutyl phthalate	84-74-2	ug/l	0.17	U	--		0.05	U	--		0.08	U	0.18	U	0.2	U	0.1	U	0.11	U	--	
Butylbenzyl phthalate	85-68-7	ug/l	0.026	U	--		0.026	U	--		0.026	U	0.027	U	0.026	U	0.026	U	0.027	U	--	
Di-n-octyl phthalate	117-84-0	ug/l	0.032	U	--		0.032	U	--		0.032	U	0.032	U	0.032	U	0.032	U	0.034	U	--	
Bis(2-ethylhexyl) phthalate	117-81-7	ug/l	0.7	U	--		0.46	U	--		0.44	U	0.58	U	0.69	U	0.27	U	0.9	U	--	
SVOCs																						
1,2,4-Trichlorobenzene	120-82-1	ug/l	0.016	U	--		0.016	U	--		0.016	U	0.016	U	0.016	U	0.016	U	0.017	U	--	
1,2-Dichlorobenzene	95-50-1	ug/l	0.015	U	--		0.015	U	--		0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	--	
1,3-Dichlorobenzene	541-73-1	ug/l	0.011	U	--		0.011	U	--		0.011	U	0.011	U	0.011	U	0.011	U	0.012	U	--	
1,4-Dichlorobenzene	106-46-7	ug/l	0.014	U	--		0.014	U	--		0.014	U	0.014	U	0.014	U	0.019	J	0.014	U	--	
Azobenzene	103-33-3	ug/l	0.012	U	--		0.012	U	--		0.012	U	0.012	U	0.012	U	0.012	U	0.013	U	--	
2,4-Dinitrotoluene	121-14-2	ug/l	0.02	U	--		0.02	U	--		0.02	U	0.02	U	0.02	U	0.02	U	0.021	U	--	
2,6-Dinitrotoluene	606-20-2	ug/l	0.0088	U	--		0.0088	U	--		0.0088	U	0.0088	U	0.0088	U	0.0088	U	0.0093	U	--	
2-Chloronaphthalene	91-58-7	ug/l	0.016	U	--		0.016	U	--		0.016	U	0.016	U	0.016	U	0.016	U	0.016	U	--	
2-Nitroaniline	88-74-4	ug/l	0.015	U	--		0.015	U	--		0.015	U	0.015	U	0.015	U	0.015	U	0.016	U	--	
3,3'-Dichlorobenzidine	91-94-1	ug/l	0.43	U	--		0.43	U	--		0.43	U	0.43	U	0.43	U	0.43	U	0.46	U	--	
3-Nitroaniline	99-09-2	ug/l	0.23	U	--		0.23	U	--		0.23	U	0.23	U	0.23	U	0.23	U	0.24	U	--	
4-Bromophenyl phenyl ether	101-55-3	ug/l	0.018	U	--		0.018	U	--		0.018	U	0.018	U	0.018	U	0.018	U	0.019	U	--	
4-Chloroaniline	106-47-8	ug/l	0.018	U	--		0.018	U	--		0.018	U	0.018	U	0.018	U	0.018	U	0.019	U	--	
4-Chlorophenyl phenyl ether	7005-72-3	ug/l	0.0085	U	--		0.0085	U	--		0.0085	U	0.0085	U	0.0085	U	0.0085	U	0.0089	U	--	
4-Nitroaniline	100-01-6	ug/l	0.17	U	--		0.17	U	--		0.17	U	0.17	U	0.17	U	0.17	U	0.18	U	--	
Aniline	62-53-3	ug/l	1	U	--		1	U	--		1	U	1	U	1	U	1	U	1.1	U	--	
Benzoic acid	65-85-0	ug/l	2.2	J	--		2.2	J	--		1.8	J	1.8	U	1.8	U	2	J	1.9	U	--	
Benzyl alcohol	100-51-6	ug/l	0.98	U	--		0.98	U	--		0.98	U	0.98	U	0.98	U	0.98	U	1.1	U	--	
Bis(2-chloroethoxy) methane	111-91-1	ug/l	0.012	U	--		0.012	U	--		0.012	U	0.012	U	0.012	U	0.012	U	0.012	U	--	
Bis(2-chloroethyl) ether	111-44-4	ug/l	0.015	U	--		0.015	U	--		0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	--	
Carbazole	86-74-8	ug/l	0.013	U	--		0.013	U	--		0.013	U	0.013	U	0.013	U	0.013	U	0.014	U	--	
Dibenzofuran	132-64-9	ug/l	0.0071	U	--		0.029	U	--		0.015	U	0.015	U	0.015	U	0.015	U	0.029	U	--	
Hexachlorobenzene	118-74-1	ug/l	0.015	U	--		0.015	U	--		0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	--	
Hexachlorobutadiene	87-68-3	ug/l	0.02	U	--		0.02	U	--		0.02	U	0.02	U	0.02	U	0.02	U	0.021	U	--	
Hexachlorocyclopentadiene	77-47-4	ug/l	0.041	U	--		0.041	U	--		0.041	U	0.041	U	0.041	U	0.041	U	0.043	U	--	
Hexachloroethane	67-72-1	ug/l	0.019	U	--		0.019	U	--		0.000481	U	0.019	U	0.019	U	0.019	U	--	U	--	
Isophorone	78-59-1	ug/l	0.018	J	--		0.0085	U	--		0.0085	U	0.0085	U	0.0085	U	0.0085	U	0.0089	U	--	
Nitrobenzene	98-95-3	ug/l	0.0074	U	--		0.0074	U	--		0.0074	U	0.0074	U	0.0074	U	0.0074	U	0.0078	U	--	
N-Nitrosodimethylamine	62-75-9	ug/l	0.42	U	--		0.42	U	--		0.42	U	0.42	U	0.42	U	0.42	U	0.45	U	--	
N-Nitrosodipropylamine	621-64-7	ug/l	0.033	U	--		0.033	U	--		0.033	U	0.033	U	0.033	U	0.033	U	0.034	U	--	
N-Nitrosodiphenylamine	86-30-6	ug/l	0.028	U	--		0.028	U	--		0.028	U	0.028	U	0.028	U	0.028	U	0.03	U	--	
Bis(2-chloroisopropyl) ether	39638-32-9	ug/l	0.017	U	--		0.017	U	--		0.017	U	0.017	U	0.017	U	0.017	U	0.018	U	--	

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Table 4-3. March 2005 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name	LW2-W2001		LW2-W2001D		LW2-W2002-1		LW2-W2002-2		LW2-W2003		LW2-W2004-1		LW2-W2004-1D		LW2-W2004-2		LW2-W2005		LW2-W2006		LW2-W2006D
			Sample Date/Time	3/4/2005		3/4/2005		3/4/2005		3/4/2005		3/4/2005		3/17/2005, 0840		3/17/2005, 0840		3/17/2005, 0925		3/10/2005, 1241		3/4/2005		3/4/2005
			X Coordinate	--		--		--		--		--		--		--		--		--		--		--
			Y Coordinate	--		--		--		--		--		--		--		--		--		--		--
PCB Aroclors																								
Aroclor 1016	12674-11-2	ug/l		0.0025	U	--		0.00255	U	--		0.0025	U	0.00256	U	--		0.00256	U	--		0.00252	U	--
Aroclor 1242	53469-21-9	ug/l		0.0025	U	--		0.00255	U	--		0.0025	U	0.00256	U	--		0.00256	U	--		0.00252	U	--
Aroclor 1248	12672-29-6	ug/l		0.00125	U	--		0.00127	U	--		0.00125	U	0.00705	J	--		0.00458		--		0.00126	U	--
Aroclor 1254	11097-69-1	ug/l		0.00125	U	--		0.00127	U	--		0.00125	U	0.00657		--		0.00636		--		0.00126	U	--
Aroclor 1260	11096-82-5	ug/l		0.0025	U	--		0.00255	U	--		0.0025	U	0.00256	U	--		0.00256	U	--		0.00252	U	--
Aroclor 1262	37324-23-5	ug/l		0.0025	U	--		0.00255	U	--		0.0025	U	0.00256	U	--		0.00256	U	--		0.00252	U	--
Aroclor 1268	11100-14-4	ug/l		0.0025	U	--		0.00255	U	--		0.0025	U	0.00256	U	--		0.00256	U	--		0.00252	U	--
Aroclor 1221	11104-28-2	ug/l		0.0025	U	--		0.00255	U	--		0.0025	U	0.00256	U	--		0.00256	U	--		0.00252	U	--
Aroclor 1232	11141-16-5	ug/l		0.0025	U	--		0.00255	U	--		0.0025	U	0.00256	U	--		0.00256	U	--		0.00252	U	--
Butyltins																								
Butyltin ion	78763-54-9	ug/l		0.003	J	--		0.0017	U	0.0017	U	0.0017	U	0.002	J	--		--		0.0017	U	0.0017	U	--
Dibutyltin ion	14488-53-0	ug/l		0.00055	U	--		0.00055	U	0.00055	U	0.00055	U	0.00084	J	--		--		0.00055	U	0.00055	U	--
Tributyltin ion	36643-28-4	ug/l		0.0026	U	--		0.0006	U	0.0006	U	0.0006	U	0.0023	J	--		--		0.0006	U	0.0006	U	--
Tetrabutyltin	1461-25-2	ug/l		0.0015	U	--		0.0015	U	0.0015	U	0.0015	U	0.0015	U	--		--		0.0015	U	0.0015	U	--
Conventionals																								
Total organic carbon	TOC	mg/l		2		1.9		1.8		1.7		1.9		1.8		1.8		--		1.5		1.8		--
Total suspended solids	TSS	mg/l		5		--		5	U	5	U	5	U	7		--		--		6		10		10
Dissolved organic carbon	DOC	mg/l		1.5		1.5		1.4		1.3		1.6		1.3		1.4		--		1.3		1.5		--
Hardness as CaCO3	HARD	mg/l		34.1		34.5		45.4		48.4		31.7		37.1		36.3		--		36.1		30.7		--
Total dissolved solids	TDS	mg/l		72		71		87		94		76		72		--		--		76		67		--
Perchlorate	PERCHLORATE	ug/l		--		--		--		--		--		--		--		--		--		--		--
Herbicides																								
Dalapon	75-99-0	ug/l		0.43	UJ	--		0.4	UJ	0.42	UJ	0.4	UJ	0.42	UJ	--		--		0.23	UJ	0.43	UJ	--
Dicamba	1918-00-9	ug/l		0.063	U	--		0.059	U	0.062	U	0.059	U	0.062	U	--		--		0.059	U	0.063	U	--
MCPA	94-74-6	ug/l		38	U	--		35	U	37	U	35	U	37	U	--		--		35	U	38	U	--
Dichloroprop	120-36-5	ug/l		0.062	U	--		0.058	U	0.061	U	0.058	U	0.061	U	--		--		0.058	U	0.062	U	--
2,4-D	94-75-7	ug/l		0.052	U	--		0.048	U	0.05	U	0.048	U	0.05	U	--		--		0.048	U	0.052	U	--
Silvex	93-72-1	ug/l		0.052	U	--		0.048	U	0.05	U	0.048	U	0.05	U	--		--		0.048	U	0.052	U	--
2,4,5-T	93-76-5	ug/l		0.046	U	--		0.043	U	0.045	U	0.043	U	0.045	U	--		--		0.043	U	0.046	U	--
2,4-DB	94-82-6	ug/l		0.11	U	--		0.1	U	0.11	U	0.1	U	0.11	U	--		--		0.1	U	0.11	U	--
Dinoseb	88-85-7	ug/l		0.073	U	--		0.068	U	0.071	U	0.068	U	0.071	U	--		--		0.068	U	0.073	U	--
MCPP	93-65-2	ug/l		110	U	--		99	U	110	U	99	U	110	U	--		--		6	U	110	U	--
Metals																								
Aluminum	7429-90-5	ug/l		195		184		157		147		202		152		--		--		128		283		--
Aluminum (dissolved)	7429-90-5	ug/l		3.3		3.4		6.3		2.2		42.8		2.9		--		--		2.4		5.4		--
Antimony	7440-36-0	ug/l		0.04	U	0.03	U	0.06	U	0.07	U	0.03	U	0.08		--		--		0.05	J	0.03	U	--
Antimony (dissolved)	7440-36-0	ug/l		0.03	U	0.03	U	0.07	U	0.07	U	0.03	U	0.06		--		--		0.04	J	0.04	U	--
Arsenic	7440-38-2	ug/l		0.425		0.424		0.533		0.557		0.437		0.489		--		--		0.452		0.428		--
Arsenic (dissolved)	7440-38-2	ug/l		0.359		--		0.471		0.508		0.353		0.406		--		--		0.394		0.33		--
Cadmium	7440-43-9	ug/l		0.02	UJ	0.02	UJ	0.02	UJ	0.02	UJ	0.02	UJ	0.05		--		--		0.02	U	0.02	UJ	--
Cadmium (dissolved)	7440-43-9	ug/l		0.02	U	0.02	U	0.02	UJ	0.02	UJ	0.02	UJ	0.02		--		--		0.02	U	0.02	UJ	--
Chromium	7440-47-3	ug/l		0.47		0.49		0.47		0.43		0.47		0.91		--		--		0.38		0.6		--
Chromium (dissolved)	7440-47-3	ug/l		0.22		0.22		0.24		0.19	J	0.29		0.33		--		--		0.18	U	0.22		--
Copper	7440-50-8	ug/l		1.08		1.07		0.94		0.96		1.22		2.09		--		--		0.91		1.14		--
Copper (dissolved)	7440-50-8	ug/l		0.66		0.67		0.63		0.67		0.7		0.95		--		--		0.6		0.62		--
Lead	7439-92-1	ug/l		0.136		0.136		0.134		0.132		0.137		1.12		--		--		0.12		0.237		--
Lead (dissolved)	7439-92-1	ug/l		0.023	J	0.02	J	0.021	J	0.02	J	0.036	J	0.034		--		--		0.011	J	0.02	J	--
Mercury	7439-97-6	ug/l		0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	U	--		0.04	U	0.04	U	--
Mercury (dissolved)	7439-97-6	ug/l		0.04	U	--		0.04	U	0.04	U	0.04	U	0.04	U	--		--		0.04	U	0.04	U	--
Nickel	7440-02-0	ug/l		1.13		1.16		1.22		1.23		1.18		1.45		--		--		0.96	U	0.95		--

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Table 4-3. March 2005 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W2001D		LW2-W2002-1		LW2-W2002-2		LW2-W2003		LW2-W2004-1		LW2-W2004-1D		LW2-W2004-2		LW2-W2005		LW2-W2006		LW2-W2006D	
			Sample Date/Time		3/4/2005		3/4/2005		3/4/2005		3/4/2005		3/17/2005, 0840		3/17/2005, 0840		3/17/2005, 0925		3/10/2005, 1241		3/4/2005		3/4/2005	
			X Coordinate		--		--		--		--		--		--		--		--		--		--	
			Y Coordinate		--		--		--		--		--		--		--		--		--		--	
Nickel (dissolved)	7440-02-0	ug/l	0.89		0.91		1.11		1.03		0.82		1.05		--		--		0.82	U	0.84		--	
Selenium	7782-49-2	ug/l	0.8	J	0.6	J	0.8	J	0.9	J	0.7	J	0.6	J	--		--		0.6	J	0.8	J	--	
Selenium (dissolved)	7782-49-2	ug/l	0.5	J	0.8	J	0.9	J	1		0.6	J	0.6	J	--		--		0.5	J	0.7	J	--	
Silver	7440-22-4	ug/l	0.009	U	0.009	U	0.009	U	0.009	U	0.009	U	0.009	U	--		--		0.009	U	0.009	U	--	
Silver (dissolved)	7440-22-4	ug/l	0.009	U	0.009	U	0.009	U	0.009	U	0.009	U	0.009	U	--		--		0.009	U	0.009	U	--	
Zinc	7440-66-6	ug/l	2.5		2.1		2		2		2.1		8.8		--		--		2.2		2.5		--	
Zinc (dissolved)	7440-66-6	ug/l	1.4		1.4		1.2		1.1		1.8		4.3		--		--		1.5		1.8		--	
Chromium hexavalent	18540-29-9	mg/l	--		--		--		--		--		--		--		--		--		--		--	
PAHs																								
2-Methylnaphthalene	91-57-6	ug/l	0.0054	U	--		0.0054	U	0.0054	U	0.0054	U	0.0054	U	--		--		0.0054	U	0.0054	U	--	
Acenaphthene	83-32-9	ug/l	0.004	U	--		0.004	U	0.004	U	0.004	U	0.004	U	--		--		0.004	U	0.004	U	--	
Acenaphthylene	208-96-8	ug/l	0.0044	J	--		0.005	J	0.0049	J	0.0036	U	0.0036	U	--		--		0.0036	U	0.0069	J	--	
Anthracene	120-12-7	ug/l	0.0021	U	--		0.0021	U	0.0021	U	0.0021	U	0.0021	U	--		--		0.0021	U	0.0021	U	--	
Fluorene	86-73-7	ug/l	0.0052	U	--		0.0052	U	0.0052	U	0.0052	U	0.0052	U	--		--		0.0052	U	0.0052	U	--	
Naphthalene	91-20-3	ug/l	0.0065	J	--		0.0064	U	0.0064	U	0.0064	U	0.0064	U	--		--		0.0064	U	0.0064	U	--	
Phenanthrene	85-01-8	ug/l	0.0064	U	--		0.0064	U	0.0064	U	0.0064	U	0.0064	U	--		--		0.0064	U	0.0064	U	--	
Dibenz(a,h)anthracene	53-70-3	ug/l	0.0033	U	--		0.0033	U	0.0033	U	0.0033	U	0.0033	U	--		--		0.0033	U	0.0033	U	--	
Benz(a)anthracene	56-55-3	ug/l	0.0042	U	--		0.0042	U	0.0042	U	0.0042	U	0.0047	U	--		--		0.0042	U	0.0042	U	--	
Benzo(a)pyrene	50-32-8	ug/l	0.0032	U	--		0.0032	U	0.0032	U	0.0032	U	0.0049	U	--		--		0.0032	U	0.0032	U	--	
Benzo(b)fluoranthene	205-99-2	ug/l	0.0039	U	--		0.0039	U	0.0039	U	0.0039	U	0.0078	U	--		--		0.0039	U	0.0039	U	--	
Benzo(g,h,i)perylene	191-24-2	ug/l	0.0074	U	--		0.0074	U	0.0074	U	0.0074	U	0.0074	U	--		--		0.0074	U	0.0074	U	--	
Benzo(k)fluoranthene	207-08-9	ug/l	0.0027	U	--		0.0027	U	0.0027	U	0.0027	U	0.0062	U	--		--		0.0027	U	0.0027	U	--	
Chrysene	218-01-9	ug/l	0.0025	U	--		0.0025	U	0.0025	U	0.0025	U	0.0081	U	--		--		0.0025	U	0.0034	J	--	
Fluoranthene	206-44-0	ug/l	0.0048	U	--		0.0048	U	0.0048	U	0.0048	U	0.014	U	--		--		0.0048	U	0.016	J	--	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	0.0042	U	--		0.0042	U	0.0042	U	0.0042	U	0.0055	J	--		--		0.0042	U	0.0042	U	--	
Pyrene	129-00-0	ug/l	0.0045	U	--		0.0045	U	0.0045	U	0.0045	U	0.021	U	--		--		0.0045	U	0.011	J	--	
Organochlorine Pesticides																								
2,4'-DDD	53-19-0	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
2,4'-DDE	3424-82-6	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
2,4'-DDT	789-02-6	ug/l	0.0187	NJ	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
4,4'-DDD	72-54-8	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
4,4'-DDE	72-55-9	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
4,4'-DDT	50-29-3	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
Aldrin	309-00-2	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
alpha-Hexachlorocyclohexane	319-84-6	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
beta-Hexachlorocyclohexane	319-85-7	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
delta-Hexachlorocyclohexane	319-86-8	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
gamma-Hexachlorocyclohexane	58-89-9	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
cis-Chlordane	5103-71-9	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
trans-Chlordane	5103-74-2	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
Oxychlordane	27304-13-8	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
cis-Nonachlor	5103-73-1	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
trans-Nonachlor	39765-80-5	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
Dieldrin	60-57-1	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
alpha-Endosulfan	959-98-8	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
beta-Endosulfan	33213-65-9	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
Endosulfan sulfate	1031-07-8	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
Endrin	72-20-8	ug/l	0.00049	UJ	--		0.000495	UJ	--		0.0005	UJ	0.000485	R	--		0.000485	R	--		0.00051	UJ	--	
Endrin aldehyde	7421-93-4	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
Endrin ketone	53494-70-5	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
Heptachlor	76-44-8	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
Heptachlor epoxide	1024-57-3	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	UJ	--		0.000485	UJ	--		0.00051	U	--	
Hexachlorobenzene	118-74-1	ug/l	0.00563		--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
Hexachlorobutadiene	87-68-3	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	UJ	--		0.000485	UJ	--		0.00051	U	--	
Hexachloroethane	67-72-1	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
Methoxychlor	72-43-5	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.0022	NJ	--		0.000485	U	--		0.00051	U	--	
Mirex	2385-85-5	ug/l	0.00049	U	--		0.000495	U	--		0.0005	U	0.000485	U	--		0.000485	U	--		0.00051	U	--	
Toxaphene	8001-35-2	ug/l	0.123	U	--		0.124	U	--		0.125	U	0.121	U	--		0.121	U	--		0.128	U	--	

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Table 4-3. March 2005 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W2001D		LW2-W2002-1		LW2-W2002-2		LW2-W2003		LW2-W2004-1		LW2-W2004-1D		LW2-W2004-2		LW2-W2005		LW2-W2006		LW2-W2006D	
			Sample Date/Time		3/4/2005		3/4/2005		3/4/2005		3/4/2005		3/17/2005, 0840		3/17/2005, 0840		3/17/2005, 0925		3/10/2005, 1241		3/4/2005		3/4/2005	
			X Coordinate		--		--		--		--		--		--		--		--		--		--	
			Y Coordinate		--		--		--		--		--		--		--		--		--		--	
Phenols																								
2,3,4,6-Tetrachlorophenol	58-90-2	ug/l	1.1	U	--		1.1	U	1.1	U	1.1	U	1.1	U	--		--		1.1	U	1.1	U	--	
2,4,5-Trichlorophenol	95-95-4	ug/l	0.027	U	--		0.027	U	0.027	U	0.027	U	0.026	U	--		--		0.027	U	0.027	U	--	
2,4,6-Trichlorophenol	88-06-2	ug/l	0.04	U	--		0.039	U	0.04	U	0.039	U	0.038	U	--		--		0.039	U	0.04	U	--	
2,4-Dichlorophenol	120-83-2	ug/l	0.026	U	--		0.025	U	0.026	U	0.025	U	0.024	U	--		--		0.025	U	0.025	U	--	
2,4-Dimethylphenol	105-67-9	ug/l	0.35	U	--		0.34	U	0.35	U	0.34	U	0.33	U	--		--		0.34	U	0.34	U	--	
2,4-Dinitrophenol	51-28-5	ug/l	0.57	U	--		0.56	U	0.57	U	0.56	U	0.54	U	--		--		0.56	U	0.57	U	--	
2-Chlorophenol	95-57-8	ug/l	0.016	U	--		0.016	U	0.016	U	0.016	U	0.015	U	--		--		0.016	U	0.016	U	--	
2-Methylphenol	95-48-7	ug/l	0.064	U	--		0.063	U	0.064	U	0.063	U	0.061	U	--		--		0.062	U	0.064	U	--	
2-Nitrophenol	88-75-5	ug/l	0.015	U	--		0.015	U	0.015	U	0.015	U	0.014	U	--		--		0.014	U	0.015	U	--	
4,6-Dinitro-2-methylphenol	534-52-1	ug/l	0.014	U	--		0.014	U	0.014	U	0.014	U	0.014	U	--		--		0.014	U	0.014	U	--	
4-Chloro-3-methylphenol	59-50-7	ug/l	0.032	U	--		0.41	U	0.68	U	0.65		0.03	U	--		--		0.031	U	0.53	U	--	
4-Methylphenol	106-44-5	ug/l	0.055	U	--		0.054	U	0.055	U	0.054	U	0.052	U	--		--		0.053	U	0.055	U	--	
4-Nitrophenol	100-02-7	ug/l	0.58	U	--		0.57	U	0.58	U	0.57	U	0.55	U	--		--		0.56	U	0.57	U	--	
Pentachlorophenol	87-86-5	ug/l	0.031	U	--		0.03	U	0.031	U	0.03	U	0.029	U	--		--		0.03	U	0.031	U	--	
Phenol	108-95-2	ug/l	0.17	J	--		0.021	U	0.022	U	0.021	U	0.02	U	--		--		0.021	U	0.021	U	--	
Phthalates																								
Dimethyl phthalate	131-11-3	ug/l	0.014	U	--		0.014	U	0.014	U	0.014	U	0.013	U	--		--		0.014	U	0.014	U	--	
Diethyl phthalate	84-66-2	ug/l	0.058	U	--		0.07	U	0.042	U	0.044	U	0.027	U	--		--		0.086	U	0.048	U	--	
Dibutyl phthalate	84-74-2	ug/l	0.15	U	--		0.19	U	0.079	U	0.096	U	0.13	U	--		--		0.085	U	0.092	U	--	
Butylbenzyl phthalate	85-68-7	ug/l	0.028	U	--		0.027	U	0.028	U	0.027	U	0.026	U	--		--		0.027	U	0.028	U	--	
Di-n-octyl phthalate	117-84-0	ug/l	0.035	U	--		0.034	U	0.035	U	0.034	U	0.033	U	--		--		0.034	U	0.035	U	--	
Bis(2-ethylhexyl) phthalate	117-81-7	ug/l	0.3	U	--		0.29	U	0.3	U	0.29	U	0.28	U	--		--		0.29	U	0.29	U	--	
SVOCs																								
1,2,4-Trichlorobenzene	120-82-1	ug/l	0.017	U	--		0.017	U	0.017	U	0.017	U	0.016	U	--		--		0.016	U	0.017	U	--	
1,2-Dichlorobenzene	95-50-1	ug/l	0.016	U	--		0.015	U	0.016	U	0.015	U	0.015	U	--		--		0.015	U	0.015	U	--	
1,3-Dichlorobenzene	541-73-1	ug/l	0.012	U	--		0.012	U	0.012	U	0.012	U	0.011	U	--		--		0.012	U	0.012	U	--	
1,4-Dichlorobenzene	106-46-7	ug/l	0.015	U	--		0.014	U	0.015	U	0.014	U	0.014	U	--		--		0.014	U	0.015	U	--	
Azobenzene	103-33-3	ug/l	0.013	U	--		0.013	U	0.013	U	0.013	U	0.013	U	--		--		0.013	U	0.013	U	--	
2,4-Dinitrotoluene	121-14-2	ug/l	0.021	U	--		0.021	U	0.021	U	0.021	U	0.02	U	--		--		0.02	U	0.021	U	--	
2,6-Dinitrotoluene	606-20-2	ug/l	0.0095	U	--		0.0093	U	0.0095	U	0.0093	U	0.009	U	--		--		0.0092	U	0.0094	U	--	
2-Chloronaphthalene	91-58-7	ug/l	0.017	U	--		0.016	U	0.017	U	0.016	U	0.016	U	--		--		0.016	U	0.017	U	--	
2-Nitroaniline	88-74-4	ug/l	0.016	U	--		0.016	U	0.016	U	0.016	U	0.015	U	--		--		0.016	U	0.016	U	--	
3,3'-Dichlorobenzidine	91-94-1	ug/l	0.47	U	--		0.46	R	0.47	U	0.46	U	0.44	U	--		--		0.45	U	0.46	U	--	
3-Nitroaniline	99-09-2	ug/l	0.25	U	--		0.24	U	0.25	U	0.24	U	0.24	U	--		--		0.24	U	0.25	U	--	
4-Bromophenyl phenyl ether	101-55-3	ug/l	0.019	U	--		0.019	U	0.019	U	0.019	U	0.018	U	--		--		0.019	U	0.019	U	--	
4-Chloroaniline	106-47-8	ug/l	0.019	U	--		0.019	U	0.019	U	0.019	U	0.018	U	--		--		0.019	U	0.019	U	--	
4-Chlorophenyl phenyl ether	7005-72-3	ug/l	0.0091	U	--		0.0089	U	0.0091	U	0.0089	U	0.0086	U	--		--		0.0088	U	0.009	U	--	
4-Nitroaniline	100-01-6	ug/l	0.18	U	--		0.18	U	0.18	U	0.18	U	0.17	U	--		--		0.17	U	0.18	U	--	
Aniline	62-53-3	ug/l	1.1	U	--		1.1	UJ	1.1	U	1.1	U	1.1	U	--		--		1.1	U	1.1	U	--	
Benzoic acid	65-85-0	ug/l	1.9	U	--		1.9	U	1.9	U	1.9	U	1.8	U	--		--		1.8	U	1.9	U	--	
Benzyl alcohol	100-51-6	ug/l	1.1	U	--		1.1	U	1.1	U	1.1	U	1	U	--		--		1.1	U	1.1	U	--	
Bis(2-chloroethoxy) methane	111-91-1	ug/l	0.013	U	--		0.012	U	0.013	U	0.012	U	0.012	U	--		--		0.012	U	0.013	U	--	
Bis(2-chloroethyl) ether	111-44-4	ug/l	0.016	U	--		0.015	U	0.016	U	0.015	U	0.015	U	--		--		0.015	U	0.016	U	--	
Carbazole	86-74-8	ug/l	0.014	U	--		0.014	U	0.014	U	0.014	U	0.013	U	--		--		0.014	U	0.014	U	--	
Dibenzofuran	132-64-9	ug/l	0.015	U	--		0.015	U	0.015	U	0.015	U	0.015	U	--		--		0.015	U	0.015	U	--	
Hexachlorobenzene	118-74-1	ug/l	0.016	U	--		0.015	U	0.016	U	0.015	U	0.015	U	--		--		0.015	U	0.015	U	--	
Hexachlorobutadiene	87-68-3	ug/l	0.021	U	--		0.021	U	0.021	U	0.021	U	0.02	U	--		--		0.021	U	0.021	U	--	
Hexachlorocyclopentadiene	77-47-4	ug/l	0.044	U	--		0.043	U	0.044	U	0.043	U	0.042	U	--		--		0.043	U	0.044	U	--	
Hexachloroethane	67-72-1	ug/l	0.02	U	--		0.02	U	0.02	U	0.02	U	0.019	U	--		--		0.02	U	0.02	U	--	
Isophorone	78-59-1	ug/l	0.0091	U	--		0.0089	U	0.0091	U	0.0089	U	0.0086	U	--		--		0.0088	U	0.009	U	--	
Nitrobenzene	98-95-3	ug/l	0.008	U	--		0.0078	U	0.008	U	0.0078	U	0.0076	U	--		--		0.0078	U	0.0079	U	--	
N-Nitrosodimethylamine	62-75-9	ug/l	0.46	U	--		0.45	U	0.46	U	0.45	U	0.43	U	--		--		0.44	U	0.45	U	--	
N-Nitrosodipropylamine	621-64-7	ug/l	0.035	U	--		0.034	U	0.035	U	0.034	U	0.033	U	--		--		0.034	U	0.035	U	--	
N-Nitrosodiphenylamine	86-30-6	ug/l	0.03	U	--		0.03	U	0.03	U	0.03	U	0.029	U	--		--		0.029	U	0.03	U	--	
Bis(2-chloroisopropyl) ether	39638-32-9	ug/l	0.018	U	--		0.018	U	0.018	U	0.018	U	0.018	U	--		--		0.018	U	0.018	U	--	

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Table 4-3. March 2005 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name	LW2-W2007		LW2-W2007D		LW2-W2008		LW2-W2008D	LW2-W2009		LW2-W2010		LW2-W2011B		LW2-W2012		LW2-W2013-1		LW2-W2013-2		LW2-W2013-2D	LW2-W2014	
			Sample Date/Time	3/11/2005, 0848		3/11/2005, 0848		3/11/2005, 1026		3/11/2005, 1026	3/11/2005, 1159		3/9/2005, 2249		3/8/2005, 2205		3/17/2005, 1515		3/1/2005, 1104		3/2/2005, 1000		3/2/2005, 1000	3/17/2005, 1115	
			X Coordinate	--		--		--		--	--		--		--		--		--		--		--	--	
			Y Coordinate	--		--		--		--	--		--		--		--		--		--		--	--	
PCB Aroclors																									
Aroclor 1016	12674-11-2	ug/l		0.00261	U	–		0.0025	U	--	0.0025	U	0.0025	U	--		0.0026	U	--		--		--	0.0026	U
Aroclor 1242	53469-21-9	ug/l		0.00261	U	–		0.0025	U	--	0.0025	U	0.0025	U	--		0.0026	U	--		--		--	0.0026	U
Aroclor 1248	12672-29-6	ug/l		0.00131	U	–		0.00125	U	--	0.00125	U	0.00125	U	--		0.0013	U	--		--		--	0.0013	U
Aroclor 1254	11097-69-1	ug/l		0.00131	U	–		0.00125	U	--	0.00125	U	0.00125	U	--		0.0013	U	--		--		--	0.0013	U
Aroclor 1260	11096-82-5	ug/l		0.00261	U	–		0.0025	U	--	0.0025	U	0.0025	U	--		0.0026	U	--		--		--	0.0026	U
Aroclor 1262	37324-23-5	ug/l		0.00261	U	–		0.0025	U	--	0.0025	U	0.0025	U	--		0.0026	U	--		--		--	0.0026	U
Aroclor 1268	11100-14-4	ug/l		0.00261	U	–		0.0025	U	--	0.0025	U	0.0025	U	--		0.0026	U	--		--		--	0.0026	U
Aroclor 1221	11104-28-2	ug/l		0.00261	U	–		0.0025	U	--	0.0025	U	0.0025	U	--		0.0026	U	--		--		--	0.0026	U
Aroclor 1232	11141-16-5	ug/l		0.00261	U	–		0.0025	U	--	0.0025	U	0.0025	U	--		0.0026	U	--		--		--	0.0026	U
Butyltins																									
Butyltin ion	78763-54-9	ug/l		0.0017	U	–		0.0017	U	--	0.0017	U	0.0017	U	0.0017	U	0.0017	U	0.0017	U	0.0036	J	--	0.0017	U
Dibutyltin ion	14488-53-0	ug/l		0.00055	U	–		0.00055	U	--	0.00055	U	0.00055	U	0.00055	U	0.00055	U	0.00055	U	0.0019	J	--	0.00055	U
Tributyltin ion	36643-28-4	ug/l		0.0006	U	–		0.00095	J	--	0.0006	U	0.0006	U	0.0006	U	0.0006	U	0.0006	U	0.0006	U	--	0.0006	U
Tetrabutyltin	1461-25-2	ug/l		0.0015	U	–		0.0015	U	--	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	--	0.0015	U
Conventionals																									
Total organic carbon	TOC	mg/l		1.7		1.8		1.8		--	1.7		1.4		1.6		1.7		1.9		1.9		--	1.6	
Total suspended solids	TSS	mg/l		5		–		5		6	5	U	6		5	U	5	U	5	U	11		12	6	
Dissolved organic carbon	DOC	mg/l		1.3		1.3		1.3		--	1.3		1.3		1.2		1.2		1.3		1.4		--	1.3	
Hardness as CaCO3	HARD	mg/l		32.9		33		31.1		--	30.6		29.9		34.9		32.7		29.6		30.7		--	32.7	
Total dissolved solids	TDS	mg/l		58		54		80		--	88		97		62		64		105		96		87	68	
Perchlorate	PERCHLORATE	ug/l		--		–		--		--	--		--		--		--		--		--		--	--	
Herbicides																									
Dalapon	75-99-0	ug/l		0.23	UJ	–		0.23	UJ	--	0.23	UJ	0.23	UJ	0.41	UJ	0.42	UJ	0.42	UJ	0.45	UJ	--	0.43	UJ
Dicamba	1918-00-9	ug/l		0.059	U	–		0.059	U	--	0.059	U	0.059	U	0.061	U	0.061	U	0.061	U	0.067	U	--	0.063	U
MCPA	94-74-6	ug/l		35	U	–		35	U	--	35	U	35	U	36	U	37	U	37	U	40	U	--	37	U
Dichloroprop	120-36-5	ug/l		0.058	U	–		0.058	U	--	0.058	U	0.058	U	0.06	U	0.06	U	0.06	U	0.066	U	--	0.062	U
2,4-D	94-75-7	ug/l		0.048	U	–		0.21	U	--	0.048	U	0.048	U	0.049	U	0.05	U	0.05	U	0.054	U	--	0.051	U
Silvex	93-72-1	ug/l		0.048	U	–		0.048	U	--	0.048	U	0.048	U	0.049	U	0.05	U	0.05	U	0.054	U	--	0.051	U
2,4,5-T	93-76-5	ug/l		0.043	U	–		0.043	U	--	0.043	U	0.043	U	0.044	U	0.045	U	0.045	U	0.049	U	--	0.046	U
2,4-DB	94-82-6	ug/l		0.1	U	–		0.1	U	--	0.1	U	0.1	U	0.11	U	0.11	U	0.11	U	0.12	U	--	0.11	U
Dinoseb	88-85-7	ug/l		0.068	U	–		0.068	U	--	0.068	U	0.068	U	0.07	U	0.071	U	0.071	U	0.077	U	--	0.072	U
MCPP	93-65-2	ug/l		6	U	–		6	U	--	6	U	6	U	110	U	110	U	110	U	120	U	--	110	U
Metals																									
Aluminum	7429-90-5	ug/l		74		73		66.1		--	123		128		121		98		247		647		--	76.2	
Aluminum (dissolved)	7429-90-5	ug/l		2	U	–		2.1		--	2.6		2.4		4.3		2.8		3.4		4.2		--	2.6	
Antimony	7440-36-0	ug/l		0.05	J	0.03	J	0.04	J	--	0.04	J	0.04	J	0.03	J	0.03	J	0.05	U	0.04	J	--	0.04	J
Antimony (dissolved)	7440-36-0	ug/l		0.04	J	–		0.04	J	--	0.04	J	0.03	J	0.02	U	0.04	J	0.04	J	0.04	J	--	0.02	U
Arsenic	7440-38-2	ug/l		0.444		0.453		0.417		--	0.414		0.419		0.447		0.437		0.362		0.405		--	0.435	
Arsenic (dissolved)	7440-38-2	ug/l		0.373		–		0.375		--	0.362		0.36		0.402		0.379		0.301		0.31		--	0.378	
Cadmium	7440-43-9	ug/l		0.008	U	0.013	J	0.02	U	--	0.02	U	0.02	U	0.03		0.02		0.008	U	0.008	U	--	0.02	U
Cadmium (dissolved)	7440-43-9	ug/l		0.02	U	–		0.02	U	--	0.02	U	0.02	U	0.02		0.03		0.015	U	0.008	U	--	0.02	U
Chromium	7440-47-3	ug/l		0.34	U	0.31	U	0.29	U	--	0.38		0.36		0.29		0.26		0.42	U	0.68		--	0.24	
Chromium (dissolved)	7440-47-3	ug/l		0.2	U	–		0.17	U	--	0.2	U	0.18	U	0.15	J	0.14	J	0.19	J	0.22		--	0.13	J
Copper	7440-50-8	ug/l		0.89		0.89		0.89		--	0.98		0.86		1.06		0.99		0.94		1.48		--	0.93	
Copper (dissolved)	7440-50-8	ug/l		0.64		–		0.66		--	0.6		0.59		0.68		0.64		0.54	U	0.59		--	0.63	
Lead	7439-92-1	ug/l		0.163		0.166		0.369		--	0.119		0.12		0.126		0.106		0.117		0.392		--	0.116	
Lead (dissolved)	7439-92-1	ug/l		0.015	J	–		0.036	J	--	0.015	J	0.017	J	0.013	J	0.009	J	0.012	J	0.014	J	--	0.015	J
Mercury	7439-97-6	ug/l		0.04	U	0.04	U	0.04	U	--	0.04	U	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	UJ	--	0.04	U
Mercury (dissolved)	7439-97-6	ug/l		0.04	U	–		0.04	U	--	0.04	U	0.04	U	0.04	U	0.04	U	0.04	UJ	0.04	UJ	--	0.04	U
Nickel	7440-02-0	ug/l		0.81	U	0.9	U	0.99	U	--	0.89	U	0.85	U	1.35		1.17		1.12		1.54		--	1.13	

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Table 4-3. March 2005 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name	LW2-W2007		LW2-W2007D		LW2-W2008		LW2-W2008D		LW2-W2009		LW2-W2010		LW2-W2011B		LW2-W2012		LW2-W2013-1		LW2-W2013-2		LW2-W2013-2D		LW2-W2014	
			Sample Date/Time	3/11/2005, 0848		3/11/2005, 0848		3/11/2005, 1026		3/11/2005, 1026		3/11/2005, 1159		3/9/2005, 2249		3/8/2005, 2205		3/17/2005, 1515		3/1/2005, 1104		3/2/2005, 1000		3/2/2005, 1000		3/17/2005, 1115	
			X Coordinate	--		--		--		--		--		--		--		--		--		--		--		--	
			Y Coordinate	--		--		--		--		--		--		--		--		--		--		--		--	
Nickel (dissolved)	7440-02-0	ug/l		0.75	U	--		0.86	U	--		0.72	U	0.71	U	1.11		1.12		0.89		0.96		--		0.93	
Selenium	7782-49-2	ug/l		0.3	J	0.5	J	0.4	J	--		0.4	J	0.3	J	0.4	J	0.5	J	0.4	J	0.5	J	--		0.3	J
Selenium (dissolved)	7782-49-2	ug/l		0.2	J	--		0.4	J	--		0.3	J	0.3	J	0.5	J	0.7	J	0.2	J	0.3	J	--		0.4	J
Silver	7440-22-4	ug/l		0.015	U	0.009	U	0.009	U	--		0.009	U	0.009	U	0.009	U	0.009	U	0.009	U	0.009	U	--		0.009	U
Silver (dissolved)	7440-22-4	ug/l		0.009	U	--		0.009	U	--		0.009	U	0.009	U	0.009	U	0.009	U	0.009	U	0.009	U	--		0.009	U
Zinc	7440-66-6	ug/l		2.3		2.2		4.8		--		2.3		2.2		2.3		2.5		2.3	U	4.7		--		2.3	
Zinc (dissolved)	7440-66-6	ug/l		1.7		--		4.2		--		1.6		4.7		1.9		1.7		1.4		1.8		--		2.1	
Chromium hexavalent	18540-29-9	mg/l		--		--		--		--		--		--		--		--		--		--		--		--	
PAHs																											
2-Methylnaphthalene	91-57-6	ug/l		0.0054	U	--		0.0054	U	--		0.0054	U	0.0054	U	0.0054	U	0.0054	U	0.0027	U	0.0027	UJ	--		0.0054	U
Acenaphthene	83-32-9	ug/l		0.004	U	--		0.004	U	--		0.004	U	0.004	U	0.004	U	0.004	U	0.002	U	0.002	UJ	--		0.004	U
Acenaphthylene	208-96-8	ug/l		0.0061	U	--		0.0036	U	--		0.004	U	0.0036	U	0.0036	U	0.005	J	0.0037	U	0.0023	J	--		0.0036	U
Anthracene	120-12-7	ug/l		0.0038	J	--		0.0021	U	--		0.0021	U	0.0021	U	0.0021	U	0.0027	U	0.0011	U	0.0018	J	--		0.0021	U
Fluorene	86-73-7	ug/l		0.0052	U	--		0.0052	U	--		0.0052	U	0.0052	U	0.0052	U	0.0052	U	0.0026	U	0.0026	UJ	--		0.0052	U
Naphthalene	91-20-3	ug/l		0.0064	U	--		0.0064	U	--		0.0064	U	0.0064	U	0.0064	U	0.0068	J	0.0044	U	0.0032	UJ	--		0.0064	U
Phenanthrene	85-01-8	ug/l		0.0064	U	--		0.0064	U	--		0.0064	U	0.0064	U	0.0064	U	0.0064	U	0.0032	U	0.0067	UJ	--		0.0064	U
Dibenz(a,h)anthracene	53-70-3	ug/l		0.0033	U	--		0.0044	J	--		0.0033	U	0.0033	U	0.0033	U	0.0033	U	0.0017	U	0.0017	UJ	--		0.0033	U
Benz(a)anthracene	56-55-3	ug/l		0.0042	U	--		0.0042	U	--		0.0042	U	0.0042	U	0.0042	U	0.006	U	0.0021	U	0.0028	J	--		0.0042	U
Benzo(a)pyrene	50-32-8	ug/l		0.0032	U	--		0.0032	U	--		0.0032	U	0.0032	U	0.0032	U	0.0082	U	0.0016	U	0.0024	J	--		0.0032	U
Benzo(b)fluoranthene	205-99-2	ug/l		0.0039	U	--		0.0039	U	--		0.0039	U	0.0039	U	0.0039	U	0.0073	U	0.002	U	0.002	UJ	--		0.0039	U
Benzo(g,h,i)perylene	191-24-2	ug/l		0.0074	U	--		0.0074	U	--		0.0074	U	0.0074	U	0.0074	U	0.01	J	0.0037	U	0.0037	UJ	--		0.0074	U
Benzo(k)fluoranthene	207-08-9	ug/l		0.0027	U	--		0.0027	U	--		0.0027	U	0.0027	U	0.0027	U	0.0068	U	0.0014	U	0.0017	J	--		0.0027	U
Chrysene	218-01-9	ug/l		0.0025	U	--		0.0025	U	--		0.0025	U	0.0025	U	0.0025	U	0.0093	U	0.0013	U	0.0028	J	--		0.0025	U
Fluoranthene	206-44-0	ug/l		0.0048	U	--		0.0048	U	--		0.0048	U	0.0048	U	0.0048	U	0.019	U	0.0026	J	0.0069	J	--		0.0048	U
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l		0.0042	U	--		0.0042	U	--		0.0042	U	0.0042	U	0.0042	U	0.0094	J	0.0021	U	0.0021	UJ	--		0.0042	U
Pyrene	129-00-0	ug/l		0.013	J	--		0.0058	J	--		0.0045	U	0.0045	U	0.0045	U	0.028	U	0.0033	U	0.0086	J	--		0.0045	U
Organochlorine Pesticides																											
2,4'-DDD	53-19-0	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
2,4'-DDE	3424-82-6	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
2,4'-DDT	789-02-6	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
4,4'-DDD	72-54-8	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
4,4'-DDE	72-55-9	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
4,4'-DDT	50-29-3	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
Aldrin	309-00-2	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
alpha-Hexachlorocyclohexane	319-84-6	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
beta-Hexachlorocyclohexane	319-85-7	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
delta-Hexachlorocyclohexane	319-86-8	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
gamma-Hexachlorocyclohexane	58-89-9	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
cis-Chlordane	5103-71-9	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
trans-Chlordane	5103-74-2	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
Oxychlordane	27304-13-8	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
cis-Nonachlor	5103-73-1	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
trans-Nonachlor	39765-80-5	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
Dieldrin	60-57-1	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
alpha-Endosulfan	959-98-8	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
beta-Endosulfan	33213-65-9	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
Endosulfan sulfate	1031-07-8	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
Endrin	72-20-8	ug/l		0.0005	UJ	--		0.00049	UJ	--		0.000485	UJ	0.0005	UJ	--		0.00051	R	--		--		--		0.000481	R
Endrin aldehyde	7421-93-4	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
Endrin ketone	53494-70-5	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
Heptachlor	76-44-8	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
Heptachlor epoxide	1024-57-3	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	UJ	--		--		--		0.000481	UJ
Hexachlorobenzene	118-74-1	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
Hexachlorobutadiene	87-68-3	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	UJ	--		--		--		0.000481	UJ
Hexachloroethane	67-72-1	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
Methoxychlor	72-43-5	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
Mirex	2385-85-5	ug/l		0.0005	U	--		0.00049	U	--		0.000485	U	0.0005	U	--		0.00051	U	--		--		--		0.000481	U
Toxaphene	8001-35-2	ug/l		0.125	U	--		0.123	U	--		0.121	U	0.125	U	--		0.128	U	--		--		--		0.12	U

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ANC04484
BZTO104(e)004484

Table 4-3. March 2005 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W2007D		LW2-W2008		LW2-W2008D		LW2-W2009		LW2-W2010		LW2-W2011B		LW2-W2012		LW2-W2013-1		LW2-W2013-2		LW2-W2013-2D		LW2-W2014	
			Sample Date/Time		3/11/2005, 0848		3/11/2005, 1026		3/11/2005, 1026		3/11/2005, 1159		3/9/2005, 2249		3/8/2005, 2205		3/17/2005, 1515		3/1/2005, 1104		3/2/2005, 1000		3/2/2005, 1000		3/17/2005, 1115	
			X Coordinate		--		--		--		--		--		--		--		--		--		--		--	
			Y Coordinate		--		--		--		--		--		--		--		--		--		--		--	
Phenols																										
2,3,4,6-Tetrachlorophenol	58-90-2	ug/l	1.1	U	--		1.1	U	--		1.1	U	1.1	U	1.1	U	1.1	U	1	U	1.1	R	--		1.1	U
2,4,5-Trichlorophenol	95-95-4	ug/l	0.027	U	--		0.027	U	--		0.026	U	0.026	U	0.027	U	0.027	U	0.026	U	0.026	R	--		0.027	U
2,4,6-Trichlorophenol	88-06-2	ug/l	0.039	U	--		0.039	U	--		0.038	U	0.038	U	0.039	U	0.039	U	0.037	U	0.038	R	--		0.039	U
2,4-Dichlorophenol	120-83-2	ug/l	0.025	U	--		0.025	U	--		0.024	U	0.024	U	0.025	U	0.025	U	0.024	U	0.024	R	--		0.025	U
2,4-Dimethylphenol	105-67-9	ug/l	0.34	U	--		0.34	U	--		0.33	U	0.33	U	0.34	U	0.34	U	0.32	U	0.33	R	--		0.34	U
2,4-Dinitrophenol	51-28-5	ug/l	0.56	U	--		0.56	U	--		0.54	U	0.54	U	0.56	U	0.56	U	0.53	U	0.54	R	--		0.56	U
2-Chlorophenol	95-57-8	ug/l	0.016	U	--		0.016	U	--		0.015	U	0.015	U	0.016	U	0.016	U	0.015	U	0.015	R	--		0.016	U
2-Methylphenol	95-48-7	ug/l	0.063	U	--		0.062	U	--		0.06	U	0.061	U	0.063	U	0.062	U	0.06	U	0.06	R	--		0.063	U
2-Nitrophenol	88-75-5	ug/l	0.015	U	--		0.014	U	--		0.014	U	0.014	U	0.015	U	0.014	U	0.014	U	0.014	R	--		0.015	U
4,6-Dinitro-2-methylphenol	534-52-1	ug/l	0.014	U	--		0.014	U	--		0.014	U	0.014	U	0.014	U	0.014	U	0.013	U	0.014	R	--		0.014	U
4-Chloro-3-methylphenol	59-50-7	ug/l	0.031	U	--		0.031	U	--		0.03	U	0.03	U	0.031	U	0.031	U	0.074	J	0.03	R	--		0.031	U
4-Methylphenol	106-44-5	ug/l	0.054	U	--		0.053	U	--		0.052	U	0.052	U	0.054	U	0.053	U	0.051	U	0.052	R	--		0.054	U
4-Nitrophenol	100-02-7	ug/l	0.57	U	--		0.56	U	--		0.54	U	0.55	U	0.57	U	0.56	U	0.54	U	0.54	R	--		0.57	U
Pentachlorophenol	87-86-5	ug/l	0.03	U	--		0.03	U	--		0.029	U	0.029	U	0.03	U	0.03	U	0.029	U	0.029	R	--		0.03	U
Phenol	108-95-2	ug/l	0.021	U	--		0.021	U	--		0.02	U	0.02	U	0.021	U	0.021	U	0.02	U	0.02	R	--		0.021	U
Phthalates																										
Dimethyl phthalate	131-11-3	ug/l	0.014	U	--		0.014	U	--		0.013	U	0.013	U	0.014	U	0.014	U	0.013	U	0.013	R	--		0.014	U
Diethyl phthalate	84-66-2	ug/l	0.048	U	--		0.027	U	--		0.027	U	0.027	U	0.04	U	0.027	U	0.026	U	0.027	R	--		0.028	U
Dibutyl phthalate	84-74-2	ug/l	0.1	U	--		0.074	U	--		0.063	U	0.066	U	0.071	U	0.058	U	0.039	U	0.027	R	--		0.083	U
Butylbenzyl phthalate	85-68-7	ug/l	0.027	U	--		0.027	U	--		0.026	U	0.026	U	0.027	U	0.027	U	0.026	U	0.026	R	--		0.027	U
Di-n-octyl phthalate	117-84-0	ug/l	0.034	U	--		0.034	U	--		0.033	U	0.033	U	0.034	U	0.034	U	0.032	U	0.033	R	--		0.034	U
Bis(2-ethylhexyl) phthalate	117-81-7	ug/l	0.29	U	--		0.29	U	--		0.28	U	0.28	U	0.29	U	0.29	U	0.27	U	0.28	R	--		0.29	U
SVOCs																										
1,2,4-Trichlorobenzene	120-82-1	ug/l	0.017	U	--		0.016	U	--		0.016	U	0.016	U	0.017	U	0.016	U	0.016	U	0.016	R	--		0.017	U
1,2-Dichlorobenzene	95-50-1	ug/l	0.015	U	--		0.015	U	--		0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	0.015	R	--		0.015	U
1,3-Dichlorobenzene	541-73-1	ug/l	0.012	U	--		0.012	U	--		0.011	U	0.011	U	0.012	U	0.012	U	0.011	U	0.011	R	--		0.012	U
1,4-Dichlorobenzene	106-46-7	ug/l	0.014	U	--		0.014	U	--		0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	R	--		0.014	U
Azobenzene	103-33-3	ug/l	0.013	U	--		0.013	U	--		0.013	U	0.013	U	0.013	U	0.013	U	0.012	U	0.013	R	--		0.013	U
2,4-Dinitrotoluene	121-14-2	ug/l	0.021	U	--		0.02	U	--		0.02	U	0.02	U	0.021	U	0.02	U	0.02	U	0.02	R	--		0.021	U
2,6-Dinitrotoluene	606-20-2	ug/l	0.0093	U	--		0.0092	U	--		0.0089	U	0.009	U	0.0093	U	0.0092	U	0.0088	U	0.0089	R	--		0.0093	U
2-Chloronaphthalene	91-58-7	ug/l	0.016	U	--		0.016	U	--		0.016	U	0.016	U	0.016	U	0.016	U	0.016	U	0.016	R	--		0.016	U
2-Nitroaniline	88-74-4	ug/l	0.016	U	--		0.016	U	--		0.015	U	0.015	U	0.016	U	0.016	U	0.015	U	0.015	R	--		0.016	U
3,3'-Dichlorobenzidine	91-94-1	ug/l	0.46	U	--		0.45	U	--		0.44	U	0.44	U	0.46	U	0.45	U	0.43	U	0.44	R	--		0.46	U
3-Nitroaniline	99-09-2	ug/l	0.24	U	--		0.24	U	--		0.23	U	0.24	U	0.24	U	0.24	U	0.23	U	0.23	R	--		0.24	U
4-Bromophenyl phenyl ether	101-55-3	ug/l	0.019	U	--		0.019	U	--		0.018	U	0.018	U	0.019	U	0.019	U	0.018	U	0.018	R	--		0.019	U
4-Chloroaniline	106-47-8	ug/l	0.019	U	--		0.019	U	--		0.018	U	0.018	U	0.019	U	0.019	U	0.018	U	0.018	R	--		0.019	U
4-Chlorophenyl phenyl ether	7005-72-3	ug/l	0.0089	U	--		0.0088	U	--		0.0086	U	0.0086	U	0.0089	U	0.0088	U	0.0085	U	0.0086	R	--		0.0089	U
4-Nitroaniline	100-01-6	ug/l	0.18	U	--		0.17	U	--		0.17	U	0.17	U	0.18	U	0.17	U	0.17	U	0.17	R	--		0.18	U
Aniline	62-53-3	ug/l	1.1	U	--		1.1	U	--		1.1	U	1.1	U	1.1	U	1.1	U	1	R	1.1	R	--		1.1	U
Benzoic acid	65-85-0	ug/l	1.9	U	--		1.8	U	--		1.8	U	1.8	U	1.9	U	1.8	U	1.8	R	1.8	R	--		1.9	U
Benzyl alcohol	100-51-6	ug/l	1.1	U	--		1.1	U	--		0.99	U	1	U	1.1	U	1.1	U	0.98	U	0.99	R	--		1.1	U
Bis(2-chloroethoxy) methane	111-91-1	ug/l	0.012	U	--		0.012	U	--		0.012	U	0.012	U	0.012	U	0.012	U	0.012	U	0.012	R	--		0.012	U
Bis(2-chloroethyl) ether	111-44-4	ug/l	0.015	U	--		0.015	U	--		0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	0.015	R	--		0.015	U
Carbazole	86-74-8	ug/l	0.014	U	--		0.014	U	--		0.013	U	0.013	U	0.014	U	0.014	U	0.013	U	0.013	R	--		0.014	U
Dibenzofuran	132-64-9	ug/l	0.015	U	--		0.015	U	--		0.015	U	0.015	U	0.015	U	0.015	U	0.0071	U	0.0071	UJ	--		0.015	U
Hexachlorobenzene	118-74-1	ug/l	0.015	U	--		0.015	U	--		0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	0.015	R	--		0.015	U
Hexachlorobutadiene	87-68-3	ug/l	0.021	U	--		0.021	U	--		0.02	U	0.02	U	0.021	U	0.021	U	0.02	R	0.02	R	--		0.021	U
Hexachlorocyclopentadiene	77-47-4	ug/l	0.043	U	--		0.043	U	--		0.042	U	0.042	U	0.043	U	0.043	U	0.041	U	0.042	R	--		0.043	U
Hexachloroethane	67-72-1	ug/l	0.02	U	--		0.02	U	--		0.019	U	0.019	U	0.02	U	0.02	U	0.019	U	0.019	R	--		0.02	U
Isophorone	78-59-1	ug/l	0.0089	U	--		0.0088	U	--		0.0086	U	0.0086	U	0.0089	U	0.0088	U	0.0085	U	0.0086	R	--		0.0089	U
Nitrobenzene	98-95-3	ug/l	0.0078	U	--		0.0078	U	--		0.0075	U	0.0076	U	0.0078	U	0.0078	U	0.0074	U	0.0075	R	--		0.0078	U
N-Nitrosodimethylamine	62-75-9	ug/l	0.45	U	--		0.44	U	--		0.43	U	0.43	U	0.45	U	0.44	U	0.42	U	0.43	R	--		0.45	U
N-Nitrosodipropylamine	621-64-7	ug/l	0.034	U	--		0.034	U	--		0.033	U	0.033	U	0.034	U	0.034	U	0.033	U	0.033	R	--		0.034	U
N-Nitrosodiphenylamine	86-30-6	ug/l	0.03	U	--		0.029	U	--		0.029	U	0.029	U	0.03	U	0.029	U	0.028	U	0.029	R	--		0.03	U
Bis(2-chloroisopropyl) ether	39638-32-9	ug/l	0.018	U	--		0.018	U	--		0.017	U	0.018	U	0.018	U	0.018	U	0.017	U	0.017	R	--		0.018	U

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Table 4-3. March 2005 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name	LW2-W2015		LW2-W2016-1		LW2-W2016-1D		LW2-W2017		LW2-W2018		LW2-W2019		LW2-W2019D		LW2-W2020		LW2-W2021		LW2-W2022		LW2-W2023		LW2-W2023D
			Sample Date/Time	3/14/2005, 0910		3/15/2005, 0923		3/15/2005, 0923		3/16/2005, 0005		3/3/2005, 0856		3/16/2005, 0912		3/16/2005, 0912		3/16/2005, 1335		3/16/2005, 1515		3/16/2005, 1025		3/7/2005, 1316		3/7/2005, 1316
			X Coordinate	--		--		--		--		--		--		--		--		--		--		--		--
			Y Coordinate	--		--		--		--		--		--		--		--		--		--		--		--
PCB Aroclors																										
Aroclor 1016	12674-11-2	ug/l		--		--		--		0.00256	U	--		0.00263	U	--		0.0025	U	0.0026	U	0.0025	U	--		--
Aroclor 1242	53469-21-9	ug/l		--		--		--		0.00256	U	--		0.00263	U	--		0.0025	U	0.0026	U	0.0025	U	--		--
Aroclor 1248	12672-29-6	ug/l		--		--		--		0.00128	U	--		0.00132	U	--		0.00125	U	0.0013	U	0.00125	U	--		--
Aroclor 1254	11097-69-1	ug/l		--		--		--		0.00128	U	--		0.00132	U	--		0.00125	U	0.0013	U	0.00125	U	--		--
Aroclor 1260	11096-82-5	ug/l		--		--		--		0.00256	U	--		0.00263	U	--		0.0025	U	0.0026	U	0.0025	U	--		--
Aroclor 1262	37324-23-5	ug/l		--		--		--		0.00256	U	--		0.00263	U	--		0.0025	U	0.0026	U	0.0025	U	--		--
Aroclor 1268	11100-14-4	ug/l		--		--		--		0.00256	U	--		0.00263	U	--		0.0025	U	0.0026	U	0.0025	U	--		--
Aroclor 1221	11104-28-2	ug/l		--		--		--		0.00256	U	--		0.00263	U	--		0.0025	U	0.0026	U	0.0025	U	--		--
Aroclor 1232	11141-16-5	ug/l		--		--		--		0.00256	U	--		0.00263	U	--		0.0025	U	0.0026	U	0.0025	U	--		--
Butyltins																										
Butyltin ion	78763-54-9	ug/l		0.0017	U	0.0017	U	--		0.0017	U	0.0017	U	0.0017	U	--		0.0017	U	0.0017	U	0.0017	U	0.002	J	--
Dibutyltin ion	14488-53-0	ug/l		0.00055	U	0.00055	U	--		0.00055	U	0.00055	U	0.00055	U	--		0.00061	J	0.00055	U	0.00055	U	0.001	J	--
Tributyltin ion	36643-28-4	ug/l		0.0006	U	0.0006	U	--		0.0006	U	0.0006	U	0.0006	U	--		0.0006	U	0.0006	U	0.0006	U	0.0006	U	--
Tetrabutyltin	1461-25-2	ug/l		0.0015	U	0.0015	U	--		0.0015	U	0.0015	U	0.0015	U	--		0.0015	U	0.0015	U	0.0015	U	0.0015	U	--
Conventionals																										
Total organic carbon	TOC	mg/l		1.8		1.7		--		1.7		2.1		1.6		1.6		2		1.8		1.6		1.7		1.8
Total suspended solids	TSS	mg/l		7		5	U	5	U	10		5	U	15		13		5	U	5	U	9		6		7
Dissolved organic carbon	DOC	mg/l		1.4		1.3		--		1.1		1.4		1.2		1.1		1.2		1.3		1.3		1.2		1.3
Hardness as CaCO3	HARD	mg/l		31.9		32.2		--		31.9		29.2		32.5		32.6		32.3		31.8		33.1		29.8		--
Total dissolved solids	TDS	mg/l		84		72		70		75		81		63		--		74		78		87		74		72
Perchlorate	PERCHLORATE	ug/l		--		3.4	J	3.1	J	--		--		--		--		--		--		--		--		--
Herbicides																										
Dalapon	75-99-0	ug/l		0.23	UJ	0.23	UJ	--		0.42	UJ	0.43	UJ	0.43	UJ	--		0.43	UJ	0.44	UJ	0.4	UJ	0.23	UJ	--
Dicamba	1918-00-9	ug/l		0.059	U	0.059	U	--		0.062	U	0.063	U	0.063	U	--		0.063	U	0.065	U	0.059	U	0.059	U	--
MCPA	94-74-6	ug/l		35	U	35	U	--		37	U	37	U	38	U	--		38	U	39	U	35	U	35	U	--
Dichloroprop	120-36-5	ug/l		0.058	U	0.058	U	--		0.061	U	0.062	U	0.062	U	--		0.062	U	0.064	U	0.058	U	0.058	U	--
2,4-D	94-75-7	ug/l		0.048	U	0.048	U	--		0.05	U	0.051	U	0.052	U	--		0.052	U	0.053	U	0.048	U	0.048	U	--
Silvex	93-72-1	ug/l		0.048	U	0.048	U	--		0.05	U	0.051	U	0.052	U	--		0.052	U	0.053	U	0.048	U	0.048	U	--
2,4,5-T	93-76-5	ug/l		0.043	U	0.043	U	--		0.045	U	0.046	U	0.046	U	--		0.046	U	0.047	U	0.043	U	0.043	U	--
2,4-DB	94-82-6	ug/l		0.1	U	0.1	U	--		0.11	U	0.11	U	0.11	U	--		0.11	U	0.11	U	0.1	U	0.1	U	--
Dinoseb	88-85-7	ug/l		0.068	U	0.068	U	--		0.071	U	0.072	U	0.073	U	--		0.073	U	0.074	U	0.068	U	0.068	U	--
MCPP	93-65-2	ug/l		6	U	6	U	--		110	U	110	U	110	U	--		110	U	110	U	99	U	6	U	--
Metals																										
Aluminum	7429-90-5	ug/l		142		101		--		109		192		171		180		41.6		41		159		161		--
Aluminum (dissolved)	7429-90-5	ug/l		2.6		2.4		--		2.7		3.8		2.8		--		2.5		2.2		2.7		3.4		--
Antimony	7440-36-0	ug/l		0.08		0.04	J	--		0.02	U	0.04	J	0.03	J	0.03	J	0.03	J	0.03	J	0.03	J	0.03	U	--
Antimony (dissolved)	7440-36-0	ug/l		0.04	J	0.04	J	--		0.04	J	0.04	J	0.02	U	--		0.03	J	0.02	U	0.02	U	0.03	U	--
Arsenic	7440-38-2	ug/l		0.435		0.437		--		0.52		0.363		0.445		0.446		0.395		0.41		0.463		0.426		--
Arsenic (dissolved)	7440-38-2	ug/l		0.372		0.376		--		0.392		0.298		0.389		--		0.325		0.323		0.397		0.36		--
Cadmium	7440-43-9	ug/l		0.02	U	0.02	U	--		0.02	U	0.008	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	UJ	--
Cadmium (dissolved)	7440-43-9	ug/l		0.02	U	0.02	U	--		0.02		0.008	U	0.02	U	--		0.02		0.02	U	0.02	U	0.02	UJ	--
Chromium	7440-47-3	ug/l		0.38		0.33	U	--		0.27		0.4		0.32		0.33		0.22		0.21		0.33		0.61		--
Chromium (dissolved)	7440-47-3	ug/l		0.19	U	0.17	U	--		0.12	J	0.23		0.13	J	--		0.1	J	0.11	J	0.11	J	0.24		--
Copper	7440-50-8	ug/l		1.02		0.97		--		1.77		1.06		0.97		1.05		1.28		1.27		1.02		0.82		--
Copper (dissolved)	7440-50-8	ug/l		0.74		0.61		--		0.77		0.64		0.62		--		0.89		0.9		0.88		0.52		--
Lead	7439-92-1	ug/l		0.153		0.121		--		0.126		0.104		0.197		0.182		0.101		0.077		0.157		0.109		--
Lead (dissolved)	7439-92-1	ug/l		0.02	J	0.014	J	--		0.01	J	0.012	J	0.01	J	--		0.009	U	0.009	U	0.023		0.016	J	--
Mercury	7439-97-6	ug/l		0.04	U	0.04	U	--		0.04	U	0.04	UJ	0.08	U	0.04	U	0.04	U	0.04	U	0.04	U	0.04	UJ	--
Mercury (dissolved)	7439-97-6	ug/l		0.04	U	0.04	U	--		0.04	U	0.04	UJ	0.04	U	--		0.04	U	0.04	U	0.04	U	0.04	UJ	--
Nickel	7440-02-0	ug/l		0.92	U	0.85	U	--		1.14		1.18		0.98		1.03		1.14		1.17		1.17		0.9		--

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BZTO104(e)004486

Table 4-3. March 2005 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name	LW2-W2015		LW2-W2016-1		LW2-W2016-1D		LW2-W2017		LW2-W2018		LW2-W2019		LW2-W2019D		LW2-W2020		LW2-W2021		LW2-W2022		LW2-W2023		LW2-W2023D
			Sample Date/Time	3/14/2005, 0910		3/15/2005, 0923		3/15/2005, 0923		3/16/2005, 0005		3/3/2005, 0856		3/16/2005, 0912		3/16/2005, 0912		3/16/2005, 1335		3/16/2005, 1515		3/16/2005, 1025		3/7/2005, 1316		3/7/2005, 1316
			X Coordinate	--		--		--		--		--		--		--		--		--		--		--		--
			Y Coordinate	--		--		--		--		--		--		--		--		--		--		--		--
Nickel (dissolved)	7440-02-0	ug/l		0.74	U	0.72	U	--		1.09		0.91		0.97		--		1		0.98		1.08		0.78		--
Selenium	7782-49-2	ug/l		0.4	J	0.4	J	--		0.6	U	0.4	J	0.5	U	0.4	U	0.5	J	0.8	J	0.4	U	0.7	J	--
Selenium (dissolved)	7782-49-2	ug/l		0.4	J	0.3	J	--		0.5	J	0.3	J	0.5	J	--		0.2	U	0.8	J	0.4	J	0.5	J	--
Silver	7440-22-4	ug/l		0.009	U	0.009	U	--		0.009	U	0.009	U	0.009	U	0.009	U	0.009	U	0.009	U	0.027	U	0.009	U	--
Silver (dissolved)	7440-22-4	ug/l		0.009	U	0.009	U	--		0.009	U	0.009	U	0.009	U	--		0.009	U	0.009	U	0.009	U	0.009	U	--
Zinc	7440-66-6	ug/l		2.9		2.2		--		2.6		2.7		2.8		2.9		2.9		2.6		5		2.2		--
Zinc (dissolved)	7440-66-6	ug/l		1.8		1.7		--		1.7		2.3		1.7		--		2.5		2		3.7		1.4		--
Chromium hexavalent	18540-29-9	mg/l		--		0.02	U	0.02	U	--		--		--		--		--		--		--		--		--
PAHs																										
2-Methylnaphthalene	91-57-6	ug/l		0.0054	U	0.0054	U	--		0.0054	U	0.0027	U	0.0054	U	--		0.0054	U	0.0054	U	0.0054	U	0.0054	U	--
Acenaphthene	83-32-9	ug/l		0.004	U	0.004	U	--		0.004	U	0.002	U	0.004	U	--		0.004	U	0.004	U	0.004	U	0.004	U	--
Acenaphthylene	208-96-8	ug/l		0.0036	U	0.0036	U	--		0.0036	U	0.0045	J	0.0036	U	--		0.0036	U	0.0036	U	0.0036	U	0.0036	U	--
Anthracene	120-12-7	ug/l		0.0034	J	0.0021	U	--		0.0021	U	0.0011	J	0.0021	U	--		0.0021	U	0.0021	U	0.0021	U	0.0021	U	--
Fluorene	86-73-7	ug/l		0.0052	U	0.0052	U	--		0.0052	U	0.0026	U	0.0052	U	--		0.0052	U	0.0052	U	0.0052	U	0.0052	U	--
Naphthalene	91-20-3	ug/l		0.0064	U	0.0064	U	--		0.0064	U	0.0053	U	0.0064	U	--		0.0064	U	0.0064	U	0.0064	U	0.0064	U	--
Phenanthrene	85-01-8	ug/l		0.0064	U	0.0064	U	--		0.0064	U	0.0032	U	0.0064	U	--		0.0064	U	0.0064	U	0.0064	U	0.0064	U	--
Dibenz(a,h)anthracene	53-70-3	ug/l		0.0033	U	0.0033	U	--		0.0033	U	0.0017	U	0.0033	U	--		0.0033	U	0.0033	U	0.0072	J	0.0033	U	--
Benz(a)anthracene	56-55-3	ug/l		0.0042	U	0.0042	U	--		0.0042	U	0.0021	U	0.0042	U	--		0.0042	U	0.0042	U	0.0042	U	0.0042	U	--
Benzo(a)pyrene	50-32-8	ug/l		0.0032	U	0.0032	U	--		0.0032	U	0.0016	U	0.0032	U	--		0.0032	U	0.0032	U	0.0032	U	0.0032	U	--
Benzo(b)fluoranthene	205-99-2	ug/l		0.0039	U	0.0039	U	--		0.0039	U	0.002	U	0.0039	U	--		0.0039	U	0.0039	U	0.0039	U	0.0039	U	--
Benzo(g,h,i)perylene	191-24-2	ug/l		0.0074	U	0.0074	U	--		0.0074	U	0.0037	U	0.0074	U	--		0.0074	U	0.0074	U	0.0074	U	0.0074	U	--
Benzo(k)fluoranthene	207-08-9	ug/l		0.0027	U	0.0027	U	--		0.0027	U	0.0014	U	0.0027	U	--		0.0027	U	0.0027	U	0.0027	U	0.0027	U	--
Chrysene	218-01-9	ug/l		0.0029	J	0.0025	U	--		0.0025	U	0.0013	U	0.0025	U	--		0.0025	U	0.0025	U	0.0025	U	0.0025	U	--
Fluoranthene	206-44-0	ug/l		0.012	J	0.0048	U	--		0.0048	U	0.0024	U	0.0048	U	--		0.0048	U	0.0048	U	0.0048	U	0.0048	U	--
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l		0.0042	U	0.0042	U	--		0.0042	U	0.0021	U	0.0042	U	--		0.0042	U	0.0042	U	0.0042	U	0.0042	U	--
Pyrene	129-00-0	ug/l		0.011	J	0.0045	U	--		0.016	U	0.0031	J	0.0047	U	--		0.005	U	0.0089	J	0.0045	U	0.0045	U	--
Organochlorine Pesticides																										
2,4'-DDD	53-19-0	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
2,4'-DDE	3424-82-6	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
2,4'-DDT	789-02-6	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
4,4'-DDD	72-54-8	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
4,4'-DDE	72-55-9	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
4,4'-DDT	50-29-3	ug/l		--		--		--		0.00051	U	--		0.00115		--		0.00049	U	0.000481	U	0.00049	U	--		--
Aldrin	309-00-2	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
alpha-Hexachlorocyclohexane	319-84-6	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
beta-Hexachlorocyclohexane	319-85-7	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
delta-Hexachlorocyclohexane	319-86-8	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
gamma-Hexachlorocyclohexane	58-89-9	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.000768		--		--
cis-Chlordane	5103-71-9	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
trans-Chlordane	5103-74-2	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
Oxychlordane	27304-13-8	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
cis-Nonachlor	5103-73-1	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
trans-Nonachlor	39765-80-5	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
Dieldrin	60-57-1	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
alpha-Endosulfan	959-98-8	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
beta-Endosulfan	33213-65-9	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
Endosulfan sulfate	1031-07-8	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
Endrin	72-20-8	ug/l		--		--		--		0.00051	R	--		0.0005	R	--		0.00049	R	0.000481	R	0.00049	R	--		--
Endrin aldehyde	7421-93-4	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
Endrin ketone	53494-70-5	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
Heptachlor	76-44-8	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
Heptachlor epoxide	1024-57-3	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	UJ	0.000481	UJ	0.00049	U	--		--
Hexachlorobenzene	118-74-1	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00701		--		--
Hexachlorobutadiene	87-68-3	ug/l		--		--		--		0.00051	UJ	--		0.0005	UJ	--		0.00049	UJ	0.000481	UJ	0.00049	UJ	--		--
Hexachloroethane	67-72-1	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
Methoxychlor	72-43-5	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
Mirex	2385-85-5	ug/l		--		--		--		0.00051	U	--		0.0005	U	--		0.00049	U	0.000481	U	0.00049	U	--		--
Toxaphene	8001-35-2	ug/l		--		--		--		0.128	U	--		0.125	U	--		0.123	U	0.12	U	0.123	U	--		--

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Table 4-3. March 2005 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name	LW2-W2015		LW2-W2016-1		LW2-W2016-1D	LW2-W2017		LW2-W2018		LW2-W2019		LW2-W2019D	LW2-W2020		LW2-W2021		LW2-W2022		LW2-W2023		LW2-W2023D
			Sample Date/Time	3/14/2005, 0910		3/15/2005, 0923		3/15/2005, 0923	3/16/2005, 0005		3/3/2005, 0856		3/16/2005, 0912		3/16/2005, 0912	3/16/2005, 1335		3/16/2005, 1515		3/16/2005, 1025		3/7/2005, 1316		3/7/2005, 1316
			X Coordinate	--		--		--	--		--		--		--	--		--		--		--		--
			Y Coordinate	--		--		--	--		--		--		--	--		--		--		--		--
Phenols																								
2,3,4,6-Tetrachlorophenol	58-90-2	ug/l		1.1	U	1.1	U	--	1.1	U	1.1	U	1.1	U	--	1.1	U	1.1	U	1	U	1.1	U	--
2,4,5-Trichlorophenol	95-95-4	ug/l		0.027	U	0.026	U	--	0.027	U	0.027	U	0.027	U	--	0.027	U	0.027	U	0.026	U	0.028	U	--
2,4,6-Trichlorophenol	88-06-2	ug/l		0.039	U	0.038	U	--	0.039	U	0.039	U	0.04	U	--	0.039	U	0.04	U	0.037	U	0.04	U	--
2,4-Dichlorophenol	120-83-2	ug/l		0.025	U	0.025	U	--	0.025	U	0.025	U	0.025	U	--	0.025	U	0.026	U	0.024	U	0.026	U	--
2,4-Dimethylphenol	105-67-9	ug/l		0.34	U	0.33	U	--	0.34	U	0.34	U	0.34	U	--	0.34	U	0.35	U	0.32	U	0.35	U	--
2,4-Dinitrophenol	51-28-5	ug/l		0.56	U	0.55	U	--	0.56	U	0.56	U	0.57	U	--	0.56	U	0.57	U	0.53	U	0.58	U	--
2-Chlorophenol	95-57-8	ug/l		0.016	U	0.015	U	--	0.016	U	0.016	U	0.016	U	--	0.016	U	0.016	U	0.015	U	0.016	U	--
2-Methylphenol	95-48-7	ug/l		0.063	U	0.062	U	--	0.062	U	0.062	U	0.064	U	--	0.062	U	0.064	U	0.06	U	0.065	U	--
2-Nitrophenol	88-75-5	ug/l		0.015	U	0.014	U	--	0.014	U	0.014	U	0.015	U	--	0.014	U	0.015	U	0.014	U	0.015	U	--
4,6-Dinitro-2-methylphenol	534-52-1	ug/l		0.014	U	0.014	U	--	0.014	U	0.014	U	0.014	U	--	0.014	U	0.014	U	0.013	U	0.015	U	--
4-Chloro-3-methylphenol	59-50-7	ug/l		0.031	U	0.03	U	--	0.031	U	0.32	J	0.031	U	--	0.031	U	0.032	U	0.029	U	0.14	U	--
4-Methylphenol	106-44-5	ug/l		0.054	U	0.053	U	--	0.053	U	0.053	U	0.055	U	--	0.053	U	0.055	U	0.051	U	0.056	U	--
4-Nitrophenol	100-02-7	ug/l		0.57	U	0.56	U	--	0.56	U	0.56	U	0.57	U	--	0.56	U	0.58	U	0.54	U	0.59	U	--
Pentachlorophenol	87-86-5	ug/l		0.03	U	0.03	U	--	0.03	U	0.03	U	0.031	U	--	0.03	U	0.031	U	0.029	U	0.061	U	--
Phenol	108-95-2	ug/l		0.021	U	0.021	U	--	0.021	U	0.021	U	0.021	U	--	0.021	U	0.022	U	0.02	U	0.022	U	--
Phthalates																								
Dimethyl phthalate	131-11-3	ug/l		0.014	U	0.013	U	--	0.014	U	0.014	U	0.014	U	--	0.014	U	0.014	U	0.013	U	0.014	U	--
Diethyl phthalate	84-66-2	ug/l		0.031	U	0.027	U	--	0.027	U	0.045	U	0.028	U	--	0.047	U	0.028	U	0.028	U	0.041	U	--
Dibutyl phthalate	84-74-2	ug/l		0.068	U	0.062	U	--	0.082	U	0.075	U	0.067	U	--	0.1	U	0.067	U	0.066	U	0.082	U	--
Butylbenzyl phthalate	85-68-7	ug/l		0.027	U	0.027	U	--	0.027	U	0.027	U	0.028	U	--	0.027	U	0.028	U	0.026	U	0.028	U	--
Di-n-octyl phthalate	117-84-0	ug/l		0.034	U	0.033	U	--	0.034	U	0.034	U	0.035	U	--	0.034	U	0.035	U	0.032	U	0.035	U	--
Bis(2-ethylhexyl) phthalate	117-81-7	ug/l		0.29	U	0.28	U	--	0.29	U	0.29	U	0.29	U	--	0.29	U	0.3	U	0.27	U	0.3	U	--
SVOCs																								
1,2,4-Trichlorobenzene	120-82-1	ug/l		0.017	U	0.016	U	--	0.016	U	0.016	U	0.017	U	--	0.016	U	0.017	U	0.016	U	0.017	U	--
1,2-Dichlorobenzene	95-50-1	ug/l		0.015	U	0.015	U	--	0.015	U	0.015	U	0.015	U	--	0.015	U	0.016	U	0.015	U	0.016	U	--
1,3-Dichlorobenzene	541-73-1	ug/l		0.012	U	0.011	U	--	0.012	U	0.012	U	0.012	U	--	0.012	U	0.012	U	0.011	U	0.012	U	--
1,4-Dichlorobenzene	106-46-7	ug/l		0.014	U	0.014	U	--	0.014	U	0.014	U	0.015	U	--	0.014	U	0.015	U	0.014	U	0.015	U	--
Azobenzene	103-33-3	ug/l		0.013	U	0.013	U	--	0.013	U	0.013	U	0.013	U	--	0.013	U	0.013	U	0.012	U	0.013	U	--
2,4-Dinitrotoluene	121-14-2	ug/l		0.021	U	0.02	U	--	0.02	U	0.02	U	0.021	U	--	0.02	U	0.021	U	0.02	U	0.021	U	--
2,6-Dinitrotoluene	606-20-2	ug/l		0.0093	U	0.0091	U	--	0.0092	U	0.0092	U	0.0094	U	--	0.0092	U	0.0095	U	0.0088	U	0.0096	U	--
2-Chloronaphthalene	91-58-7	ug/l		0.016	U	0.016	U	--	0.016	U	0.016	U	0.017	U	--	0.016	U	0.017	U	0.016	U	0.017	U	--
2-Nitroaniline	88-74-4	ug/l		0.016	U	0.016	U	--	0.016	U	0.016	U	0.016	U	--	0.016	U	0.016	U	0.015	U	0.016	U	--
3,3'-Dichlorobenzidine	91-94-1	ug/l		0.46	U	0.45	U	--	0.45	U	0.45	U	0.46	U	--	0.45	U	0.47	U	0.43	U	0.47	U	--
3-Nitroaniline	99-09-2	ug/l		0.24	U	0.24	U	--	0.24	U	0.24	U	0.25	U	--	0.24	U	0.25	U	0.23	U	0.25	U	--
4-Bromophenyl phenyl ether	101-55-3	ug/l		0.019	U	0.019	U	--	0.019	U	0.019	U	0.019	U	--	0.019	U	0.019	U	0.018	U	0.02	U	--
4-Chloroaniline	106-47-8	ug/l		0.019	U	0.018	U	--	0.019	U	0.019	U	0.019	U	--	0.019	U	0.019	U	0.018	U	0.019	U	--
4-Chlorophenyl phenyl ether	7005-72-3	ug/l		0.0089	U	0.0087	U	--	0.0088	U	0.0088	U	0.009	U	--	0.0088	U	0.0091	U	0.0085	U	0.0092	U	--
4-Nitroaniline	100-01-6	ug/l		0.18	U	0.17	U	--	0.17	U	0.17	U	0.18	U	--	0.17	U	0.18	U	0.17	U	0.18	U	--
Aniline	62-53-3	ug/l		1.1	U	1.1	U	--	1.1	U	1.1	R	1.1	U	--	1.1	U	1.1	U	1	U	1.1	U	--
Benzoic acid	65-85-0	ug/l		1.9	U	1.8	U	--	1.8	U	1.8	R	1.9	U	--	1.8	U	1.9	U	1.8	U	1.9	U	--
Benzyl alcohol	100-51-6	ug/l		1.1	U	1.1	U	--	1.1	U	1.1	U	1.1	U	--	1.1	U	1.1	U	0.98	U	1.1	U	--
Bis(2-chloroethoxy) methane	111-91-1	ug/l		0.012	U	0.012	U	--	0.012	U	0.012	U	0.013	U	--	0.012	U	0.013	U	0.012	U	0.013	U	--
Bis(2-chloroethyl) ether	111-44-4	ug/l		0.015	U	0.015	U	--	0.015	U	0.015	U	0.016	U	--	0.015	U	0.016	U	0.015	U	0.016	U	--
Carbazole	86-74-8	ug/l		0.014	U	0.013	U	--	0.014	U	0.014	U	0.014	U	--	0.014	U	0.014	U	0.013	U	0.014	U	--
Dibenzofuran	132-64-9	ug/l		0.015	U	0.015	U	--	0.015	U	0.0071	U	0.015	U	--	0.015	U	0.015	U	0.015	U	0.015	U	--
Hexachlorobenzene	118-74-1	ug/l		0.015	U	0.015	U	--	0.015	U	0.015	U	0.015	U	--	0.015	U	0.016	U	0.015	U	0.016	U	--
Hexachlorobutadiene	87-68-3	ug/l		0.021	U	0.02	U	--	0.021	U	0.021	U	0.021	U	--	0.021	U	0.021	U	0.02	U	0.022	U	--
Hexachlorocyclopentadiene	77-47-4	ug/l		0.043	U	0.042	U	--	0.043	U	0.043	R	0.044	U	--	0.043	U	0.044	U	0.041	U	0.045	U	--
Hexachloroethane	67-72-1	ug/l		0.02	U	0.019	U	--	0.02	U	0.02	U	0.02	U	--	0.02	U	0.02	U	0.019	U	0.02	U	--
Isophorone	78-59-1	ug/l		0.0089	U	0.0087	U	--	0.0088	U	0.0088	U	0.009	U	--	0.0088	U	0.0091	U	0.0085	U	0.0092	U	--
Nitrobenzene	98-95-3	ug/l		0.0078	U	0.0077	U	--	0.0078	U	0.0078	U	0.0079	U	--	0.0078	U	0.008	U	0.0074	U	0.0081	U	--
N-Nitrosodimethylamine	62-75-9	ug/l		0.45	U	0.44	U	--	0.44	U	0.44	U	0.45	U	--	0.44	U	0.46	U	0.42	U	0.46	U	--
N-Nitrosodipropylamine	621-64-7	ug/l		0.034	UJ	0.034	UJ	--	0.034	UJ	0.034	UJ	0.035	UJ	--	0.034	UJ	0.035	UJ	0.033	UJ	0.036	UJ	--
N-Nitrosodiphenylamine	86-30-6	ug/l		0.03	U	0.029	U	--	0.029	U	0.029	U	0.03	U	--	0.029	U	0.03	U	0.028	U	0.031	U	--
Bis(2-chloroisopropyl) ether	39638-32-9	ug/l		0.018	U	0.018	U	--	0.018	U	0.018	U	0.018	U	--	0.018	U	0.018	U	0.017	U	0.019	U	--

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BZTO104(e)00488
ANC04488

Table 4-4. July 2005 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W3001		LW2-W3002-1		LW2-W3002-2		LW2-W3003		LW2-W3004		LW2-W3005		LW2-W3006		LW2-W3007		LW2-W3008	
			Sample Date/Time		7/5/2005		7/5/2005		7/5/2005		7/5/2005		7/5/2005		7/13/2005		7/8/2005		7/8/2005		7/8/2005	
			X Coordinate		--		--		--		--		--		--		--		--		--	
			Y Coordinate		--		--		--		--		--		--		--		--		--	
PCB Aroclors																						
Aroclor 1016	12674-11-2	ug/l		0.0025	UJ	0.0025	UJ	--		0.0025	UJ	0.0025	UJ	--		0.0025	U	0.0025	U	0.0025	U
Aroclor 1242	53469-21-9	ug/l		0.0025	UJ	0.0025	UJ	--		0.0025	UJ	0.0025	UJ	--		0.0025	U	0.0025	U	0.0025	U
Aroclor 1248	12672-29-6	ug/l		0.00358	J	0.00125	UJ	--		0.00125	UJ	0.00125	UJ	--		0.00125	U	0.00125	U	0.00125	U
Aroclor 1254	11097-69-1	ug/l		0.00272	J	0.00125	UJ	--		0.00125	UJ	0.00125	UJ	--		0.00125	U	0.00125	U	0.00125	U
Aroclor 1260	11096-82-5	ug/l		0.0025	UJ	0.0025	UJ	--		0.0025	UJ	0.0025	UJ	--		0.0025	U	0.0025	U	0.0025	U
Aroclor 1262	37324-23-5	ug/l		0.0025	UJ	0.0025	UJ	--		0.0025	UJ	0.0025	UJ	--		0.0025	U	0.0025	U	0.0025	U
Aroclor 1268	11100-14-4	ug/l		0.0025	UJ	0.0025	UJ	--		0.0025	UJ	0.0025	UJ	--		0.0025	U	0.0025	U	0.0025	U
Aroclor 1221	11104-28-2	ug/l		0.0025	UJ	0.0025	UJ	--		0.0025	UJ	0.0025	UJ	--		0.0025	U	0.0025	U	0.0025	U
Aroclor 1232	11141-16-5	ug/l		0.0025	UJ	0.0025	UJ	--		0.0025	UJ	0.0025	UJ	--		0.0025	U	0.0025	U	0.0025	U
Butyltins																						
Butyltin ion	78763-54-9	ug/l		0.03	U	0.032	U	0.034	U	0.034	U	0.029	U	0.033	U	0.034	U	0.033	U	0.04	U
Dibutyltin ion	14488-53-0	ug/l		0.00055	UJ	0.001	J	0.00055	UJ	0.00055	UJ	0.00055	UJ	0.00055	UJ	0.0008	J	0.00061	J	0.00057	UJ
Tributyltin ion	36643-28-4	ug/l		0.0006	U	0.0006	U	0.0006	U	0.0006	U	0.0006	U	0.0011	U	0.0011	J	0.00099	J	0.0012	J
Tetrabutyltin	1461-25-2	ug/l		0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U
Conventionals																						
Total organic carbon	TOC	mg/l		2.2		2.2		2.3		2		2.1		1.7		1.9		2.1		2	
Total suspended solids	TSS	mg/l		7	J	13	J	15	J	15	J	9	J	8	J	7	J	7	J	4	J
Dissolved organic carbon	DOC	mg/l		1.7		1.7		1.7		1.4		1.5		1.4		1.5		1.6		1.6	
Hardness as CaCO3	HARD	mg/l		54.8		52.5		52.8		29.3		29.8		34.2		28.5		28.8		28.3	
Total dissolved solids	TDS	mg/l		101		102		82		63		67		65		82		74		70	
Perchlorate	PERCHLORATE	ug/l		--		--		--		--		--		--		--		--		--	
Chlorinated Herbicides																						
Dalapon	75-99-0	ug/l		0.23	U	0.23	U	0.23	U	0.23	U	0.23	U	0.25	U	0.23	U	0.23	U	0.23	U
Dicamba	1918-00-9	ug/l		0.059	U	0.059	U	0.059	U	0.059	U	0.059	U	0.064	U	0.059	U	0.059	U	0.059	U
MCPA	94-74-6	ug/l		35	U	35	U	35	U	35	U	35	U	38	U	35	U	35	U	35	U
Dichloroprop	120-36-5	ug/l		0.058	U	0.058	U	0.058	U	0.058	U	0.058	U	0.063	U	0.058	U	0.058	U	0.058	U
2,4-D	94-75-7	ug/l		0.048	U	0.048	U	0.048	U	0.048	U	0.048	U	0.052	U	0.048	U	0.048	U	0.048	U
Silvex	93-72-1	ug/l		0.048	U	0.048	U	0.048	U	0.048	U	0.048	U	0.052	U	0.048	U	0.048	U	0.048	U
2,4,5-T	93-76-5	ug/l		0.043	U	0.043	U	0.043	U	0.043	U	0.043	U	0.047	U	0.043	U	0.043	U	0.043	U
2,4-DB	94-82-6	ug/l		0.2	U	0.11	U	0.21	U	0.12	U	0.21	U	0.11	U	0.1	U	0.22	U	0.22	U
Dinoseb	88-85-7	ug/l		0.068	U	0.068	U	0.068	U	0.068	U	0.068	U	0.074	U	0.068	U	0.068	U	0.068	U
MCPP	93-65-2	ug/l		50	U	6.8	U	14	U	7.3	U	9.6	U	18	U	13	U	21	U	11	U
Metals																						
Aluminum	7429-90-5	ug/l		353		253		264		313		181		186	J	165	J	91	J	89.4	J
Aluminum (dissolved)	7429-90-5	ug/l		1.2	U	1.2	U	0.9	U	1.8	U	1.6	U	2.5	UJ	2.5	UJ	2.2	UJ	2.4	UJ
Antimony	7440-36-0	ug/l		0.13		0.12		0.11		0.03	J	0.04	J	0.06		0.03	J	0.04	J	0.05	J
Antimony (dissolved)	7440-36-0	ug/l		0.11		0.11		0.1		0.03	J	0.03	J	0.05		0.03	J	0.05	J	0.04	J
Arsenic	7440-38-2	ug/l		0.75		0.64		0.71		0.49		0.48		0.55		0.49		0.48		0.48	
Arsenic (dissolved)	7440-38-2	ug/l		0.64		0.62		0.62		0.41		0.41		0.48		0.42		0.42		0.43	
Cadmium	7440-43-9	ug/l		0.03		0.02		0.03		0.02	U	0.02	U	0.03		0.07	U	0.06	U	0.06	U
Cadmium (dissolved)	7440-43-9	ug/l		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02		0.05	U	0.05	U	0.04	U
Chromium	7440-47-3	ug/l		0.66		0.55		0.48	U	0.54		0.48	U	0.53		0.39	U	0.37	U	0.29	U
Chromium (dissolved)	7440-47-3	ug/l		0.14	U	0.13	U	0.11	U	0.16	U	0.16	U	0.26		0.17	U	0.2	U	0.25	U

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Table 4-4. July 2005 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W3001		LW2-W3002-1		LW2-W3002-2		LW2-W3003		LW2-W3004		LW2-W3005		LW2-W3006		LW2-W3007		LW2-W3008	
			Sample Date/Time		7/5/2005		7/5/2005		7/5/2005		7/5/2005		7/5/2005		7/13/2005		7/8/2005		7/8/2005		7/8/2005	
			X Coordinate		--		--		--		--		--		--		--		--		--	
			Y Coordinate		--		--		--		--		--		--		--		--		--	
Copper	7440-50-8	ug/l			1.66		1.42		1.5		1.41		1.38		1.33	J	1.37	J	1.36	J	1.09	J
Copper (dissolved)	7440-50-8	ug/l			0.84		0.84		0.82		0.74		0.87		0.77	J	0.83		0.87		0.84	
Lead	7439-92-1	ug/l			0.47		0.26		0.26		0.26		0.25		0.24		0.179		0.359		1.8	
Lead (dissolved)	7439-92-1	ug/l			0.01	UJ	0.01	UJ	0.01	UJ	0.01	U	0.02	U	0.03		0.019	U	0.029		0.152	
Mercury	7439-97-6	ug/l			0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
Mercury (dissolved)	7439-97-6	ug/l			0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U
Nickel	7440-02-0	ug/l			1.27		1.2		1.26		0.94		1.1		0.76		0.79		0.77		0.9	
Nickel (dissolved)	7440-02-0	ug/l			0.87		0.87		0.88		0.66		0.66		0.52	U	0.63		0.78		0.77	
Selenium	7782-49-2	ug/l			0.4	J	0.2	J	0.3	J	0.1	UJ	0.1	J	0.2	J	0.4	J	0.4	J	0.3	J
Selenium (dissolved)	7782-49-2	ug/l			0.1	J	0.3	J	0.2	J	0.1	UJ	0.1	UJ	0.2	J	0.4	J	0.4	J	0.4	J
Silver	7440-22-4	ug/l			0.015	U	0.005	U	0.005	U	0.005	U	0.005	U	0.018	U	0.005	UJ	0.005	UJ	0.005	UJ
Silver (dissolved)	7440-22-4	ug/l			0.005	U	0.061		0.005	U	0.005	U	0.005	U	0.005	U	0.005	UJ	0.005	UJ	0.005	UJ
Zinc	7440-66-6	ug/l			3.66	J	2.48	J	2.78	J	2.94	J	3.28	J	3.12		3.3	J	3.1	J	6.1	J
Zinc (dissolved)	7440-66-6	ug/l			1.21	UJ	1.17	UJ	1.46	UJ	1.9	J	1.88	J	1.79		2	J	2.4	J	4.7	J
Chromium hexavalent	18540-29-9	mg/l									--		--		--		--		--		--	
PAHs																						
2-Methylnaphthalene	91-57-6	ug/l			0.0051	U	0.0028	U	0.0027	U	0.0027	U	0.0027	U	0.0054	U	0.0054	U	0.0054	U	0.0054	U
Acenaphthene	83-32-9	ug/l			0.002	U	0.002	U	0.002	U	0.002	U	0.002	U	0.004	U	0.0043	U	0.004	U	0.0045	U
Acenaphthylene	208-96-8	ug/l			0.0018	U	0.0018	U	0.0019	U	0.0018	U	0.0018	U	0.0036	U	0.0036	U	0.0036	U	0.0036	U
Anthracene	120-12-7	ug/l			0.0011	U	0.0013	J	0.0011	U	0.0011	U	0.0011	U	0.0021	U	0.0021	U	0.0021	U	0.0021	U
Fluorene	86-73-7	ug/l			0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0026	U	0.0052	U	0.0052	U	0.0052	U	0.0052	U
Naphthalene	91-20-3	ug/l			0.0032	U	0.004	U	0.0032	U	0.0039	U	0.0032	U	0.032	U	0.0064	U	0.0064	U	0.0064	U
Phenanthrene	85-01-8	ug/l			0.0032	U	0.0032	U	0.0032	U	0.0032	U	0.0032	U	0.0064	U	0.0064	U	0.0075	U	0.0073	U
Dibenz(a,h)anthracene	53-70-3	ug/l			0.0017	U	0.0017	U	0.0017	U	0.0017	U	0.0017	U	0.0033	U	0.0033	U	0.0033	U	0.0033	U
Benz(a)anthracene	56-55-3	ug/l			0.0021	U	0.0021	U	0.0021	U	0.003	J	0.0021	U	0.0042	U	0.0042	U	0.0065	J	0.0078	J
Benzo(a)pyrene	50-32-8	ug/l			0.0016	U	0.0016	U	0.0016	U	0.0027	J	0.0016	U	0.0032	U	0.0032	U	0.004	J	0.0075	J
Benzo(b)fluoranthene	205-99-2	ug/l			0.002	U	0.002	U	0.002	U	0.0028	J	0.002	U	0.0039	U	0.0039	U	0.004	J	0.008	J
Benzo(g,h,i)perylene	191-24-2	ug/l			0.0037	U	0.0037	U	0.0037	U	0.0037	U	0.0037	U	0.0074	U	0.0074	U	0.0074	U	0.0074	U
Benzo(k)fluoranthene	207-08-9	ug/l			0.0014	U	0.0014	U	0.0014	U	0.0018	J	0.0014	U	0.0027	U	0.0027	U	0.0039	J	0.006	J
Chrysene	218-01-9	ug/l			0.0021	J	0.002	J	0.0013	U	0.0037	J	0.0013	U	0.0025	U	0.0032	J	0.0064	J	0.0081	J
Fluoranthene	206-44-0	ug/l			0.0036	J	0.0042	J	0.0094	J	0.016	J	0.011	J	0.011	J	0.017	J	0.018		0.018	J
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l			0.0021	U	0.0021	U	0.0021	U	0.0021	U	0.0021	U	0.0042	U	0.0042	U	0.0042	U	0.0057	J
Pyrene	129-00-0	ug/l			0.0044	J	0.0048	J	0.0038	J	0.012	J	0.0039	J	0.0073	J	0.015	J	0.015	J	0.014	J
Pesticides																						
2,4'-DDD	53-19-0	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
2,4'-DDE	3424-82-6	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
2,4'-DDT	789-02-6	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
4,4'-DDD	72-54-8	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
4,4'-DDE	72-55-9	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
4,4'-DDT	50-29-3	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	UJ	0.000515	UJ
Aldrin	309-00-2	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
alpha-Hexachlorocyclohexane	319-84-6	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
beta-Hexachlorocyclohexane	319-85-7	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
delta-Hexachlorocyclohexane	319-86-8	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
gamma-Hexachlorocyclohexane	58-89-9	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
cis-Chlordane	5103-71-9	ug/l			0.000481	UJ	0.00104	J	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U

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Analysis/Analyte	CAS #	Units	Sample Name		LW2-W3001		LW2-W3002-1		LW2-W3002-2		LW2-W3003		LW2-W3004		LW2-W3005		LW2-W3006		LW2-W3007		LW2-W3008	
			Sample Date/Time		7/5/2005		7/5/2005		7/5/2005		7/5/2005		7/5/2005		7/13/2005		7/8/2005		7/8/2005		7/8/2005	
			X Coordinate		--		--		--		--		--		--		--		--		--	
			Y Coordinate		--		--		--		--		--		--		--		--		--	
trans-Chlordane	5103-74-2	ug/l			0.000481	UJ	0.00108	J	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
Oxychlordane	27304-13-8	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
cis-Nonachlor	5103-73-1	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
trans-Nonachlor	39765-80-5	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
Dieldrin	60-57-1	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
alpha-Endosulfan	959-98-8	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
beta-Endosulfan	33213-65-9	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
Endosulfan sulfate	1031-07-8	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
Endrin	72-20-8	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	UJ	0.000515	U
Endrin aldehyde	7421-93-4	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
Endrin ketone	53494-70-5	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
Heptachlor	76-44-8	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
Heptachlor epoxide	1024-57-3	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
Hexachlorobenzene	118-74-1	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
Hexachlorobutadiene	87-68-3	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
Hexachloroethane	67-72-1	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
Methoxychlor	72-43-5	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
Mirex	2385-85-5	ug/l			0.000481	UJ	0.000538	UJ	--		0.000505	UJ	0.000526	UJ	--		0.000521	U	0.000524	U	0.000515	U
Toxaphene	8001-35-2	ug/l			0.12	UJ	0.134	UJ	--		0.125	UJ	0.132	UJ	--		0.13	U	0.131	U	0.129	U
Phenols																						
2,3,4,6-Tetrachlorophenol	58-90-2	ug/l			1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
2,4,5-Trichlorophenol	95-95-4	ug/l			0.026	U	0.027	U	0.027	U	0.026	U	0.028	U	0.027	U	0.027	U	0.027	U	0.028	U
2,4,6-Trichlorophenol	88-06-2	ug/l			0.038	U	0.04	U	0.04	U	0.038	U	0.041	U	0.039	U	0.04	U	0.039	U	0.041	U
2,4-Dichlorophenol	120-83-2	ug/l			0.024	U	0.026	U	0.025	U	0.025	U	0.026	U	0.025	U	0.025	U	0.025	U	0.026	U
2,4-Dimethylphenol	105-67-9	ug/l			0.33	U	0.35	U	0.34	U	0.33	U	0.35	U	0.34	U	0.34	U	0.34	U	0.35	U
2,4-Dinitrophenol	51-28-5	ug/l			0.54	U	0.57	U	0.57	U	0.55	U	0.59	U	0.56	U	0.57	U	0.56	U	0.59	U
2-Chlorophenol	95-57-8	ug/l			0.015	U	0.016	U	0.016	U	0.015	U	0.016	U	0.016	U	0.016	U	0.016	U	0.016	U
2-Methylphenol	95-48-7	ug/l			0.06	U	0.064	U	0.064	U	0.062	U	0.066	U	0.062	U	0.064	U	0.063	U	0.066	U
2-Nitrophenol	88-75-5	ug/l			0.014	U	0.015	U	0.015	U	0.014	U	0.015	U	0.014	U	0.015	U	0.015	U	0.015	U
4,6-Dinitro-2-methylphenol	534-52-1	ug/l			0.014	U	0.014	U	0.014	U	0.014	U	0.015	U	0.014	U	0.014	U	0.014	U	0.015	U
4-Chloro-3-methylphenol	59-50-7	ug/l			0.048	U	0.032	U	0.062	U	0.03	U	0.074	U	0.031	U	0.031	U	0.031	U	0.032	U
4-Methylphenol	106-44-5	ug/l			0.052	U	0.055	U	0.055	U	0.053	U	0.056	U	0.053	U	0.055	U	0.054	U	0.056	U
4-Nitrophenol	100-02-7	ug/l			0.54	U	0.58	U	0.57	U	0.56	U	0.59	U	0.56	U	0.57	U	0.57	U	0.59	U
Pentachlorophenol	87-86-5	ug/l			0.029	U	0.031	U	0.031	U	0.03	U	0.032	U	0.03	U	0.031	U	0.03	U	0.032	U
Phenol	108-95-2	ug/l			0.034	U	0.33	U	0.042	U	0.021	U	0.046	U	0.064	J	0.021	U	0.021	U	0.022	U
Phthalate Esters																						
Dimethyl phthalate	131-11-3	ug/l			0.013	U	0.014	UJ	0.014	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Diethyl phthalate	84-66-2	ug/l			0.031	U	0.028	UJ	0.058	U	0.027	U	0.035	U	0.065	U	0.051	U	0.047	U	0.044	U
Dibutyl phthalate	84-74-2	ug/l			0.13	U	0.07	U	0.13	U	0.13	U	0.15	U	0.13	U	0.084	U	0.065	U	0.098	U
Butylbenzyl phthalate	85-68-7	ug/l			0.026	U	0.028	UJ	0.028	U	0.027	U	0.028	U	0.027	U	0.028	U	0.027	J	0.028	U
Di-n-octyl phthalate	117-84-0	ug/l			0.033	U	0.035	UJ	0.035	U	0.033	U	0.036	U	0.034	U	0.035	U	0.034	U	0.036	U
Bis(2-ethylhexyl) phthalate	117-81-7	ug/l			0.28	U	0.3	UJ	0.29	U	0.28	U	0.3	U	0.42	U	0.29	U	0.29	U	0.3	U
SVOCs																						
1,2,4-Trichlorobenzene	120-82-1	ug/l			0.016	U	0.017	UJ	0.017	U	0.016	U	0.017	U	0.016	U	0.017	U	0.017	U	0.017	U
1,2-Dichlorobenzene	95-50-1	ug/l			0.015	U	0.016	U	0.015	U	0.015	U	0.016	U	0.015	U	0.015	U	0.015	U	0.016	U

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Table 4-4. July 2005 Surface Water Data Results - Peristaltic.

	Sample Name	LW2-W3001		LW2-W3002-1		LW2-W3002-2		LW2-W3003		LW2-W3004		LW2-W3005		LW2-W3006		LW2-W3007		LW2-W3008	
	Sample Date/Time	7/5/2005		7/5/2005		7/5/2005		7/5/2005		7/5/2005		7/13/2005		7/8/2005		7/8/2005		7/8/2005	
	X Coordinate	--		--		--		--		--		--		--		--		--	
	Y Coordinate	--		--		--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																	
1,3-Dichlorobenzene	541-73-1	ug/l	0.011	U	0.012	U	0.012	U	0.011	U	0.012	U	0.012	U	0.012	U	0.012	U	0.012	U
1,4-Dichlorobenzene	106-46-7	ug/l	0.014	U	0.015	U	0.015	U	0.014	U	0.015	U	0.014	U	0.015	U	0.014	U	0.015	U
Azobenzene	103-33-3	ug/l	0.013	U	0.013	UJ	0.013	U	0.013	U	0.014	U	0.013	U	0.013	U	0.013	U	0.014	U
2,4-Dinitrotoluene	121-14-2	ug/l	0.02	U	0.021	UJ	0.021	U	0.02	U	0.021	U	0.02	U	0.021	U	0.021	U	0.021	U
2,6-Dinitrotoluene	606-20-2	ug/l	0.0089	U	0.0095	UJ	0.0094	U	0.0091	U	0.0097	U	0.0092	U	0.0094	U	0.0093	U	0.0097	U
2-Chloronaphthalene	91-58-7	ug/l	0.016	U	0.017	UJ	0.017	U	0.016	U	0.017	U	0.016	U	0.017	U	0.016	U	0.017	U
2-Nitroaniline	88-74-4	ug/l	0.015	U	0.016	UJ	0.016	U	0.016	U	0.017	U	0.016	U	0.016	U	0.016	U	0.017	U
3,3'-Dichlorobenzidine	91-94-1	ug/l	0.44	U	0.47	R	0.46	U	0.45	U	0.48	U	0.45	U	0.46	U	0.46	U	0.48	U
3-Nitroaniline	99-09-2	ug/l	0.23	U	0.25	UJ	0.25	U	0.24	U	0.25	U	0.24	U	0.25	U	0.24	U	0.25	U
4-Bromophenyl phenyl ether	101-55-3	ug/l	0.018	U	0.019	UJ	0.019	U	0.019	U	0.02	U	0.019	U	0.019	U	0.019	U	0.02	U
4-Chloroaniline	106-47-8	ug/l	0.018	U	0.019	R	0.019	U	0.018	U	0.02	U	0.019	U	0.019	U	0.019	U	0.02	U
4-Chlorophenyl phenyl ether	7005-72-3	ug/l	0.0086	U	0.0091	UJ	0.009	U	0.0087	U	0.0093	U	0.0088	U	0.009	U	0.0089	U	0.0093	U
4-Nitroaniline	100-01-6	ug/l	0.17	U	0.18	UJ	0.18	U	0.17	U	0.18	U	0.17	U	0.18	U	0.18	U	0.18	U
Aniline	62-53-3	ug/l	1.1	R	1.1	R	1.1	R	1.1	R	1.1	R	1.1	U	1.1	U	1.1	U	1.1	U
Benzoic acid	65-85-0	ug/l	1.8	U	1.9	U	1.9	U	1.8	U	1.9	U	1.8	U	1.9	U	1.9	U	1.9	U
Benzyl alcohol	100-51-6	ug/l	0.99	U	1.1	UJ	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
Bis(2-chloroethoxy) methane	111-91-1	ug/l	0.012	U	0.013	UJ	0.013	U	0.012	U	0.013	U	0.012	U	0.013	U	0.012	U	0.013	U
Bis(2-chloroethyl) ether	111-44-4	ug/l	0.015	U	0.016	UJ	0.016	U	0.015	U	0.016	U	0.015	U	0.016	U	0.015	U	0.016	U
Carbazole	86-74-8	ug/l	0.013	U	0.014	UJ	0.014	U	0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Dibenzofuran	132-64-9	ug/l	0.0071	U	0.0071	U	0.0071	U	0.0071	U	0.0071	U	0.015	U	0.015	U	0.015	U	0.015	U
Hexachlorobenzene	118-74-1	ug/l	0.015	U	0.016	UJ	0.015	U	0.015	U	0.016	U	0.015	U	0.015	U	0.015	U	0.016	U
Hexachlorobutadiene	87-68-3	ug/l	0.02	U	0.021	UJ	0.021	U	0.02	U	0.022	U	0.021	U	0.021	U	0.021	U	0.022	U
Hexachlorocyclopentadiene	77-47-4	ug/l	0.042	U	0.044	UJ	0.044	U	0.042	U	0.045	U	0.043	U	0.044	U	0.043	U	0.045	U
Hexachloroethane	67-72-1	ug/l	0.019	U	0.02	UJ	0.02	U	0.019	U	0.021	U	0.02	U	0.02	U	0.02	U	0.021	U
Isophorone	78-59-1	ug/l	0.0086	U	0.0091	UJ	0.009	U	0.0087	U	0.0093	U	0.0088	U	0.009	U	0.0089	U	0.0093	U
Nitrobenzene	98-95-3	ug/l	0.0075	U	0.008	UJ	0.0079	U	0.0077	U	0.0082	U	0.0078	U	0.0079	U	0.0078	U	0.0082	U
N-Nitrosodimethylamine	62-75-9	ug/l	0.43	U	0.46	UJ	0.45	U	0.44	U	0.47	U	0.44	U	0.45	U	0.45	U	0.47	U
N-Nitrosodipropylamine	621-64-7	ug/l	0.033	U	0.035	UJ	0.035	U	0.034	U	0.036	U	0.034	U	0.035	U	0.034	U	0.036	U
N-Nitrosodiphenylamine	86-30-6	ug/l	0.029	U	0.03	UJ	0.03	U	0.029	U	0.031	U	0.029	U	0.03	U	0.03	U	0.031	U
Bis(2-chloroisopropyl) ether	39638-32-9	ug/l	0.017	U	0.018	UJ	0.018	U	0.018	U	0.019	U	0.018	U	0.018	U	0.018	U	0.019	U

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Table 4-4. July 2005 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W3009		LW2-W3010		LW2-W3011		LW2-W3012		LW2-W3013		LW2-W3014		LW2-W3015		LW2-W3016-1		LW2-W3016-2	
			Sample Date/Time		7/8/2005		7/15/2005		7/12/2005		7/15/2005		7/6/2005		7/15/2005		7/19/2005		7/18/2005		7/18/2005	
			X Coordinate		--		--		--		--		--		--		--		--		--	
			Y Coordinate		--		--		--		--		--		--		--		--		--	
PCB Aroclors																						
Aroclor 1016	12674-11-2	ug/l			0.0025	U	0.0025	U	--		0.0025	U	--		0.0025	U	--		--		--	
Aroclor 1242	53469-21-9	ug/l			0.0025	U	0.0025	U	--		0.0025	U	--		0.0025	U	--		--		--	
Aroclor 1248	12672-29-6	ug/l			0.00125	U	0.00125	U	--		0.00125	U	--		0.00125	U	--		--		--	
Aroclor 1254	11097-69-1	ug/l			0.00125	U	0.00125	U	--		0.00125	U	--		0.00125	U	--		--		--	
Aroclor 1260	11096-82-5	ug/l			0.0025	U	0.0025	U	--		0.0025	U	--		0.0025	U	--		--		--	
Aroclor 1262	37324-23-5	ug/l			0.0025	U	0.0025	U	--		0.0025	U	--		0.0025	U	--		--		--	
Aroclor 1268	11100-14-4	ug/l			0.0025	U	0.0025	U	--		0.0025	U	--		0.0025	U	--		--		--	
Aroclor 1221	11104-28-2	ug/l			0.0025	U	0.0025	U	--		0.0025	U	--		0.0025	U	--		--		--	
Aroclor 1232	11141-16-5	ug/l			0.0025	U	0.0025	U	--		0.0025	U	--		0.0025	U	--		--		--	
Butyltins																						
Butyltin ion	78763-54-9	ug/l			0.036	U	0.0017	UJ	0.032	U	0.0017	UJ	0.034	U	0.0017	UJ	0.0017	UJ	0.0017	UJ	--	
Dibutyltin ion	14488-53-0	ug/l			0.00072	J	0.00079	J	0.00078	J	0.00055	UJ	0.00055	UJ	0.00055	UJ	0.00055	UJ	0.00062	U	--	
Tributyltin ion	36643-28-4	ug/l			0.0011	J	0.0006	U	0.00091	U	0.0006	U	0.0006	U	0.0006	U	0.0006	U	0.0006	U	--	
Tetrabutyltin	1461-25-2	ug/l			0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	--	
Conventionals																						
Total organic carbon	TOC	mg/l			1.9		1.8		1.8		1.8		1.9		1.7		1.8		1.7		--	
Total suspended solids	TSS	mg/l			10	J	7	J	25	J	13	J	8	J	5	J	5	J	7	J	--	
Dissolved organic carbon	DOC	mg/l			1.5		1.6		1.4		1.6		1.4		1.5		1.4		1.5		--	
Hardness as CaCO3	HARD	mg/l			28.6		28.9		31.2		29.4		28.3		28.9		29.6		30.4		--	
Total dissolved solids	TDS	mg/l			75		73		63		80		65		75		87		63		--	
Perchlorate	PERCHLORATE	ug/l			--		--		--		--		--		--		--		1.7	J	0.9	J
Chlorinated Herbicides																						
Dalapon	75-99-0	ug/l			0.23		0.23	U	0.25	U	0.24	U	0.23	U	0.23	U	0.24	U	0.25	U	--	
Dicamba	1918-00-9	ug/l			0.059	U	0.059	U	0.065	U	0.061	U	0.059	U	0.059	U	0.062	U	0.065	U	--	
MCPA	94-74-6	ug/l			35	U	35	U	39	U	36	U	35	U	35	U	37	U	39	U	--	
Dichloroprop	120-36-5	ug/l			0.058	U	0.058	U	0.064	U	0.06	U	0.058	U	0.058	U	0.061	U	0.064	U	--	
2,4-D	94-75-7	ug/l			0.048	U	0.048	U	0.053	U	0.049	U	0.048	U	0.048	U	0.05	U	0.053	U	--	
Silvex	93-72-1	ug/l			0.048	U	0.048	U	0.053	U	0.049	U	0.048	U	0.048	U	0.05	U	0.053	U	--	
2,4,5-T	93-76-5	ug/l			0.043	U	0.043	U	0.047	U	0.044	U	0.043	U	0.043	U	0.045	U	0.047	U	--	
2,4-DB	94-82-6	ug/l			0.22	U	0.1	U	0.11	U	0.11	U	0.22	U	0.1	U	0.11	U	0.12	U	--	
Dinoseb	88-85-7	ug/l			0.068	U	0.068	U	0.074	U	0.07	U	0.068	U	0.068	U	0.071	U	0.074	U	--	
MCPP	93-65-2	ug/l			13	U	18	U	15	U	12	U	9.5	U	6	U	21	U	9.8	U	--	
Metals																						
Aluminum	7429-90-5	ug/l			228	J	174	J	207	J	314	J	158		145	J	141	J	183		--	
Aluminum (dissolved)	7429-90-5	ug/l			2.4	UJ	3.3	UJ	3	UJ	3.2	UJ	1.7	U	3	UJ	2.7	UJ	3.2	U	--	
Antimony	7440-36-0	ug/l			0.05	J	0.05	J	0.05	J	0.05	J	0.02	J	0.05	J	0.04	J	0.03	J	--	
Antimony (dissolved)	7440-36-0	ug/l			0.04	J	0.04	J	0.05		0.04	J	0.02	J	0.04	J	0.03	J	0.03	J	--	
Arsenic	7440-38-2	ug/l			0.5		0.54		0.5		0.56		0.43		0.52		0.52		0.5		--	
Arsenic (dissolved)	7440-38-2	ug/l			0.42		0.46		0.45		0.47		0.37		0.46		0.45		0.45		--	
Cadmium	7440-43-9	ug/l			0.07	U	0.04	U	0.02		0.06	U	0.02	U	0.05	U	0.04	U	0.02	U	--	
Cadmium (dissolved)	7440-43-9	ug/l			0.04	U	0.04	U	0.03		0.03	U	0.02	U	0.05	U	0.04	U	0.02	U	--	
Chromium	7440-47-3	ug/l			0.48	U	0.43	U	0.43	U	0.59		0.39	U	0.35	U	0.36	U	0.48	U	--	
Chromium (dissolved)	7440-47-3	ug/l			0.2	U	0.19	U	0.29		0.16	U	0.18	U	0.21	U	0.18	U	0.21	U	--	

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Table 4-4. July 2005 Surface Water Data Results - Peristaltic.

Sample Name			LW2-W3009		LW2-W3010		LW2-W3011		LW2-W3012		LW2-W3013		LW2-W3014		LW2-W3015		LW2-W3016-1		LW2-W3016-2	
Sample Date/Time			7/8/2005		7/15/2005		7/12/2005		7/15/2005		7/6/2005		7/15/2005		7/19/2005		7/18/2005		7/18/2005	
X Coordinate			--		--		--		--		--		--		--		--		--	
Y Coordinate			--		--		--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																		
Copper	7440-50-8	ug/l	1.43	J	1.2	J	1.42	J	1.93	J	1.19		1.45	J	1.25	J	1.29		--	
Copper (dissolved)	7440-50-8	ug/l	0.73		0.9	J	0.83	J	0.85	J	0.86		0.87		0.84	J	1.12		--	
Lead	7439-92-1	ug/l	0.243		0.191		0.23		0.38		0.24		0.32		0.186		0.44		--	
Lead (dissolved)	7439-92-1	ug/l	0.019	U	0.022		0.03		0.024		0.02	U	0.026		0.026		0.04	U	--	
Mercury	7439-97-6	ug/l	0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	--	
Mercury (dissolved)	7439-97-6	ug/l	0.08	U	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	--	
Nickel	7440-02-0	ug/l	0.86		0.78		0.65		1.36		0.82		0.84		0.84		0.86		--	
Nickel (dissolved)	7440-02-0	ug/l	0.6		0.69		0.53	U	0.76		0.65		0.72		0.71		0.73		--	
Selenium	7782-49-2	ug/l	0.3	J	0.2	J	0.2	J	0.3	J	0.1	J	0.4	J	0.4	J	0.1	UJ	--	
Selenium (dissolved)	7782-49-2	ug/l	0.2	J	0.1	J	0.2	J	0.3	J	0.1	J	0.2	J	0.4	J	0.1	UJ	--	
Silver	7440-22-4	ug/l	0.005	UJ	0.005	UJ	0.024	U	0.005	UJ	0.005	U	0.005	UJ	0.005	UJ	0.005	U	--	
Silver (dissolved)	7440-22-4	ug/l	0.005	UJ	0.005	UJ	0.005	U	0.005	UJ	0.005	U	0.005	UJ	0.005	UJ	0.005	U	--	
Zinc	7440-66-6	ug/l	3.5	J	2.8	J	2.83		4.3	J	2.91	J	3.2	J	2.9	J	2.6	J	--	
Zinc (dissolved)	7440-66-6	ug/l	1.8	J	2	J	1.75		1.8	J	1.63	UJ	2.3	J	1.6	J	2.15	J	--	
Chromium hexavalent	18540-29-9	mg/l	--		--		--		--		--		--		--		0.02	U	0.02	U
PAHs																				
2-Methylnaphthalene	91-57-6	ug/l	0.0054	U	0.0054	U	0.0054	U	0.034	U	0.0027	U	0.0054	U	0.0054	U	0.0054	U	--	
Acenaphthene	83-32-9	ug/l	0.004	U	0.004	U	0.004	U	0.21		0.002	U	0.004	U	0.004	U	0.004	U	--	
Acenaphthylene	208-96-8	ug/l	0.0036	U	0.0036	U	0.0036	U	0.043		0.0038	U	0.0036	U	0.0036	U	0.0036	U	--	
Anthracene	120-12-7	ug/l	0.0021	U	0.0021	U	0.0021	U	0.072		0.0022	J	0.0021	U	0.0021	U	0.0021	U	--	
Fluorene	86-73-7	ug/l	0.0052	U	0.0052	U	0.0052	U	0.063		0.0026	U	0.0052	U	0.0052	U	0.0052	U	--	
Naphthalene	91-20-3	ug/l	0.0064	U	0.0064	U	0.047	U	0.13		0.0098	U	0.016	U	0.0064	U	0.0096	U	--	
Phenanthrene	85-01-8	ug/l	0.0064	U	0.0064	U	0.0066	U	0.17		0.0032	U	0.0064	U	0.0064	U	0.0064	U	--	
Dibenz(a,h)anthracene	53-70-3	ug/l	0.0033	U	0.0033	U	0.0033	U	0.011	J	0.0017	U	0.0033	U	0.0033	U	0.0033	U	--	
Benz(a)anthracene	56-55-3	ug/l	0.0042	U	0.0042	U	0.0042	U	0.11		0.0021	U	0.0042	U	0.0042	U	0.0042	U	--	
Benzo(a)pyrene	50-32-8	ug/l	0.0032	U	0.0032	U	0.0032	U	0.15		0.0016	U	0.0032	U	0.0032	U	0.0032	U	--	
Benzo(b)fluoranthene	205-99-2	ug/l	0.0039	U	0.0039	U	0.0039	U	0.11		0.002	U	0.0039	U	0.0039	U	0.0039	U	--	
Benzo(g,h,i)perylene	191-24-2	ug/l	0.0074	U	0.0074	U	0.0074	U	0.14		0.0037	U	0.0074	U	0.0074	U	0.0074	U	--	
Benzo(k)fluoranthene	207-08-9	ug/l	0.0027	U	0.0027	U	0.0027	U	0.1		0.0014	U	0.0027	U	0.0027	U	0.0027	U	--	
Chrysene	218-01-9	ug/l	0.0025	J	0.0025	U	0.0031	J	0.19		0.0013	U	0.0025	U	0.0034	J	0.0038	J	--	
Fluoranthene	206-44-0	ug/l	0.016	J	0.01	J	0.013	J	0.4		0.0049	J	0.0099	J	0.021	U	0.02		--	
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	0.0042	U	0.0042	U	0.0042	U	0.11		0.0021	U	0.0042	U	0.0042	U	0.0042	U	--	
Pyrene	129-00-0	ug/l	0.014	J	0.0077	J	0.0094	J	0.45		0.005	J	0.0049	J	0.015	J	0.015	J	--	
Pesticides																				
2,4'-DDD	53-19-0	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--	
2,4'-DDE	3424-82-6	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--	
2,4'-DDT	789-02-6	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--	
4,4'-DDD	72-54-8	ug/l	0.000532	U	0.000476	U	--		0.000839		--		0.00049	U	--		--		--	
4,4'-DDE	72-55-9	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--	
4,4'-DDT	50-29-3	ug/l	0.000532	UJ	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--	
Aldrin	309-00-2	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--	
alpha-Hexachlorocyclohexane	319-84-6	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--	
beta-Hexachlorocyclohexane	319-85-7	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	UJ	--		--		--	
delta-Hexachlorocyclohexane	319-86-8	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--	
gamma-Hexachlorocyclohexane	58-89-9	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--	
cis-Chlordane	5103-71-9	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--	

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Table 4-4. July 2005 Surface Water Data Results - Peristaltic.

Sample Name			LW2-W3009		LW2-W3010		LW2-W3011		LW2-W3012		LW2-W3013		LW2-W3014		LW2-W3015		LW2-W3016-1		LW2-W3016-2
Sample Date/Time			7/8/2005		7/15/2005		7/12/2005		7/15/2005		7/6/2005		7/15/2005		7/19/2005		7/18/2005		7/18/2005
X Coordinate			--		--		--		--		--		--		--		--		--
Y Coordinate			--		--		--		--		--		--		--		--		--
Analysis/Analyte	**CAS #**	**Units**																	
trans-Chlordane	5103-74-2	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
Oxychlordane	27304-13-8	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
cis-Nonachlor	5103-73-1	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
trans-Nonachlor	39765-80-5	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
Dieldrin	60-57-1	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
alpha-Endosulfan	959-98-8	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
beta-Endosulfan	33213-65-9	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
Endosulfan sulfate	1031-07-8	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
Endrin	72-20-8	ug/l	0.000532	U	0.000476	UJ	--		0.000481	UJ	--		0.00049	UJ	--		--		--
Endrin aldehyde	7421-93-4	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
Endrin ketone	53494-70-5	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
Heptachlor	76-44-8	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
Heptachlor epoxide	1024-57-3	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
Hexachlorobenzene	118-74-1	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
Hexachlorobutadiene	87-68-3	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
Hexachloroethane	67-72-1	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
Methoxychlor	72-43-5	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
Mirex	2385-85-5	ug/l	0.000532	U	0.000476	U	--		0.000481	U	--		0.00049	U	--		--		--
Toxaphene	8001-35-2	ug/l	0.133	U	0.119	U	--		0.12	U	--		0.123	U	--		--		--
Phenols																			
2,3,4,6-Tetrachlorophenol	58-90-2	ug/l	1.1	U	1	U	1.1	U	1.1	U	1.2	U	1	U	1.1	U	1.1	U	--
2,4,5-Trichlorophenol	95-95-4	ug/l	0.026	U	0.026	U	0.027	U	0.026	U	0.028	U	0.026	U	0.027	U	0.027	U	--
2,4,6-Trichlorophenol	88-06-2	ug/l	0.038	U	0.037	U	0.04	U	0.038	U	0.041	U	0.037	U	0.039	U	0.039	U	--
2,4-Dichlorophenol	120-83-2	ug/l	0.025	U	0.024	U	0.026	U	0.025	U	0.027	U	0.024	U	0.025	U	0.025	U	--
2,4-Dimethylphenol	105-67-9	ug/l	0.33	U	0.32	U	0.35	U	0.33	U	0.36	U	0.32	U	0.34	U	0.34	U	--
2,4-Dinitrophenol	51-28-5	ug/l	0.55	U	0.53	U	0.57	U	0.55	U	0.59	U	0.53	U	0.56	U	0.56	U	--
2-Chlorophenol	95-57-8	ug/l	0.015	U	0.015	U	0.016	U	0.015	U	0.017	U	0.015	U	0.016	U	0.016	U	--
2-Methylphenol	95-48-7	ug/l	0.062	U	0.06	U	0.064	U	0.062	U	0.066	U	0.06	U	0.063	U	0.063	U	--
2-Nitrophenol	88-75-5	ug/l	0.014	U	0.014	U	0.015	U	0.014	U	0.015	U	0.014	U	0.015	U	0.015	U	--
4,6-Dinitro-2-methylphenol	534-52-1	ug/l	0.014	U	0.013	U	0.014	U	0.014	U	0.015	U	0.013	U	0.014	U	0.014	U	--
4-Chloro-3-methylphenol	59-50-7	ug/l	0.03	U	0.11	U	0.032	U	0.15	U	0.033	U	0.15	U	0.14	U	0.067	U	--
4-Methylphenol	106-44-5	ug/l	0.053	U	0.051	U	0.055	U	0.053	U	0.057	U	0.051	U	0.054	U	0.054	U	--
4-Nitrophenol	100-02-7	ug/l	0.56	U	0.54	U	0.58	U	0.56	U	0.6	U	0.54	U	0.57	U	0.57	U	--
Pentachlorophenol	87-86-5	ug/l	0.03	U	0.029	U	0.031	U	0.03	U	0.032	U	0.029	U	0.03	U	0.03	U	--
Phenol	108-95-2	ug/l	0.021	U	0.02	U	0.059	J	0.021	U	0.022	U	0.02	U	0.021	U	0.021	U	--
Phthalate Esters																			
Dimethyl phthalate	131-11-3	ug/l	0.013	U	0.013	U	0.014	U	0.013	U	0.014	U	0.013	U	0.014	U	0.014	U	--
Diethyl phthalate	84-66-2	ug/l	0.038	U	0.052	U	0.11	U	0.056	U	0.048	U	0.053	U	0.037	U	0.051	U	--
Dibutyl phthalate	84-74-2	ug/l	0.073	U	0.2	U	0.17	U	0.14	U	0.16	U	0.11	U	0.17	U	0.071	U	--
Butylbenzyl phthalate	85-68-7	ug/l	0.027	U	0.026	U	0.033	U	0.027	U	0.029	U	0.026	U	0.027	U	0.027	U	--
Di-n-octyl phthalate	117-84-0	ug/l	0.033	U	0.032	U	0.035	U	0.033	U	0.036	U	0.032	U	0.034	U	0.034	U	--
Bis(2-ethylhexyl) phthalate	117-81-7	ug/l	0.28	U	4	U	0.3	U	0.61	U	0.3	U	0.91	U	2.1	U	1.5	U	--
SVOCs																			
1,2,4-Trichlorobenzene	120-82-1	ug/l	0.016	U	0.016	U	0.017	U	0.016	U	0.017	U	0.016	U	0.017	U	0.017	U	--
1,2-Dichlorobenzene	95-50-1	ug/l	0.015	U	0.015	U	0.016	U	0.015	U	0.016	U	0.015	U	0.015	U	0.015	U	--

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Table 4-4. July 2005 Surface Water Data Results - Peristaltic.

	Sample Name	LW2-W3009		LW2-W3010		LW2-W3011		LW2-W3012		LW2-W3013		LW2-W3014		LW2-W3015		LW2-W3016-1		LW2-W3016-2
	Sample Date/Time	7/8/2005		7/15/2005		7/12/2005		7/15/2005		7/6/2005		7/15/2005		7/19/2005		7/18/2005		7/18/2005
	X Coordinate	--		--		--		--		--		--		--		--		--
	Y Coordinate	--		--		--		--		--		--		--		--		--
Analysis/Analyte	CAS #	Units																
1,3-Dichlorobenzene	541-73-1	ug/l	0.011	U	0.011	U	0.012	U	0.011	U	0.012	U	0.011	U	0.012	U	0.012	U	--
1,4-Dichlorobenzene	106-46-7	ug/l	0.014	U	0.014	U	0.015	U	0.014	U	0.015	U	0.014	U	0.014	U	0.014	U	--
Azobenzene	103-33-3	ug/l	0.013	U	0.012	U	0.013	U	0.013	U	0.014	U	0.012	U	0.013	U	0.013	U	--
2,4-Dinitrotoluene	121-14-2	ug/l	0.02	U	0.02	U	0.021	U	0.02	U	0.022	U	0.02	U	0.021	U	0.021	U	--
2,6-Dinitrotoluene	606-20-2	ug/l	0.0091	U	0.0088	U	0.0095	U	0.0091	U	0.0098	U	0.0088	U	0.0093	U	0.0093	U	--
2-Chloronaphthalene	91-58-7	ug/l	0.016	U	0.016	U	0.017	U	0.016	U	0.017	U	0.016	U	0.016	U	0.016	U	--
2-Nitroaniline	88-74-4	ug/l	0.016	U	0.015	U	0.016	U	0.016	U	0.017	U	0.015	U	0.016	U	0.016	U	--
3,3'-Dichlorobenzidine	91-94-1	ug/l	0.45	U	0.43	U	0.47	U	0.45	U	0.48	U	0.43	U	0.46	U	0.46	U	--
3-Nitroaniline	99-09-2	ug/l	0.24	U	0.23	U	0.25	U	0.24	U	0.26	U	0.23	U	0.24	U	0.24	U	--
4-Bromophenyl phenyl ether	101-55-3	ug/l	0.019	U	0.018	U	0.019	U	0.019	U	0.02	U	0.018	U	0.019	U	0.019	U	--
4-Chloroaniline	106-47-8	ug/l	0.018	U	0.018	U	0.019	U	0.018	U	0.02	U	0.018	U	0.019	U	0.019	U	--
4-Chlorophenyl phenyl ether	7005-72-3	ug/l	0.0087	U	0.0085	U	0.0091	U	0.0087	U	0.0094	U	0.0085	U	0.0089	U	0.0089	U	--
4-Nitroaniline	100-01-6	ug/l	0.17	U	0.17	U	0.18	U	0.17	U	0.19	U	0.17	U	0.18	U	0.18	U	--
Aniline	62-53-3	ug/l	1.1	U	1	U	1.1	U	1.1	U	1.2	R	1	U	1.1	U	1.1	U	--
Benzoic acid	65-85-0	ug/l	1.8	U	1.8	U	1.9	U	1.8	U	2.1	U	1.8	U	1.9	U	1.9	U	--
Benzyl alcohol	100-51-6	ug/l	1.1	U	0.98	U	1.1	U	1.1	U	1.1	U	0.98	U	1.1	U	1.1	U	--
Bis(2-chloroethoxy) methane	111-91-1	ug/l	0.012	U	0.012	U	0.013	U	0.012	U	0.013	U	0.012	U	0.012	U	0.012	U	--
Bis(2-chloroethyl) ether	111-44-4	ug/l	0.015	U	0.015	U	0.016	U	0.015	U	0.016	U	0.015	U	0.015	U	0.015	U	--
Carbazole	86-74-8	ug/l	0.013	U	0.013	U	0.014	U	0.06	J	0.014	U	0.013	U	0.014	U	0.014	U	--
Dibenzofuran	132-64-9	ug/l	0.015	U	0.015	U	0.015	U	0.015	U	0.0071	U	0.015	U	0.015	U	0.015	U	--
Hexachlorobenzene	118-74-1	ug/l	0.015	U	0.015	U	0.016	U	0.015	U	0.016	U	0.015	U	0.015	U	0.015	U	--
Hexachlorobutadiene	87-68-3	ug/l	0.02	U	0.02	U	0.021	U	0.02	U	0.022	U	0.02	U	0.021	U	0.021	U	--
Hexachlorocyclopentadiene	77-47-4	ug/l	0.042	U	0.041	U	0.044	U	0.042	U	0.046	U	0.041	U	0.043	U	0.043	U	--
Hexachloroethane	67-72-1	ug/l	0.019	U	0.019	U	0.02	U	0.019	U	0.021	U	0.019	U	0.02	U	0.02	U	--
Isophorone	78-59-1	ug/l	0.0087	U	0.0085	U	0.0091	U	0.0087	U	0.0094	U	0.0085	U	0.0089	U	0.0089	U	--
Nitrobenzene	98-95-3	ug/l	0.0077	U	0.0074	U	0.008	U	0.0077	U	0.0083	U	0.0074	U	0.0078	U	0.0078	U	--
N-Nitrosodimethylamine	62-75-9	ug/l	0.44	U	0.42	U	0.46	U	0.44	U	0.47	U	0.42	U	0.45	U	0.45	U	--
N-Nitrosodipropylamine	621-64-7	ug/l	0.034	U	0.033	U	0.035	U	0.034	U	0.036	U	0.033	U	0.034	U	0.034	U	--
N-Nitrosodiphenylamine	86-30-6	ug/l	0.029	U	0.028	U	0.03	U	0.029	U	0.031	U	0.028	U	0.03	U	0.03	U	--
Bis(2-chloroisopropyl) ether	39638-32-9	ug/l	0.018	U	0.017	U	0.018	U	0.018	U	0.019	U	0.017	U	0.018	U	0.018	U	--

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Table 4-4. July 2005 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W3017		LW2-W3018		LW2-W3019		LW2-W3020		LW2-W3021		LW2-W3022		LW2-W3023	
			Sample Date/Time		7/15/2005		7/14/2005		7/20/2005		7/20/2005		7/20/2005		7/20/2005		7/11/2005	
			X Coordinate		--		--		--		--		--		--		--	
			Y Coordinate		--		--		--		--		--		--		--	
PCB Aroclors																		
Aroclor 1016	12674-11-2	ug/l		0.0025	U	--		0.0025	U	0.0025	U	0.0025	U	0.0025	U	--	
Aroclor 1242	53469-21-9	ug/l		0.0025	U	--		0.0025	U	0.0025	U	0.0025	U	0.0025	U	--	
Aroclor 1248	12672-29-6	ug/l		0.00125	U	--		0.00125	U	0.00125	U	0.00125	U	0.00217		--	
Aroclor 1254	11097-69-1	ug/l		0.00125	U	--		0.00125	U	0.00125	U	0.00125	U	0.0025	J	--	
Aroclor 1260	11096-82-5	ug/l		0.0025	U	--		0.0025	U	0.0025	U	0.0025	U	0.0025	U	--	
Aroclor 1262	37324-23-5	ug/l		0.0025	U	--		0.0025	U	0.0025	U	0.0025	U	0.0025	U	--	
Aroclor 1268	11100-14-4	ug/l		0.0025	U	--		0.0025	U	0.0025	U	0.0025	U	0.0025	U	--	
Aroclor 1221	11104-28-2	ug/l		0.0025	U	--		0.0025	U	0.0025	U	0.0025	U	0.0025	U	--	
Aroclor 1232	11141-16-5	ug/l		0.0025	U	--		0.0025	U	0.0025	U	0.0025	U	0.0025	U	--	
Butyltins																		
Butyltin ion	78763-54-9	ug/l		0.0017	UJ	0.038	U	0.0017	UJ	0.002	J	0.0017	UJ	0.015	J	0.038	U
Dibutyltin ion	14488-53-0	ug/l		0.00055	UJ	0.00055	UJ	0.00055	UJ	0.001	J	0.00055	UJ	0.00055	UJ	0.00055	UJ
Tributyltin ion	36643-28-4	ug/l		0.0006	U	0.0013	U	0.0006	U	0.0011	U	0.0006	U	0.0006	U	0.0007	U
Tetrabutyltin	1461-25-2	ug/l		0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U
Conventionals																		
Total organic carbon	TOC	mg/l		1.7		1.7		2		2.3		2.2		2.1		1.8	
Total suspended solids	TSS	mg/l		10	J	4	J	12	J	3	J	4	J	8	J	17	J
Dissolved organic carbon	DOC	mg/l		1.5		1.4		1.5		1.7		1.7		1.5		1.4	
Hardness as CaCO3	HARD	mg/l		28.8		29.2		30.2		29.8		30.7		30.3		28.2	
Total dissolved solids	TDS	mg/l		70		60		78		66		82		92		57	
Perchlorate	PERCHLORATE	ug/l		--		--		--		--		--		--		--	
Chlorinated Herbicides																		
Dalapon	75-99-0	ug/l		0.23	U	0.25	U	0.23	U	0.24	U	0.25	U	0.23	U	0.25	U
Dicamba	1918-00-9	ug/l		0.059	U	0.063	U	0.059	U	0.062	U	0.063	U	0.059	U	0.064	U
MCPA	94-74-6	ug/l		35	U	37	U	35	U	37	U	37	U	35	U	38	U
Dichloroprop	120-36-5	ug/l		0.058	U	0.062	U	0.058	U	0.061	U	0.062	U	0.058	U	0.063	U
2,4-D	94-75-7	ug/l		0.048	U	0.051	U	0.048	U	0.05	U	0.051	U	0.048	U	0.052	U
Silvex	93-72-1	ug/l		0.048	U	0.051	U	0.048	U	0.05	U	0.051	U	0.048	U	0.052	U
2,4,5-T	93-76-5	ug/l		0.043	U	0.046	U	0.043	U	0.045	U	0.046	U	0.043	U	0.047	U
2,4-DB	94-82-6	ug/l		0.1	U	0.11	U	0.13	U	0.11	U	0.12	U	0.1	U	0.11	U
Dinoseb	88-85-7	ug/l		0.068	U	0.072	U	0.068	U	0.071	U	0.072	U	0.068	U	0.074	U
MCPP	93-65-2	ug/l		23	U	24	U	6	U	6.3	U	6.4	U	6	U	20	U
Metals																		
Aluminum	7429-90-5	ug/l		262	J	83.9	J	105	J	145	J	158	J	142	J	149	J
Aluminum (dissolved)	7429-90-5	ug/l		3	UJ	2.4	UJ	3.1	UJ	2	UJ	2.3	UJ	3	UJ	3.4	UJ
Antimony	7440-36-0	ug/l		0.05	J	0.04	J	0.07		0.04	J	0.04	J	0.04	J	0.03	J
Antimony (dissolved)	7440-36-0	ug/l		0.04	J	0.04	J	0.05		0.04	J	0.04	J	0.05	J	0.03	J
Arsenic	7440-38-2	ug/l		0.56		0.48		0.54		0.47		0.48		0.53		0.48	
Arsenic (dissolved)	7440-38-2	ug/l		0.47		0.41		0.46		0.44		0.43		0.45		0.43	
Cadmium	7440-43-9	ug/l		0.05	U	0.03		0.02		0.03		0.03		0.03		0.02	U
Cadmium (dissolved)	7440-43-9	ug/l		0.03	U	0.03		0.02		0.02	U	0.02	U	0.02	U	0.03	
Chromium	7440-47-3	ug/l		0.46	U	0.36	U	0.51		0.36	U	0.32	U	0.44	U	0.33	U
Chromium (dissolved)	7440-47-3	ug/l		0.16	U	0.24	U	0.21	U	0.22	U	0.25		0.28		0.22	U

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Table 4-4. July 2005 Surface Water Data Results - Peristaltic.

Sample Name			LW2-W3017		LW2-W3018		LW2-W3019		LW2-W3020		LW2-W3021		LW2-W3022		LW2-W3023	
Sample Date/Time			7/15/2005		7/14/2005		7/20/2005		7/20/2005		7/20/2005		7/20/2005		7/11/2005	
X Coordinate			--		--		--		--		--		--		--	
Y Coordinate			--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**														
Copper	7440-50-8	ug/l	1.38	J	1.28	J	1.61	J	1.71	J	1.74	J	1.27	J	1.02	J
Copper (dissolved)	7440-50-8	ug/l	0.79	J	0.86	J	0.85	J	1.19	J	1.23	J	1.64	J	0.79	J
Lead	7439-92-1	ug/l	0.279		0.16		0.45		0.19		0.16		0.31		0.17	
Lead (dissolved)	7439-92-1	ug/l	0.02		0.04		0.06		0.02		0.02		0.08		0.03	
Mercury	7439-97-6	ug/l	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ
Mercury (dissolved)	7439-97-6	ug/l	0.08	U	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ
Nickel	7440-02-0	ug/l	0.91		0.6		0.75		0.57	U	0.68		0.65		0.53	U
Nickel (dissolved)	7440-02-0	ug/l	0.64		0.51	U	0.54	U	0.45	U	0.55	U	0.51	U	0.48	U
Selenium	7782-49-2	ug/l	0.4	J	0.3	J	0.2	J	0.1	J	0.2	J	0.2	J	0.1	U
Selenium (dissolved)	7782-49-2	ug/l	0.2	J	0.2	J	0.2	J	0.1	UJ	0.2	J	0.2	J	0.2	J
Silver	7440-22-4	ug/l	0.005	UJ	0.01	U	0.005	UJ	0.005	UJ	0.005	UJ	0.005	UJ	0.032	U
Silver (dissolved)	7440-22-4	ug/l	0.005	UJ	0.005	U	0.005	UJ	0.005	UJ	0.005	UJ	0.005	UJ	0.02	U
Zinc	7440-66-6	ug/l	3.5	J	3.34		3.72		4.56		3.32		6.77		2.32	
Zinc (dissolved)	7440-66-6	ug/l	1.8	J	2.67		1.74		1.79		1.61		2.7		2.18	
Chromium hexavalent	18540-29-9	mg/l	--		--		--		--		--		--		--	
PAHs																
2-Methylnaphthalene	91-57-6	ug/l	0.0054	U	0.0054	U	0.0054	U	0.0054	U	0.0097	U	0.0054	U	0.0054	U
Acenaphthene	83-32-9	ug/l	0.004	U	0.016	U	0.004	U	0.004	U	0.021		0.004	U	0.004	U
Acenaphthylene	208-96-8	ug/l	0.0036	U	0.0036	U	0.0042	J	0.0057	J	0.0046	J	0.0036	U	0.0036	U
Anthracene	120-12-7	ug/l	0.0022	J	0.0021	U	0.0021	U	0.0021	U	0.011	J	0.0021	U	0.0021	U
Fluorene	86-73-7	ug/l	0.0052	U	0.007	J	0.0052	U	0.0052	U	0.021		0.0052	U	0.0052	U
Naphthalene	91-20-3	ug/l	0.011	U	0.028	U	0.0064	U	0.0064	U	0.0064	U	0.0064	U	0.043	U
Phenanthrene	85-01-8	ug/l	0.0071	J	0.0065	U	0.0064	U	0.0073	J	0.096		0.0064	U	0.0064	U
Dibenz(a,h)anthracene	53-70-3	ug/l	0.0033	U	0.0033	U	0.0033	U	0.0033	U	0.0033	U	0.0033	U	0.0033	U
Benz(a)anthracene	56-55-3	ug/l	0.0042	U	0.0042	U	0.0042	U	0.0042	U	0.0042	U	0.0042	U	0.0042	U
Benzo(a)pyrene	50-32-8	ug/l	0.0032	U	0.0032	U	0.0032	U	0.0032	U	0.0032	U	0.0032	U	0.0032	U
Benzo(b)fluoranthene	205-99-2	ug/l	0.0039	U	0.0039	U	0.0039	U	0.0039	U	0.0039	U	0.0039	U	0.0039	U
Benzo(g,h,i)perylene	191-24-2	ug/l	0.0074	U	0.0074	U	0.0074	U	0.0074	U	0.0074	U	0.0074	U	0.0074	U
Benzo(k)fluoranthene	207-08-9	ug/l	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U	0.0027	U
Chrysene	218-01-9	ug/l	0.0036	J	0.0025	U	0.004	J	0.0025	U	0.0057	J	0.0025	U	0.0025	U
Fluoranthene	206-44-0	ug/l	0.02		0.0097	J	0.024		0.02		0.082		0.013	J	0.0048	U
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	0.0042	U	0.0042	U	0.0042	U	0.0042	U	0.0042	U	0.0042	J	0.0042	U
Pyrene	129-00-0	ug/l	0.016	J	0.0052	J	0.017		0.0083	J	0.047		0.0083	J	0.0045	U
Pesticides																
2,4'-DDD	53-19-0	ug/l	0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
2,4'-DDE	3424-82-6	ug/l	0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
2,4'-DDT	789-02-6	ug/l	0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
4,4'-DDD	72-54-8	ug/l	0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
4,4'-DDE	72-55-9	ug/l	0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
4,4'-DDT	50-29-3	ug/l	0.000693	J	--		0.000485	UJ	0.00051	UJ	0.00049	UJ	0.0005	UJ	--	
Aldrin	309-00-2	ug/l	0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
alpha-Hexachlorocyclohexane	319-84-6	ug/l	0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
beta-Hexachlorocyclohexane	319-85-7	ug/l	0.000481	UJ	--		0.000485	U	0.00051	UJ	0.00049	UJ	0.0005	UJ	--	
delta-Hexachlorocyclohexane	319-86-8	ug/l	0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
gamma-Hexachlorocyclohexane	58-89-9	ug/l	0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
cis-Chlordane	5103-71-9	ug/l	0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	

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Table 4-4. July 2005 Surface Water Data Results - Peristaltic.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W3017		LW2-W3018		LW2-W3019		LW2-W3020		LW2-W3021		LW2-W3022		LW2-W3023	
			Sample Date/Time		7/15/2005		7/14/2005		7/20/2005		7/20/2005		7/20/2005		7/20/2005		7/11/2005	
			X Coordinate		--		--		--		--		--		--		--	
			Y Coordinate		--		--		--		--		--		--		--	
trans-Chlordane	5103-74-2	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
Oxychlordane	27304-13-8	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
cis-Nonachlor	5103-73-1	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
trans-Nonachlor	39765-80-5	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
Dieldrin	60-57-1	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
alpha-Endosulfan	959-98-8	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.000569		0.0005	U	--	
beta-Endosulfan	33213-65-9	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
Endosulfan sulfate	1031-07-8	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
Endrin	72-20-8	ug/l			0.000481	UJ	--		0.000485	U	0.00051	UJ	0.00049	UJ	0.0005	UJ	--	
Endrin aldehyde	7421-93-4	ug/l			0.000481	U	--		0.000485	UJ	0.00051	UJ	0.00049	UJ	0.0005	UJ	--	
Endrin ketone	53494-70-5	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.00049	UJ	0.0005	U	--	
Heptachlor	76-44-8	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
Heptachlor epoxide	1024-57-3	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
Hexachlorobenzene	118-74-1	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
Hexachlorobutadiene	87-68-3	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
Hexachloroethane	67-72-1	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
Methoxychlor	72-43-5	ug/l			0.000481	U	--		0.000485	U	0.00051	UJ	0.00049	UJ	0.0005	UJ	--	
Mirex	2385-85-5	ug/l			0.000481	U	--		0.000485	U	0.00051	U	0.00049	U	0.0005	U	--	
Toxaphene	8001-35-2	ug/l			0.12	U	--		0.121	U	0.128	U	0.00049	U	0.125	U	--	
Phenols																		
2,3,4,6-Tetrachlorophenol	58-90-2	ug/l			1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.2	U
2,4,5-Trichlorophenol	95-95-4	ug/l			0.026	U	0.027	U	0.027	U	0.027	U	0.027	U	0.026	U	0.029	U
2,4,6-Trichlorophenol	88-06-2	ug/l			0.038	U	0.039	U	0.039	U	0.039	U	0.039	U	0.038	U	0.042	U
2,4-Dichlorophenol	120-83-2	ug/l			0.024	U	0.025	U	0.025	U	0.025	U	0.025	U	0.024	U	0.027	U
2,4-Dimethylphenol	105-67-9	ug/l			0.33	U	0.34	U	0.34	U	0.34	U	0.34	U	0.33	U	0.36	U
2,4-Dinitrophenol	51-28-5	ug/l			0.54	U	0.56	U	0.56	U	0.56	U	0.56	U	0.54	U	0.6	U
2-Chlorophenol	95-57-8	ug/l			0.015	U	0.016	U	0.016	U	0.016	U	0.016	U	0.015	U	0.017	U
2-Methylphenol	95-48-7	ug/l			0.061	U	0.063	U	0.063	U	0.062	U	0.063	U	0.061	U	0.067	U
2-Nitrophenol	88-75-5	ug/l			0.014	U	0.015	U	0.015	U	0.014	U	0.015	U	0.014	U	0.016	U
4,6-Dinitro-2-methylphenol	534-52-1	ug/l			0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.015	U
4-Chloro-3-methylphenol	59-50-7	ug/l			0.063	U	0.031	U	0.031	U	0.075	J	0.031	U	0.03	U	0.033	U
4-Methylphenol	106-44-5	ug/l			0.052	U	0.054	U	0.054	U	0.053	U	0.054	U	0.052	U	0.058	U
4-Nitrophenol	100-02-7	ug/l			0.55	U	0.57	U	0.57	U	0.56	U	0.57	U	0.55	U	0.6	U
Pentachlorophenol	87-86-5	ug/l			0.029	U	0.03	U	0.03	U	0.03	U	0.03	U	0.029	U	0.032	U
Phenol	108-95-2	ug/l			0.02	U	0.067	J	0.021	U	0.021	U	0.021	U	0.02	U	0.067	J
Phthalate Esters																		
Dimethyl phthalate	131-11-3	ug/l			0.013	U	0.014	U	0.014	U	0.014	U	0.014	U	0.013	U	0.015	U
Diethyl phthalate	84-66-2	ug/l			0.041	U	0.056	U	0.042	U	0.04	U	0.031	U	0.043	U	0.09	U
Dibutyl phthalate	84-74-2	ug/l			0.11	U	0.11	U	0.097	U	0.12	U	0.12	U	0.12	U	0.2	U
Butylbenzyl phthalate	85-68-7	ug/l			0.026	U	0.035	U	0.027	U	0.027	U	0.027	U	0.026	U	0.053	U
Di-n-octyl phthalate	117-84-0	ug/l			0.033	U	0.034	U	0.034	U	0.034	U	0.034	U	0.033	U	0.036	U
Bis(2-ethylhexyl) phthalate	117-81-7	ug/l			4.1	U	0.29	U	0.29	U	0.29	U	0.29	U	0.81	U	0.34	U
SVOCs																		
1,2,4-Trichlorobenzene	120-82-1	ug/l			0.016	U	0.017	U	0.017	U	0.016	U	0.017	U	0.016	U	0.018	U
1,2-Dichlorobenzene	95-50-1	ug/l			0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	0.016	U

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ANC04499

Table 4-4. July 2005 Surface Water Data Results - Peristaltic.

	Sample Name	LW2-W3017		LW2-W3018		LW2-W3019		LW2-W3020		LW2-W3021		LW2-W3022		LW2-W3023	
	Sample Date/Time	7/15/2005		7/14/2005		7/20/2005		7/20/2005		7/20/2005		7/20/2005		7/11/2005	
	X Coordinate	--		--		--		--		--		--		--	
	Y Coordinate	--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**													
1,3-Dichlorobenzene	541-73-1	ug/l	0.011	U	0.012	U	0.012	U	0.012	U	0.012	U	0.011	U	0.012	U
1,4-Dichlorobenzene	106-46-7	ug/l	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.015	U
Azobenzene	103-33-3	ug/l	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.013	U	0.014	U
2,4-Dinitrotoluene	121-14-2	ug/l	0.02	U	0.021	U	0.021	U	0.02	U	0.021	U	0.02	U	0.022	U
2,6-Dinitrotoluene	606-20-2	ug/l	0.009	U	0.0093	U	0.0093	U	0.0092	U	0.0093	U	0.009	U	0.0099	U
2-Chloronaphthalene	91-58-7	ug/l	0.016	U	0.016	U	0.016	U	0.016	U	0.016	U	0.016	U	0.017	U
2-Nitroaniline	88-74-4	ug/l	0.015	U	0.016	U	0.016	U	0.016	U	0.016	U	0.015	U	0.017	U
3,3'-Dichlorobenzidine	91-94-1	ug/l	0.44	U	0.46	U	0.46	U	0.45	U	0.46	U	0.44	U	0.49	U
3-Nitroaniline	99-09-2	ug/l	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.24	U	0.26	U
4-Bromophenyl phenyl ether	101-55-3	ug/l	0.018	U	0.019	U	0.019	U	0.019	U	0.019	U	0.018	U	0.02	U
4-Chloroaniline	106-47-8	ug/l	0.018	U	0.019	U	0.019	U	0.019	U	0.019	U	0.018	U	0.02	U
4-Chlorophenyl phenyl ether	7005-72-3	ug/l	0.0086	U	0.0089	U	0.0089	U	0.0088	U	0.0089	U	0.0086	U	0.0095	U
4-Nitroaniline	100-01-6	ug/l	0.17	U	0.18	U	0.18	U	0.17	U	0.18	U	0.17	U	0.19	U
Aniline	62-53-3	ug/l	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.2	U
Benzoic acid	65-85-0	ug/l	1.8	U	1.9	U	1.9	U	1.8	U	1.9	U	1.8	U	2	U
Benzyl alcohol	100-51-6	ug/l	1	U	1.1	U	1.1	U	1.1	U	1.1	U	1	U	1.1	U
Bis(2-chloroethoxy) methane	111-91-1	ug/l	0.012	U	0.012	U	0.012	U	0.012	U	0.012	U	0.012	U	0.013	U
Bis(2-chloroethyl) ether	111-44-4	ug/l	0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	0.016	U
Carbazole	86-74-8	ug/l	0.013	U	0.014	U	0.014	U	0.014	U	0.03	J	0.013	U	0.015	U
Dibenzofuran	132-64-9	ug/l	0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	0.015	U
Hexachlorobenzene	118-74-1	ug/l	0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	0.015	U	0.016	U
Hexachlorobutadiene	87-68-3	ug/l	0.02	U	0.021	U	0.021	U	0.021	U	0.021	U	0.02	U	0.022	U
Hexachlorocyclopentadiene	77-47-4	ug/l	0.042	U	0.043	U	0.043	U	0.043	U	0.043	U	0.042	U	0.046	U
Hexachloroethane	67-72-1	ug/l	0.019	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.021	U
Isophorone	78-59-1	ug/l	0.0086	U	0.0089	U	0.0089	U	0.0088	U	0.0089	U	0.0086	U	0.0095	U
Nitrobenzene	98-95-3	ug/l	0.0076	U	0.0078	U	0.0078	U	0.0078	U	0.0078	U	0.0076	U	0.0084	U
N-Nitrosodimethylamine	62-75-9	ug/l	0.43	U	0.45	U	0.45	U	0.44	U	0.45	U	0.43	U	0.48	U
N-Nitrosodipropylamine	621-64-7	ug/l	0.033	U	0.034	U	0.034	U	0.034	U	0.034	U	0.033	U	0.037	U
N-Nitrosodiphenylamine	86-30-6	ug/l	0.029	U	0.03	U	0.03	U	0.029	U	0.03	U	0.029	U	0.032	U
Bis(2-chloroisopropyl) ether	39638-32-9	ug/l	0.018	U	0.018	U	0.018	U	0.018	U	0.018	U	0.018	U	0.019	U

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ANC04500
BZTO104(e)004500

Table 4-5. November 2004 Surface Water Data Results - XAD

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W005 C		LW2-W005 F		LW2-W011 C		LW2-W011 F		LW2-W013-1 C		LW2-W013-1 F		LW2-W013-2 C		LW2-W013-2 F	
			Sample Date/Time		11/23/2004, 0627		11/23/2004, 0627		11/18/2004, 1823		11/18/2004, 1823		11/9/2004, 0335		11/9/2004, 0335		11/9/2004, 2306		11/9/2004, 2306	
			X Coordinate		7617639.07		7617639.07		7624381.08		7624381.08		7627111.88		7627111.88		7627115.05		7627115.05	
			Y Coordinate		715650.05		715650.05		706235.85		706235.85		705760.03		705760.03		705761.09		705761.09	
PCB Aroclors [1]																				
Aroclor 1016	12674-11-2	pg/l		0.0159	U	0.0287	U	0.0135	U	0.0147	U	0.0146	U	0.0265	U	0.0111	U	0.0207	U
Aroclor 1242	53469-21-9	pg/l		33.5	NJ	8.27	NJ	40.2	NJ	8.6	NJ	0.0162	U	0.0295	U	0.0123	U	0.023	U
Aroclor 1248	12672-29-6	pg/l		0.0508	U	0.0396	U	0.0892	U	0.0527	U	380	NJ	484	NJ	349	NJ	300	NJ
Aroclor 1254	11097-69-1	pg/l		34.7	NJ	23.8	NJ	50.8	NJ	36.3	NJ	0.094	U	0.0391	U	0.081	U	0.0922	U
Aroclor 1260	11096-82-5	pg/l		6.98	NJ	44.1	NJ	19.9	NJ	104	NJ	74.4	NJ	2140	NJ	45.5	NJ	1580	NJ
Aroclor 1221	11104-28-2	pg/l		0.0102	U	0.0149	U	0.0087	U	0.0076	U	0.0076	U	0.0138	U	0.0052	U	0.0107	U
Aroclor 1232	11141-16-5	pg/l		0.0248	U	0.0199	U	0.021	U	0.0121	U	0.0106	U	0.0333	U	0.0125	U	0.0191	U
PAHs																				
2-Methylnaphthalene	91-57-6	pg/l		2420		175	U	2170		111	U	4040		208	U	5770		154	U
Acenaphthene	83-32-9	pg/l		1450		92.7	U	998		51.8	U	1490		64.5	U	1220		62.2	U
Acenaphthylene	208-96-8	pg/l		375		137	U	346		120	U	581		135	U	639		124	U
Anthracene	120-12-7	pg/l		433		242		441		156	U	351		193		294		170	U
Fluorene	86-73-7	pg/l		983		120	J	1030		78.0	U	1150		88.1	J	986		83.5	J
Naphthalene	91-20-3	pg/l		6530	U	720	U	5870	U	507	U	10100		714	U	10900		557	U
Phenanthrene	85-01-8	pg/l		1970		724	U	1870		493	U	1720		598	U	1270		523	U
Dibenz(a,h)anthracene	53-70-3	pg/l		14.1	U	69.1	U	44.4	U	44.3	U	19.1	U	73.9	U	5.50	U	58.5	U
Benz(a)anthracene	56-55-3	pg/l		133	J	535		113	J	267	U	106	J	436		71.5	J	358	
Benzo(a)pyrene	50-32-8	pg/l		34.9	J	555		40.1	J	266	U	37.9	J	384		16.9	U	336	
Benzo(g,h,i)perylene	205-99-2	pg/l		23.0	U	541		29.3	U	330		27.6	U	449		11.1	U	371	
Benzo(k)fluoranthene	191-24-2	pg/l		22.0	U	387		25.4	J	219		27.8	J	300		15.5	U	274	
Chrysene	207-08-9	pg/l		219		789		213		435		194		620		123	J	522	
Fluoranthene	218-01-9	pg/l		1490		1510		1460		898		1110		1080		846		931	
Indeno(1,2,3-cd)pyrene	206-44-0	pg/l		14.6	U	410		27.6	U	240		22.9	U	307		13.7	U	280	
Pyrene	193-39-5	pg/l		1520		1790		1320		1010		990		1310		726		1060	
Benzo(b+j)fluoranthene	129-00-0	pg/l		38.8	J	531		47.9	J	335		47.1	J	465		20.6	J	406	
Organochlorine Pesticides																				
2,4'-DDD	53-19-0	pg/l		12.6		5.85	J	11.5		6.67		4.36	J	2.98	J	3.65	J	2.01	J
2,4'-DDE	3424-82-6	pg/l		0.695	J	0.545	J	0.702	J	0.605	J	0.433	J	0.289	J	0.264	J	0.329	J
2,4'-DDT	789-02-6	pg/l		2.42	J	1.72	J	3.09	J	2.27	J	1.09	J	0.867	J	0.807	J	0.865	J
4,4'-DDD	72-54-8	pg/l		22.8		15.3		20.9		16.7		11.3		10.4		9.57		7.56	
4,4'-DDE	72-55-9	pg/l		13.4		10.7		15.1		14.2		11.9		12.4		9.81		12.0	
4,4'-DDT	50-29-3	pg/l		5.22	J	7.49		7.43		9.33		3.88	J	5.46	J	2.59	J	5.72	J
Aldrin	309-00-2	pg/l		0.668	UJ	0.296	J	0.871	J	0.332	J	0.537	J	0.406	J	0.418	UJ	0.310	J
alpha-Hexachlorocyclohexane	319-84-6	pg/l		18.7		0.101	U	24.4		0.0771	U	18.1		0.0772	U	16.0		0.0808	U
beta-Hexachlorocyclohexane	319-85-7	pg/l		3.44	J	0.0824	U	4.09	J	0.0783	U	2.70	J	0.142	U	2.42	J	0.111	U
delta-Hexachlorocyclohexane	319-86-8	pg/l		0.786	UJ	0.100	U	0.684	UJ	0.0689	U	0.618	U	0.105	U	0.512	UJ	0.123	U
gamma-Hexachlorocyclohexane	58-89-9	pg/l		22.3		0.104	U	26.8		0.0979	U	24.5		0.111	U	16.8		0.0935	U
cis-Chlordane	5103-71-9	pg/l		5.24	J	1.09	J	6.91	J	1.24	J	5.66	J	1.35	J	4.51	J	1.31	J
trans-Chlordane	5103-74-2	pg/l		3.80	J	1.11	J	4.99	J	1.32	J	3.89	J	1.37	J	3.25	J	1.24	J
Oxychlordane	27304-13-8	pg/l		0.942	UJ	0.0985	U	1.17	J	0.144	U	1.17	UJ	0.202	U	0.832	J	0.132	U
cis-Nonachlor	5103-73-1	pg/l		1.09	J	0.430	J	1.42	J	0.563	J	1.13	J	0.621	J	1.03	J	0.621	J
trans-Nonachlor	39765-80-5	pg/l		3.24	J	1.10	J	4.32	J	1.38	J	3.69	J	1.50	J	3.05	J	1.41	J
Dieldrin	60-57-1	pg/l		27.5		1.67	UJ	29.9		2.00	UJ	30.1		2.00	J	24.9		2.14	J
alpha-Endosulfan	959-98-8	pg/l		8.30		0.490	U	6.22		0.226	U	8.54		1.04	U	6.39		0.845	U
beta-Endosulfan	33213-65-9	pg/l		16.2	U	2.62	U	13.0	U	0.824	U	24.1		2.38	U	17.3	U	2.19	U
Endosulfan sulfate	1031-07-8	pg/l		83.1		1.54	UJ	82.0		1.01	UJ	136		1.21	UJ	110		1.93	U

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ANC04501
BZTO104(e)004501

Table 4-5. November 2004 Surface Water Data Results - XAD

Analysis/Analyte	CAS #	Units	Sample Name		Sample Date/Time		X Coordinate		Y Coordinate	
			LW2-W005 C		LW2-W005 F		LW2-W011 C		LW2-W011 F	
			11/23/2004, 0627		11/23/2004, 0627		11/18/2004, 1823		11/18/2004, 1823	
			7617639.07		7617639.07		7624381.08		7624381.08	
			715650.05		715650.05		706235.85		706235.85	
Endrin	72-20-8	pg/l	0.461	U	0.146	U	0.660	U	0.074	UJ
Endrin aldehyde	7421-93-4	pg/l	0.235	U	0.286	U	0.324	U	0.252	U
Endrin ketone	53494-70-5	pg/l	0.339	J	0.0811	U	0.551	J	0.100	U
Heptachlor	76-44-8	pg/l	0.130	J	0.0318	U	0.220	J	0.0461	U
Heptachlor epoxide	1024-57-3	pg/l	3.59	J	0.138	UJ	4.12	J	0.119	UJ
Methoxychlor	72-43-5	pg/l	1.69	UJ	0.758	U	2.13	J	0.904	U
Hexachlorobenzene	118-74-1	pg/l	25.0		3.24	J	32.6		3.09	J
Hexachlorobutadiene	87-68-3	pg/l	1.55	J	0.173	UJ	1.97	J	0.071	U
Phthalate Esters										
Dimethyl phthalate	131-11-3	pg/l	454	U	102	U	610	U	102	U
Diethyl phthalate	84-66-2	pg/l	674	U	242	U	980	U	210	U
Dibutyl phthalate	84-74-2	pg/l	1360	U	468	U	1550	U	411	U
Butylbenzyl phthalate	85-68-7	pg/l	639	U	330	U	913	U	293	U
Di-n-octyl phthalate	117-84-0	pg/l	132	U	212	U	182	U	209	U
Bis(2-ethylhexyl) phthalate	117-81-7	pg/l	4320	U	3510	U	5140	U	6070	U
Chlorinated Dioxin/Furan Homologs										
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/l	0.0500		0.0703		0.0700		0.0711	
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/l	0.0158		0.0413		0.0614		0.0703	
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/l	0.0507		0.394		0.104		0.593	
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/l	0.251		4.05		0.340		4.51	
Octachlorodibenzo-p-dioxin	3268-87-9	pg/l	0.698		17.2		1.05		17.0	
Tetrachlorodibenzofuran homologs	30402-14-3	pg/l	0.0387		0.0958		0.0605		0.104	
Pentachlorodibenzofuran homologs	30402-15-4	pg/l	0.0170	U	0.109		0.0382		0.129	
Hexachlorodibenzofuran homologs	55684-94-1	pg/l	0.0140	U	0.207		0.0469		0.273	
Heptachlorodibenzofuran homologs	38998-75-3	pg/l	0.0105	U	0.341		0.0553		0.471	
Octachlorodibenzofuran	39001-02-0	pg/l	0.00667	U	0.246		0.0328	J	0.382	
Chlorinated Dioxins/Furans										
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/l	0.00129	U	0.00315	U	0.00262	U	0.00331	U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/l	0.00113	U	0.00545	J	0.00225	U	0.00684	J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/l	0.00134	U	0.00917	J	0.00418	U	0.0180	J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/l	0.00441	U	0.0463		0.0109	J	0.0705	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/l	0.00275	U	0.0256	J	0.00716	U	0.0383	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/l	0.113		1.88		0.163		2.30	
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/l	0.00550	J	0.0161		0.0036	U	0.0153	
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/l	0.00144	U	0.0126	J	0.00339	U	0.0132	J
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/l	0.00205	U	0.00928	J	0.00256	U	0.00956	J
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/l	0.00151	U	0.0250	J	0.00586	U	0.0287	J
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/l	0.00128	U	0.00996	J	0.00383	U	0.0108	J
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/l	0.0005	U	0.00144	U	0.000568	U	0.00153	U
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/l	0.000639	U	0.00546	J	0.00126	U	0.00717	J
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/l	0.00427	U	0.120		0.0174	J	0.152	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/l	0.00192	U	0.0105	J	0.00590	U	0.0153	J
PCB Congeners										
2-Chlorobiphenyl	2051-60-7	pg/l	0.525		0.05		0.689		0.056	
3-Chlorobiphenyl	2051-61-8	pg/l	0.133		0.0583		0.223		0.0552	

Analysis/Analyte	CAS #	Units	Sample Name		Sample Date/Time		X Coordinate		Y Coordinate	
			LW2-W013-1 C		LW2-W013-1 F		LW2-W013-2 C		LW2-W013-2 F	
			11/9/2004, 0335		11/9/2004, 0335		11/9/2004, 2306		11/9/2004, 2306	
			7627111.88		7627111.88		7627115.05		7627115.05	
			705760.03		705760.03		705761.09		705761.09	
Endrin	72-20-8	pg/l	0.653	U	0.186	U	0.460	U	0.340	U
Endrin aldehyde	7421-93-4	pg/l	0.238	U	0.202	U	0.170	U	0.120	U
Endrin ketone	53494-70-5	pg/l	0.756	J	0.0749	U	0.506	J	0.0812	U
Heptachlor	76-44-8	pg/l	0.125	UJ	0.0362	U	0.141	J	0.0319	U
Heptachlor epoxide	1024-57-3	pg/l	4.49	J	0.146	J	3.55	J	0.144	J
Methoxychlor	72-43-5	pg/l	2.16	UJ	0.674	U	1.38	UJ	1.04	UJ
Hexachlorobenzene	118-74-1	pg/l	32.0		3.14	J	28.1		3.06	J
Hexachlorobutadiene	87-68-3	pg/l	0.319	J	0.042	U	0.280	J	0.039	U
Phthalate Esters										
Dimethyl phthalate	131-11-3	pg/l	559	U	108	U	383	U	103	U
Diethyl phthalate	84-66-2	pg/l	865	U	232	U	747	U	231	U
Dibutyl phthalate	84-74-2	pg/l	1250	U	376	U	975	U	367	U
Butylbenzyl phthalate	85-68-7	pg/l	667	U	288	U	512	U	332	U
Di-n-octyl phthalate	117-84-0	pg/l	171	U	212	U	157	U	203	U
Bis(2-ethylhexyl) phthalate	117-81-7	pg/l	4310	U	8590	U	5430	U	4850	U
Chlorinated Dioxin/Furan Homologs										
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/l	0.0586		0.0862		0.0440		0.0849	
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/l	0.0184		0.142		0.00934		0.111	
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/l	0.0657		1.38		0.0308		0.955	
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/l	0.309		9.78		0.181		8.45	
Octachlorodibenzo-p-dioxin	3268-87-9	pg/l	1.13		36.2		0.768		36.4	
Tetrachlorodibenzofuran homologs	30402-14-3	pg/l	0.0512		0.103		0.0367		0.0978	
Pentachlorodibenzofuran homologs	30402-15-4	pg/l	0.0345		0.237		0.0185	U	0.228	
Hexachlorodibenzofuran homologs	55684-94-1	pg/l	0.0393		0.550		0.0175	U	0.541	
Heptachlorodibenzofuran homologs	38998-75-3	pg/l	0.0451		0.943		0.0185	U	0.910	
Octachlorodibenzofuran	39001-02-0	pg/l	0.0296	J	0.711		0.0118	U	0.730	
Chlorinated Dioxins/Furans										
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/l	0.00234	U	0.00356	U	0.00156	U	0.00430	U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/l	0.00244	U	0.0148	J	0.00132	U	0.0167	J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/l	0.00310	U	0.0333		0.00121	U	0.0250	J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/l	0.00971	U	0.185		0.00441	U	0.140	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/l	0.00616	U	0.0989		0.00222	U	0.0742	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/l	0.147		5.31		0.0826		4.33	
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/l	0.0030	U	0.00752		0.0021	U	0.00773	
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/l	0.00139	U	0.00673	J	0.000863	U	0.00747	J
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/l	0.00250	U	0.00981	J	0.00173	U	0.00961	J
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/l	0.00340	U	0.0442		0.00106	U	0.0397	
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/l	0.00285	U	0.0177	J	0.000926	U	0.0155	J
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/l	0.000591	U	0.00171	U	0.0005	U	0.00159	U
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/l	0.00117	U	0.0118	J	0.000856	U	0.0115	J
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/l	0.0140	J	0.297		0.00623	U	0.290	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/l	0.00429	U	0.0351		0.00122	U	0.0305	
PCB Congeners										
2-Chlorobiphenyl	2051-60-7	pg/l	0.917		0.222		0.838		0.169	
3-Chlorobiphenyl	2051-61-8	pg/l	0.221		0.0956		0.184		0.0532	

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Table 4-5. November 2004 Surface Water Data Results - XAD

		Sample Name	LW2-W005 C		LW2-W005 F		LW2-W011 C		LW2-W011 F		LW2-W013-1 C		LW2-W013-1 F		LW2-W013-2 C		LW2-W013-2 F	
		Sample Date/Time	11/23/2004, 0627		11/23/2004, 0627		11/18/2004, 1823		11/18/2004, 1823		11/9/2004, 0335		11/9/2004, 0335		11/9/2004, 2306		11/9/2004, 2306	
		X Coordinate	7617639.07		7617639.07		7624381.08		7624381.08		7627111.88		7627111.88		7627115.05		7627115.05	
		Y Coordinate	715650.05		715650.05		706235.85		706235.85		705760.03		705760.03		705761.09		705761.09	
Analysis/Analyte	**CAS #**	**Units**																
4-Chlorobiphenyl	2051-62-9	pg/l	0.22		0.0681		0.36		0.0807		0.387		0.394		0.34		0.301	
2,2'-Dichlorobiphenyl	13029-08-8	pg/l	9.19		0.504		15.1		0.836		87.2		13.8		81.4		10.5	
2,3-Dichlorobiphenyl	16605-91-7	pg/l	0.0344		0.0118	U	0.0493		0.00605	U	0.0293		0.0109	U	0.0254		0.0346	U
2,3'-Dichlorobiphenyl	25569-80-6	pg/l	0.461		0.065		0.545		0.0655		0.581		0.143		0.549		0.118	
2,4-Dichlorobiphenyl	33284-50-3	pg/l	0.0958	U	0.011	U	0.121		0.014	J	0.165		0.0467		0.161		0.035	
2,4'-Dichlorobiphenyl	34883-43-7	pg/l	1.8		0.275		2.12		0.252		1.53		0.333		1.39		0.274	
2,5-Dichlorobiphenyl	34883-39-1	pg/l	0.135		0.018	J	0.156		0.0151	J	0.207		0.0417		0.192		0.0349	
2,6-Dichlorobiphenyl	33146-45-1	pg/l	0.364		0.0235	J	0.615		0.0394		4.71		0.694		4.46		0.627	
3,3'-Dichlorobiphenyl	2050-67-1	pg/l	6.95		2.26		8.44		2.43		3.59		2.1		2.95		1.66	
PCB012 & 013	PCB012_013	pg/l	0.222		0.0857		0.268		0.0707		0.496		0.474		0.433		0.386	
3,5-Dichlorobiphenyl	34883-41-5	pg/l	0.0301	U	0.0305	U	0.0254	U	0.0302	U	0.0309	U	0.0302	U	0.0301	U	0.0301	U
4,4'-Dichlorobiphenyl	2050-68-2	pg/l	1.07		0.542		1.28		0.478		1.43		1.86		1.29		1.59	
2,2',3-Trichlorobiphenyl	38444-78-9	pg/l	1.17		0.164		1.5		0.153		1.05		0.181		0.886		0.157	
2,2',4-Trichlorobiphenyl	37680-66-3	pg/l	2.79		0.364		4.69		0.571		18.6		8.14		16.9		5.2	
PCB018 & 030	PCB018_030	pg/l	2.83		0.372		3.73		0.42		4.21		1.19		3.71		0.86	
2,2',6-Trichlorobiphenyl	38444-73-4	pg/l	9.81		0.943		19.4		1.73		139		40.8		127		28.7	
PCB020 & 028	PCB020_028	pg/l	3.52		1.23		4.04		1.26		3.34		1.9		2.9		1.5	
PCB021 & 033	PCB021_033	pg/l	1.29		0.44		1.51		0.424		1.57		1.01		1.36		0.727	
2,3,4'-Trichlorobiphenyl	38444-85-8	pg/l	1.15		0.347		1.28		0.337		0.74		0.228		0.647		0.205	
2,3,5-Trichlorobiphenyl	55720-44-0	pg/l	0.00618	U	0.002	J	0.0088	J	0.00193	U	0.0213	J	0.0123	J	0.0214	J	0.006	J
2,3,6-Trichlorobiphenyl	55702-45-9	pg/l	0.0458		0.0051	J	0.0603		0.0033	J	0.0311	U	0.0303	U	0.0302	U	0.0302	U
2,3',4-Trichlorobiphenyl	55712-37-3	pg/l	0.411		0.113		0.587		0.148		1.65		1.3		1.44		0.848	
PCB026 & 029	PCB026_029	pg/l	0.77		0.203		1.01		0.243		1.78		1.15		1.59		0.75	
2,3',6-Trichlorobiphenyl	38444-76-7	pg/l	0.929		0.125		1.86		0.219		10.9		4.78		9.87		3.38	
2,4',5-Trichlorobiphenyl	16606-02-3	pg/l	3.03		0.881		3.53		0.937		2.39		0.997		2.08		0.835	
2,4',6-Trichlorobiphenyl	38444-77-8	pg/l	1.51		0.194		2.11		0.265		5.99		2.3		5.9		1.64	
2,3',5'-Trichlorobiphenyl	37680-68-5	pg/l	0.0205	J	0.0066	J	0.028		0.0061	J	0.0523		0.0329		0.0461		0.0222	J
3,3',4-Trichlorobiphenyl	37680-69-6	pg/l	0.0729		0.045		0.0976		0.0473		0.0663		0.0462		0.0451		0.0364	
3,3',5-Trichlorobiphenyl	38444-87-0	pg/l	0.0136	J	0.0071	J	0.0153	J	0.0055	J	0.0158	U	0.00549	U	0.0154	U	0.0043	J
3,4,4'-Trichlorobiphenyl	38444-90-5	pg/l	0.705		0.523		0.738		0.488		0.45		0.37		0.388		0.361	
3,4,5-Trichlorobiphenyl	53555-66-1	pg/l	0.00586	U	0.0047	J	0.0221	J	0.006	J	0.0606		0.0606		0.0492		0.0496	
3,4',5-Trichlorobiphenyl	38444-88-1	pg/l	0.0381		0.0129	J	0.0365		0.0144	J	0.0404		0.0305		0.0387		0.0243	
PCB040 & 041 & 071	PCB040_041_071	pg/l	2.08		0.639		2.58		0.761		3.92		3.44		3.39		2.4	
2,2',3,4'-Tetrachlorobiphenyl	36559-22-5	pg/l	0.891		0.286		1.06		0.327		1.13		0.932		0.989		0.648	
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	pg/l	0.209		0.0474		0.361		0.0725		1.59		1.51		1.31		0.957	
PCB044 & 047 & 065	PCB044_047_065	pg/l	6.38		1.98		11.5		3.52		45.7		60.7		42.4		37.1	
PCB045 & 051	PCB045_051	pg/l	2.16		0.459		4.63		0.837		20.6		16.4		18		11.5	
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	pg/l	0.314		0.0645		0.511		0.0884		1.24		0.764		1.1		0.516	
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	pg/l	0.627		0.173		0.762		0.2		0.818		0.631		0.721		0.413	
PCB049 & 069	PCB049_069	pg/l	3.57		0.987		5.49		1.46		14.8		16.4		13.2		10.4	
PCB050 & 053	PCB050_053	pg/l	2.55		0.448		5.31		0.784		20.9		14.6		18.1		9.82	
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	pg/l	6.51		1.61		9.37		2.15		18.3		15.5		16.3		10.6	
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	pg/l	1.21		0.213		2.55		0.42		17.6		11.5		15.7		7.37	
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	pg/l	0.0303		0.0113	J	0.0314		0.019	J	0.0355	U	0.0347	U	0.0346	U	0.0121	U
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	pg/l	1.02		0.592		1.09		0.643		0.673		0.485		0.58		0.467	
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	pg/l	0.0288		0.0117	J	0.0563		0.0261		0.367		0.63		0.326		0.43	
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	pg/l	0.0111	J	0.0061	U	0.127	U	0.126	U	0.129	U	0.126	U	0.125	U	0.125	U
PCB059 & 062 & 075	PCB059_062_075	pg/l	0.477		0.135		0.8		0.216		3.31		3.48		2.99		2.31	
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	pg/l	0.481		0.253		0.51		0.301		0.309		0.215		0.279		0.203	

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ANC04503
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Table 4-5. November 2004 Surface Water Data Results - XAD

		Sample Name	LW2-W005 C		LW2-W005 F		LW2-W011 C		LW2-W011 F		LW2-W013-1 C		LW2-W013-1 F		LW2-W013-2 C		LW2-W013-2 F	
		Sample Date/Time	11/23/2004, 0627		11/23/2004, 0627		11/18/2004, 1823		11/18/2004, 1823		11/9/2004, 0335		11/9/2004, 0335		11/9/2004, 2306		11/9/2004, 2306	
		X Coordinate	7617639.07		7617639.07		7624381.08		7624381.08		7627111.88		7627111.88		7627115.05		7627115.05	
		Y Coordinate	715650.05		715650.05		706235.85		706235.85		705760.03		705760.03		705761.09		705761.09	
Analysis/Analyte	**CAS #**	**Units**																
PCB061 & 070 & 074 & 076	PCB061_070_074_	pg/l	4.2		2.24		4.64		2.5		3.56		3.1		2.99		2.64	
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	pg/l	0.112		0.0449		0.134		0.0582		0.198		0.29		0.185		0.183	
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	pg/l	1.41		0.457		1.65		0.524		1.11		0.512		0.96		0.43	
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	pg/l	2.17		1.43		2.32		1.62		1.91		2.23		1.59		1.76	
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	pg/l	0.1		0.0434		0.103		0.0583		0.337		0.741		0.28		0.493	
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	pg/l	0.0444		0.0247		0.0913		0.0417		0.423		0.774		0.383		0.502	
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	pg/l	0.104		0.0455		0.15	U	0.0343		0.323		0.357		0.296		0.24	
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	pg/l	0.164		0.035		0.33		0.0769		2.4		2.47		2.13		1.57	
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	pg/l	0.15		0.186		0.171		0.219		0.123		0.184		0.1		0.169	
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	pg/l	0.0313	U	0.0317	U	0.0317	U	0.0314	U	0.0322	U	0.0314	U	0.0313	U	0.0313	U
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	pg/l	0.0481	U	0.0303		0.0593		0.0372		0.0964		0.223		0.0732		0.167	
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	pg/l	0.0404	U	0.041	U	0.041	U	0.0406	U	0.0415	U	0.0406	U	0.0404	U	0.0404	U
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	pg/l	0.00825	U	0.00609	U	0.0157	U	0.0083	U	0.0098	U	0.0135	U	0.00727	U	0.0117	U
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	pg/l	0.296		0.259		0.377		0.312		0.327		0.562		0.27		0.502	
PCB083 & 099	PCB083_099	pg/l	2.15		1.5		3.34		2.45		8.46		26.5		7.02		17.5	
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	pg/l	1.15		0.576		1.62		0.801		4.08		6.74		3.6		5.09	
PCB085 & 116 & 117	PCB085_116_117	pg/l	0.489		0.404		0.693		0.566		1.08		2.59		0.923		1.86	
PCB086 & 087 & 097 & 108 & 119 & 125	PCB086_087_097_	pg/l	2.19	J	1.48		3.01	J	2.09	J	5.58	J	13	J	4.53	J	9.53	J
PCB088 & 091	PCB088_091	pg/l	0.958		0.511		1.54		0.858		5.12		11.9		4.28		8.07	
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	pg/l	0.0383		0.0233	J	0.0558		0.031		0.0909		0.152		0.0783		0.108	
PCB090 & 101 & 113	PCB090_101_113	pg/l	4.52		2.7		6.97		4.58		20.5		52		17.1		38.2	
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	pg/l	1.17		0.651		2.1		1.27		8.69		22		7.51		15.8	
PCB093 & 095 & 098 & 100 & 102	PCB093_095_098_	pg/l	5.52		2.43		9.27		4.31		34.3		64.1		30		46.5	
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	pg/l	0.229		0.0914		0.526		0.212		3.35		6.17		2.84		4.01	
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	pg/l	0.14		0.0526		0.288		0.0948		1.22		1.91		1.03		1.24	
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	pg/l	0.286		0.124		0.53		0.245		2.12		4.65		1.82		3.11	
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	pg/l	0.0571		0.0271	U	0.123		0.0601		0.653		1.34		0.584		0.897	
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	pg/l	0.636		0.835		0.794		1.09		0.652		1.46		0.546		1.49	
2,3,3',4,5-Pentachlorobiphenyl	70424-69-0	pg/l	0.138	U	0.14	U	0.14	U	0.139	U	0.049		0.189		0.0374		0.141	
PCB107 & 124	PCB107_124	pg/l	0.0749		0.0782		0.0909		0.104		0.121		0.291		0.0984		0.223	
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	pg/l	0.197		0.169		0.226		0.246		0.332		1.16		0.267		0.856	
PCB110 & 115	PCB110_115	pg/l	3.72		2.73		4.96		3.75		7.51		16		6.25		12.8	
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	pg/l	0.0109	J	0.0052	J	0.0122	J	0.0155	J	0.0685		0.252		0.0572		0.195	
2,3,3',5,6-Pentachlorobiphenyl	74472-36-9	pg/l	0.099		0.0542		0.242		0.161		2.26		5.81		1.82		4.17	
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	pg/l	0.0478		0.0453		0.0551		0.0585		0.0407		0.0819		0.0248	U	0.0723	
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	pg/l	1.88		2.03		2.45		2.86		3.12		10.2		2.49		8.23	
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	pg/l	0.0202	J	0.0207	J	0.0308		0.0436		0.116		0.569		0.0923		0.393	
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	pg/l	0.0259		0.014	J	0.0471		0.0303		0.251		0.647		0.222		0.469	
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	pg/l	0.0239		0.0244		0.0254		0.031		0.0226	J	0.0671		0.0265		0.0484	
2,3',4,4',5'-Pentachlorobiphenyl	65510-44-3	pg/l	0.0557		0.0417		0.079		0.0503		0.0436		0.116		0.0509	U	0.112	
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	pg/l	0.0062	U	0.0106	J	0.0089	J	0.0177	J	0.0205	U	0.0412		0.00981	U	0.0252	
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	pg/l	0.00496	U	0.0052	J	0.0391	U	0.0078	J	0.018	U	0.077		0.00852	U	0.0485	
PCB128 & 166	PCB128_166	pg/l	0.25		0.607		0.403		0.89		0.825		7.84		0.602		5.96	
PCB129 & 138 & 160 & 163	PCB129_138_160_	pg/l	2.95		5.53		6.27		11.7		17.2		195		16.3		126	
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	pg/l	0.15		0.286		0.254		0.502		0.646		6.25		0.52		4.65	
2,2',3,3',4,6-Hexachlorobiphenyl	61798-70-7	pg/l	0.0278		0.0459		0.0543		0.0739		0.148		0.939		0.112		0.693	
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	pg/l	1.02		1.7		1.9		3.06		5.54		40		4.18		30.6	
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	pg/l	0.108		0.137		0.207		0.314		0.778		6.21		0.61		4.3	
PCB134 & 143	PCB134_143	pg/l	0.25		0.3		0.47		0.638		1.87		12.4		1.52		9.24	

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Table 4-5. November 2004 Surface Water Data Results - XAD

		Sample Name	LW2-W005 C		LW2-W005 F		LW2-W011 C		LW2-W011 F		LW2-W013-1 C		LW2-W013-1 F		LW2-W013-2 C		LW2-W013-2 F	
		Sample Date/Time	11/23/2004, 0627		11/23/2004, 0627		11/18/2004, 1823		11/18/2004, 1823		11/9/2004, 0335		11/9/2004, 0335		11/9/2004, 2306		11/9/2004, 2306	
		X Coordinate	7617639.07		7617639.07		7624381.08		7624381.08		7627111.88		7627111.88		7627115.05		7627115.05	
		Y Coordinate	715650.05		715650.05		706235.85		706235.85		705760.03		705760.03		705761.09		705761.09	
Analysis/Analyte	**CAS #**	**Units**																
PCB135 & 151 & 154	PCB135_151_154	pg/l	2.22		2.64		4.51		6		18		113		14.7		85.7	
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	pg/l	0.768		0.807		1.55		1.65		5.68		28.1		4.46		21.1	
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	pg/l	0.0598		0.129		0.081		0.197		0.168		2.13		0.159		1.28	
PCB139 & 140	PCB139_140	pg/l	0.0433	J	0.0678		0.0882		0.133		0.224		1.64		0.165		1.1	
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	pg/l	0.672		1.18		1.31		2.51		4.64		47		3.6		34.6	
2,2',3,4,5,6-Hexachlorobiphenyl	41411-61-4	pg/l	0.0356	U	0.0361	U	0.0361	U	0.0357	U	0.0366	U	0.0451	U	0.00618	U	0.0356	U
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	pg/l	0.184		0.248		0.363		0.535		1.27		8.95		1.03		6.72	
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	pg/l	0.048	U	0.0487	U	0.0019	J	0.005	J	0.0155	J	0.0798		0.014	J	0.0543	
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	pg/l	0.665		1.08		1.22		2.37		4.07		43		3.21		30.4	
PCB147 & 149	PCB147_149	pg/l	3.8		4.74		7.17		10.2		24.5		169		20.2		122	
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	pg/l	0.0341	U	0.0378		0.0741		0.104		0.283		1.88		0.24		1.29	
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	pg/l	0.0311		0.0323		0.0633		0.0757		0.216		1.38		0.172		0.884	
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	pg/l	0.0265		0.0252		0.0701		0.0626		0.33		1.77		0.265		1.13	
PCB153 & 168	PCB153_168	pg/l	3.19		5.36		6.07		11.3		20.7		206		15.9		150	
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	pg/l	0.0061	J	0.0069	J	0.0121	J	0.0166	J	0.0489		0.345		0.0415		0.253	
PCB156 & 157	PCB156_157	pg/l	0.138		0.433		0.256		0.771		0.701		10.2		0.483		7.73	
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	pg/l	0.249		0.457		0.446		0.882		1.33		13.6		1.03		9.91	
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	pg/l	0.0345		0.107		0.083		0.218		0.249		5.1		0.148		3.81	
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	pg/l	0.0609	U	0.0617	U	0.0618	U	0.0611	U	0.0626	U	0.0611	U	0.0609	U	0.0609	U
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	pg/l	0.0051	J	0.0104	J	0.0095	J	0.0176	J	0.0171	J	0.153		0.0127	J	0.121	
2,3,3',4',5',6-Hexachlorobiphenyl	74472-45-0	pg/l	0.255		0.388		0.47		0.793		1.53		13.5		1.17		9.74	
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	pg/l	0.0094	J	0.0118	J	0.0157	U	0.0293		0.0775		0.615		0.069		0.411	
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	pg/l	0.0639		0.162		0.115		0.311		0.331		4.54		0.247		3.35	
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	pg/l	0.0394	U	0.00802	U	0.00401	U	0.0146	U	0.0105	U	0.312	U	0.0394	U	0.24	U
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	pg/l	0.275		2.26		0.837		5.08		3.15		101		1.82		77.8	
PCB171 & 173	PCB171_173	pg/l	0.13		0.678		0.331		1.58		1.17		31.1		0.739		22.8	
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	pg/l	0.0693		0.385		0.172		0.935		0.663		19.9		0.397		14.1	
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	pg/l	0.599		2.38		1.55		5.49		5.8		111		3.28		83.1	
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	pg/l	0.0228	J	0.0904		0.057		0.216		0.188		4.14		0.139		3.05	
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	pg/l	0.0754	U	0.311		0.194		0.733		0.673		14.2		0.461		10.6	
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	pg/l	0.319		1.43		0.841		3.42		3.05		64		2.01		47.1	
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	pg/l	0.155		0.536		0.364		1.3		1.3		26		0.922		18.7	
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	pg/l	0.309		1.11		0.763		2.63		2.94		50.5		1.98		37.7	
PCB180 & 193	PCB180_193	pg/l	0.772		5		2.27		11.9		8.57		250		5.16		182	
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	pg/l	0.0772	U	0.0155	J	0.0047	U	0.031		0.0206	J	0.526		0.0109	J	0.334	
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	pg/l	0.0048	J	0.0153	J	0.0097	J	0.0308		0.0318		0.646		0.0217	J	0.456	
PCB183 & 185	PCB183_185	pg/l	0.348		1.58		0.874		3.78		3.16		78.1		2.13		57	
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	pg/l	0.0309	U	0.0029	J	0.0025	U	0.0042	J	0.0031	U	0.0527		0.0028	U	0.0356	
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	pg/l	0.0652	U	0.0662	U	0.0662	U	0.0655	U	0.0671	U	0.0302		0.0653	U	0.0167	J
2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	pg/l	0.744		3.12		1.79		7.69		6.25		154		4.33		112	
2,2',3,4',5,6,6'-IIeptachlorobiphenyl	74487-85-7	pg/l	0.0025	U	0.0093	J	0.0077	J	0.0212	J	0.0259		0.429		0.0169	J	0.286	
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	pg/l	0.0095	J	0.079		0.0316		0.178		0.0994		4.09		0.0628		2.85	
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	pg/l	0.0615		0.457		0.185		1.03		0.688		20.7		0.409		15.8	
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	pg/l	0.0138	J	0.0815		0.0374		0.197		0.152		4.07		0.0893		3.03	
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	pg/l	0.0552	U	0.056	U	0.056	U	0.0554	U	0.0568	U	0.0554	U	0.0553	U	0.0552	U
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	pg/l	0.0698		1.08		0.322		2.57		0.925		58.9		0.39		42.5	
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	pg/l	0.0381		0.446		0.128		1.12		0.392		24.2		0.185		18.6	
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	pg/l	0.0529		0.664		0.198		1.45		0.546		31.2		0.264		22.2	
PCB197 & 200	PCB197_200	pg/l	0.0191	J	0.221	J	0.0806		0.482	J	0.21		10.1	J	0.0967		6.55	J

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Table 4-5. November 2004 Surface Water Data Results - XAD

		Sample Name	LW2-W005 C		LW2-W005 F		LW2-W011 C		LW2-W011 F		LW2-W013-1 C		LW2-W013-1 F		LW2-W013-2 C		LW2-W013-2 F	
		Sample Date/Time	11/23/2004, 0627		11/23/2004, 0627		11/18/2004, 1823		11/18/2004, 1823		11/9/2004, 0335		11/9/2004, 0335		11/9/2004, 2306		11/9/2004, 2306	
		X Coordinate	7617639.07		7617639.07		7624381.08		7624381.08		7627111.88		7627111.88		7627115.05		7627115.05	
		Y Coordinate	715650.05		715650.05		706235.85		706235.85		705760.03		705760.03		705761.09		705761.09	
Analysis/Analyte	**CAS #**	**Units**																
PCB198 & 199	PCB198_199	pg/l	0.124	U	1.35		0.396		2.94		1.07		55.3		0.551		39	
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	pg/l	0.0161	J	0.153		0.0622		0.359		0.14		6.96		0.0721		4.68	
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	pg/l	0.0348	U	0.244		0.105		0.532		0.235		9.17		0.129		6.49	
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	pg/l	0.0663		0.837		0.242		1.82		0.636		35		0.308		24.7	
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	pg/l	0.0727	U	0.0007	U	0.0003	U	0.0017	U	0.0004	U	0.0158	J	0.0002	U	0.0085	J
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	pg/l	0.0048	J	0.0517		0.0171	J	0.138		0.0498		3.02		0.0212	J	2.12	
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	pg/l	0.0308	U	0.529		0.106		1.31		0.162		11.2		0.0667		7.86	
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	pg/l	0.0073	U	0.0887		0.0229	U	0.143		0.0289	U	1.58		0.0141	U	1.18	
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	pg/l	0.018	U	0.199		0.0406	U	0.469		0.0442	U	1.9		0.018	U	1.37	
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	pg/l	0.017	J	1.81		0.0459		1.1		0.0349		0.632		0.0178	J	0.63	
Polychlorinated biphenyls	1336-36-3	pg/l	136		92.9		217		171		720		2620		624		1890	
PCB Homologs																		
Monochlorobiphenyl	27323-18-8	pg/l	0.879		0.176		1.27		0.192		1.53		0.712		1.36		0.524	
Dichlorobiphenyl	25512-42-9	pg/l	20.3		3.77		28.7		4.2		99.9		19.5		92.8		15.2	
Trichlorobiphenyl	25323-68-6	pg/l	30.1		5.98		46.3		7.27		192		64.5		175		45.3	
Tetrachlorobiphenyl	26914-33-0	pg/l	37		12.4		56.1		17		162		158		144		103	
Pentachlorobiphenyl	25429-29-2	pg/l	26		16.9		39.5		26.3		110		251		93.5		182	
Hexachlorobiphenyl	26601-64-9	pg/l	17.2		26.5		33.5		55.4		111		941		91.1		674	
Heptachlorobiphenyl	28655-71-2	pg/l	3.84		19.5		10.3		46.2		37.9		935		24		689	
Octachlorobiphenyl	55722-26-4	pg/l	0.391		5.04		1.55		11.4		4.21		234		2.02		167	
Nonachlorobiphenyl	53742-07-7	pg/l	0.049	U	0.816		0.169		1.92		0.235		14.7		0.099	U	10.4	

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Table 4-5. November 2004 Surface Water Data Results - XAD

Analysis/Analyte	CAS #	Units	Sample Name		Sample Date/Time		X Coordinate		Y Coordinate	
			LW2-W015 C		LW2-W015 F		LW2-W016 C		LW2-W016 F	
			11/30/2004, 0055		11/30/2004, 0005		12/1/2004, 0115		12/1/2004, 0115	
			7626447.04		7626447.04		7627821.5		7627821.5	
			703929.23		703929.23		702551.16		702551.16	
PCB Aroclors [1]										
Aroclor 1016	12674-11-2	pg/l	0.0267	U	0.0218	U	0.0234	U	0.006	U
Aroclor 1242	53469-21-9	pg/l	513	NJ	570	NJ	0.026	U	0.0067	U
Aroclor 1248	12672-29-6	pg/l	0.0776	U	0.203	U	107	NJ	108	NJ
Aroclor 1254	11097-69-1	pg/l	72.2	NJ	302	NJ	0.0465	U	0.0633	U
Aroclor 1260	11096-82-5	pg/l	19.2	NJ	161	NJ	5.1	NJ	98	NJ
Aroclor 1221	11104-28-2	pg/l	0.0128	U	0.0054	U	0.0121	U	0.0104	U
Aroclor 1232	11141-16-5	pg/l	0.0245	U	0.0122	U	0.0148	U	0.0253	U
PAHs										
2-Methylnaphthalene	91-57-6	pg/l	4300		621	U	2720		219	U
Acenaphthene	83-32-9	pg/l	7810		219		637		74.2	U
Acenaphthylene	208-96-8	pg/l	889		331		495		159	U
Anthracene	120-12-7	pg/l	2150		799		289		222	
Fluorene	86-73-7	pg/l	4540		321		815		107	J
Naphthalene	91-20-3	pg/l	10200		1310	U	5950	U	617	U
Phenanthrene	85-01-8	pg/l	10800		2420		1760		822	U
Dibenz(a,h)anthracene	53-70-3	pg/l	23.7	U	509		6.16	U	170	J
Benz(a)anthracene	56-55-3	pg/l	572		2780		149	J	707	
Benzo(a)pyrene	50-32-8	pg/l	143	J	2890		36.7	J	852	
Benzo(g,h,i)perylene	205-99-2	pg/l	96.9	J	2940		19.2	U	872	
Benzo(k)fluoranthene	191-24-2	pg/l	128	J	2430		39.3	J	846	
Chrysene	207-08-9	pg/l	902		4260		260		1300	
Fluoranthene	218-01-9	pg/l	7480		6120		1500		1430	
Indeno(1,2,3-cd)pyrene	206-44-0	pg/l	85.3	UJ	2430		18.1	U	767	
Pyrene	193-39-5	pg/l	6150		6410		1350		1660	
Benzo(b+j)fluoranthene	129-00-0	pg/l	211		3210		74.2	J	1250	
Organochlorine Pesticides										
2,4'-DDD	53-19-0	pg/l	1270		787		215		176	
2,4'-DDE	3424-82-6	pg/l	56.6		33.1		9.85		12.5	
2,4'-DDT	789-02-6	pg/l	145		122		53.4		160	
4,4'-DDD	72-54-8	pg/l	1290		1820		324		480	
4,4'-DDE	72-55-9	pg/l	292		266		60.9		139	
4,4'-DDT	50-29-3	pg/l	402		1180		118		1220	
Aldrin	309-00-2	pg/l	3.27	J	13.0		0.702	J	0.504	UJ
alpha-Hexachlorocyclohexane	319-84-6	pg/l	44.5		1.28	J	20.0		0.193	J
beta-Hexachlorocyclohexane	319-85-7	pg/l	33.7		1.04	J	5.91	J	0.288	U
delta-Hexachlorocyclohexane	319-86-8	pg/l	6.25		0.432	U	1.52	UJ	0.168	U
gamma-Hexachlorocyclohexane	58-89-9	pg/l	51.4		0.862	J	25.5		0.258	J
cis-Chlordane	5103-71-9	pg/l	22.9		61.6		5.45	J	2.00	J
trans-Chlordane	5103-74-2	pg/l	19.4		70.1		4.07	J	2.39	J
Oxychlordane	27304-13-8	pg/l	1.20	J	0.443	J	0.897	UJ	0.444	U
cis-Nonachlor	5103-73-1	pg/l	2.87	J	12.9		1.11	J	0.899	J
trans-Nonachlor	39765-80-5	pg/l	9.09	J	39.7		3.39	J	2.10	J
Dieldrin	60-57-1	pg/l	46.8		15.7		23.0		2.03	UJ
alpha-Endosulfan	959-98-8	pg/l	7.55		1.60	U	5.53	U	0.788	U
beta-Endosulfan	33213-65-9	pg/l	17.1	U	4.30	U	14.5	U	2.22	U
Endosulfan sulfate	1031-07-8	pg/l	95.4		2.21	U	88.6		2.76	UJ

Analysis/Analyte	CAS #	Units	Sample Name		Sample Date/Time		X Coordinate		Y Coordinate	
			LW2-W018 C		LW2-W018 F		LW2-W023 C		LW2-W023 F	
			11/11/2004, 0004		11/11/2004, 0004		11/17/2004, 0003		11/17/2004, 0003	
			7633797.55		7633797.55		7642505.89		7642505.89	
			700824.33		700824.33		690067.93		690067.93	
PCB Aroclors [1]										
Aroclor 1016	12674-11-2	pg/l	0.0107	U	0.0232	U	0.0141	U	0.0182	U
Aroclor 1242	53469-21-9	pg/l	27.8	NJ	8.5	NJ	12.5	NJ	5.58	NJ
Aroclor 1248	12672-29-6	pg/l	0.0553	U	0.0944	U	0.073	U	0.0485	U
Aroclor 1254	11097-69-1	pg/l	67.9	NJ	90.8	NJ	12.7	NJ	53.8	NJ
Aroclor 1260	11096-82-5	pg/l	15.4	NJ	152	NJ	2.56	NJ	478	NJ
Aroclor 1221	11104-28-2	pg/l	0.0068	U	0.012	U	0.0082	U	0.0095	U
Aroclor 1232	11141-16-5	pg/l	0.0166	U	0.0201	U	0.0198	U	0.0195	U
PAHs										
2-Methylnaphthalene	91-57-6	pg/l	2540		176	U	1630		144	U
Acenaphthene	83-32-9	pg/l	424		46.3	U	207		49.0	U
Acenaphthylene	208-96-8	pg/l	549		151	U	282		150	U
Anthracene	120-12-7	pg/l	278		176		164	U	135	U
Fluorene	86-73-7	pg/l	777		74.9	U	414		63.9	U
Naphthalene	91-20-3	pg/l	5270	U	540	U	3620	U	602	U
Phenanthrene	85-01-8	pg/l	1100		612	U	788		524	U
Dibenz(a,h)anthracene	53-70-3	pg/l	14.0	U	69.0	U	11.8	U	46.6	U
Benz(a)anthracene	56-55-3	pg/l	70.5	J	311		52.0	J	236	U
Benzo(a)pyrene	50-32-8	pg/l	23.2	U	384		26.3	J	247	U
Benzo(g,h,i)perylene	205-99-2	pg/l	17.5	U	498		20.8	U	375	
Benzo(k)fluoranthene	191-24-2	pg/l	20.1	U	291		16.6	U	193	
Chrysene	207-08-9	pg/l	141	J	665		94.5	J	353	U
Fluoranthene	218-01-9	pg/l	789		797		416		666	
Indeno(1,2,3-cd)pyrene	206-44-0	pg/l	16.8	U	323		18.3	U	242	
Pyrene	193-39-5	pg/l	783		1100		432		821	U
Benzo(b+j)fluoranthene	129-00-0	pg/l	29.6	J	452		23.4	J	294	
Organochlorine Pesticides										
2,4'-DDD	53-19-0	pg/l	4.69	J	2.11	J	1.69	J	1.57	J
2,4'-DDE	3424-82-6	pg/l	0.394	J	0.297	J	0.154	J	0.234	J
2,4'-DDT	789-02-6	pg/l	1.03	J	0.314	U	0.534	UJ	0.847	J
4,4'-DDD	72-54-8	pg/l	12.6		8.30		4.15	J	7.44	
4,4'-DDE	72-55-9	pg/l	14.0		13.4		4.98	J	11.4	
4,4'-DDT	50-29-3	pg/l	3.17	J	0.884	J	1.45	J	8.87	
Aldrin	309-00-2	pg/l	0.659	J	0.390	J	0.341	UJ	0.272	UJ
alpha-Hexachlorocyclohexane	319-84-6	pg/l	20.9		0.0705	U	10.6	J	0.106	U
beta-Hexachlorocyclohexane	319-85-7	pg/l	3.14	J	0.0943	U	1.73	J	0.103	U
delta-Hexachlorocyclohexane	319-86-8	pg/l	0.567	U	0.0733	U	0.415	U	0.105	U
gamma-Hexachlorocyclohexane	58-89-9	pg/l	21.0		0.0792	U	11.8	J	0.117	U
cis-Chlordane	5103-71-9	pg/l	6.56	J	1.32	J	3.09	J	1.47	J
trans-Chlordane	5103-74-2	pg/l	4.59	J	1.37	J	2.21	J	1.54	J
Oxychlordane	27304-13-8	pg/l	1.09	UJ	0.133	U	0.644	UJ	0.181	U
cis-Nonachlor	5103-73-1	pg/l	1.34	J	0.621	J	0.617	J	0.721	J
trans-Nonachlor	39765-80-5	pg/l	4.05	J	1.53	J	1.95	J	1.77	J
Dieldrin	60-57-1	pg/l	30.6		1.84	UJ	14.3		2.43	J
alpha-Endosulfan	959-98-8	pg/l	7.01		1.03	U	3.94	J	0.462	U
beta-Endosulfan	33213-65-9	pg/l	20.1		0.740	U	7.61	U	2.03	U
Endosulfan sulfate	1031-07-8	pg/l	122		0.666	U	53.1		0.840	UJ

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Table 4-5. November 2004 Surface Water Data Results - XAD

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W015 F		LW2-W016 C		LW2-W016 F		LW2-W018 C		LW2-W018 F		LW2-W023 C		LW2-W023 F	
			Sample Date/Time		11/30/2004, 0005		12/1/2004, 0115		12/1/2004, 0115		11/11/2004, 0004		11/11/2004, 0004		11/17/2004, 0003		11/17/2004, 0003	
			X Coordinate		7626447.04		7627821.5		7627821.5		7633797.55		7633797.55		7642505.89		7642505.89	
			Y Coordinate		703929.23		702551.16		702551.16		700824.33		700824.33		690067.93		690067.93	
Endrin	72-20-8	pg/l		1.57	J	0.639	UJ	0.533	UJ	0.220	U	0.633	U	0.147	UJ	0.450	U	0.168	J
Endrin aldehyde	7421-93-4	pg/l		0.394	U	0.450	U	0.238	U	0.283	U	0.191	U	0.322	U	0.195	U	0.670	U
Endrin ketone	53494-70-5	pg/l		2.33	J	0.168	U	0.492	J	0.110	U	0.567	J	0.0977	U	0.396	UJ	0.0954	U
Heptachlor	76-44-8	pg/l		5.64	J	2.24	J	0.305	J	0.135	J	0.161	UJ	0.0294	U	0.111	UJ	0.0454	U
Heptachlor epoxide	1024-57-3	pg/l		4.56	J	0.702	J	3.24	J	0.123	J	4.48	J	0.121	J	2.11	J	0.196	UJ
Methoxychlor	72-43-5	pg/l		90.6		40.0		2.37	UJ	1.91	J	1.92	U	0.845	U	1.70	J	1.65	J
Hexachlorobenzene	118-74-1	pg/l		54.0		13.0		31.7		7.84		37.3		3.12	J	15.7		3.62	J
Hexachlorobutadiene	87-68-3	pg/l		104		5.75	J	42.1		3.07	J	0.390	UJ	0.035	U	0.230	UJ	0.030	U
Phthalate Esters																			
Dimethyl phthalate	131-11-3	pg/l		4830		194	U	565	U	107	U	438	U	104	U	296	U	113	U
Diethyl phthalate	84-66-2	pg/l		6650		299	U	1140	J	251	U	718	U	285	U	1080	U	240	U
Dibutyl phthalate	84-74-2	pg/l		5980	J	801	U	1600	U	413	U	1270	U	391	U	1030	U	392	U
Butylbenzyl phthalate	85-68-7	pg/l		7330		2170		1060	U	398	U	785	U	595	U	723	U	456	U
Di-n-octyl phthalate	117-84-0	pg/l		186	U	1970	U	150	U	328	U	172	U	219	U	180	U	287	U
Bis(2-ethylhexyl) phthalate	117-81-7	pg/l		5660	U	33000		4260	U	7490	U	5620	U	5700	U	4940	U	6470	U
Chlorinated Dioxin/Furan Homologs																			
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/l		0.166		0.204		--		--		--		--		0.0253		0.0900	
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/l		0.0417		0.290		--		--		--		--		0.00551	U	0.0622	
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/l		0.117		1.47		--		--		--		--		0.0203	U	0.438	
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/l		0.583		10.5		--		--		--		--		0.0957		2.87	
Octachlorodibenzo-p-dioxin	3268-87-9	pg/l		2.10		55.1		--		--		--		--		0.346		13.3	
Tetrachlorodibenzofuran homologs	30402-14-3	pg/l		0.454		1.74		--		--		--		--		0.0231		0.0917	
Pentachlorodibenzofuran homologs	30402-15-4	pg/l		0.226		2.06		--		--		--		--		0.0105	U	0.107	
Hexachlorodibenzofuran homologs	55684-94-1	pg/l		0.147		2.50		--		--		--		--		0.00935	U	0.220	
Heptachlorodibenzofuran homologs	38998-75-3	pg/l		0.117		2.29		--		--		--		--		0.0136	U	0.473	
Octachlorodibenzofuran	39001-02-0	pg/l		0.0672		1.86		--		--		--				0.0114	U	0.464	
Chlorinated Dioxins/Furans																			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/l		0.00384	U	0.0133		--		--		--		--		0.00144	U	0.00302	U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/l		0.00313	U	0.0327		--		--		--		--		0.000887	U	0.00739	J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/l		0.00324	U	0.0602		--		--		--		--		0.000961	U	0.0141	J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/l		0.0110	J	0.172		--		--		--		--		0.00256	U	0.0571	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/l		0.00894	U	0.161		--		--		--		--		0.00179	U	0.0373	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/l		0.267		4.88		--		--		--		--		0.0454		1.46	
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/l		0.0961		0.453		--		--		--		--		0.0023	U	0.00904	
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/l		0.0595		0.670		--		--		--		--		0.000722	U	0.00385	J
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/l		0.0310		0.285		--		--		--		--		0.00166	U	0.00592	U
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/l		0.0564		1.15		--		--		--		--		0.000879	U	0.0123	J
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/l		0.0199	J	0.311		--		--		--		--		0.000791	U	0.00815	J
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/l		0.00156	U	0.0229	J	--		--		--		--		0.0005	U	0.00182	U
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/l		0.00430	U	0.0657		--		--		--		--		0.000846	U	0.00664	J
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/l		0.0399		0.969		--		--		--		--		0.00511	U	0.160	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/l		0.0258	J	0.226		--		--		--		--		0.00116	U	0.0123	J
PCB Congeners																			
2-Chlorobiphenyl	2051-60-7	pg/l		1.83		0.161		0.544		0.0426	U	0.724		0.109		0.29		0.046	
3-Chlorobiphenyl	2051-61-8	pg/l		0.357		0.131		0.165		0.059		0.262		0.0893		0.132		0.0842	

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Table 4-5. November 2004 Surface Water Data Results - XAD

		Sample Name	LW2-W015 C		LW2-W015 F		LW2-W016 C		LW2-W016 F		LW2-W018 C		LW2-W018 F		LW2-W023 C		LW2-W023 F	
		Sample Date/Time	11/30/2004, 0055		11/30/2004, 0005		12/1/2004, 0115		12/1/2004, 0115		11/11/2004, 0004		11/11/2004, 0004		11/17/2004, 0003		11/17/2004, 0003	
		X Coordinate	7626447.04		7626447.04		7627821.5		7627821.5		7633797.55		7633797.55		7642505.89		7642505.89	
		Y Coordinate	703929.23		703929.23		702551.16		702551.16		700824.33		700824.33		690067.93		690067.93	
Analysis/Analyte	**CAS #**	**Units**																
4-Chlorobiphenyl	2051-62-9	pg/l	1.1		0.273		0.247		0.0639		0.361		0.144		0.201		0.0854	
2,2'-Dichlorobiphenyl	13029-08-8	pg/l	17.1		2.47		4.07		0.245		4.76		0.199		2.67		0.223	
2,3-Dichlorobiphenyl	16605-91-7	pg/l	0.907		0.155		0.0309		0.0699	U	0.042		0.00953	U	0.0174	J	0.0348	U
2,3'-Dichlorobiphenyl	25569-80-6	pg/l	8.03		2.18		0.39		0.0802		0.365		0.0714		0.167		0.0404	
2,4-Dichlorobiphenyl	33284-50-3	pg/l	1.44		0.358		0.0745	U	0.0139	J	0.0849	U	0.0178	J	0.0426	U	0.0082	J
2,4'-Dichlorobiphenyl	34883-43-7	pg/l	39		11.1		1.51		0.327		1.37		0.281		0.667		0.175	
2,5-Dichlorobiphenyl	34883-39-1	pg/l	2.52		0.607		0.101		0.0188	J	0.114		0.0196	J	0.0555		0.013	J
2,6-Dichlorobiphenyl	33146-45-1	pg/l	0.699		0.0882		0.131		0.0099	J	0.166		0.0114	J	0.0802		0.009	J
3,3'-Dichlorobiphenyl	2050-67-1	pg/l	9.61		4.18		5.16		1.99		3.88		2.32		3.3		2.42	
PCB012 & 013	PCB012_013	pg/l	2.6		1.72		0.226		0.0736	J	0.179		0.0929		0.0926		0.054	
3,5-Dichlorobiphenyl	34883-41-5	pg/l	0.0253	U	0.0076	J	0.0303	U	0.0608	U	0.017	U	0.03	U	0.0111	U	0.0303	U
4,4'-Dichlorobiphenyl	2050-68-2	pg/l	17.9		15		1.2		0.64		0.986		0.525		0.384		0.317	
2,2',3-Trichlorobiphenyl	38444-78-9	pg/l	21.7		14.3		1.56		0.38		0.965		0.11		0.435		0.0815	
2,2',4-Trichlorobiphenyl	37680-66-3	pg/l	20.9		17		1.88		0.487		1.72		0.291		0.708		0.255	
PCB018 & 030	PCB018_030	pg/l	42.6		30.3		3.59		0.898		2.27		0.312		0.982		0.221	
2,2',6-Trichlorobiphenyl	38444-73-4	pg/l	8.51		2.91		2.48		0.299		4.03		0.368		2.07		0.496	
PCB020 & 028	PCB020_028	pg/l	46.2		80.6		5.3		3.17	U	3.11		1.36		1.31		0.854	
PCB021 & 033	PCB021_033	pg/l	28.5		42.6		1.82		0.813		0.931		0.372		0.477		0.246	
2,3,4'-Trichlorobiphenyl	38444-85-8	pg/l	19.6		28.8		1.74		0.775		0.888		0.286		0.438		0.198	
2,3,5-Trichlorobiphenyl	55720-44-0	pg/l	0.0795		0.0883		0.0053	J	0.0034	J	0.00411	U	0.0043	U	0.00407	U	0.00218	U
2,3,6-Trichlorobiphenyl	55702-45-9	pg/l	0.799		0.457		0.0479		0.0611	U	0.0358		0.0057	J	0.0165	J	0.0304	U
2,3',4-Trichlorobiphenyl	55712-37-3	pg/l	3.62		5.5		0.444		0.231		0.342		0.144		0.124		0.0872	
PCB026 & 029	PCB026_029	pg/l	9.25		12.8		0.901		0.406		0.6		0.214		0.263		0.148	
2,3',6-Trichlorobiphenyl	38444-76-7	pg/l	3.28		2.37		0.436		0.112		0.486		0.0931		0.183		0.0763	
2,4',5-Trichlorobiphenyl	16606-02-3	pg/l	43.2		67.9		4.3		2.11		2.51		0.882		1.19		0.611	
2,4',6-Trichlorobiphenyl	38444-77-8	pg/l	16		12.3		1.83		0.461		1.27		0.247		0.389		0.125	
2,3',5'-Trichlorobiphenyl	37680-68-5	pg/l	0.159		0.237		0.0285		0.0129	J	0.0177	J	0.0075	J	0.0067	J	0.004	J
3,3',4-Trichlorobiphenyl	37680-69-6	pg/l	0.647		1.57		0.0929		0.0642		0.0744		0.0582		0.0373		0.042	
3,3',5-Trichlorobiphenyl	38444-87-0	pg/l	0.00992	U	0.0112	J	0.0082	J	0.0065	J	0.0149	J	0.0083	J	0.006	J	0.006	J
3,4,4'-Trichlorobiphenyl	38444-90-5	pg/l	9.56		26.1		1.14		1.12		0.562		0.479		0.251		0.357	
3,4,5-Trichlorobiphenyl	53555-66-1	pg/l	0.0386		0.0712		0.0162	J	0.006	J	0.0112	J	0.008	J	0.006	U	0.0047	J
3,4',5-Trichlorobiphenyl	38444-88-1	pg/l	0.225		0.526		0.0598		0.0348	J	0.0327		0.0184	J	0.0185	J	0.0087	J
PCB040 & 041 & 071	PCB040_041_071	pg/l	15.4		41.5		4.43		3.53		2.26		1.11		0.661		0.512	
2,2',3,4'-Tetrachlorobiphenyl	36559-22-5	pg/l	6.74		18.8		2.03		1.69		0.916		0.445		0.267		0.214	
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	pg/l	1.11		2.96		0.295		0.208		0.119		0.0451		0.033	U	0.0281	
PCB044 & 047 & 065	PCB044_047_065	pg/l	24.4		59.7		8.03		6.48		7.09		4.07		1.55		1.5	
PCB045 & 051	PCB045_051	pg/l	7.09		12.6		1.86		1.03		2.35		0.951		0.425		0.328	
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	pg/l	2.51		4.21		0.598		0.332		0.357		0.112		0.0857		0.0495	
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	pg/l	5.74		17.2		1.27		0.899		0.458		0.157		0.182		0.131	
PCB049 & 069	PCB049_069	pg/l	13.9		36.1		4.74		3.79		4.48		2.43		0.975		1.01	
PCB050 & 053	PCB050_053	pg/l	5.63		8.06		1.78		0.883		2.4		0.822		0.568		0.466	
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	pg/l	26.7		56.2		9.42		6.82		8.33		4.25		2.05		2.46	
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	pg/l	0.385		0.183		0.225		0.0608		0.543		0.133		0.2		0.109	
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	pg/l	0.263		1.07		0.0705		0.0729		0.0234	J	0.0226	J	0.0357	U	0.0113	J
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	pg/l	6.22		21.5		2.6		3.4		0.953		0.77		0.355		0.57	
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	pg/l	0.0903		0.383		0.0212	J	0.0233	J	0.0124	J	0.0149	U	0.0667	U	0.00766	U
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	pg/l	0.0397		0.102		0.0174	J	0.0205	J	0.0217	J	0.0146	U	0.129	U	0.126	U
PCB059 & 062 & 075	PCB059_062_075	pg/l	2.43		6.5		0.654		0.512		0.35		0.169		0.104		0.0911	
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	pg/l	3.09		13		1.11		1.63		0.397		0.27		0.181		0.265	

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ANC04509
BZTO104(e)004509

Table 4-5. November 2004 Surface Water Data Results - XAD

		Sample Name	LW2-W015 C		LW2-W015 F		LW2-W016 C		LW2-W016 F		LW2-W018 C		LW2-W018 F		LW2-W023 C		LW2-W023 F	
		Sample Date/Time	11/30/2004, 0055		11/30/2004, 0005		12/1/2004, 0115		12/1/2004, 0115		11/11/2004, 0004		11/11/2004, 0004		11/17/2004, 0003		11/17/2004, 0003	
		X Coordinate	7626447.04		7626447.04		7627821.5		7627821.5		7633797.55		7633797.55		7642505.89		7642505.89	
		Y Coordinate	703929.23		703929.23		702551.16		702551.16		700824.33		700824.33		690067.93		690067.93	
Analysis/Analyte	**CAS #**	**Units**																
PCB061 & 070 & 074 & 076	PCB061_070_074_	pg/l	21.1		82.2		7.72		9.77		5.16		4.43		1.65		2.78	
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	pg/l	0.588		2.35		0.201		0.251		0.118		0.0865		0.0375		0.0454	
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	pg/l	10.4		29.4		3.24		2.85		1.46		0.705		0.487		0.446	
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	pg/l	11.4		47.2		4.82		7.42		2.53		2.62		0.749		1.49	
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	pg/l	0.506		2.24		0.13		0.139		0.0741		0.0578		0.0227	U	0.0332	
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	pg/l	0.0506		0.137		0.0338		0.0341	J	0.0751		0.0756		0.0229	J	0.0201	J
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	pg/l	0.179	U	0.276		0.136	U	0.0525		0.178		0.0838		0.0884		0.041	U
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	pg/l	0.0987		0.0641	U	0.0378		0.128	U	0.0987		0.0567		0.0219	J	0.0226	J
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	pg/l	0.745		4.34		0.313		0.824		0.193		0.32		0.0575		0.215	
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	pg/l	0.0316	U	0.0337	U	0.0315	U	0.0633	U	0.0316	U	0.0312	U	0.0324	U	0.0315	U
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	pg/l	0.0947		0.252		0.056		0.0772		0.1		0.134		0.0175	J	0.0556	
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	pg/l	0.0408	U	0.0409	U	0.0407	U	0.0817	U	0.0408	U	0.0403	U	0.0418	U	0.0407	U
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	pg/l	0.0363		0.212		0.011	U	0.0358	J	0.0178	U	0.0143	U	0.0507	U	0.0112	U
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	pg/l	0.951		5.05		0.55		1.07		0.535		0.732		0.14		0.46	
PCB083 & 099	PCB083_099	pg/l	4		16.1		2.32		4.18		4.31		6.02		0.705		2.67	
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	pg/l	2.66		9.64		1.46		1.93		2.14		2.07		0.406		1.14	
PCB085 & 116 & 117	PCB085_116_117	pg/l	1.24		6.47		0.736		1.59		0.893		1.21		0.215		0.715	
PCB086 & 087 & 097 & 108 & 119 & 125	PCB086_087_097_	pg/l	5.02	J	21.6	J	2.79	U	5.05		4.18	J	5.33	J	0.883	J	4.05	J
PCB088 & 091	PCB088_091	pg/l	1.48		5.95		0.857		1.21		2.01		2.13		0.29		0.713	
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	pg/l	0.18		0.789		0.0976		0.156		0.059		0.0553	U	0.0168	J	0.0308	
PCB090 & 101 & 113	PCB090_101_113	pg/l	8.79		27.3		4.36		8.74		8.86		11.1		1.45		15.8	
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	pg/l	1.77		5.12		0.875		1.53		1.99		2.46		0.291		1.93	
PCB093 & 095 & 098 & 100 & 102	PCB093_095_098_	pg/l	9.25		27.1		4.77		6.59		9.46		8.71		1.54		10.4	
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	pg/l	0.108		0.331		0.0676		0.0575		0.206		0.174		0.0273		0.0412	
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	pg/l	0.175		0.564		0.0891		0.0889		0.176		0.126		0.03		0.0475	
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	pg/l	0.231		0.318		0.116		0.114		0.39		0.372		0.0694		0.141	
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	pg/l	0.0156	J	0.0141	J	0.0099	J	0.0106	J	0.0401		0.0323		0.011	J	0.0176	J
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	pg/l	1.83		12		0.909		3		1.02		2.3		0.296		1.92	
2,3,3',4,5-Pentachlorobiphenyl	70424-69-0	pg/l	0.139	U	0.14	U	0.139	U	0.279	U	0.139	U	0.138	U	0.00518	U	0.139	U
PCB107 & 124	PCB107_124	pg/l	0.218		0.996		0.0986		0.267		0.127		0.251		0.0291	J	0.201	
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	pg/l	0.423		1.71		0.207		0.532		0.337		0.676		0.0683		0.33	
PCB110 & 115	PCB110_115	pg/l	8.06		30.7		4.54		8.48		8.02		10.7		1.54		9.61	
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	pg/l	0.0146	J	0.0133	J	0.00425	U	0.006	J	0.0144	J	0.0226	J	0.0632	U	0.00727	U
2,3,3',5,6-Pentachlorobiphenyl	74472-36-9	pg/l	0.0533		0.0255	U	0.0256		0.0511	U	0.0255	U	0.0252	U	0.0261	U	0.0254	U
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	pg/l	0.119		0.772		0.0517		0.172		0.0611		0.113		0.0172	U	0.105	
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	pg/l	4.26		23.2		2.28		6.63		3.62		7.37		0.8		6.25	
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	pg/l	0.0387		0.0589		0.0168	J	0.0298	J	0.0567		0.108		0.0066	J	0.0297	
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	pg/l	0.0125	J	0.0103	J	0.0058	J	0.0069	J	0.0166	J	0.0186	J	0.0048	J	0.0117	J
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	pg/l	0.0616		0.407		0.0265		0.101		0.0352		0.0819		0.0096	U	0.0492	
2,3',4,4',5'-Pentachlorobiphenyl	65510-44-3	pg/l	0.11		0.601		0.0638		0.135		0.0818		0.0998		0.0392		0.0873	
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	pg/l	0.0213	J	0.133		0.0097	J	0.0388	J	0.013	J	0.0357		0.0386	U	0.0238	J
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	pg/l	0.00661	U	0.0435		0.0389	U	0.078	U	0.0389	U	0.02	J	0.0399	U	0.0124	J
PCB128 & 166	PCB128_166	pg/l	0.528		4.17		0.228		1.59		0.513		2.12		0.107		2.86	
PCB129 & 138 & 160 & 163	PCB129_138_160_	pg/l	5.71		28.1		2.16		13.8		5.37		19.9		0.871		46.6	
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	pg/l	0.336		1.76		0.127		0.737		0.289		1.06		0.0542		1.52	
2,2',3,3',4,6-Hexachlorobiphenyl	61798-70-7	pg/l	0.0608		0.337		0.0266		0.136		0.0574		0.156		0.0124	J	0.272	
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	pg/l	2.1		9.86		0.827		4.28		1.99		6.46		0.318		13.8	
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	pg/l	0.176		0.457		0.0562		0.238		0.153		0.468		0.0218	J	0.516	
PCB134 & 143	PCB134_143	pg/l	0.357		1.42		0.145		0.642		0.361		0.992		0.0575		1.79	

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ANC04510
BZTO104(e)004510

Table 4-5. November 2004 Surface Water Data Results - XAD

		Sample Name	LW2-W015 C		LW2-W015 F		LW2-W016 C		LW2-W016 F		LW2-W018 C		LW2-W018 F		LW2-W023 C		LW2-W023 F	
		Sample Date/Time	11/30/2004, 0055		11/30/2004, 0005		12/1/2004, 0115		12/1/2004, 0115		11/11/2004, 0004		11/11/2004, 0004		11/17/2004, 0003		11/17/2004, 0003	
		X Coordinate	7626447.04		7626447.04		7627821.5		7627821.5		7633797.55		7633797.55		7642505.89		7642505.89	
		Y Coordinate	703929.23		703929.23		702551.16		702551.16		700824.33		700824.33		690067.93		690067.93	
Analysis/Analyte	**CAS #**	**Units**																
PCB135 & 151 & 154	PCB135_151_154	pg/l	3.44		9.95		1.29		5.32		3.58		9.01		0.481		22.8	
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	pg/l	1.18		3.63		0.471		1.81		1.29		2.89		0.187		6.95	
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	pg/l	0.122		1.22		0.0622		0.37		0.115		0.494		0.0203	U	0.351	
PCB139 & 140	PCB139_140	pg/l	0.112		0.497		0.0375	J	0.163		0.0945		0.331		0.0158	J	0.129	
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	pg/l	1.34		5.83		0.451		3.2		1.03		3.81		0.152		14.3	
2,2',3,4,5,6-Hexachlorobiphenyl	41411-61-4	pg/l	0.0089	J	0.0224	J	0.0057	U	0.0398	J	0.036	U	0.00872	U	0.0368	U	0.0359	U
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	pg/l	0.361		1.38		0.138		0.776		0.33		0.846		0.0502		3.3	
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	pg/l	0.00168	U	0.0195	U	0.0484	U	0.0049	J	0.0485	U	0.0058	J	0.0497	U	0.00209	U
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	pg/l	1.32		4.3		0.447		2.2		1.18		4.37		0.167		7.31	
PCB147 & 149	PCB147_149	pg/l	6.47		21.7		2.68		11.3		6.79		17.9		0.929		46.1	
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	pg/l	0.0459		0.072		0.013	J	0.0388	J	0.0478		0.12		0.0059	J	0.0389	
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	pg/l	0.0248		0.0606		0.0147	J	0.0327	J	0.0553		0.141		0.0085	J	0.0406	
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	pg/l	0.0101	J	0.0332		0.0066	U	0.0115	J	0.0266		0.0565		0.0035	J	0.013	J
PCB153 & 168	PCB153_168	pg/l	6.02		23.2		2.12		12.5		5.75		20		0.798		52.2	
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	pg/l	0.0026	U	0.0129	U	0.0019	J	0.0052	J	0.004	J	0.0104	J	0.0024	J	0.0059	J
PCB156 & 157	PCB156_157	pg/l	0.343		3.1		0.123		1.32		0.281		1.59		0.0561		2.96	
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	pg/l	0.515		2.74		0.189		1.31		0.452		1.68		0.0779		4.13	
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	pg/l	0.0723		0.387		0.02	J	0.185		0.0495		0.345		0.0088	U	1.16	
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	pg/l	0.0616	U	0.0616	U	0.0614	U	0.123	U	0.0615	U	0.0607	U	0.063	U	0.0613	U
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	pg/l	0.0094	J	0.0738		0.0035	U	0.0369	J	0.0105	J	0.0374		0.0559	U	0.0428	
2,3,3',4',5',6-Hexachlorobiphenyl	74472-45-0	pg/l	0.475		1.96		0.173		1.07		0.443		1.49		0.0711		3.33	
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	pg/l	0.0075	U	0.0179	J	0.0031	J	0.125	U	0.0096	J	0.0274		0.0641	U	0.0625	U
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	pg/l	0.143		1.04		0.0527		0.521		0.122		0.626		0.0235	U	1.08	
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	pg/l	0.00564	U	0.0357	U	0.00265	U	0.0797	U	0.0398	U	0.0287	U	0.0407	U	0.0715	U
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	pg/l	0.807		7.58		0.212		5.02		0.668		7.81		0.111		22.2	
PCB171 & 173	PCB171_173	pg/l	0.348		2.52		0.0874		1.75		0.269		2.34		0.0431	U	7.22	
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	pg/l	0.187		1.39		0.0477		0.857		0.132		1.29		0.0228	J	4.13	
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	pg/l	1.47		8.9		0.423		5.59		1.07		7.23		0.184		25.8	
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	pg/l	0.0574		0.39		0.0172	J	0.236		0.0438		0.304		0.0067	J	1.04	
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	pg/l	0.186		1.21		0.0479		0.74		0.143		0.979		0.0227	J	3.55	
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	pg/l	0.83		5.12		0.226		3.23		0.612		4.78		0.102		14.6	
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	pg/l	0.317		1.94		0.0978		1.12		0.27		1.69		0.0529		5.04	
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	pg/l	0.663		4.15		0.193		2.13		0.571		3.42		0.0982		10.9	
PCB180 & 193	PCB180_193	pg/l	2.17		18.3		0.57		10.9		1.68		17.3		0.29		54.6	
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	pg/l	0.0362		0.283		0.009	U	0.34		0.0048	U	0.0501		0.00199	U	0.0646	
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	pg/l	0.0082	J	0.0614		0.0018	J	0.0301	J	0.0055	J	0.0584		0.0446	U	0.0434	U
PCB183 & 185	PCB183_185	pg/l	0.853		6.3		0.238		3.69		0.719		5.27		0.111		18.7	
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	pg/l	0.0026	U	0.0178	J	0.0009	U	0.009	U	0.0313	U	0.0089	J	0.00142	U	0.0066	J
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	pg/l	0.0018	U	0.0106	J	0.0658	U	0.012	J	0.0659	U	0.0651	U	0.0675	U	0.0657	U
2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	pg/l	1.66		12.1		0.504		6.42		1.41		10.6		0.255		33.2	
2,2',3,4',5,6,6'-IIeptachlorobiphenyl	74487-85-7	pg/l	0.0032	J	0.0195	J	0.0017	U	0.0105	J	0.0053	J	0.0292		0.00136	U	0.0127	J
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	pg/l	0.0324		0.288		0.0079	U	0.175		0.0185	J	0.292		0.0036	J	0.683	
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	pg/l	0.184		1.66		0.048		1.16		0.152		1.61		0.0282		4.8	
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	pg/l	0.0414		0.307		0.0113	J	0.223		0.033		0.306		0.005	J	0.949	
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	pg/l	0.0558	U	0.0558	U	0.0557	U	0.112	U	0.0558	U	0.0551	U	0.0571	U	0.0556	U
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	pg/l	0.306		4.49		0.0635		1.85		0.145		3.52		0.04	U	9.76	
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	pg/l	0.127		1.86		0.0336		0.96		0.0714		1.42		0.0178	J	4.46	
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	pg/l	0.194		3.1		0.0448	U	1.39		0.129		2.08		0.0305	U	5.95	
PCB197 & 200	PCB197_200	pg/l	0.0785		1.09	J	0.0192	J	0.443	J	0.0442	J	0.591	J	0.0149	U	1.91	J

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Table 4-5. November 2004 Surface Water Data Results - XAD

		Sample Name	LW2-W015 C		LW2-W015 F		LW2-W016 C		LW2-W016 F		LW2-W018 C		LW2-W018 F		LW2-W023 C		LW2-W023 F	
		Sample Date/Time	11/30/2004, 0055		11/30/2004, 0005		12/1/2004, 0115		12/1/2004, 0115		11/11/2004, 0004		11/11/2004, 0004		11/17/2004, 0003		11/17/2004, 0003	
		X Coordinate	7626447.04		7626447.04		7627821.5		7627821.5		7633797.55		7633797.55		7642505.89		7642505.89	
		Y Coordinate	703929.23		703929.23		702551.16		702551.16		700824.33		700824.33		690067.93		690067.93	
Analysis/Analyte	**CAS #**	**Units**																
PCB198 & 199	PCB198_199	pg/l	0.445		7.71		0.115	U	3.02		0.304		4.1		0.0917	U	11	
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	pg/l	0.0643		0.976		0.0143	U	0.362		0.0368		0.47		0.0115	U	1.4	
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	pg/l	0.11		1.47		0.0305		0.517		0.0637		0.737		0.02	J	1.8	
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	pg/l	0.245		4.51		0.0614		1.9		0.173	U	2.63		0.0508	U	6.98	
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	pg/l	0.0735	U	0.0187	J	0.0733	U	0.016	J	0.0003	U	0.0017	U	0.0011	U	0.0011	U
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	pg/l	0.0191	J	0.265		0.0036	U	0.143		0.0103	J	0.186		0.0022	U	0.532	
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	pg/l	0.245		6.07		0.0369	U	1.57		0.0689		1.55		0.0375	U	2.36	
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	pg/l	0.0379	U	0.72		0.0079	U	0.294		0.012	U	0.202		0.0183	U	0.35	
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	pg/l	0.0853		1.76		0.0191	U	0.501		0.0308	U	0.482		0.0181	U	0.554	
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	pg/l	0.156		9.17		0.0296		1.62		0.0401		0.804		0.0172	J	0.549	
Polychlorinated biphenyls	1336-36-3	pg/l	639		1290		137		241		162		277		42.7		566	
PCB Homologs																		
Monochlorobiphenyl	27323-18-8	pg/l	3.29		0.565		0.956		0.123		1.35		0.342		0.623		0.216	
Dichlorobiphenyl	25512-42-9	pg/l	99.8		37.8		12.9		3.4		11.9		3.54		7.48		3.26	
Trichlorobiphenyl	25323-68-6	pg/l	275		346		27.7		11.4		19.9		5.26		8.91		3.82	
Tetrachlorobiphenyl	26914-33-0	pg/l	167		469		55.7		52.8		41		24.3		10.7		12.9	
Pentachlorobiphenyl	25429-29-2	pg/l	51.1		197		24.5		51.7		48.6		62.3		8.87		56.8	
Hexachlorobiphenyl	26601-64-9	pg/l	31.3		127		11.9		63.6		30.4		97		4.45		234	
Heptachlorobiphenyl	28655-71-2	pg/l	9.86		72.6		2.73		43.6		7.8		65.4		1.29		208	
Octachlorobiphenyl	55722-26-4	pg/l	1.59		25.5		0.368		10.6		0.977		15.7		0.266		43.8	
Nonachlorobiphenyl	53742-07-7	pg/l	0.369		8.55		0.064	U	2.37		0.1	U	2.24		0.038	U	3.27	

Notes:

[1] Axys used PCB congener patterns to identify Aroclors and quantitated Aroclor concentrations using various combinations of congeners, depending on the identified Aroclors.

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ANC04512
BZTO104(e)004512

Table 4-6. March 2005 Surface Water Data Results - XAD.

Analysis/Analyte	CAS #	Units	Sample Name	LW2-W2005 C		LW2-W2005 F		LW2-W2011 C		LW2-W2011 F		LW2-W2013-1 C		LW2-W2013-1 F		LW2-W2013-2 C		LW2-W2013-2 F	
			Sample Date/Time	3/10/2005, 1241		3/10/2005, 1241		3/8/2005, 2205		3/8/2005, 2205		3/1/2005, 1104		3/1/2005, 1104		3/2/2005, 1000		3/2/2005, 1000	
			X Coordinate	--		--		--		--		--		--		--		--	
			Y Coordinate	--		--		--		--		--		--		--		--	
PCB Aroclors [1]																			
Aroclor 1016	12674-11-2	pg/l		0.0407	U	0.0192	U	0.0279	U	0.0211	U	0.0374	U	0.0298	U	0.0206	U	0.0231	U
Aroclor 1242	53469-21-9	pg/l		63	NJ	7.56	NJ	56.9	NJ	9.49	NJ	0.0416	U	0.0331	U	0.0229	U	0.0256	U
Aroclor 1248	12672-29-6	pg/l		0.0988	U	0.0998	U	0.0492	U	0.0539	U	1420	NJ	1850	NJ	364	NJ	229	NJ
Aroclor 1254	11097-69-1	pg/l		49.7	NJ	47.3	NJ	56.8	NJ	76.4	NJ	0.589	U	0.845	U	0.209	U	0.134	U
Aroclor 1260	11096-82-5	pg/l		12	NJ	90.8	NJ	12.7	NJ	139	NJ	132	NJ	8100	NJ	62.2	NJ	1070	NJ
Aroclor 1221	11104-28-2	pg/l		0.0211	U	0.01	U	0.0145	U	0.0109	U	0.0166	U	0.0154	U	0.0107	U	0.012	U
Aroclor 1232	11141-16-5	pg/l		0.0445	U	0.0137	U	0.0269	U	0.018	U	0.0188	U	0.0199	U	0.0213	U	0.021	U
PAHs																			
2-Methylnaphthalene	91-57-6	pg/l		3630		430	U	12300		477	U	10900		544	U	9640		185	U
Acenaphthene	83-32-9	pg/l		1240		103	U	2390		153	U	2040		132	U	1750		59	U
Acenaphthylene	208-96-8	pg/l		401	U	187	U	1000		246	U	919		191	U	534	U	113	U
Anthracene	120-12-7	pg/l		305	U	250	U	486		338	U	423		258	U	452	U	151	U
Fluorene	86-73-7	pg/l		991		116	U	2020		144	U	1960		162	U	1460		79.7	U
Naphthalene	91-20-3	pg/l		4260	U	1020	U	15300		1200	U	18400	U	1090	U	16900		520	U
Phenanthrene	85-01-8	pg/l		1610		825	U	3170		1010	U	2570		856	U	2080		444	U
Dibenz(a,h)anthracene	53-70-3	pg/l		43.6	U	101	J	60.2	U	103	J	36.9	U	90.2	U	29.4	U	51.5	U
Benz(a)anthracene	56-55-3	pg/l		171		458		178		530		118	J	453		118	J	247	U
Benzo(a)pyrene	50-32-8	pg/l		32.8	U	678		48.4	J	724		18.3	J	500	U	31.6	J	262	U
Benzo(g,h,i)perylene	205-99-2	pg/l		15.4	U	719		23.5	U	794		9.6	U	483		21.4	U	330	U
Benzo(k)fluoranthene	191-24-2	pg/l		23.8	J	530		34	J	554		16.6	J	461		28.7	J	264	
Chrysene	207-08-9	pg/l		321		813		303		878		204		700		222		417	
Fluoranthene	218-01-9	pg/l		1680		994	U	1890		1230		1310		1040	U	1090		632	U
Indeno(1,2,3-cd)pyrene	206-44-0	pg/l		38.1	U	519		62.1	J	558		35.6	U	391		31.8	U	235	
Pyrene	193-39-5	pg/l		2340		1350	U	1960		1590	U	1220		1220	U	1070		763	U
Benzo(b+j)fluoranthene	129-00-0	pg/l		42.3	J	683		50.3	J	716		23.7	J	621		45.3	J	361	U
Organochlorine Pesticides																			
2,4'-DDD	53-19-0	pg/l		18		4.3		20.5		9.19		7.33		4.45		3.98		2.54	
2,4'-DDE	3424-82-6	pg/l		1.26		1	J	1.49		1.4		0.549	J	0.559	J	0.565	J	0.488	J
2,4'-DDT	789-02-6	pg/l		2.73		0.399	U	4.59		4.57		1.65		1.84		0.457	U	0.257	U
4,4'-DDD	72-54-8	pg/l		38.6		8.05		37.1		27.9		19.1		16		6.56		5.45	
4,4'-DDE	72-55-9	pg/l		19.8		22.7		21.1		24.7		14		15.2		13.6		14.7	
4,4'-DDT	50-29-3	pg/l		5.85		2.76		10.1		32.5		4.38		8.06		0.744	J	0.598	J
Aldrin	309-00-2	pg/l		1.07	J	0.406	J	1.09	J	0.504	J	0.791	J	0.387	J	1.44	J	0.333	J
alpha-Hexachlorocyclohexane	319-84-6	pg/l		14.1		0.025	U	11.1		0.077	J	10.7		0.037	U	3.75		0.021	U
beta-Hexachlorocyclohexane	319-85-7	pg/l		4.19		0.028	U	4.89		0.096	U	3.45		0.063	U	1.84	J	0.055	U
delta-Hexachlorocyclohexane	319-86-8	pg/l		1.54	U	1.55	U	1.52	U	1.51	U	1.38	U	1.37	U	1.53	U	1.53	U
gamma-Hexachlorocyclohexane	58-89-9	pg/l		30.7		0.034	U	29.4		0.109	J	29.1		0.064	U	7.23		0.029	U
cis-Chlordane	5103-71-9	pg/l		7.25		1.28	J	8.14		2.21	J	6.51		1.67	J	4.67		1.5	J
trans-Chlordane	5103-74-2	pg/l		5.37		1.25	J	6		2.27	J	4.91		1.66	J	3.59		1.54	J
Oxychlordane	27304-13-8	pg/l		1.3	J	0.12	J	1.56	J	0.266	J	1.13	J	0.19	J	1.08	J	0.168	J
cis-Nonachlor	5103-73-1	pg/l		1.45	J	0.448	U	1.61	J	0.909	J	1.28	J	0.739	J	0.654	J	0.463	J
trans-Nonachlor	39765-80-5	pg/l		4.51		1.14	J	4.99		2.7		4.07		1.83	J	2.56		1.59	J
Dieldrin	60-57-1	pg/l		31.9		1.9	J	37.3		3.2	J	29.1		2.35	J	22.7		1.95	U
alpha-Endosulfan	959-98-8	pg/l		10.4		0.988	U	5.13		0.935	U	8.07	U	0.871	U	5.16		0.574	U
beta-Endosulfan	33213-65-9	pg/l		7.26		2.41	U	11.1		0.909	U	8.2		1.08	U	3.7	J	1.11	J
Endosulfan sulfate	1031-07-8	pg/l		74.5		5.87	U	77.9		2.69	J	71.4		5.18	U	5.23		5.78	U

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ANC04513
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Table 4-6. March 2005 Surface Water Data Results - XAD.

Analysis/Analyte	CAS #	Units	Sample Name		LW2-W2005 C		LW2-W2005 F		LW2-W2011 C		LW2-W2011 F		LW2-W2013-1 C		LW2-W2013-1 F		LW2-W2013-2 C		LW2-W2013-2 F	
			Sample Date/Time		3/10/2005, 1241		3/10/2005, 1241		3/8/2005, 2205		3/8/2005, 2205		3/1/2005, 1104		3/1/2005, 1104		3/2/2005, 1000		3/2/2005, 1000	
			X Coordinate		--		--		--		--		--		--		--		--	
			Y Coordinate		--		--		--		--		--		--		--		--	
Endrin	72-20-8	pg/l			1.04	J	0.856	U	0.978	J	0.833	U	0.787	J	0.754	U	2.11	U	0.842	U
Endrin aldehyde	7421-93-4	pg/l			8.26	U	3.32	U	8.11	U	3.24	U	7.4	U	2.93	U	8.19	U	3.27	U
Endrin ketone	53494-70-5	pg/l			0.803	J	2.71	U	0.575	J	2.64	U	0.57	J	2.39	U	6.68	U	2.67	U
Heptachlor	76-44-8	pg/l			0.224	U	0.04	U	0.266	J	0.05	U	0.298	U	0.06	U	0.168	U	0.057	U
Heptachlor epoxide	1024-57-3	pg/l			5.2		0.855	U	5.11		0.832	U	4.25	J	0.754	U	3.41	J	0.842	U
Methoxychlor	72-43-5	pg/l			2.63	J	0.785	U	3.07	J	2.06	U	2.74	J	3.28	J	1.28	U	0.773	U
Hexachlorobenzene	118-74-1	pg/l			44.1		6.34		55.4		6.09		44.2		4.27		37.7		3.68	
Hexachlorobutadiene	87-68-3	pg/l			1.78	UJ	0.11	UJ	3.46	J	0.28	UJ	0.711	J	0.061	UJ	0.768	UJ	0.171	UJ
Phthalate Esters																				
Dimethyl phthalate	131-11-3	pg/l			314	U	32.2	U	288	U	43.3	U	308	U	48.2	U	307	U	36.2	U
Diethyl phthalate	84-66-2	pg/l			802	J	94.5	U	884	J	100	U	1000	J	82.4	U	1080	J	93.5	U
Diburyl phthalate	84-74-2	pg/l			1210	U	427	U	1340	U	303	U	1430	U	331	U	1410	U	312	U
Butylbenzyl phthalate	85-68-7	pg/l			1110	J	182	U	1530	J	225	U	961	J	196	U	932	J	259	U
Di-n-octyl phthalate	117-84-0	pg/l			102	U	114	U	128	U	168	U	75.9	U	157	U	107	U	185	U
Bis(2-ethylhexyl) phthalate	117-81-7	pg/l			3120	U	4910	U	3460	U	6390	U	3380	U	5600	U	3580	U	6930	U
Chlorinated Dioxin/Furan Homologs																				
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/l			0.0962		0.201		0.111		0.143		0.11		0.111		6.1		0.181	
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/l			0.0425		0.221		0.0434		0.0886		0.0325		0.119		0.783		0.296	
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/l			0.0515		1.17		0.0527		0.593		0.0558		1.05		0.969		1.59	
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/l			0.145		5.83		0.14		5.17		0.165		8.5		1.9		8.57	
Octachlorodibenzo-p-dioxin	3268-87-9	pg/l			0.276		18.2		0.285		25.2		0.38		31.9		2.32		26.4	
Tetrachlorodibenzofuran homologs	30402-14-3	pg/l			0.0678		0.147		0.0715		0.173		0.0694		0.139		0.259		0.112	
Pentachlorodibenzofuran homologs	30402-15-4	pg/l			0.0267		0.169		0.0334		0.235		0.034		0.342		0.107		0.226	
Hexachlorodibenzofuran homologs	55684-94-1	pg/l			0.0253		0.327		0.0231		0.52		0.0259		0.652		0.059		0.465	
Heptachlorodibenzofuran homologs	38998-75-3	pg/l			0.0191		0.577		0.0223		0.867		0.0167		1.04		0.0377		0.672	
Octachlorodibenzofuran	39001-02-0	pg/l			0.00671	J	0.358		0.00889	J	0.704		0.00807	J	0.877		0.0109	J	0.256	
Chlorinated Dioxins/Furans																				
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/l			0.00163	U	0.00518	J	0.00204	U	0.00352	U	0.00164	U	0.00367	U	0.00165	U	0.00499	U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/l			0.00137	U	0.0118	J	0.0015	J	0.0104	J	0.00175	J	0.0123	J	0.00968	J	0.0144	J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/l			0.00257	U	0.0263	J	0.00229	U	0.016	J	0.00271	U	0.023	J	0.0127	J	0.0346	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/l			0.00541	J	0.135		0.00564	J	0.0842		0.00719	J	0.131		0.0839		0.192	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/l			0.00367	J	0.0799		0.0036	J	0.0475		0.0047	J	0.0631		0.0483		0.0995	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/l			0.0762		3.06		0.0747		2.29		0.0829		4.4		1.03		4.61	
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/l			0.00391	J	0.0219		0.00577	J	0.0403		0.0026	J	0.0131		0.00784		0.0117	
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/l			0.00242	J	0.0196	J	0.00278	J	0.0353		0.00114	J	0.00919	J	0.00495	J	0.00919	J
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/l			0.0025	U	0.0121	J	0.00259	U	0.0196	J	0.00196	U	0.0118	J	0.0161	U	0.0139	J
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/l			0.00277	J	0.0398		0.00291	J	0.106		0.00268	J	0.0807		0.012	J	0.0345	
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/l			0.0026	J	0.0156	J	0.00225	J	0.0306		0.00219	J	0.0221	J	0.00477	J	0.0186	J
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/l			0.00105	U	0.00145	U	0.00103	U	0.00258	U	0.000937	U	0.00178	J	0.000557	U	0.00127	J
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/l			0.000658	J	0.00865	J	0.000908	J	0.0113	J	0.000815	J	0.0137	J	0.00192	J	0.0113	J
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/l			0.00481	J	0.2		0.00626	J	0.292		0.00593	J	0.336		0.0154	J	0.25	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/l			0.00415	J	0.0155	J	0.00383	J	0.0312		0.00282	U	0.0662		0.00487	J	0.0213	J
PCB Congeners																				
2-Chlorobiphenyl	2051-60-7	pg/l			0.481		0.0538	U	0.845		0.0602	U	2.44		0.689		1.02		0.187	
3-Chlorobiphenyl	2051-61-8	pg/l			0.207		0.0756	U	0.263		0.0773		0.383		0.103		0.378		0.0633	U

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ANC04514
BZTO104(e)004514

Table 4-6. March 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W2005 C		LW2-W2005 F		LW2-W2011 C		LW2-W2011 F		LW2-W2013-1 C		LW2-W2013-1 F		LW2-W2013-2 C		LW2-W2013-2 F	
		Sample Date/Time	3/10/2005, 1241		3/10/2005, 1241		3/8/2005, 2205		3/8/2005, 2205		3/1/2005, 1104		3/1/2005, 1104		3/2/2005, 1000		3/2/2005, 1000	
		X Coordinate	--		--		--		--		--		--		--		--	
		Y Coordinate	--		--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																
4-Chlorobiphenyl	2051-62-9	pg/l	0.264		0.0939	U	0.375		0.108	U	0.781		1.08		0.463		0.327	
2,2'-Dichlorobiphenyl	13029-08-8	pg/l	15.2		0.36		17.8		0.503		332		31.6		76.1		4.7	
2,3-Dichlorobiphenyl	16605-91-7	pg/l	0.0407		0.0351	U	0.0542		0.0343	U	0.065		0.0309	U	0.0506		0.0347	U
2,3'-Dichlorobiphenyl	25569-80-6	pg/l	0.509		0.0573		0.69		0.0665		1.95		0.355		0.77		0.0967	
2,4-Dichlorobiphenyl	33284-50-3	pg/l	0.139	U	0.0178	J	0.16	U	0.0168	U	0.637		0.116		0.25		0.0471	
2,4'-Dichlorobiphenyl	34883-43-7	pg/l	1.83		0.224		2.35		0.256		3.8		0.612		2.21		0.219	
2,5-Dichlorobiphenyl	34883-39-1	pg/l	0.173		0.0169	J	0.228		0.0209	J	0.737		0.109		0.254		0.0257	
2,6-Dichlorobiphenyl	33146-45-1	pg/l	0.633		0.0276		0.715		0.0414		17.5		2.78		4.79		0.516	
3,3'-Dichlorobiphenyl	2050-67-1	pg/l	19.7		2.5		17.2		2.43		13.3		1.75		12.6		2.3	
PCB012 & 013	PCB012_013	pg/l	0.425		0.0878		0.41		0.0946		2.2		1.5		0.965		0.361	
3,5-Dichlorobiphenyl	34883-41-5	pg/l	0.0303	U	0.0305	U	0.0167	J	0.0298	U	0.0271	U	0.0269	U	0.0623	U	0.0302	U
4,4'-Dichlorobiphenyl	2050-68-2	pg/l	1.88		0.54		1.71		0.589		3.95		5.02		1.8		1.28	
2,2',3-Trichlorobiphenyl	38444-78-9	pg/l	2.27		0.145		1.88		0.171		2.61		0.402		1.71		0.125	
2,2',4-Trichlorobiphenyl	37680-66-3	pg/l	5.67		0.29		5.33		0.474		85.5		20.9		17		2.98	
PCB018 & 030	PCB018_030	pg/l	6.4		0.318		5.67		0.408		16		3.08		5.14		0.572	
2,2',6-Trichlorobiphenyl	38444-73-4	pg/l	16.2		1.11		17.3		2.08		564		183		130		25	
PCB020 & 028	PCB020_028	pg/l	6.97		1.23		5.78		1.49		9.09		3.71		4.57		1.19	
PCB021 & 033	PCB021_033	pg/l	1.97		0.347		1.64		0.445		4.31		3.02		1.87		0.544	
2,3,4'-Trichlorobiphenyl	38444-85-8	pg/l	1.89		0.267		1.6		0.345		1.28		0.166		1.14		0.157	
2,3,5-Trichlorobiphenyl	55720-44-0	pg/l	0.0231	U	0.0233	U	0.0104	J	0.0228	U	0.102		0.0157	J	0.0299		0.023	U
2,3,6-Trichlorobiphenyl	55702-45-9	pg/l	0.0803		0.0095	J	0.0756		0.0083	J	0.0273	U	0.027	U	0.0303	U	0.0303	U
2,3',4-Trichlorobiphenyl	55712-37-3	pg/l	0.818		0.113		0.754		0.177		6.57		3.91		1.94		0.585	
PCB026 & 029	PCB026_029	pg/l	1.52		0.191		1.41		0.275		7.49		2.87		2.09		0.548	
2,3',6-Trichlorobiphenyl	38444-76-7	pg/l	1.96		0.158		1.73		0.271		47.3		19.9		9.94		2.64	
2,4',5-Trichlorobiphenyl	16606-02-3	pg/l	5.8		0.746		5.15		1.01		5.61		1.39		3.71		0.612	
2,4',6-Trichlorobiphenyl	38444-77-8	pg/l	3.07		0.157		2.87		0.281		25.2		6.25		6.48		0.966	
2,3',5'-Trichlorobiphenyl	37680-68-5	pg/l	0.043		0.0056	U	0.0421		0.007	J	0.231		0.0543		0.0704		0.0143	J
3,3',4-Trichlorobiphenyl	37680-69-6	pg/l	0.137		0.0486		0.134		0.0654		0.104		0.0518		0.119		0.0609	
3,3',5-Trichlorobiphenyl	38444-87-0	pg/l	0.0403		0.0094	U	0.0465		0.0155	J	0.0149	U	0.0137	U	0.0216	J	0.0124	J
3,4,4'-Trichlorobiphenyl	38444-90-5	pg/l	1.05		0.58		0.865		0.629		0.753		0.536		0.666		0.357	
3,4,5-Trichlorobiphenyl	53555-66-1	pg/l	0.0358		0.0222	J	0.0269		0.0103	U	0.286		0.434		0.115		0.0623	
3,4',5-Trichlorobiphenyl	38444-88-1	pg/l	0.0712	U	0.015	J	0.0609	U	0.0185	U	0.108	U	0.103		0.0547	U	0.0267	
PCB040 & 041 & 071	PCB040_041_071	pg/l	3.95		1.05		3.59		1.29		12.2		13.7		4.8		2.19	
2,2',3,4'-Tetrachlorobiphenyl	36559-22-5	pg/l	1.68		0.477		1.51		0.542		3.36		3.48		1.52		0.651	
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	pg/l	0.44		0.0926		0.373		0.128		5.78		6.74		1.69		0.86	
PCB044 & 047 & 065	PCB044_047_065	pg/l	12.1		3.32		11.2		4.77		172		234		42.2		27.6	
PCB045 & 051	PCB045_051	pg/l	4.42		0.682		4.1		1.19		83.8		67.4		20		7.96	
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	pg/l	0.685		0.115		0.594		0.138		4.92		3.45		1.43		0.468	
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	pg/l	1.27		0.289		1.16		0.314		2.55		2.12		1.07		0.397	
PCB049 & 069	PCB049_069	pg/l	6.78		1.62		6.9		2.23		56.8		65		14.9		8.15	
PCB050 & 053	PCB050_053	pg/l	5.3		0.702		5.44		1.24		91.3		61.6		24.5		7.38	
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	pg/l	11.8		2.59		12.2		3.26		67.2		69.4		19.6		9.03	
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	pg/l	1.86		0.319		1.91		0.601		62.5		54.3		14.8		6.16	
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	pg/l	0.0348	U	0.0257	U	0.0344	U	0.0363		0.045		0.0468	U	0.0401		0.0347	U
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	pg/l	1.63		0.851		1.69		1.17		1.17		0.883		1.08		0.609	
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	pg/l	0.0692		0.0654	U	0.0717		0.0417		1.65		1.94		0.356		0.361	
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	pg/l	0.023	J	0.127	U	0.0261	U	0.0121	J	0.113	U	0.112	U	0.126	U	0.126	U
PCB059 & 062 & 075	PCB059_062_075	pg/l	0.955		0.256		0.846		0.342		13		15.9		3.43		1.93	
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	pg/l	0.719		0.402		0.693		0.471		0.529		0.403		0.497		0.267	

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ANC04515
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Table 4-6. March 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W2005 C		LW2-W2005 F		LW2-W2011 C		LW2-W2011 F		LW2-W2013-1 C		LW2-W2013-1 F		LW2-W2013-2 C		LW2-W2013-2 F	
		Sample Date/Time	3/10/2005, 1241		3/10/2005, 1241		3/8/2005, 2205		3/8/2005, 2205		3/1/2005, 1104		3/1/2005, 1104		3/2/2005, 1000		3/2/2005, 1000	
		X Coordinate	--		--		--		--		--		--		--		--	
		Y Coordinate	--		--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																
PCB061 & 070 & 074 & 076	PCB061_070_074_	pg/l	7.05		3.18		7.69		4.42		6.6		7.56		4.9		2.94	
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	pg/l	0.202		0.0821		0.221		0.114		0.621		0.905		0.244		0.177	
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	pg/l	2.67		0.8		2.38		0.841		2.14		1.23		1.69		0.536	
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	pg/l	3.72		2.01		3.62		2.55		4.06		5.31		2.57		1.82	
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	pg/l	0.18		0.082		0.196		0.152		1.12		2.87		0.366		0.426	
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	pg/l	0.116	U	0.046		0.117	U	0.0833		1.47		2.83		0.41		0.404	
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	pg/l	0.119		0.0384		0.115		0.0595		0.83		1.47		0.249		0.23	
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	pg/l	0.331		0.0795		0.335		0.0726		9.05		3.94		1.97		1.24	
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	pg/l	0.213		0.252		0.199		0.308		0.176		0.309		0.162		0.193	
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	pg/l	0.0315	U	0.0317	U	0.0311	U	0.02	U	0.0282	U	0.229	U	0.0314	U	0.0315	U
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	pg/l	0.0915		0.0729		0.0849		0.0972		0.274		1.01		0.127		0.228	
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	pg/l	0.0407	U	0.0409	U	0.0402	U	0.0401	U	0.0365	U	0.0434	U	0.0406	U	0.0405	U
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	pg/l	0.0494	U	0.0497	U	0.0487	U	0.0486	U	0.0442	U	0.0446	U	0.0492	U	0.0491	U
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	pg/l	0.427		0.467		0.439		0.69		0.566		1.77		0.387		0.454	
PCB083 & 099	PCB083_099	pg/l	3.12		3.09		3.67		5.16		22.5		89.7		7.91		12	
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	pg/l	1.69		1.03		1.65		1.53		11.8		29		3.76		3.89	
PCB085 & 116 & 117	PCB085_116_117	pg/l	0.782		0.815		0.83		1.26		2.41		8.52		1.01		1.38	
PCB086 & 087 & 097 & 108 & 119 & 125	PCB086_087_097_	pg/l	3.09		2.82		3.43		4.39		12.8		44.3		4.96		6.77	
PCB088 & 091	PCB088_091	pg/l	1.45		0.896		1.53		1.54		14.8		41.2		4.39		4.6	
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	pg/l	0.0655		0.0494		0.0684		0.0628		0.226		0.549		0.0913		0.0799	
PCB090 & 101 & 113	PCB090_101_113	pg/l	6.54		5.33		7.3		8.82		58.2		214		18.1		25.7	
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	pg/l	1.81		1.35		1.97		2.19		25.5		82.7		7.09		11.4	
PCB093 & 095 & 098 & 100 & 102	PCB093_095_098_	pg/l	8.69		4.65		9.12		7.57		112		267		30.3		31.2	
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	pg/l	0.373		0.194		0.338		0.339		9.78		22.2		2.68		2.83	
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	pg/l	0.216		0.0874		0.198		0.138		3.87		7.29		1.06		0.716	
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	pg/l	0.426		0.227		0.45		0.372		6.57		15.5		1.74		1.77	
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	pg/l	0.0763		0.0475		0.0762		0.0842		1.9		4.98		0.533		0.63	
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	pg/l	0.927		1.48		1.08		2.62		0.993		3.71		0.782		1.45	
2,3,3',4,5-Pentachlorobiphenyl	70424-69-0	pg/l	0.139	U	0.14	U	0.137	U	0.137	U	0.116		0.97		0.0343		0.182	
PCB107 & 124	PCB107_124	pg/l	0.107		0.164		0.143		0.315		0.194		1.16		0.118		0.266	J
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	pg/l	0.242		0.355		0.274		0.581		0.661		4.09		0.342		0.799	
PCB110 & 115	PCB110_115	pg/l	5.1		5.1		5.7		7.97		17.2		59.6		7.33		9.65	
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	pg/l	0.0134	J	0.0151	J	0.0106	J	0.0216	U	0.156		0.833		0.0518		0.122	
2,3,3',5,6-Pentachlorobiphenyl	74472-36-9	pg/l	0.0254	U	0.138		0.0251	U	0.255		6.77		22.1		1.65		3.46	
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	pg/l	0.065		0.0832		0.0805		0.158		0.0767		0.227		0.0444		0.0764	
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	pg/l	2.58		3.75		3.07		6.94		6.1		38.2		2.94		7.41	
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	pg/l	0.0312		0.0484		0.0354		0.0684		0.296		1.82		0.109		0.279	
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	pg/l	0.0316		0.0222	J	0.0388	U	0.0414		0.704		2.14		0.178		0.256	
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	pg/l	0.0323		0.0627		0.0408		0.0881		0.0601		0.271		0.0342		0.0758	U
2,3',4,4',5'-Pentachlorobiphenyl	65510-44-3	pg/l	0.0725		0.0848		0.0822		0.128		0.103		0.505	U	0.0857		0.109	U
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	pg/l	0.0376	U	0.0241		0.0167	J	0.031		0.0337	U	0.209		0.0086	U	0.0667	U
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	pg/l	0.0389	U	0.019	J	0.0383	U	0.0253	U	0.032		0.307		0.0132	J	0.0546	U
PCB128 & 166	PCB128_166	pg/l	0.318		1.11		0.339		2.07		1.48		29.8		0.801		5.06	
PCB129 & 138 & 160 & 163	PCB129_138_160_	pg/l	4.17		11.2		4.28		19.3		38.2		662		15.3		105	
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	pg/l	0.236		0.555		0.248		1		1.41		22		0.619		3.77	
2,2',3,3',4,6-Hexachlorobiphenyl	61798-70-7	pg/l	0.0469		0.0901		0.0457		0.162		0.328		3.9		0.126		0.769	
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	pg/l	1.48		3.17		1.41		5.34		12.4		160		4.86		25.8	
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	pg/l	0.152		0.298		0.145		0.466		1.68		20.7		0.62		3.64	
PCB134 & 143	PCB134_143	pg/l	0.37		0.638		0.351		1.08		4.69		49		1.58		7.75	

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Table 4-6. March 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W2005 C		LW2-W2005 F		LW2-W2011 C		LW2-W2011 F		LW2-W2013-1 C		LW2-W2013-1 F		LW2-W2013-2 C		LW2-W2013-2 F	
		Sample Date/Time	3/10/2005, 1241		3/10/2005, 1241		3/8/2005, 2205		3/8/2005, 2205		3/1/2005, 1104		3/1/2005, 1104		3/2/2005, 1000		3/2/2005, 1000	
		X Coordinate	--		--		--		--		--		--		--		--	
		Y Coordinate	--		--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																
PCB135 & 151 & 154	PCB135_151_154	pg/l	3.25		4.94		3.36		8.11		45		428		14.7		63.2	
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	pg/l	1.12		1.47		1.06		2.6		14.1		106		4.55		15.8	
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	pg/l	0.109		0.271		0.12		0.556		0.476		6.87		0.195		1.31	
PCB139 & 140	PCB139_140	pg/l	0.0676		0.138		0.0784		0.275		0.428		5.23		0.161		0.525	J
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	pg/l	0.928		2.37		0.951		3.91		10.8		192		4.26		29.8	
2,2',3,4,5,6-Hexachlorobiphenyl	41411-61-4	pg/l	0.0359	U	0.0361	U	0.0354	U	0.0409	U	0.0321	U	0.223		0.0357	U	0.0948	U
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	pg/l	0.291		0.488		0.298		0.853		3.28		31.7		1.18		4.78	
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	pg/l	0.0017	U	0.0042	U	0.0032	U	0.0089	J	0.0388		0.284		0.011	U	0.0393	U
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	pg/l	1.01		2.06		1.17		3.49		9.53		129		3.53		21.9	
PCB147 & 149	PCB147_149	pg/l	5.51		9.61		5.35		16.1		61.1		647		21.3		93.9	
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	pg/l	0.0441		0.0767		0.0411		0.121		0.661		5.42		0.205		0.82	
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	pg/l	0.0496		0.0604		0.0394		0.104		0.533		4.1		0.166		0.584	
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	pg/l	0.042		0.0528		0.0327		0.0877		0.817		5.95		0.245		0.842	
PCB153 & 168	PCB153_168	pg/l	4.46		10.6		4.79		17.7		49.2		775		17.9		116	
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	pg/l	0.0066	U	0.0151	J	0.0067	J	0.0247		0.105		1.13		0.0393		0.155	
PCB156 & 157	PCB156_157	pg/l	0.223		0.886		0.254		1.71		1.37		37.8		0.637		6.22	
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	pg/l	0.357		0.957		0.384		1.69		2.91		54.4		1.25		8.56	
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	pg/l	0.06		0.285		0.0482		0.432		0.53		20.8		0.24		3.52	
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	pg/l	0.0614	U	0.0617	U	0.0605	U	0.0604	U	0.055	U	0.0545	U	0.0611	U	0.0648	U
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	pg/l	0.0545	U	0.0272		0.0059	J	0.048		0.034		0.635		0.0188	J	0.123	
2,3,3',4',5',6-Hexachlorobiphenyl	74472-45-0	pg/l	0.348		0.867		0.343		1.42		3.4		51.1		1.42		8.6	
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	pg/l	0.0118	U	0.0232	J	0.0108	J	0.0376		0.202		2.08		0.0678		0.368	
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	pg/l	0.0966		0.35		0.104		0.626		0.632		16.3		0.284		2.73	
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	pg/l	0.0397	U	0.0399	U	0.0392	U	0.0391	U	0.049	U	1.4	U	0.0396	U	0.211	U
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	pg/l	0.485		4.36		0.506		6.67		5.35		406		2.54		52	
PCB171 & 173	PCB171_173	pg/l	0.227		1.42		0.194		2.19		2.21		114		1.05		15.1	
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	pg/l	0.111		0.797		0.109		1.22		1.15		61.7		0.574		8.35	
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	pg/l	0.834		4.84		0.806		7.46		9.42		440		4.28		54.7	
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	pg/l	0.0369		0.187		0.0368		0.284		0.369		13.6		0.168		1.95	
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	pg/l	0.114		0.575		0.111		0.935		1.31		46.4		0.559		6.32	
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	pg/l	0.484		2.91		0.478		4.43		4.94		232		2.34		31.6	
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	pg/l	0.235		1.09		0.237		1.7		2.52		86		1.12		11.9	
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	pg/l	0.481		2.04		0.486		3.23		5.65		174		2.27		24.9	
PCB180 & 193	PCB180_193	pg/l	1.32		10.5		1.44		16.1		14.8		932		7.14		125	
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	pg/l	0.0778	U	0.0293		0.0055	J	0.0492		0.0288		1.54		0.0162	J	0.22	
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	pg/l	0.0435	U	0.0352		0.0093	J	0.0567		0.055		1.77		0.0251		0.289	
PCB183 & 185	PCB183_185	pg/l	0.602		3.29		0.605		4.98		6.2		282		2.77		36.3	
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	pg/l	0.0007	U	0.0081	J	0.0037	J	0.0126	U	0.0072	J	0.142		0.0025	U	0.028	
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	pg/l	0.0658	U	0.0661	U	0.0005	U	0.0026	U	0.0589	U	0.11		0.0655	U	0.018	J
2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	pg/l	1.17		5.79		1.19		8.93		11.7		450		5.32		61	
2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	pg/l	0.0055	J	0.0193	J	0.0058	J	0.0253		0.0427		1.29		0.0189	J	0.188	
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	pg/l	0.0177	J	0.148		0.0175	U	0.239		0.142		13.3		0.0722		2.28	
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	pg/l	0.118		0.924		0.114		1.43		1.21		76.2		0.577		10.6	
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	pg/l	0.0248		0.188		0.0273		0.29		0.296		14		0.141		2.04	
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	pg/l	0.0006	U	0.056	U	0.0549	U	0.0547	U	0.0498	U	0.0494	U	0.0554	U	0.0554	U
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	pg/l	0.147		2.31		0.156		3.36		1		221		0.596		36.4	
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	pg/l	0.0547		0.957		0.0584		1.39		0.491		88.2		0.272		15.9	
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	pg/l	0.103	U	1.27		0.108	U	1.85		0.725		104		0.422		17.7	
PCB197 & 200	PCB197_200	pg/l	0.0437	U	0.414		0.0421	U	0.634		0.235		28.4		0.134		4.51	

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Table 4-6. March 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W2005 C		LW2-W2005 F		LW2-W2011 C		LW2-W2011 F		LW2-W2013-1 C		LW2-W2013-1 F		LW2-W2013-2 C		LW2-W2013-2 F	
		Sample Date/Time	3/10/2005, 1241		3/10/2005, 1241		3/8/2005, 2205		3/8/2005, 2205		3/1/2005, 1104		3/1/2005, 1104		3/2/2005, 1000		3/2/2005, 1000	
		X Coordinate	--		--		--		--		--		--		--		--	
		Y Coordinate	--		--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																
PCB198 & 199	PCB198_199	pg/l	0.26	U	2.61		0.252	U	3.78		1.48		190		0.85		29.9	
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	pg/l	0.0452	U	0.325		0.0377	U	0.477		0.2		21.5		0.129		3.3	
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	pg/l	0.0934	U	0.483		0.0693	U	0.69		0.337		28.4		0.202		4.8	
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	pg/l	0.163	U	1.58		0.146	U	2.25		0.827		120		0.489		20.6	
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	pg/l	0.0733	U	0.0014	U	0.0723	U	0.0036	U	0.0656	U	0.0423		0.0014	J	0.0089	U
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	pg/l	0.0101	J	0.118		0.0109	J	0.161		0.0561		9.5		0.0288		1.58	
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	pg/l	0.0703		1.18		0.0548	U	1.3		0.122		32.8		0.139		6.08	
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	pg/l	0.0201	J	0.146		0.0166	J	0.188		0.0282		4.91		0.0242		0.987	
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	pg/l	0.043		0.386		0.0337		0.396		0.0467		5.44		0.0519		1.12	
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	pg/l	0.027	U	1.22		0.0315		1.15		0.0236		1.12		0.033		0.81	
Polychlorinated biphenyls	1336-36-3	pg/l	236		166		237		259		2420		9550		681		1380	
PCB Homologs																		
Monochlorobiphenyl	27323-18-8	pg/l	0.952		0.148		1.48		0.186		3.6		1.87		1.86		0.578	
Dichlorobiphenyl	25512-42-9	pg/l	40.5		3.83		41.3		4		376		43.8		99.9		9.54	
Trichlorobiphenyl	25323-68-6	pg/l	56		5.75		52.3		8.15		776		250		187		36.4	
Tetrachlorobiphenyl	26914-33-0	pg/l	68.4		19.4		67.2		26.5		605		627		165		82.2	
Pentachlorobiphenyl	25429-29-2	pg/l	38		32.4		41.6		53.3		316		964		97.7		127	
Hexachlorobiphenyl	26601-64-9	pg/l	24.7		52.6		25.3		89.3		265		3470		96.3		532	
Heptachlorobiphenyl	28655-71-2	pg/l	6.27		39.2		6.36		60.2		67.5		3340		31		445	
Octachlorobiphenyl	55722-26-4	pg/l	0.921	U	10.1		0.811	U	14.6		5.36		810		3.13		135	
Nonachlorobiphenyl	53742-07-7	pg/l	0.133		1.71		0.05		1.88		0.197		43.2		0.215		8.19	

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ANC04518
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Table 4-6. March 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W2015 C		LW2-W2015 F		LW2-W2016 C		LW2-W2016 F		LW2-W2018 C		LW2-W2018 F		LW2-W2023 C		LW2-W2023 F	
		Sample Date/Time	3/14/2005, 0910		3/14/2005, 0910		3/15/2005, 0923		3/15/2005, 0923		3/3/2005, 0856		3/3/2005, 0856		3/7/2005, 1316		3/7/2005, 1316	
		X Coordinate	--		--		--				--		–		--		--	
		Y Coordinate	--		--		--				--		–		--		--	
Analysis/Analyte	**CAS #**	**Units**																
PCB Aroclors [1]																		
Aroclor 1016	12674-11-2	pg/l	0.02	U	0.0377	U	0.0278	U	0.0221	U	0.0304	U	0.0265	U	0.0152	U	0.0218	U
Aroclor 1242	53469-21-9	pg/l	72.3	NJ	21.1	NJ	0.0309	U	0.0246	U	47.4	NJ	14	NJ	32.4	NJ	4.12	NJ
Aroclor 1248	12672-29-6	pg/l	0.0625	U	0.163	U	161	NJ	91.7	NJ	0.0937	U	0.0696	U	0.0392	U	0.0868	U
Aroclor 1254	11097-69-1	pg/l	65.2	NJ	93.4	NJ	0.0604	U	0.0799	U	236	NJ	331	NJ	24.6	NJ	21.9	NJ
Aroclor 1260	11096-82-5	pg/l	13.4	NJ	113	NJ	9.65	NJ	66.6	NJ	51.7	NJ	527	NJ	4.33	NJ	23.5	NJ
Aroclor 1221	11104-28-2	pg/l	0.0146	U	0.0195	U	0.0147	U	0.0115	U	0.0158	U	0.0137	U	0.0082	U	0.0113	U
Aroclor 1232	11141-16-5	pg/l	0.0354	U	0.0214	U	0.0358	U	0.0185	U	0.0267	U	0.026	U	0.02	U	0.0175	U
PAHs																		
2-Methylnaphthalene	91-57-6	pg/l	6050		292	U	2590		705	U	4270		5380		24100		412	U
Acenaphthene	83-32-9	pg/l	10500		176	U	1000		150	U	1730		664		832		74.3	U
Acenaphthylene	208-96-8	pg/l	1380		296	U	277	U	247	U	421		708	U	1410		159	U
Anthracene	120-12-7	pg/l	860		450		299	U	285	U	277	U	1550		381	U	128	U
Fluorene	86-73-7	pg/l	4720		192	U	972		176	U	1170		2180		1350		117	U
Naphthalene	91-20-3	pg/l	18000		877	U	4240	U	1390	U	6850		6670	U	34500		1010	U
Phenanthrene	85-01-8	pg/l	5970		1240	U	2030		1080	U	1620		3640		1750		601	U
Dibenz(a,h)anthracene	53-70-3	pg/l	51	U	246	U	41.2	U	126	U	56.7	U	337		43.4	U	37.5	U
Benz(a)anthracene	56-55-3	pg/l	461		1140		165		478		164		1410		75.3	J	167	U
Benzo(a)pyrene	50-32-8	pg/l	63.2	J	1690		34.8	J	755		34.7	U	1610		28.3	J	238	U
Benzo(g,h,i)perylene	205-99-2	pg/l	31.3	J	1790		19.9	U	787		24.9	U	1850		19.1	U	329	U
Benzo(k)fluoranthene	191-24-2	pg/l	96.4	J	1540		37.8	J	688		26.8	J	1680		15.7	J	173	U
Chrysene	207-08-9	pg/l	904		2030		326		1010		374		2670		133	J	297	
Fluoranthene	218-01-9	pg/l	7430		2560		1920		1130	U	1740		3600		591		446	U
Indeno(1,2,3-cd)pyrene	206-44-0	pg/l	59.7	U	1500		39	U	589		65.2	U	1450		42.1	U	185	
Pyrene	193-39-5	pg/l	5880		3220		2170		1580		2720		4480		708		654	U
Benzo(b+j)fluoranthene	129-00-0	pg/l	177		1860		65.7	J	971		50.5	J	2300		23.8	J	240	U
Organochlorine Pesticides																		
2,4'-DDD	53-19-0	pg/l	649		485		140		97.9		8.87		4.94	J	3.8		1.02	J
2,4'-DDE	3424-82-6	pg/l	25		37.5		7.64	J	10.6	J	0.795	J	0.769	J	0.393	J	0.313	J
2,4'-DDT	789-02-6	pg/l	62		107		27.9		54.5		0.977	J	6.91		1.04	J	0.168	U
4,4'-DDD	72-54-8	pg/l	1110		1270		228		252		23.8		12		10.7		1.3	
4,4'-DDE	72-55-9	pg/l	111		252		48.2		106		14.7		16.7		12.4		11.6	
4,4'-DDT	50-29-3	pg/l	138		964		42.3		222		2.68		10.1		3.24		0.18	U
Aldrin	309-00-2	pg/l	1.42	J	0.693	J	1.4	J	0.652	J	0.972	J	0.629	J	0.646	J	0.197	J
alpha-Hexachlorocyclohexane	319-84-6	pg/l	16.5		0.251	J	10.7		0.447	J	10.9		0.041	U	10.3		0.014	U
beta-Hexachlorocyclohexane	319-85-7	pg/l	23.4		0.597	J	8.96		0.499	J	3.46		0.047	U	3.73		0.024	U
delta-Hexachlorocyclohexane	319-86-8	pg/l	1.38	J	1.58	U	1.53	U	1.52	U	1.53	U	1.53	U	1.55	U	1.56	U
gamma-Hexachlorocyclohexane	58-89-9	pg/l	29.8		0.296	J	24.1		0.154	J	30.3		0.083	U	29.6		0.01	U
cis-Chlordane	5103-71-9	pg/l	7.88		3.64		7.54		2.6		6.92		1.98	J	6.47		0.945	J
trans-Chlordane	5103-74-2	pg/l	6.19		3.8		5.76		2.67		5.48		2.25	J	4.67		0.799	J
Oxychlordane	27304-13-8	pg/l	1.48	J	0.383	U	1.4	J	0.303	J	1.17	J	0.175	U	1.51	J	0.102	J
cis-Nonachlor	5103-73-1	pg/l	1.59	J	1.42	J	1.48	J	1.02	J	1.39	J	0.873	J	1.27	J	0.227	J
trans-Nonachlor	39765-80-5	pg/l	4.47		3.8		4.44		2.85		4		1.97	J	4.07		0.714	J
Dieldrin	60-57-1	pg/l	36		3.87	J	34.9		3.37	J	29		1.8	J	28.6		1.25	J
alpha-Endosulfan	959-98-8	pg/l	13.5		1.51	U	18		0.894	U	8.62		1.1	U	7.07		0.994	U
beta-Endosulfan	33213-65-9	pg/l	8.4	U	2.67	U	7.43		1.22	U	7.93		0.962	U	7.26		1.35	U
Endosulfan sulfate	1031-07-8	pg/l	66		1.22	U	14.7		5.75	U	74.8		5.79	U	66		0.395	J

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Table 4-6. March 2005 Surface Water Data Results - XAD.

Analysis/Analyte	CAS #	Units	Sample Name	LW2-W2015 C		LW2-W2015 F		LW2-W2016 C		LW2-W2016 F		LW2-W2018 C		LW2-W2018 F		LW2-W2023 C		LW2-W2023 F	
			Sample Date/Time	3/14/2005, 0910		3/14/2005, 0910		3/15/2005, 0923		3/15/2005, 0923		3/3/2005, 0856		3/3/2005, 0856		3/7/2005, 1316		3/7/2005, 1316	
			X Coordinate	--		--		--				--		--		--		--	
			Y Coordinate	--		--		--				--		--		--		--	
Endrin	72-20-8	pg/l		0.999	J	0.869	U	0.717	U	0.838	U	0.852	U	0.843	U	0.83	J	0.861	U
Endrin aldehyde	7421-93-4	pg/l		8.27	U	3.38	U	8.21	U	3.26	U	0.638	U	3.28	U	0.94	U	3.35	U
Endrin ketone	53494-70-5	pg/l		1.14	J	2.75	U	0.481	J	2.66	U	0.512	J	2.67	U	0.646	J	2.73	U
Heptachlor	76-44-8	pg/l		0.244	U	0.067	U	0.219	U	0.056	U	0.291	U	0.071	U	0.249	U	0.025	U
Heptachlor epoxide	1024-57-3	pg/l		4.91		0.869	U	4.75	J	0.838	U	4	J	0.843	U	4.18	J	0.861	U
Methoxychlor	72-43-5	pg/l		2.69	J	1.68	U	1.91	J	0.927	U	2.33	J	0.774	U	3.44	J	0.791	U
Hexachlorobenzene	118-74-1	pg/l		51.5		17.4		45.6		9.77		40		4.01		48.2		25	
Hexachlorobutadiene	87-68-3	pg/l		73.2	J	8.52	J	66.6	J	4.05	J	0.808	J	0.064	UJ	0.582	J	0.044	UJ
Phthalate Esters																			
Dimethyl phthalate	131-11-3	pg/l		262	U	88.9	U	339	U	42.3	U	744	J	54.8	U	266	U	35.1	U
Diethyl phthalate	84-66-2	pg/l		858	J	260	U	899	J	127	U	1190	J	85.2	U	724	J	92.7	U
Diburyl phthalate	84-74-2	pg/l		1420	U	550	U	1430	U	507	U	1620	U	391	U	1190	U	302	U
Butylbenzyl phthalate	85-68-7	pg/l		1070	J	419	U	874	J	317	U	1350	J	651	J	1280	J	192	U
Di-n-octyl phthalate	117-84-0	pg/l		323	U	241	U	179	U	135	U	87.1	U	961	U	246	U	153	U
Bis(2-ethylhexyl) phthalate	117-81-7	pg/l		3460	U	8550	U	3380	U	6600	U	3550	U	8310	U	4000	U	6320	U
Chlorinated Dioxin/Furan Homologs																			
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/l		0.215		0.226		--		--		--		--		0.112		0.497	
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/l		0.076		0.139		--		--		--		--		0.0659		0.218	
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/l		0.0914		1.01		--		--		--		--		0.0671		1.02	
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/l		0.249		7.52		--		--		--		--		0.176		3.98	
Octachlorodibenzo-p-dioxin	3268-87-9	pg/l		0.487		26		--		--		--		--		0.324		9.23	
Tetrachlorodibenzofuran homologs	30402-14-3	pg/l		0.335		1.38		--		--		--		--		0.0598		0.118	
Pentachlorodibenzofuran homologs	30402-15-4	pg/l		0.188		1.75		--		--		--		--		0.0238		0.11	
Hexachlorodibenzofuran homologs	55684-94-1	pg/l		0.195		2.42		--		--		--		--		0.021		0.213	
Heptachlorodibenzofuran homologs	38998-75-3	pg/l		0.162		1.75		--		--		--		--		0.0173		0.341	
Octachlorodibenzofuran	39001-02-0	pg/l		0.00882	J	1.4		--		--		--		--		0.00764	J	0.131	
Chlorinated Dioxins/Furans																			
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/l		0.00481	U	0.00845	U	--		--		--		--		0.00186	U	0.00953	U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/l		0.00224	J	0.0147	J	--		--		--		--		0.00169	U	0.0169	J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/l		0.0036	J	0.0311		--		--		--		--		0.00301	U	0.0247	J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/l		0.00875	J	0.117		--		--		--		--		0.00654	J	0.13	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/l		0.00543	J	0.0745		--		--		--		--		0.00402	J	0.0956	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/l		0.123		3.49		--		--		--		--		0.0936		2.09	
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/l		0.0641		0.555		--		--		--		--		0.00287	J	0.0118	
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/l		0.0472		0.657		--		--		--		--		0.00137	J	0.00579	J
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/l		0.0142	J	0.256		--		--		--		--		0.00205	U	0.00677	U
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/l		0.0245	J	1.34		--		--		--		--		0.00305	J	0.0127	J
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/l		0.026	J	0.323		--		--		--		--		0.0021	J	0.00983	J
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/l		0.004	J	0.0235	J	--		--		--		--		0.00104	U	0.00113	U
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/l		0.00192	J	0.0577		--		--		--		--		0.000666	J	0.00628	U
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/l		0.0167	J	0.776		--		--		--		--		0.0056	J	0.135	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/l		0.0507		0.258		--		--		--		--		0.00301	J	0.0101	J
PCB Congeners																			
2-Chlorobiphenyl	2051-60-7	pg/l		0.624		0.0693	U	0.536		0.114		0.849		0.98		0.814		0.048	U
3-Chlorobiphenyl	2051-61-8	pg/l		0.182		0.0834		0.293		0.104		0.214		2.43		0.351		0.134	

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Table 4-6. March 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W2015 C		LW2-W2015 F		LW2-W2016 C		LW2-W2016 F		LW2-W2018 C		LW2-W2018 F		LW2-W2023 C		LW2-W2023 F	
		Sample Date/Time	3/14/2005, 0910		3/14/2005, 0910		3/15/2005, 0923		3/15/2005, 0923		3/3/2005, 0856		3/3/2005, 0856		3/7/2005, 1316		3/7/2005, 1316	
		X Coordinate	--		--		--				--		–		--		--	
		Y Coordinate	--		--		--				--		–		--		--	
Analysis/Analyte	CAS #	Units																
4-Chlorobiphenyl	2051-62-9	pg/l	0.403		0.123	U	0.371		0.179		0.396		1.24		0.492		0.114	
2,2'-Dichlorobiphenyl	13029-08-8	pg/l	11.2		0.231		13.6		0.168		10.1		0.884		7.24		0.147	
2,3-Dichlorobiphenyl	16605-91-7	pg/l	0.0422		0.0356	U	0.0315		0.0344	U	0.0369		0.0122	U	0.0462		0.0352	U
2,3'-Dichlorobiphenyl	25569-80-6	pg/l	0.452		0.0966		0.467		0.101		0.462		0.607		0.373		0.0272	
2,4-Dichlorobiphenyl	33284-50-3	pg/l	0.114	U	0.0237	J	0.0964	U	0.0257		0.141	U	0.0751		0.116	U	0.0116	U
2,4'-Dichlorobiphenyl	34883-43-7	pg/l	1.66		0.377		1.45		0.316		1.53		0.669		1.56		0.125	
2,5-Dichlorobiphenyl	34883-39-1	pg/l	0.142		0.0282		0.135		0.0216	J	0.164		0.241		0.123		0.0105	J
2,6-Dichlorobiphenyl	33146-45-1	pg/l	0.364		0.015	J	0.457		0.0126	U	0.383		0.027		0.259		0.0435	U
3,3'-Dichlorobiphenyl	2050-67-1	pg/l	21		3.34		19.7		2.71		9.8		8.93		14.7		4.37	
PCB012 & 013	PCB012_013	pg/l	0.442		0.136		0.521		0.118		0.343		0.542		0.316		0.0904	
3,5-Dichlorobiphenyl	34883-41-5	pg/l	0.0303	U	0.031	U	0.0301	U	0.0299	U	0.0301	U	0.0243		0.0189	U	0.0214	J
4,4'-Dichlorobiphenyl	2050-68-2	pg/l	2.46		0.902		2.28		0.679		1.68		0.957		1.09		0.245	
2,2',3-Trichlorobiphenyl	38444-78-9	pg/l	2.93		0.41		3.55		0.25		1.74		0.186		1.16		0.0754	U
2,2',4-Trichlorobiphenyl	37680-66-3	pg/l	4.18		0.628		5.02		0.339		5.13		0.94		2.14		0.188	
PCB018 & 030	PCB018_030	pg/l	7.1		0.925		8.08		0.569		4.18		1.22		3.01		0.173	
2,2',6-Trichlorobiphenyl	38444-73-4	pg/l	8.75		0.654		11.4		0.617		12.8		1.43		4.16		0.529	
PCB020 & 028	PCB020_028	pg/l	8.61		3.51		9.96		2.52		5.84		1.68		3.37		0.648	
PCB021 & 033	PCB021_033	pg/l	2.08		0.804		1.92		0.565		2.19		0.762		0.856		0.173	
2,3,4'-Trichlorobiphenyl	38444-85-8	pg/l	2.51		0.804		2.6		0.484		1.22		0.306		0.983		0.148	
2,3,5-Trichlorobiphenyl	55720-44-0	pg/l	0.0136	J	0.0059	U	0.0123	J	0.0228	U	0.023	U	0.023	U	0.0098	J	0.0234	U
2,3,6-Trichlorobiphenyl	55702-45-9	pg/l	0.129		0.0181	J	0.0988		0.0151	U	0.0745		0.0095	J	0.0476		0.0044	J
2,3',4-Trichlorobiphenyl	55712-37-3	pg/l	0.792		0.253		1.03		0.254		1.14		0.383		0.339		0.0641	
PCB026 & 029	PCB026_029	pg/l	1.58		0.494		2.05		0.383		1.28		0.873		0.694		0.115	
2,3',6-Trichlorobiphenyl	38444-76-7	pg/l	1.13		0.17		1.32		0.145		1.6		0.335		0.537		0.0696	
2,4',5-Trichlorobiphenyl	16606-02-3	pg/l	6.72		2.23		7.93		1.38		4.25		1.11		2.86		0.428	
2,4',6-Trichlorobiphenyl	38444-77-8	pg/l	3.56		0.48		3.76		0.292		3.94		0.439		1.23		0.0897	
2,3',5'-Trichlorobiphenyl	37680-68-5	pg/l	0.0442		0.0143	J	0.0547		0.0096	U	0.0471		0.0375		0.0261		0.0029	U
3,3',4-Trichlorobiphenyl	37680-69-6	pg/l	0.207		0.122		0.181		0.07		0.13		0.137		0.102		0.0549	
3,3',5-Trichlorobiphenyl	38444-87-0	pg/l	0.0685		0.0314		0.0695		0.0172	J	0.0404		0.0474		0.0266		0.0091	J
3,4,4'-Trichlorobiphenyl	38444-90-5	pg/l	1.61		1.29		1.42		0.988		1		0.763		0.561		0.278	
3,4,5-Trichlorobiphenyl	53555-66-1	pg/l	0.0184	J	0.0168	J	0.0303		0.0135	U	0.0368		0.04	U	0.0179	J	0.0952	
3,4',5-Trichlorobiphenyl	38444-88-1	pg/l	0.0847	U	0.0488	U	0.0847	U	0.0404		0.0836	U	0.0553		0.0547	U	0.0075	J
PCB040 & 041 & 071	PCB040_041_071	pg/l	6.35		3.52		5.9		3		8.13		3.52		1.67		0.522	
2,2',3,4'-Tetrachlorobiphenyl	36559-22-5	pg/l	2.84		1.69		2.7		1.43		2.4		1.12		0.745		0.234	
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	pg/l	0.415		0.25		0.463		0.212		0.34		0.155		0.126		0.0327	
PCB044 & 047 & 065	PCB044_047_065	pg/l	11.9		6.47		12.5		5.76		34.8		15		3.79		1.32	
PCB045 & 051	PCB045_051	pg/l	3.54		1.22		3.8		1.02		17.2		5.84		1.08		0.296	
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	pg/l	1.07		0.344		1		0.316		1.09		0.351		0.279		0.0554	
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	pg/l	1.8		0.963		1.84		0.767		1.15		0.396		0.553		0.133	
PCB049 & 069	PCB049_069	pg/l	7.29		4.05		7.76		3.38		20.7		8.22		2.45		0.874	
PCB050 & 053	PCB050_053	pg/l	4.02		1.14		4.4		0.974		14.4		4.35		1.57		0.43	
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	pg/l	14.2		7.21		14.8		6.09		27.7		13.9		5.01		1.5	
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	pg/l	0.693		0.142		0.855		0.14		2.84		0.774		0.325		0.108	
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	pg/l	0.0348	U	0.11		0.0975		0.0798	U	0.0346	U	0.049	U	0.0348	U	0.0216	J
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	pg/l	3.38		3.46		3.04		2.79		2.11		1.58		0.88		0.481	
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	pg/l	0.0386	U	0.0303		0.0398		0.0641	U	0.0421		0.0283		0.0134	J	0.0657	U
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	pg/l	0.0294		0.129	U	0.0319		0.124	U	0.119		0.0584		0.0111	U	0.128	U
PCB059 & 062 & 075	PCB059_062_075	pg/l	1.03		0.564		0.974		0.467		1.34		0.612		0.297		0.0937	
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	pg/l	1.43		1.49		1.3		1.24		0.579		0.414		0.412		0.237	

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Table 4-6. March 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W2015 C		LW2-W2015 F		LW2-W2016 C		LW2-W2016 F		LW2-W2018 C		LW2-W2018 F		LW2-W2023 C		LW2-W2023 F	
		Sample Date/Time	3/14/2005, 0910		3/14/2005, 0910		3/15/2005, 0923		3/15/2005, 0923		3/3/2005, 0856		3/3/2005, 0856		3/7/2005, 1316		3/7/2005, 1316	
		X Coordinate	--		--		--				--		–		--		--	
		Y Coordinate	--		--		--				--		–		--		--	
Analysis/Analyte	CAS #	Units																
PCB061 & 070 & 074 & 076	PCB061_070_074_	pg/l	10.6		10.2		10.6		8.17		12.4		8.87		3.72		1.94	
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	pg/l	0.299		0.254		0.283		0.22		0.41		0.195		0.0948		0.0435	
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	pg/l	4.41		2.69		4.25		2.43		3.27		1.59		1.29		0.382	
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	pg/l	6.53		6.83		6.15		5.89		6.45		5.15		1.89		1.13	
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	pg/l	0.201		0.171		0.213		0.159		0.3		0.24		0.0682		0.0362	
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	pg/l	0.0693	U	0.058		0.0741	U	0.0532		0.581		0.385		0.0532	U	0.0172	J
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	pg/l	0.098		0.0778		0.116		0.0689		0.508		0.404		0.0312		0.028	U
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	pg/l	0.125		0.146		0.263		0.124		0.837		0.0905		0.0444		0.0206	J
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	pg/l	0.444		0.769		0.342		0.645		0.38		0.712		0.131		0.151	
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	pg/l	0.0315	U	0.0322	U	0.0314	U	0.0376	U	0.0314	U	0.0357		0.0315	U	0.0241	U
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	pg/l	0.108		0.136		0.0839		0.113		0.363		0.502		0.0375		0.0327	
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	pg/l	0.0407	U	0.0416	U	0.0405	U	0.0402	U	0.016	J	0.0404	U	0.0407	U	0.0412	U
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	pg/l	0.0257		0.0504	U	0.0491	U	0.0487	U	0.0491	U	0.049	U	0.0494	U	0.0499	U
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	pg/l	0.796		1.29		0.648		1.08		1.26		2.32		0.259		0.252	
PCB083 & 099	PCB083_099	pg/l	3.79		5.51		3.36		4.28		17.6		24		1.42		1.32	
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	pg/l	2.47		2.37		2.06		1.89		5.86		6.44		0.878		0.494	
PCB085 & 116 & 117	PCB085_116_117	pg/l	1.26		1.88		0.953		1.56		2.15		3.94		0.42		0.417	
PCB086 & 087 & 097 & 108 & 119 & 125	PCB086_087_097_	pg/l	4.36		6.16		3.53		4.67		11.9		17.4		1.65		1.42	
PCB088 & 091	PCB088_091	pg/l	1.49		1.61		1.36		1.32		8.99		9.89		0.532		0.44	
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	pg/l	0.131		0.164		0.109		0.139		0.149		0.19		0.0386		0.0227	J
PCB090 & 101 & 113	PCB090_101_113	pg/l	7.99		10.6		6.25		7.33		36.8		48.1		2.7		2.3	
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	pg/l	1.6		2.03		1.37		1.47		8.84		10.6		0.573		0.466	
PCB093 & 095 & 098 & 100 & 102	PCB093_095_098_	pg/l	9.07		7.63		7.51		5.9		41.5		38		3.31		1.93	
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	pg/l	0.126		0.111		0.136		0.0941		1.31		1.07		0.0469		0.0356	
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	pg/l	0.175		0.114		0.165		0.101	U	0.986		0.761		0.0569		0.0397	
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	pg/l	0.262		0.225		0.24		0.168		2.39		2.11		0.103		0.103	
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	pg/l	0.0303		0.0221	J	0.0269		0.0158	J	0.193		0.176		0.0127	J	0.0166	U
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	pg/l	1.62		3.62		1.15		2.88		2.24		6.33		0.584		0.881	
2,3,3',4,5-Pentachlorobiphenyl	70424-69-0	pg/l	0.139	U	0.142	U	0.138	U	0.137	U	0.138	U	0.138	U	0.139	U	0.141	U
PCB107 & 124	PCB107_124	pg/l	0.174		0.376		0.141		0.281		0.348		0.829		0.0624		0.0932	
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	pg/l	0.353		0.741		0.287		0.576		1.19		2.53		0.131		0.193	
PCB110 & 115	PCB110_115	pg/l	7.35		10.6		6.01		8.51		23.7		36.5		2.84		2.59	
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	pg/l	0.0058	U	0.0124	J	0.0067	J	0.0118	U	0.0665		0.115		0.0616	U	0.0044	J
2,3,3',5,6-Pentachlorobiphenyl	74472-36-9	pg/l	0.0255	U	0.026	U	0.0253	U	0.0251	U	0.0253	U	0.0253	U	0.0254	U	0.0257	U
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	pg/l	0.115		0.212		0.0757		0.18		0.131		0.307		0.0458		0.0548	
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	pg/l	3.76		8.02		3.03		6.41		9.52		23.8		1.53		2.09	
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	pg/l	0.0324	U	0.0629		0.0242		0.0445		0.302		0.554		0.0093	U	0.0165	U
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	pg/l	0.0152	U	0.0146	U	0.0151	U	0.0114	U	0.104		0.102		0.008	U	0.0068	J
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	pg/l	0.0606		0.148		0.0589		0.115		0.106		0.258		0.0205	J	0.0353	
2,3',4,4',5'-Pentachlorobiphenyl	65510-44-3	pg/l	0.11		0.196		0.103		0.159		0.132		0.305		0.0682		0.0564	
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	pg/l	0.0179	J	0.0569		0.0111	U	0.0375		0.0209	J	0.11		0.0077	J	0.0145	J
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	pg/l	0.0389	U	0.0298		0.0387	U	0.0383	U	0.0238		0.0907		0.0045	J	0.0393	U
PCB128 & 166	PCB128_166	pg/l	0.511		1.91		0.337		1.41		1.41		8.05		0.192		0.546	
PCB129 & 138 & 160 & 163	PCB129_138_160_	pg/l	4.91		16.5		3.41		11.2		20.1		95.3		1.61		4.15	
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	pg/l	0.301		1		0.219		0.677		0.999		4.6		0.108		0.257	
2,2',3,3',4,6-Hexachlorobiphenyl	61798-70-7	pg/l	0.056		0.158		0.0446		0.11		0.206		0.746		0.0206	J	0.0364	
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	pg/l	1.71		5.15		1.26		3.4		7.65		31.2		0.577		1.23	
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	pg/l	0.151		0.378		0.108		0.265		0.707		2.33		0.0443		0.107	
PCB134 & 143	PCB134_143	pg/l	0.36		0.941		0.249		0.574		1.52		4.98		0.102		0.206	

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Table 4-6. March 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W2015 C		LW2-W2015 F		LW2-W2016 C		LW2-W2016 F		LW2-W2018 C		LW2-W2018 F		LW2-W2023 C		LW2-W2023 F	
		Sample Date/Time	3/14/2005, 0910		3/14/2005, 0910		3/15/2005, 0923		3/15/2005, 0923		3/3/2005, 0856		3/3/2005, 0856		3/7/2005, 1316		3/7/2005, 1316	
		X Coordinate	--		--		--				--		–		--		--	
		Y Coordinate	--		--		--				--		–		--		--	
Analysis/Analyte	CAS #	Units																
PCB135 & 151 & 154	PCB135_151_154	pg/l	2.79		6.51		2.1		4.13		16.8		44		0.852		1.55	
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	pg/l	1.02		2.11		0.76		1.43		5.77		15.1		0.33		0.526	
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	pg/l	0.178		0.544		0.0932		0.399		0.346		1.77		0.0495		0.133	
PCB139 & 140	PCB139_140	pg/l	0.092		0.285		0.0663		0.192		0.393		1.52		0.0261	J	0.0662	
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	pg/l	0.96		3.86		0.708		2.21		4.46		19.9		0.267		0.742	
2,2',3,4,5,6-Hexachlorobiphenyl	41411-61-4	pg/l	0.0359	U	0.0367	U	0.0357	U	0.0354	U	0.0357	U	0.0503	U	0.0359	U	0.0363	U
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	pg/l	0.3		0.769		0.215		0.465		1.42		4.34		0.0885		0.167	
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	pg/l	0.0484	U	0.008	J	0.0482	U	0.0052	U	0.0482	U	0.0233	J	0.0019	U	0.0009	U
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	pg/l	1.19		3.08		0.859		2.03		5.59		20.6		0.33		0.745	
PCB147 & 149	PCB147_149	pg/l	5.35		14		3.91		9.2		30.1		111		1.64		3.28	
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	pg/l	0.0337	U	0.0782		0.029		0.0528		0.241		0.751		0.0085	J	0.0237	J
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	pg/l	0.0293		0.0644		0.0267		0.0473		0.285		0.829		0.0076	J	0.0261	
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	pg/l	0.0157	J	0.0287		0.0114	J	0.0201	J	0.156		0.374		0.0045	J	0.0103	J
PCB153 & 168	PCB153_168	pg/l	4.7		14.9		3.33		9.61		24		98.1		1.49		3.54	
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	pg/l	0.004	U	0.0079	J	0.0068	J	0.008	J	0.0154	J	0.0412		0.0039	U	0.0062	U
PCB156 & 157	PCB156_157	pg/l	0.329		1.38		0.208		0.971		0.911		6.32		0.105		0.383	
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	pg/l	0.432		1.5		0.307		0.999		1.61		7.82		0.144		0.368	
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	pg/l	0.0503		0.368		0.0367		0.227		0.213		1.93		0.0208	J	0.0927	
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	pg/l	0.0614	U	0.0627	U	0.0611	U	0.0605	U	0.0611	U	0.0609	U	0.0614	U	0.0621	U
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	pg/l	0.0141	J	0.047		0.0084	J	0.036		0.0323		0.173		0.0545	U	0.0184	J
2,3,3',4',5,6-Hexachlorobiphenyl	74472-45-0	pg/l	0.336		1.22		0.274		0.787		1.8		7.03		0.118		0.296	
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	pg/l	0.0625	U	0.0234	J	0.0062	J	0.0616	U	0.0526		0.154		0.0625	U	0.0632	U
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	pg/l	0.113		0.577		0.0934		0.382		0.381		2.58		0.0411		0.142	
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	pg/l	0.0397	U	0.0406	U	0.0395	U	0.0392	U	0.0395	U	0.145	U	0.0397	U	0.0402	U
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	pg/l	0.595		5.2		0.375		3.19		2.05		26.4		0.167		1.09	
PCB171 & 173	PCB171_173	pg/l	0.225		1.79		0.166		1.1		0.885		8.57		0.0722		0.375	
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	pg/l	0.136		0.965		0.0863		0.547		0.478		4.11		0.0377	U	0.226	
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	pg/l	0.822		6.13		0.627		3.69		3.45		27.7		0.24		1.29	
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	pg/l	0.0427		0.263		0.0399		0.154		0.165		1.1		0.0126	J	0.0561	
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	pg/l	0.123		0.764		0.099		0.484		0.5		3.74		0.0371		0.168	
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	pg/l	0.573		3.57		0.374		2.18		2.02		17.6		0.173		0.82	
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	pg/l	0.26		1.36		0.196		0.873		0.981		6.04		0.0786		0.334	
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	pg/l	0.484		2.53		0.361		1.65		1.96		12.7		0.145		0.609	
PCB180 & 193	PCB180_193	pg/l	1.47		13.2		1.08		7.59		5.75		59.7		0.501		2.74	
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	pg/l	0.0779	U	0.25		0.0089	U	0.226		0.01	J	0.146		0.0014	U	0.0098	J
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	pg/l	0.0435	U	0.0505		0.0432	U	0.0301		0.0336		0.239		0.0054	U	0.0125	U
PCB183 & 185	PCB183_185	pg/l	0.622		4.17		0.473		2.53		2.53		19.3		0.198		0.878	
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	pg/l	0.0045	U	0.0125	U	0.0042	J	0.0107	J	0.0047	U	0.0192	J	0.0024	U	0.0053	U
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	pg/l	0.0658	U	0.0129	J	0.0654	U	0.011	J	0.0654	U	0.0653	U	0.0658	U	0.0665	U
2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	pg/l	1.32		7.51		0.992		4.65		4.78		33.9		0.444		1.77	
2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	pg/l	0.0059	J	0.0195	J	0.0057	U	0.0133	J	0.0184	J	0.138		0.0014	U	0.0067	U
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	pg/l	0.0213	J	0.202		0.0146	U	0.124		0.0565		1.05		0.0079	U	0.0431	
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	pg/l	0.153		1.16		0.0892		0.7		0.482		5.21		0.0383		0.237	
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	pg/l	0.0243		0.234		0.0171	J	0.138		0.119		1.08		0.0095	U	0.0484	
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	pg/l	0.0557	U	0.0568	U	0.0553	U	0.0549	U	0.0554	U	0.0552	U	0.0557	U	0.0563	U
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	pg/l	0.157		2.9		0.107		1.79		0.429		13.8		0.0685	U	0.641	
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	pg/l	0.0708		1.3		0.0509		0.799		0.181		5.7		0.0255		0.245	
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	pg/l	0.12	U	1.6		0.104	U	1		0.344		6.59		0.0612	U	0.368	
PCB197 & 200	PCB197_200	pg/l	0.0595	U	0.641		0.0461	U	0.39		0.104		2.04		0.0308	U	0.129	

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Table 4-6. March 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W2015 C		LW2-W2015 F		LW2-W2016 C		LW2-W2016 F		LW2-W2018 C		LW2-W2018 F		LW2-W2023 C		LW2-W2023 F	
		Sample Date/Time	3/14/2005, 0910		3/14/2005, 0910		3/15/2005, 0923		3/15/2005, 0923		3/3/2005, 0856		3/3/2005, 0856		3/7/2005, 1316		3/7/2005, 1316	
		X Coordinate	--		--		--				--		--		--		--	
		Y Coordinate	--		--		--				--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																
PCB198 & 199	PCB198_199	pg/l	0.32	U	3.65		0.226	U	2.21		0.668		12.5		0.179	U	0.921	
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	pg/l	0.0782		0.502		0.0599	U	0.31		0.109		1.61		0.0352	U	0.113	
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	pg/l	0.101	U	0.703		0.0878	U	0.467		0.17		2.45		0.06	U	0.215	
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	pg/l	0.166	U	2.17		0.124	U	1.43		0.391		7.98		0.117	U	0.509	
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	pg/l	0.0733	U	0.017	J	0.0017	U	0.0137	U	0.0729	U	0.005	U	0.0007	U	0.0014	J
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	pg/l	0.0089	U	0.181		0.0074	U	0.111		0.0234	J	0.65		0.0037	U	0.0274	
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	pg/l	0.105		3.42		0.0847		1.46		0.111		3.76		0.0494		0.477	
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	pg/l	0.0673		0.453		0.0423		0.265		0.0317	U	0.538		0.0307		0.0857	
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	pg/l	0.0882		0.95		0.0498		0.473		0.064		1.13		0.045		0.191	
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	pg/l	0.0385	U	4.01		0.0335		1.72		0.0411		1.68		0.032		0.452	
Polychlorinated biphenyls	1336-36-3	pg/l	255		285		248		201		567		1120		105		67.5	
PCB Homologs																		
Monochlorobiphenyl	27323-18-8	pg/l	1.21		0.276		1.2		0.397		1.46		4.66		1.66		0.296	
Dichlorobiphenyl	25512-42-9	pg/l	37.9		5.15		38.8		4.14		24.7		13		25.9		5.03	
Trichlorobiphenyl	25323-68-6	pg/l	52.1		12.9		60.6		8.91		46.7		10.7		22.2		3.15	
Tetrachlorobiphenyl	26914-33-0	pg/l	82.9		54		83.9		45.5		160		74.5		26.6		10.1	
Pentachlorobiphenyl	25429-29-2	pg/l	47.1		63.8		38.6		49.1		178		237		17.3		15.2	
Hexachlorobiphenyl	26601-64-9	pg/l	25.9		77.5		18.7		50.8		127		491		8.18		18.7	
Heptachlorobiphenyl	28655-71-2	pg/l	6.88		49.3		4.98		29.9		26.3		229		2.11		10.7	
Octachlorobiphenyl	55722-26-4	pg/l	1.07	U	13.7		0.717	U	8.51		2.42		53.3		0.577	U	3.17	
Nonachlorobiphenyl	53742-07-7	pg/l	0.26		4.82		0.177		2.2		0.175		5.43		0.125		0.754	

Notes:

- Axys used PCB congener patterns to identify Aroclors and quantitated Aroclor concentrations using various combinations of congeners, depending on the identified Aroclors.

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Table 4-7. July 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W3005 C		LW2-W3005 F		LW2-W3011 C		LW2-W3011 F		LW2-W3013-1 C		LW2-W3013-1 F		LW2-W3013-2 C		LW2-W3013-2 F	
		Sample Date/Time	7/13/2005		7/13/2005		7/12/2005		7/12/2005		7/6/2005		7/6/2005		7/7/2005		7/7/2005	
		X Coordinate	--		--		--		--		--		--		--		--	
		Y Coordinate	--		--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																
PCB Aroclors [1]																		
Aroclor 1016	12674-11-2	pg/l	0.108	U	0.206	U	0.141	U	0.211	U	0.17	U	0.108	U	0.137	U	--	
Aroclor 1242	53469-21-9	pg/l	72.6	NJ	15.4	NJ	61.5	NJ	13.1	NJ	0.189	U	0.119	U	0.152	U	--	
Aroclor 1248	12672-29-6	pg/l	0.132	U	0.0655	U	0.124	U	0.0864	U	1190	NJ	1300	NJ	1270	NJ	--	
Aroclor 1254	11097-69-1	pg/l	76.4	NJ	62.6	NJ	80.9	NJ	59.3	NJ	0.213	U	0.687	U	0.27	U	--	
Aroclor 1260	11096-82-5	pg/l	20	NJ	129	NJ	20.1	NJ	118	NJ	246	NJ	4360	NJ	333	NJ	--	
Aroclor 1221	11104-28-2	pg/l	0.0562	U	0.107	U	0.0731	U	0.109	U	0.0881	U	0.0558	U	0.071	U	--	
Aroclor 1232	11141-16-5	pg/l	0.0906	U	0.0412	U	0.0751	U	0.0376	U	0.0492	U	0.031	U	0.064	U	--	
PAHs																		
2-Methylnaphthalene	91-57-6	pg/l	3.29		359	U	3780		506	U	2030		412	U	1770		689	U
Acenaphthene	83-32-9	pg/l	4.57		121	U	4020		189	U	1400		140	U	1590		116	U
Acenaphthylene	208-96-8	pg/l	0.523		205	U	333	U	200	U	525		220	U	304		136	U
Anthracene	120-12-7	pg/l	1.49		395		1470		484		707		428		720	U	288	U
Fluorene	86-73-7	pg/l	2.98		151	J	2750		192		1310		213		1290		201	
Naphthalene	91-20-3	pg/l	16.5		835		14600	U	1010		7260	U	865		6820	U	836	
Phenanthrene	85-01-8	pg/l	5.74		871	U	5470		1290		2260		952	U	1750		387	U
Dibenz(a,h)anthracene	53-70-3	pg/l	0.0255	J	135	U	34.4	U	140	U	28.4	U	130	U	32.2	U	42.5	U
Benz(a)anthracene	56-55-3	pg/l	0.633		703		470		811		321		675		292		252	
Benzo(a)pyrene	50-32-8	pg/l	0.135	U	908		125	J	1050		121	J	722		81.2	U	232	U
Benzo(g,h,i)perylene	205-99-2	pg/l	0.0544	J	986		44.5	J	1110		74.1	J	838		43	J	267	
Benzo(k)fluoranthene	191-24-2	pg/l	0.0806	J	678		795		702		88.5	J	655		62	U	222	
Chrysene	207-08-9	pg/l	1		1180		742		1340		685		1150		511		399	
Fluoranthene	218-01-9	pg/l	5.47		1390		3620		1380		4020		1570		2820		607	
Indeno(1,2,3-cd)pyrene	206-44-0	pg/l	0.0265	U	718		42.3	U	799		33.1	U	625		27.1	U	198	
Pyrene	193-39-5	pg/l	6.53		1960		3950		2040		3270		1870		2570		675	U
Benzo(b+j)fluoranthene	129-00-0	pg/l	0.143	J	883		123	J	919		156		931		109	U	308	
Organochlorine Pesticides																		
2,4'-DDD	53-19-0	pg/l	32.9		0.249	J	32.4		8.1		31.2		15.6		15.7		0.647	J
2,4'-DDE	3424-82-6	pg/l	1.85	J	0.938	J	2.26	J	1.11	J	1.28	J	1.89	J	0.945	J	0.184	J
2,4'-DDT	789-02-6	pg/l	2.39	J	0.13	U	2.85	J	2.24	J	3.13	J	2.28	J	1.1	J	0.198	U
4,4'-DDD	72-54-8	pg/l	77		0.405	J	75.4		27.1		66.2		41		36.1		2.02	J
4,4'-DDE	72-55-9	pg/l	33		23.7		32.9		27		20.7		40.2		21.2		4.78	J
4,4'-DDT	50-29-3	pg/l	3.68	J	0.186	U	5.39	J	19.9		7.49		10.3		2.79	J	0.294	U
Aldrin	309-00-2	pg/l	2.2	J	0.107	J	1.98	J	0.764	J	1.19	J	0.953	J	1.28	J	0.122	J
alpha-Hexachlorocyclohexane	319-84-6	pg/l	61.3		0.042	J	67.6		0.357	J	22.3		0.21	J	50.2		0.0483	U
beta-Hexachlorocyclohexane	319-85-7	pg/l	7.01	J	0.105	U	7.99	J	0.133	U	5.06	J	0.17	J	6.36	J	0.0743	U
delta-Hexachlorocyclohexane	319-86-8	pg/l	1.27	J	0.04	UJ	1.39	J	0.0455	UJ	0.935	J	0.136	UJ	1.66	J	0.0915	UJ
gamma-Hexachlorocyclohexane	58-89-9	pg/l	24.9		0.063	U	26.4		0.21	J	40.7		0.21	J	35.3		0.063	U
cis-Chlordane	5103-71-9	pg/l	9.67	J	0.115	U	9.98	J	2.24	J	8.88	J	4.08	J	9.28	J	0.299	J
trans-Chlordane	5103-74-2	pg/l	7.64	J	0.101	J	7.63	J	2.35	J	6.2	J	3.99	J	6.83	J	0.305	J
Oxychlordane	27304-13-8	pg/l	1.36	U	0.167	U	1.46	J	0.236	J	0.827	U	0.9	J	2.67	J	0.145	U
cis-Nonachlor	5103-73-1	pg/l	2.49	J	0.193	U	2.54	J	1.1	J	1.92	J	1.41	U	2.03	J	0.158	U
trans-Nonachlor	39765-80-5	pg/l	6.13	J	0.113	U	6.73	J	2.78	J	4.86	J	4.43	J	5.53	J	0.332	J
Dieldrin	60-57-1	pg/l	39.2		0.192	UJ	40.9		2.46	J	40		4.27	J	37.2		0.24	J

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Table 4-7. July 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W3005 C		LW2-W3005 F		LW2-W3011 C		LW2-W3011 F		LW2-W3013-1 C		LW2-W3013-1 F		LW2-W3013-2 C		LW2-W3013-2 F	
		Sample Date/Time	7/13/2005		7/13/2005		7/12/2005		7/12/2005		7/6/2005		7/6/2005		7/7/2005		7/7/2005	
		X Coordinate	--		--		--		--		--		--		--		--	
		Y Coordinate	--		--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																
alpha-Endosulfan	959-98-8	pg/l	45.7		0.278	UJ	47.8		1.03	UJ	50.8		2.11	UJ	54.3		0.552	J
beta-Endosulfan	33213-65-9	pg/l	24.3		1.13	UJ	28.4		1.23	UJ	27.5		1.65	UJ	33.1		1.26	UJ
Endosulfan sulfate	1031-07-8	pg/l	221		0.538	UJ	270		2.86	J	340		2.77	J	291		0.0729	UJ
Endrin	72-20-8	pg/l	0.77	U	0.109	UJ	0.984	U	0.151	UJ	0.935	U	0.139	UJ	1.32	U	0.047	UJ
Endrin aldehyde	7421-93-4	pg/l	0.2	U	2.41	UJ	0.2	U	1.17	UJ	0.42	U	0.195	UJ	0.197	U	0.0776	UJ
Endrin ketone	53494-70-5	pg/l	0.46	J	0.174	UJ	0.546	U	0.188	UJ	0.846	J	0.19	UJ	0.594	U	0.114	UJ
Heptachlor	76-44-8	pg/l	0	U	0.031	U	0.0953	U	0.05	U	0.0638	U	0.069	U	0.216	U	0.014	U
Heptachlor epoxide	1024-57-3	pg/l	4.15	J	0.0456	UJ	4.16	J	0.164	J	4.63	J	0.281	J	4.54	J	0.0268	UJ
Methoxychlor	72-43-5	pg/l	1.65	U	0.855	UJ	1.48	U	0.859	UJ	1.25	U	1.18	UJ	2.22	U	1.29	UJ
Hexachlorobenzene	118-74-1	pg/l	33.6		3.57	J	37.2		5.6	J	30.6		7.49		30.8		0.918	U
Hexachlorobutadiene	87-68-3	pg/l	2.85	UJ	0.079	UJ	3.02	J	0.326	J	2.84	J	0.342	J	1.9	J	1.4	UJ
Phthalate Esters																		
Dimethyl phthalate	131-11-3	pg/l	0.593	U	6.3	U	632	U	43.4	U	622	U	13.4	U	534	U	34.4	J
Diethyl phthalate	84-66-2	pg/l	2.13		119	U	2480		131	U	1240	J	122	U	1250	J	125	U
Dibutyl phthalate	84-74-2	pg/l	1.49	J	12.6	U	1950	J	232	U	2170	J	301	U	1640	J	219	U
Butylbenzyl phthalate	85-68-7	pg/l	0.515	U	894	U	1990		207	U	1900		25.4	U	1440	J	37.9	U
Di-n-octyl phthalate	117-84-0	pg/l	0.109	U	1020	U	230	U	112	U	142	J	249	U	116	J	102	U
Bis(2-ethylhexyl) phthalate	117-81-7	pg/l	3.61	J	5480	J	6310	J	4760	J	19800		5200	J	12100		2570	U
Chlorinated Dioxin/Furan Homologs																		
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/l	0.115		0.337		0.116		0.168		0.109		0.215		0.118		1.99	
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/l	0.0696		0.81		0.0678		0.0965		0.146		0.331		0.0732		3.19	
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/l	0.307		4.77		0.165		0.604		0.268		3.13		0.205		3.95	
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/l	1.14		14.5		0.616		3.78		1.19		27		0.92		5.16	
Octachlorodibenzo-p-dioxin	3268-87-9	pg/l	2.03		22.8		1.53		15.7		4.24		118		2.86		10.4	
Tetrachlorodibenzofuran homologs	30402-14-3	pg/l	0.12		0.304		0.109		0.202		0.14		0.319		0.126		0.339	
Pentachlorodibenzofuran homologs	30402-15-4	pg/l	0.0593		0.397		0.0666		0.282		0.128		0.885		0.0874		0.457	
Hexachlorodibenzofuran homologs	55684-94-1	pg/l	0.0642	U	0.864		0.0709	U	0.564		0.131		1.76		0.0723	U	0.34	
Heptachlorodibenzofuran homologs	38998-75-3	pg/l	0.053		1.19		0.0578		1.08		0.0914		2.74		0.0509		0.315	
Octachlorodibenzofuran	39001-02-0	pg/l	0.0234	U	0.596		0.0201	U	0.983		0.0271	U	1.97		0.0163	U	0.203	
Chlorinated Dioxins/Furans																		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/l	0.00216	U	0.014	U	0.00358	U	0.00454	J	0.00321	U	0.00943	U	0.00475	U	0.26	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/l	0.00307	U	0.0872		0.00289	U	0.0124	J	0.00459	U	0.0438		0.00345	U	0.505	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/l	0.00583	U	0.165		0.0055	U	0.0245	J	0.0111	U	0.08		0.00606	U	0.154	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/l	0.0181	J	0.45		0.0126	U	0.0868		0.0254	J	0.479		0.0173	J	0.424	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/l	0.0137	J	0.604		0.00871	U	0.0602		0.0148	J	0.239		0.00915	U	0.449	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/l	0.55		6.91		0.3		1.86		0.569		14.3		0.441		2.59	
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/l	0.0106		0.0319		0.0113		0.0393		0.0118		0.0387		0.00766	U	0.0162	
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/l	0.00507	U	0.0323		0.00698	U	0.0387		0.0109	U	0.0369		0.00341	U	0.0152	J
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/l	0.00452	U	0.0211	J	0.00476	U	0.0217	J	0.0057	U	0.0372		0.0044	U	0.0137	J
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/l	0.0068	U	0.0801		0.00896	U	0.0833		0.0145	U	0.146		0.00758	U	0.023	J
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/l	0.00635	U	0.0501		0.00755	U	0.0298	J	0.0115	U	0.0569		0.00604	U	0.0188	J
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/l	0.00215	U	0.00369	J	0.00144	U	0.00328	J	0.00176	U	0.00377	J	0.000788	U	0.00131	J
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/l	0.00293	U	0.0233	J	0.00202	U	0.0153	J	0.00263	U	0.0389		0.00174	U	0.00954	J

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Table 4-7. July 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W3005 C		LW2-W3005 F		LW2-W3011 C		LW2-W3011 F		LW2-W3013-1 C		LW2-W3013-1 F		LW2-W3013-2 C		LW2-W3013-2 F	
		Sample Date/Time	7/13/2005		7/13/2005		7/12/2005		7/12/2005		7/6/2005		7/6/2005		7/7/2005		7/7/2005	
		X Coordinate	--		--		--		--		--		--		--		--	
		Y Coordinate	--		--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/l	0.014	U	0.494		0.0149	U	0.375		0.0245	U	0.876		0.0142	U	0.118	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/l	0.0112	U	0.0435		0.0142	U	0.0318		0.0158	U	0.0855		0.00943	U	0.0122	J
PCB Congeners																		
2-Chlorobiphenyl	2051-60-7	pg/l	0.772		0.0364	U	0.735		0.0442	U	1.78		0.381		1.4		--	
3-Chlorobiphenyl	2051-61-8	pg/l	0.238		0.887		0.215		0.0743		0.457		0.215		0.49		--	
4-Chlorobiphenyl	2051-62-9	pg/l	0.32		0.0975	U	0.287		0.0818		0.853		0.802		1.15		--	
2,2'-Dichlorobiphenyl	13029-08-8	pg/l	18.8		0.237	U	18.2		0.264		198		14.3		135		--	
2,3-Dichlorobiphenyl	16605-91-7	pg/l	0.0682		0.0832	U	0.0642	U	0.0852	U	0.0714	U	0.0435	U	0.0575	U	--	
2,3'-Dichlorobiphenyl	25569-80-6	pg/l	0.837		0.0805	U	0.79		0.104	U	1.6		0.226		1.14		--	
2,4-Dichlorobiphenyl	33284-50-3	pg/l	0.167	U	0.685	U	0.134		0.681	U	0.328		0.0816		0.286		--	
2,4'-Dichlorobiphenyl	34883-43-7	pg/l	3.22		0.286		2.8		0.266		3.54		0.447		2.56		--	
2,5-Dichlorobiphenyl	34883-39-1	pg/l	0.238		0.0802	U	0.195		0.0821	U	0.455		0.0671		0.313		--	
2,6-Dichlorobiphenyl	33146-45-1	pg/l	0.73		0.084	U	0.617		0.086	U	11.4		1.09		7.9		--	
3,3'-Dichlorobiphenyl	2050-67-1	pg/l	14.1		3.66		14.5		1.95		20.8		2.67		20		--	
PCB012 & 013	PCB012_013	pg/l	0.363	U	0.134		0.355		0.0866	U	1.35		0.723		1.09		--	
3,5-Dichlorobiphenyl	34883-41-5	pg/l	0.042	U	0.0797	U	0.0547	U	0.0816	U	0.0685	U	0.0432	U	0.0552	U	--	
4,4'-Dichlorobiphenyl	2050-68-2	pg/l	2.15		0.683		1.87		0.544		3.95		3.15		3.05		--	
2,2',3-Trichlorobiphenyl	38444-78-9	pg/l	3.02		0.276		2.46		0.213		3.58		0.505		2.48		--	
2,2',4-Trichlorobiphenyl	37680-66-3	pg/l	5.8		0.53		4.97		0.487		48		11.6		40.7		--	
PCB018 & 030	PCB018_030	pg/l	6.55		0.709		5.5		0.64		13.2		2.81		10.2		--	
2,2',6-Trichlorobiphenyl	38444-73-4	pg/l	21.3		0.9		18.9		0.838		393		61.1		317		--	
PCB020 & 028	PCB020_028	pg/l	7.99		2.48		6.8		2.07		11		4.16		8.65		--	
PCB021 & 033	PCB021_033	pg/l	2.89		0.633		2.37		0.502		5.78		1.85		4.81		--	
2,3,4'-Trichlorobiphenyl	38444-85-8	pg/l	2.5		0.518		2.11		0.381		2.62		0.521		1.83		--	
2,3,5-Trichlorobiphenyl	55720-44-0	pg/l	0.0232	U	0.0234	U	0.0232	U	0.0232	U	0.0426	U	0.0125	J	0.0408		--	
2,3,6-Trichlorobiphenyl	55702-45-9	pg/l	0.147		0.0227	J	0.12		0.0109	U	0.0308	U	0.0305	U	0.0301	U	--	
2,3',4-Trichlorobiphenyl	55712-37-3	pg/l	0.895		0.221		0.753		0.206		5.54		2.31		5.07		--	
PCB026 & 029	PCB026_029	pg/l	1.77		0.399		1.47		0.337		6		2.1		5.05		--	
2,3',6-Trichlorobiphenyl	38444-76-7	pg/l	1.85		0.196		1.45		0.163		33		8.36		28.3		--	
2,4',5-Trichlorobiphenyl	16606-02-3	pg/l	6.44		1.66		5.39		1.39		7.81		2.2		5.79		--	
2,4',6-Trichlorobiphenyl	38444-77-8	pg/l	2.99		0.308		2.55		0.25		16.5		2.64		14.4		--	
2,3',5'-Trichlorobiphenyl	37680-68-5	pg/l	0.0522		0.0102	J	0.0554		0.00966	U	0.158		0.049		0.131		--	
3,3',4-Trichlorobiphenyl	37680-69-6	pg/l	0.142		0.0675		0.141		0.0496		0.183		0.0945		0.158	U	--	
3,3',5-Trichlorobiphenyl	38444-87-0	pg/l	0.0329	U	0.0116	J	0.0392	U	0.0134	J	0.048	U	0.0155	U	0.0161	U	--	
3,4,4'-Trichlorobiphenyl	38444-90-5	pg/l	1.44		0.887		1.26		0.694		1.48		0.986		1.11		--	
3,4,5-Trichlorobiphenyl	53555-66-1	pg/l	0.0169	J	0.0742		0.024	U	0.00967	U	0.165		0.0926		0.202		--	
3,4',5-Trichlorobiphenyl	38444-88-1	pg/l	0.0591		0.0205	J	0.059		0.0197	J	0.113	U	0.0575		0.0989	U	--	
PCB040 & 041 & 071	PCB040_041_071	pg/l	5.25		1.62		4.74		1.26		17		13.8		15.5		--	
2,2',3,4'-Tetrachlorobiphenyl	36559-22-5	pg/l	2.3		0.752		2.05		0.618		4.52		3.64		4.08		--	
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	pg/l	0.433		0.133		0.349		0.104		3.99		4.02		4.47		--	
PCB044 & 047 & 065	PCB044_047_065	pg/l	14		4.43		12.3		3.74		139		157		151		--	
PCB045 & 051	PCB045_051	pg/l	5.16		1.16		4.2		0.98		73.2		48.8		71.5		--	
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	pg/l	0.907		0.21		0.772		0.169		5.68		2.8		4.91		--	
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	pg/l	1.51		0.472		1.33		0.397		2.55		1.9		2.31		--	
PCB049 & 069	PCB049_069	pg/l	8.18		2.62		7.63		2.5		49.7		48.2		51.7		--	

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Table 4-7. July 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W3005 C		LW2-W3005 F		LW2-W3011 C		LW2-W3011 F		LW2-W3013-1 C		LW2-W3013-1 F		LW2-W3013-2 C		LW2-W3013-2 F
		Sample Date/Time	7/13/2005		7/13/2005		7/12/2005		7/12/2005		7/6/2005		7/6/2005		7/7/2005		7/7/2005
		X Coordinate	--		--		--		--		--		--		--		--
		Y Coordinate	--		--		--		--		--		--		--		--
Analysis/Analyte	CAS #	Units															
PCB050 & 053	PCB050_053	pg/l	5.97		1.18		5.37		1.15		80		42.8		73.2		--
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	pg/l	14		4.21		13.1		3.98		56.7		45		56.5		--
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	pg/l	2.42		0.269		2.04		0.22		54.1		19.7		50.8		--
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	pg/l	0.0634	U	0.0352	U	0.0349	U	0.035	U	0.0352	U	0.0694		0.0344	U	--
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	pg/l	2.34		1.22		2.27		1.18		2.24		1.94		1.84		--
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	pg/l	0.0409		0.0189	U	0.032	U	0.0152	U	0.816		1.4		0.965		--
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	pg/l	0.0253		0.128	U	0.126	U	0.127	U	0.065	U	0.127	U	0.0643		--
PCB059 & 062 & 075	PCB059_062_075	pg/l	1.08		0.342		0.845		0.261		10.6		10.1		10.9		--
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	pg/l	1.01		0.532		0.956		0.486		0.899		0.793		0.761		--
PCB061 & 070 & 074 & 076	PCB061_070_074_	pg/l	9.36		5.03		8.97		4.62		10.1		10.9		9.27		--
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	pg/l	0.245		0.125		0.23		0.111		0.549		0.717		0.586		--
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	pg/l	3.45		1.24		3.14		1.02		3.56		2.41		2.95		--
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	pg/l	4.8		2.88		4.56		2.7		6.14		7.74		5.75		--
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	pg/l	0.218		0.128		0.18		0.0932		0.921		1.88		0.0369	U	--
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	pg/l	0.112		0.0638		0.114		0.0555		1.24		2.12		1.47		--
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	pg/l	0.119		0.0715		0.109		0.0612		0.648		1.01		0.794		--
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	pg/l	0.27	U	0.0888		0.204		0.0697		2.7		5.95		7.17		--
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	pg/l	0.319		0.428		0.332		0.373		0.33		0.562		0.297		--
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	pg/l	0.0317	U	0.0319	U	0.0316	U	0.0317	U	0.0319	U	0.0326	U	0.0312	U	--
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	pg/l	0.0931		0.0816	U	0.101		0.0688	U	0.305		0.598		0.387		--
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	pg/l	0.0409	U	0.0411	U	0.0408	U	0.0409	U	0.0412	U	0.0408	U	0.0403	U	--
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	pg/l	0.0496	U	0.0216	U	0.0495	U	0.0164	U	0.0499	U	0.0335	U	0.0488	U	--
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	pg/l	0.748		0.637		0.825		0.739		0.968		2.1		1.05		--
PCB083 & 099	PCB083_099	pg/l	4.67		3.93		4.86		3.83		24.7		76.7		32.6		--
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	pg/l	2.76		1.38		2.77		1.28		12		22.2		14.5		--
PCB085 & 116 & 117	PCB085_116_117	pg/l	1.16		1.03		1.24		0.996		2.85		7.13		3.53		--
PCB086 & 087 & 097 & 108 & 119 & 125	PCB086_087_097_	pg/l	4.88		3.89		5.25		3.58		15.2		39.8		19.2		--
PCB088 & 091	PCB088_091	pg/l	2.09		1.27		2.17		1.25		13.5		33.3		17.5		--
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	pg/l	0.108		0.0639		0.118		0.0582		0.269		0.489		0.301		--
PCB090 & 101 & 113	PCB090_101_113	pg/l	9.36		6.96		9.6		6.75		53.7		148		70.6		--
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	pg/l	2.34		1.62		2.15		1.55		20.8		55.7		28.8		--
PCB093 & 095 & 098 & 100 & 102	PCB093_095_098_	pg/l	12.2		5.98		11.5		5.79		93.4		206		117		--
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	pg/l	0.41		0.193		0.308		0.142		8.57		18.1		10.9		--
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	pg/l	0.323		0.129		0.31		0.118		4.12		6.7		4.65		--
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	pg/l	0.548		0.294		0.558		0.315		5.67		13.9		7.17		--
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	pg/l	0.108		0.0447		0.0917		0.039	U	1.97		3.4		2.5		--
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	pg/l	1.36		2.24		1.49		2.17		1.68		4.68		1.76		--
2,3,3',4,5-Pentachlorobiphenyl	70424-69-0	pg/l	0.14	U	0.141	U	0.139	U	0.14	U	0.111		0.444		0.167		--
PCB107 & 124	PCB107_124	pg/l	0.164		0.229		0.169	U	0.21	U	0.277		0.902		0.354		--
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	pg/l	0.386		0.53		0.427		0.498		0.854		2.56		1.11		--
PCB110 & 115	PCB110_115	pg/l	8.09		6.77		8.78		6.67		21.3		50.4		26.4		--
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	pg/l	0.015	U	0.0181	U	0.0166	U	0.0139	U	0.139		0.59		0.226		--
2,3,3',5,6-Pentachlorobiphenyl	74472-36-9	pg/l	0.244		0.144	U	0.156		0.0256	U	5.37		13.3		7.51		--
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	pg/l	0.0828		0.11		0.0997		0.11		0.0753	U	0.223		0.105		--
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	pg/l	3.76		5.6		4.06		5.42		8.18		29.6		10.1		--
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	pg/l	0.0442		0.06		0.046		0.0548		0.27		1.24		0.43		--

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Table 4-7. July 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W3005 C		LW2-W3005 F		LW2-W3011 C		LW2-W3011 F		LW2-W3013-1 C		LW2-W3013-1 F		LW2-W3013-2 C		LW2-W3013-2 F
		Sample Date/Time	7/13/2005		7/13/2005		7/12/2005		7/12/2005		7/6/2005		7/6/2005		7/7/2005		7/7/2005
		X Coordinate	--		--		--		--		--		--		--		--
		Y Coordinate	--		--		--		--		--		--		--		--
Analysis/Analyte	CAS #	Units															
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	pg/l	0.0413		0.0278	U	0.0365		0.0243		0.489		1.53		0.719		--
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	pg/l	0.0515		0.0662		0.0621		0.0702	U	0.0552	U	0.206		0.0899		--
2,3',4,4',5'-Pentachlorobiphenyl	65510-44-3	pg/l	0.0908		0.136	U	0.107		0.0859	U	0.151		0.422		0.168		--
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	pg/l	0.0377	U	0.0463		0.0377	U	0.0411		0.0491	U	0.143	U	0.0372	U	--
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	pg/l	0.039	U	0.0273	U	0.039	U	0.0338	U	0.0505	U	0.138	U	0.0384	U	--
PCB128 & 166	PCB128_166	pg/l	0.577		1.55		0.649		1.51		2.74		19.6		3.66		--
PCB129 & 138 & 160 & 163	PCB129_138_160_	pg/l	6.28		12.3		6.66		12.3		50.6		415		72.7		--
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	pg/l	0.375		0.68		0.375		0.651		1.98		14.6		2.78		--
2,2',3,3',4,6-Hexachlorobiphenyl	61798-70-7	pg/l	0.0767		0.0967		0.0818	U	0.0917		0.391		2.22		0.556		--
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	pg/l	2.36		3.15		2.58		3.17		15.8		91.6		22.3		--
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	pg/l	0.217		0.291		0.211		0.293		1.79		12		2.74		--
PCB134 & 143	PCB134_143	pg/l	0.504		0.563		0.515		0.534		5.14		27		7.4		--
PCB135 & 151 & 154	PCB135_151_154	pg/l	4.42		4.63		4.7		4.51		45.4		246		67		--
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	pg/l	1.69		1.37		1.8		1.46		14.9		70.7		21.1		--
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	pg/l	0.145		0.333		0.149		0.324		0.724		0.228	U	0.97		--
PCB139 & 140	PCB139_140	pg/l	0.105		0.173		0.137		0.161		0.526		3.12		0.761		--
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	pg/l	1.37		2.45		1.37		2.28		13.7		112		19.6		--
2,2',3,4,5,6-Hexachlorobiphenyl	41411-61-4	pg/l	0.036	U	0.0363	U	0.036	U	0.0361	U	0.0803	U	0.22	U	0.127	U	--
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	pg/l	0.407		0.463		0.468		0.483		3.72		21.5		5.24		--
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	pg/l	0.00149	U	0.00291	U	0.0485	U	0.0044	U	0.0312		0.189	U	0.0551		--
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	pg/l	1.41		2.36		1.53		2.29		10.8		70.3		15.8		--
PCB147 & 149	PCB147_149	pg/l	7.99		8.46		8.24		9		66.3		370		97.3		--
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	pg/l	0.0641		0.0692		0.0661	U	0.0982	U	0.643		3.78		0.961		--
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	pg/l	0.0645		0.0623		0.0757		0.0718		0.523		2.9		0.774		--
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	pg/l	0.0443		0.0391		0.0366		0.0339		0.815		4.05		1.21		--
PCB153 & 168	PCB153_168	pg/l	6.26		11.1		6.52		11.8		56.9		463		82.8		--
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	pg/l	0.00914	J	0.0189	J	0.00887	U	0.0145	U	0.116		0.698		0.179		--
PCB156 & 157	PCB156_157	pg/l	0.329		1.29		0.337		1.17		2.09		23.9		2.77		--
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	pg/l	0.529		1.17		0.574		1.15		3.97		35.3		5.69		--
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	pg/l	0.0665		0.268		0.0537		0.259		0.793		9.27		1.08		--
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	pg/l	0.0616	U	0.062	U	0.0615	U	0.0617	U	0.0621	U	0.154	U	0.083	U	--
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	pg/l	0.0547	U	0.0551	U	0.0546	U	0.0547	U	0.0551	U	0.135	U	0.0818	U	--
2,3,3',4',5',6-Hexachlorobiphenyl	74472-45-0	pg/l	0.556		0.956		0.571		0.936		4.48		37.1		6.48		--
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	pg/l	0.0628	U	0.0225	U	0.0626	U	0.0166	U	0.186		1.1		0.295		--
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	pg/l	0.137		0.524		0.139		0.455		0.949		10.3		1.3		--
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	pg/l	0.0399	U	0.046	U	0.0398	U	0.0293	U	0.0634	U	0.786	U	0.0708	U	--
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	pg/l	0.858		5.97		0.877		5.41		11.4		201		14.8		--
PCB171 & 173	PCB171_173	pg/l	0.348		2.12		0.383		1.84		4.39		72.2		6.1		--
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	pg/l	0.171		1.28		0.19		1.09		2.26		47.4		3.01		--
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	pg/l	1.44		6.4		1.53		6.18		17.3		255		24.5		--
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	pg/l	0.0606		0.256		0.0651	U	0.25		0.67		10.8		0.922		--
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	pg/l	0.215		0.703		0.211		0.646		2.2		35.3		3.11		--
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	pg/l	0.796		3.7		0.781		3.56		9.02		144		12.7		--
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	pg/l	0.37		1.41		0.396		1.35		4.12		64.2		5.88		--
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	pg/l	0.785		2.25		0.849		2.26		8.67		113		12.5		--
PCB180 & 193	PCB180_193	pg/l	2.24		15.6		2.17		14		27.3		486		37		--

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Table 4-7. July 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W3005 C		LW2-W3005 F		LW2-W3011 C		LW2-W3011 F		LW2-W3013-1 C		LW2-W3013-1 F		LW2-W3013-2 C		LW2-W3013-2 F
		Sample Date/Time	7/13/2005		7/13/2005		7/12/2005		7/12/2005		7/6/2005		7/6/2005		7/7/2005		7/7/2005
		X Coordinate	--		--		--		--		--		--		--		--
		Y Coordinate	--		--		--		--		--		--		--		--
Analysis/Analyte	**CAS #**	**Units**															
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	pg/l	0.00762	J	0.0497	U	0.00475	U	0.046	U	0.069		1.05		0.0931		--
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	pg/l	0.00884	U	0.0576		0.00749	U	0.043	U	0.0951		1.43		0.156		--
PCB183 & 185	PCB183_185	pg/l	0.891		4.32		0.967		4.12		10.6		185		14.8		--
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	pg/l	0.00248	U	0.00941	U	0.00282	U	0.012	U	0.00629	U	0.123		0.0105	U	--
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	pg/l	0.066	U	0.0665	U	0.00106	U	0.0661	U	0.0665	U	0.0659	U	0.065	U	--
2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	pg/l	1.77		8.21		1.92		7.44		19.2		315		27.3		--
2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	pg/l	0.00723	J	0.0271		0.00783	J	0.0212	U	0.0636		0.776		0.0982		--
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39535-31-9	pg/l	0.0241		0.206		0.0231	J	0.182		0.272		8.08		0.352		--
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	pg/l	0.193		1.14		0.188		1.08		2.32		55.1		3.11		--
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	pg/l	0.0389		0.245		0.0439		0.227		0.503		11.2		0.7		--
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	pg/l	0.0559	U	0.0562	U	0.000363	U	0.00316	U	0.0563	U	0.0558	U	0.055	U	--
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	pg/l	0.239		2.93		0.221		2.62		2.24		120		2.83		--
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	pg/l	0.104		1.18		0.107		1.14		1.23		46.4		1.48		--
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	pg/l	0.169		1.6		0.174		1.48		1.71		72.6		2.15		--
PCB197 & 200	PCB197_200	pg/l	0.0711		0.671		0.0735		0.597		0.656		20.9		0.818		--
PCB198 & 199	PCB198_199	pg/l	0.437		3.43		0.425		3.12		3.52		137		4.47		--
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	pg/l	0.0618	U	0.476		0.0826	U	0.416		0.529		15.8		0.638		--
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	pg/l	0.138	U	0.711		0.136	U	0.666		0.649		18.5		0.86		--
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	pg/l	0.254		2.16		0.241		2.07		1.97		77		2.38		--
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	pg/l	0.0736	U	0.00141	U	0.00107	U	0.00126	U	0.00168	U	0.041	U	0.00273	U	--
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	pg/l	0.0149	J	0.14		0.00801	U	0.131		0.111		5.79		0.144		--
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	pg/l	0.11		1.54		0.1	U	1.31		0.309		21.4		0.29		--
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	pg/l	0.0315		0.306		0.0304	U	0.204		0.0877		3.65		0.0731		--
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	pg/l	0.0598		0.612		0.0571		0.449		0.111		3.75		0.0869		--
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	pg/l	0.0478	U	1.36		0.0571		1.4		0.0498		1.86		0.0345		--
Polychlorinated biphenyls	1336-36-3	pg/l	295		213		280		199		2060		5920		2160		--
PCB Homologs																	
Monochlorobiphenyl	27323-18-8	pg/l	1.33		0.887		1.24		0.156		3.09		1.4		3.05		--
Dichlorobiphenyl	25512-42-9	pg/l	40.2		4.76		39.5		3.02		241		22.8		172		--
Trichlorobiphenyl	25323-68-6	pg/l	65.9		9.92		56.4		8.25		548		101		446		--
Tetrachlorobiphenyl	26914-33-0	pg/l	83.4		29.2		75.9		26.2		527		436		529		--
Pentachlorobiphenyl	25429-29-2	pg/l	56		43.1		57.1		41.4		297		739		380		--
Hexachlorobiphenyl	26601-64-9	pg/l	36		54.4		37.7		54.9		306		2070		443		--
Heptachlorobiphenyl	28655-71-2	pg/l	10.2		53.8		10.5		49.6		120		2010		167		--
Octachlorobiphenyl	55722-26-4	pg/l	1.49		13.3		1.46		12.2		12.6		514		15.8		--
Nonachlorobiphenyl	53742-07-7	pg/l	0.201		2.46		0.057		1.97		0.507		28.8		0.45		--

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Table 4-7. July 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W3015 C		LW2-W3015 F		LW2-W3016 C		LW2-W3016 F		LW2-W3018 C		LW2-W3018 F		LW2-W3023 C		LW2-W3023 F	
		Sample Date/Time	7/19/2005		7/19/2005		7/18/2005		7/18/2005		7/14/2005		7/14/2005		7/12/2005		7/12/2005	
		X Coordinate	--		--		--		--		--		--		--		--	
		Y Coordinate	--		--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																
PCB Aroclors [1]																		
Aroclor 1016	12674-11-2	pg/l	0.481	U	0.153	U	0.101	U	0.128	U	0.132	U	0.0954	U	0.211	U	0.19	U
Aroclor 1242	53469-21-9	pg/l	122	NJ	38.3	NJ	0.113	U	0.142	U	65.8	NJ	4.64	NJ	36.2	NJ	7.3	NJ
Aroclor 1248	12672-29-6	pg/l	0.505	U	0.19	U	492	NJ	495	NJ	0.179	U	0.0478	U	0.146	U	0.0548	U
Aroclor 1254	11097-69-1	pg/l	99.2	NJ	145	NJ	0.102	U	0.137	U	180	NJ	113	NJ	71.2	NJ	38.4	NJ
Aroclor 1260	11096-82-5	pg/l	19.9	NJ	148	NJ	24.3	NJ	152	NJ	43.1	NJ	197	NJ	12.6	NJ	57.1	NJ
Aroclor 1221	11104-28-2	pg/l	0.249	U	0.0795	U	0.0525	U	0.0662	U	0.0685	U	0.0495	U	0.11	U	0.0987	U
Aroclor 1232	11141-16-5	pg/l	0.185	U	0.0552	U	0.0749	U	0.0309	U	0.0574	U	0.0228	U	0.0989	U	0.0375	U
PAHs																		
2-Methylnaphthalene	91-57-6	pg/l	6120		297	U	2890		238	U	3250		52.8	U	3620		211	U
Acenaphthene	83-32-9	pg/l	17200		257		4380		140	U	26200		20.7	U	433		54.9	U
Acenaphthylene	208-96-8	pg/l	1730		1120	U	736		451	U	448	U	76.6	U	460		114	U
Anthracene	120-12-7	pg/l	3210		1430		1520		752		1870		131	U	560	U	126	U
Fluorene	86-73-7	pg/l	10500		278		4330		219		12100		31.6	J	615		71.6	U
Naphthalene	91-20-3	pg/l	27600		930		7900	U	742		10700	U	155	U	6290	U	511	U
Phenanthrene	85-01-8	pg/l	30900		1730	U	13600		1110	U	6100		198	U	1050		482	U
Dibenz(a,h)anthracene	53-70-3	pg/l	60	U	865		30.9	U	542		45.4	J	39.2	U	32.9	U	47.7	U
Benz(a)anthracene	56-55-3	pg/l	2360		3770		1670		2070		167		159	U	121	J	215	
Benzo(a)pyrene	50-32-8	pg/l	336		6300		190	U	2570		45.5	J	185	U	54.5	U	275	
Benzo(g,h,i)perylene	205-99-2	pg/l	136	J	7510		83.5	J	3050		44.9	J	302		39.7	U	399	
Benzo(k)fluoranthene	191-24-2	pg/l	526		5430		476		3440		34.5	U	181		34.7	U	210	
Chrysene	207-08-9	pg/l	4990		8110		3060		4340		394		293	U	238		372	U
Fluoranthene	218-01-9	pg/l	37500		6810		20200		3370		3340		416	U	873		603	
Indeno(1,2,3-cd)pyrene	206-44-0	pg/l	92.7	U	6080		66.1	U	2810		36.4	U	219		24.2	U	264	
Pyrene	193-39-5	pg/l	25300		8150		13600		4070		3160		470	U	899		731	U
Benzo(b+j)fluoranthene	129-00-0	pg/l	758		6010		736		4160		61.9	U	267		52.1	U	305	
Organochlorine Pesticides																		
2,4'-DDD	53-19-0	pg/l	536		347		749		621		11.5		2.27	J	8.05		2.02	J
2,4'-DDE	3424-82-6	pg/l	21.7		22.3		35.8		54.3		0.872	J	0.382	J	0.646	J	0.34	J
2,4'-DDT	789-02-6	pg/l	33.3		0.623	U	123		402		0.774	J	0.421	J	0.644	J	0.242	J
4,4'-DDD	72-54-8	pg/l	1210		1070		1630		1620		34.6		9.05		23.3		8.86	
4,4'-DDE	72-55-9	pg/l	107		171		197		466		22.4		12.5		22.9		17	
4,4'-DDT	50-29-3	pg/l	71.1		0.982	U	232		3630		2.6	J	2.51	J	2.27	J	0.648	J
Aldrin	309-00-2	pg/l	1.15	J	1.26	J	1.44	U	0.979	J	1.43	U	0.4	J	1.49	J	0.451	J
alpha-Hexachlorocyclohexane	319-84-6	pg/l	89.8		0.462	J	94.2		1.05	J	75.9		0.315	J	81		0.651	J
beta-Hexachlorocyclohexane	319-85-7	pg/l	15.9		0.254	U	19.4		1.24	J	8.32	J	0.125	U	8.56	J	0.823	J
delta-Hexachlorocyclohexane	319-86-8	pg/l	3.24	J	0.13	UJ	3.31	J	0.508	J	1.58	J	0.0465	UJ	1.53	J	0.065	UJ
gamma-Hexachlorocyclohexane	58-89-9	pg/l	71.1		0.147	J	60.5		1.28	J	27.7		0.168	J	26.9		0.21	J
cis-Chlordane	5103-71-9	pg/l	10	J	5.14	J	8.64	J	4.41	J	12.5		1.42	J	8.86	J	1.68	J
trans-Chlordane	5103-74-2	pg/l	7.65	J	5.15	J	7.65	J	4.53	J	6.76	J	1.4	J	6.19	J	1.73	J
Oxychlordane	27304-13-8	pg/l	0.746	U	0.503	J	1.32	J	1.76	U	1.83	U	0.375	U	1.43	U	0.192	U
cis-Nonachlor	5103-73-1	pg/l	1.95	J	1.58	J	2.31	U	1.65	J	2.57	U	0.666	J	1.96	U	0.79	J
trans-Nonachlor	39765-80-5	pg/l	5.61	J	4.82	J	5.9	J	4.94	J	7.3	J	1.75	J	6.35	J	2.21	J
Dieldrin	60-57-1	pg/l	44.1		6.85	J	42.4		4.56	J	42.1		1.54	J	38.5		1.99	J

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Table 4-7. July 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W3015 C		LW2-W3015 F		LW2-W3016 C		LW2-W3016 F		LW2-W3018 C		LW2-W3018 F		LW2-W3023 C		LW2-W3023 F	
		Sample Date/Time	7/19/2005		7/19/2005		7/18/2005		7/18/2005		7/14/2005		7/14/2005		7/12/2005		7/12/2005	
		X Coordinate	--		--		--		--		--		--		--		--	
		Y Coordinate	--		--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																
alpha-Endosulfan	959-98-8	pg/l	40.9		6.2	J	50.6		2.34	J	51.6		0.727	UJ	52.1		0.772	J
beta-Endosulfan	33213-65-9	pg/l	22.2		1.62	UJ	27.5		1.3	UJ	31.8		1.06	UJ	35.7		0.774	UJ
Endosulfan sulfate	1031-07-8	pg/l	262		3.68	J	260		5.32	J	352		1.57	J	274		1.62	J
Endrin	72-20-8	pg/l	0.792	U	0.209	UJ	0.723	J	0.265	UJ	0.83	U	0.014	UJ	0.613	U	0.117	UJ
Endrin aldehyde	7421-93-4	pg/l	0.195	U	0.551	UJ	0.14	U	0.136	UJ	0.64	U	0.0761	UJ	0.2	U	1.73	UJ
Endrin ketone	53494-70-5	pg/l	0.872	J	0.19	UJ	0.591	U	0.216	UJ	1.1	J	0.133	UJ	0.432	J	0.112	UJ
Heptachlor	76-44-8	pg/l	0.13	U	0.061	U	0.254	U	0.162	J	0.286	U	0.04	U	0.144	U	0.04	U
Heptachlor epoxide	1024-57-3	pg/l	4.36	J	0.405	J	4.34	J	0.207	UJ	4.78	J	0.079	UJ	4.41	J	0.125	UJ
Methoxychlor	72-43-5	pg/l	2	U	1.31	UJ	1.26	U	1.26	UJ	2.29	U	0.983	UJ	1.5	U	0.19	UJ
Hexachlorobenzene	118-74-1	pg/l	39.5		10.7		53.4		32		38.9		3.73	J	39.3		8.65	
Hexachlorobutadiene	87-68-3	pg/l	30.7	J	3.21	J	140	J	21.2	J	2.02	UJ	0.113	J	0.573	J	0.099	UJ
Phthalate Esters																		
Dimethyl phthalate	131-11-3	pg/l	534	U	61.8	U	548	U	30.5	U	616	U	52.9	U	550	U	5.1	U
Diethyl phthalate	84-66-2	pg/l	1880		131	U	1990		129	U	2330		129	U	2310		123	U
Dibutyl phthalate	84-74-2	pg/l	1810	J	303	U	1690	J	368	U	1800	J	329	U	1780	J	201	U
Butylbenzyl phthalate	85-68-7	pg/l	967	J	271	U	889	J	33.6	U	2060		27.6	U	1240	J	188	U
Di-n-octyl phthalate	117-84-0	pg/l	125	U	252	U	138	U	249	U	125	U	114	U	119	U	210	U
Bis(2-ethylhexyl) phthalate	117-81-7	pg/l	3510	J	4240	J	4350	J	4570	J	3940	J	5930	J	17100		5890	J
Chlorinated Dioxin/Furan Homologs																		
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/l	0.166		0.256		--		--				--		0.146		0.151	
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/l	0.0701		0.151		--		--				--		0.0523		0.0864	
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/l	0.153		1.28		--		--				--		0.103		0.61	
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/l	0.499		9.62		--		--				--		0.339		4.37	
Octachlorodibenzo-p-dioxin	3268-87-9	pg/l	1.1		28.8		--		--				--		0.935		17.7	
Tetrachlorodibenzofuran homologs	30402-14-3	pg/l	0.324		1.16		--		--				--		0.0859		0.108	
Pentachlorodibenzofuran homologs	30402-15-4	pg/l	0.202		1.35		--		--				--		0.0442		0.14	
Hexachlorodibenzofuran homologs	55684-94-1	pg/l	0.246		1.8		--		--				--		0.0458	U	0.306	
Heptachlorodibenzofuran homologs	38998-75-3	pg/l	0.197		1.66		--		--				--		0.0378		0.667	
Octachlorodibenzofuran	39001-02-0	pg/l	0.0184	U	1.31		--		--				--		0.0178	U	0.642	
Chlorinated Dioxins/Furans																		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/l	0.00443	U	0.00826	U	--		--				--		0.00329	U	0.00391	U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/l	0.00257	U	0.0162	J	--		--				--		0.00237	U	0.0103	J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/l	0.00443	U	0.0332		--		--				--		0.00457	U	0.0216	J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/l	0.0124	U	0.149		--		--				--		0.0101	U	0.0826	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/l	0.00791	U	0.0967		--		--				--		0.00693	U	0.0537	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/l	0.255		4.26		--		--				--		0.177		2.3	
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/l	0.0754		0.435		--		--				--		0.00542	U	0.011	
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/l	0.0491		0.457		--		--				--		0.00174	U	0.00456	J
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/l	0.0156	J	0.188		--		--				--		0.00315	U	0.0069	U
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/l	0.0323		0.856		--		--				--		0.00516	U	0.0152	J
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/l	0.0314		0.23		--		--				--		0.0044	U	0.0123	J
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/l	0.00409	U	0.0157	J	--		--				--		0.00113	U	0.00144	J
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/l	0.00283	U	0.0439		--		--				--		0.00176	U	0.00924	J

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Table 4-7. July 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W3015 C		LW2-W3015 F		LW2-W3016 C		LW2-W3016 F		LW2-W3018 C		LW2-W3018 F		LW2-W3023 C		LW2-W3023 F	
		Sample Date/Time	7/19/2005		7/19/2005		7/18/2005		7/18/2005		7/14/2005		7/14/2005		7/12/2005		7/12/2005	
		X Coordinate	--		--		--		--		--		--		--		--	
		Y Coordinate	--		--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/l	0.0256	J	0.689		--		--				--		0.0112	U	0.236	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/l	0.0699		0.185		--		--				--		0.00799	U	0.0159	J
PCB Congeners																		
2-Chlorobiphenyl	2051-60-7	pg/l	0.836		0.0675		1.04		0.19		2.96		0.0597		0.696		0.0431	
3-Chlorobiphenyl	2051-61-8	pg/l	0.23		0.0758		0.365		0.134		0.3		0.0471	U	0.243		0.0705	
4-Chlorobiphenyl	2051-62-9	pg/l	0.42		0.101		0.622		0.237		0.686		0.0792		0.313		0.0664	U
2,2'-Dichlorobiphenyl	13029-08-8	pg/l	21.2		0.703		21.2		0.656		27.2		0.136	U	13.1		0.422	
2,3-Dichlorobiphenyl	16605-91-7	pg/l	0.202	U	0.062	U	0.0794	U	0.0516	U	0.0657	U	0.0386	U	0.0854	U	0.0769	U
2,3'-Dichlorobiphenyl	25569-80-6	pg/l	1.34		0.181	U	1.51		0.276		0.939		0.0376	U	0.487		0.0958	U
2,4-Dichlorobiphenyl	33284-50-3	pg/l	0.246		0.678	U	0.228		0.0683	U	0.202		0.676	U	0.0977		0.683	U
2,4'-Dichlorobiphenyl	34883-43-7	pg/l	4.52		0.683		4.65		0.829		3.06		0.138	U	1.65		0.175	
2,5-Dichlorobiphenyl	34883-39-1	pg/l	0.29		0.0581	U	0.306		0.0498		0.244		0.0361	U	0.136	U	0.0741	U
2,6-Dichlorobiphenyl	33146-45-1	pg/l	0.834		0.0586	U	0.716		0.0488	U	0.984		0.0429	U	0.441		0.0776	U
3,3'-Dichlorobiphenyl	2050-67-1	pg/l	30.2		4.06		22.7		3.02		13.8		1.06		15.8		1.99	
PCB012 & 013	PCB012_013	pg/l	0.65	U	0.156		0.644	U	0.273		0.393	U	0.0605	U	0.298	U	0.076	U
3,5-Dichlorobiphenyl	34883-41-5	pg/l	0.194	U	0.0617	U	0.0408	U	0.0513	U	0.0533	U	0.0384	U	0.082	U	0.0736	U
4,4'-Dichlorobiphenyl	2050-68-2	pg/l	3.52		1.23		3.56		1.76		2.58		0.346		1.17		0.32	
2,2',3-Trichlorobiphenyl	38444-78-9	pg/l	5.03		0.921		5.83		1.34		2.18		0.0897		1.39		0.0992	
2,2',4-Trichlorobiphenyl	37680-66-3	pg/l	7.44		1.59		8.44		1.84		6.19		0.214		3.27		0.416	
PCB018 & 030	PCB018_030	pg/l	10.7		2.19		14.1		3.8		5.48		0.229		3.06		0.342	
2,2',6-Trichlorobiphenyl	38444-73-4	pg/l	19.6		1.74		20.8		1.54		24.5		0.485		13.2		1.08	
PCB020 & 028	PCB020_028	pg/l	14.1		5.71		21.2		11		7.75		0.806		4.1		1.11	
PCB021 & 033	PCB021_033	pg/l	5.17		1.71		6.18		2.26		1.97		0.203		1.2		0.28	
2,3,4'-Trichlorobiphenyl	38444-85-8	pg/l	4.98		1.51		6.38		2.51		1.88		0.157		1.23		0.223	
2,3,5-Trichlorobiphenyl	55720-44-0	pg/l	0.0397	U	0.00702	J	0.0188	J	0.0083	U	0.0231	U	0.00377	U	0.0232	U	0.0233	U
2,3,6-Trichlorobiphenyl	55702-45-9	pg/l	0.259		0.0431		0.263		0.0517		0.121		0.00699	J	0.0305	U	0.00644	U
2,3',4-Trichlorobiphenyl	55712-37-3	pg/l	1.36		0.503		2.06		0.993		1.11		0.0962		0.518		0.145	
PCB026 & 029	PCB026_029	pg/l	2.77		0.96		3.81		1.54		1.81		0.135		0.975		0.224	
2,3',6-Trichlorobiphenyl	38444-76-7	pg/l	1.98		0.355		2.13		0.405		1.89		0.0826		0.95		0.138	
2,4',5-Trichlorobiphenyl	16606-02-3	pg/l	11.3		4.17		16.7		7.31		5.65		0.513		3.27		0.801	
2,4',6-Trichlorobiphenyl	38444-77-8	pg/l	4.87		0.721		6.99		1.21		4.15		0.139		1.6		0.177	
2,3',5'-Trichlorobiphenyl	37680-68-5	pg/l	0.0892	U	0.0314		0.158		0.0665		0.0532		0.0041	U	0.0327	U	0.00856	J
3,3',4-Trichlorobiphenyl	37680-69-6	pg/l	0.329		0.17		0.293		0.187		0.168		0.0368	U	0.125	U	0.0424	
3,3',5-Trichlorobiphenyl	38444-87-0	pg/l	0.0705	U	0.0466		0.062		0.0296	U	0.0384	U	0.00682	J	0.0383	U	0.0147	J
3,4,4'-Trichlorobiphenyl	38444-90-5	pg/l	2.73		1.91		3.28		3.14		1.3		0.348		0.796		0.389	
3,4,5-Trichlorobiphenyl	53555-66-1	pg/l	0.0403	U	0.0147	U	0.0512		0.0272		0.0264	U	0.0239	U	0.024	U	0.00631	U
3,4',5-Trichlorobiphenyl	38444-88-1	pg/l	0.131		0.0577		0.234		0.152		0.137		0.0108	U	0.0456	U	0.0156	U
PCB040 & 041 & 071	PCB040_041_071	pg/l	9.52		5.68		20.5		16.9		6.49		1.09		3.3		0.748	
2,2',3,4'-Tetrachlorobiphenyl	36559-22-5	pg/l	4.27		2.81		9.16		8.51		2.69		0.483		1.5		0.329	
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	pg/l	0.646		0.441		1.29		1.17		0.311		0.0509		0.251		0.045	
PCB044 & 047 & 065	PCB044_047_065	pg/l	18.8		11.8		36.9		30.4		20.8		3.84		8.63		2.42	
PCB045 & 051	PCB045_051	pg/l	5.89		2.67		8.94		4.81		7.32		0.843		2.81		0.728	
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	pg/l	1.51		0.617		2.82		1.55		1.29		0.134		0.547		0.0906	
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	pg/l	2.69		1.8		5.29		4.5		1.22		0.189		0.871		0.189	
PCB049 & 069	PCB049_069	pg/l	11.1		7.94		21.1		18.5		14		2.4		5.74		1.76	

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Table 4-7. July 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W3015 C		LW2-W3015 F		LW2-W3016 C		LW2-W3016 F		LW2-W3018 C		LW2-W3018 F		LW2-W3023 C		LW2-W3023 F	
		Sample Date/Time	7/19/2005		7/19/2005		7/18/2005		7/18/2005		7/14/2005		7/14/2005		7/12/2005		7/12/2005	
		X Coordinate	--		--		--		--		--		--		--		--	
		Y Coordinate	--		--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																
PCB050 & 053	PCB050_053	pg/l	6.22		2.76		8.7		4.07		9.27		0.95		4.17		1.06	
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	pg/l	19.2		12.9		37.4		29.4		27.1		4.69		10.7		2.81	
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	pg/l	1.72		0.384		1.73		0.319		2.42		0.145		1.21		0.259	
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	pg/l	0.204	U	0.111	U	0.237		0.312	U	0.0348	U	0.0177	U	0.0622		0.0351	U
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	pg/l	5.34		4.25		12.7		16		2.26		0.695		1.52		0.616	
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	pg/l	0.0827	U	0.0372		0.0904		0.124		0.0649	U	0.00799	U	0.0651	U	0.0655	U
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	pg/l	0.518		0.126	U	0.826		0.0868	U	1.4		0.011	U	0.126	U	0.127	U
PCB059 & 062 & 075	PCB059_062_075	pg/l	1.51		0.987		2.96		2.52		1.03		0.192		0.582		0.137	
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	pg/l	2.22		1.88		5.36		6.84		0.88		0.254		0.737		0.279	
PCB061 & 070 & 074 & 076	PCB061_070_074_	pg/l	16.5		14.6		32.8		42.8		12.7		3.99		6.98		2.82	
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	pg/l	0.44	U	0.392		1.02		1.26		0.31		0.0888		0.165		0.0593	
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	pg/l	6.44		4.45		14.7		14.1		3.97		0.763		2.3		0.518	
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	pg/l	9.43		8.98		22.7		32.2		6.21		2.11		3.5		1.58	
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	pg/l	0.317		0.338		0.573		0.756		0.247		0.077		0.118		0.0489	
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	pg/l	0.117	U	0.114		0.136		0.16	U	0.318		0.0808		0.0754	U	0.0411	
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	pg/l	0.15		0.156		0.227		0.272		0.273		0.0732		0.0932		0.0407	
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	pg/l	0.437		0.267		0.872		0.082	U	0.362		0.0547		0.117		0.0301	
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	pg/l	0.665		1.04		1.38		3.07		0.511		0.351		0.256		0.243	
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	pg/l	0.0893	U	0.0316	U	0.0339	U	0.0831	U	0.0317	U	0.0315	U	0.0316	U	0.0318	U
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	pg/l	0.145		0.152		0.246		0.377		0.272		0.14		0.09	U	0.0509	U
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	pg/l	0.0812	U	0.0408	U	0.0405	U	0.0765	U	0.0407	U	0.0406	U	0.0408	U	0.0411	U
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	pg/l	0.0817	U	0.0511	U	0.0475	U	0.116		0.0493	U	0.0152	U	0.0495	U	0.00942	U
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	pg/l	1.31		1.8		2.5		4.9		1.65		1.09		0.657		0.378	
PCB083 & 099	PCB083_099	pg/l	5.65		8.99		8.9		17.9		11.2		7.27		4.17		2.43	
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	pg/l	3.57		3.99		5.77		8.36		7.28		3.25		2.59		0.764	
PCB085 & 116 & 117	PCB085_116_117	pg/l	1.77		2.52		3.16		6.52		2.46		1.69		1.14		0.647	
PCB086 & 087 & 097 & 108 & 119 & 125	PCB086_087_097_	pg/l	6.75		9.16		10.9		19.9		11.3		6.86		4.72		2.36	
PCB088 & 091	PCB088_091	pg/l	2.32		3.26		3.34		5.61		5.16		2.64		1.84		0.842	
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	pg/l	0.193		0.246	U	0.452		0.796		0.189		0.0911	U	0.107		0.0325	
PCB090 & 101 & 113	PCB090_101_113	pg/l	10.3		15.8		14.5		25.3		23		13.2		8.14		4.17	
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	pg/l	2.43		3.49		3.1		4.96		5.29		2.98		1.75		0.89	
PCB093 & 095 & 098 & 100 & 102	PCB093_095_098_	pg/l	12		16.1		16.4		23.1		30.5		13.2		10.1		3.64	
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	pg/l	0.239		0.283		0.278		0.365		0.54		0.206		0.205		0.0872	U
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	pg/l	0.285	U	0.311		0.401		0.469		0.546		0.165		0.236		0.0916	
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	pg/l	0.433		0.666		0.46		0.602		1.07		0.464		0.425		0.275	
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	pg/l	0.0515		0.0616		0.0552		0.045		0.116		0.0332		0.0517	U	0.0439	
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	pg/l	2.07		4.37		3.72		10.8		2.68		2.93		1.27		1.51	
2,3,3',4,5-Pentachlorobiphenyl	70424-69-0	pg/l	0.142	U	0.139	U	0.138	U	0.139	U	0.139	U	0.139	U	0.139	U	0.14	U
PCB107 & 124	PCB107_124	pg/l	0.245		0.411		0.39		0.882		0.389		0.338		0.149		0.149	
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	pg/l	0.546		0.874		0.765		1.67		0.834		0.716		0.31		0.331	
PCB110 & 115	PCB110_115	pg/l	11		14.5		16.2		28		23.4		14.4		7.34		4.4	
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	pg/l	0.0628	U	0.0255	U	0.0146	J	0.0288		0.033	U	0.0256		0.0618	U	0.0126	J
2,3,3',5,6-Pentachlorobiphenyl	74472-36-9	pg/l	0.0319	U	0.0255	U	0.0253	U	0.0255	U	0.0254	U	0.0254	U	0.0255	U	0.0257	U
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	pg/l	0.122		0.285		0.246		0.692		0.133		0.14		0.0779	U	0.0803	
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	pg/l	4.99		9.93		7.81		20.7		8.7		8.43		3.32		3.65	
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	pg/l	0.0556		0.11		0.0563		0.12		0.125		0.109	U	0.0331	U	0.0387	U

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Table 4-7. July 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W3015 C		LW2-W3015 F		LW2-W3016 C		LW2-W3016 F		LW2-W3018 C		LW2-W3018 F		LW2-W3023 C		LW2-W3023 F	
		Sample Date/Time	7/19/2005		7/19/2005		7/18/2005		7/18/2005		7/14/2005		7/14/2005		7/12/2005		7/12/2005	
		X Coordinate	--		--		--		--		--		--		--		--	
		Y Coordinate	--		--		--		--		--		--		--		--	
Analysis/Analyte	CAS #	Units																
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	pg/l	0.0536	U	0.0327		0.0234	U	0.0301		0.0578		0.0233	U	0.0261	U	0.0246	U
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	pg/l	0.0878		0.173		0.191		0.432		0.105		0.111	U	0.0502	U	0.0454	
2,3',4,4',5'-Pentachlorobiphenyl	65510-44-3	pg/l	0.131		0.272		0.238		0.61		0.215		0.151		0.116	U	0.0706	U
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	pg/l	0.071	U	0.0696		0.0236	J	0.109		0.024	U	0.0531		0.0377	U	0.021	U
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	pg/l	0.0612	U	0.0224	U	0.0387	U	0.0525	U	0.0388	U	0.0347	U	0.039	U	0.0144	U
PCB128 & 166	PCB128_166	pg/l	0.832		2.32		0.85		3.39		1.58		3.19		0.49		1	
PCB129 & 138 & 160 & 163	PCB129_138_160_	pg/l	7.91		20.1		7.43		26.8		14.8		27.7		4.13		7.18	
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	pg/l	0.506	U	1.18		0.476		1.52		0.861		1.6		0.228		0.387	
2,2',3,3',4,6-Hexachlorobiphenyl	61798-70-7	pg/l	0.101	U	0.195		0.101		0.275		0.184		0.249		0.0409		0.0538	U
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	pg/l	3.23		6.18		2.8		7.25		5.95		8.22		1.58		1.86	
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	pg/l	0.227		0.526		0.199		0.55		0.397		0.575		0.125	U	0.196	
PCB134 & 143	PCB134_143	pg/l	0.602		0.928		0.525		1.17		1.1		1.3		0.325		0.293	
PCB135 & 151 & 154	PCB135_151_154	pg/l	4.96		9.37		4.32		9.35		9.42		10.6		2.69		2.59	
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	pg/l	1.92		3.28		1.57		3.52		3.69		3.66		1.25		0.894	
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	pg/l	0.214		0.62		0.216		1.08		0.361		0.832	U	0.131	U	0.205	
PCB139 & 140	PCB139_140	pg/l	0.138		0.315		0.143		0.439		0.279		0.4		0.0886		0.114	
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	pg/l	1.67		4.19		1.52		5.24		2.94		5.32		0.722		1.18	
2,2',3,4,5,6-Hexachlorobiphenyl	41411-61-4	pg/l	0.0539	U	0.0215	J	0.0233	J	0.154		0.0359	U	0.0487	U	0.036	U	0.0362	U
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	pg/l	0.55		0.984		0.49		1.11		0.997		1.16		0.257		0.271	
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	pg/l	0.0493	U	0.00974	U	0.0058	J	0.0197	J	0.0082	J	0.00961	J	0.00385	U	0.00108	U
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	pg/l	1.79		3.86		1.54		4.23		3.21		4.56		0.869		1.46	
PCB147 & 149	PCB147_149	pg/l	9.4		16.9		7.91		19.6		18.2		21.9		4.89		5.15	
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	pg/l	0.0621		0.141		0.0498		0.122		0.108	U	0.112		0.0544	U	0.0595	
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	pg/l	0.0648		0.121		0.049		0.115		0.137		0.147		0.0624		0.0619	
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	pg/l	0.03	U	0.0559		0.0283	U	0.0521	U	0.0679		0.0646		0.0273	U	0.0207	U
PCB153 & 168	PCB153_168	pg/l	7.62		19.4		6.85		21.6		14.5		25.6		3.8		6.12	
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	pg/l	0.0628	U	0.0147	J	0.00858	J	0.0158	U	0.011	U	0.0128	U	0.00801	U	0.01	J
PCB156 & 157	PCB156_157	pg/l	0.381		1.62		0.43		2.22		0.728		2.08		0.248		0.728	
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	pg/l	0.653		1.77		0.659		2.34		1.31		2.56		0.361		0.667	
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	pg/l	0.0755		0.294		0.0797		0.359		0.14		0.358		0.0217	U	0.139	
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	pg/l	0.0625	U	0.0615	U	0.0611	U	0.0616	U	0.0613	U	0.0612	U	0.0615	U	0.0619	U
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	pg/l	0.0555	U	0.0546	U	0.0542	U	0.0546	U	0.0255	U	0.0543	U	0.0546	U	0.0262	
2,3,3',4',5',6-Hexachlorobiphenyl	74472-45-0	pg/l	0.674		1.39		0.637		1.78		1.29		2.21		0.316		0.503	
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	pg/l	0.0637	U	0.0289	U	0.0622	U	0.0307		0.0222	U	0.0343	U	0.0626	U	0.0175	U
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	pg/l	0.162		0.643		0.167		0.897		0.336		0.884		0.114		0.261	
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	pg/l	0.0405	U	0.0273	U	0.0395	U	0.0464	U	0.0397	U	0.0392	U	0.0398	U	0.0231	U
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	pg/l	1.02	U	6.9		1.06		6.92		1.94		10.3		0.541		2.53	
PCB171 & 173	PCB171_173	pg/l	0.52		2.17		0.483		2.98		0.837		3.08		0.261		0.899	
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	pg/l	0.268	U	0.0399	U	0.23		1.75		0.38		1.76		0.11	U	0.541	
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	pg/l	1.95		7.06		1.77		8.76		3.07		9.44		0.879		3.14	
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	pg/l	0.0903	U	0.377		0.0936		0.492		0.13		0.452		0.0433		0.126	
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	pg/l	0.311		1.01		0.262		1.29		0.439		1.43		0.132		0.323	
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	pg/l	1.06		4.13		0.981		5.32		1.75		5.73		0.495		1.93	
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	pg/l	0.507		1.92		0.507		2.36		0.792		2.45		0.247		0.831	
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	pg/l	1.06		3.38		0.913		3.77		1.62		4.13		0.451		1.21	
PCB180 & 193	PCB180_193	pg/l	2.69		17.3		2.63		16.4		4.69		22.1		1.42		6.81	

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Table 4-7. July 2005 Surface Water Data Results - XAD.

		Sample Name	LW2-W3015 C		LW2-W3015 F		LW2-W3016 C		LW2-W3016 F		LW2-W3018 C		LW2-W3018 F		LW2-W3023 C		LW2-W3023 F	
		Sample Date/Time	7/19/2005		7/19/2005		7/18/2005		7/18/2005		7/14/2005		7/14/2005		7/12/2005		7/12/2005	
		X Coordinate	--		--		--		--		--		--		--		--	
		Y Coordinate	--		--		--		--		--		--		--		--	
Analysis/Analyte	**CAS #**	**Units**																
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	pg/l	0.0303	U	0.239		0.082	U	1.55		0.0168	U	0.0692		0.078	U	0.0236	J
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	pg/l	0.0174	J	0.0526	U	0.0118	U	0.0881	U	0.0204	J	0.0893		0.00443	U	0.0345	
PCB183 & 185	PCB183_185	pg/l	1.28		5.43		1.17		7.1		2		7.09		0.557		2.08	
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	pg/l	0.0318	U	0.0152	J	0.00827	U	0.0302		0.00404	J	0.011	J	0.00368	U	0.00791	U
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	pg/l	0.067	U	0.0659	U	0.0655	U	0.066	U	0.0657	U	0.0656	U	0.0659	U	0.0663	U
2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	pg/l	2.54		10.4		2.37		12		3.89		12.8		1.19		4.29	
2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	pg/l	0.0228	U	0.0265		0.0129	J	0.0286		0.0127	J	0.0346	U	0.00797	J	0.0229	U
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	pg/l	0.0449	U	0.217		0.026	U	0.294	U	0.0522		0.322		0.0137	J	0.0858	
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	pg/l	0.215		1.47		0.226		2.21		0.412		2.09		0.132	U	0.524	
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	pg/l	0.0512		0.0697	U	0.0531		0.413		0.0946		0.458		0.0179	J	0.107	
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	pg/l	0.0567	U	1.43		0.0554	U	0.0119	U	0.0556	U	0.0555	U	0.0558	U	0.00262	J
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	pg/l	0.187		2.96		0.223		4		0.365	U	3.91		0.155		1.45	
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	pg/l	0.1	U	1.18		0.135		1.94		0.202		1.6		0.0717		0.6	
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	pg/l	0.211	U	1.95		0.28		2.64		0.329		2.56		0.131		0.764	
PCB197 & 200	PCB197_200	pg/l	0.114		0.727		0.136		1.29		0.143		0.873		0.0479	J	0.32	
PCB198 & 199	PCB198_199	pg/l	0.627		0.000956	U	0.66		5.93		0.799		5.21		0.352		1.78	
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	pg/l	0.164		0.526		0.204		0.779		0.135		0.631		0.0503	U	0.264	
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	pg/l	0.14	U	0.796		0.208	U	1.1		0.178	U	0.94		0.113	U	0.449	
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	pg/l	0.304	U	2.34		0.346		4.06		0.43		3.31		0.2		1.17	
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	pg/l	0.0746	U	0.0194	U	0.00372	U	0.0822		0.000764	J	0.0731	U	0.0734	U	0.00161	U
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	pg/l	0.0822	U	0.153		0.015	U	0.336		0.0233	J	0.202		0.00703	U	0.07	
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	pg/l	0.163	U	3.29		0.152		4.44		0.138		1.74		0.0885		0.838	
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	pg/l	0.0995	U	0.358		0.146		1.15		0.0382	U	0.296		0.0344		0.141	
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	pg/l	0.0822	U	0.773		0.148		1.37		0.0658		0.589		0.0529		0.289	
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	pg/l	0.0958	U	6.29		0.0722		7.25		0.0603		1.72		0.0542	U	0.934	
Polychlorinated biphenyls	1336-36-3	pg/l	404		398		581		695		487		341		204		118	
PCB Homologs																		
Monochlorobiphenyl	27323-18-8	pg/l	1.48		0.244		2.03		0.561		3.95		0.186		1.25		0.114	
Dichlorobiphenyl	25512-42-9	pg/l	62.2		6.83		54.9		6.86		49		1.4		32.8		2.9	
Trichlorobiphenyl	25323-68-6	pg/l	92.8		24.4		119		39.4		66.3		3.51		35.5		5.5	
Tetrachlorobiphenyl	26914-33-0	pg/l	125		87.4		251		241		124		23.7		56.2		16.9	
Pentachlorobiphenyl	25429-29-2	pg/l	66.2		97.5		99.9		183		137		80.3		48.5		26.7	
Hexachlorobiphenyl	26601-64-9	pg/l	43.1		96.4		39.1		115		82.5		124		22.5		31.3	
Heptachlorobiphenyl	28655-71-2	pg/l	12.2		63.4		12.8		73.4		22.1		83.8		6.25		25.5	
Octachlorobiphenyl	55722-26-4	pg/l	1.23		10.6		2.19		22.2		2.24		19.2		1.12		6.86	
Nonachlorobiphenyl	53742-07-7	pg/l	0.147	U	4.42		0.447		6.97		0.204		2.63		0.176		1.27	

Notes:

[1] Axys used PCB congener patterns to identify Aroclors and quantitated Aroclor concentrations using various combinations of congeners, depending on the identified Aroclors.

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Table 4-8. Round 2A Sampling Events Surface Water Data Summary.

		Sampling Event		
Parameter	**Units**	**Nov-04**	**Mar-05**	**Jul-05**
Duration of event	days	25 days	17 days	16 days
Discharge [1]	cfs	15,400 - 24,700	8,390 - 11,900	5,720 - 11,300
Temperature [2]	°C	7.9 - 10.8	7.5 - 12.4	20.0 - 23.7
Total rainfall [3]	inches	1.31	0.13	0.25
Specific conductance	µS/cm	---	57 - 156	84 - 143
TSS	mg/L	5 - 8	5 - 15	5 - 16
TDS	mg/L	47 - 87	58 - 105	57 - 102
TOC	mg/L	1.4 - 2.4	1.4 - 2.1	1.7 - 2.3
DOC	mg/L	1.2 - 2.0	1.1 - 1.6	1.4 - 1.7

Notes:

[1] USGS Willamette River Data - http://nwis.waterdata.usgs.gov/or/nwis.

[2] Data were collected with a YSI 600 QS sonde and a 650 MDS monitor.

[3] National Weather Service Forecast Office, Portland, OR - http://newweb.wrh.noaa.gov/climate/index.php?wfo=pqr

-- Specific conductance results not reliable for selected days during the November 2004 event due to problems with the water quality meters.

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Table 4-9. Percent Contribution to Total Concentration from XAD Columns and Pre-filters.

Analyte Group	Percent Contribution to Total Concentration[1]	
	Water Column (XAD resin)	Particulate Phase (XAD pre-filter)
Chlorinated Dioxin/Furans	6 ± 2	94 ± 2
PCBs[2]	30 ± 5	70 ± 5
PAHs	73 ± 7	27 ± 7
4,4'-DDTs[3]	35 ± 2	65 ± 2

Notes:

[1] Percent contribution to the total concentration was averaged for all stations over each of the three sampling events.

[2] Represents the sum of all 209 PCB congeners.

[3] Represents the sum of 4,4'-DDT, 4,4'-DDE, and 4,4'-DDD.

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LWG
LOWER WILLAMETTE GROUP

PORTLAND HARBOR RI/FS
ROUND 2A SURFACE WATER SITE CHARACTERIZATION SUMMARY REPORT

APPENDIX A
DATA QUALITY SUMMARY

DRAFT

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April 24, 2006

Prepared for

The Lower Willamette Group

Prepared by

Integral Consulting Inc.

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LIST OF ACRONYMS

CAS	Columbia Analytical Services
CLP	Contract Laboratory Program
DQO	data quality objectives
EPA	U.S. Environmental Protection Agency
ICP	inductively coupled plasma
LCS/LCSD	laboratory control sample/laboratory control sample duplicate
LDC	Laboratory Data Consultants, Inc.
MDL	method detection limit
MRL	method reporting limit
MS/MSD	matrix spike/matrix spike duplicate
NEA	Northeast Analytical
OPR	ongoing precision and recovery
PAH	polycyclic aromatic hydrocarbon
PARCC	precision, accuracy, representativeness, completeness, comparability
PCB	polychlorinated biphenyl
PCDD/F	polychlorinated dibenzo-p-dioxin/furans
QA	quality assurance
QAPP	quality assurance project plan
QC	quality control
RI/FS	remedial investigation and feasibility study
RPD	relative percent difference
SOP	standard operating procedure
SVOC	semivolatile organic compounds

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1.0 INTRODUCTION

This report summarizes the data quality of surface water samples collected during Round 2A of the Portland Harbor Remedial Investigation and Feasibility Study (RI/FS). Samples were collected and analyzed for organic, inorganic, and conventional parameters according to the sample preparation and analytical procedures in the Round 2 Quality Assurance Project Plan (QAPP) Addendum 1: Surface Water (Integral 2004b).

The laboratory methods of analysis for the surface water samples are included in Table A-1. All surface water samples collected by peristaltic pump were analyzed for conventionals, metals, butyltins, chlorinated herbicides, organochlorine pesticides, polychlorinated biphenyl (PCB) Aroclors, semivolatile organic compounds (SVOCs), phenols, phthalate esters, and polycyclic aromatic hydrocarbons (PAHs). All surface water samples collected by the Infiltrex 300 system were analyzed for organochlorine pesticides, PAHs, phthalate esters, polychlorinated dibenzo-p-dioxins and furans (PCDD/Fs), and PCB congeners. Samples were collected and analyzed as required by the Round 2A Field Sampling Plan for Surface Water (Integral 2004a). Chemical analyses of bulk and high-volume surface water samples were completed by three laboratories:

- Northeast Analytical (NEA; Schenectady, NY) completed analyses for pesticides and PCB Aroclors for peristaltic samples and for PCB Aroclors in in XAD extracts for the November 2004 and July 2005 sampling events.
- Axys Analytical (Axys; Sidney, BC, Canada) prepared XAD extracts and completed analyses for pesticides, PAHs, phthalate esters, dioxins and furans, and PCB congeners in XAD extracts.
- Columbia Analytical Services (CAS; Kelso, WA) completed all other analyses on water samples (i.e., conventional analyses, metals, butyltin compounds, chlorinated herbicides, and SVOCs).

The sample analyses were conducted according to the Round 2 QAPP Addendum 1 (Integral 2004b). Deviations from the QAPP are detailed in Table 3-1 of the main body of this report.

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2.0 DATA QUALITY AND USABILITY

Data generated in the field and at the laboratories were verified and validated according to the criteria and procedures described in the Round 2 QAPP (Integral and Windward 2004). Data quality and usability were evaluated based on the results of the data validation and the data quality objectives (DQOs) for the Round 2 data. The performance criteria in the QAPP included project analytical goals for precision, accuracy, representativeness, completeness, and comparability (PARCC) of the Round 2 data.

The precision, accuracy, representativeness, and comparability of the data were assessed during data validation, as described in the *Data Validation* section below and in the Round 2 QAPP. Completeness is calculated by comparing the total number of acceptable data (nonrejected data) to the total number of data points generated. Completeness for the Round 2 surface water chemistry data is summarized by parameter group and sample type in Table A-2. Completeness was >99% overall and ranged from 95 to 100% for the various parameter groups and sample types.

2.1 DATA VALIDATION

Data validation was conducted as required by the Round 2 QAPP (Integral and Windward 2004) and is summarized in Section 3.3 of the main body of this report. The inorganic, organic, PCB congener, and PCDD/F data were validated in accordance with guidance specified in *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic and Organic Data Review*, by U.S Environmental Protection Agency (EPA) Region 10 standard operating procedures (SOPs) for validation of PCB congener data and PCDD/F data (EPA 1994a, 1995, 1996, 1999a), and by *Guidance on Environmental Data Verification and Validation* (EPA 2002). Modifications were made to the Functional Guidelines to accommodate quality assurance/quality control (QA/QC) requirements of the non-Contract Laboratory Program (CLP) methods that were used for this project.

Data validation was completed by EcoChem (Seattle, WA) and Laboratory Data Consultants, Inc. (LDC; Carlsbad, CA). Approximately 10% of the data for each laboratory method were fully validated, as described in the Round 2 QAPP. Validation for the remaining data was based on review of the summary forms for sample and QC data. However, all chromatograms were reviewed for PCBs to verify the identity of the reported Aroclors, and for pesticides to evaluate any effects of interference by PCBs and other sample constituents. The following deliverables were reviewed during Level 3 and full data validation:

- The case narrative discussing analytical problems (if any) and procedures
- Chain-of-custody documentation and laboratory sample receipt logs
- Instrument calibration results

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- Method blank results
- Results for laboratory quality control samples required by the referenced method, including laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses, matrix spike/matrix spike duplicate (MS/MSD) analyses, surrogate recoveries, and other method-specific QC samples [e.g. serial dilutions for inductively coupled plasma (ICP) analyses]
- Results for field QC samples (i.e., equipment blanks, field duplicates, and field split samples)
- Analytical results for the surface water samples.

In addition to review and assessment of the documentation identified above, full validation included verification of reported concentrations of the results for field samples and QC samples, verification of intermediate transcriptions, and review of instrument data, such as mass spectra, to verify analyte identification procedures.

Data qualifiers were assigned during data validation if applicable control limits were not met, in accordance with the EPA data validation guidelines (EPA 1994a, 1995, 1996, 1999a) and the QC requirements included in the referenced methods. Integral applied additional qualifiers to the phthalate ester data during each sampling event; these qualifiers are not included in the third-party data validation reports, but can be found in Attachment A3. The QC limits for surrogate spikes, MS/MSD samples, laboratory control samples, and ongoing precision and recovery (OPR) for the Round 2 laboratories are summarized in Tables A-3 and A-4. The data validation qualifiers and definitions are summarized in Table A-5. Data quality reports generated by EcoChem and LDC are included in Attachments A1 and A2, respectively.

2.2 DATA QUALITY

The EcoChem and LDC data validation reports (Attachments A1 and A2) provide detailed information on the data quality issues and data validation qualifiers for each parameter group for each laboratory data package. A summary of the qualified data by parameter group, with the reasons for qualification, is included in Table A-6.

The discussion below includes a comparison of the reported detection limits to the detection limits specified in the QAPP Addendum 1 (Integral 2004b), followed by a summary of the qualified data for each parameter group and any limitations to the usability of the data.

2.2.1 Reported Detection Limits

Surface water data for Round 2 of the Portland Harbor RI/FS were reported to the method detection limit (MDL) in most cases (Tables A-7a–c). Sample-specific detection limits were reported for PCB congeners and PCDD/Fs, as specified in the respective method protocols (EPA methods 1668A and 1613B; EPA 1999b, 1994b).

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These detection limits are based on the signal-to-noise ratio of the analytical system for each analyte and sample. In several cases, particularly for pesticides and PCBs, the MDL and method reporting limit (MRL) were elevated at the laboratory or during data validation because matrix interference or the presence of another analyte (e.g., PCBs in the pesticide analysis) interfered with the quantification of a given analyte.

MDLs and MRLs were also elevated when results were restated as undetected during data validation because of possible sample contamination, as indicated by the presence of target analytes in an associated method blank or equipment blank. MDLs for naphthalene in the XAD samples for each of the three sampling events were elevated due to the presence of naphthalene as a breakdown product of the XAD resin. MDLs for bis(2-ethylhexyl) phthalate were also elevated in each of the three sampling events due to background laboratory contamination. Various MDLs on an event-by-event basis were also elevated due to diluted samples with high analyte concentrations.

2.2.2 Field Quality Control Samples

Field quality control samples are used to assess sample variability (field replicates), evaluate potential sources of contamination (equipment rinsate blanks), or confirm proper storage conditions (temperature blanks). The Round 2 QAPP Addendum 1 (Integral 2004b) required collection of the following field QC samples:

- Field replicate samples – 5% of the sample total
- Equipment rinsate blanks – near the beginning and end of the sampling event
- Decontamination blanks for the peristaltic pump - analyzed to ensure that the decontamination procedure used for the peristaltic pump equipment was adequate
- Temperature blanks – 1 per cooler.

The field QC samples were collected at the frequency specified in the QAPP.

In several cases, target analytes were detected at low levels in the surface water equipment rinsate blanks. Selected data from the surface water samples were restated as undetected on the basis of detection of target analytes in the equipment rinsate blanks (Table A-6 and Attachment A3).

Field replicates were collected to assess the variability of the results. Field replicate samples were generated by collecting an additional surface water sample at a designated station, processing this sample separately in the same manner as the original sample, and submitting the replicate as a separate sample for analysis at the laboratory. The field replicate sample results for each sampling event are summarized in Tables A-8a–c.

The comparability of the replicate results was assessed by calculating the relative percent difference (RPD) of the results. Because there is no standard control limit for

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comparison of field replicate results, a target RPD of 50 was established for detected results greater than 5 times the reporting limit. Greater variability is expected for results within 5-10 times the reporting limit because the background signal variations (i.e., "noise") are greater relative to the lower analyte levels. Surface water data were not qualified based solely on the field replicate results. For the November 2004 sampling event, the majority of the RPDs were within the target control limit. For the March 2005 event, there were several exceedances of the target control limit for DDTs and PCDD/Fs, and the majority of the PCB congeners for the XAD samples exceeded the target control limit. For the July 2005 event, there were numerous exceedances of the target control limit for the PCDD/F XAD samples, and multiple exceedances for the XAD PAH and organochlorine pesticide results. These XAD exceedances are likely due to the heterogeneity of replicate samples collected a day apart. Overall, the precision of the surface water results is acceptable.

2.2.3 Summary of Qualified Data

Selected data not meeting the data quality criteria were qualified as undetected, estimated, tentatively identified, or rejected during validation, in accordance with the QAPP. A summary of the qualified data by parameter group, including the reasons for qualification, is included in Table A-6. A complete list of qualified results with reason codes is provided in Attachment A3. Data qualified as undetected are usable for all intended purposes. Data qualified as estimated or tentatively identified are usable for all intended purposes, with the knowledge that these data may be less precise or less accurate than unqualified data. Rejected data are not usable for any purpose and have been flagged as "not reportable" in the database.

The precision and accuracy of the Round 2 surface water data was acceptable, with the exception of the data (<1%) that were rejected during data validation. The completeness of the Round 2 surface water data was >99% (Table A-2). The Round 2 surface water data, excluding the rejected data, are usable for all project purposes. Overall, the data quality was good and will meet program objectives and goals for the RI/FS.

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Table A-1. Laboratory Methods for Round 2A Surface Water Samples.

Analytes	Laboratory	Sample Preparation		Quantitative Analysis	
		Protocol	Procedure	Protocol	Procedure
Peristaltic Pump Samples					
Conventional Analyses	CAS				
Total suspended solids		EPA 160.2	Filtration and drying	EPA 160.2	Balance
Total dissolved solids		EPA 160.1	Filtration and drying	EPA 160.1	Balance
Total organic carbon		EPA 415.1	Chemical oxidation	EPA 415.1	Infrared detector
Dissolved organic carbon		EPA 415.1	Filtration, chemical oxidation	EPA 415.1	Infrared detector
Perchlorate		EPA 314.0	Filtration, 0.45-um filter	EPA 314.0	Ion chromatography
Metals	CAS				
Aluminum, antimony, cadmium, total chromium, copper, lead, nickel, selenium, silver, zinc		EPA 3005	Acid digestion	EPA 200.8	ICP/MS
Arsenic		EPA 3005A (Modified)	Acid Digestion/pre-concentration	EPA 200.8	ICP/MS
Hexavalent chromium		EPA 7195	Coprecipitation	EPA 6010B	ICP/OES
Mercury		EPA 7470	Acid digestion/oxidation	EPA 7470	CVAA
Hardness as $CaCO_3$		EPA 3005	Acid digestion	EPA 200.8 or 6010B SM2340B	ICP/MS or ICP/OES Calculation
Butyltins	CAS	Unger et al. 1988	Solvent extraction Derivatization	Unger et al. 1988	GC/FPD
PCBs Aroclors	NEA	EPA 3545 EPA 3640A EPA 3630C EPA 3665A	Pressurized fluid extraction Gel permeation chromatography Florisil® cleanup Sulfuric acid cleanup	EPA 8082	GC/ECD
Chlorinated Herbicides	CAS	EPA 8151A	Solvent extraction Esterification	EPA 8151A	GC/ECD
Organochlorine Pesticides	NEA	EPA 3545 EPA 3640A EPA 3660B EPA 3630C	Pressurized fluid extraction Gel permeation chromatography Sulfur cleanup (as needed) Florisil® cleanup	EPA 8081A	GC/ECD
Semivolatile Organic Compounds	CAS	EPA 3520C	Continuous liquid-liquid extraction	EPA 8270C	GC/MS with LVI GC/MS-SIM (PAHs only)
XAD-2 Column Extracts					
Column Extraction	Axys	EPA 3540	Soxhlet extraction	--	--
Organochlorine Pesticides	Axys	AXYS SOP MLA-028	Florisil® cleanup Extract fractionation	AXYS SOP MLA-028	HRGC/HRMS

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Table A-1. Laboratory Methods for Round 2A Surface Water Samples.

Analytes	Laboratory	Sample Preparation		Quantitative Analysis	
		Protocol	Procedure	Protocol	Procedure
Polycyclic Aromatic Hydrocarbons	Axys	AXYS SOP MLA-021	Extract fractionation	AXYS SOP MLA-021	HRGC/LRMS
Phthalate Esters	Axys	AXYS SOP MLA-027	Extract fractionation	AXYS SOP MLA-027	HRGC/LRMS
Chlorinated Dioxins and Furans	Axys	EPA 1613B[1]	Layered Acid/Base/SiO_3 column Florisil® cleanup Carbon/Celite clean-up column 1% deactivated basic Alumina	EPA 1613B	HRGC/HRMS
PCB congeners [2]	Axys	EPA 1668A	Florisil® cleanup Extract fractionation Layered Acid/Base SiO_3 Alumina	EPA 1668A	HRGC/HRMS

Notes:

[1]Cleanup procedures indicated in this table will be used as needed for chlorinated dioxin and furan analyses.

[2] PCB Aroclors and homologs were derived from the PCB congener analysis.

CAS - Columbia Analytical Services
EPA - U.S. Environmental Protection Agency
GC/ECD - gas chromatography/electron capture detection
GC/MS - gas chromatography/mass spectrometry
HRGC/HRMS - high resolution gas chromatography/high resolution mass spectrometry
ICP/OES - inductively coupled plasma/optical emission spectrometry
ICP/MS - inductively coupled plasma - mass spectrometry
LVI - large-volume injector
NEA - Northeast Analytical
SIM - selected ion monitoring
SOP - standard operating procedures

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Table A-2. Percent Completeness by Parameter Group.

Sample Type	Analysis	Total # of Data Points[1]	Number of Data Points		Completeness (%)
			Accepted	Rejected	
November 2004 Event					
Peristaltic Samples	PCB Aroclors	189	180	9	95
	Butyltins	100	100	0	100
	Conventionals[2]	127	127	0	100
	Chlorinated herbicides	250	250	0	100
	Total metals[3]	302	302	0	100
	Dissolved metals	300	300	0	100
	PAHs	425	425	0	100
	Organochlorine pesticides	589	587	2	> 99
	Phenols	350	350	0	100
	Phthalate esters	150	150	0	100
	SVOCs	800	800	0	100
XAD Samples	PCB Aroclors	112	112	0	100
	Chlorinated dioxin/furan homologs	120	120	0	100
	Chlorinated dioxin/furans	192	188	4	98
	PAHs	304	304	0	100
	PCB congeners	2560	2560	0	100
	PCB homologs	144	144	0	100
	Organochlorine pesticides	416	416	0	100
	Phthalate esters	96	96	0	100
March 2005 Event					
Peristaltic Samples	PCB Aroclors	153	153	0	100
	Butyltins	100	100	0	100
	Conventionals	127	127	0	100
	Chlorinated herbicides	250	250	0	100
	Total metals	302	302	0	100
	Dissolved metals	300	300	0	100
	PAHs	425	425	0	100
	Organochlorine pesticides	527	518	9	98
	Phenols	375	360	15	96
	Phthalate esters	150	144	6	96
	SVOCs	800	762	38	95
XAD Samples	PCB Aroclors	112	112	0	100
	Chlorinated dioxin/furan homologs	120	120	0	100
	Chlorinated dioxin/furans	186	186	0	100
	PAHs	304	304	0	100
	PCB congeners	2560	2560	0	100
	PCB homologs	144	144	0	100
	Organochlorine pesticides	416	416	0	100
	Phthalate esters	96	96	0	100
July 2005 Event					
Peristaltic Samples	PCB Aroclors	144	144	0	100
	Butyltins	96	96	0	100
	Conventionals	122	122	0	100
	Chlorinated herbicides	240	240	0	100
	Total metals	290	290	0	100
	Dissolved metals	288	288	0	100
	PAHs	408	408	0	100
	Organochlorine pesticides	496	496	0	100
	Phenols	360	360	0	100
	Phthalate esters	144	144	0	100
	SVOCs	768	760	8	99

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Table A-2. Percent Completeness by Parameter Group.

Sample Type	Analysis	Total # of Data Points[1]	Number of Data Points		Completeness (%)
			Accepted	Rejected	
XAD Samples	PCB Aroclors	105	105	0	100
	Chlorinated dioxin/furan homologs	120	120	0	100
	Chlorinated dioxin/furans	186	186	0	100
	PAHs	304	304	0	100
	PCB congeners	2400	2400	0	100
	PCB homologs	135	135	0	100
	Organochlorine pesticides	416	416	0	100
	Phthalate esters	96	96	0	100
	November 2004 Peristaltic Subtotal	**3582**	**3571**	**11**	**> 99**
	November 2004 XAD Subtotal	**3944**	**3940**	**4**	**> 99**
	March 2005 Peristaltic Subtotal	**3509**	**3441**	**68**	**98**
	March 2005 XAD Subtotal	**3938**	**3938**	**0**	**100**
	July 2005 Peristaltic Subtotal	**3356**	**3348**	**8**	**> 99**
	July 2005 XAD Subtotal	**3762**	**3762**	**0**	**100**
	Round 2 SW Sampling Project Total	**22091**	**22000**	**91**	**> 99**

Notes:

[1] Totals include field replicates and exclude field blanks.

[2] Includes dissolved organic carbon (DOC), hardness, perchlorate, total dissolved solids (TDS), total organic carbon (TOC), and total suspended solids (TSS).

[3] Includes hexavalent chromium.

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Table A-3. Laboratory Control Limits for Surface Water Surrogate Samples.

Analysis	Percent Recovery		
	November 2004	March 2005	July 2005
Peristaltic Samples			
SVOCs			
2,4,6-Tribromophenol	34 - 130	44 - 135	44 - 135
Phenol-d6	41 - 118	36 - 134	36 - 134
p-Terphenyl-d14	18 - 153	18 - 155	25 - 155
2-Fluoro-1,1'-biphenyl	36 - 107	41 - 117	41 - 117
2-Fluorophenol	33 - 109	38 - 119	38 - 119
Nitrobenzene-d5	39 - 120	47 - 128	47 - 128
PAHs			
Fluorene-d10	37 - 107	37 - 107	24 - 111
Fluoranthene-d10	18 - 137	18 - 137	26 - 123
Chlorinated Herbicides			
2,4-Dichlorophenylacetic acid	15 - 126	10 - 116	10 - 116
Organochlorine Pesticides			
Decachlorobiphenyl	60 - 140	60 - 140	60 - 140
2,4,5,6-Tetrachloro-m-xylene	60 - 140	60 - 140	60 - 140
Butyltins			
Tripropyltin hydride	19 - 146	23 - 137	23 - 137
XAD Samples			
PCB Congeners			
^{13}C-2-CB	15 - 150	15 - 150	15 - 150
^{13}C-4-CB	15 - 150	15 - 150	15 - 150
^{13}C-2,2'-DiCB	25 - 150	25 - 150	25 - 150
^{13}C-4,4'-DiCB	25 - 150	25 - 150	25 - 150
^{13}C-2,2',6-TriCB	25 - 150	25 - 150	25 - 150
^{13}C-2,4,4'-TriCB	30 - 135	30 - 135	30 - 135
^{13}C-3,4,4'-TriCB	25 - 150	25 - 150	25 - 150
^{13}C-2,2',6,6'-TetraCB	25 - 150	25 - 150	25 - 150
^{13}C-3,3',4,4'-TetraCB	25 - 150	25 - 150	25 - 150
^{13}C-3,4,4',5-TetraCB	25 - 150	25 - 150	25 - 150
^{13}C-2,2',4,6,6'-PentaCB	25 - 150	25 - 150	25 - 150
^{13}C-2,3,3',4,4'-PentaCB	25 - 150	25 - 150	25 - 150
^{13}C-2,3,3',5,5'-PentaCB	30 - 135	30 - 135	30 - 135
^{13}C-2,3,4,4',5-PentaCB	25 - 150	25 - 150	25 - 150
^{13}C-2,3',4,4',5-PentaCB	25 - 150	25 - 150	25 - 150
^{13}C-2,3',4,4',5'-PentaCB	25 - 150	25 - 150	25 - 150
^{13}C-3,3',4,4',5-PentaCB	25 - 150	25 - 150	25 - 150
^{13}C-2,2',4,4',6,6'-HexaCB	25 - 150	25 - 150	25 - 150
^{13}C-2,3',4,4',5,5'-HexaCB	25 - 150	25 - 150	25 - 150
^{13}C-3,3',4,4',5,5'-HexaCB	25 - 150	25 - 150	25 - 150
^{13}C-2,2',3,3',4,4',5-HeptaCB	25 - 150	25 - 150	25 - 150
^{13}C-2,2',3,3',5,5',6-HeptaCB	30 - 135	30 - 135	30 - 135
^{13}C-2,2',3,4,4',5,5'-HeptaCB	25 - 150	25 - 150	25 - 150
^{13}C-2,2',3,4',5,6,6'-HeptaCB	25 - 150	25 - 150	25 - 150

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Table A-3. Laboratory Control Limits for Surface Water Surrogate Samples.

Analysis	Percent Recovery		
	November 2004	March 2005	July 2005
^{13}C-2,3,3',4,4',5,5'-HeptaCB	25 - 150	25 - 150	25 - 150
^{13}C-2,2',3,3',5,5',6,6'-OctaCB	25 - 150	25 - 150	25 - 150
^{13}C-2,3,3',4,4',5,5',6-OctaCB	25 - 150	25 - 150	25 - 150
^{13}C-2,2',3,3',4,4',5,5',6-NonaCB	25 - 150	25 - 150	25 - 150
^{13}C-2,2',3,3',4,5,5',6,6'-NonaCB	25 - 150	25 - 150	25 - 150
^{13}C-2,2',3,3',4,4',5,5',6,6'-DecaCB	25 - 150	25 - 150	25 - 150
PCB156L & 157L	25 - 150	25 - 150	25 - 150
Chlorinated Dioxin/Furans			
^{13}C-2,3,7,8-TetraCDD	25 - 164	25 - 164	25 - 164
^{13}C-2,3,7,8-TetraCDF	24 - 169	24 - 169	24 - 169
^{37}Cl-2,3,7,8-TetraCDD	35 - 197	35 - 197	35 - 197
^{13}C-1,2,3,7,8-PentaCDD	25 - 181	25 - 181	25 - 181
^{13}C-1,2,3,7,8-PentaCDF	24 - 185	24 - 185	24 - 185
^{13}C-2,3,4,7,8-PentaCDF	21 - 178	21 - 178	21 - 178
^{13}C-1,2,3,4,7,8-HexaCDD	32 - 141	32 - 141	32 - 141
^{13}C-1,2,3,4,7,8-HexaCDF	26 - 152	26 - 152	26 - 152
^{13}C-1,2,3,6,7,8-HexaCDD	28 - 130	28 - 130	28 - 130
^{13}C-1,2,3,6,7,8-HexaCDF	26 - 123	26 - 123	26 - 123
^{13}C-1,2,3,7,8,9-HexaCDF	29 - 147	29 - 147	29 - 147
^{13}C-2,3,4,6,7,8-HexaCDF	28 - 136	28 - 136	28 - 136
^{13}C-1,2,3,4,6,7,8-HeptaCDD	23 - 140	23 - 140	23 - 140
^{13}C-1,2,3,4,6,7,8-HeptaCDF	28 - 143	28 - 143	28 - 143
^{13}C-1,2,3,4,7,8,9-HeptaCDF	26 - 138	26 - 138	26 - 138
^{13}C-OctaCDD	17 - 157	17 - 157	17 - 157
PAHs			
Naphthalene-d8	15 - 120	15 - 120	15 - 120
Phenanthrene-d10	30 - 120	30 - 120	30 - 120
Chrysene-d12	30 - 120	30 - 120	30 - 120
Benzo(a)pyrene-d12	30 - 120	30 - 120	30 - 120
2-Methylnaphthalene-d10	30 - 120	30 - 120	30 - 120
Acenaphthylene-d8	20 - 120	20 - 120	20 - 120
Benzo(g,h,i)perylene-d12	30 - 120	30 - 120	30 - 120
Indeno(1,2,3-cd)pyrene-d12	30 - 120	30 - 120	30 - 120
Fluoranthene-d10	30 - 120	30 - 120	30 - 120
Dibenz(a,h)anthracene-d14	30 - 120	30 - 120	30 - 120
Benz(a)anthracene-d12	30 - 120	30 - 120	30 - 120
Benzo(b+k)fluoranthene-d12	30 - 120	30 - 120	30 - 120
Phthalate Esters			
Bis(2-ethylhexyl) phthalate-d4	40 - 140	40 - 140	40 - 140
Di-n-octyl phthalate-d4	40 - 140	40 - 140	40 - 140
Dimethyl phthalate-d4	40 - 140	40 - 140	40 - 140
Diethyl phthalate-d4	40 - 140	40 - 140	40 - 140
Dibutyl phthalate-d4	40 - 140	40 - 140	40 - 140
Butylbenzyl phthalate-d4	40 - 140	40 - 140	40 - 140

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Table A-3. Laboratory Control Limits for Surface Water Surrogate Samples.

Analysis	Percent Recovery		
	November 2004	March 2005	July 2005
Organochlorine Pesticides			
^{13}C-Heptachlor epoxide	30 - 150	30 - 150	30 - 150
^{13}C-Hexachlorobenzene	20 - 150	20 - 150	20 - 150
^{13}C-Oxychlordane	30 - 200	30 - 200	30 - 200
^{13}C-Aldrin	30 - 150	30 - 200	30 - 200
^{13}C-beta-Hexachlorocyclohexane	30 - 150	30 - 150	30 - 150
^{13}C-delta-Hexachlorocyclohexane	30 - 150	30 - 150	30 - 150
^{13}C-gamma-Hexachlorocyclohexane	30 - 150	30 - 150	30 - 150
^{13}C-beta-Endosulfan	30 - 150	30 - 150	30 - 150
^{13}C-2,4'-DDE	40 - 150	40 - 150	40 - 150
^{13}C-4,4'-DDE	40 - 150	40 - 150	40 - 150
^{13}C-cis-Nonachlor	30 - 150	40 - 150	40 - 150
^{13}C-trans-Nonachlor	30 - 150	30 - 150	30 - 150
^{13}C-2,4'-DDT	40 - 150	40 - 150	40 - 150
^{13}C-4,4'-DDT	40 - 150	40 - 150	40 - 150
^{13}C-trans-Chlordane	30 - 200	30 - 150	30 - 150
^{13}C-Dieldrin	30 - 150	30 - 150	30 - 150
^{13}C-Endrin	30 - 150	30 - 150	30 - 150
^{13}C-Methoxychlor	30 - 150	30 - 150	30 - 150
^{13}C-Heptachlor	30 - 150	30 - 150	30 - 150
^{13}C-1,2,3-Trichlorobenzene	20 - 130	20 - 130	20 - 130
^{13}C-alpha-Endosulfan	30 - 150	30 - 150	30 - 150

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ANC04555
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Table A-4. Laboratory Control Limits for Surface Water Matrix Spike, Laboratory Control Samples, and Ongoing Precsion and Recovery.

Analysis	Matrix Spike Recovery (percent)			Laboratory Control Sample Recovery (percent)			Type of Duplicate	Control Limit Relative Percent Difference
	November '04	March '05	July '05	November '04	March '05	July '05		
Peristaltic Samples								
Conventionals								
Total dissolved solids	--	--	--	--	--	--	LD	20
Total suspended solids	--	--	--	--	--	--	LD	20
Dissolved organic carbon	76 - 121	76 - 121	68 - 132	92 - 106	92 - 106	90 - 109	LD	20
Total organic carbon	76 - 121	68 - 132	68 - 132	92 - 106	92 - 106	90 - 109	LD	20
Perchlorate	80 - 120	80 - 120	80 - 120	85 - 115	85 - 115	85 - 115	LD	30
Total Metals								
Aluminum	--	67 - 133	70 - 130	85 - 115	85 - 115	53 - 181	LD	20
Antimony	70 - 130	70 - 130	83 - 113	85 - 115	85 - 115	88 - 109	LD	20
Arsenic	70 - 130	70 - 130	76 - 125	85 - 115	85 - 115	86 - 112	LD	20
Cadmium	70 - 130	70 - 130	80 - 113	85 - 115	85 - 115	86 - 112	LD	20
Calcium	--	--	--	81 - 124	92 - 112	92 - 112	LD	20
Chromium	70 - 130	70 - 130	76 - 118	85 - 115	85 - 115	88 - 110	LD	20
Copper	70 - 130	70 - 130	70 - 116	85 - 115	85 - 115	86 - 112	LD	20
Lead	70 - 130	59 - 130	59 - 127	85 - 115	85 - 115	89 - 109	LD	20
Magnesium	--	--	--	72 - 131	66 - 131	66 - 131	LD	20
Nickel	70 - 130	70 - 130	73 - 118	85 - 115	85 - 115	87 - 110	LD	20
Selenium	70 - 130	70 - 130	73 - 125	85 - 115	85 - 116	85 - 116	LD	20
Silver	70 - 130	67 - 130	70 - 130	85 - 115	85 - 115	85 - 115	LD	20
Thallium	70 - 130	--	--	85 - 115	--	--	LD	20
Zinc	70 - 130	65 - 130	65 - 120	85 - 115	84 - 116	84 - 116	LD	20
Mercury	75 - 125	72 - 121	72 - 121	84 - 115	81 - 108	81 - 108	LD	20
Hexavalent chromium	85 - 115	85 - 115	85 - 115	85 - 115	85 - 115	85 - 115	LD	20
Dissolved Metals								
Aluminum	--	70 - 130	--	--	85 - 115	--	LD	20
Antimony	--	70 - 130	--	--	85 - 115	--	LD	20
Arsenic	--	--	--	--	85 - 115	--	LD	20
Cadmium	--	70 - 130	--	--	85 - 115	--	LD	20
Chromium	--	70 - 130	--	--	85 - 115	--	LD	20
Copper	--	70 - 130	--	--	85 - 115	--	LD	20
Lead	--	70 - 130	--	--	85 - 115	--	LD	20
Nickel	--	70 - 130	--	--	85 - 115	--	LD	20
Selenium	--	70 - 130	--	--	85 - 115	--	LD	20
Silver	--	70 - 130	--	--	85 - 115	--	LD	20
Zinc	--	70 - 130	--	--	85 - 115	--	LD	20
Butyltins								
Butyltin ion	10 - 151	23 - 130	23 - 130	13 - 167	28 - 143	28 - 143	MSD	30
Dibutyltin ion	10 - 151	16 - 120	16 - 120	10 - 128	21 - 119	21 - 119	MSD	30
Tributyltin ion	14 - 143	28 - 121	28 - 121	11 - 145	24 - 129	24 - 129	MSD	30
Tetrabutyltin ion	10 - 93	10 - 95	10 - 95	10 - 112	10 - 104	10 - 104	MSD	30

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Table A-4. Laboratory Control Limits for Surface Water Matrix Spike, Laboratory Control Samples, and Ongoing Precsion and Recovery.

Analysis	Matrix Spike Recovery (percent)			Laboratory Control Sample Recovery (percent)			Type of Duplicate	Control Limit Relative Percent Difference
	November '04	March '05	July '05	November '04	March '05	July '05		
Chlorinated Herbicides								
Dichloroprop	--	10 - 137	10 - 137	10 - 159	21 - 116	21 - 116	MSD	30
Dicamba	--	18 - 135	18 - 135	29 - 151	27 - 110	27 - 110	MSD	30
Dalapon	--	10 - 169	10 - 169	13 - 114	10 - 125	10 - 125	MSD	30
Dinoseb	--	10 - 105	10 - 105	10 - 155	16 - 93	16 - 93	MSD	30
MCPP	--	10 - 156	10 - 156	12 - 143	10 - 131	10 - 131	MSD	30
Silvex	--	19 - 135	19 - 135	17 - 139	24 - 120	24 - 120	MSD	30
2,4,5-T	--	10 - 155	10 - 155	14 - 118	19 - 128	19 - 128	MSD	30
MCPA	--	10 - 146	10 - 146	10 - 156	10 - 121	10 - 121	MSD	30
2,4-D	--	10 - 141	10 - 141	24 - 139	22 - 110	22 - 110	MSD	30
2,4-DB	--	10 - 152	10 - 152	10 - 171	10 - 124	10 - 124	MSD	30
Organochlorine Pesticides								
All target analytes	60 - 140	60 - 140	60 - 140	50 - 130	50 - 130	50 - 130	MSD	20
PCB Aroclors								
All target analytes	--	60 - 140	--	--	70 - 130	70 - 130	MSD	20
Semivolatile Organic Compounds								
4-Nitroaniline	--	70 - 130	70 - 130	44 - 127	48 - 132	48 - 132	MSD	30
Benzyl alcohol	--	18 - 154	18 - 154	37 - 128	49 - 133	49 - 133	MSD	30
4-Bromophenyl phenyl ether	--	42 - 124	42 - 124	40 - 127	49 - 126	49 - 126	MSD	30
Azobenzene	--	70 - 130	70 - 130	42 - 117	48 - 133	48 - 133	MSD	30
1,4-Dichlorobenzene	--	20 - 83	20 - 83	17 - 86	21 - 97	21 - 97	MSD	30
4-Chloroaniline	--	10 - 113	10 - 113	10 - 110	10 - 126	10 - 126	MSD	30
Bis(2-chloroethyl) ether	--	54 - 122	54 - 122	41 - 124	51 - 129	51 - 129	MSD	30
Bis(2-chlorotheoxy) methane	--	53 - 122	53 - 122	41 - 120	50 - 124	50 - 124	MSD	30
1,2,4-Trichlorobenzene	--	26 - 87	26 - 87	21 - 90	25 - 103	25 - 103	MSD	30
2,4-Dinitrotolucne	--	50 - 155	50 - 155	51 - 134	52 - 149	52 - 149	MSD	30
Bis(2-chloroisopropyl) ether	--	16 - 166	16 - 166	35 - 120	48 - 124	48 - 124	MSD	30
1,3-Dichlorobenzene	--	19 - 81	19 - 81	16 - 86	20 - 96	20 - 96	MSD	30
2,6-Dinitrotoluene	--	60 - 140	60 - 140	47 - 130	55 - 140	55 - 140	MSD	30
N-Nitrosodipropylamine	--	42 - 156	42 - 156	40 - 134	47 - 139	47 - 139	MSD	30
Aniline	--	70 - 130	70 - 130	70 - 130	10 - 121	10 - 121	MSD	30
N-Nitrosodimethylamine	--	70 - 130	70 - 130	29 - 121	41 - 134	41 - 134	MSD	30
Benzoic acid	--	10 - 175	10 - 175	10 - 86	10 - 92	10 - 92	MSD	30
4-Chlorophenyl phenyl ether	--	43 - 120	43 - 120	40 - 119	47 - 126	47 - 126	MSD	30
Hexachlorocyclopentadiene	--	10 - 66	10 - 66	10 - 62	10 - 64	10 - 64	MSD	30
Isophorone	--	44 - 155	44 - 155	46 - 135	52 - 140	52 - 140	MSD	30
N-Nitrosodiphenylamine	--	10 - 151	10 - 151	43 - 131	40 - 145	40 - 145	MSD	30
Carbazole	--	70 - 130	70 - 130	51 - 125	37 - 148	37 - 148	MSD	30
2-Nitroaniline	--	10 - 165	10 - 165	41 - 127	51 - 136	51 - 136	MSD	30
3,3'-Dichlorobenzidine	--	70 - 130	70 - 130	24 - 106	10 - 123	10 - 123	MSD	30
1,2-Dichlorobenzene	--	23 - 90	23 - 90	21 - 93	26 - 103	26 - 103	MSD	30
Hexachlorobenzene	--	41 - 140	41 - 140	42 - 124	50 - 129	50 - 129	MSD	30
Hexachloroethane	--	11 - 140	11 - 140	10 - 78	10 - 94	10 - 94	MSD	30

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Table A-4. Laboratory Control Limits for Surface Water Matrix Spike, Laboratory Control Samples, and Ongoing Precsion and Recovery.

Analysis	Matrix Spike Recovery (percent)			Laboratory Control Sample Recovery (percent)			Type of Duplicate	Control Limit Relative Percent Difference
	November '04	March '05	July '05	November '04	March '05	July '05		
Hexachlorobutadiene	--	10 - 140	10 - 140	10 - 80	10 - 93	10 - 93	MSD	30
Nitrobenzene	--	50 - 148	50 - 148	28 - 126	50 - 130	50 - 130	MSD	30
3-Nitroaniline	--	10 - 161	10 - 161	41 - 128	47 - 134	47 - 134	MSD	30
Phenols								
4-Nitrophenol	--	47 - 169	47 - 169	39 - 126	50 - 141	50 - 141	MSD	30
2,4-Dimethylphenol	--	10 - 172	10 - 172	10 - 105	10 - 105	10 - 105	MSD	30
4-Methylphenol	--	15 - 162	15 - 162	27 - 123	42 - 123	42 - 123	MSD	30
Phenol	--	10 - 170	10 - 170	45 - 119	46 - 139	46 - 139	MSD	30
2,4-Dichlorophenol	--	35 - 137	35 - 137	43 - 120	47 - 133	47 - 133	MSD	30
2,4-Dinitrophenol	--	59 - 142	59 - 142	14 - 131	10 - 137	10 - 137	MSD	30
4,6-Dinitro-2-methylphenol	--	28 - 151	28 - 151	31 - 123	34 - 139	34 - 139	MSD	30
2,3,4,6-Tetrachlorophenol	--	70 - 130	70 - 130		70 - 130	70 - 130	MSD	30
4-Chloro-3-methylphenol	--	10 - 176	10 - 176	33 - 126	42 - 140	42 - 140	MSD	30
Pentachlorophenol	--	30 - 154	30 - 154	37 - 122	37 - 122	37 - 122	MSD	30
2,4,6-Trichlorophenol	--	40 - 142	40 - 142	57 - 124	57 - 124	57 - 124	MSD	30
2-Nitrophenol	--	55 - 141	55 - 141	44 - 124	51 - 131	51 - 131	MSD	30
2-Methylphenol	--	17 - 164	17 - 164	30 - 120	44 - 121	44 - 121	MSD	30
2-Chlorophenol	--	39 - 135	39 - 135	43 - 120	52 - 125	52 - 125	MSD	30
2,4,5-Trichlorophenol	--	56 - 132	56 - 132	49 - 132	49 - 132	49 - 132	MSD	30
Phthalate Esters								
Bis(2-ethylhexyl) phthalate	--	17 - 179	17 - 179	47 - 140	48 - 151	48 - 151	MSD	30
Di-n-octyl phthalate	--	41 - 136	41 - 136	47 - 134	55 - 143	55 - 143	MSD	30
Dimethyl phthalate	--	43 - 150	43 - 150	48 - 125	53 - 133	53 - 133	MSD	30
Diethyl phthalate	--	29 - 153	29 - 153	45 - 140	39 - 148	39 - 148	MSD	30
Dibutyl phthalate	--	44 - 137	44 - 137	47 - 134	51 - 141	51 - 141	MSD	30
Butylbenzyl phthalate	--	43 - 136	43 - 136	50 - 128	49 - 144	49 - 144	MSD	30
Polycyclic Aromatic Hydrocarbons								
Anthracene	--	26 - 118	28 - 122	40 - 126	40 - 126	36 - 131	MSD	30
Pyrene	--	19 - 133	27 - 135	34 - 152	34 - 152	38 - 143	MSD	30
Dibenzofuran	--	26 - 121	20 - 134	16 - 146	16 - 146	10 - 167	MSD	30
Benzo(g,h,i)perylene	--	22 - 134	26 - 132	46 - 133	46 - 133	42 - 139	MSD	30
Indeno(1,2,3-cd)pyrene	--	19 - 151	21 - 143	41 - 141	41 - 141	35 - 148	MSD	30
Benzo(b)fluoranthene	--	19 - 141	26 - 138	54 - 137	54 - 137	51 - 135	MSD	30
Fluoranthene	--	18 - 133	32 - 134	41 - 141	41 - 141	45 - 139	MSD	30
Benzo(k)fluoranthene	--	19 - 138	27 - 135	54 - 141	54 - 141	46 - 139	MSD	30
Acenaphthylene	--	30 - 118	34 - 116	44 - 122	44 - 122	36 - 128	MSD	30
Chrysene	--	22 - 129	30 - 130	46 - 136	46 - 136	47 - 132	MSD	30
Benzo(a)pyrene	--	10 - 142	16 - 140	38 - 142	49 - 133	40 - 138	MSD	30
Dibenz(a,h)anthracene	--	16 - 146	24 - 139	39 - 143	39 - 143	42 - 143	MSD	30
Benz(a)anthracene	--	19 - 136	28 - 131	46 - 132	46 - 132	45 - 131	MSD	30
Acenapthene	--	28 - 115	30 - 117	41 - 123	41 - 123	36 - 126	MSD	30
Phenanthrene	--	24 - 129	36 - 120	45 - 127	45 - 127	43 - 129	MSD	30
Fluorene	--	28 - 122	28 - 130	44 - 128	44 - 128	41 -130	MSD	30

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Table A-4. Laboratory Control Limits for Surface Water Matrix Spike, Laboratory Control Samples, and Ongoing Precsion and Recovery.

Analysis	Matrix Spike Recovery (percent)			Laboratory Control Sample Recovery (percent)			Type of Duplicate	Control Limit Relative Percent Difference
	November '04	March '05	July '05	November '04	March '05	July '05		
Naphthalene	--	27 - 109	27 - 109	41 - 115	41 - 115	32 - 124	MSD	30
2-Methylnaphthalene	--	27 - 115	23 - 116	33 - 123	33 - 123	19 - 133	MSD	30
2-Chloronaphthalene	--	49 - 109	49 - 109	33 - 121	42 - 117	42 - 117	MSD	30
Benzo(b,j)fluoranthene	--	--	--	70 - 130	70 - 130	70 - 130	MSD	30
XAD Samples								
Chlorinated Dioxin/Furans	--	--	--	--	--	--	NA[1]	--
PCB Congeners	--	--	--	--	--	--	NA[1]	--
Semivolatile Organic Compounds								
Polycyclic aromatic hydrocarbons	--	--	--	70 - 130[3]	70 - 130[3]	70 - 130[3]	NA[1]	--
Phthalate esters	--	--	--	70 - 130	--	--	NA[1]	--
Organochlorine Pesticides								
All target analytes	--	--	--	60-130 / 70-130[2]	60-130 / 70-130[2]	60-130 / 70-130[2]	NA[1]	--
Phthalate Esters								
Butylbenzyl phthalate	--	--	--	70 - 130	--	--		
Dimethyl phthalate	--	--	--	70 - 130	--	--		

Notes:

[1] Field duplicates will be used to assess overall precision. Laboratory duplicates cannot be used because of sample limitations.

[2] Laboratory control limits for delta-HCH, heptachlor expoxide, dieldrin, endrin, endrin detone, methoxychlor, dichlorobenzenes, trichlorobenzenes, and tetrachlorobenzenes is 60-130. Laboratory control limits for all other target compounds is 70-130.

[3] Control limits for acenaphthylene are 70-140.

LD - laboratory duplicate
MSD - matrix spike duplicate
NA - not applicable
-- Data not available

ANC04559
BZTO104(e)004559

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Table A-5. Data Validation Qualifiers and Definitions.

Data Qualifier	Definition
U	The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
J	The associated numerical value is an estimated quantity.
R	The data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification. (Overrides all quals and their codes.)
N	Presumptive evidence of presence of material.
NJ	Presumptive evidence of the presence of the material at an estimated quantity.
UJ	The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.
T	The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

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ANC04560
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Table A-6. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
November 2004 Event							
Peristaltic Samples							
Conventionals	93	153	0	153	100	detected	
					0	undetected	
Total Metals	47	328	45	373	88	detected	
					12	undetected	
					1	J	LB, Precision/reps.
					9	U	LB
					3	UJ	LB, Precision/reps.
Dissolved Metals	47	249	51	300	83	detected	
					17	undetected	
					4	J	Other
					11	U	FB, LB
					2	UJ	LB, Precision/reps., Other
Butyltins	23	100	0	100	100	detected	
					0	undetected	
PCB Aroclors	20	153	27	180	85	detected	
					15	undetected	
					1	J	Comp. confirm.
					15	UJ	Surr. rec.
Organochlorine Pesticides	18	425	105	530	80	detected	
					20	undetected	
					< 1	J	Comp. confirm.
					< 1	NJ	Comp. confirm.
					20	UJ	CC, MS/MSD rec., LCS rec., Surr. rec.
Semivolatile Organic Compounds	23	809	48	857	94	detected	
					6	undetected	
					1	J	Comp. confirm., Precision/reps., Surr. rec.
					< 1	NJ	Comp. confirm.
					< 1	U	LB
					5	UJ	IIT/samp. preservation, LCS rec., Surr. rec.
Phenols	23	325	25	350	93	detected	
					7	undetected	
					< 1	J	HT/samp. preservation
					4	U	LB
					3	UJ	HT/samp. preservation

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ANC04561
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Table A-6. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
Phthalate Esters	23	0	150	150	0	detected	
					100	undetected	
					96	U	FB, LB
					4	UJ	HT/samp. preservation, LB
Polycyclic Aromatic Hydrocarbons	23	344	81	425	81	detected	
					19	undetected	
					1	J	HT/samp. preservation
					8	U	FB, LB
					11	UJ	HT/samp. preservation, FB
Chlorinated Herbicides	23	237	13	250	95	detected	
					5	undetected	
					1	U	LB
					4	UJ	Other
XAD Samples							
PCB Aroclors	14	112	0	112	100	detected	
					0	undetected	
					38	NJ	Other
Organochlorine Pesticides	16	324	92	416	78	detected	
					22	undetected	
					< 1	J	Surr. reps.
					13	U	FB, LB, Other
					10	UJ	Other
Semivolatile Organic Compounds	16	24	8	32	75	detected	
					25	undetected	
					16	U	LB
					9	UJ	Other
Phthalate Esters	16	6	90	96	6	detected	
					94	undetected	
					94	U	FB, LB, Other
Polycyclic Aromatic Hydrocarbons	16	184	88	272	68	detected	
					32	undetected	
					32	U	FB, LB, Other
					< 1	UJ	Other
PCB Homologs	14	139	5	144	97	detected	
					3	undetected	
					3	U	LB

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ANC04562
BZTO104(e)004562

Table A-6. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
PCB Congeners	14	2468	92	2560	96	detected	
					4	undetected	
					1	J	Other
					4	U	FB, LB, PFPs
Chlorinated Dioxin/Furan Homologs	12	106	14	120	88	detected	
					12	undetected	
					12	U	FB, LB
Chlorinated Dioxin/Furans	12	104	76	180	58	detected	
					42	undetected	
					42	U	FB, LB
March 2005 Event							
Peristaltic Samples							
Conventionals	97	161	0	161	100	detected	
					0	undetected	
					2	J	MS/MSD rec.
Total Metals	49	307	46	353	87	detected	
					13	undetected	
					1	J	LB, Other
					9	U	FB, LB
					4	UJ	LB
Dissolved Metals	49	287	35	322	89	detected	
					11	undetected	
					7	J	CC, LB, Other
					7	U	FB, LB
					3	UJ	LB
Butyltins	24	104	0	104	100	detected	
					0	undetected	
PCB Aroclors	16	153	0	153	100	detected	
					0	undetected	
					1	J	Comp. confirm.
Organochlorine Pesticides	16	453	14	467	97	detected	
					3	undetected	
					< 1	NJ	Comp. confirm.
					3	UJ	CC

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ANC04563
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Table A-6. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
Semivolatile Organic Compounds	24	834	11	845	99	detected	
					1	undetected	
					1	UJ	HT/samp. preservation, LCS rec., Surr. rec.
Phenols	24	370	5	375	99	detected	
					1	undetected	
					1	U	LB, Other
Phthalate Esters	24	0	144	144	0	detected	
					100	undetected	
					100	U	FB, LB, Other
Polycyclic Aromatic Hydrocarbons	24	408	34	442	92	detected	
					8	undetected	
					2	J	Surr. rec.
					6	U	FB, LB
					2	UJ	LB, Surr. rec.
Chlorinated Herbicides	24	234	26	260	90	detected	
					10	undetected	
					10	UJ	Other
XAD Samples							
PCB Aroclors	14	112	0	112	100	detected	
					0	undetected	
					38	NJ	Other
Organochlorine Pesticides	16	356	60	416	86	detected	
					14	undetected	
					< 1	J	LCS rec.
					14	U	FB, LB, PFPs
Semivolatile Organic Compounds	16	24	8	32	75	detected	
					25	undetected	
					25	J	IC., CC, LCS rec.
					25	UJ	IC, CC, LB, LCS rec., PFPs
Phthalate Esters	16	0	96	96	0	detected	
					100	undetected	
					100	U	FB, LB, PFPs, Other
Polycyclic Aromatic Hydrocarbons	16	162	110	272	60	detected	
					40	undetected	
					40	U	FB, LB, PFPs

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ANC04564
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Table A-6. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
PCB Homologs	14	139	5	144	97	detected	
					3	undetected	
					3	U	FB
PCB Congeners	14	2403	157	2560	94	detected	
					6	undetected	
					< 1	J	Other
					6	U	FB, LB, PFPs
Chlorinated Dioxin/Furan Homologs	12	60	0	60	100	detected	
					0	undetected	
Chlorinated Dioxin/Furans	12	152	28	180	84	detected	
					16	undetected	
					16	U	FB, LB, PFPs
July 2005 Event							
Peristaltic Samples							
Conventionals	93	142	0	142	100	detected	
					0	undetected	
Total Metals	47	269	60	329	82	detected	
					18	undetected	
					23	J	LB, ICP Serial Dilution %D
					12	U	FB, LB
					6	UJ	LB, Other
Dissolved Metals	47	192	96	288	67	detected	
					33	undetected	
					14	J	LB, ICP Serial Dilution %D
					18	U	FB, LB
					16	UJ	LB, Other, ICP Serial Dilution %D
Butyltins	23	58	38	96	60	detected	
					40	undetected	
					9	J	HT/samp. preservation, Comp. confirm., LCS rec.
					15	U	LB
					25	UJ	HT/samp. preservation, LCS rec.
PCB Aroclors	16	110	34	144	76	detected	
					24	undetected	
					2	J	HT/samp. preservation, Comp. confirm., LCS rec.
					24	UJ	HT/samp. preservation

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Table A-6. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
Organochlorine Pesticides	16	304	144	448	68	detected	
					32	undetected	
					1	J	HT/samp. preservation, Comp. confirm., LCS rec.
					32	UJ	HT/samp. preservation, CC
Semivolatile Organic Compounds	23	771	37	808	95	detected	
					5	undetected	
					< 1	U	FB
					4	UJ	HT/samp. preservation, MS/MSD rec., Surr. rec.
Phenols	23	347	13	360	96	detected	
					4	undetected	
					4	U	LB
Phthalate Esters	23	1	143	144	1	detected	
					99	undetected	
					96	U	FB, LB
					3	UJ	Surr. rec.
Polycyclic Aromatic Hydrocarbons	23	385	23	408	94	detected	
					6	undetected	
					6	U	FB, ICP Interference Check Std. Rec.
Chlorinated Herbicides	23	240	0	240	100	detected	
					0	undetected	
XAD Samples							
PCB Aroclors	14	105	0	105	100	detected	
					0	undetected	
					38	NJ	Other
Organochlorine Pesticides	16	331	85	416	80	detected	
					20	undetected	
					5	J	LCS rec., Surr. rec.
					6	U	FB, LB, PFPs
					14	UJ	LCS rec., Surr. rec., PFPs
Semivolatile Organic Compounds	16	26	6	32	81	detected	
					19	undetected	
					34	J	IC, CC, LCS rec.
					3	U	LB
					16	UJ	IC., CC., LCS rec.

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Table A-6. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
Phthalate Esters	16	55	41	96	57	detected	
					43	undetected	
					43	U	FB, LB, PFPs
Polycyclic Aromatic Hydrocarbons	16	194	78	272	71	detected	
					29	undetected	
					29	U	FB, LB, PFPs
PCB Homologs	14	135	0	135	100	detected	
					0	undetected	
PCB Congeners	14	2183	217	2400	91	detected	
					9	undetected	
					9	U	FB, LB, PFPs
Chlorinated Dioxin/Furan Homologs	12	110	10	120	92	detected	
					8	undetected	
					8	U	LB
Chlorinated Dioxin/Furans	12	106	74	180	59	detected	
					41	undetected	
					41	U	FB, LB, PFPs

Notes:

Includes replicates and excludes field blanks.

The analyte groupings for SVOCs, phenols, PAHs, and phthalates are as defined in the Round 2 QAPP Addendum 1, Table A6-2 (see Integral 2004c).

CC - continuing calibration
FB - field blank contamination
HT - holding time
IC - initial calibration
ICP - inductively coupled plasma
LB - lab blank contamination (e.g. method blank, instrument, etc.)
LCS - laboratory control sample
MS/MSD - matrix spike/matrix spike duplicate
PCB - polychlorinated biphenyl
PFPs - potential false positives

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Table A-7a. Reported Detection Limits - November 2004 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
Peristaltic Samples					
Conventional Analyses					
Total suspended solids	TSS	mg/L	1	5	5
Total dissolved solids	TDS	mg/L	5	5	5
Total organic carbon	TOC	mg/L	0.07	0.07	0.07
Dissolved organic carbon	DOC	mg/L	0.07	0.07	0.07
Perchlorate	14797-73-0	ug/L	0.5	1	1
Hardness as $CaCO_3$	HARD	mg/L	0.2	0.2	0.4
Metals					
Aluminum	7429-90-5	ug/L	0.7	--	--
Antimony	7440-36-0	ug/L	0.02	0.02	0.07
Arsenic	7440-38-2	ug/L	NA	0.009	0.009
Cadmium	7440-43-9	ug/L	0.01	0.008	0.051
Chromium	7440-47-3	ug/L	0.06	0.02	0.16
Copper	7440-50-8	ug/L	0.04	0.03	0.44
Lead	7439-92-1	ug/L	0.01	0.009	0.012
Mercury	7439-97-6	ug/L	0.1	0.04	0.04
Nickel	7440-02-0	ug/L	0.04	0.06	0.58
Selenium	7782-49-2	ug/L	0.2	0.2	0.5
Silver	7440-22-4	ug/L	0.01	0.009	0.052
Thallium	7440-28-0	ug/L	NA	0.004	0.004
Zinc	7440-66-6	ug/L	0.2	0.3	2.2
Chromium hexavalent	18540-29-9	mg/L	0.003	0.007	0.007
Butyltins					
Butyltin ion	78763-54-9	ug/L	0.0047	0.0047	0.0047
Dibutyltin ion	14488-53-0	ug/L	0.005	0.005	0.005
Tributyltin ion	36643-28-4	ug/L	0.0071	0.0071	0.0071
Tetrabutyltin	1461-25-2	ug/L	0.0032	0.0032	0.0032
PCBs Aroclors					
Aroclor 1016	12674-11-2	ug/L	0.0025	0.0025	0.00267
Aroclor 1221	11104-28-2	ug/L	0.0025	0.0025	0.00267
Aroclor 1232	11141-16-5	ug/L	0.0025	0.0025	0.00267
Aroclor 1242	53469-21-9	ug/L	0.0025	0.0025	0.00267
Aroclor 1248	12672-29-6	ug/L	0.00125	0.00125	0.00256
Aroclor 1254	11097-69-1	ug/L	0.00125	0.00125	0.00134
Aroclor 1260	11096-82-5	ug/L	0.0025	0.00128	0.00267
Aroclor 1262	37324-23-5	ug/L	0.0025	0.0025	0.00267
Aroclor 1268	11100-14-4	ug/L	0.0025	0.0025	0.00267
Chlorinated Herbicides					
Dalapon	75-99-0	ug/L	0.06	0.24	0.51
Dicamba	1918-00-9	ug/L	0.071	0.08	0.087
MCPA	94-74-6	ug/L	24	7.8	9.5
Dichloroprop	120-36-5	ug/L	0.061	0.066	0.071
2,4-D	94-75-7	ug/L	0.079	0.056	0.061
Silvex	93-72-1	ug/L	0.085	0.053	0.057
2,4,5-T	93-76-5	ug/L	0.017	0.063	0.068
2,4-DB	94-82-6	ug/L	0.13	0.11	0.19
Dinoseb	88-85-7	ug/L	0.091	0.066	0.071
MCPP	93-65-2	ug/L	23	15	35
Chlorinated Pesticides					
alpha-Hexachlorocyclohexane	319-84-6	ug/L	0.0005	0.000472	0.000526
beta-Hexachlorocyclohexane	319-85-7	ug/L	0.0005	0.000472	0.000526
gamma-Hexachlorocyclohexane	58-89-9	ug/L	0.0005	0.000472	0.000526
delta-Hexachlorocyclohexane	319-86-8	ug/L	0.0005	0.000472	0.000526

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Table A-7a. Reported Detection Limits - November 2004 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
Heptachlor	76-44-8	ug/L	0.0005	0.000472	0.000526
Aldrin	309-00-2	ug/L	0.0005	0.000472	0.000526
Heptachlor epoxide	1024-57-3	ug/L	0.0005	0.000472	0.000526
trans-Chlordane	5103-74-2	ug/L	0.0005	0.000472	0.000526
cis-Chlordane	5103-71-9	ug/L	0.0005	0.000472	0.000526
alpha-Endosulfan	959-98-8	ug/L	0.0005	0.000472	0.000526
4,4'-DDE	72-55-9	ug/L	0.0005	0.000472	0.000526
Dieldrin	60-57-1	ug/L	0.0005	0.000472	0.000526
Endrin	72-20-8	ug/L	0.0005	0.000472	0.000526
beta-Endosulfan	33213-65-9	ug/L	0.0005	0.000472	0.000526
4,4'-DDD	72-54-8	ug/L	0.0005	0.000472	0.000526
Endrin aldehyde	7421-93-4	ug/L	0.0005	0.000472	0.000526
4,4'-DDT	50-29-3	ug/L	0.0005	0.000472	0.000526
Endosulfan sulfate	1031-07-8	ug/L	0.0005	0.000472	0.000526
Endrin ketone	53494-70-5	ug/L	0.0005	0.000472	0.000526
Methoxychlor	72-43-5	ug/L	0.0005	0.000472	0.000526
Hexachlorobenzene	118-74-1	ug/L	0.0005	0.000472	0.015
Toxaphene	8001-35-2	ug/L	0.025	0.118	0.132
Hexachlorobutadiene	87-68-3	ug/L	0.001	0.000472	0.021
Oxychlordane	27304-13-8	ug/L	0.0005	0.000472	0.000526
cis-Nonachlor	5103-73-1	ug/L	0.0005	0.000472	0.000526
trans-Nonachlor	39765-80-5	ug/L	0.0005	0.000472	0.000526
2,4'-DDD	53-19-0	ug/L	0.0005	0.000472	0.000526
2,4'-DDE	3424-82-6	ug/L	0.0005	0.000472	0.000526
2,4'-DDT	789-02-6	ug/L	0.0005	0.000472	0.000526
Mirex	2385-85-5	ug/L	NA	0.000472	0.000526
Semivolatile Organic Compounds					
1,2-Dichlorobenzene	95-50-1	ug/L	0.014	0.015	0.015
1,3-Dichlorobenzene	541-73-1	ug/L	0.011	0.011	0.012
1,4-Dichlorobenzene	106-46-7	ug/L	0.014	0.014	0.014
1,2,4-Trichlorobenzene	120-82-1	ug/L	0.016	0.016	0.017
Hexachlorobenzene	118-74-1	ug/L	0.014	0.015	0.017
2-Chloronaphthalene	91-58-7	ug/L	0.015	0.016	0.016
Hexachloroethane	67-72-1	ug/L	0.018	0.019	0.021
Hexachlorobutadiene	87-68-3	ug/L	0.019	0.02	0.023
Hexachlorocyclopentadiene	77-47-4	ug/L	0.041	0.041	0.043
Bis(2-chloroisopropyl) ether	39638-32-9	ug/L	0.017	0.017	0.018
Bis(2-chloroethoxy) methane	111-91-1	ug/L	0.012	0.012	0.012
Bis(2-chloroethyl) ether	111-44-4	ug/L	0.014	0.015	0.015
4-Chlorophenyl phenyl ether	7005-72-3	ug/L	0.0084	0.0085	0.0089
4-Bromophenyl phenyl ether	101-55-3	ug/L	0.018	0.018	0.019
3,3'-Dichlorobenzidine	91-94-1	ug/L	0.43	0.43	0.46
4-Chloroaniline	106-47-8	ug/L	0.017	0.018	0.019
Nitrobenzene	98-95-3	ug/L	0.0074	0.0074	0.0078
Aniline	62-53-3	ug/L	NA	1	1.1
2-Nitroaniline	88-74-4	ug/L	0.015	0.015	0.016
3-Nitroaniline	99-09-2	ug/L	0.23	0.23	0.24
4-Nitroaniline	100-01-6	ug/L	0.16	0.17	0.18
N-Nitrosodimethylamine	62-75-9	ug/L	0.00026	0.42	0.45
N-Nitrosodipropylamine	621-64-7	ug/L	0.032	0.033	0.034
N-Nitrosodiphenylamine	86-30-6	ug/L	0.028	0.028	0.03
2,4-Dinitrotoluene	121-14-2	ug/L	0.019	0.02	0.021
2,6-Dinitrotoluene	606-20-2	ug/L	0.0088	0.0088	0.0093
Carbazole	86-74-8	ug/L	0.013	0.013	0.014
Benzoic acid	65-85-0	ug/L	1.71	1.8	1.9
Benzyl alcohol	100-51-6	ug/L	0.97	0.98	1.1

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Table A-7a. Reported Detection Limits - November 2004 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
Dibenzofuran	132-64-9	ug/L	0.013	0.0071	0.029
Isophorone	78-59-1	ug/L	0.0084	0.0085	0.0089
Azobenzene	103-33-3	ug/L	NA	0.012	0.013
Phenols					
Phenol	108-95-2	ug/L	0.020	0.02	0.043
2-Methylphenol	95-48-7	ug/L	0.059	0.06	0.063
4-Methylphenol	106-44-5	ug/L	0.051	0.051	0.054
2,4-Dimethylphenol	105-67-9	ug/L	0.32	0.32	0.34
2-Chlorophenol	95-57-8	ug/L	0.015	0.015	0.016
2,4-Dichlorophenol	120-83-2	ug/L	0.024	0.024	0.025
2,4,5-Trichlorophenol	95-95-4	ug/L	0.025	0.026	0.027
2,4,6-trichlorophenol	88-06-2	ug/L	0.037	0.037	0.039
Pentachlorophenol	87-86-5	ug/L	0.028	0.029	0.03
4-Chloro-3-methylphenol	59-50-7	ug/L	0.029	0.029	0.13
2-Nitrophenol	88-75-5	ug/L	0.014	0.014	0.015
4-Nitrophenol	100-02-7	ug/L	0.54	0.54	0.57
2,4-Dinitrophenol	51-28-5	ug/L	0.53	0.53	0.56
4,6-Dinitro-2-methylphenol	534-52-1	ug/L	0.013	0.013	0.014
Phthalate Esters					
Dimethyl phthalate	131-11-3	ug/L	0.013	0.013	0.014
Diethyl phthalate	84-66-2	ug/L	0.026	0.026	0.076
Dibutyl phthalate	84-74-2	ug/L	0.026	0.041	0.29
Butylbenzyl phthalate	85-68-7	ug/L	0.025	0.026	0.027
Di-n-octyl phthalate	117-84-0	ug/L	0.032	0.032	0.034
Bis(2-ethylhexyl) phthalate	117-81-7	ug/L	0.27	0.27	1.3
Polycyclic Aromatic Hydrocarbons					
Naphthalene	91-20-3	ug/L	0.014	0.0056	0.099
2-Methylnaphthalene	91-57-6	ug/L	0.012	0.0027	0.011
Acenaphthylene	208-96-8	ug/L	0.0089	0.0018	0.027
Acenaphthene	83-32-9	ug/L	0.0097	0.002	0.008
Fluorene	86-73-7	ug/L	0.011	0.0026	0.011
Phenanthrene	85-01-8	ug/L	0.013	0.0032	0.013
Anthracene	120-12-7	ug/L	0.010	0.002	0.015
Fluoranthene	206-44-0	ug/L	0.013	0.0024	0.0096
Pyrene	129-00-0	ug/L	0.012	0.0023	0.0089
Benz(a)anthracene	56-55-3	ug/L	0.013	0.0021	0.0084
Chrysene	218-01-9	ug/L	0.012	0.0013	0.005
Benzo(b)fluoranthene	205-99-2	ug/L	0.0098	0.002	0.0078
Benzo(k)fluoranthene	207-08-9	ug/L	0.011	0.0014	0.0054
Benzo(a)pyrene	50-32-8	ug/L	0.0087	0.0016	0.0064
Indeno(1,2,3-cd)pyrene	193-39-5	ug/L	0.0087	0.0021	0.0084
Dibenz(a,h)anthracene	53-70-3	ug/L	0.0079	0.0017	0.0065
Benzo(g,h,i)perylene	191-24-2	ug/L	0.0090	0.0037	0.015
XAD Column Samples					
PCBs Aroclors					
Aroclor 1016	12674-11-2	pg/L	NA	0.0107	0.0267
Aroclor 1221	11104-28-2	pg/L	NA	0.0052	0.0128
Aroclor 1232	11141-16-5	pg/L	NA	0.0106	0.0248
Aroclor 1242	53469-21-9	pg/L	NA	0.0119	0.0297
Aroclor 1248	12672-29-6	pg/L	NA	0.036	0.0892
Aroclor 1254	11097-69-1	pg/L	NA	0.0465	0.094
Aroclor 1260	11096-82-5	pg/L	NA	0.0005	0.0103
Aroclor 1262	37324-23-5	pg/L	NA	--	--

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Table A-7a. Reported Detection Limits - November 2004 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
Aroclor 1268	11100-14-4	pg/L	NA	--	--
Organochlorine Pesticides					
alpha-Hexachlorocyclohexane	319-84-6	pg/L	0.6-3.0	0.0224	0.0574
beta-Hexachlorocyclohexane	319-85-7	pg/L	0.6-3.0	0.0326	0.0874
gamma-Hexachlorocyclohexane	58-89-9	pg/L	0.6-3.0	0.0257	0.0659
delta-Hexachlorocyclohexane	319-86-8	pg/L	0.6-3.0	0.415	1.52
Heptachlor	76-44-8	pg/L	0.6-3.0	0.0013	0.161
Aldrin	309-00-2	pg/L	0.6-3.0	0.0389	0.668
Heptachlor epoxide	1024-57-3	pg/L	0.6-3.0	0.026	0.106
trans-Chlordane	5103-74-2	pg/L	0.6-3.0	0.0143	0.093
cis-Chlordane	5103-71-9	pg/L	0.6-3.0	0.0164	0.107
alpha-Endosulfan	959-98-8	pg/L	0.6-3.0	0.846	5.53
4,4'-DDE	72-55-9	pg/L	0.6-3.0	0.0149	0.365
Dieldrin	60-57-1	pg/L	0.6-3.0	0.284	0.942
Endrin	72-20-8	pg/L	0.6-3.0	0.45	0.906
beta-Endosulfan	33213-65-9	pg/L	0.6-3.0	4.04	17.3
4,4'-DDD	72-54-8	pg/L	0.6-3.0	0.0704	0.262
Endrin aldehyde	7421-93-4	pg/L	0.6-3.0	0.17	0.394
4,4'-DDT	50-29-3	pg/L	0.6-3.0	0.107	0.396
Endosulfan sulfate	1031-07-8	pg/L	0.6-3.0	1.7	4.59
Endrin ketone	53494-70-5	pg/L	0.6-3.0	0.106	0.396
Methoxychlor	72-43-5	pg/L	0.6-3.0	0.841	2.37
Hexachlorobenzene	118-74-1	pg/L	0.6-3.0	0.0008	0.0129
Toxaphene	8001-35-2	pg/L	0.6-3.0	--	--
Hexachlorobutadiene	87-68-3	pg/L	0.6-3.0	0.0056	0.39
Oxychlordane	27304-13-8	pg/L	0.6-3.0	0.117	1.17
cis-Nonachlor	5103-73-1	pg/L	0.6-3.0	0.0159	0.0994
trans-Nonachlor	39765-80-5	pg/L	0.6-3.0	0.0185	0.117
2,4'-DDD	53-19-0	pg/L	0.6-3.0	0.0657	0.245
2,4'-DDE	3424-82-6	pg/L	0.6-3.0	0.0157	0.278
2,4'-DDT	789-02-6	pg/L	0.6-3.0	0.0804	0.534
Mirex	2385-85-5	pg/L	NA	--	--
Phthalate Esters					
Dimethyl phthalate	131-11-3	pg/L	300 - 3000	22.9	610
Diethyl phthalate	84-66-2	pg/L	300 - 3000	26.7	1140
Dibutyl phthalate	84-74-2	pg/L	300 - 3000	7.75	1600
Butylbenzyl phthalate	85-68-7	pg/L	300 - 3000	27.4	1060
Di-n-octyl phthalate	117-84-0	pg/L	300 - 3000	132	186
Bis(2-ethylhexyl) phthalate	117-81-7	pg/L	300 - 3000	4260	5660
Polycyclic Aromatic Hydrocarbons					
Naphthalene	91-20-3	pg/L	100 - 600	12.6	6530
2-Methylnaphthalene	91-57-6	pg/L	100 - 600	7.71	19.4
Acenaphthylene	208-96-8	pg/L	100 - 600	6.4	22.3
Acenaphthene	83-32-9	pg/L	100 - 600	5.75	16.7
Fluorene	86-73-7	pg/L	100 - 600	15	61.3
Phenanthrene	85-01-8	pg/L	100 - 600	14.3	75.4
Anthracene	120-12-7	pg/L	100 - 600	16.6	164
Fluoranthene	206-44-0	pg/L	100 - 600	11.1	59.2
Pyrene	129-00-0	pg/L	100 - 600	10.2	57
Benz(a)anthracene	56-55-3	pg/L	100 - 600	4.46	16.5
Chrysene	218-01-9	pg/L	100 - 600	4.72	17.6
Benzo(b)fluoranthene	205-99-2	pg/L	100 - 600	--	--
Benzo(k)fluoranthene	207-08-9	pg/L	100 - 600	8.97	22
Benzo(a)pyrene	50-32-8	pg/L	100 - 600	6.99	23.2

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Table A-7a. Reported Detection Limits - November 2004 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
Indeno(1,2,3-cd)pyrene	193-39-5	pg/L	100 - 600	13.7	85.3
Dibenz(a,h)anthracene	53-70-3	pg/L	100 - 600	5.5	44.4
Benzo(g,h,i)perylene	191-24-2	pg/L	100 - 600	6.91	29.3
Chlorinated Dioxins and Furans					
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/L	0.003 - 0.01	0.00129	0.00384
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/L	0.003 - 0.01	0.0005	0.0036
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/L	0.003 - 0.01	0.000887	0.00313
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/L	0.003 - 0.01	0.0005	0.00339
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/L	0.003 - 0.01	0.0005	0.00256
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/L	0.003 - 0.01	0.000961	0.00418
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/L	0.003 - 0.01	0.0005	0.00971
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/L	0.003 - 0.01	0.00179	0.00894
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/L	0.003 - 0.01	0.0005	0.00586
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/L	0.003 - 0.01	0.0005	0.00383
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/L	0.003 - 0.01	0.0005	0.00156
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/L	0.003 - 0.01	0.000639	0.0043
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/L	0.003 - 0.01	0.0005	0.0009
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/L	0.003 - 0.01	0.0005	0.00623
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/L	0.003 - 0.01	0.0005	0.0059
Octachlorodibenzofuran	39001-02-0	pg/L	NA	0.0005	0.0118
Octachlorodibenzo-p-dioxin	3268-87-9	pg/L	NA	0.0005	0.0005
Chlorinated Dioxin/Furan Homologs					
Tetrachlorodibenzofuran homologs	30402-14-3	pg/L	NA	0.0005	0.001
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/L	NA	0.0005	0.0005
Pentachlorodibenzofuran homologs	30402-15-4	pg/L	NA	0.0005	0.0185
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/L	NA	0.0005	0.00551
Hexachlorodibenzofuran homologs	55684-94-1	pg/L	NA	0.0005	0.0175
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/L	NA	0.0005	0.0203
Heptachlorodibenzofuran homologs	38998-75-3	pg/L	NA	0.0005	0.0185
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/L	NA	0.0005	0.0009
Octachlorodibenzofuran	39001-02-0	pg/L	NA	0.0005	0.0118
Octachlorodibenzo-p-dioxin	3268-87-9	pg/L	NA	0.0005	0.0005
PCB Congeners					
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	pg/L	0.03 - 3	0.00007	0.00081
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	pg/L	0.03 - 3	0.00723	0.0375
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	pg/L	0.03 - 3	0.00016	0.04
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	pg/L	0.03 - 3	0.0073	0.0379
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	pg/L	0.03 - 3	0.00012	0.0448
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	pg/L	0.03 - 3	0.00017	0.00511
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	pg/L	0.03 - 3	0.0001	0.00206
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	pg/L	0.03 - 3	0.0103	0.0442
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	pg/L	0.03 - 3	0.0001	0.00213
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	pg/L	0.03 - 3	0.00009	0.0143
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	pg/L	0.03 - 3	0.0001	0.00212
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	pg/L	0.03 - 3	0.00009	0.00199
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	pg/L	0.03 - 3	0.0001	0.00204
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	pg/L	0.03 - 3	0.00399	0.0161
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	pg/L	0.03 - 3	0.00007	0.0754
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	pg/L	0.03 - 3	0.00401	0.0157
2,2',3,3',4,6-Hexachlorobiphenyl	61798-70-7	pg/L	0.03 - 3	0.004	0.0158
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	pg/L	0.03 - 3	0.00649	0.0133
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	pg/L	0.03 - 3	0.00009	0.0348
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	pg/L	0.03 - 3	0.0001	0.00206
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	pg/L	0.03 - 3	0.00388	0.0154

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Table A-7a. Reported Detection Limits - November 2004 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	pg/L	0.03 - 3	0.00007	0.00154
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	pg/L	0.03 - 3	0.0013	0.00227
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	pg/L	0.03 - 3	0.0068	0.0137
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	pg/L	0.03 - 3	0.00011	0.173
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	pg/L	0.03 - 3	0.0002	0.0735
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	pg/L	0.03 - 3	0.00009	0.0446
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	pg/L	0.03 - 3	0.00087	0.0772
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	pg/L	0.03 - 3	0.00352	0.0203
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	pg/L	0.03 - 3	0.0009	0.0313
2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	pg/L	0.03 - 3	0.00009	0.00185
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	pg/L	0.03 - 3	0.00379	0.0144
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	pg/L	0.03 - 3	0.00334	0.0132
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	pg/L	0.03 - 3	0.0018	0.0675
2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	pg/L	0.03 - 3	0.0006	0.0025
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	pg/L	0.03 - 3	0.00173	0.0341
2,2',3,4,5,6-Hexachlorobiphenyl	41411-61-4	pg/L	0.03 - 3	0.0057	0.0368
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	pg/L	0.03 - 3	0.00162	0.00287
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	pg/L	0.03 - 3	0.0013	0.0497
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	pg/L	0.03 - 3	0.00128	0.00219
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	pg/L	0.03 - 3	0.00619	0.0127
2,2',3,4'-Tetrachlorobiphenyl	36559-22-5	pg/L	0.03 - 3	0.00322	0.0119
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	pg/L	0.03 - 3	0.00601	0.0121
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	pg/L	0.03 - 3	0.00128	0.0066
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	pg/L	0.03 - 3	0.00619	0.0125
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	pg/L	0.03 - 3	0.00347	0.033
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	pg/L	0.03 - 3	0.00175	0.00235
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	pg/L	0.03 - 3	0.0035	0.0132
2,2',3-Trichlorobiphenyl	38444-78-9	pg/L	0.03 - 3	0.00154	0.00352
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	pg/L	0.03 - 3	0.00097	0.0026
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	pg/L	0.03 - 3	0.00536	0.0106
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	pg/L	0.03 - 3	0.00293	0.011
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	pg/L	0.03 - 3	0.00179	0.00262
2,2',4-Trichlorobiphenyl	37680-66-3	pg/L	0.03 - 3	0.00135	0.00308
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	pg/L	0.03 - 3	0.00279	0.0104
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	pg/L	0.03 - 3	0.00235	0.0113
2,2',6-Trichlorobiphenyl	38444-73-4	pg/L	0.03 - 3	0.00168	0.00432
2,2'-Dichlorobiphenyl	13029-08-8	pg/L	0.03 - 3	0.00623	0.0153
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	pg/L	0.03 - 3	0.00014	0.00406
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	pg/L	0.03 - 3	0.00166	0.0079
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	pg/L	0.03 - 3	0.00007	0.00156
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	pg/L	0.03 - 3	0.00007	0.00154
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	pg/L	0.03 - 3	0.00254	0.0102
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	pg/L	0.03 - 3	0.00394	0.0182
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	pg/L	0.03 - 3	0.0552	0.0571
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	pg/L	0.03 - 3	0.00263	0.0107
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	pg/L	0.03 - 3	0.0035	0.0559
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	pg/L	0.03 - 3	0.0609	0.063
2,3,3',4',5',6-Hexachlorobiphenyl	74472-45-0	pg/L	0.03 - 3	0.00283	0.0109
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	pg/L	0.03 - 3	0.00428	0.0197
2,3,3',4,5-Pentachlorobiphenyl	70424-69-0	pg/L	0.03 - 3	0.00518	0.14
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	pg/L	0.03 - 3	0.00406	0.017
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	pg/L	0.03 - 3	0.00627	0.0156
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	pg/L	0.03 - 3	0.0075	0.0357
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	pg/L	0.03 - 3	0.003	0.0641
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	pg/L	0.03 - 3	0.00425	0.0632
2,3,3',5,6-Pentachlorobiphenyl	74472-36-9	pg/L	0.03 - 3	0.00454	0.0261
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	pg/L	0.03 - 3	0.00721	0.129

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Table A-7a. Reported Detection Limits - November 2004 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	pg/L	0.03 - 3	0.00617	0.0667
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	pg/L	0.03 - 3	0.00248	0.0235
2,3',4,4',5'-Pentachlorobiphenyl	65510-44-3	pg/L	0.03 - 3	0.00424	0.0509
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	pg/L	0.03 - 3	0.00401	0.0248
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	pg/L	0.03 - 3	0.00403	0.0181
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	pg/L	0.03 - 3	0.00613	0.0152
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	pg/L	0.03 - 3	0.0059	0.0146
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	pg/L	0.03 - 3	0.00397	0.00827
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	pg/L	0.03 - 3	0.00442	0.00885
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	pg/L	0.03 - 3	0.00561	0.0139
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	pg/L	0.03 - 3	0.00541	0.0227
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	pg/L	0.03 - 3	0.00594	0.0144
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	pg/L	0.03 - 3	0.00217	0.00837
2,3',4-Trichlorobiphenyl	55712-37-3	pg/L	0.03 - 3	0.00303	0.00915
2,3,4'-Trichlorobiphenyl	38444-85-8	pg/L	0.03 - 3	0.00351	0.0106
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	pg/L	0.03 - 3	0.00581	0.179
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	pg/L	0.03 - 3	0.00212	0.00836
2,3',5'-Trichlorobiphenyl	37680-68-5	pg/L	0.03 - 3	0.00338	0.0102
2,3,5-Trichlorobiphenyl	55720-44-0	pg/L	0.03 - 3	0.00343	0.0104
2,3,6-Trichlorobiphenyl	55702-45-9	pg/L	0.03 - 3	0.00123	0.0311
2,3',6-Trichlorobiphenyl	38444-76-7	pg/L	0.03 - 3	0.00093	0.00213
2,3'-Dichlorobiphenyl	25569-80-6	pg/L	0.03 - 3	0.00366	0.00967
2,3-Dichlorobiphenyl	16605-91-7	pg/L	0.03 - 3	0.00385	0.00994
2,4',5-Trichlorobiphenyl	16606-02-3	pg/L	0.03 - 3	0.00314	0.00949
2,4',6-Trichlorobiphenyl	38444-77-8	pg/L	0.03 - 3	0.00324	0.00978
2,4'-Dichlorobiphenyl	34883-43-7	pg/L	0.03 - 3	0.00339	0.00915
2,4-Dichlorobiphenyl	33284-50-3	pg/L	0.03 - 3	0.00359	0.0958
2,5-Dichlorobiphenyl	34883-39-1	pg/L	0.03 - 3	0.00361	0.00947
2,6-Dichlorobiphenyl	33146-45-1	pg/L	0.03 - 3	0.00367	0.00959
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	pg/L	0.03 - 3	0.00265	0.0407
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	pg/L	0.03 - 3	0.00434	0.0386
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	pg/L	0.03 - 3	0.00626	0.0157
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	pg/L	0.03 - 3	0.00496	0.0399
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	pg/L	0.03 - 3	0.00548	0.0481
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	pg/L	0.03 - 3	0.0313	0.0324
3,3',4-Trichlorobiphenyl	37680-69-6	pg/L	0.03 - 3	0.00374	0.0113
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	pg/L	0.03 - 3	0.0404	0.0418
3,3',5-Trichlorobiphenyl	38444-87-0	pg/L	0.03 - 3	0.00328	0.0158
3,3'-Dichlorobiphenyl	2050-67-1	pg/L	0.03 - 3	0.00385	0.0103
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	pg/L	0.03 - 3	0.00727	0.0507
3,4,4'-Trichlorobiphenyl	38444-90-5	pg/L	0.03 - 3	0.0036	0.0108
3,4,5-Trichlorobiphenyl	53555-66-1	pg/L	0.03 - 3	0.00325	0.00982
3,4',5-Trichlorobiphenyl	38444-88-1	pg/L	0.03 - 3	0.0032	0.00967
3,5-Dichlorobiphenyl	34883-41-5	pg/L	0.03 - 3	0.0111	0.0309
3-Chlorobiphenyl	2051-61-8	pg/L	0.03 - 3	0.0029	0.00678
4,4'-Dichlorobiphenyl	2050-68-2	pg/L	0.03 - 3	0.00428	0.0117
PCB012 & 013	PCB012_013	pg/L	0.03 - 3	0.00382	0.0101
PCB018 & 030	PCB018_030	pg/L	0.03 - 3	0.00109	0.0025
PCB020 & 028	PCB020_028	pg/L	0.03 - 3	0.00327	0.00989
PCB021 & 033	PCB021_033	pg/L	0.03 - 3	0.00323	0.00975
PCB026 & 029	PCB026_029	pg/L	0.03 - 3	0.00337	0.0102
PCB040 & 041 & 071	PCB040_041_071	pg/L	0.03 - 3	0.00292	0.0113
PCB044 & 047 & 065	PCB044_047_065	pg/L	0.03 - 3	0.00264	0.0102
PCB045 & 051	PCB045_051	pg/L	0.03 - 3	0.00294	0.011
PCB049 & 069	PCB049_069	pg/L	0.03 - 3	0.00255	0.0096
PCB050 & 053	PCB050_053	pg/L	0.03 - 3	0.00285	0.0108
PCB059 & 062 & 075	PCB059_062_075	pg/L	0.03 - 3	0.00222	0.00845

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Table A-7a. Reported Detection Limits - November 2004 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
PCB061 & 070 & 074 & 076	PCB061_070_074_	pg/L	0.03 - 3	0.00596	0.0143
PCB083 & 099	PCB083_099	pg/L	0.03 - 3	0.00581	0.0118
PCB085 & 116 & 117	PCB085_116_117	pg/L	0.03 - 3	0.0049	0.0101
PCB086 & 087 & 097 & 108 & 119 & 125	PCB086_087_097_	pg/L	0.03 - 3	0.00507	2.79
PCB088 & 091	PCB088_091	pg/L	0.03 - 3	0.00583	0.0118
PCB090 & 101 & 113	PCB090 101 113	pg/L	0.03 - 3	0.00519	0.0105
PCB093 & 095 & 098 & 100 & 102	PCB093_095_098_	pg/L	0.03 - 3	0.0057	0.0116
PCB107 & 124	PCB107_124	pg/L	0.03 - 3	0.00419	0.0187
PCB110 & 115	PCB110_115	pg/L	0.03 - 3	0.00428	0.00878
PCB128 & 166	PCB128_166	pg/L	0.03 - 3	0.00317	0.0127
PCB129 & 138 & 160 & 163	PCB129_138_160_	pg/L	0.03 - 3	0.00316	0.0124
PCB134 & 143	PCB134_143	pg/L	0.03 - 3	0.00406	0.0157
PCB135 & 151 & 154	PCB135_151_154	pg/L	0.03 - 3	0.00158	0.00282
PCB139 & 140	PCB139_140	pg/L	0.03 - 3	0.00367	0.0144
PCB147 & 149	PCB147_149	pg/L	0.03 - 3	0.00361	0.014
PCB153 & 168	PCB153_168	pg/L	0.03 - 3	0.00292	0.0113
PCB156 & 157	PCB156_157	pg/L	0.03 - 3	0.00325	0.0136
PCB171 & 173	PCB171_173	pg/L	0.03 - 3	0.0001	0.0431
PCB180 & 193	PCB180_193	pg/L	0.03 - 3	0.00008	0.00167
PCB183 & 185	PCB183_185	pg/L	0.03 - 3	0.00009	0.00194
PCB197 & 200	PCB197_200	pg/L	0.03 - 3	0.00009	0.0149
PCB198 & 199	PCB198_199	pg/L	0.03 - 3	0.00012	0.124
PCB Homologs					
Dichlorobiphenyl	25512-42-9	pg/L	NA	0.0074	0.0309
Heptachlorobiphenyl	28655-71-2	pg/L	NA	0.0558	0.0772
Hexachlorobiphenyl	26601-64-9	pg/L	NA	0.0609	0.0641
Monochlorobiphenyl	27323-18-8	pg/L	NA	0.0031	0.0073
Nonachlorobiphenyl	53742-07-7	pg/L	NA	0.0072	0.1
Octachlorobiphenyl	55722-26-4	pg/L	NA	0.0008	0.0735
Pentachlorobiphenyl	25429-29-2	pg/L	NA	0.0118	0.14
Tetrachlorobiphenyl	26914-33-0	pg/L	NA	0.0404	0.129
Trichlorobiphenyl	25323-68-6	pg/L	NA	0.0037	0.0311
XAD Filter Samples					
PCBs Aroclors					
Aroclor 1016	12674-11-2	pg/L	NA	0.006	0.0287
Aroclor 1221	11104-28-2	pg/L	NA	0.0054	0.0149
Aroclor 1232	11141-16-5	pg/L	NA	0.0121	0.0333
Aroclor 1242	53469-21-9	pg/L	NA	0.0067	0.0319
Aroclor 1248	12672-29-6	pg/L	NA	0.0396	0.203
Aroclor 1254	11097-69-1	pg/L	NA	0.0391	0.0922
Aroclor 1260	11096-82-5	pg/L	NA	0.0087	0.027
Aroclor 1262	37324-23-5	pg/L	NA	--	--
Aroclor 1268	11100-14-4	pg/L	NA	--	--
Organochlorine Pesticides					
alpha-Hexachlorocyclohexane	319-84-6	pg/L	0.6-3.0	0.0236	0.106
beta-Hexachlorocyclohexane	319-85-7	pg/L	0.6-3.0	0.0474	0.288
gamma-Hexachlorocyclohexane	58-89-9	pg/L	0.6-3.0	0.0271	0.117
delta-Hexachlorocyclohexane	319-86-8	pg/L	0.6-3.0	0.0689	0.432
Heptachlor	76-44-8	pg/L	0.6-3.0	0.0211	0.0461
Aldrin	309-00-2	pg/L	0.6-3.0	0.0097	0.504
Heptachlor epoxide	1024-57-3	pg/L	0.6-3.0	0.0078	0.196
trans-Chlordane	5103-74-2	pg/L	0.6-3.0	0.0182	0.272
cis-Chlordane	5103-71-9	pg/L	0.6-3.0	0.0209	0.306
alpha-Endosulfan	959-98-8	pg/L	0.6-3.0	0.226	1.6

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Table A-7a. Reported Detection Limits - November 2004 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
4,4'-DDE	72-55-9	pg/L	0.6-3.0	0.0089	0.225
Dieldrin	60-57-1	pg/L	0.6-3.0	0.157	2.03
Endrin	72-20-8	pg/L	0.6-3.0	0.074	0.639
beta-Endosulfan	33213-65-9	pg/L	0.6-3.0	0.74	4.3
4,4'-DDD	72-54-8	pg/L	0.6-3.0	0.0529	0.458
Endrin aldehyde	7421-93-4	pg/L	0.6-3.0	0.12	0.67
4,4'-DDT	50-29-3	pg/L	0.6-3.0	0.0925	1
Endosulfan sulfate	1031-07-8	pg/L	0.6-3.0	0.666	2.76
Endrin ketone	53494-70-5	pg/L	0.6-3.0	0.0749	0.168
Methoxychlor	72-43-5	pg/L	0.6-3.0	0.674	1.17
Hexachlorobenzene	118-74-1	pg/L	0.6-3.0	0.0002	0.0105
Toxaphene	8001-35-2	pg/L	0.6-3.0	--	--
Hexachlorobutadiene	87-68-3	pg/L	0.6-3.0	0.0163	0.173
Oxychlordane	27304-13-8	pg/L	0.6-3.0	0.0985	0.444
cis-Nonachlor	5103-73-1	pg/L	0.6-3.0	0.0666	0.294
trans-Nonachlor	39765-80-5	pg/L	0.6-3.0	0.0227	0.368
2,4'-DDD	53-19-0	pg/L	0.6-3.0	0.0494	0.428
2,4'-DDE	3424-82-6	pg/L	0.6-3.0	0.0065	0.169
2,4'-DDT	789-02-6	pg/L	0.6-3.0	0.0604	0.523
Mirex	2385-85-5	pg/L	NA	--	--
Phthalate Esters					
Dimethyl phthalate	131-11-3	pg/L	300 - 3000	102	194
Diethyl phthalate	84-66-2	pg/L	300 - 3000	210	299
Dibutyl phthalate	84-74-2	pg/L	300 - 3000	367	801
Butylbenzyl phthalate	85-68-7	pg/L	300 - 3000	43.8	595
Di-n-octyl phthalate	117-84-0	pg/L	300 - 3000	203	1970
Bis(2-ethylhexyl) phthalate	117-81-7	pg/L	300 - 3000	45.5	8590
Polycyclic Aromatic Hydrocarbons					
Naphthalene	91-20-3	pg/L	100 - 600	507	1310
2-Methylnaphthalene	91-57-6	pg/L	100 - 600	111	621
Acenaphthylene	208-96-8	pg/L	100 - 600	5.05	159
Acenaphthene	83-32-9	pg/L	100 - 600	7.52	92.7
Fluorene	86-73-7	pg/L	100 - 600	6.34	78
Phenanthrene	85-01-8	pg/L	100 - 600	19.7	822
Anthracene	120-12-7	pg/L	100 - 600	8.84	170
Fluoranthene	206-44-0	pg/L	100 - 600	7.2	24.1
Pyrene	129-00-0	pg/L	100 - 600	6.69	821
Benz(a)anthracene	56-55-3	pg/L	100 - 600	4.28	267
Chrysene	218-01-9	pg/L	100 - 600	4.58	353
Benzo(b)fluoranthene	205-99-2	pg/L	100 - 600	--	--
Benzo(k)fluoranthene	207-08-9	pg/L	100 - 600	12.8	81.3
Benzo(a)pyrene	50-32-8	pg/L	100 - 600	9.89	266
Indeno(1,2,3-cd)pyrene	193-39-5	pg/L	100 - 600	6.76	19.6
Dibenz(a,h)anthracene	53-70-3	pg/L	100 - 600	14	73.9
Benzo(g,h,i)perylene	191-24-2	pg/L	100 - 600	6.2	18.5
Chlorinated Dioxins and Furans					
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/L	0.003 - 0.01	0.0005	0.0043
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/L	0.003 - 0.01	0.0005	0.002
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/L	0.003 - 0.01	0.0002	0.0005
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/L	0.003 - 0.01	0.0004	0.0018
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/L	0.003 - 0.01	0.0004	0.00592
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/L	0.003 - 0.01	0.0007	0.0021
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/L	0.003 - 0.01	0.0007	0.0021
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/L	0.003 - 0.01	0.0007	0.0021

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Table A-7a. Reported Detection Limits - November 2004 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/L	0.003 - 0.01	0.0006	0.0015
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/L	0.003 - 0.01	0.0006	0.0015
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/L	0.003 - 0.01	0.00144	0.00182
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/L	0.003 - 0.01	0.0006	0.0015
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/L	0.003 - 0.01	0.0021	0.0036
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/L	0.003 - 0.01	0.0005	0.0025
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/L	0.003 - 0.01	0.0005	0.0025
Octachlorodibenzofuran	39001-02-0	pg/L	NA	0.0005	0.0019
Octachlorodibenzo-p-dioxin	3268-87-9	pg/L	NA	0.0006	0.0215
Chlorinated Dioxin/Furan Homologs					
Tetrachlorodibenzofuran homologs	30402-14-3	pg/L	NA	0.0005	0.0011
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/L	NA	0.0003	0.0005
Pentachlorodibenzofuran homologs	30402-15-4	pg/L	NA	0.0004	0.0018
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/L	NA	0.0002	0.0005
Hexachlorodibenzofuran homologs	55684-94-1	pg/L	NA	0.0006	0.0015
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/L	NA	0.0007	0.0021
Heptachlorodibenzofuran homologs	38998-75-3	pg/L	NA	0.0005	0.0025
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/L	NA	0.0006	0.0033
Octachlorodibenzofuran	39001-02-0	pg/L	NA	0.0005	0.0019
Octachlorodibenzo-p-dioxin	3268-87-9	pg/L	NA	0.0006	0.0215
PCB Congeners					
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	pg/L	0.03 - 3	0.00009	0.0072
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	pg/L	0.03 - 3	0.00919	0.046
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	pg/L	0.03 - 3	0.00353	0.047
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	pg/L	0.03 - 3	0.00745	0.0359
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	pg/L	0.03 - 3	0.00009	0.0025
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	pg/L	0.03 - 3	0.00391	0.052
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	pg/L	0.03 - 3	0.00175	0.0054
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	pg/L	0.03 - 3	0.00774	0.036
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	pg/L	0.03 - 3	0.00176	0.00543
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	pg/L	0.03 - 3	0.00007	0.00191
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	pg/L	0.03 - 3	0.00177	0.00547
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	pg/L	0.03 - 3	0.00167	0.00517
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	pg/L	0.03 - 3	0.00172	0.00533
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	pg/L	0.03 - 3	0.0092	0.0476
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	pg/L	0.03 - 3	0.00131	0.00404
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	pg/L	0.03 - 3	0.00902	0.0466
2,2',3,3',4,6-Hexachlorobiphenyl	61798-70-7	pg/L	0.03 - 3	0.00869	0.0449
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	pg/L	0.03 - 3	0.00556	0.0131
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	pg/L	0.03 - 3	0.00007	0.00181
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	pg/L	0.03 - 3	0.00176	0.00543
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	pg/L	0.03 - 3	0.00846	0.0438
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	pg/L	0.03 - 3	0.0013	0.004
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	pg/L	0.03 - 3	0.00105	0.0194
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	pg/L	0.03 - 3	0.0055	0.013
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	pg/L	0.03 - 3	0.00009	0.00233
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	pg/L	0.03 - 3	0.00011	0.00196
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	pg/L	0.03 - 3	0.00171	0.0434
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	pg/L	0.03 - 3	0.00167	0.00515
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	pg/L	0.03 - 3	0.00816	0.0422
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	pg/L	0.03 - 3	0.00125	0.009
2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	pg/L	0.03 - 3	0.00159	0.00492
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	pg/L	0.03 - 3	0.00848	0.0439
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	pg/L	0.03 - 3	0.0075	0.0388
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	pg/L	0.03 - 3	0.00186	0.0662

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Table A-7a. Reported Detection Limits - November 2004 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	pg/L	0.03 - 3	0.0011	0.00327
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	pg/L	0.03 - 3	0.00136	0.0264
2,2',3,4,5,6-Hexachlorobiphenyl	41411-61-4	pg/L	0.03 - 3	0.00872	0.0451
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	pg/L	0.03 - 3	0.00135	0.0253
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	pg/L	0.03 - 3	0.00104	0.0487
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	pg/L	0.03 - 3	0.001	0.0186
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	pg/L	0.03 - 3	0.00504	0.0553
2,2',3,4'-Tetrachlorobiphenyl	36559-22-5	pg/L	0.03 - 3	0.00293	0.0101
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	pg/L	0.03 - 3	0.00498	0.0118
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	pg/L	0.03 - 3	0.00099	0.0183
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	pg/L	0.03 - 3	0.00495	0.0117
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	pg/L	0.03 - 3	0.00328	0.0114
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	pg/L	0.03 - 3	0.00145	0.00275
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	pg/L	0.03 - 3	0.00318	0.011
2,2',3-Trichlorobiphenyl	38444-78-9	pg/L	0.03 - 3	0.00194	0.00368
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	pg/L	0.03 - 3	0.00086	0.0129
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	pg/L	0.03 - 3	0.00431	0.0102
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	pg/L	0.03 - 3	0.00277	0.00959
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	pg/L	0.03 - 3	0.00131	0.0271
2,2',4-Trichlorobiphenyl	37680-66-3	pg/L	0.03 - 3	0.00176	0.00333
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	pg/L	0.03 - 3	0.00261	0.00903
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	pg/L	0.03 - 3	0.00241	0.00798
2,2',6-Trichlorobiphenyl	38444-73-4	pg/L	0.03 - 3	0.00244	0.00441
2,2'-Dichlorobiphenyl	13029-08-8	pg/L	0.03 - 3	0.00438	0.0236
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	pg/L	0.03 - 3	0.00317	0.0457
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	pg/L	0.03 - 3	0.00458	0.0357
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	pg/L	0.03 - 3	0.00133	0.0041
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	pg/L	0.03 - 3	0.00128	0.00395
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	pg/L	0.03 - 3	0.00573	0.0296
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	pg/L	0.03 - 3	0.00424	0.0185
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	pg/L	0.03 - 3	0.0551	0.112
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	pg/L	0.03 - 3	0.00596	0.0308
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	pg/L	0.03 - 3	0.00616	0.0318
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	pg/L	0.03 - 3	0.0607	0.123
2,3,3',4',5',6-Hexachlorobiphenyl	74472-45-0	pg/L	0.03 - 3	0.00618	0.032
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	pg/L	0.03 - 3	0.0049	0.0207
2,3,3',4,5-Pentachlorobiphenyl	70424-69-0	pg/L	0.03 - 3	0.017	0.279
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	pg/L	0.03 - 3	0.00433	0.0183
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	pg/L	0.03 - 3	0.0064	0.0328
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	pg/L	0.03 - 3	0.00675	0.0347
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	pg/L	0.03 - 3	0.00667	0.125
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	pg/L	0.03 - 3	0.00361	0.00852
2,3,3',5,6-Pentachlorobiphenyl	74472-36-9	pg/L	0.03 - 3	0.00372	0.0511
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	pg/L	0.03 - 3	0.0061	0.126
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	pg/L	0.03 - 3	0.00625	0.032
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	pg/L	0.03 - 3	0.00573	0.0297
2,3',4,4',5'-Pentachlorobiphenyl	65510-44-3	pg/L	0.03 - 3	0.00475	0.02
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	pg/L	0.03 - 3	0.00453	0.0191
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	pg/L	0.03 - 3	0.00445	0.0193
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	pg/L	0.03 - 3	0.00629	0.0322
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	pg/L	0.03 - 3	0.00649	0.0332
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	pg/L	0.03 - 3	0.00347	0.00819
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	pg/L	0.03 - 3	0.00355	0.00837
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	pg/L	0.03 - 3	0.00577	0.0295
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	pg/L	0.03 - 3	0.00563	0.0288
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	pg/L	0.03 - 3	0.00601	0.0307
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	pg/L	0.03 - 3	0.00205	0.00709

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Table A-7a. Reported Detection Limits - November 2004 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
2,3',4-Trichlorobiphenyl	55712-37-3	pg/L	0.03 - 3	0.00131	0.00728
2,3,4'-Trichlorobiphenyl	38444-85-8	pg/L	0.03 - 3	0.00157	0.00875
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	pg/L	0.03 - 3	0.00583	0.041
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	pg/L	0.03 - 3	0.00196	0.128
2,3',5'-Trichlorobiphenyl	37680-68-5	pg/L	0.03 - 3	0.00151	0.00841
2,3,5-Trichlorobiphenyl	55720-44-0	pg/L	0.03 - 3	0.00149	0.00828
2,3,6-Trichlorobiphenyl	55702-45-9	pg/L	0.03 - 3	0.00125	0.0611
2,3',6-Trichlorobiphenyl	38444-76-7	pg/L	0.03 - 3	0.00123	0.00233
2,3'-Dichlorobiphenyl	25569-80-6	pg/L	0.03 - 3	0.00207	0.0112
2,3-Dichlorobiphenyl	16605-91-7	pg/L	0.03 - 3	0.00425	0.0699
2,4',5-Trichlorobiphenyl	16606-02-3	pg/L	0.03 - 3	0.00141	0.00786
2,4',6-Trichlorobiphenyl	38444-77-8	pg/L	0.03 - 3	0.00141	0.00785
2,4'-Dichlorobiphenyl	34883-43-7	pg/L	0.03 - 3	0.00193	0.0106
2,4-Dichlorobiphenyl	33284-50-3	pg/L	0.03 - 3	0.00204	0.011
2,5-Dichlorobiphenyl	34883-39-1	pg/L	0.03 - 3	0.00206	0.0111
2,6-Dichlorobiphenyl	33146-45-1	pg/L	0.03 - 3	0.00216	0.0112
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	pg/L	0.03 - 3	0.00802	0.312
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	pg/L	0.03 - 3	0.00488	0.0224
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	pg/L	0.03 - 3	0.00609	0.0334
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	pg/L	0.03 - 3	0.0045	0.078
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	pg/L	0.03 - 3	0.00541	0.0277
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	pg/L	0.03 - 3	0.0312	0.0633
3,3',4-Trichlorobiphenyl	37680-69-6	pg/L	0.03 - 3	0.00166	0.00965
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	pg/L	0.03 - 3	0.0403	0.0817
3,3',5-Trichlorobiphenyl	38444-87-0	pg/L	0.03 - 3	0.00148	0.00822
3,3'-Dichlorobiphenyl	2050-67-1	pg/L	0.03 - 3	0.00207	0.0124
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	pg/L	0.03 - 3	0.00609	0.0332
3,4,4'-Trichlorobiphenyl	38444-90-5	pg/L	0.03 - 3	0.00143	0.00838
3,4,5-Trichlorobiphenyl	53555-66-1	pg/L	0.03 - 3	0.00151	0.00842
3,4',5-Trichlorobiphenyl	38444-88-1	pg/L	0.03 - 3	0.00144	0.00804
3,5-Dichlorobiphenyl	34883-41-5	pg/L	0.03 - 3	0.00414	0.0608
3-Chlorobiphenyl	2051-61-8	pg/L	0.03 - 3	0.00358	0.00937
4,4'-Dichlorobiphenyl	2050-68-2	pg/L	0.03 - 3	0.00196	0.0121
PCB012 & 013	PCB012_013	pg/L	0.03 - 3	0.00204	0.0121
PCB018 & 030	PCB018_030	pg/L	0.03 - 3	0.00143	0.0027
PCB020 & 028	PCB020_028	pg/L	0.03 - 3	0.00145	3.17
PCB021 & 033	PCB021_033	pg/L	0.03 - 3	0.00143	0.00796
PCB026 & 029	PCB026_029	pg/L	0.03 - 3	0.00148	0.00827
PCB040 & 041 & 071	PCB040_041_071	pg/L	0.03 - 3	0.00278	0.00962
PCB044 & 047 & 065	PCB044_047_065	pg/L	0.03 - 3	0.00249	0.00862
PCB045 & 051	PCB045_051	pg/L	0.03 - 3	0.00271	0.00941
PCB049 & 069	PCB049_069	pg/L	0.03 - 3	0.00233	0.00809
PCB050 & 053	PCB050_053	pg/L	0.03 - 3	0.00261	0.00906
PCB059 & 062 & 075	PCB059_062_075	pg/L	0.03 - 3	0.00208	0.00721
PCB061 & 070 & 074 & 076	PCB061_070_074_	pg/L	0.03 - 3	0.00603	0.0308
PCB083 & 099	PCB083_099	pg/L	0.03 - 3	0.00489	0.0115
PCB085 & 116 & 117	PCB085_116_117	pg/L	0.03 - 3	0.0041	0.00968
PCB086 & 087 & 097 & 108 & 119 & 125	PCB086_087_097_	pg/L	0.03 - 3	0.00421	0.00993
PCB088 & 091	PCB088_091	pg/L	0.03 - 3	0.00475	0.0112
PCB090 & 101 & 113	PCB090_101_113	pg/L	0.03 - 3	0.00425	0.01
PCB093 & 095 & 098 & 100 & 102	PCB093_095_098_	pg/L	0.03 - 3	0.00459	0.0108
PCB107 & 124	PCB107_124	pg/L	0.03 - 3	0.00469	0.0198
PCB110 & 115	PCB110_115	pg/L	0.03 - 3	0.00359	0.00847
PCB128 & 166	PCB128_166	pg/L	0.03 - 3	0.0072	0.0372
PCB129 & 138 & 160 & 163	PCB129_138_160_	pg/L	0.03 - 3	0.00712	0.0368
PCB134 & 143	PCB134_143	pg/L	0.03 - 3	0.00871	0.045
PCB135 & 151 & 154	PCB135_151_154	pg/L	0.03 - 3	0.00128	0.0244

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Table A-7a. Reported Detection Limits - November 2004 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
PCB139 & 140	PCB139_140	pg/L	0.03 - 3	0.00788	0.0407
PCB147 & 149	PCB147_149	pg/L	0.03 - 3	0.0077	0.0398
PCB153 & 168	PCB153_168	pg/L	0.03 - 3	0.00641	0.0331
PCB156 & 157	PCB156_157	pg/L	0.03 - 3	0.00747	0.0379
PCB171 & 173	PCB171_173	pg/L	0.03 - 3	0.0018	0.00557
PCB180 & 193	PCB180_193	pg/L	0.03 - 3	0.00139	0.0043
PCB183 & 185	PCB183_185	pg/L	0.03 - 3	0.00163	0.00505
PCB197 & 200	PCB197_200	pg/L	0.03 - 3	0.00007	0.00191
PCB198 & 199	PCB198_199	pg/L	0.03 - 3	0.00009	0.00251
PCB Homologs					
Dichlorobiphenyl	25512-42-9	pg/L	NA	0.0077	0.0699
Heptachlorobiphenyl	28655-71-2	pg/L	NA	0.0552	0.112
Hexachlorobiphenyl	26601-64-9	pg/L	NA	0.0607	0.312
Monochlorobiphenyl	27323-18-8	pg/L	NA	0.0036	0.0098
Nonachlorobiphenyl	53742-07-7	pg/L	NA	0.0092	0.046
Octachlorobiphenyl	55722-26-4	pg/L	NA	0.0039	0.052
Pentachlorobiphenyl	25429-29-2	pg/L	NA	0.0201	0.279
Tetrachlorobiphenyl	26914-33-0	pg/L	NA	0.0403	0.128
Trichlorobiphenyl	25323-68-6	pg/L	NA	0.0024	0.0611

Notes:

[1]MRLs were provided by Northeast Analytical Inc (NEA) for peristaltic and XAD PCB Aroclor analyses and for peristaltic pesticide analyses.

[2] Reported detection limits were elevated when an analyte was present in field and/or laboratory QA/QC samples.

NA - not applicable
-- Data not available

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Table A-7b. Reported Detection Limits - March 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limit[2]	
				Minimum	Maximum
Peristaltic Samples					
Conventional Analyses					
Total suspended solids	TSS	mg/L	1	5	5
Total dissolved solids	TDS	mg/L	5	5	5
Total organic carbon	TOC	mg/L	0.07	0.1	0.1
Dissolved organic carbon	DOC	mg/L	0.07	0.1	0.1
Perchlorate	14797-73-0	ug/L	0.5	0.5	0.5
Hardness as $CaCO_3$	HARD	mg/L	0.2	0.2	0.2
Metals					
Aluminum	7429-90-5	ug/L	0.7	2	100
Antimony	7440-36-0	ug/L	0.02	0.02	0.07
Arsenic	7440-38-2	ug/L	NA	0.009	0.009
Cadmium	7440-43-9	ug/L	0.01	0.008	0.02
Chromium	7440-47-3	ug/L	0.06	0.02	0.42
Copper	7440-50-8	ug/L	0.04	0.03	0.54
Lead	7439-92-1	ug/L	0.01	0.009	0.009
Mercury	7439-97-6	ug/L	0.1	0.04	0.08
Nickel	7440-02-0	ug/L	0.04	0.06	0.99
Selenium	7782-49-2	ug/L	0.2	0.2	0.6
Silver	7440-22-4	ug/L	0.01	0.009	0.027
Thallium	7440-28-0	ug/L	NA	--	--
Zinc	7440-66-6	ug/L	0.2	0.3	2.3
Chromium hexavalent	18540-29-9	mg/L	0.003	0.02	0.02
Butyltins					
Butyltin ion	78763-54-9	ug/L	0.0047	0.0017	0.0017
Dibutyltin ion	14488-53-0	ug/L	0.005	0.00055	0.00055
Tributyltin ion	36643-28-4	ug/L	0.0071	0.0006	0.0026
Tetrabutyltin	1461-25-2	ug/L	0.0032	0.0015	0.0015
PCBs Aroclors					
Aroclor 1016	12674-11-2	ug/L	0.0025	0.0025	0.00263
Aroclor 1221	11104-28-2	ug/L	0.0025	0.0025	0.00263
Aroclor 1232	11141-16-5	ug/L	0.0025	0.0025	0.00263
Aroclor 1242	53469-21-9	ug/L	0.0025	0.0025	0.00263
Aroclor 1248	12672-29-6	ug/L	0.00125	0.00125	0.00132
Aroclor 1254	11097-69-1	ug/L	0.00125	0.00125	0.00132
Aroclor 1260	11096-82-5	ug/L	0.0025	0.0025	0.00263
Aroclor 1262	37324-23-5	ug/L	0.0025	0.0025	0.00263
Aroclor 1268	11100-14-4	ug/L	0.0025	0.0025	0.00263
Chlorinated Herbicides					
Dalapon	75-99-0	ug/L	0.06	0.23	0.45
Dicamba	1918-00-9	ug/L	0.071	0.059	0.067
MCPA	94-74-6	ug/L	24	35	40
Dichloroprop	120-36-5	ug/L	0.061	0.058	0.066
2,4-D	94-75-7	ug/L	0.079	0.048	0.21
Silvex	93-72-1	ug/L	0.085	0.048	0.054
2,4,5-T	93-76-5	ug/L	0.017	0.043	0.049
2,4-DB	94-82-6	ug/L	0.13	0.1	0.12
Dinoseb	88-85-7	ug/L	0.091	0.068	0.077
MCPP	93-65-2	ug/L	23	6	120

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Table A-7b. Reported Detection Limits - March 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limit[2]	
				Minimum	Maximum
Chlorinated Pesticides					
alpha-Hexachlorocyclohexane	319-84-6	ug/L	0.0005	0.000481	0.00051
beta-Hexachlorocyclohexane	319-85-7	ug/L	0.0005	0.000481	0.00051
gamma-Hexachlorocyclohexane	58-89-9	ug/L	0.0005	0.000481	0.00051
delta-Hexachlorocyclohexane	319-86-8	ug/L	0.0005	0.000481	0.00051
Heptachlor	76-44-8	ug/L	0.0005	0.000481	0.00051
Aldrin	309-00-2	ug/L	0.0005	0.000481	0.00051
Heptachlor epoxide	1024-57-3	ug/L	0.0005	0.000481	0.00051
trans-Chlordane	5103-74-2	ug/L	0.0005	0.000481	0.00051
cis-Chlordane	5103-71-9	ug/L	0.0005	0.000481	0.00051
alpha-Endosulfan	959-98-8	ug/L	0.0005	0.000481	0.00051
4,4'-DDE	72-55-9	ug/L	0.0005	0.000481	0.00051
Dieldrin	60-57-1	ug/L	0.0005	0.000481	0.00051
Endrin	72-20-8	ug/L	0.0005	0.000481	0.00051
beta-Endosulfan	33213-65-9	ug/L	0.0005	0.000481	0.00051
4,4'-DDD	72-54-8	ug/L	0.0005	0.000481	0.00051
Endrin aldehyde	7421-93-4	ug/L	0.0005	0.000481	0.00051
4,4'-DDT	50-29-3	ug/L	0.0005	0.000481	0.00051
Endosulfan sulfate	1031-07-8	ug/L	0.0005	0.000481	0.00051
Endrin ketone	53494-70-5	ug/L	0.0005	0.000481	0.00051
Methoxychlor	72-43-5	ug/L	0.0005	0.000481	0.00051
Hexachlorobenzene	118-74-1	ug/L	0.0005	0.000481	0.016
Toxaphene	8001-35-2	ug/L	0.025	0.12	0.128
Hexachlorobutadiene	87-68-3	ug/L	0.001	0.000481	0.022
Oxychlordane	27304-13-8	ug/L	0.0005	0.000481	0.00051
cis-Nonachlor	5103-73-1	ug/L	0.0005	0.000481	0.00051
trans-Nonachlor	39765-80-5	ug/L	0.0005	0.000481	0.00051
2,4'-DDD	53-19-0	ug/L	0.0005	0.000481	0.00051
2,4'-DDE	3424-82-6	ug/L	0.0005	0.000481	0.00051
2,4'-DDT	789-02-6	ug/L	0.0005	0.000481	0.00051
Mirex	2385-85-5	ug/L	NA	0.000481	0.00051
Semivolatile Organic Compounds					
1,2-Dichlorobenzene	95-50-1	ug/L	0.014	0.015	0.016
1,3-Dichlorobenzene	541-73-1	ug/L	0.011	0.011	0.012
1,4-Dichlorobenzene	106-46-7	ug/L	0.014	0.014	0.015
1,2,4-Trichlorobenzene	120-82-1	ug/L	0.016	0.016	0.017
Hexachlorobenzene	118-74-1	ug/L	0.014	0.015	0.016
2-Chloronaphthalene	91-58-7	ug/L	0.015	0.016	0.017
Hexachloroethane	67-72-1	ug/L	0.018	0.019	0.02
Hexachlorobutadiene	87-68-3	ug/L	0.019	0.02	0.022
Hexachlorocyclopentadiene	77-47-4	ug/L	0.041	0.041	0.045
Bis(2-chloroisopropyl) ether	39638-32-9	ug/L	0.017	0.017	0.019
Bis(2-chloroethoxy) methane	111-91-1	ug/L	0.012	0.012	0.013
Bis(2-chloroethyl) ether	111-44-4	ug/L	0.014	0.015	0.016
4-Chlorophenyl phenyl ether	7005-72-3	ug/L	0.0084	0.0085	0.0092
4-Bromophenyl phenyl ether	101-55-3	ug/L	0.018	0.018	0.02
3,3'-Dichlorobenzidine	91-94-1	ug/L	0.43	0.43	0.47
4-Chloroaniline	106-47-8	ug/L	0.017	0.018	0.019
Nitrobenzene	98-95-3	ug/L	0.0074	0.0074	0.0081
Aniline	62-53-3	ug/L	NA	1	1.1
2-Nitroaniline	88-74-4	ug/L	0.015	0.015	0.016
3-Nitroaniline	99-09-2	ug/L	0.23	0.23	0.25
4-Nitroaniline	100-01-6	ug/L	0.16	0.17	0.18

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ANC04582
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Table A-7b. Reported Detection Limits - March 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limit[2]	
				Minimum	Maximum
N-Nitrosodimethylamine	62-75-9	ug/L	0.00026	0.42	0.46
N-Nitrosodipropylamine	621-64-7	ug/L	0.032	0.033	0.036
N-Nitrosodiphenylamine	86-30-6	ug/L	0.028	0.028	0.031
2,4-Dinitrotoluene	121-14-2	ug/L	0.019	0.02	0.021
2,6-Dinitrotoluene	606-20-2	ug/L	0.0088	0.0088	0.0096
Carbazole	86-74-8	ug/L	0.013	0.013	0.014
Benzoic acid	65-85-0	ug/L	1.71	1.8	1.9
Benzyl alcohol	100-51-6	ug/L	0.97	0.98	1.1
Dibenzofuran	132-64-9	ug/L	0.013	0.0071	0.015
Isophorone	78-59-1	ug/L	0.0084	0.0085	0.0092
Azobenzene	103-33-3	ug/L	NA	0.012	0.013
Phenols					
Phenol	108-95-2	ug/L	0.020	0.02	0.022
2-Methylphenol	95-48-7	ug/L	0.059	0.06	0.065
4-Methylphenol	106-44-5	ug/L	0.051	0.051	0.056
2,4-Dimethylphenol	105-67-9	ug/L	0.32	0.32	0.35
2-Chlorophenol	95-57-8	ug/L	0.015	0.015	0.016
2,4-Dichlorophenol	120-83-2	ug/L	0.024	0.024	0.026
2,4,5-Trichlorophenol	95-95-4	ug/L	0.025	0.026	0.028
2,4,6-trichlorophenol	88-06-2	ug/L	0.037	0.037	0.04
Pentachlorophenol	87-86-5	ug/L	0.028	0.029	0.061
4-Chloro-3-methylphenol	59-50-7	ug/L	0.029	0.029	0.68
2-Nitrophenol	88-75-5	ug/L	0.014	0.014	0.015
4-Nitrophenol	100-02-7	ug/L	0.54	0.54	0.59
2,4-Dinitrophenol	51-28-5	ug/L	0.53	0.53	0.58
4,6-Dinitro-2-methylphenol	534-52-1	ug/L	0.013	0.013	0.015
Phthalate Esters					
Dimethyl phthalate	131-11-3	ug/L	0.013	0.013	0.014
Diethyl phthalate	84-66-2	ug/L	0.026	0.026	0.086
Dibutyl phthalate	84-74-2	ug/L	0.026	0.027	0.19
Butylbenzyl phthalate	85-68-7	ug/L	0.025	0.026	0.028
Di-n-octyl phthalate	117-84-0	ug/L	0.032	0.032	0.035
Bis(2-ethylhexyl) phthalate	117-81-7	ug/L	0.27	0.27	0.3
Polycyclic Aromatic Hydrocarbons					
Naphthalene	91-20-3	ug/L	0.014	0.0032	0.0064
2-Methylnaphthalene	91-57-6	ug/L	0.012	0.0027	0.0054
Acenaphthylene	208-96-8	ug/L	0.0089	0.0018	0.0061
Acenaphthene	83-32-9	ug/L	0.0097	0.002	0.004
Fluorene	86-73-7	ug/L	0.011	0.0026	0.0052
Phenanthrene	85-01-8	ug/L	0.013	0.0032	0.0067
Anthracene	120-12-7	ug/L	0.010	0.0011	0.0027
Fluoranthene	206-44-0	ug/L	0.013	0.0024	0.019
Pyrene	129-00-0	ug/L	0.012	0.0023	0.028
Benz(a)anthracene	56-55-3	ug/L	0.013	0.0021	0.006
Chrysene	218-01-9	ug/L	0.012	0.0013	0.0093
Benzo(b)fluoranthene	205-99-2	ug/L	0.0098	0.002	0.0078
Benzo(k)fluoranthene	207-08-9	ug/L	0.011	0.0014	0.0068
Benzo(a)pyrene	50-32-8	ug/L	0.0087	0.0016	0.0082
Indeno(1,2,3-cd)pyrene	193-39-5	ug/L	0.0087	0.0021	0.0042
Dibenz(a,h)anthracene	53-70-3	ug/L	0.0079	0.0017	0.0033
Benzo(g,h,i)perylene	191-24-2	ug/L	0.0090	0.0037	0.0074

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Table A-7b. Reported Detection Limits - March 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limit[2]	
				Minimum	Maximum
XAD Column Samples					
PCBs Aroclors					
Aroclor 1016	12674-11-2	pg/L	NA	0.0152	0.0407
Aroclor 1221	11104-28-2	pg/L	NA	0.0082	0.0211
Aroclor 1232	11141-16-5	pg/L	NA	0.0188	0.0445
Aroclor 1242	53469-21-9	pg/L	NA	0.0169	0.0452
Aroclor 1248	12672-29-6	pg/L	NA	0.0392	0.0988
Aroclor 1254	11097-69-1	pg/L	NA	0.0453	0.589
Aroclor 1260	11096-82-5	pg/L	NA	0.0022	0.0025
Aroclor 1262	37324-23-5	pg/L	NA	--	--
Aroclor 1268	11100-14-4	pg/L	NA	--	--
Organochlorine Pesticides					
alpha-Hexachlorocyclohexane	319-84-6	pg/L	0.6-3.0	0.273	0.305
beta-Hexachlorocyclohexane	319-85-7	pg/L	0.6-3.0	0.308	0.345
gamma-Hexachlorocyclohexane	58-89-9	pg/L	0.6-3.0	0.197	0.22
delta-Hexachlorocyclohexane	319-86-8	pg/L	0.6-3.0	1.38	1.55
Heptachlor	76-44-8	pg/L	0.6-3.0	0.168	0.298
Aldrin	309-00-2	pg/L	0.6-3.0	0.168	0.188
Heptachlor epoxide	1024-57-3	pg/L	0.6-3.0	0.761	0.851
trans-Chlordane	5103-74-2	pg/L	0.6-3.0	0.26	0.29
cis-Chlordane	5103-71-9	pg/L	0.6-3.0	0.324	0.362
alpha-Endosulfan	959-98-8	pg/L	0.6-3.0	0.964	8.07
4,4'-DDE	72-55-9	pg/L	0.6-3.0	0.129	1.44
Dieldrin	60-57-1	pg/L	0.6-3.0	0.703	0.787
Endrin	72-20-8	pg/L	0.6-3.0	0.717	2.13
beta-Endosulfan	33213-65-9	pg/L	0.6-3.0	1.11	8.4
4,4'-DDD	72-54-8	pg/L	0.6-3.0	0.153	1.71
Endrin aldehyde	7421-93-4	pg/L	0.6-3.0	0.638	8.27
4,4'-DDT	50-29-3	pg/L	0.6-3.0	0.159	1.78
Endosulfan sulfate	1031-07-8	pg/L	0.6-3.0	5.23	5.84
Endrin ketone	53494-70-5	pg/L	0.6-3.0	6.03	6.75
Methoxychlor	72-43-5	pg/L	0.6-3.0	0.699	1.28
Hexachlorobenzene	118-74-1	pg/L	0.6-3.0	0.154	0.172
Toxaphene	8001-35-2	pg/L	0.6-3.0	--	--
Hexachlorobutadiene	87-68-3	pg/L	0.6-3.0	0.154	1.78
Oxychlordane	27304-13-8	pg/L	0.6-3.0	0.336	0.375
cis-Nonachlor	5103-73-1	pg/L	0.6-3.0	0.211	0.236
trans-Nonachlor	39765-80-5	pg/L	0.6-3.0	0.355	0.397
2,4'-DDD	53-19-0	pg/L	0.6-3.0	0.128	1.44
2,4'-DDE	3424-82-6	pg/L	0.6-3.0	0.155	1.73
2,4'-DDT	789-02-6	pg/L	0.6-3.0	0.149	1.67
Mirex	2385-85-5	pg/L	NA	--	--
Phthalate Esters					
Dimethyl phthalate	131-11-3	pg/L	300 - 3000	262	744
Diethyl phthalate	84-66-2	pg/L	300 - 3000	724	1190
Dibutyl phthalate	84-74-2	pg/L	300 - 3000	1190	1620
Butylbenzyl phthalate	85-68-7	pg/L	300 - 3000	874	1530
Di-n-octyl phthalate	117-84-0	pg/L	300 - 3000	75.9	323
Bis(2-ethylhexyl) phthalate	#N/A	pg/L	300 - 3000	3120	4000

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Table A-7b. Reported Detection Limits - March 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limit[2]	
				Minimum	Maximum
Polycyclic Aromatic Hydrocarbons					
Naphthalene	91-20-3	pg/L	100 - 600	212	18400
2-Methylnaphthalene	91-57-6	pg/L	100 - 600	32.1	36
Acenaphthylene	208-96-8	pg/L	100 - 600	30	534
Acenaphthene	83-32-9	pg/L	100 - 600	30	33.6
Fluorene	86-73-7	pg/L	100 - 600	57.8	64.8
Phenanthrene	85-01-8	pg/L	100 - 600	43.8	49.1
Anthracene	120-12-7	pg/L	100 - 600	42.3	452
Fluoranthene	206-44-0	pg/L	100 - 600	16.4	18.4
Pyrene	129-00-0	pg/L	100 - 600	24.9	28
Benz(a)anthracene	56-55-3	pg/L	100 - 600	9.3	10.4
Chrysene	218-01-9	pg/L	100 - 600	17	19.1
Benzo(b)fluoranthene	205-99-2	pg/L	100 - 600	--	--
Benzo(k)fluoranthene	207-08-9	pg/L	100 - 600	34	38.1
Benzo(a)pyrene	50-32-8	pg/L	100 - 600	32.8	39.3
Indeno(1,2,3-cd)pyrene	193-39-5	pg/L	100 - 600	9.5	65.2
Dibenz(a,h)anthracene	53-70-3	pg/L	100 - 600	29.4	60.2
Benzo(g,h,i)perylene	191-24-2	pg/L	100 - 600	9.6	24.9
Chlorinated Dioxins and Furans					
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/L	0.003 - 0.01	0.00163	0.00481
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/L	0.003 - 0.01	0.0009	0.001
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/L	0.003 - 0.01	0.00137	0.00233
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/L	0.003 - 0.01	0.000921	0.00103
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/L	0.003 - 0.01	0.00117	0.0161
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/L	0.003 - 0.01	0.00229	0.00393
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/L	0.003 - 0.01	0.00238	0.00267
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/L	0.003 - 0.01	0.00263	0.00294
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/L	0.003 - 0.01	0.0024	0.00269
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/L	0.003 - 0.01	0.00143	0.0016
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/L	0.003 - 0.01	0.000557	0.00105
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/L	0.003 - 0.01	0.000865	0.000968
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/L	0.003 - 0.01	0.00208	0.00233
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/L	0.003 - 0.01	0.00132	0.00148
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/L	0.003 - 0.01	0.00243	0.00282
Octachlorodibenzofuran	39001-02-0	pg/L	NA	0.0029	0.00325
Octachlorodibenzo-p-dioxin	3268-87-9	pg/L	NA	0.0109	0.0122
Chlorinated Dioxin/Furan Homologs					
Tetrachlorodibenzofuran homologs	30402-14-3	pg/L	NA	0.000852	0.000954
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/L	NA	0.00148	0.00166
Pentachlorodibenzofuran homologs	30402-15-4	pg/L	NA	0.00105	0.00117
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/L	NA	0.00208	0.00233
Hexachlorodibenzofuran homologs	55684-94-1	pg/L	NA	0.0024	0.00269
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/L	NA	0.00351	0.00393
Heptachlorodibenzofuran homologs	38998-75-3	pg/L	NA	0.0022	0.00246
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/L	NA	0.00208	0.00233
Octachlorodibenzofuran	39001-02-0	pg/L	NA	0.0029	0.00325
Octachlorodibenzo-p-dioxin	3268-87-9	pg/L	NA	0.0109	0.0122
PCB Congeners					
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	pg/L	0.03 - 3	0.00045	0.0385
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	pg/L	0.03 - 3	0.00528	0.0548

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Table A-7b. Reported Detection Limits - March 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limit[2]	
				Minimum	Maximum
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	pg/L	0.03 - 3	0.00045	0.0685
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	pg/L	0.03 - 3	0.00522	0.0317
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	pg/L	0.03 - 3	0.00045	0.12
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	pg/L	0.03 - 3	0.00045	0.0005
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	pg/L	0.03 - 3	0.00045	0.0005
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	pg/L	0.03 - 3	0.00455	0.00926
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	pg/L	0.03 - 3	0.00045	0.0377
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	pg/L	0.03 - 3	0.00045	0.0599
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	pg/L	0.03 - 3	0.00045	0.0005
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	pg/L	0.03 - 3	0.00045	0.0005
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	pg/L	0.03 - 3	0.00045	0.0005
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	pg/L	0.03 - 3	0.00717	0.0164
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	pg/L	0.03 - 3	0.00045	0.0005
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	pg/L	0.03 - 3	0.00667	0.0158
2,2',3,3',4,6-Hexachlorobiphenyl	61798-70-7	pg/L	0.03 - 3	0.00651	0.0154
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	pg/L	0.03 - 3	0.00685	0.0889
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	pg/L	0.03 - 3	0.00045	0.101
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	pg/L	0.03 - 3	0.00045	0.0005
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	pg/L	0.03 - 3	0.00632	0.0149
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	pg/L	0.03 - 3	0.00045	0.0005
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	pg/L	0.03 - 3	0.00045	0.0005
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	pg/L	0.03 - 3	0.00642	0.0833
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	pg/L	0.03 - 3	0.00045	0.166
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	pg/L	0.03 - 3	0.0005	0.0733
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	pg/L	0.03 - 3	0.00045	0.0435
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	pg/L	0.03 - 3	0.00045	0.0779
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	pg/L	0.03 - 3	0.00627	0.0149
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	pg/L	0.03 - 3	0.00045	0.0047
2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	pg/L	0.03 - 3	0.00045	0.0005
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	pg/L	0.03 - 3	0.00638	0.0143
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	pg/L	0.03 - 3	0.00577	0.0137
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	pg/L	0.03 - 3	0.0005	0.0658
2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	pg/L	0.03 - 3	0.00045	0.0057
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	pg/L	0.03 - 3	0.00045	0.0337
2,2',3,4,5,6-Hexachlorobiphenyl	41411-61-4	pg/L	0.03 - 3	0.0321	0.0359
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	pg/L	0.03 - 3	0.00045	0.0005
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	pg/L	0.03 - 3	0.00045	0.0484
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	pg/L	0.03 - 3	0.00045	0.0005
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	pg/L	0.03 - 3	0.00602	0.0782
2,2',3,4'-Tetrachlorobiphenyl	36559-22-5	pg/L	0.03 - 3	0.00231	0.018
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	pg/L	0.03 - 3	0.00591	0.0768
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	pg/L	0.03 - 3	0.00045	0.0005
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	pg/L	0.03 - 3	0.00583	0.0758
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	pg/L	0.03 - 3	0.00255	0.0199
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	pg/L	0.03 - 3	0.00045	0.00164
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	pg/L	0.03 - 3	0.00252	0.0196
2,2',3-Trichlorobiphenyl	38444-78-9	pg/L	0.03 - 3	0.00393	0.00961
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	pg/L	0.03 - 3	0.00045	0.0066
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	pg/L	0.03 - 3	0.00506	0.0657
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	pg/L	0.03 - 3	0.00212	0.0165
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	pg/L	0.03 - 3	0.00045	0.00162
2,2',4-Trichlorobiphenyl	37680-66-3	pg/L	0.03 - 3	0.0032	0.00886
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	pg/L	0.03 - 3	0.00203	0.0158
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	pg/L	0.03 - 3	0.00143	0.0104

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Table A-7b. Reported Detection Limits - March 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limit[2]	
				Minimum	Maximum
2,2',6-Trichlorobiphenyl	38444-73-4	pg/L	0.03 - 3	0.00378	0.0178
2,2'-Dichlorobiphenyl	13029-08-8	pg/L	0.03 - 3	0.00882	0.0253
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	pg/L	0.03 - 3	0.00045	0.0089
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	pg/L	0.03 - 3	0.00049	0.0175
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	pg/L	0.03 - 3	0.00045	0.0005
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	pg/L	0.03 - 3	0.00045	0.0095
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	pg/L	0.03 - 3	0.00456	0.0104
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	pg/L	0.03 - 3	0.00412	0.0145
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	pg/L	0.03 - 3	0.0006	0.0557
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	pg/L	0.03 - 3	0.00493	0.011
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	pg/L	0.03 - 3	0.005	0.0545
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	pg/L	0.03 - 3	0.055	0.0614
2,3,3',4',5',6-Hexachlorobiphenyl	74472-45-0	pg/L	0.03 - 3	0.00498	0.0111
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	pg/L	0.03 - 3	0.00448	0.0157
2,3,3',4,5-Pentachlorobiphenyl	70424-69-0	pg/L	0.03 - 3	0.00553	0.139
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	pg/L	0.03 - 3	0.00369	0.013
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	pg/L	0.03 - 3	0.00684	0.0172
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	pg/L	0.03 - 3	0.00749	0.0348
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	pg/L	0.03 - 3	0.00485	0.0625
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	pg/L	0.03 - 3	0.00547	0.0616
2,3,3',5,6-Pentachlorobiphenyl	74472-36-9	pg/L	0.03 - 3	0.0194	0.0598
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	pg/L	0.03 - 3	0.0084	0.126
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	pg/L	0.03 - 3	0.00658	0.0386
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	pg/L	0.03 - 3	0.00446	0.0105
2,3',4,4',5'-Pentachlorobiphenyl	65510-44-3	pg/L	0.03 - 3	0.00409	0.0127
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	pg/L	0.03 - 3	0.00425	0.0137
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	pg/L	0.03 - 3	0.00387	0.0125
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	pg/L	0.03 - 3	0.00677	0.0171
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	pg/L	0.03 - 3	0.00643	0.0162
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	pg/L	0.03 - 3	0.00559	0.0548
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	pg/L	0.03 - 3	0.008	0.0565
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	pg/L	0.03 - 3	0.00669	0.117
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	pg/L	0.03 - 3	0.00572	0.0144
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	pg/L	0.03 - 3	0.00632	0.0159
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	pg/L	0.03 - 3	0.00162	0.0126
2,3',4-Trichlorobiphenyl	55712-37-3	pg/L	0.03 - 3	0.00316	0.0123
2,3,4'-Trichlorobiphenyl	38444-85-8	pg/L	0.03 - 3	0.00384	0.015
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	pg/L	0.03 - 3	0.00617	0.0156
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	pg/L	0.03 - 3	0.00162	0.0126
2,3',5'-Trichlorobiphenyl	37680-68-5	pg/L	0.03 - 3	0.00366	0.0143
2,3,5-Trichlorobiphenyl	55720-44-0	pg/L	0.03 - 3	0.00367	0.0231
2,3,6-Trichlorobiphenyl	55702-45-9	pg/L	0.03 - 3	0.00362	0.0303
2,3',6-Trichlorobiphenyl	38444-76-7	pg/L	0.03 - 3	0.00212	0.00595
2,3'-Dichlorobiphenyl	25569-80-6	pg/L	0.03 - 3	0.00593	0.0163
2,3-Dichlorobiphenyl	16605-91-7	pg/L	0.03 - 3	0.00642	0.0177
2,4',5-Trichlorobiphenyl	16606-02-3	pg/L	0.03 - 3	0.00335	0.013
2,4',6-Trichlorobiphenyl	38444-77-8	pg/L	0.03 - 3	0.00337	0.0131
2,4'-Dichlorobiphenyl	34883-43-7	pg/L	0.03 - 3	0.00547	0.0151
2,4-Dichlorobiphenyl	33284-50-3	pg/L	0.03 - 3	0.00812	0.16
2,5-Dichlorobiphenyl	34883-39-1	pg/L	0.03 - 3	0.00575	0.0158
2,6-Dichlorobiphenyl	33146-45-1	pg/L	0.03 - 3	0.00568	0.0156
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	pg/L	0.03 - 3	0.0392	0.049
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	pg/L	0.03 - 3	0.00466	0.0376
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	pg/L	0.03 - 3	0.00693	0.0185

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Table A-7b. Reported Detection Limits - March 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limit[2]	
				Minimum	Maximum
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	pg/L	0.03 - 3	0.00412	0.0389
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	pg/L	0.03 - 3	0.00564	0.0142
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	pg/L	0.03 - 3	0.0282	0.0315
3,3',4-Trichlorobiphenyl	37680-69-6	pg/L	0.03 - 3	0.00426	0.0166
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	pg/L	0.03 - 3	0.0156	0.0407
3,3',5-Trichlorobiphenyl	38444-87-0	pg/L	0.03 - 3	0.00384	0.0149
3,3'-Dichlorobiphenyl	2050-67-1	pg/L	0.03 - 3	0.00688	0.0189
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	pg/L	0.03 - 3	0.0111	0.0494
3,4,4'-Trichlorobiphenyl	38444-90-5	pg/L	0.03 - 3	0.0039	0.0148
3,4,5-Trichlorobiphenyl	53555-66-1	pg/L	0.03 - 3	0.00367	0.0143
3,4',5-Trichlorobiphenyl	38444-88-1	pg/L	0.03 - 3	0.0547	0.108
3,5-Dichlorobiphenyl	34883-41-5	pg/L	0.03 - 3	0.0122	0.0623
3-Chlorobiphenyl	2051-61-8	pg/L	0.03 - 3	0.00524	0.0124
4,4'-Dichlorobiphenyl	2050-68-2	pg/L	0.03 - 3	0.00635	0.0188
PCB012 & 013	PCB012_013	pg/L	0.03 - 3	0.00687	0.0189
PCB018 & 030	PCB018_030	pg/L	0.03 - 3	0.00257	0.00733
PCB020 & 028	PCB020_028	pg/L	0.03 - 3	0.00356	0.0139
PCB021 & 033	PCB021_033	pg/L	0.03 - 3	0.0035	0.0136
PCB026 & 029	PCB026_029	pg/L	0.03 - 3	0.0036	0.014
PCB040 & 041 & 071	PCB040_041_071	pg/L	0.03 - 3	0.00219	0.0171
PCB044 & 047 & 065	PCB044_047_065	pg/L	0.03 - 3	0.00194	0.0151
PCB045 & 051	PCB045_051	pg/L	0.03 - 3	0.00205	0.0159
PCB049 & 069	PCB049_069	pg/L	0.03 - 3	0.00189	0.0148
PCB050 & 053	PCB050_053	pg/L	0.03 - 3	0.00197	0.0153
PCB059 & 062 & 075	PCB059_062_075	pg/L	0.03 - 3	0.00162	0.0126
PCB061 & 070 & 074 & 076	PCB061_070_074_	pg/L	0.03 - 3	0.00627	0.0158
PCB083 & 099	PCB083_099	pg/L	0.03 - 3	0.00567	0.0736
PCB085 & 116 & 117	PCB085_116_117	pg/L	0.03 - 3	0.00516	0.067
PCB086 & 087 & 097 & 108 & 119 & 125	PCB086_087_097_	pg/L	0.03 - 3	0.00497	0.0645
PCB088 & 091	PCB088_091	pg/L	0.03 - 3	0.00562	0.073
PCB090 & 101 & 113	PCB090_101_113	pg/L	0.03 - 3	0.00498	0.0647
PCB093 & 095 & 098 & 100 & 102	PCB093_095_098_	pg/L	0.03 - 3	0.00538	0.0699
PCB107 & 124	PCB107_124	pg/L	0.03 - 3	0.00411	0.0141
PCB110 & 115	PCB110_115	pg/L	0.03 - 3	0.00442	0.0574
PCB128 & 166	PCB128_166	pg/L	0.03 - 3	0.00585	0.0131
PCB129 & 138 & 160 & 163	PCB129_138_160_	pg/L	0.03 - 3	0.00564	0.0128
PCB134 & 143	PCB134_143	pg/L	0.03 - 3	0.00631	0.0153
PCB135 & 151 & 154	PCB135_151_154	pg/L	0.03 - 3	0.00045	0.0005
PCB139 & 140	PCB139_140	pg/L	0.03 - 3	0.00577	0.0137
PCB147 & 149	PCB147_149	pg/L	0.03 - 3	0.00563	0.0136
PCB153 & 168	PCB153_168	pg/L	0.03 - 3	0.00482	0.0114
PCB156 & 157	PCB156_157	pg/L	0.03 - 3	0.00608	0.0141
PCB171 & 173	PCB171_173	pg/L	0.03 - 3	0.00045	0.0005
PCB180 & 193	PCB180_193	pg/L	0.03 - 3	0.00045	0.0005
PCB183 & 185	PCB183_185	pg/L	0.03 - 3	0.00045	0.0005
PCB197 & 200	PCB197_200	pg/L	0.03 - 3	0.00045	0.0595
PCB198 & 199	PCB198_199	pg/L	0.03 - 3	0.00045	0.32
PCB Homologs					
Dichlorobiphenyl	25512-42-9	pg/L	NA	0.0088	0.0303
Heptachlorobiphenyl	28655-71-2	pg/L	NA	0.0549	0.0779
Hexachlorobiphenyl	26601-64-9	pg/L	NA	0.055	0.0625
Monochlorobiphenyl	27323-18-8	pg/L	NA	0.0055	0.0131
Nonachlorobiphenyl	53742-07-7	pg/L	NA	0.0053	0.0107

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Table A-7b. Reported Detection Limits - March 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limit[2]	
				Minimum	Maximum
Octachlorobiphenyl	55722-26-4	pg/L	NA	0.0005	1.07
Pentachlorobiphenyl	25429-29-2	pg/L	NA	0.0297	0.139
Tetrachlorobiphenyl	26914-33-0	pg/L	NA	0.0407	0.126
Trichlorobiphenyl	25323-68-6	pg/L	NA	0.0054	0.0303
XAD Filter Samples					
PCBs Aroclors					
Aroclor 1016	12674-11-2	pg/L	60	0.0192	0.0377
Aroclor 1221	11104-28-2	pg/L	60	0.01	0.0195
Aroclor 1232	11141-16-5	pg/L	60	0.0137	0.026
Aroclor 1242	53469-21-9	pg/L	60	0.0214	0.0419
Aroclor 1248	12672-29-6	pg/L	60	0.0539	0.267
Aroclor 1254	11097-69-1	pg/L	60	0.0427	0.845
Aroclor 1260	11096-82-5	pg/L	60	0.0025	0.034
Aroclor 1262	37324-23-5	pg/L	60	--	--
Aroclor 1268	11100-14-4	pg/L	60	--	--
Organochlorine Pesticides					
alpha-Hexachlorocyclohexane	319-84-6	pg/L	0.6-3.0	0.014	0.312
beta-Hexachlorocyclohexane	319-85-7	pg/L	0.6-3.0	0.024	0.352
gamma-Hexachlorocyclohexane	58-89-9	pg/L	0.6-3.0	0.01	0.225
delta-Hexachlorocyclohexane	319-86-8	pg/L	0.6-3.0	1.37	1.58
Heptachlor	76-44-8	pg/L	0.6-3.0	0.025	0.071
Aldrin	309-00-2	pg/L	0.6-3.0	0.167	0.192
Heptachlor epoxide	1024-57-3	pg/L	0.6-3.0	0.754	0.869
trans-Chlordane	5103-74-2	pg/L	0.6-3.0	0.257	0.296
cis-Chlordane	5103-71-9	pg/L	0.6-3.0	0.321	0.37
alpha-Endosulfan	959-98-8	pg/L	0.6-3.0	0.574	1.51
4,4'-DDE	72-55-9	pg/L	0.6-3.0	0.127	1.47
Dieldrin	60-57-1	pg/L	0.6-3.0	0.697	1.95
Endrin	72-20-8	pg/L	0.6-3.0	0.754	0.869
beta-Endosulfan	33213-65-9	pg/L	0.6-3.0	0.909	2.67
4,4'-DDD	72-54-8	pg/L	0.6-3.0	0.151	1.75
Endrin aldehyde	7421-93-4	pg/L	0.6-3.0	2.93	3.38
4,4'-DDT	50-29-3	pg/L	0.6-3.0	0.158	1.82
Endosulfan sulfate	1031-07-8	pg/L	0.6-3.0	1.22	5.91
Endrin ketone	53494-70-5	pg/L	0.6-3.0	2.39	2.75
Methoxychlor	72-43-5	pg/L	0.6-3.0	0.693	2.06
Hexachlorobenzene	118-74-1	pg/L	0.6-3.0	0.153	0.176
Toxaphene	8001-35-2	pg/L	0.6-3.0	--	--
Hexachlorobutadiene	87-68-3	pg/L	0.6-3.0	0.044	0.28
Oxychlordane	27304-13-8	pg/L	0.6-3.0	0.175	0.383
cis-Nonachlor	5103-73-1	pg/L	0.6-3.0	0.209	0.448
trans-Nonachlor	39765-80-5	pg/L	0.6-3.0	0.352	0.405
2,4'-DDD	53-19-0	pg/L	0.6-3.0	0.127	1.47
2,4'-DDE	3424-82-6	pg/L	0.6-3.0	0.153	1.77
2,4'-DDT	789-02-6	pg/L	0.6-3.0	0.148	1.7
Mirex	2385-85-5	pg/L	NA	--	--

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Table A-7b. Reported Detection Limits - March 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limit[2]	
				Minimum	Maximum
Phthalate Esters					
Dimethyl phthalate	131-11-3	pg/L	300 - 3000	32.2	88.9
Diethyl phthalate	84-66-2	pg/L	300 - 3000	82.4	260
Dibutyl phthalate	84-74-2	pg/L	300 - 3000	302	550
Butylbenzyl phthalate	85-68-7	pg/L	300 - 3000	182	651
Di-n-octyl phthalate	117-84-0	pg/L	300 - 3000	114	961
Bis(2-ethylhexyl) phthalate	117-81-7	pg/L	300 - 3000	4910	8550
Polycyclic Aromatic Hydrocarbons					
Naphthalene	91-20-3	pg/L	100 - 600	520	6670
2-Methylnaphthalene	91-57-6	pg/L	100 - 600	35.8	705
Acenaphthylene	208-96-8	pg/L	100 - 600	113	708
Acenaphthene	83-32-9	pg/L	100 - 600	33.4	176
Fluorene	86-73-7	pg/L	100 - 600	64.5	192
Phenanthrene	85-01-8	pg/L	100 - 600	48.9	1240
Anthracene	120-12-7	pg/L	100 - 600	47	338
Fluoranthene	206-44-0	pg/L	100 - 600	18.1	1130
Pyrene	129-00-0	pg/L	100 - 600	27.7	1590
Benz(a)anthracene	56-55-3	pg/L	100 - 600	9.3	247
Chrysene	218-01-9	pg/L	100 - 600	17	19.2
Benzo(b)fluoranthene	205-99-2	pg/L	100 - 600	--	--
Benzo(k)fluoranthene	207-08-9	pg/L	100 - 600	34	173
Benzo(a)pyrene	50-32-8	pg/L	100 - 600	38.7	500
Indeno(1,2,3-cd)pyrene	193-39-5	pg/L	100 - 600	8.6	9.7
Dibenz(a,h)anthracene	53-70-3	pg/L	100 - 600	9.4	246
Benzo(g,h,i)perylene	191-24-2	pg/L	100 - 600	10.4	330
Chlorinated Dioxins and Furans					
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/L	0.003 - 0.01	0.0016	0.00953
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/L	0.003 - 0.01	0.0008	0.0009
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/L	0.003 - 0.01	0.0021	0.0023
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/L	0.003 - 0.01	0.0009	0.001
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/L	0.003 - 0.01	0.001	0.00677
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/L	0.003 - 0.01	0.0035	0.0039
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/L	0.003 - 0.01	0.0024	0.0026
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/L	0.003 - 0.01	0.0026	0.0029
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/L	0.003 - 0.01	0.0024	0.0027
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/L	0.003 - 0.01	0.0014	0.0016
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/L	0.003 - 0.01	0.0009	0.00258
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/L	0.003 - 0.01	0.0009	0.00628
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/L	0.003 - 0.01	0.0021	0.0023
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/L	0.003 - 0.01	0.0013	0.0015
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/L	0.003 - 0.01	0.0022	0.0024
Octachlorodibenzofuran	39001-02-0	pg/L	NA	0.0029	0.0032
Octachlorodibenzo-p-dioxin	3268-87-9	pg/L	NA	0.0108	0.0121
Chlorinated Dioxin/Furan Homologs					
Tetrachlorodibenzofuran homologs	30402-14-3	pg/L	NA	0.0008	0.0009
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/L	NA	0.0015	0.0016
Pentachlorodibenzofuran homologs	30402-15-4	pg/L	NA	0.001	0.0012
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/L	NA	0.0021	0.0023
Hexachlorodibenzofuran homologs	55684-94-1	pg/L	NA	0.0024	0.0027
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/L	NA	0.0035	0.0039

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Table A-7b. Reported Detection Limits - March 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limit[2]	
				Minimum	Maximum
Heptachlorodibenzofuran homologs	38998-75-3	pg/L	NA	0.0022	0.0024
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/L	NA	0.0021	0.0023
Octachlorodibenzofuran	39001-02-0	pg/L	NA	0.0029	0.0032
Octachlorodibenzo-p-dioxin	3268-87-9	pg/L	NA	0.0108	0.0121
PCB Congeners					
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	pg/L	0.03 - 3	0.00045	0.00465
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	pg/L	0.03 - 3	0.00517	0.0466
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	pg/L	0.03 - 3	0.0005	0.0456
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	pg/L	0.03 - 3	0.00454	0.0403
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	pg/L	0.03 - 3	0.00045	0.00224
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	pg/L	0.03 - 3	0.0005	0.0512
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	pg/L	0.03 - 3	0.00049	0.00681
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	pg/L	0.03 - 3	0.00446	0.0405
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	pg/L	0.03 - 3	0.00049	0.00656
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	pg/L	0.03 - 3	0.00045	0.0016
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	pg/L	0.03 - 3	0.00049	0.00637
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	pg/L	0.03 - 3	0.00049	0.00577
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	pg/L	0.03 - 3	0.00049	0.00616
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	pg/L	0.03 - 3	0.0139	0.101
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	pg/L	0.03 - 3	0.00049	0.00417
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	pg/L	0.03 - 3	0.0129	0.0931
2,2',3,3',4,6-Hexachlorobiphenyl	61798-70-7	pg/L	0.03 - 3	0.0126	0.0904
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	pg/L	0.03 - 3	0.00609	0.125
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	pg/L	0.03 - 3	0.00045	0.00153
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	pg/L	0.03 - 3	0.00049	0.00593
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	pg/L	0.03 - 3	0.0122	0.0883
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	pg/L	0.03 - 3	0.00049	0.00406
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	pg/L	0.03 - 3	0.00045	0.00239
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	pg/L	0.03 - 3	0.00571	0.12
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	pg/L	0.03 - 3	0.00045	0.00213
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	pg/L	0.03 - 3	0.00045	0.0137
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	pg/L	0.03 - 3	0.00049	0.0125
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	pg/L	0.03 - 3	0.00049	0.0061
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	pg/L	0.03 - 3	0.0121	0.0931
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	pg/L	0.03 - 3	0.0005	0.0126
2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	pg/L	0.03 - 3	0.00049	0.00585
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	pg/L	0.03 - 3	0.0124	0.0916
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	pg/L	0.03 - 3	0.0112	0.079
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	pg/L	0.03 - 3	0.00129	0.0665
2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	pg/L	0.03 - 3	0.00049	0.0067
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	pg/L	0.03 - 3	0.00045	0.00341
2,2',3,4,5,6-Hexachlorobiphenyl	41411-61-4	pg/L	0.03 - 3	0.0354	0.0948
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	pg/L	0.03 - 3	0.00045	0.0033
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	pg/L	0.03 - 3	0.00045	0.0393
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	pg/L	0.03 - 3	0.00045	0.00235
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	pg/L	0.03 - 3	0.00526	0.11
2,2',3,4'-Tetrachlorobiphenyl	36559-22-5	pg/L	0.03 - 3	0.0005	0.00906
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	pg/L	0.03 - 3	0.00518	0.109
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	pg/L	0.03 - 3	0.00045	0.00228
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	pg/L	0.03 - 3	0.00511	0.106
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	pg/L	0.03 - 3	0.00058	0.0106
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	pg/L	0.03 - 3	0.00045	0.101
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	pg/L	0.03 - 3	0.00053	0.00974

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Table A-7b. Reported Detection Limits - March 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limit[2]	
				Minimum	Maximum
2,2',3-Trichlorobiphenyl	38444-78-9	pg/L	0.03 - 3	0.0034	0.0754
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	pg/L	0.03 - 3	0.00045	0.0062
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	pg/L	0.03 - 3	0.00437	0.0906
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	pg/L	0.03 - 3	0.0005	0.00836
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	pg/L	0.03 - 3	0.00045	0.0166
2,2',4-Trichlorobiphenyl	37680-66-3	pg/L	0.03 - 3	0.00308	0.00608
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	pg/L	0.03 - 3	0.0005	0.00809
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	pg/L	0.03 - 3	0.0005	0.0075
2,2',6-Trichlorobiphenyl	38444-73-4	pg/L	0.03 - 3	0.00391	0.00899
2,2'-Dichlorobiphenyl	13029-08-8	pg/L	0.03 - 3	0.0122	0.0261
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	pg/L	0.03 - 3	0.0005	0.0362
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	pg/L	0.03 - 3	0.00151	0.0519
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	pg/L	0.03 - 3	0.00049	0.00516
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	pg/L	0.03 - 3	0.00049	0.00496
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	pg/L	0.03 - 3	0.00883	0.0649
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	pg/L	0.03 - 3	0.00875	0.055
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	pg/L	0.03 - 3	0.0494	0.0568
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	pg/L	0.03 - 3	0.00955	0.069
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	pg/L	0.03 - 3	0.00967	0.0682
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	pg/L	0.03 - 3	0.0545	0.0648
2,3,3',4',5',6-Hexachlorobiphenyl	74472-45-0	pg/L	0.03 - 3	0.00964	0.068
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	pg/L	0.03 - 3	0.0104	0.0758
2,3,3',4,5-Pentachlorobiphenyl	70424-69-0	pg/L	0.03 - 3	0.0379	0.142
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	pg/L	0.03 - 3	0.00863	0.0497
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	pg/L	0.03 - 3	0.00944	0.0472
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	pg/L	0.03 - 3	0.00937	0.0798
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	pg/L	0.03 - 3	0.0134	0.07
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	pg/L	0.03 - 3	0.00387	0.0808
2,3,3',5,6-Pentachlorobiphenyl	74472-36-9	pg/L	0.03 - 3	0.00576	0.085
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	pg/L	0.03 - 3	0.00886	0.129
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	pg/L	0.03 - 3	0.00907	0.0657
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	pg/L	0.03 - 3	0.00902	0.0653
2,3',4,4',5'-Pentachlorobiphenyl	65510-44-3	pg/L	0.03 - 3	0.0088	0.505
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	pg/L	0.03 - 3	0.00899	0.0526
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	pg/L	0.03 - 3	0.00839	0.0479
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	pg/L	0.03 - 3	0.0094	0.0467
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	pg/L	0.03 - 3	0.00884	0.0438
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	pg/L	0.03 - 3	0.00572	0.08
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	pg/L	0.03 - 3	0.00376	0.0785
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	pg/L	0.03 - 3	0.00837	0.0406
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	pg/L	0.03 - 3	0.00807	0.0386
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	pg/L	0.03 - 3	0.0088	0.0421
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	pg/L	0.03 - 3	0.0005	0.00631
2,3',4-Trichlorobiphenyl	55712-37-3	pg/L	0.03 - 3	0.00232	0.00537
2,3,4'-Trichlorobiphenyl	38444-85-8	pg/L	0.03 - 3	0.00284	0.00663
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	pg/L	0.03 - 3	0.00845	0.0416
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	pg/L	0.03 - 3	0.0005	0.00618
2,3',5'-Trichlorobiphenyl	37680-68-5	pg/L	0.03 - 3	0.0029	0.0096
2,3,5-Trichlorobiphenyl	55720-44-0	pg/L	0.03 - 3	0.0059	0.0234
2,3,6-Trichlorobiphenyl	55702-45-9	pg/L	0.03 - 3	0.00215	0.0303
2,3',6-Trichlorobiphenyl	38444-76-7	pg/L	0.03 - 3	0.00214	0.00422
2,3'-Dichlorobiphenyl	25569-80-6	pg/L	0.03 - 3	0.00771	0.0151
2,3-Dichlorobiphenyl	16605-91-7	pg/L	0.03 - 3	0.0122	0.0356
2,4',5-Trichlorobiphenyl	16606-02-3	pg/L	0.03 - 3	0.00251	0.00579

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Table A-7b. Reported Detection Limits - March 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limit[2]	
				Minimum	Maximum
2,4',6-Trichlorobiphenyl	38444-77-8	pg/L	0.03 - 3	0.00244	0.0058
2,4'-Dichlorobiphenyl	34883-43-7	pg/L	0.03 - 3	0.00712	0.014
2,4-Dichlorobiphenyl	33284-50-3	pg/L	0.03 - 3	0.00757	0.0168
2,5-Dichlorobiphenyl	34883-39-1	pg/L	0.03 - 3	0.00744	0.0146
2,6-Dichlorobiphenyl	33146-45-1	pg/L	0.03 - 3	0.00725	0.0435
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	pg/L	0.03 - 3	0.0391	1.4
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	pg/L	0.03 - 3	0.00981	0.0667
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	pg/L	0.03 - 3	0.00841	0.0443
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	pg/L	0.03 - 3	0.00986	0.0546
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	pg/L	0.03 - 3	0.00806	0.0388
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	pg/L	0.03 - 3	0.0131	0.229
3,3',4-Trichlorobiphenyl	37680-69-6	pg/L	0.03 - 3	0.00314	0.00724
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	pg/L	0.03 - 3	0.0401	0.0434
3,3',5-Trichlorobiphenyl	38444-87-0	pg/L	0.03 - 3	0.00278	0.0137
3,3'-Dichlorobiphenyl	2050-67-1	pg/L	0.03 - 3	0.00898	0.017
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	pg/L	0.03 - 3	0.0446	0.0504
3,4,4'-Trichlorobiphenyl	38444-90-5	pg/L	0.03 - 3	0.00262	0.00615
3,4,5-Trichlorobiphenyl	53555-66-1	pg/L	0.03 - 3	0.00275	0.04
3,4',5-Trichlorobiphenyl	38444-88-1	pg/L	0.03 - 3	0.00273	0.0488
3,5-Dichlorobiphenyl	34883-41-5	pg/L	0.03 - 3	0.00964	0.031
3-Chlorobiphenyl	2051-61-8	pg/L	0.03 - 3	0.00494	0.0756
4,4'-Dichlorobiphenyl	2050-68-2	pg/L	0.03 - 3	0.00889	0.0157
PCB012 & 013	PCB012_013	pg/L	0.03 - 3	0.00879	0.0166
PCB018 & 030	PCB018_030	pg/L	0.03 - 3	0.00243	0.0048
PCB020 & 028	PCB020_028	pg/L	0.03 - 3	0.0026	0.00618
PCB021 & 033	PCB021_033	pg/L	0.03 - 3	0.00259	0.00609
PCB026 & 029	PCB026_029	pg/L	0.03 - 3	0.00266	0.00626
PCB040 & 041 & 071	PCB040_041_071	pg/L	0.03 - 3	0.0005	0.00858
PCB044 & 047 & 065	PCB044_047_065	pg/L	0.03 - 3	0.0005	0.00763
PCB045 & 051	PCB045_051	pg/L	0.03 - 3	0.0005	0.0082
PCB049 & 069	PCB049_069	pg/L	0.03 - 3	0.0005	0.00733
PCB050 & 053	PCB050_053	pg/L	0.03 - 3	0.0005	0.00798
PCB059 & 062 & 075	PCB059_062_075	pg/L	0.03 - 3	0.0005	0.00638
PCB061 & 070 & 074 & 076	PCB061_070_074_	pg/L	0.03 - 3	0.00868	0.0434
PCB083 & 099	PCB083_099	pg/L	0.03 - 3	0.00534	0.106
PCB085 & 116 & 117	PCB085_116_117	pg/L	0.03 - 3	0.00449	0.094
PCB086 & 087 & 097 & 108 & 119 & 125	PCB086_087_097_	pg/L	0.03 - 3	0.00449	0.0932
PCB088 & 091	PCB088_091	pg/L	0.03 - 3	0.00489	0.102
PCB090 & 101 & 113	PCB090_101_113	pg/L	0.03 - 3	0.00444	0.0942
PCB093 & 095 & 098 & 100 & 102	PCB093_095_098_	pg/L	0.03 - 3	0.0047	0.0987
PCB107 & 124	PCB107_124	pg/L	0.03 - 3	0.00935	0.0523
PCB110 & 115	PCB110_115	pg/L	0.03 - 3	0.00391	0.0813
PCB128 & 166	PCB128_166	pg/L	0.03 - 3	0.0113	0.0818
PCB129 & 138 & 160 & 163	PCB129_138_160_	pg/L	0.03 - 3	0.0109	0.167
PCB134 & 143	PCB134_143	pg/L	0.03 - 3	0.0122	0.0894
PCB135 & 151 & 154	PCB135_151_154	pg/L	0.03 - 3	0.00045	0.00327
PCB139 & 140	PCB139_140	pg/L	0.03 - 3	0.0112	0.0812
PCB147 & 149	PCB147_149	pg/L	0.03 - 3	0.0109	0.176

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Table A-7b. Reported Detection Limits - March 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limit[2]	
				Minimum	Maximum
PCB153 & 168	PCB153_168	pg/L	0.03 - 3	0.00932	0.149
PCB156 & 157	PCB156_157	pg/L	0.03 - 3	0.0116	0.0892
PCB171 & 173	PCB171_173	pg/L	0.03 - 3	0.00049	0.00663
PCB180 & 193	PCB180_193	pg/L	0.03 - 3	0.00049	0.00591
PCB183 & 185	PCB183_185	pg/L	0.03 - 3	0.00049	0.00583
PCB197 & 200	PCB197_200	pg/L	0.03 - 3	0.00045	0.00161
PCB198 & 199	PCB198_199	pg/L	0.03 - 3	0.00045	0.00222
PCB Homologs					
Dichlorobiphenyl	25512-42-9	pg/L	NA	0.0194	0.0435
Heptachlorobiphenyl	28655-71-2	pg/L	NA	0.0519	0.0665
Hexachlorobiphenyl	26601-64-9	pg/L	NA	0.0604	1.4
Monochlorobiphenyl	27323-18-8	pg/L	NA	0.004	0.0078
Nonachlorobiphenyl	53742-07-7	pg/L	NA	0.0052	0.0466
Octachlorobiphenyl	55722-26-4	pg/L	NA	0.0005	0.0512
Pentachlorobiphenyl	25429-29-2	pg/L	NA	0.0667	0.142
Tetrachlorobiphenyl	26914-33-0	pg/L	NA	0.0486	0.129
Trichlorobiphenyl	25323-68-6	pg/L	NA	0.0048	0.0303

Notes:

[1] MRLs were provided by Northeast Analytical Inc (NEA) for peristaltic and XAD PCB Aroclor analyses and for peristaltic pesticide analyses.

[2] Reported detection limits were elevated when an analyte was present in field and/or laboratory QA/QC samples.

NA - not applicable
-- Data not available

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Table A-7c. Reported Detection Limits - July 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2] Minimum	Maximum
Peristaltic Samples					
Conventional Analyses					
Total suspended solids	TSS	mg/L	1	5	5
Total dissolved solids	TDS	mg/L	5	5	5
Total organic carbon	TOC	mg/L	0.07	0.1	0.1
Dissolved organic carbon	DOC	mg/L	0.07	0.1	0.1
Perchlorate	14797-73-0	ug/L	0.5	0.4	0.4
Hardness as $CaCO_3$	HARD	mg/L	0.2	--	--
Metals					
Aluminum	7429-90-5	ug/L	0.7	0.9	3.4
Antimony	7440-36-0	ug/L	0.02	0.02	0.02
Arsenic	7440-38-2	ug/L	NA	0.01	0.01
Cadmium	7440-43-9	ug/L	0.01	0.02	0.07
Chromium	7440-47-3	ug/L	0.06	0.02	0.48
Copper	7440-50-8	ug/L	0.04	0.02	0.02
Lead	7439-92-1	ug/L	0.01	0.002	0.04
Mercury	7439-97-6	ug/L	0.1	0.08	0.08
Nickel	7440-02-0	ug/L	0.04	0.03	0.57
Selenium	7782-49-2	ug/L	0.2	0.1	0.1
Silver	7440-22-4	ug/L	0.01	0.005	0.035
Thallium	7440-28-0	ug/L	NA	--	--
Zinc	7440-66-6	ug/L	0.2	0.05	1.63
Chromium hexavalent	18540-29-9	mg/L	0.003	0.02	0.02
Butyltins					
Butyltin ion	78763-54-9	ug/L	0.0047	0.0017	0.04
Dibutyltin ion	14488-53-0	ug/L	0.005	0.00055	0.00062
Tributyltin ion	36643-28-4	ug/L	0.0071	0.0006	0.0013
Tetrabutyltin	1461-25-2	ug/L	0.0032	0.0015	0.0015
PCBs Aroclors					
Aroclor 1016	12674-11-2	ug/L	0.0025	0.0025	0.0025
Aroclor 1221	11104-28-2	ug/L	0.0025	0.0025	0.0025
Aroclor 1232	11141-16-5	ug/L	0.0025	0.0025	0.0025
Aroclor 1242	53469-21-9	ug/L	0.0025	0.0025	0.0025
Aroclor 1248	12672-29-6	ug/L	0.00125	0.00125	0.00125
Aroclor 1254	11097-69-1	ug/L	0.00125	0.00125	0.00125
Aroclor 1260	11096-82-5	ug/L	0.0025	0.0025	0.0025
Aroclor 1262	37324-23-5	ug/L	0.0025	0.0025	0.0025
Aroclor 1268	11100-14-4	ug/L	0.0025	0.0025	0.0025
Chlorinated Herbicides					
Dalapon	75-99-0	ug/L	0.06	0.23	0.25
Dicamba	1918-00-9	ug/L	0.071	0.059	0.065
MCPA	94-74-6	ug/L	24	35	39
Dichloroprop	120-36-5	ug/L	0.061	0.058	0.064
2,4-D	94-75-7	ug/L	0.079	0.048	0.053
Silvex	93-72-1	ug/L	0.085	0.048	0.053
2,4,5-T	93-76-5	ug/L	0.017	0.043	0.047
2,4-DB	94-82-6	ug/L	0.13	0.1	0.22
Dinoseb	88-85-7	ug/L	0.091	0.068	0.074
MCPP	93-65-2	ug/L	23	6	50

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Table A-7c. Reported Detection Limits - July 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
Chlorinated Pesticides					
alpha-Hexachlorocyclohexane	319-84-6	ug/L	0.0005	0.000476	0.000538
beta-Hexachlorocyclohexane	319-85-7	ug/L	0.0005	0.000476	0.000538
gamma-Hexachlorocyclohexane	58-89-9	ug/L	0.0005	0.000476	0.000538
delta-Hexachlorocyclohexane	319-86-8	ug/L	0.0005	0.000476	0.000538
Heptachlor	76-44-8	ug/L	0.0005	0.000476	0.000538
Aldrin	309-00-2	ug/L	0.0005	0.000476	0.000538
Heptachlor epoxide	1024-57-3	ug/L	0.0005	0.000476	0.000538
trans-Chlordane	5103-74-2	ug/L	0.0005	0.000476	0.000538
cis-Chlordane	5103-71-9	ug/L	0.0005	0.000476	0.000538
alpha-Endosulfan	959-98-8	ug/L	0.0005	0.000476	0.000538
4,4'-DDE	72-55-9	ug/L	0.0005	0.000476	0.000538
Dieldrin	60-57-1	ug/L	0.0005	0.000476	0.000538
Endrin	72-20-8	ug/L	0.0005	0.000476	0.000538
beta-Endosulfan	33213-65-9	ug/L	0.0005	0.000476	0.000538
4,4'-DDD	72-54-8	ug/L	0.0005	0.000476	0.000538
Endrin aldehyde	7421-93-4	ug/L	0.0005	0.000476	0.000538
4,4'-DDT	50-29-3	ug/L	0.0005	0.000476	0.000538
Endosulfan sulfate	1031-07-8	ug/L	0.0005	0.000476	0.000538
Endrin ketone	53494-70-5	ug/L	0.0005	0.000476	0.000538
Methoxychlor	72-43-5	ug/L	0.0005	0.000476	0.000538
Hexachlorobenzene	118-74-1	ug/L	0.0005	0.000476	0.016
Toxaphene	8001-35-2	ug/L	0.025	0.119	0.134
Hexachlorobutadiene	87-68-3	ug/L	0.001	0.000476	0.022
Oxychlordane	27304-13-8	ug/L	0.0005	0.000476	0.000538
cis-Nonachlor	5103-73-1	ug/L	0.0005	0.000476	0.000538
trans-Nonachlor	39765-80-5	ug/L	0.0005	0.000476	0.000538
2,4'-DDD	53-19-0	ug/L	0.0005	0.000476	0.000538
2,4'-DDE	3424-82-6	ug/L	0.0005	0.000476	0.000538
2,4'-DDT	789-02-6	ug/L	0.0005	0.000476	0.000538
Mirex	2385-85-5	ug/L	NA	0.000476	0.000538
Semivolatile Organic Compounds					
1,2-Dichlorobenzene	95-50-1	ug/L	0.014	0.015	0.016
1,3-Dichlorobenzene	541-73-1	ug/L	0.011	0.011	0.012
1,4-Dichlorobenzene	106-46-7	ug/L	0.014	0.014	0.015
1,2,4-Trichlorobenzene	120-82-1	ug/L	0.016	0.016	0.018
Hexachlorobenzene	118-74-1	ug/L	0.014	0.015	0.016
2-Chloronaphthalene	91-58-7	ug/L	0.015	0.016	0.017
Hexachloroethane	67-72-1	ug/L	0.018	0.019	0.021
Hexachlorobutadiene	87-68-3	ug/L	0.019	0.02	0.022
Hexachlorocyclopentadiene	77-47-4	ug/L	0.041	0.041	0.046
Bis(2-chloroisopropyl) ether	39638-32-9	ug/L	0.017	0.017	0.019
Bis(2-chloroethoxy) methane	111-91-1	ug/L	0.012	0.012	0.013
Bis(2-chloroethyl) ether	111-44-4	ug/L	0.014	0.015	0.016
4-Chlorophenyl phenyl ether	7005-72-3	ug/L	0.0084	0.0085	0.0095
4-Bromophenyl phenyl ether	101-55-3	ug/L	0.018	0.018	0.02
3,3'-Dichlorobenzidine	91-94-1	ug/L	0.43	0.43	0.49
4-Chloroaniline	106-47-8	ug/L	0.017	0.018	0.02
Nitrobenzene	98-95-3	ug/L	0.0074	0.0074	0.0084
Aniline	62-53-3	ug/L	NA	1	1.2
2-Nitroaniline	88-74-4	ug/L	0.015	0.015	0.017

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Table A-7c. Reported Detection Limits - July 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
3-Nitroaniline	99-09-2	ug/L	0.23	0.23	0.26
4-Nitroaniline	100-01-6	ug/L	0.16	0.17	0.19
N-Nitrosodimethylamine	62-75-9	ug/L	0.00026	0.42	0.48
N-Nitrosodipropylamine	621-64-7	ug/L	0.032	0.033	0.037
N-Nitrosodiphenylamine	86-30-6	ug/L	0.028	0.028	0.032
2,4-Dinitrotoluene	121-14-2	ug/L	0.019	0.02	0.022
2,6-Dinitrotoluene	606-20-2	ug/L	0.0088	0.0088	0.0099
Carbazole	86-74-8	ug/L	0.013	0.013	0.015
Benzoic acid	65-85-0	ug/L	1.71	1.8	2.1
Benzyl alcohol	100-51-6	ug/L	0.97	0.98	1.1
Dibenzofuran	132-64-9	ug/L	0.013	0.0071	0.015
Isophorone	78-59-1	ug/L	0.0084	0.0085	0.0095
Azobenzene	103-33-3	ug/L	NA	0.012	0.014
Phenols					
Phenol	108-95-2	ug/L	0.020	0.02	0.33
2-Methylphenol	95-48-7	ug/L	0.059	0.06	0.067
4-Methylphenol	106-44-5	ug/L	0.051	0.051	0.058
2,4-Dimethylphenol	105-67-9	ug/L	0.32	0.32	0.36
2-Chlorophenol	95-57-8	ug/L	0.015	0.015	0.017
2,4-Dichlorophenol	120-83-2	ug/L	0.024	0.024	0.027
2,4,5-Trichlorophenol	95-95-4	ug/L	0.025	0.026	0.029
2,4,6-trichlorophenol	88-06-2	ug/L	0.037	0.037	0.042
Pentachlorophenol	87-86-5	ug/L	0.028	0.029	0.032
4-Chloro-3-methylphenol	59-50-7	ug/L	0.029	0.03	0.15
2-Nitrophenol	88-75-5	ug/L	0.014	0.014	0.016
4-Nitrophenol	100-02-7	ug/L	0.54	0.54	0.6
2,4-Dinitrophenol	51-28-5	ug/L	0.53	0.53	0.6
4,6-Dinitro-2-methylphenol	534-52-1	ug/L	0.013	0.013	0.015
Phthalate Esters					
Dimethyl phthalate	131-11-3	ug/L	0.013	0.013	0.015
Diethyl phthalate	84-66-2	ug/L	0.026	0.027	0.11
Dibutyl phthalate	84-74-2	ug/L	0.026	0.065	0.2
Butylbenzyl phthalate	85-68-7	ug/L	0.025	0.026	0.053
Di-n-octyl phthalate	117-84-0	ug/L	0.032	0.032	0.036
Bis(2-ethylhexyl) phthalate	117-81-7	ug/L	0.27	0.28	4.1
Polycyclic Aromatic Hydrocarbons					
Naphthalene	91-20-3	ug/L	0.014	0.0032	0.047
2-Methylnaphthalene	91-57-6	ug/L	0.012	0.0027	0.034
Acenaphthylene	208-96-8	ug/L	0.0089	0.0018	0.0038
Acenaphthene	83-32-9	ug/L	0.0097	0.002	0.016
Fluorene	86-73-7	ug/L	0.011	0.0026	0.0052
Phenanthrene	85-01-8	ug/L	0.013	0.0032	0.0075
Anthracene	120-12-7	ug/L	0.010	0.0011	0.0021
Fluoranthene	206-44-0	ug/L	0.013	0.0024	0.0048
Pyrene	129-00-0	ug/L	0.012	0.0023	0.0045
Benz(a)anthracene	56-55-3	ug/L	0.013	0.0021	0.0042
Chrysene	218-01-9	ug/L	0.012	0.0013	0.0025
Benzo(b)fluoranthene	205-99-2	ug/L	0.0098	0.002	0.0039
Benzo(k)fluoranthene	207-08-9	ug/L	0.011	0.0014	0.0027

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Table A-7c. Reported Detection Limits - July 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2] Minimum	Maximum
Benzo(a)pyrene	50-32-8	ug/L	0.0087	0.0016	0.0032
Indeno(1,2,3-cd)pyrene	193-39-5	ug/L	0.0087	0.0021	0.0042
Dibenz(a,h)anthracene	53-70-3	ug/L	0.0079	0.0017	0.0033
Benzo(g,h,i)perylene	191-24-2	ug/L	0.0090	0.0037	0.0074
XAD Column Samples					
PCBs Aroclors					
Aroclor 1016	12674-11-2	pg/L	60	0.101	0.481
Aroclor 1221	11104-28-2	pg/L	60	0.0525	0.249
Aroclor 1232	11141-16-5	pg/L	60	0.0492	0.185
Aroclor 1242	53469-21-9	pg/L	60	0.113	0.534
Aroclor 1248	12672-29-6	pg/L	60	0.124	0.505
Aroclor 1254	11097-69-1	pg/L	60	0.102	0.354
Aroclor 1260	11096-82-5	pg/L	60	0.0016	0.0831
Aroclor 1262	37324-23-5	pg/L	60	--	--
Aroclor 1268	11100-14-4	pg/L	60	--	--
Organochlorine Pesticides					
alpha-Hexachlorocyclohexane	319-84-6	pg/L	0.6-3.0	0.0808	0.272
beta-Hexachlorocyclohexane	319-85-7	pg/L	0.6-3.0	0.137	0.469
gamma-Hexachlorocyclohexane	58-89-9	pg/L	0.6-3.0	0.106	0.357
delta-Hexachlorocyclohexane	319-86-8	pg/L	0.6-3.0	0.258	0.368
Heptachlor	76-44-8	pg/L	0.6-3.0	0.0638	0.286
Aldrin	309-00-2	pg/L	0.6-3.0	0.0849	1.44
Heptachlor epoxide	1024-57-3	pg/L	0.6-3.0	0.0097	0.114
trans-Chlordane	5103-74-2	pg/L	0.6-3.0	0.122	0.378
cis-Chlordane	5103-71-9	pg/L	0.6-3.0	0.141	0.434
alpha-Endosulfan	959-98-8	pg/L	0.6-3.0	1.14	1.98
4,4'-DDE	72-55-9	pg/L	0.6-3.0	0.216	0.846
Dieldrin	60-57-1	pg/L	0.6-3.0	0.398	0.771
Endrin	72-20-8	pg/L	0.6-3.0	0.613	1.32
beta-Endosulfan	33213-65-9	pg/L	0.6-3.0	1.83	3.1
4,4'-DDD	72-54-8	pg/L	0.6-3.0	0.167	0.846
Endrin aldehyde	7421-93-4	pg/L	0.6-3.0	0.14	0.64
4,4'-DDT	50-29-3	pg/L	0.6-3.0	0.25	1.44
Endosulfan sulfate	1031-07-8	pg/L	0.6-3.0	1.8	2.91
Endrin ketone	53494-70-5	pg/L	0.6-3.0	0.18	0.594
Methoxychlor	72-43-5	pg/L	0.6-3.0	1.25	2.29
Hexachlorobenzene	118-74-1	pg/L	0.6-3.0	0.0136	0.0571
Toxaphene	8001-35-2	pg/L	0.6-3.0	--	--
Hexachlorobutadiene	87-68-3	pg/L	0.6-3.0	0.181	2.85
Oxychlordane	27304-13-8	pg/L	0.6-3.0	0.363	1.83
cis-Nonachlor	5103-73-1	pg/L	0.6-3.0	0.212	2.57
trans-Nonachlor	39765-80-5	pg/L	0.6-3.0	0.162	0.477
2,4'-DDD	53-19-0	pg/L	0.6-3.0	0.137	0.695
2,4'-DDE	3424-82-6	pg/L	0.6-3.0	0.161	0.581
2,4'-DDT	789-02-6	pg/L	0.6-3.0	0.199	1.01
Mirex	2385-85-5	pg/L	NA	--	--
Phthalate Esters					
Dimethyl phthalate	131-11-3	pg/L	300 - 3000	534	632
Diethyl phthalate	84-66-2	pg/L	300 - 3000	129	369

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Table A-7c. Reported Detection Limits - July 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2] Minimum	Maximum
Dibutyl phthalate	84-74-2	pg/L	300 - 3000	117	201
Butylbenzyl phthalate	85-68-7	pg/L	300 - 3000	253	515
Di-n-octyl phthalate	117-84-0	pg/L	300 - 3000	57.2	230
Bis(2-ethylhexyl) phthalate	#N/A	pg/L	300 - 3000	104	332
Polycyclic Aromatic Hydrocarbons					
Naphthalene	91-20-3	pg/L	100 - 600	63.8	14600
2-Methylnaphthalene	91-57-6	pg/L	100 - 600	24.9	76.2
Acenaphthylene	208-96-8	pg/L	100 - 600	16	448
Acenaphthene	83-32-9	pg/L	100 - 600	15.6	44.7
Fluorene	86-73-7	pg/L	100 - 600	46.5	166
Phenanthrene	85-01-8	pg/L	100 - 600	45.6	106
Anthracene	120-12-7	pg/L	100 - 600	54.7	720
Fluoranthene	206-44-0	pg/L	100 - 600	26.4	118
Pyrene	129-00-0	pg/L	100 - 600	28.5	126
Benz(a)anthracene	56-55-3	pg/L	100 - 600	9.5	39.4
Chrysene	218-01-9	pg/L	100 - 600	11.1	43.7
Benzo(b)fluoranthene	205-99-2	pg/L	100 - 600	--	--
Benzo(k)fluoranthene	207-08-9	pg/L	100 - 600	21.2	62
Benzo(a)pyrene	50-32-8	pg/L	100 - 600	17.3	190
Indeno(1,2,3-cd)pyrene	193-39-5	pg/L	100 - 600	24.2	92.7
Dibenz(a,h)anthracene	53-70-3	pg/L	100 - 600	24	60
Benzo(g,h,i)perylene	191-24-2	pg/L	100 - 600	21.1	49.2
Chlorinated Dioxins and Furans					
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/L	0.003 - 0.01	0.00216	0.00475
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/L	0.003 - 0.01	0.0005	0.00766
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/L	0.003 - 0.01	0.00237	0.00459
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/L	0.003 - 0.01	0.0009	0.0109
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/L	0.003 - 0.01	0.0009	0.0057
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/L	0.003 - 0.01	0.00443	0.0111
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/L	0.003 - 0.01	0.0006	0.0126
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/L	0.003 - 0.01	0.0006	0.00915
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/L	0.003 - 0.01	0.0008	0.0145
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/L	0.003 - 0.01	0.0008	0.0115
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/L	0.003 - 0.01	0.000788	0.00409
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/L	0.003 - 0.01	0.00174	0.00293
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/L	0.003 - 0.01	0.0008	0.0015
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/L	0.003 - 0.01	0.0008	0.0245
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/L	0.003 - 0.01	0.0008	0.0158
Octachlorodibenzofuran	39001-02-0	pg/L	NA	0.0163	0.0271
Octachlorodibenzo-p-dioxin	3268-87-9	pg/L	NA	0.0022	0.0114
Chlorinated Dioxin/Furan Homologs					
Tetrachlorodibenzofuran homologs	30402-14-3	pg/L	NA	0.0006	0.0013
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/L	NA	0.0005	0.0005
Pentachlorodibenzofuran homologs	30402-15-4	pg/L	NA	0.0005	0.0009
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/L	NA	0.0005	0.0005
Hexachlorodibenzofuran homologs	55684-94-1	pg/L	NA	0.0006	0.0723
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/L	NA	0.0005	0.0012
Heptachlorodibenzofuran homologs	38998-75-3	pg/L	NA	0.0005	0.0008
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/L	NA	0.0005	0.0015

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Table A-7c. Reported Detection Limits - July 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
Octachlorodibenzofuran	39001-02-0	pg/L	NA	0.0163	0.0271
Octachlorodibenzo-p-dioxin	3268-87-9	pg/L	NA	0.0022	0.0114
PCB Congeners					
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	pg/L	0.03 - 3	0.000313	0.0958
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	pg/L	0.03 - 3	0.0128	0.163
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	pg/L	0.03 - 3	0.000459	0.365
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	pg/L	0.03 - 3	0.0105	0.0995
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	pg/L	0.03 - 3	0.000267	0.211
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	pg/L	0.03 - 3	0.000494	0.1
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	pg/L	0.03 - 3	0.000323	1.02
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	pg/L	0.03 - 3	0.0106	0.0822
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	pg/L	0.03 - 3	0.000333	0.268
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	pg/L	0.03 - 3	0.00021	0.0826
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	pg/L	0.03 - 3	0.00033	0.0165
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	pg/L	0.03 - 3	0.00046	0.0903
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	pg/L	0.03 - 3	0.00033	0.0164
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	pg/L	0.03 - 3	0.021	0.506
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	pg/L	0.03 - 3	0.000247	0.0117
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	pg/L	0.03 - 3	0.0199	0.123
2,2',3,3',4,6-Hexachlorobiphenyl	61798-70-7	pg/L	0.03 - 3	0.0194	0.12
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	pg/L	0.03 - 3	0.0145	0.0503
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	pg/L	0.03 - 3	0.000193	0.208
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	pg/L	0.03 - 3	0.000346	0.0165
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	pg/L	0.03 - 3	0.0191	0.125
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	pg/L	0.03 - 3	0.00024	0.0113
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	pg/L	0.03 - 3	0.000158	0.0112
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	pg/L	0.03 - 3	0.0143	0.0495
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	pg/L	0.03 - 3	0.000252	0.304
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	pg/L	0.03 - 3	0.000498	0.0746
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	pg/L	0.03 - 3	0.00188	0.0159
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	pg/L	0.03 - 3	0.00184	0.082
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	pg/L	0.03 - 3	0.0181	0.131
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	pg/L	0.03 - 3	0.00201	0.0318
2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	pg/L	0.03 - 3	0.000292	0.0145
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	pg/L	0.03 - 3	0.0186	0.115
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	pg/L	0.03 - 3	0.0176	0.109
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	pg/L	0.03 - 3	0.00106	0.067
2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	pg/L	0.03 - 3	0.000203	0.0228
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	pg/L	0.03 - 3	0.000218	0.108
2,2',3,4,5,6-Hexachlorobiphenyl	41411-61-4	pg/L	0.03 - 3	0.0206	0.127
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	pg/L	0.03 - 3	0.000214	0.0152
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	pg/L	0.03 - 3	0.000159	0.0493
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	pg/L	0.03 - 3	0.000155	0.011
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	pg/L	0.03 - 3	0.0134	0.0463
2,2',3,4'-Tetrachlorobiphenyl	36559-22-5	pg/L	0.03 - 3	0.00346	0.0291
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	pg/L	0.03 - 3	0.0129	0.0445
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	pg/L	0.03 - 3	0.000151	0.03
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	pg/L	0.03 - 3	0.0128	0.0441
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	pg/L	0.03 - 3	0.00405	0.0305
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	pg/L	0.03 - 3	0.000404	0.285
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	pg/L	0.03 - 3	0.00397	0.0317

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Table A-7c. Reported Detection Limits - July 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
2,2',3-Trichlorobiphenyl	38444-78-9	pg/L	0.03 - 3	0.0112	0.0578
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	pg/L	0.03 - 3	0.000148	0.0628
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	pg/L	0.03 - 3	0.0108	0.0372
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	pg/L	0.03 - 3	0.00319	0.0267
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	pg/L	0.03 - 3	0.0037	0.0517
2,2',4-Trichlorobiphenyl	37680-66-3	pg/L	0.03 - 3	0.00988	0.0511
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	pg/L	0.03 - 3	0.00309	0.0253
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	pg/L	0.03 - 3	0.0025	0.0208
2,2',6-Trichlorobiphenyl	38444-73-4	pg/L	0.03 - 3	0.0143	0.068
2,2'-Dichlorobiphenyl	13029-08-8	pg/L	0.03 - 3	0.0741	0.344
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	pg/L	0.03 - 3	0.000499	0.0822
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	pg/L	0.03 - 3	0.000664	0.0449
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	pg/L	0.03 - 3	0.000228	0.132
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	pg/L	0.03 - 3	0.000231	0.012
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	pg/L	0.03 - 3	0.013	0.0801
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	pg/L	0.03 - 3	0.0138	0.0616
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	pg/L	0.03 - 3	0.000363	0.0567
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	pg/L	0.03 - 3	0.0136	0.0838
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	pg/L	0.03 - 3	0.0255	0.0818
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	pg/L	0.03 - 3	0.0611	0.083
2,3,3',4',5',6-Hexachlorobiphenyl	74472-45-0	pg/L	0.03 - 3	0.0145	0.0894
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	pg/L	0.03 - 3	0.0153	0.067
2,3,3',4,5-Pentachlorobiphenyl	70424-69-0	pg/L	0.03 - 3	0.0344	0.142
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	pg/L	0.03 - 3	0.0132	0.0576
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	pg/L	0.03 - 3	0.0213	0.0881
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	pg/L	0.03 - 3	0.0251	0.204
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	pg/L	0.03 - 3	0.0222	0.0911
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	pg/L	0.03 - 3	0.0093	0.0628
2,3,3',5,6-Pentachlorobiphenyl	74472-36-9	pg/L	0.03 - 3	0.0107	0.0319
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	pg/L	0.03 - 3	0.0223	0.126
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	pg/L	0.03 - 3	0.0224	0.0827
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	pg/L	0.03 - 3	0.0114	0.0721
2,3',4,4',5'-Pentachlorobiphenyl	65510-44-3	pg/L	0.03 - 3	0.0137	0.116
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	pg/L	0.03 - 3	0.0135	0.0779
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	pg/L	0.03 - 3	0.0134	0.0588
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	pg/L	0.03 - 3	0.0211	0.0876
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	pg/L	0.03 - 3	0.0203	0.0828
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	pg/L	0.03 - 3	0.00893	0.0331
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	pg/L	0.03 - 3	0.0108	0.0536
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	pg/L	0.03 - 3	0.0199	0.117
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	pg/L	0.03 - 3	0.0194	0.076
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	pg/L	0.03 - 3	0.0204	0.44
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	pg/L	0.03 - 3	0.00232	0.0198
2,3',4-Trichlorobiphenyl	55712-37-3	pg/L	0.03 - 3	0.011	0.0353
2,3,4'-Trichlorobiphenyl	38444-85-8	pg/L	0.03 - 3	0.0132	0.0421
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	pg/L	0.03 - 3	0.0208	0.0809
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	pg/L	0.03 - 3	0.00232	0.27
2,3',5'-Trichlorobiphenyl	37680-68-5	pg/L	0.03 - 3	0.0128	0.0892
2,3,5-Trichlorobiphenyl	55720-44-0	pg/L	0.03 - 3	0.0127	0.0426
2,3,6-Trichlorobiphenyl	55702-45-9	pg/L	0.03 - 3	0.00889	0.0356
2,3',6-Trichlorobiphenyl	38444-76-7	pg/L	0.03 - 3	0.00681	0.0352
2,3'-Dichlorobiphenyl	25569-80-6	pg/L	0.03 - 3	0.0402	0.191

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ANC04601
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Table A-7c. Reported Detection Limits - July 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
2,3-Dichlorobiphenyl	16605-91-7	pg/L	0.03 - 3	0.0437	0.202
2,4',5-Trichlorobiphenyl	16606-02-3	pg/L	0.03 - 3	0.012	0.0383
2,4',6-Trichlorobiphenyl	38444-77-8	pg/L	0.03 - 3	0.0118	0.0377
2,4'-Dichlorobiphenyl	34883-43-7	pg/L	0.03 - 3	0.0375	0.178
2,4-Dichlorobiphenyl	33284-50-3	pg/L	0.03 - 3	0.0396	0.188
2,5-Dichlorobiphenyl	34883-39-1	pg/L	0.03 - 3	0.0398	0.189
2,6-Dichlorobiphenyl	33146-45-1	pg/L	0.03 - 3	0.043	0.204
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	pg/L	0.03 - 3	0.0395	0.0708
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	pg/L	0.03 - 3	0.014	0.071
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	pg/L	0.03 - 3	0.018	0.0793
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	pg/L	0.03 - 3	0.0384	0.0612
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	pg/L	0.03 - 3	0.0178	0.09
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	pg/L	0.03 - 3	0.0312	0.0893
3,3',4-Trichlorobiphenyl	37680-69-6	pg/L	0.03 - 3	0.0136	0.158
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	pg/L	0.03 - 3	0.0403	0.0812
3,3',5-Trichlorobiphenyl	38444-87-0	pg/L	0.03 - 3	0.0116	0.0705
3,3'-Dichlorobiphenyl	2050-67-1	pg/L	0.03 - 3	0.0415	0.197
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	pg/L	0.03 - 3	0.0475	0.0817
3,4,4'-Trichlorobiphenyl	38444-90-5	pg/L	0.03 - 3	0.0112	0.0371
3,4,5-Trichlorobiphenyl	53555-66-1	pg/L	0.03 - 3	0.0129	0.0411
3,4',5-Trichlorobiphenyl	38444-88-1	pg/L	0.03 - 3	0.0121	0.113
3,5-Dichlorobiphenyl	34883-41-5	pg/L	0.03 - 3	0.0408	0.194
3-Chlorobiphenyl	2051-61-8	pg/L	0.03 - 3	0.015	0.0582
4,4'-Dichlorobiphenyl	2050-68-2	pg/L	0.03 - 3	0.0413	0.198
PCB012 & 013	PCB012_013	pg/L	0.03 - 3	0.0554	0.65
PCB018 & 030	PCB018_030	pg/L	0.03 - 3	0.00785	0.0406
PCB020 & 028	PCB020_028	pg/L	0.03 - 3	0.0123	0.0393
PCB021 & 033	PCB021_033	pg/L	0.03 - 3	0.0127	0.0405
PCB026 & 029	PCB026_029	pg/L	0.03 - 3	0.0127	0.0406
PCB040 & 041 & 071	PCB040_041_071	pg/L	0.03 - 3	0.00326	0.0277
PCB044 & 047 & 065	PCB044_047_065	pg/L	0.03 - 3	0.00296	0.0249
PCB045 & 051	PCB045_051	pg/L	0.03 - 3	0.00332	0.0263
PCB049 & 069	PCB049_069	pg/L	0.03 - 3	0.00277	0.0232
PCB050 & 053	PCB050_053	pg/L	0.03 - 3	0.00324	0.0254
PCB059 & 062 & 075	PCB059_062_075	pg/L	0.03 - 3	0.00242	0.0204
PCB061 & 070 & 074 & 076	PCB061_070_074_	pg/L	0.03 - 3	0.0207	0.0833
PCB083 & 099	PCB083_099	pg/L	0.03 - 3	0.0128	0.0442
PCB085 & 116 & 117	PCB085_116_117	pg/L	0.03 - 3	0.0108	0.0374
PCB086 & 087 & 097 & 108 & 119 & 125	PCB086_087_097_	pg/L	0.03 - 3	0.0111	0.0383
PCB088 & 091	PCB088_091	pg/L	0.03 - 3	0.0122	0.0422
PCB090 & 101 & 113	PCB090_101_113	pg/L	0.03 - 3	0.0112	0.0387
PCB093 & 095 & 098 & 100 & 102	PCB093_095_098_	pg/L	0.03 - 3	0.0119	0.0413
PCB107 & 124	PCB107_124	pg/L	0.03 - 3	0.0145	0.169
PCB110 & 115	PCB110_115	pg/L	0.03 - 3	0.00955	0.033
PCB128 & 166	PCB128_166	pg/L	0.03 - 3	0.0166	0.104
PCB129 & 138 & 160 & 163	PCB129_138_160_	pg/L	0.03 - 3	0.0163	0.101
PCB134 & 143	PCB134_143	pg/L	0.03 - 3	0.0198	0.122
PCB135 & 151 & 154	PCB135_151_154	pg/L	0.03 - 3	0.000209	0.0148
PCB139 & 140	PCB139_140	pg/L	0.03 - 3	0.0179	0.111
PCB147 & 149	PCB147_149	pg/L	0.03 - 3	0.0177	0.109
PCB153 & 168	PCB153_168	pg/L	0.03 - 3	0.0147	0.0906
PCB156 & 157	PCB156_157	pg/L	0.03 - 3	0.0149	0.0939

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ANC04602
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Table A-7c. Reported Detection Limits - July 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2] Minimum	Maximum
PCB171 & 173	PCB171_173	pg/L	0.03 - 3	0.000352	0.0174
PCB180 & 193	PCB180_193	pg/L	0.03 - 3	0.000264	0.0133
PCB183 & 185	PCB183_185	pg/L	0.03 - 3	0.00031	0.0152
PCB197 & 200	PCB197_200	pg/L	0.03 - 3	0.000204	0.0175
PCB198 & 199	PCB198 199	pg/L	0.03 - 3	0.000282	0.0242
PCB Homologs					
Dichlorobiphenyl	25512-42-9	pg/L	NA	0.0741	0.344
Heptachlorobiphenyl	28655-71-2	pg/L	NA	0.0014	0.078
Hexachlorobiphenyl	26601-64-9	pg/L	NA	0.0613	0.129
Monochlorobiphenyl	27323-18-8	pg/L	NA	0.015	0.0582
Nonachlorobiphenyl	53742-07-7	pg/L	NA	0.0128	0.147
Octachlorobiphenyl	55722-26-4	pg/L	NA	0.0005	0.0822
Pentachlorobiphenyl	25429-29-2	pg/L	NA	0.0386	0.142
Tetrachlorobiphenyl	26914-33-0	pg/L	NA	0.0405	0.126
Trichlorobiphenyl	25323-68-6	pg/L	NA	0.0231	0.068
XAD Filter Samples					
PCBs Aroclors					
Aroclor 1016	12674-11-2	pg/L	60	0.0954	0.211
Aroclor 1221	11104-28-2	pg/L	60	0.0495	0.109
Aroclor 1232	11141-16-5	pg/L	60	0.0228	0.0552
Aroclor 1242	53469-21-9	pg/L	60	0.106	0.234
Aroclor 1248	12672-29-6	pg/L	60	0.0478	0.525
Aroclor 1254	11097-69-1	pg/L	60	0.0419	0.687
Aroclor 1260	11096-82-5	pg/L	60	0.002	0.248
Aroclor 1262	37324-23-5	pg/L	60	--	--
Aroclor 1268	11100-14-4	pg/L	60	--	--
Organochlorine Pesticides					
alpha-Hexachlorocyclohexane	319-84-6	pg/L	0.6-3.0	0.0273	0.0483
beta-Hexachlorocyclohexane	319-85-7	pg/L	0.6-3.0	0.0479	0.254
gamma-Hexachlorocyclohexane	58-89-9	pg/L	0.6-3.0	0.0315	0.063
delta-Hexachlorocyclohexane	319-86-8	pg/L	0.6-3.0	0.04	0.136
Heptachlor	76-44-8	pg/L	0.6-3.0	0.014	0.069
Aldrin	309-00-2	pg/L	0.6-3.0	0.0191	0.254
Heptachlor epoxide	1024-57-3	pg/L	0.6-3.0	0.0268	0.207
trans-Chlordane	5103-74-2	pg/L	0.6-3.0	0.0598	0.125
cis-Chlordane	5103-71-9	pg/L	0.6-3.0	0.0675	0.141
alpha-Endosulfan	959-98-8	pg/L	0.6-3.0	0.0372	2.11
4,4'-DDE	72-55-9	pg/L	0.6-3.0	0.0298	0.184
Dieldrin	60-57-1	pg/L	0.6-3.0	0.0119	0.246
Endrin	72-20-8	pg/L	0.6-3.0	0.014	0.265
beta-Endosulfan	33213-65-9	pg/L	0.6-3.0	0.774	1.65
4,4'-DDD	72-54-8	pg/L	0.6-3.0	0.101	4.1
Endrin aldehyde	7421-93-4	pg/L	0.6-3.0	0.0761	2.41
4,4'-DDT	50-29-3	pg/L	0.6-3.0	0.186	5.71
Endosulfan sulfate	1031-07-8	pg/L	0.6-3.0	0.0587	1.14
Endrin ketone	53494-70-5	pg/L	0.6-3.0	0.112	0.216
Methoxychlor	72-43-5	pg/L	0.6-3.0	0.19	1.31
Hexachlorobenzene	118-74-1	pg/L	0.6-3.0	0.001	0.918
Toxaphene	8001-35-2	pg/L	0.6-3.0	--	--

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ANC04603
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Table A-7c. Reported Detection Limits - July 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2] Minimum	Maximum
Hexachlorobutadiene	87-68-3	pg/L	0.6-3.0	0.0181	1.4
Oxychlordane	27304-13-8	pg/L	0.6-3.0	0.145	1.76
cis-Nonachlor	5103-73-1	pg/L	0.6-3.0	0.158	1.41
trans-Nonachlor	39765-80-5	pg/L	0.6-3.0	0.0777	0.136
2,4'-DDD	53-19-0	pg/L	0.6-3.0	0.0822	1.49
2,4'-DDE	3424-82-6	pg/L	0.6-3.0	0.021	0.152
2,4'-DDT	789-02-6	pg/L	0.6-3.0	0.128	2.32
Mirex	2385-85-5	pg/L	NA	--	--
Phthalate Esters					
Dimethyl phthalate	131-11-3	pg/L	300 - 3000	5.1	61.8
Diethyl phthalate	84-66-2	pg/L	300 - 3000	119	131
Dibutyl phthalate	84-74-2	pg/L	300 - 3000	12.6	368
Butylbenzyl phthalate	85-68-7	pg/L	300 - 3000	25.4	894
Di-n-octyl phthalate	117-84-0	pg/L	300 - 3000	102	1020
Bis(2-ethylhexyl) phthalate	117-81-7	pg/L	300 - 3000	8.4	2570
Polycyclic Aromatic Hydrocarbons					
Naphthalene	91-20-3	pg/L	100 - 600	5.6	511
2-Methylnaphthalene	91-57-6	pg/L	100 - 600	52.8	689
Acenaphthylene	208-96-8	pg/L	100 - 600	76.6	1120
Acenaphthene	83-32-9	pg/L	100 - 600	4.5	189
Fluorene	86-73-7	pg/L	100 - 600	12.4	71.6
Phenanthrene	85-01-8	pg/L	100 - 600	7.5	1730
Anthracene	120-12-7	pg/L	100 - 600	8.7	288
Fluoranthene	206-44-0	pg/L	100 - 600	9.3	416
Pyrene	129-00-0	pg/L	100 - 600	11.4	731
Benz(a)anthracene	56-55-3	pg/L	100 - 600	4.5	159
Chrysene	218-01-9	pg/L	100 - 600	10	372
Benzo(b)fluoranthene	205-99-2	pg/L	100 - 600	--	--
Benzo(k)fluoranthene	207-08-9	pg/L	100 - 600	7.6	32.4
Benzo(a)pyrene	50-32-8	pg/L	100 - 600	12.5	232
Indeno(1,2,3-cd)pyrene	193-39-5	pg/L	100 - 600	15.1	48.8
Dibenz(a,h)anthracene	53-70-3	pg/L	100 - 600	32.3	140
Benzo(g,h,i)perylene	191-24-2	pg/L	100 - 600	15.3	43.4
Chlorinated Dioxins and Furans					
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/L	0.003 - 0.01	0.0005	0.014
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/L	0.003 - 0.01	0.0005	0.0005
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/L	0.003 - 0.01	0.0005	0.0008
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/L	0.003 - 0.01	0.0005	0.0017
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/L	0.003 - 0.01	0.0006	0.0069
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/L	0.003 - 0.01	0.0011	0.007
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/L	0.003 - 0.01	0.0011	0.007
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/L	0.003 - 0.01	0.0011	0.007
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/L	0.003 - 0.01	0.0008	0.0028
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/L	0.003 - 0.01	0.0008	0.0028
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/L	0.003 - 0.01	0.0008	0.0028
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/L	0.003 - 0.01	0.0008	0.0028
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/L	0.003 - 0.01	0.0018	0.011
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/L	0.003 - 0.01	0.0011	0.0023
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/L	0.003 - 0.01	0.0011	0.0023

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ANC04604
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Table A-7c. Reported Detection Limits - July 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
Octachlorodibenzofuran	39001-02-0	pg/L	NA	0.0005	0.0031
Octachlorodibenzo-p-dioxin	3268-87-9	pg/L	NA	0.005	0.446
Chlorinated Dioxin/Furan Homologs					
Tetrachlorodibenzofuran homologs	30402-14-3	pg/L	NA	0.0005	0.0025
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/L	NA	0.0005	0.0006
Pentachlorodibenzofuran homologs	30402-15-4	pg/L	NA	0.0005	0.0017
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/L	NA	0.0005	0.0008
Hexachlorodibenzofuran homologs	55684-94-1	pg/L	NA	0.0008	0.0028
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/L	NA	0.0011	0.007
Heptachlorodibenzofuran homologs	38998-75-3	pg/L	NA	0.0011	0.0023
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/L	NA	0.0016	0.0087
Octachlorodibenzofuran	39001-02-0	pg/L	NA	0.0005	0.0031
Octachlorodibenzo-p-dioxin	3268-87-9	pg/L	NA	0.005	0.446
PCB Congeners					
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	pg/L	0.03 - 3	0.000238	0.0235
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	40186-72-9	pg/L	0.03 - 3	0.00944	0.118
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	35694-08-7	pg/L	0.03 - 3	0.00491	0.105
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	52663-79-3	pg/L	0.03 - 3	0.00796	0.102
2,2',3,3',4,4',5,6'-Octachlorobiphenyl	42740-50-1	pg/L	0.03 - 3	0.000298	0.0175
2,2',3,3',4,4',5,6-Octachlorobiphenyl	52663-78-2	pg/L	0.03 - 3	0.00537	0.104
2,2',3,3',4,4',5-Heptachlorobiphenyl	35065-30-6	pg/L	0.03 - 3	0.000399	0.0496
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	52663-77-1	pg/L	0.03 - 3	0.0076	0.0912
2,2',3,3',4,5,5'-Heptachlorobiphenyl	52663-74-8	pg/L	0.03 - 3	0.000454	0.0399
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	40186-71-8	pg/L	0.03 - 3	0.000255	0.0125
2,2',3,3',4,5',6'-Heptachlorobiphenyl	52663-70-4	pg/L	0.03 - 3	0.000428	0.0167
2,2',3,3',4,5',6-Heptachlorobiphenyl	40186-70-7	pg/L	0.03 - 3	0.000398	0.0172
2,2',3,3',4,5,6'-Heptachlorobiphenyl	38411-25-5	pg/L	0.03 - 3	0.000433	0.0161
2,2',3,3',4,5'-Hexachlorobiphenyl	52663-66-8	pg/L	0.03 - 3	0.0106	0.247
2,2',3,3',4,6,6'-Heptachlorobiphenyl	52663-65-7	pg/L	0.03 - 3	0.000275	0.0136
2,2',3,3',4,6'-Hexachlorobiphenyl	38380-05-1	pg/L	0.03 - 3	0.00941	0.216
2,2',3,3',4,6-Hexachlorobiphenyl	61798-70-7	pg/L	0.03 - 3	0.0183	0.208
2,2',3,3',4-Pentachlorobiphenyl	52663-62-4	pg/L	0.03 - 3	0.00598	0.0927
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	2136-99-4	pg/L	0.03 - 3	0.000264	0.012
2,2',3,3',5,5',6-Heptachlorobiphenyl	52663-67-9	pg/L	0.03 - 3	0.000413	0.0191
2,2',3,3',5,5'-Hexachlorobiphenyl	35694-04-3	pg/L	0.03 - 3	0.00919	0.211
2,2',3,3',5,6,6'-Heptachlorobiphenyl	52663-64-6	pg/L	0.03 - 3	0.000258	0.0119
2,2',3,3',6,6'-Hexachlorobiphenyl	38411-22-2	pg/L	0.03 - 3	0.000161	0.00396
2,2',3,3',6-Pentachlorobiphenyl	52663-60-2	pg/L	0.03 - 3	0.00599	0.109
2,2',3,4,4',5,5',6-Octachlorobiphenyl	52663-76-0	pg/L	0.03 - 3	0.000277	0.0161
2,2',3,4,4',5,6,6'-Octachlorobiphenyl	74472-52-9	pg/L	0.03 - 3	0.00126	0.0731
2,2',3,4,4',5,6'-Heptachlorobiphenyl	60145-23-5	pg/L	0.03 - 3	0.000405	0.0881
2,2',3,4,4',5,6-Heptachlorobiphenyl	74472-47-2	pg/L	0.03 - 3	0.000747	0.0497
2,2',3,4,4',5-Hexachlorobiphenyl	35694-06-5	pg/L	0.03 - 3	0.00964	0.832
2,2',3,4,4',6,6'-Heptachlorobiphenyl	74472-48-3	pg/L	0.03 - 3	0.00165	0.012
2,2',3,4',5,5',6-Heptachlorobiphenyl	52663-68-0	pg/L	0.03 - 3	0.000376	0.0158
2,2',3,4,5,5'-Hexachlorobiphenyl	52712-04-6	pg/L	0.03 - 3	0.0094	0.226
2,2',3,4',5,5'-Hexachlorobiphenyl	51908-16-8	pg/L	0.03 - 3	0.0084	0.177
2,2',3,4,5,6,6'-Heptachlorobiphenyl	74472-49-4	pg/L	0.03 - 3	0.0656	0.0665
2,2',3,4',5,6,6'-Heptachlorobiphenyl	74487-85-7	pg/L	0.03 - 3	0.000267	0.0346
2,2',3,4',5,6'-Hexachlorobiphenyl	74472-41-6	pg/L	0.03 - 3	0.000225	0.0982

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Table A-7c. Reported Detection Limits - July 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
2,2',3,4,5,6-Hexachlorobiphenyl	41411-61-4	pg/L	0.03 - 3	0.0214	0.22
2,2',3,4,5',6-Hexachlorobiphenyl	68194-14-9	pg/L	0.03 - 3	0.00022	0.00481
2,2',3,4,6,6'-Hexachlorobiphenyl	74472-40-5	pg/L	0.03 - 3	0.000496	0.189
2,2',3,4',6,6'-Hexachlorobiphenyl	68194-08-1	pg/L	0.03 - 3	0.000156	0.00373
2,2',3,4,6'-Pentachlorobiphenyl	73575-57-2	pg/L	0.03 - 3	0.0055	0.246
2,2',3,4'-Tetrachlorobiphenyl	36559-22-5	pg/L	0.03 - 3	0.004	0.00857
2,2',3,5,5'-Pentachlorobiphenyl	52663-61-3	pg/L	0.03 - 3	0.00522	0.0873
2,2',3,5,6,6'-Hexachlorobiphenyl	68194-09-2	pg/L	0.03 - 3	0.000156	0.0521
2,2',3,5,6'-Pentachlorobiphenyl	73575-55-0	pg/L	0.03 - 3	0.00792	0.101
2,2',3,5-Tetrachlorobiphenyl	70362-46-8	pg/L	0.03 - 3	0.00447	0.00923
2,2',3,6,6'-Pentachlorobiphenyl	73575-54-9	pg/L	0.03 - 3	0.000263	0.00185
2,2',3,6'-Tetrachlorobiphenyl	41464-47-5	pg/L	0.03 - 3	0.00495	0.00885
2,2',3-Trichlorobiphenyl	38444-78-9	pg/L	0.03 - 3	0.00639	0.0108
2,2',4,4',6,6'-Hexachlorobiphenyl	33979-03-2	pg/L	0.03 - 3	0.000184	0.0158
2,2',4,5',6-Pentachlorobiphenyl	60145-21-3	pg/L	0.03 - 3	0.00476	0.0851
2,2',4,5-Tetrachlorobiphenyl	70362-47-9	pg/L	0.03 - 3	0.00382	0.00772
2,2',4,6,6'-Pentachlorobiphenyl	56558-16-8	pg/L	0.03 - 3	0.000267	0.039
2,2',4-Trichlorobiphenyl	37680-66-3	pg/L	0.03 - 3	0.00526	0.00929
2,2',5,5'-Tetrachlorobiphenyl	35693-99-3	pg/L	0.03 - 3	0.0038	0.00735
2,2',6,6'-Tetrachlorobiphenyl	15968-05-5	pg/L	0.03 - 3	0.00283	0.00522
2,2',6-Trichlorobiphenyl	38444-73-4	pg/L	0.03 - 3	0.00776	0.0122
2,2'-Dichlorobiphenyl	13029-08-8	pg/L	0.03 - 3	0.0734	0.237
2,3,3',4,4',5,5',6-Octachlorobiphenyl	74472-53-0	pg/L	0.03 - 3	0.00375	0.0801
2,3,3',4,4',5,5'-Heptachlorobiphenyl	39635-31-9	pg/L	0.03 - 3	0.00453	0.294
2,3,3',4,4',5,6-Heptachlorobiphenyl	41411-64-7	pg/L	0.03 - 3	0.00028	0.0135
2,3,3',4,4',5',6-Heptachlorobiphenyl	74472-50-7	pg/L	0.03 - 3	0.000305	0.0697
2,3,3',4,4',6-Hexachlorobiphenyl	74472-42-7	pg/L	0.03 - 3	0.00718	0.158
2,3,3',4,4'-Pentachlorobiphenyl	32598-14-4	pg/L	0.03 - 3	0.0132	0.135
2,3,3',4,5,5',6-Heptachlorobiphenyl	74472-51-8	pg/L	0.03 - 3	0.000635	0.0562
2,3,3',4,5,5'-Hexachlorobiphenyl	39635-35-3	pg/L	0.03 - 3	0.00771	0.142
2,3,3',4',5,5'-Hexachlorobiphenyl	39635-34-2	pg/L	0.03 - 3	0.00752	0.135
2,3,3',4,5',6-Hexachlorobiphenyl	74472-43-8	pg/L	0.03 - 3	0.0612	0.154
2,3,3',4',5',6-Hexachlorobiphenyl	74472-45-0	pg/L	0.03 - 3	0.0075	0.166
2,3,3',4',5'-Pentachlorobiphenyl	76842-07-4	pg/L	0.03 - 3	0.0139	0.139
2,3,3',4,5-Pentachlorobiphenyl	70424-69-0	pg/L	0.03 - 3	0.125	0.141
2,3,3',4,6-Pentachlorobiphenyl	74472-35-8	pg/L	0.03 - 3	0.0123	0.113
2,3,3',4'-Tetrachlorobiphenyl	41464-43-1	pg/L	0.03 - 3	0.0078	0.0856
2,3,3',4-Tetrachlorobiphenyl	74338-24-2	pg/L	0.03 - 3	0.0177	0.312
2,3,3',5,5',6-Hexachlorobiphenyl	74472-46-1	pg/L	0.03 - 3	0.0166	0.155
2,3,3',5,5'-Pentachlorobiphenyl	39635-32-0	pg/L	0.03 - 3	0.00386	0.0613
2,3,3',5,6-Pentachlorobiphenyl	74472-36-9	pg/L	0.03 - 3	0.0254	0.144
2,3,3',5'-Tetrachlorobiphenyl	41464-49-7	pg/L	0.03 - 3	0.011	0.128
2,3,3',5-Tetrachlorobiphenyl	70424-67-8	pg/L	0.03 - 3	0.00799	0.0877
2,3',4,4',5,5'-Hexachlorobiphenyl	52663-72-6	pg/L	0.03 - 3	0.00695	0.142
2,3',4,4',5'-Pentachlorobiphenyl	65510-44-3	pg/L	0.03 - 3	0.021	0.136
2,3,4,4',5-Pentachlorobiphenyl	74472-37-0	pg/L	0.03 - 3	0.0129	0.129
2,3',4,4',5-Pentachlorobiphenyl	31508-00-6	pg/L	0.03 - 3	0.0128	0.125
2,3,4,4'-Tetrachlorobiphenyl	33025-41-1	pg/L	0.03 - 3	0.00766	0.0841
2,3',4,4'-Tetrachlorobiphenyl	32598-10-0	pg/L	0.03 - 3	0.00784	0.0861
2,3',4,5,5'-Pentachlorobiphenyl	68194-12-7	pg/L	0.03 - 3	0.00519	0.109
2,3',4,5',6-Pentachlorobiphenyl	56558-18-0	pg/L	0.03 - 3	0.00558	0.0648
2,3',4,5'-Tetrachlorobiphenyl	73575-52-7	pg/L	0.03 - 3	0.00734	0.16

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Table A-7c. Reported Detection Limits - July 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
2,3',4,5-Tetrachlorobiphenyl	73575-53-8	pg/L	0.03 - 3	0.0074	0.0813
2,3,4',5-Tetrachlorobiphenyl	74472-34-7	pg/L	0.03 - 3	0.00769	0.0844
2,3,4',6-Tetrachlorobiphenyl	52663-58-8	pg/L	0.03 - 3	0.00273	0.00585
2,3',4-Trichlorobiphenyl	55712-37-3	pg/L	0.03 - 3	0.00327	0.00746
2,3,4'-Trichlorobiphenyl	38444-85-8	pg/L	0.03 - 3	0.00399	0.0086
2,3',5,5'-Tetrachlorobiphenyl	41464-42-0	pg/L	0.03 - 3	0.00764	0.0839
2,3',5',6-Tetrachlorobiphenyl	74338-23-1	pg/L	0.03 - 3	0.00299	0.082
2,3',5'-Trichlorobiphenyl	37680-68-5	pg/L	0.03 - 3	0.0041	0.00966
2,3,5-Trichlorobiphenyl	55720-44-0	pg/L	0.03 - 3	0.00377	0.0234
2,3,6-Trichlorobiphenyl	55702-45-9	pg/L	0.03 - 3	0.00365	0.0305
2,3',6-Trichlorobiphenyl	38444-76-7	pg/L	0.03 - 3	0.00359	0.00631
2,3'-Dichlorobiphenyl	25569-80-6	pg/L	0.03 - 3	0.0376	0.181
2,3-Dichlorobiphenyl	16605-91-7	pg/L	0.03 - 3	0.0386	0.0852
2,4',5-Trichlorobiphenyl	16606-02-3	pg/L	0.03 - 3	0.00356	0.00808
2,4',6-Trichlorobiphenyl	38444-77-8	pg/L	0.03 - 3	0.00352	0.00803
2,4'-Dichlorobiphenyl	34883-43-7	pg/L	0.03 - 3	0.0398	0.138
2,4-Dichlorobiphenyl	33284-50-3	pg/L	0.03 - 3	0.0407	0.685
2,5-Dichlorobiphenyl	34883-39-1	pg/L	0.03 - 3	0.0361	0.0821
2,6-Dichlorobiphenyl	33146-45-1	pg/L	0.03 - 3	0.0411	0.086
3,3',4,4',5,5'-Hexachlorobiphenyl	32774-16-6	pg/L	0.03 - 3	0.0231	0.786
3,3',4,4',5-Pentachlorobiphenyl	57465-28-8	pg/L	0.03 - 3	0.021	0.143
3,3',4,4'-Tetrachlorobiphenyl	32598-13-3	pg/L	0.03 - 3	0.0076	0.0819
3,3',4,5,5'-Pentachlorobiphenyl	39635-33-1	pg/L	0.03 - 3	0.0144	0.138
3,3',4,5'-Tetrachlorobiphenyl	41464-48-6	pg/L	0.03 - 3	0.00635	0.0816
3,3',4,5-Tetrachlorobiphenyl	70362-49-1	pg/L	0.03 - 3	0.0315	0.0831
3,3',4-Trichlorobiphenyl	37680-69-6	pg/L	0.03 - 3	0.00605	0.0368
3,3',5,5'-Tetrachlorobiphenyl	33284-52-5	pg/L	0.03 - 3	0.0406	0.0765
3,3',5-Trichlorobiphenyl	38444-87-0	pg/L	0.03 - 3	0.00372	0.0296
3,3'-Dichlorobiphenyl	2050-67-1	pg/L	0.03 - 3	0.039	0.0836
3,4,4',5-Tetrachlorobiphenyl	70362-50-4	pg/L	0.03 - 3	0.00942	0.0825
3,4,4'-Trichlorobiphenyl	38444-90-5	pg/L	0.03 - 3	0.00406	0.00791
3,4,5-Trichlorobiphenyl	53555-66-1	pg/L	0.03 - 3	0.00578	0.0239
3,4',5-Trichlorobiphenyl	38444-88-1	pg/L	0.03 - 3	0.00528	0.0156
3,5-Dichlorobiphenyl	34883-41-5	pg/L	0.03 - 3	0.0384	0.0816
3-Chlorobiphenyl	2051-61-8	pg/L	0.03 - 3	0.00844	0.0471
4,4'-Dichlorobiphenyl	2050-68-2	pg/L	0.03 - 3	0.0401	0.0909
PCB012 & 013	PCB012_013	pg/L	0.03 - 3	0.0446	0.0866
PCB018 & 030	PCB018_030	pg/L	0.03 - 3	0.00424	0.00749
PCB020 & 028	PCB020_028	pg/L	0.03 - 3	0.00372	0.00829
PCB021 & 033	PCB021_033	pg/L	0.03 - 3	0.00377	0.00823
PCB026 & 029	PCB026_029	pg/L	0.03 - 3	0.00375	0.00844
PCB040 & 041 & 071	PCB040_041_071	pg/L	0.03 - 3	0.00374	0.00813
PCB044 & 047 & 065	PCB044_047_065	pg/L	0.03 - 3	0.00355	0.00728
PCB045 & 051	PCB045_051	pg/L	0.03 - 3	0.00415	0.00742
PCB049 & 069	PCB049_069	pg/L	0.03 - 3	0.00336	0.0067
PCB050 & 053	PCB050_053	pg/L	0.03 - 3	0.00404	0.00703
PCB059 & 062 & 075	PCB059_062_075	pg/L	0.03 - 3	0.00289	0.00604
PCB061 & 070 & 074 & 076	PCB061_070_074_	pg/L	0.03 - 3	0.00777	0.0854
PCB083 & 099	PCB083_099	pg/L	0.03 - 3	0.00523	0.0859
PCB085 & 116 & 117	PCB085_116_117	pg/L	0.03 - 3	0.00432	0.07
PCB086 & 087 & 097 & 108 & 119 & 125	PCB086_087_097_	pg/L	0.03 - 3	0.00449	0.0751
PCB088 & 091	PCB088_091	pg/L	0.03 - 3	0.00517	0.0936

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Table A-7c. Reported Detection Limits - July 2005 Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL[1]	Reported Detection Limits[2]	
				Minimum	Maximum
PCB090 & 101 & 113	PCB090_101_113	pg/L	0.03 - 3	0.00458	0.0756
PCB093 & 095 & 098 & 100 & 102	PCB093_095_098_	pg/L	0.03 - 3	0.00511	0.0928
PCB107 & 124	PCB107_124	pg/L	0.03 - 3	0.0128	0.21
PCB110 & 115	PCB110_115	pg/L	0.03 - 3	0.00392	0.061
PCB128 & 166	PCB128 166	pg/L	0.03 - 3	0.00923	0.185
PCB129 & 138 & 160 & 163	PCB129_138_160_	pg/L	0.03 - 3	0.00882	0.197
PCB134 & 143	PCB134_143	pg/L	0.03 - 3	0.00915	0.216
PCB135 & 151 & 154	PCB135_151_154	pg/L	0.03 - 3	0.000215	0.00495
PCB139 & 140	PCB139_140	pg/L	0.03 - 3	0.00824	0.185
PCB147 & 149	PCB147_149	pg/L	0.03 - 3	0.00805	0.193
PCB153 & 168	PCB153_168	pg/L	0.03 - 3	0.00727	0.171
PCB156 & 157	PCB156_157	pg/L	0.03 - 3	0.00865	0.179
PCB171 & 173	PCB171_173	pg/L	0.03 - 3	0.000449	0.0171
PCB180 & 193	PCB180_193	pg/L	0.03 - 3	0.000344	0.0384
PCB183 & 185	PCB183_185	pg/L	0.03 - 3	0.000394	0.0162
PCB197 & 200	PCB197_200	pg/L	0.03 - 3	0.000251	0.0348
PCB198 & 199	PCB198_199	pg/L	0.03 - 3	0.000306	0.0183
PCB Homologs					
Dichlorobiphenyl	25512-42-9	pg/L	NA	0.0734	0.685
Heptachlorobiphenyl	28655-71-2	pg/L	NA	0.0656	0.0697
Hexachlorobiphenyl	26601-64-9	pg/L	NA	0.0612	0.786
Monochlorobiphenyl	27323-18-8	pg/L	NA	0.0067	0.0162
Nonachlorobiphenyl	53742-07-7	pg/L	NA	0.0094	0.118
Octachlorobiphenyl	55722-26-4	pg/L	NA	0.0054	0.105
Pentachlorobiphenyl	25429-29-2	pg/L	NA	0.139	0.143
Tetrachlorobiphenyl	26914-33-0	pg/L	NA	0.0406	0.128
Trichlorobiphenyl	25323-68-6	pg/L	NA	0.0113	0.0305

Notes:

[1] MRLs were provided by Northeast Analytical Inc (NEA) for peristaltic and XAD PCB Aroclor analyses and for peristaltic pesticide analyses.

[2] Reported detection limits were elevated when an analyte was present in field and/or laboratory QA/QC samples.

NA - not applicable
-- Data not available

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Table A-8a. Results for November 2004 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
Peristaltic Samples				
Conventionals				
Total dissolved solids	mg/L	2	2	17
Total suspended solids	mg/L	2	1	NA
Perchlorate	ug/L	1	1	NA
Dissolved organic carbon	mg/L	2	2	12
Total organic carbon	mg/L	2	2	5
Hardness as $CaCO_3$	mg/L	2	2	5
Butyltins				
Butyltin ion	ug/L	2	0	--
Dibutyltin ion	ug/L	2	0	--
Tributyltin ion	ug/L	2	0	--
Tetrabutyltin ion	ug/L	2	0	--
Total Metals				
Aluminum	ug/L	--	--	--
Antimony	ug/L	2	0	--
Arsenic	ug/L	2	2	6
Cadmium	ug/L	2	2	NA
Chromium	ug/L	2	2	NA
Copper	ug/L	2	2	8
Lead	ug/L	2	2	NA
Mercury	ug/L	2	0	--
Nickel	ug/L	2	2	7
Selenium	ug/L	2	1	NA
Silver	ug/L	2	0	--
Thallium	ug/L	2	1	NA
Zinc	ug/L	2	2	NA
Hexavalent chromium	mg/L	1	0	--
Dissolved Metals				
Aluminum	ug/L	--	--	--
Antimony	ug/L	2	0	--
Arsenic	ug/L	2	2	8
Cadmium	ug/L	2	0	--
Chromium	ug/L	2	0	--
Copper	ug/L	2	1	8
Lead	ug/L	2	0	--
Mercury	ug/L	2	0	--
Nickel	ug/L	2	1	7
Selenium	ug/L	2	0	--
Silver	ug/L	2	0	--
Thallium	ug/L	2	0	--
Zinc	ug/L	2	0	--
Chlorinated Herbicides				
2,4,5-T	ug/L	2	0	--
2,4-D	ug/L	2	0	--
2,4-DB	ug/L	2	0	--
Dalapon	ug/L	2	0	--
Dicamba	ug/L	2	0	--

ANC04609
BZTO104(e)004609

Table A-8a. Results for November 2004 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
Dichloroprop	ug/L	2	0	--
Dinoseb	ug/L	2	0	--
MCPA	ug/L	2	0	--
MCPP	ug/L	2	0	--
Silvex	ug/L	2	0	--
Semivolatile Organic Compounds				
1,2,4-Trichlorobenzene	ug/L	2	0	--
1,2-Dichlorobenzene	ug/L	2	0	--
1,3-Dichlorobenzene	ug/L	2	0	--
1,4-Dichlorobenzene	ug/L	2	0	--
2,4-Dinitrotoluene	ug/L	2	0	--
2,6-Dinitrotoluene	ug/L	2	0	--
2-Chloronaphthalene	ug/L	2	0	--
2-Nitroaniline	ug/L	2	0	--
3,3'-Dichlorobenzidine	ug/L	2	0	--
3-Nitroaniline	ug/L	2	0	--
4-Bromophenyl phenyl ether	ug/L	2	0	--
4-Chloroaniline	ug/L	2	0	--
4-Chlorophenyl phenyl ether	ug/L	2	0	--
4-Nitroaniline	ug/L	2	0	--
Aniline	ug/L	2	0	--
Azobenzene	ug/L	2	0	--
Benzoic acid	ug/L	2	0	--
Benzyl alcohol	ug/L	2	0	--
Bis(2-chloroethoxy) methane	ug/L	2	0	--
Bis(2-chloroethyl) ether	ug/L	2	0	--
Bis(2-chloroisopropyl) ether	ug/L	2	0	--
Carbazole	ug/L	2	0	--
Hexachlorobenzene	ug/L	2	0	--
Hexachlorobutadiene	ug/L	2	0	--
Hexachlorocyclopentadiene	ug/L	2	0	--
Hexachloroethane	ug/L	2	0	--
Isophorone	ug/L	2	0	--
Nitrobenzene	ug/L	2	0	--
N-Nitrosodimethylamine	ug/L	2	0	--
N-Nitrosodiphenylamine	ug/L	2	0	--
N-Nitrosodipropylamine	ug/L	2	0	--
Phenols				
2,4,5-Trichlorophenol	ug/L	2	0	--
2,4,6-Trichlorophenol	ug/L	2	0	--
2,4-Dichlorophenol	ug/L	2	0	--
2,4-Dimethylphenol	ug/L	2	0	--
2,4-Dinitrophenol	ug/L	2	0	--
2-Chlorophenol	ug/L	2	0	--
2-Methylphenol	ug/L	2	0	--
2-Nitrophenol	ug/L	2	0	--
4,6-Dinitro-2-methylphenol	ug/L	2	0	--
4-Chloro-3-methylphenol	ug/L	2	0	--
4-Methylphenol	ug/L	2	0	--
4-Nitrophenol	ug/L	2	0	--
Pentachlorophenol	ug/L	2	0	--

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ANC04610
BZTO104(e)004610

Table A-8a. Results for November 2004 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
Phenol	ug/L	2	1	NA
Phthalate Esters				
Bis(2-ethylhexyl) phthalate	ug/L	2	0	--
Butylbenzyl phthalate	ug/L	2	0	--
Dibutyl phthalate	ug/L	2	0	--
Diethyl phthalate	ug/L	2	0	--
Dimethyl phthalate	ug/L	2	0	--
Di-n-octyl phthalate	ug/L	2	0	--
Polycyclic Aromatic Hydrocarbons				
2-Methylnaphthalene	ug/L	2	0	--
Acenaphthene	ug/L	2	0	--
Acenaphthylene	ug/L	2	0	--
Anthracene	ug/L	2	0	--
Benz(a)anthracene	ug/L	2	0	--
Benzo(a)pyrene	ug/L	2	0	--
Benzo(b)fluoranthene	ug/L	2	0	--
Benzo(g,h,i)perylene	ug/L	2	0	--
Benzo(k)fluoranthene	ug/L	2	0	--
Chrysene	ug/L	2	0	--
Dibenz(a,h)anthracene	ug/L	2	0	--
Dibenzofuran	ug/L	2	0	--
Fluoranthene	ug/L	2	0	--
Fluorene	ug/L	2	0	--
Indeno(1,2,3-cd)pyrene	ug/L	2	0	--
Naphthalene	ug/L	2	0	--
Phenanthrene	ug/L	2	0	--
Pyrene	ug/L	2	0	--
Organochlorine Pesticides				
2,4'-DDD	ug/L	1	0	--
2,4'-DDE	ug/L	1	0	--
2,4'-DDT	ug/L	1	0	--
4,4'-DDD	ug/L	1	0	--
4,4'-DDE	ug/L	1	0	--
4,4'-DDT	ug/L	1	0	--
Aldrin	ug/L	1	0	--
alpha-Endosulfan	ug/L	1	0	--
alpha-Hexachlorocyclohexane	ug/L	1	0	--
beta-Endosulfan	ug/L	1	0	--
beta-Hexachlorocyclohexane	ug/L	1	0	--
cis-Chlordane	ug/L	1	0	--
cis-Nonachlor	ug/L	1	0	--
delta-Hexachlorocyclohexane	ug/L	1	0	--
Dieldrin	ug/L	1	0	--
Endosulfan sulfate	ug/L	1	0	--
Endrin	ug/L	1	0	--
Endrin aldehyde	ug/L	1	0	--
Endrin ketone	ug/L	1	0	--
gamma-Hexachlorocyclohexane	ug/L	1	0	--
Heptachlor	ug/L	1	0	--
Heptachlor epoxide	ug/L	1	0	--

Table A-8a. Results for November 2004 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
Hexachlorobenzene	ug/L	1	0	--
Hexachlorobutadiene	ug/L	1	0	--
Hexachloroethane	ug/L	1	0	--
Methoxychlor	ug/L	1	1	NA
Mirex	ug/L	1	0	--
Oxychlordane	ug/L	1	0	--
Toxaphene	ug/L	1	0	--
trans-Chlordane	ug/L	1	0	--
trans-Nonachlor	ug/L	1	0	--
PCB Aroclors				
Aroclor 1016	ug/L	1	0	--
Aroclor 1221	ug/L	1	0	--
Aroclor 1232	ug/L	1	0	--
Aroclor 1242	ug/L	1	0	--
Aroclor 1248	ug/L	1	0	--
Aroclor 1254	ug/L	1	0	--
Aroclor 1260	ug/L	1	0	--
Aroclor 1262	ug/L	1	0	--
Aroclor 1268	ug/L	1	0	--
XAD Column Samples				
PCB Congeners				
2-Chlorobiphenyl (PCB 1)	pg/L	1	1	9
3-Chlorobiphenyl (PCB 2)	pg/L	1	1	18
4-Chlorobiphenyl (PCB 3)	pg/L	1	1	13
2,2'-Dichlorobiphenyl (PCB 4)	pg/L	1	1	7
2,3-Dichlorobiphenyl (PCB 5)	pg/L	1	1	14
2,3'-Dichlorobiphenyl (PCB 6)	pg/L	1	1	6
2,4-Dichlorobiphenyl (PCB 7)	pg/L	1	1	2
2,4'-Dichlorobiphenyl (PCB 8)	pg/L	1	1	10
2,5-Dichlorobiphenyl (PCB 9)	pg/L	1	1	8
2,6-Dichlorobiphenyl (PCB 10)	pg/L	1	1	5
3,3'-Dichlorobiphenyl (PCB 11)	pg/L	1	1	20
3,5-Dichlorobiphenyl (PCB 14)	pg/L	1	0	--
4,4'-Dichlorobiphenyl (PCB 15)	pg/L	1	1	10
2,2',3-Trichlorobiphenyl (PCB 16)	pg/L	1	1	17
2,2',4-Trichlorobiphenyl (PCB 17)	pg/L	1	1	10
2,2',6-Trichlorobiphenyl (PCB 19)	pg/L	1	1	9
2,3,4'-Trichlorobiphenyl (PCB 22)	pg/L	1	1	13
2,3,5-Trichlorobiphenyl (PCB 23)	pg/L	1	1	0.5
2,3,6-Trichlorobiphenyl (PCB 24)	pg/L	1	0	--
2,3',4-Trichlorobiphenyl (PCB 25)	pg/L	1	1	14
2,3',6-Trichlorobiphenyl (PCB 27)	pg/L	1	1	10
2,4',5-Trichlorobiphenyl (PCB 31)	pg/L	1	1	14
2,4',6-Trichlorobiphenyl (PCB 32)	pg/L	1	1	2
2,3',5'-Trichlorobiphenyl (PCB 34)	pg/L	1	1	13
3,3',4-Trichlorobiphenyl (PCB 35)	pg/L	1	1	38
3,3',5-Trichlorobiphenyl (PCB 36)	pg/L	1	0	--
3,4,4'-Trichlorobiphenyl (PCB 37)	pg/L	1	1	15
3,4,5-Trichlorobiphenyl (PCB 38)	pg/L	1	1	21
3,4',5-Trichlorobiphenyl (PCB 39)	pg/L	1	1	4
2,2',3,4'-Tetrachlorobiphenyl (PCB 42)	pg/L	1	1	13

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ANC04612
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Table A-8a. Results for November 2004 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
2,2',3,5-Tetrachlorobiphenyl (PCB 43)	pg/L	1	1	19
2,2',3,6'-Tetrachlorobiphenyl (PCB 46)	pg/L	1	1	12
2,2',4,5-Tetrachlorobiphenyl (PCB 48)	pg/L	1	1	13
2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	pg/L	1	1	12
2,2',6,6'-Tetrachlorobiphenyl (PCB 54)	pg/L	1	1	11
2,3,3',4-Tetrachlorobiphenyl (PCB 55)	pg/L	1	0	--
2,3,3',4'-Tetrachlorobiphenyl (PCB 56)	pg/L	1	1	15
2,3,3',5-Tetrachlorobiphenyl (PCB 57)	pg/L	1	1	12
2,3,3',5'-Tetrachlorobiphenyl (PCB 58)	pg/L	1	0	--
2,3,4,4'-Tetrachlorobiphenyl (PCB 60)	pg/L	1	1	10
2,3,4',5-Tetrachlorobiphenyl (PCB 63)	pg/L	1	1	7
2,3,4',6-Tetrachlorobiphenyl (PCB 64)	pg/L	1	1	14
2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	pg/L	1	1	18
2,3',4,5-Tetrachlorobiphenyl (PCB 67)	pg/L	1	1	18
2,3',4,5'-Tetrachlorobiphenyl (PCB 68)	pg/L	1	1	10
2,3',5,5'-Tetrachlorobiphenyl (PCB 72)	pg/L	1	1	9
2,3',5',6-Tetrachlorobiphenyl (PCB 73)	pg/L	1	1	12
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	pg/L	1	1	21
3,3',4,5-Tetrachlorobiphenyl (PCB 78)	pg/L	1	0	--
3,3',4,5'-Tetrachlorobiphenyl (PCB 79)	pg/L	1	1	27
3,3',5,5'-Tetrachlorobiphenyl (PCB 80)	pg/L	1	0	--
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	pg/L	1	0	--
2,2',3,3',4-Pentachlorobiphenyl (PCB 82)	pg/L	1	1	19
2,2',3,3',6-Pentachlorobiphenyl (PCB 84)	pg/L	1	1	13
2,2',3,4,6'-Pentachlorobiphenyl (PCB 89)	pg/L	1	1	15
2,2',3,5,5'-Pentachlorobiphenyl (PCB 92)	pg/L	1	1	15
2,2',3,5,6'-Pentachlorobiphenyl (PCB 94)	pg/L	1	1	16
2,2',3,6,6'-Pentachlorobiphenyl (PCB 96)	pg/L	1	1	17
2,2',4,5',6-Pentachlorobiphenyl (PCB 103)	pg/L	1	1	15
2,2',4,6,6'-Pentachlorobiphenyl (PCB 104)	pg/L	1	1	11
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	pg/L	1	1	18
2,3,3',4,5-Pentachlorobiphenyl (PCB 106)	pg/L	1	1	27
2,3,3',4,6-Pentachlorobiphenyl (PCB 109)	pg/L	1	1	22
2,3,3',5,5'-Pentachlorobiphenyl (PCB 111)	pg/L	1	1	18
2,3,3',5,6-Pentachlorobiphenyl (PCB 112)	pg/L	1	1	22
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	pg/L	1	0	--
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	pg/L	1	1	22
2,3',4,5,5'-Pentachlorobiphenyl (PCB 120)	pg/L	1	1	23
2,3',4,5',6-Pentachlorobiphenyl (PCB 121)	pg/L	1	1	12
2,3,3',4',5'-Pentachlorobiphenyl (PCB 122)	pg/L	1	1	16
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	pg/L	1	0	--
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	pg/L	1	0	--
3,3',4,5,5'-Pentachlorobiphenyl (PCB 127)	pg/L	1	0	--
2,2',3,3',4,5'-Hexachlorobiphenyl (PCB 130)	pg/L	1	1	22
2,2',3,3',4,6-Hexachlorobiphenyl (PCB 131)	pg/L	1	1	28
2,2',3,3',4,6'-Hexachlorobiphenyl (PCB 132)	pg/L	1	1	28
2,2',3,3',5,5'-Hexachlorobiphenyl (PCB 133)	pg/L	1	1	24
2,2',3,3',6,6'-Hexachlorobiphenyl (PCB 136)	pg/L	1	1	24
2,2',3,4,4',5-Hexachlorobiphenyl (PCB 137)	pg/L	1	1	6
2,2',3,4,5,5'-Hexachlorobiphenyl (PCB 141)	pg/L	1	1	25
2,2',3,4,5,6-Hexachlorobiphenyl (PCB 142)	pg/L	1	0	--
2,2',3,4,5',6-Hexachlorobiphenyl (PCB 144)	pg/L	1	1	21
2,2',3,4,6,6'-Hexachlorobiphenyl (PCB 145)	pg/L	1	1	10

Table A-8a. Results for November 2004 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
2,2',3,4',5,5'-Hexachlorobiphenyl (PCB 146)	pg/L	1	1	24
2,2',3,4',5,6'-Hexachlorobiphenyl (PCB 148)	pg/L	1	1	16
2,2',3,4',6,6'-Hexachlorobiphenyl (PCB 150)	pg/L	1	1	23
2,2',3,5,6,6'-Hexachlorobiphenyl (PCB 152)	pg/L	1	1	22
2,2',4,4',6,6'-Hexachlorobiphenyl (PCB 155)	pg/L	1	1	16
2,3,3',4,4',6-Hexachlorobiphenyl (PCB 158)	pg/L	1	1	25
2,3,3',4,5,5'-Hexachlorobiphenyl (PCB 159)	pg/L	1	1	51
2,3,3',4,5',6-Hexachlorobiphenyl (PCB 161)	pg/L	1	0	--
2,3,3',4',5,5'-Hexachlorobiphenyl (PCB 162)	pg/L	1	1	30
2,3,3',4',5',6-Hexachlorobiphenyl (PCB 164)	pg/L	1	1	27
2,3,3',5,5',6-Hexachlorobiphenyl (PCB 165)	pg/L	1	1	12
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	pg/L	1	1	29
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	pg/L	1	0	--
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	pg/L	1	1	54
2,2',3,3',4,5,5'-Heptachlorobiphenyl (PCB 172)	pg/L	1	1	50
2,2',3,3',4,5,6'-Heptachlorobiphenyl (PCB 174)	pg/L	1	1	56
2,2',3,3',4,5',6-Heptachlorobiphenyl (PCB 175)	pg/L	1	1	30
2,2',3,3',4,6,6'-Heptachlorobiphenyl (PCB 176)	pg/L	1	1	37
2,2',3,3',4,5',6'-Heptachlorobiphenyl (PCB 177)	pg/L	1	1	41
2,2',3,3',5,5',6-Heptachlorobiphenyl (PCB 178)	pg/L	1	1	34
2,2',3,3',5,6,6'-Heptachlorobiphenyl (PCB 179)	pg/L	1	1	39
2,2',3,4,4',5,6-Heptachlorobiphenyl (PCB 181)	pg/L	1	1	62
2,2',3,4,4',5,6'-Heptachlorobiphenyl (PCB 182)	pg/L	1	1	38
2,2',3,4,4',6,6'-Heptachlorobiphenyl (PCB 184)	pg/L	1	0	--
2,2',3,4,5,6,6'-Heptachlorobiphenyl (PCB 186)	pg/L	1	0	--
2,2',3,4',5,5',6-Heptachlorobiphenyl (PCB 187)	pg/L	1	1	36
2,2',3,4',5,6,6'-Heptachlorobiphenyl (PCB 188)	pg/L	1	1	42
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	pg/L	1	1	45
2,3,3',4,4',5,6-Heptachlorobiphenyl (PCB 190)	pg/L	1	1	51
2,3,3',4,4',5',6-Heptachlorobiphenyl (PCB 191)	pg/L	1	1	52
2,3,3',4,5,5',6-Heptachlorobiphenyl (PCB 192)	pg/L	1	0	--
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (PCB 194)	pg/L	1	1	81
2,2',3,3',4,4',5,6-Octachlorobiphenyl (PCB 195)	pg/L	1	1	72
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (PCB 196)	pg/L	1	1	70
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (PCB 201)	pg/L	1	1	64
2,2',3,3',5,5',6,6'-Octachlorobiphenyl (PCB 202)	pg/L	1	1	58
2,2',3,4,4',5,5',6-Octachlorobiphenyl (PCB 203)	pg/L	1	1	69
2,2',3,4,4',5,6,6'-Octachlorobiphenyl (PCB 204)	pg/L	1	0	--
2,3,3',4,4',5,5',6-Octachlorobiphenyl (PCB 205)	pg/L	1	1	81
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB 206)	pg/L	1	1	83
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (PCB 207)	pg/L	1	0	--
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (PCB 208)	pg/L	1	0	--
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)	pg/L	1	1	65
PCB012 & 013	pg/L	1	1	14
PCB018 & 030	pg/L	1	1	13
PCB020 & 028	pg/L	1	1	14
PCB021 & 033	pg/L	1	1	14
PCB026 & 029	pg/L	1	1	11
PCB040 & 041 & 071	pg/L	1	1	15
PCB044 & 047 & 065	pg/L	1	1	7
PCB045 & 051	pg/L	1	1	13
PCB049 & 069	pg/L	1	1	11
PCB050 & 053	pg/L	1	1	14

ANC04614
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Table A-8a. Results for November 2004 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
PCB059 & 062 & 075	pg/L	1	1	10
PCB061 & 070 & 074 & 076	pg/L	1	1	17
PCB083 & 099	pg/L	1	1	19
PCB085 & 116 & 117	pg/L	1	1	16
PCB086 & 087 & 097 & 108 & 119 & 125	pg/L	1	1	21
PCB088 & 091	pg/L	1	1	18
PCB090 & 101 & 113	pg/L	1	1	18
PCB093 & 095 & 098 & 100 & 102	pg/L	1	1	13
PCB107 & 124	pg/L	1	1	21
PCB110 & 115	pg/L	1	1	18
PCB128 & 166	pg/L	1	1	31
PCB129 & 138 & 160 & 163	pg/L	1	1	5
PCB134 & 143	pg/L	1	1	21
PCB135 & 151 & 154	pg/L	1	1	20
PCB139 & 140	pg/L	1	1	30
PCB147 & 149	pg/L	1	1	19
PCB153 & 168	pg/L	1	1	26
PCB156 & 157	pg/L	1	1	37
PCB171 & 173	pg/L	1	1	45
PCB180 & 193	pg/L	1	1	50
PCB183 & 185	pg/L	1	1	39
PCB197 & 200	pg/L	1	1	74
PCB198 & 199	pg/L	1	1	64
PCB Aroclors				
Aroclor 1016	pg/L	1	0	--
Aroclor 1221	pg/L	1	0	--
Aroclor 1232	pg/L	1	0	--
Aroclor 1242	pg/L	1	0	--
Aroclor 1248	pg/L	1	1	9
Aroclor 1254	pg/L	1	0	--
Aroclor 1260	pg/L	1	1	48
PCB Homologs				
Monochlorobiphenyl	pg/L	1	1	12
Dichlorobiphenyl	pg/L	1	1	7
Trichlorobiphenyl	pg/L	1	1	9
Tetrachlorobiphenyl	pg/L	1	1	12
Pentachlorobiphenyl	pg/L	1	1	16
Hexachlorobiphenyl	pg/L	1	1	20
Heptachlorobiphenyl	pg/L	1	1	45
Octachlorobiphenyl	pg/L	1	1	70
Nonachlorobiphenyl	pg/L	1	0	--
Polychlorinated biphenyls	pg/L	1	1	14
Chlorinated Dioxin/Furans				
2,3,7,8-Tetrachlorodibenzofuran	pg/L	1	0	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/L	1	0	--
1,2,3,7,8-Pentachlorodibenzofuran	pg/L	1	0	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/L	1	0	--
2,3,4,7,8-Pentachlorodibenzofuran	pg/L	1	0	--
1,2,3,4,7,8-Hexachlorodibenzofuran	pg/L	1	0	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/L	1	0	--

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Table A-8a. Results for November 2004 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
1,2,3,6,7,8-Hexachlorodibenzofuran	pg/L	1	0	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/L	1	0	--
1,2,3,7,8,9-Hexachlorodibenzofuran	pg/L	1	0	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/L	1	0	--
2,3,4,6,7,8-Hexachlorodibenzofuran	pg/L	1	0	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/L	1	0	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/L	1	1	56
1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/L	1	0	--
Chlorinated Dioxin/Furan Homologs				
Tetrachlorodibenzofuran homologs	pg/L	1	1	33
Tetrachlorodibenzo-p-dioxin homologs	pg/L	1	1	28
Pentachlorodibenzofuran homologs	pg/L	1	0	--
Pentachlorodibenzo-p-dioxin homologs	pg/L	1	1	65
Hexachlorodibenzofuran homologs	pg/L	1	0	--
Hexachlorodibenzo-p-dioxin homologs	pg/L	1	1	72
Heptachlorodibenzofuran homologs	pg/L	1	0	--
Heptachlorodibenzo-p-dioxin homologs	pg/L	1	1	52
Octachlorodibenzofuran	pg/L	1	0	--
Octachlorodibenzo-p-dioxin	pg/L	1	1	38
Polycyclic Aromatic Hydrocarbons				
2-Methylnaphthalene	pg/L	1	1	35
Acenaphthene	pg/L	1	1	20
Acenaphthylene	pg/L	1	1	10
Anthracene	pg/L	1	1	18
Benz(a)anthracene	pg/L	1	1	39
Benzo(a)pyrene	pg/L	1	0	--
Benzo(b+j)fluoranthene	pg/L	1	1	78
Benzo(g,h,i)perylene	pg/L	1	0	--
Benzo(k)fluoranthene	pg/L	1	0	--
Chrysene	pg/L	1	1	45
Dibenz(a,h)anthracene	pg/L	1	0	--
Fluoranthene	pg/L	1	1	27
Fluorene	pg/L	1	1	15
Indeno(1,2,3-cd)pyrene	pg/L	1	0	--
Naphthalene	pg/L	1	1	8
Phenanthrene	pg/L	1	1	30
Pyrene	pg/L	1	1	31
Phthalate Esters				
Bis(2-ethylhexyl) phthalate	pg/L	1	0	--
Butylbenzyl phthalate	pg/L	1	0	--
Dibutyl phthalate	pg/L	1	0	--
Diethyl phthalate	pg/L	1	0	--
Dimethyl phthalate	pg/L	1	0	--
Di-n-octyl phthalate	pg/L	1	0	--
Organochlorine Pesticides				
2,4'-DDD	pg/L	1	1	18
2,4'-DDE	pg/L	1	1	48
2,4'-DDT	pg/L	1	1	30
4,4'-DDD	pg/L	1	1	17

ANC04616
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Table A-8a. Results for November 2004 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
4,4'-DDE	pg/L	1	1	19
4,4'-DDT	pg/L	1	1	40
Aldrin	pg/L	1	0	--
alpha-Endosulfan	pg/L	1	1	29
alpha-Hexachlorocyclohexane	pg/L	1	1	12
beta-Endosulfan	pg/L	1	0	--
beta-Hexachlorocyclohexane	pg/L	1	1	11
cis-Chlordane	pg/L	1	1	23
cis-Nonachlor	pg/L	1	1	9
delta-Hexachlorocyclohexane	pg/L	1	0	--
Dieldrin	pg/L	1	1	19
Endosulfan sulfate	pg/L	1	1	21
Endrin	pg/L	1	0	--
Endrin aldehyde	pg/L	1	0	--
Endrin ketone	pg/L	1	1	40
gamma-Hexachlorocyclohexane	pg/L	1	1	37
Heptachlor	pg/L	1	1	--
Heptachlor epoxide	pg/L	1	1	23
Hexachlorobenzene	pg/L	1	1	13
Hexachlorobutadiene	pg/L	1	1	13
Methoxychlor	pg/L	1	0	--
Oxychlordane	pg/L	1	1	--
trans-Chlordane	pg/L	1	1	18
trans-Nonachlor	pg/L	1	1	19
XAD Filter Samples				
PCB Congeners				
2-Chlorobiphenyl (PCB 1)	pg/L	1	1	27
3-Chlorobiphenyl (PCB 2)	pg/L	1	1	57
4-Chlorobiphenyl (PCB 3)	pg/L	1	1	27
2,2'-Dichlorobiphenyl (PCB 4)	pg/L	1	1	27
2,3-Dichlorobiphenyl (PCB 5)	pg/L	1	0	--
2,3'-Dichlorobiphenyl (PCB 6)	pg/L	1	1	19
2,4-Dichlorobiphenyl (PCB 7)	pg/L	1	1	29
2,4'-Dichlorobiphenyl (PCB 8)	pg/L	1	1	19
2,5-Dichlorobiphenyl (PCB 9)	pg/L	1	1	18
2,6-Dichlorobiphenyl (PCB 10)	pg/L	1	1	10
3,3'-Dichlorobiphenyl (PCB 11)	pg/L	1	1	23
3,5-Dichlorobiphenyl (PCB 14)	pg/L	1	0	--
4,4'-Dichlorobiphenyl (PCB 15)	pg/L	1	1	16
2,2',3-Trichlorobiphenyl (PCB 16)	pg/L	1	1	14
2,2',4-Trichlorobiphenyl (PCB 17)	pg/L	1	1	44
2,2',6-Trichlorobiphenyl (PCB 19)	pg/L	1	1	35
2,3,4'-Trichlorobiphenyl (PCB 22)	pg/L	1	1	11
2,3,5-Trichlorobiphenyl (PCB 23)	pg/L	1	1	69
2,3,6-Trichlorobiphenyl (PCB 24)	pg/L	1	0	--
2,3',4-Trichlorobiphenyl (PCB 25)	pg/L	1	1	42
2,3',6-Trichlorobiphenyl (PCB 27)	pg/L	1	1	34
2,4',5-Trichlorobiphenyl (PCB 31)	pg/L	1	1	18
2,4',6-Trichlorobiphenyl (PCB 32)	pg/L	1	1	34
2,3',5'-Trichlorobiphenyl (PCB 34)	pg/L	1	1	39
3,3',4-Trichlorobiphenyl (PCB 35)	pg/L	1	1	24
3,3',5-Trichlorobiphenyl (PCB 36)	pg/L	1	1	--

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Table A-8a. Results for November 2004 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
3,4,4'-Trichlorobiphenyl (PCB 37)	pg/L	1	1	2
3,4,5-Trichlorobiphenyl (PCB 38)	pg/L	1	1	20
3,4',5-Trichlorobiphenyl (PCB 39)	pg/L	1	1	23
2,2',3,4'-Tetrachlorobiphenyl (PCB 42)	pg/L	1	1	36
2,2',3,5-Tetrachlorobiphenyl (PCB 43)	pg/L	1	1	45
2,2',3,6'-Tetrachlorobiphenyl (PCB 46)	pg/L	1	1	39
2,2',4,5-Tetrachlorobiphenyl (PCB 48)	pg/L	1	1	42
2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	pg/L	1	1	38
2,2',6,6'-Tetrachlorobiphenyl (PCB 54)	pg/L	1	1	44
2,3,3',4-Tetrachlorobiphenyl (PCB 55)	pg/L	1	0	--
2,3,3',4'-Tetrachlorobiphenyl (PCB 56)	pg/L	1	1	4
2,3,3',5-Tetrachlorobiphenyl (PCB 57)	pg/L	1	1	38
2,3,3',5'-Tetrachlorobiphenyl (PCB 58)	pg/L	1	0	--
2,3,4,4'-Tetrachlorobiphenyl (PCB 60)	pg/L	1	1	6
2,3,4',5-Tetrachlorobiphenyl (PCB 63)	pg/L	1	1	45
2,3,4',6-Tetrachlorobiphenyl (PCB 64)	pg/L	1	1	17
2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	pg/L	1	1	24
2,3',4,5-Tetrachlorobiphenyl (PCB 67)	pg/L	1	1	40
2,3',4,5'-Tetrachlorobiphenyl (PCB 68)	pg/L	1	1	43
2,3',5,5'-Tetrachlorobiphenyl (PCB 72)	pg/L	1	1	39
2,3',5',6-Tetrachlorobiphenyl (PCB 73)	pg/L	1	1	45
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	pg/L	1	1	8
3,3',4,5-Tetrachlorobiphenyl (PCB 78)	pg/L	1	0	--
3,3',4,5'-Tetrachlorobiphenyl (PCB 79)	pg/L	1	1	29
3,3',5,5'-Tetrachlorobiphenyl (PCB 80)	pg/L	1	0	--
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	pg/L	1	0	--
2,2',3,3',4-Pentachlorobiphenyl (PCB 82)	pg/L	1	1	11
2,2',3,3',6-Pentachlorobiphenyl (PCB 84)	pg/L	1	1	28
2,2',3,4,6'-Pentachlorobiphenyl (PCB 89)	pg/L	1	1	34
2,2',3,5,5'-Pentachlorobiphenyl (PCB 92)	pg/L	1	1	33
2,2',3,5,6'-Pentachlorobiphenyl (PCB 94)	pg/L	1	1	42
2,2',3,6,6'-Pentachlorobiphenyl (PCB 96)	pg/L	1	1	43
2,2',4,5',6-Pentachlorobiphenyl (PCB 103)	pg/L	1	1	40
2,2',4,6,6'-Pentachlorobiphenyl (PCB 104)	pg/L	1	1	40
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	pg/L	1	1	2
2,3,3',4,5-Pentachlorobiphenyl (PCB 106)	pg/L	1	1	29
2,3,3',4,6-Pentachlorobiphenyl (PCB 109)	pg/L	1	1	30
2,3,3',5,5'-Pentachlorobiphenyl (PCB 111)	pg/L	1	1	26
2,3,3',5,6-Pentachlorobiphenyl (PCB 112)	pg/L	1	1	33
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	pg/L	1	1	12
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	pg/L	1	1	21
2,3',4,5,5'-Pentachlorobiphenyl (PCB 120)	pg/L	1	1	37
2,3',4,5',6-Pentachlorobiphenyl (PCB 121)	pg/L	1	1	32
2,3,3',4',5'-Pentachlorobiphenyl (PCB 122)	pg/L	1	1	32
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	pg/L	1	1	4
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	pg/L	1	1	48
3,3',4,5,5'-Pentachlorobiphenyl (PCB 127)	pg/L	1	1	45
2,2',3,3',4,5'-Hexachlorobiphenyl (PCB 130)	pg/L	1	1	29
2,2',3,3',4,6-Hexachlorobiphenyl (PCB 131)	pg/L	1	1	30
2,2',3,3',4,6'-Hexachlorobiphenyl (PCB 132)	pg/L	1	1	27
2,2',3,3',5,5'-Hexachlorobiphenyl (PCB 133)	pg/L	1	1	36
2,2',3,3',6,6'-Hexachlorobiphenyl (PCB 136)	pg/L	1	1	28
2,2',3,4,4',5-Hexachlorobiphenyl (PCB 137)	pg/L	1	1	50

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Table A-8a. Results for November 2004 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
2,2',3,4,5,5'-Hexachlorobiphenyl (PCB 141)	pg/L	1	1	30
2,2',3,4,5,6-Hexachlorobiphenyl (PCB 142)	pg/L	1	0	--
2,2',3,4,5',6-Hexachlorobiphenyl (PCB 144)	pg/L	1	1	28
2,2',3,4,6,6'-Hexachlorobiphenyl (PCB 145)	pg/L	1	1	38
2,2',3,4',5,5'-Hexachlorobiphenyl (PCB 146)	pg/L	1	1	34
2,2',3,4',5,6'-Hexachlorobiphenyl (PCB 148)	pg/L	1	1	37
2,2',3,4',6,6'-Hexachlorobiphenyl (PCB 150)	pg/L	1	1	44
2,2',3,5,6,6'-Hexachlorobiphenyl (PCB 152)	pg/L	1	1	44
2,2',4,4',6,6'-Hexachlorobiphenyl (PCB 155)	pg/L	1	1	31
2,3,3',4,4',6-Hexachlorobiphenyl (PCB 158)	pg/L	1	1	31
2,3,3',4,5,5'-Hexachlorobiphenyl (PCB 159)	pg/L	1	1	29
2,3,3',4,5',6-Hexachlorobiphenyl (PCB 161)	pg/L	1	0	--
2,3,3',4',5,5'-Hexachlorobiphenyl (PCB 162)	pg/L	1	1	23
2,3,3',4',5',6-Hexachlorobiphenyl (PCB 164)	pg/L	1	1	32
2,3,3',5,5',6-Hexachlorobiphenyl (PCB 165)	pg/L	1	1	40
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	pg/L	1	1	30
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	pg/L	1	0	--
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	pg/L	1	1	26
2,2',3,3',4,5,5'-Heptachlorobiphenyl (PCB 172)	pg/L	1	1	34
2,2',3,3',4,5,6'-Heptachlorobiphenyl (PCB 174)	pg/L	1	1	29
2,2',3,3',4,5',6-Heptachlorobiphenyl (PCB 175)	pg/L	1	1	30
2,2',3,3',4,6,6'-Heptachlorobiphenyl (PCB 176)	pg/L	1	1	29
2,2',3,3',4,5',6'-Heptachlorobiphenyl (PCB 177)	pg/L	1	1	30
2,2',3,3',5,5',6-Heptachlorobiphenyl (PCB 178)	pg/L	1	1	33
2,2',3,3',5,6,6'-Heptachlorobiphenyl (PCB 179)	pg/L	1	1	29
2,2',3,4,4',5,6-Heptachlorobiphenyl (PCB 181)	pg/L	1	1	45
2,2',3,4,4',5,6'-Heptachlorobiphenyl (PCB 182)	pg/L	1	1	34
2,2',3,4,4',6,6'-Heptachlorobiphenyl (PCB 184)	pg/L	1	1	39
2,2',3,4,5,6,6'-Heptachlorobiphenyl (PCB 186)	pg/L	1	1	58
2,2',3,4',5,5',6-Heptachlorobiphenyl (PCB 187)	pg/L	1	1	32
2,2',3,4',5,6,6'-Heptachlorobiphenyl (PCB 188)	pg/L	1	1	40
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	pg/L	1	1	36
2,3,3',4,4',5,6-Heptachlorobiphenyl (PCB 190)	pg/L	1	1	27
2,3,3',4,4',5',6-Heptachlorobiphenyl (PCB 191)	pg/L	1	1	29
2,3,3',4,5,5',6-Heptachlorobiphenyl (PCB 192)	pg/L	1	0	--
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (PCB 194)	pg/L	1	1	32
2,2',3,3',4,4',5,6-Octachlorobiphenyl (PCB 195)	pg/L	1	1	26
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (PCB 196)	pg/L	1	1	34
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (PCB 201)	pg/L	1	1	39
2,2',3,3',5,5',6,6'-Octachlorobiphenyl (PCB 202)	pg/L	1	1	34
2,2',3,4,4',5,5',6-Octachlorobiphenyl (PCB 203)	pg/L	1	1	35
2,2',3,4,4',5,6,6'-Octachlorobiphenyl (PCB 204)	pg/L	1	1	60
2,3,3',4,4',5,5',6-Octachlorobiphenyl (PCB 205)	pg/L	1	1	35
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB 206)	pg/L	1	1	35
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (PCB 207)	pg/L	1	1	29
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (PCB 208)	pg/L	1	1	32
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)	pg/L	1	1	0.3
PCB012 & 013	pg/L	1	1	20
PCB018 & 030	pg/L	1	1	32
PCB020 & 028	pg/L	1	1	24
PCB021 & 033	pg/L	1	1	33
PCB026 & 029	pg/L	1	1	42
PCB040 & 041 & 071	pg/L	1	1	36

ANC04619
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Table A-8a. Results for November 2004 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
PCB044 & 047 & 065	pg/L	1	1	48
PCB045 & 051	pg/L	1	1	35
PCB049 & 069	pg/L	1	1	45
PCB050 & 053	pg/L	1	1	39
PCB059 & 062 & 075	pg/L	1	1	40
PCB061 & 070 & 074 & 076	pg/L	1	1	16
PCB083 & 099	pg/L	1	1	41
PCB085 & 116 & 117	pg/L	1	1	33
PCB086 & 087 & 097 & 108 & 119 & 125	pg/L	1	1	31
PCB088 & 091	pg/L	1	1	38
PCB090 & 101 & 113	pg/L	1	1	31
PCB093 & 095 & 098 & 100 & 102	pg/L	1	1	32
PCB107 & 124	pg/L	1	1	26
PCB110 & 115	pg/L	1	1	22
PCB128 & 166	pg/L	1	1	27
PCB129 & 138 & 160 & 163	pg/L	1	1	43
PCB134 & 143	pg/L	1	1	29
PCB135 & 151 & 154	pg/L	1	1	27
PCB139 & 140	pg/L	1	1	39
PCB147 & 149	pg/L	1	1	32
PCB153 & 168	pg/L	1	1	31
PCB156 & 157	pg/L	1	1	28
PCB171 & 173	pg/L	1	1	31
PCB180 & 193	pg/L	1	1	31
PCB183 & 185	pg/L	1	1	31
PCB197 & 200	pg/L	1	1	43
PCB198 & 199	pg/L	1	1	35
PCB Aroclors				
Aroclor 1016	pg/L	1	0	--
Aroclor 1221	pg/L	1	0	--
Aroclor 1232	pg/L	1	0	--
Aroclor 1242	pg/L	1	0	--
Aroclor 1248	pg/L	1	1	47
Aroclor 1254	pg/L	1	0	--
Aroclor 1260	pg/L	1	1	30
PCB Homologs				
Monochlorobiphenyl	pg/L	1	1	30
Dichlorobiphenyl	pg/L	1	1	25
Trichlorobiphenyl	pg/L	1	1	35
Tetrachlorobiphenyl	pg/L	1	1	42
Pentachlorobiphenyl	pg/L	1	1	32
Hexachlorobiphenyl	pg/L	1	1	33
Heptachlorobiphenyl	pg/L	1	1	30
Octachlorobiphenyl	pg/L	1	1	33
Nonachlorobiphenyl	pg/L	1	1	34
Polychlorinated biphenyls	pg/L	1	1	32
Chlorinated Dioxin/Furans				
2,3,7,8-Tetrachlorodibenzofuran	pg/L	1	1	3
2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/L	1	0	--
1,2,3,7,8-Pentachlorodibenzofuran	pg/L	1	1	10

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ANC04620
BZTO104(e)004620

Table A-8a. Results for November 2004 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/L	1	1	12
2,3,4,7,8-Pentachlorodibenzofuran	pg/L	1	1	2
1,2,3,4,7,8-Hexachlorodibenzofuran	pg/L	1	1	11
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/L	1	1	28
1,2,3,6,7,8-Hexachlorodibenzofuran	pg/L	1	1	13
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/L	1	1	28
1,2,3,7,8,9-Hexachlorodibenzofuran	pg/L	1	0	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/L	1	1	29
2,3,4,6,7,8-Hexachlorodibenzofuran	pg/L	1	1	3
1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/L	1	1	2
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/L	1	1	20
1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/L	1	1	14
Chlorinated Dioxin/Furan Homologs				
Tetrachlorodibenzofuran homologs	pg/L	1	1	5
Tetrachlorodibenzo-p-dioxin homologs	pg/L	1	1	2
Pentachlorodibenzofuran homologs	pg/L	1	1	4
Pentachlorodibenzo-p-dioxin homologs	pg/L	1	1	25
Hexachlorodibenzofuran homologs	pg/L	1	1	2
Hexachlorodibenzo-p-dioxin homologs	pg/L	1	1	36
Heptachlorodibenzofuran homologs	pg/L	1	1	4
Heptachlorodibenzo-p-dioxin homologs	pg/L	1	1	15
Octachlorodibenzofuran	pg/L	1	1	3
Octachlorodibenzo-p-dioxin	pg/L	1	1	1
Polycyclic Aromatic Hydrocarbons				
2-Methylnaphthalene	pg/L	1	0	--
Acenaphthene	pg/L	1	0	--
Acenaphthylene	pg/L	1	0	--
Anthracene	pg/L	1	0	--
Benz(a)anthracene	pg/L	1	1	20
Benzo(a)pyrene	pg/L	1	1	13
Benzo(b+j)fluoranthene	pg/L	1	1	14
Benzo(g,h,i)perylene	pg/L	1	1	19
Benzo(k)fluoranthene	pg/L	1	1	9
Chrysene	pg/L	1	1	17
Dibenz(a,h)anthracene	pg/L	1	0	--
Fluoranthene	pg/L	1	1	15
Fluorene	pg/L	1	1	5
Indeno(1,2,3-cd)pyrene	pg/L	1	1	9
Naphthalene	pg/L	1	0	--
Phenanthrene	pg/L	1	0	--
Pyrene	pg/L	1	1	21
Phthalate Esters				
Bis(2-ethylhexyl) phthalate	pg/L	1	0	--
Butylbenzyl phthalate	pg/L	1	0	--
Dibutyl phthalate	pg/L	1	0	--
Diethyl phthalate	pg/L	1	0	--
Dimethyl phthalate	pg/L	1	0	--
Di-n-octyl phthalate	pg/L	1	0	--

ANC04621
BZTO104(e)004621

Table A-8a. Results for November 2004 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
Organochlorine Pesticides				
2,4'-DDD	pg/L	1	1	39
2,4'-DDE	pg/L	1	1	13
2,4'-DDT	pg/L	1	1	0
4,4'-DDD	pg/L	1	1	32
4,4'-DDE	pg/L	1	1	3
4,4'-DDT	pg/L	1	1	5
Aldrin	pg/L	1	1	27
alpha-Endosulfan	pg/L	1	0	--
alpha-Hexachlorocyclohexane	pg/L	1	0	--
beta-Endosulfan	pg/L	1	0	--
beta-Hexachlorocyclohexane	pg/L	1	0	--
cis-Chlordane	pg/L	1	1	3
cis-Nonachlor	pg/L	1	1	0
delta-Hexachlorocyclohexane	pg/L	1	0	--
Dieldrin	pg/L	1	1	7
Endosulfan sulfate	pg/L	1	0	--
Endrin	pg/L	1	0	--
Endrin aldehyde	pg/L	1	0	--
Endrin ketone	pg/L	1	0	--
gamma-Hexachlorocyclohexane	pg/L	1	0	--
Heptachlor	pg/L	1	0	--
Heptachlor epoxide	pg/L	1	1	1
Hexachlorobenzene	pg/L	1	1	3
Hexachlorobutadiene	pg/L	1	0	--
Methoxychlor	pg/L	1	0	--
Oxychlordane	pg/L	1	0	--
trans-Chlordane	pg/L	1	1	10
trans-Nonachlor	pg/L	1	1	6

Notes:
NA - not applicable
RPD - relative percent difference

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Table A-8b. Results for March 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
Peristaltic Samples				
Conventionals				
Total dissolved solids	mg/L	1	1	8
Total suspended solids	mg/L	1	0	--
Perchlorate	ug/L	1	1	89
Dissolved organic carbon	mg/L	1	1	7
Total organic carbon	mg/L	1	1	6
Hardness as $CaCO_3$	mg/L	1	1	6
Butyltins				
Butyltin ion	ug/L	1	0	--
Dibutyltin ion	ug/L	1	0	--
Tributyltin ion	ug/L	1	0	--
Tetrabutyltin ion	ug/L	1	0	--
Total Metals				
Aluminum	ug/L	1	1	7
Antimony	ug/L	1	0	--
Arsenic	ug/L	1	1	8
Cadmium	ug/L	1	0	--
Chromium	ug/L	1	1	23
Copper	ug/L	1	1	6
Lead	ug/L	1	1	5
Mercury	ug/L	1	0	--
Nickel	ug/L	1	1	7
Selenium	ug/L	1	1	11
Silver	ug/L	1	0	--
Thallium	ug/L	--	--	--
Zinc	ug/L	1	1	9
Hexavalent chromium	mg/L	1	0	--
Dissolved Metals				
Aluminum	ug/L	1	1	96
Antimony	ug/L	1	0	--
Arsenic	ug/L	1	1	8
Cadmium	ug/L	1	0	--
Chromium	ug/L	1	1	23
Copper	ug/L	1	1	6
Lead	ug/L	1	1	5
Mercury	ug/L	1	0	--
Nickel	ug/L	1	1	7
Selenium	ug/L	1	1	11
Silver	ug/L	1	0	--
Thallium	ug/L	--	--	--
Zinc	ug/L	1	1	9
Chlorinated Herbicides				
2,4,5-T	ug/L	1	0	--
2,4-D	ug/L	1	0	--
2,4-DB	ug/L	1	0	--
Dalapon	ug/L	1	0	--
Dicamba	ug/L	1	0	--
Dichloroprop	ug/L	1	0	--
Dinoseb	ug/L	1	0	--
MCPA	ug/L	1	0	--

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Table A-8b. Results for March 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
MCPP	ug/L	1	0	--
Silvex	ug/L	1	0	--
Semivolatile Organic Compounds				
1,2,4-Trichlorobenzene	ug/L	1	0	--
1,2-Dichlorobenzene	ug/L	1	0	--
1,3-Dichlorobenzene	ug/L	1	0	--
1,4-Dichlorobenzene	ug/L	1	0	--
2,4-Dinitrotoluene	ug/L	1	0	--
2,6-Dinitrotoluene	ug/L	1	0	--
2-Chloronaphthalene	ug/L	1	0	--
2-Nitroaniline	ug/L	1	0	--
3,3'-Dichlorobenzidine	ug/L	1	0	--
3-Nitroaniline	ug/L	1	0	--
4-Bromophenyl phenyl ether	ug/L	1	0	--
4-Chloroaniline	ug/L	1	0	--
4-Chlorophenyl phenyl ether	ug/L	1	0	--
4-Nitroaniline	ug/L	1	0	--
Aniline	ug/L	1	0	--
Azobenzene	ug/L	1	0	--
Benzoic acid	ug/L	1	0	--
Benzyl alcohol	ug/L	1	0	--
Bis(2-chloroethoxy) methane	ug/L	1	0	--
Bis(2-chloroethyl) ether	ug/L	1	0	--
Bis(2-chloroisopropyl) ether	ug/L	1	0	--
Carbazole	ug/L	1	0	--
Hexachlorobenzene	ug/L	1	0	--
Hexachlorobutadiene	ug/L	1	0	--
Hexachlorocyclopentadiene	ug/L	1	0	--
Hexachloroethane	ug/L	1	0	--
Isophorone	ug/L	1	0	--
Nitrobenzene	ug/L	1	0	--
N-Nitrosodimethylamine	ug/L	1	0	--
N-Nitrosodiphenylamine	ug/L	1	0	--
N-Nitrosodipropylamine	ug/L	1	0	--
Phenols				
2,4,5-Trichlorophenol	ug/L	1	0	--
2,4,6-Trichlorophenol	ug/L	1	0	--
2,4-Dichlorophenol	ug/L	1	0	--
2,4-Dimethylphenol	ug/L	1	0	--
2,4-Dinitrophenol	ug/L	1	0	--
2-Chlorophenol	ug/L	1	0	--
2-Methylphenol	ug/L	1	0	--
2-Nitrophenol	ug/L	1	0	--
4,6-Dinitro-2-methylphenol	ug/L	1	0	--
4-Chloro-3-methylphenol	ug/L	1	0	--
4-Methylphenol	ug/L	1	0	--
4-Nitrophenol	ug/L	1	0	--
Pentachlorophenol	ug/L	1	0	--
Phenol	ug/L	1	0	--
Phthalate Esters				
Bis(2-ethylhexyl) phthalate	ug/L	1	0	--
Butylbenzyl phthalate	ug/L	1	0	--
Dibutyl phthalate	ug/L	1	0	--

Table A-8b. Results for March 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
Diethyl phthalate	ug/L	1	0	--
Dimethyl phthalate	ug/L	1	0	--
Di-n-octyl phthalate	ug/L	1	0	--
Polycyclic Aromatic Hydrocarbons				
2-Methylnaphthalene	ug/L	1	0	--
Acenaphthene	ug/L	1	0	--
Acenaphthylene	ug/L	1	1	2
Anthracene	ug/L	1	0	--
Benz(a)anthracene	ug/L	1	0	--
Benzo(a)pyrene	ug/L	1	0	--
Benzo(b)fluoranthene	ug/L	1	0	--
Benzo(g,h,i)perylene	ug/L	1	0	--
Benzo(k)fluoranthene	ug/L	1	0	--
Chrysene	ug/L	1	0	--
Dibenz(a,h)anthracene	ug/L	1	0	--
Dibenzofuran	ug/L	1	0	--
Fluoranthene	ug/L	1	0	--
Fluorene	ug/L	1	0	--
Indeno(1,2,3-cd)pyrene	ug/L	1	0	--
Naphthalene	ug/L	1	0	--
Phenanthrene	ug/L	1	0	--
Pyrene	ug/L	1	0	--
Organochlorine Pesticides				
2,4'-DDD	ug/L	1	0	--
2,4'-DDE	ug/L	1	0	--
2,4'-DDT	ug/L	1	0	--
4,4'-DDD	ug/L	1	0	--
4,4'-DDE	ug/L	1	0	--
4,4'-DDT	ug/L	1	0	--
Aldrin	ug/L	1	0	--
alpha-Endosulfan	ug/L	1	0	--
alpha-Hexachlorocyclohexane	ug/L	1	0	--
beta-Endosulfan	ug/L	1	0	--
beta-Hexachlorocyclohexane	ug/L	1	0	--
cis-Chlordane	ug/L	1	0	--
cis-Nonachlor	ug/L	1	0	--
delta-Hexachlorocyclohexane	ug/L	1	0	--
Dieldrin	ug/L	1	0	--
Endosulfan sulfate	ug/L	1	0	--
Endrin	ug/L	1	0	--
Endrin aldehyde	ug/L	1	0	--
Endrin ketone	ug/L	1	0	--
gamma-Hexachlorocyclohexane	ug/L	1	0	--
Heptachlor	ug/L	1	0	--
Heptachlor epoxide	ug/L	1	0	--
Hexachlorobenzene	ug/L	1	0	--
Hexachlorobutadiene	ug/L	1	0	--
Hexachloroethane	ug/L	1	0	--
Methoxychlor	ug/L	1	0	--
Mirex	ug/L	1	0	--
Oxychlordane	ug/L	1	0	--
Toxaphene	ug/L	1	0	--
trans-Chlordane	ug/L	1	0	--
trans-Nonachlor	ug/L	1	0	--

Table A-8b. Results for March 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
PCB Aroclors				
Aroclor 1016	ug/L	1	0	--
Aroclor 1221	ug/L	1	0	--
Aroclor 1232	ug/L	1	0	--
Aroclor 1242	ug/L	1	0	--
Aroclor 1248	ug/L	1	1	42
Aroclor 1254	ug/L	1	1	3
Aroclor 1260	ug/L	1	0	--
Aroclor 1262	ug/L	1	0	--
Aroclor 1268	ug/L	1	0	--
XAD Column Samples				
PCB Congeners				
2-Chlorobiphenyl (PCB 1)	pg/L	1	1	82
3-Chlorobiphenyl (PCB 2)	pg/L	1	1	1
4-Chlorobiphenyl (PCB 3)	pg/L	1	1	51
2,2'-Dichlorobiphenyl (PCB 4)	pg/L	1	1	125
2,3-Dichlorobiphenyl (PCB 5)	pg/L	1	1	25
2,3'-Dichlorobiphenyl (PCB 6)	pg/L	1	1	87
2,4-Dichlorobiphenyl (PCB 7)	pg/L	1	1	87
2,4'-Dichlorobiphenyl (PCB 8)	pg/L	1	1	53
2,5-Dichlorobiphenyl (PCB 9)	pg/L	1	1	97
2,6-Dichlorobiphenyl (PCB 10)	pg/L	1	1	114
3,3'-Dichlorobiphenyl (PCB 11)	pg/L	1	1	5
3,5-Dichlorobiphenyl (PCB 14)	pg/L	1	0	--
4,4'-Dichlorobiphenyl (PCB 15)	pg/L	1	1	75
2,2',3-Trichlorobiphenyl (PCB 16)	pg/L	1	1	42
2,2',4-Trichlorobiphenyl (PCB 17)	pg/L	1	1	134
2,2',6-Trichlorobiphenyl (PCB 19)	pg/L	1	1	125
2,3,4'-Trichlorobiphenyl (PCB 22)	pg/L	1	1	12
2,3,5-Trichlorobiphenyl (PCB 23)	pg/L	1	1	109
2,3,6-Trichlorobiphenyl (PCB 24)	pg/L	1	0	--
2,3',4-Trichlorobiphenyl (PCB 25)	pg/L	1	1	109
2,3',6-Trichlorobiphenyl (PCB 27)	pg/L	1	1	131
2,4',5-Trichlorobiphenyl (PCB 31)	pg/L	1	1	41
2,4',6-Trichlorobiphenyl (PCB 32)	pg/L	1	1	118
2,3',5'-Trichlorobiphenyl (PCB 34)	pg/L	1	1	107
3,3',4-Trichlorobiphenyl (PCB 35)	pg/L	1	1	13
3,3',5-Trichlorobiphenyl (PCB 36)	pg/L	1	1	NA
3,4,4'-Trichlorobiphenyl (PCB 37)	pg/L	1	1	12
3,4,5-Trichlorobiphenyl (PCB 38)	pg/L	1	1	85
3,4',5-Trichlorobiphenyl (PCB 39)	pg/L	1	0	--
2,2',3,4'-Tetrachlorobiphenyl (PCB 42)	pg/L	1	1	75
2,2',3,5-Tetrachlorobiphenyl (PCB 43)	pg/L	1	1	110
2,2',3,6'-Tetrachlorobiphenyl (PCB 46)	pg/L	1	1	110
2,2',4,5-Tetrachlorobiphenyl (PCB 48)	pg/L	1	1	82
2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	pg/L	1	1	110
2,2',6,6'-Tetrachlorobiphenyl (PCB 54)	pg/L	1	1	123
2,3,3',4-Tetrachlorobiphenyl (PCB 55)	pg/L	1	1	12
2,3,3',4'-Tetrachlorobiphenyl (PCB 56)	pg/L	1	1	8
2,3,3',5-Tetrachlorobiphenyl (PCB 57)	pg/L	1	1	129
2,3,3',5'-Tetrachlorobiphenyl (PCB 58)	pg/L	1	0	--
2,3,4,4'-Tetrachlorobiphenyl (PCB 60)	pg/L	1	1	6
2,3,4',5-Tetrachlorobiphenyl (PCB 63)	pg/L	1	1	87
2,3,4',6-Tetrachlorobiphenyl (PCB 64)	pg/L	1	1	23

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Table A-8b. Results for March 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	pg/L	1	1	45
2,3',4,5-Tetrachlorobiphenyl (PCB 67)	pg/L	1	1	101
2,3',4,5'-Tetrachlorobiphenyl (PCB 68)	pg/L	1	1	113
2,3',5,5'-Tetrachlorobiphenyl (PCB 72)	pg/L	1	1	108
2,3',5',6-Tetrachlorobiphenyl (PCB 73)	pg/L	1	1	128
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	pg/L	1	1	8
3,3',4,5-Tetrachlorobiphenyl (PCB 78)	pg/L	1	0	--
3,3',4,5'-Tetrachlorobiphenyl (PCB 79)	pg/L	1	1	73
3,3',5,5'-Tetrachlorobiphenyl (PCB 80)	pg/L	1	0	--
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	pg/L	1	0	--
2,2',3,3',4-Pentachlorobiphenyl (PCB 82)	pg/L	1	1	38
2,2',3,3',6-Pentachlorobiphenyl (PCB 84)	pg/L	1	1	103
2,2',3,4,6'-Pentachlorobiphenyl (PCB 89)	pg/L	1	1	85
2,2',3,5,5'-Pentachlorobiphenyl (PCB 92)	pg/L	1	1	113
2,2',3,5,6'-Pentachlorobiphenyl (PCB 94)	pg/L	1	1	114
2,2',3,6,6'-Pentachlorobiphenyl (PCB 96)	pg/L	1	1	114
2,2',4,5',6-Pentachlorobiphenyl (PCB 103)	pg/L	1	1	116
2,2',4,6,6'-Pentachlorobiphenyl (PCB 104)	pg/L	1	1	112
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	pg/L	1	1	24
2,3,3',4,5-Pentachlorobiphenyl (PCB 106)	pg/L	1	1	109
2,3,3',4,6-Pentachlorobiphenyl (PCB 109)	pg/L	1	1	64
2,3,3',5,5'-Pentachlorobiphenyl (PCB 111)	pg/L	1	1	100
2,3,3',5,6-Pentachlorobiphenyl (PCB 112)	pg/L	1	1	122
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	pg/L	1	1	53
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	pg/L	1	1	70
2,3',4,5,5'-Pentachlorobiphenyl (PCB 120)	pg/L	1	1	92
2,3',4,5',6-Pentachlorobiphenyl (PCB 121)	pg/L	1	1	119
2,3,3',4',5'-Pentachlorobiphenyl (PCB 122)	pg/L	1	1	55
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	pg/L	1	1	18
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	pg/L	1	0	--
3,3',4,5,5'-Pentachlorobiphenyl (PCB 127)	pg/L	1	1	83
2,2',3,3',4,5'-Hexachlorobiphenyl (PCB 130)	pg/L	1	1	78
2,2',3,3',4,6-Hexachlorobiphenyl (PCB 131)	pg/L	1	1	89
2,2',3,3',4,6'-Hexachlorobiphenyl (PCB 132)	pg/L	1	1	87
2,2',3,3',5,5'-Hexachlorobiphenyl (PCB 133)	pg/L	1	1	92
2,2',3,3',6,6'-Hexachlorobiphenyl (PCB 136)	pg/L	1	1	102
2,2',3,4,4',5-Hexachlorobiphenyl (PCB 137)	pg/L	1	1	84
2,2',3,4,5,5'-Hexachlorobiphenyl (PCB 141)	pg/L	1	1	87
2,2',3,4,5,6-Hexachlorobiphenyl (PCB 142)	pg/L	1	0	--
2,2',3,4,5',6-Hexachlorobiphenyl (PCB 144)	pg/L	1	1	94
2,2',3,4,6,6'-Hexachlorobiphenyl (PCB 145)	pg/L	1	0	--
2,2',3,4',5,5'-Hexachlorobiphenyl (PCB 146)	pg/L	1	1	92
2,2',3,4',5,6'-Hexachlorobiphenyl (PCB 148)	pg/L	1	1	105
2,2',3,4',6,6'-Hexachlorobiphenyl (PCB 150)	pg/L	1	1	105
2,2',3,5,6,6'-Hexachlorobiphenyl (PCB 152)	pg/L	1	1	108
2,2',4,4',6,6'-Hexachlorobiphenyl (PCB 155)	pg/L	1	1	91
2,3,3',4,4',6-Hexachlorobiphenyl (PCB 158)	pg/L	1	1	80
2,3,3',4,5,5'-Hexachlorobiphenyl (PCB 159)	pg/L	1	1	75
2,3,3',4,5',6-Hexachlorobiphenyl (PCB 161)	pg/L	1	0	--
2,3,3',4',5,5'-Hexachlorobiphenyl (PCB 162)	pg/L	1	1	58
2,3,3',4',5',6-Hexachlorobiphenyl (PCB 164)	pg/L	1	1	82
2,3,3',5,5',6-Hexachlorobiphenyl (PCB 165)	pg/L	1	1	99
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	pg/L	1	1	76
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	pg/L	1	0	--
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	pg/L	1	1	71
2,2',3,3',4,5,5'-Heptachlorobiphenyl (PCB 172)	pg/L	1	1	67

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Table A-8b. Results for March 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
2,2',3,3',4,5,6'-Heptachlorobiphenyl (PCB 174)	pg/L	1	1	75
2,2',3,3',4,5',6-Heptachlorobiphenyl (PCB 175)	pg/L	1	1	75
2,2',3,3',4,6,6'-Heptachlorobiphenyl (PCB 176)	pg/L	1	1	80
2,2',3,3',4,5',6'-Heptachlorobiphenyl (PCB 177)	pg/L	1	1	71
2,2',3,3',5,5',6-Heptachlorobiphenyl (PCB 178)	pg/L	1	1	77
2,2',3,3',5,6,6'-Heptachlorobiphenyl (PCB 179)	pg/L	1	1	85
2,2',3,4,4',5,6-Heptachlorobiphenyl (PCB 181)	pg/L	1	1	56
2,2',3,4,4',5,6'-Heptachlorobiphenyl (PCB 182)	pg/L	1	1	75
2,2',3,4,4',6,6'-Heptachlorobiphenyl (PCB 184)	pg/L	1	0	--
2,2',3,4,5,6,6'-Heptachlorobiphenyl (PCB 186)	pg/L	1	0	--
2,2',3,4',5,5',6-Heptachlorobiphenyl (PCB 187)	pg/L	1	1	75
2,2',3,4',5,6,6'-Heptachlorobiphenyl (PCB 188)	pg/L	1	1	77
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	pg/L	1	1	65
2,3,3',4,4',5,6-Heptachlorobiphenyl (PCB 190)	pg/L	1	1	71
2,3,3',4,4',5',6-Heptachlorobiphenyl (PCB 191)	pg/L	1	1	71
2,3,3',4,5,5',6-Heptachlorobiphenyl (PCB 192)	pg/L	1	0	--
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (PCB 194)	pg/L	1	1	51
2,2',3,3',4,4',5,6-Octachlorobiphenyl (PCB 195)	pg/L	1	1	57
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (PCB 196)	pg/L	1	1	53
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (PCB 201)	pg/L	1	1	43
2,2',3,3',5,5',6,6'-Octachlorobiphenyl (PCB 202)	pg/L	1	1	50
2,2',3,4,4',5,5',6-Octachlorobiphenyl (PCB 203)	pg/L	1	1	51
2,2',3,4,4',5,6,6'-Octachlorobiphenyl (PCB 204)	pg/L	1	1	NA
2,3,3',4,4',5,5',6-Octachlorobiphenyl (PCB 205)	pg/L	1	1	64
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB 206)	pg/L	1	1	13
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (PCB 207)	pg/L	1	1	15
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (PCB 208)	pg/L	1	1	11
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)	pg/L	1	1	33
PCB012 & 013	pg/L	1	1	78
PCB018 & 030	pg/L	1	1	103
PCB020 & 028	pg/L	1	1	66
PCB021 & 033	pg/L	1	1	79
PCB026 & 029	pg/L	1	1	113
PCB040 & 041 & 071	pg/L	1	1	87
PCB044 & 047 & 065	pg/L	1	1	121
PCB045 & 051	pg/L	1	1	123
PCB049 & 069	pg/L	1	1	117
PCB050 & 053	pg/L	1	1	115
PCB059 & 062 & 075	pg/L	1	1	116
PCB061 & 070 & 074 & 076	pg/L	1	1	30
PCB083 & 099	pg/L	1	1	96
PCB085 & 116 & 117	pg/L	1	1	82
PCB086 & 087 & 097 & 108 & 119 & 125	pg/L	1	1	88
PCB088 & 091	pg/L	1	1	108
PCB090 & 101 & 113	pg/L	1	1	105
PCB093 & 095 & 098 & 100 & 102	pg/L	1	1	115
PCB107 & 124	pg/L	1	1	49
PCB110 & 115	pg/L	1	1	80
PCB128 & 166	pg/L	1	1	60
PCB129 & 138 & 160 & 163	pg/L	1	1	86
PCB134 & 143	pg/L	1	1	99
PCB135 & 151 & 154	pg/L	1	1	102
PCB139 & 140	pg/L	1	1	91
PCB147 & 149	pg/L	1	1	97
PCB153 & 168	pg/L	1	1	93
PCB156 & 157	pg/L	1	1	73

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Table A-8b. Results for March 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
PCB171 & 173	pg/L	1	1	71
PCB180 & 193	pg/L	1	1	70
PCB183 & 185	pg/L	1	1	76
PCB197 & 200	pg/L	1	1	55
PCB198 & 199	pg/L	1	1	54
PCB Aroclors				
Aroclor 1016	pg/L	1	0	--
Aroclor 1221	pg/L	1	0	--
Aroclor 1232	pg/L	1	0	--
Aroclor 1242	pg/L	1	0	--
Aroclor 1248	pg/L	1	1	118
Aroclor 1254	pg/L	1	0	--
Aroclor 1260	pg/L	1	1	72
PCB Homologs				
Monochlorobiphenyl	pg/L	1	1	64
Dichlorobiphenyl	pg/L	1	1	116
Trichlorobiphenyl	pg/L	1	1	122
Tetrachlorobiphenyl	pg/L	1	1	114
Pentachlorobiphenyl	pg/L	1	1	106
Hexachlorobiphenyl	pg/L	1	1	93
Heptachlorobiphenyl	pg/L	1	1	74
Octachlorobiphenyl	pg/L	1	1	53
Nonachlorobiphenyl	pg/L	1	1	9
Polychlorinated biphenyls	pg/L	1	1	112
Chlorinated Dioxin/Furans				
2,3,7,8-Tetrachlorodibenzofuran	pg/L	1	1	100
2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/L	1	0	--
1,2,3,7,8-Pentachlorodibenzofuran	pg/L	1	1	125
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/L	1	1	139
2,3,4,7,8-Pentachlorodibenzofuran	pg/L	1	0	--
1,2,3,4,7,8-Hexachlorodibenzofuran	pg/L	1	1	127
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/L	1	1	NA
1,2,3,6,7,8-Hexachlorodibenzofuran	pg/L	1	1	74
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/L	1	1	168
1,2,3,7,8,9-Hexachlorodibenzofuran	pg/L	1	0	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/L	1	1	165
2,3,4,6,7,8-Hexachlorodibenzofuran	pg/L	1	1	81
1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/L	1	1	89
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/L	1	1	170
1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/L	1	1	NA
Chlorinated Dioxin/Furan Homologs				
Tetrachlorodibenzofuran homologs	pg/L	1	1	115
Tetrachlorodibenzo-p-dioxin homologs	pg/L	1	1	193
Pentachlorodibenzofuran homologs	pg/L	1	1	104
Pentachlorodibenzo-p-dioxin homologs	pg/L	1	1	184
Hexachlorodibenzofuran homologs	pg/L	1	1	78
Hexachlorodibenzo-p-dioxin homologs	pg/L	1	1	178
Heptachlorodibenzofuran homologs	pg/L	1	1	77
Heptachlorodibenzo-p-dioxin homologs	pg/L	1	1	168
Octachlorodibenzofuran	pg/L	1	1	30
Octachlorodibenzo-p-dioxin	pg/L	1	1	144

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Table A-8b. Results for March 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
Polycyclic Aromatic Hydrocarbons				
2-Methylnaphthalene	pg/L	1	1	12
Acenaphthene	pg/L	1	1	15
Acenaphthylene	pg/L	1	0	--
Anthracene	pg/L	1	0	--
Benz(a)anthracene	pg/L	1	1	0
Benzo(a)pyrene	pg/L	1	1	53
Benzo(b+j)fluoranthene	pg/L	1	1	63
Benzo(g,h,i)perylene	pg/L	1	0	--
Benzo(k)fluoranthene	pg/L	1	1	53
Chrysene	pg/L	1	1	8
Dibenz(a,h)anthracene	pg/L	1	0	--
Fluoranthene	pg/L	1	1	18
Fluorene	pg/L	1	1	29
Indeno(1,2,3-cd)pyrene	pg/L	1	0	--
Naphthalene	pg/L	1	1	--
Phenanthrene	pg/L	1	1	21
Pyrene	pg/L	1	1	13
Phthalate Esters				
Bis(2-ethylhexyl) phthalate	pg/L	1	0	--
Butylbenzyl phthalate	pg/L	1	0	--
Dibutyl phthalate	pg/L	1	0	--
Diethyl phthalate	pg/L	1	0	--
Dimethyl phthalate	pg/L	1	0	--
Di-n-octyl phthalate	pg/L	1	0	--
Organochlorine Pesticides				
2,4'-DDD	pg/L	1	1	59
2,4'-DDE	pg/L	1	1	3
2,4'-DDT	pg/L	1	0	--
4,4'-DDD	pg/L	1	1	98
4,4'-DDE	pg/L	1	1	3
4,4'-DDT	pg/L	1	1	142
Aldrin	pg/L	1	1	58
alpha-Endosulfan	pg/L	1	1	--
alpha-Hexachlorocyclohexane	pg/L	1	1	96
beta-Endosulfan	pg/L	1	1	76
beta-Hexachlorocyclohexane	pg/L	1	1	61
cis-Chlordane	pg/L	1	1	33
cis-Nonachlor	pg/L	1	1	65
delta-Hexachlorocyclohexane	pg/L	1	0	--
Dieldrin	pg/L	1	1	25
Endosulfan sulfate	pg/L	1	1	173
Endrin	pg/L	1	0	--
Endrin aldehyde	pg/L	1	0	--
Endrin ketone	pg/L	1	0	--
gamma-Hexachlorocyclohexane	pg/L	1	1	120
Heptachlor	pg/L	1	0	--
Heptachlor epoxide	pg/L	1	1	22
Hexachlorobenzene	pg/L	1	1	16
Hexachlorobutadiene	pg/L	1	0	--
Methoxychlor	pg/L	1	0	--
Oxychlordane	pg/L	1	1	5
trans-Chlordane	pg/L	1	1	31
trans-Nonachlor	pg/L	1	1	46

ANC04630
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Table A-8b. Results for March 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
XAD Filter Samples				
PCB Congeners				
2-Chlorobiphenyl (PCB 1)	pg/L	1	1	115
3-Chlorobiphenyl (PCB 2)	pg/L	1	0	--
4-Chlorobiphenyl (PCB 3)	pg/L	1	1	107
2,2'-Dichlorobiphenyl (PCB 4)	pg/L	1	1	148
2,3-Dichlorobiphenyl (PCB 5)	pg/L	1	0	--
2,3'-Dichlorobiphenyl (PCB 6)	pg/L	1	1	114
2,4-Dichlorobiphenyl (PCB 7)	pg/L	1	1	84
2,4'-Dichlorobiphenyl (PCB 8)	pg/L	1	1	95
2,5-Dichlorobiphenyl (PCB 9)	pg/L	1	1	124
2,6-Dichlorobiphenyl (PCB 10)	pg/L	1	1	137
3,3'-Dichlorobiphenyl (PCB 11)	pg/L	1	1	27
3,5-Dichlorobiphenyl (PCB 14)	pg/L	1	0	--
4,4'-Dichlorobiphenyl (PCB 15)	pg/L	1	1	119
2,2',3-Trichlorobiphenyl (PCB 16)	pg/L	1	1	105
2,2',4-Trichlorobiphenyl (PCB 17)	pg/L	1	1	150
2,2',6-Trichlorobiphenyl (PCB 19)	pg/L	1	1	152
2,3,4'-Trichlorobiphenyl (PCB 22)	pg/L	1	1	6
2,3,5-Trichlorobiphenyl (PCB 23)	pg/L	1	0	--
2,3,6-Trichlorobiphenyl (PCB 24)	pg/L	1	0	--
2,3',4-Trichlorobiphenyl (PCB 25)	pg/L	1	1	148
2,3',6-Trichlorobiphenyl (PCB 27)	pg/L	1	1	153
2,4',5-Trichlorobiphenyl (PCB 31)	pg/L	1	1	78
2,4',6-Trichlorobiphenyl (PCB 32)	pg/L	1	1	146
2,3',5'-Trichlorobiphenyl (PCB 34)	pg/L	1	1	117
3,3',4-Trichlorobiphenyl (PCB 35)	pg/L	1	1	16
3,3',5-Trichlorobiphenyl (PCB 36)	pg/L	1	1	NA
3,4,4'-Trichlorobiphenyl (PCB 37)	pg/L	1	1	40
3,4,5-Trichlorobiphenyl (PCB 38)	pg/L	1	1	150
3,4',5-Trichlorobiphenyl (PCB 39)	pg/L	1	1	118
2,2',3,4'-Tetrachlorobiphenyl (PCB 42)	pg/L	1	1	137
2,2',3,5-Tetrachlorobiphenyl (PCB 43)	pg/L	1	1	155
2,2',3,6'-Tetrachlorobiphenyl (PCB 46)	pg/L	1	1	152
2,2',4,5-Tetrachlorobiphenyl (PCB 48)	pg/L	1	1	137
2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	pg/L	1	1	154
2,2',6,6'-Tetrachlorobiphenyl (PCB 54)	pg/L	1	1	159
2,3,3',4-Tetrachlorobiphenyl (PCB 55)	pg/L	1	0	--
2,3,3',4'-Tetrachlorobiphenyl (PCB 56)	pg/L	1	1	37
2,3,3',5-Tetrachlorobiphenyl (PCB 57)	pg/L	1	1	137
2,3,3',5'-Tetrachlorobiphenyl (PCB 58)	pg/L	1	0	--
2,3,4,4'-Tetrachlorobiphenyl (PCB 60)	pg/L	1	1	41
2,3,4',5-Tetrachlorobiphenyl (PCB 63)	pg/L	1	1	135
2,3,4',6-Tetrachlorobiphenyl (PCB 64)	pg/L	1	1	79
2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	pg/L	1	1	98
2,3',4,5-Tetrachlorobiphenyl (PCB 67)	pg/L	1	1	148
2,3',4,5'-Tetrachlorobiphenyl (PCB 68)	pg/L	1	1	150
2,3',5,5'-Tetrachlorobiphenyl (PCB 72)	pg/L	1	1	146
2,3',5',6-Tetrachlorobiphenyl (PCB 73)	pg/L	1	1	104
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	pg/L	1	1	46
3,3',4,5-Tetrachlorobiphenyl (PCB 78)	pg/L	1	0	--
3,3',4,5'-Tetrachlorobiphenyl (PCB 79)	pg/L	1	1	126
3,3',5,5'-Tetrachlorobiphenyl (PCB 80)	pg/L	1	0	--
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	pg/L	1	0	--
2,2',3,3',4-Pentachlorobiphenyl (PCB 82)	pg/L	1	1	118

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Table A-8b. Results for March 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
2,2',3,3',6-Pentachlorobiphenyl (PCB 84)	pg/L	1	1	153
2,2',3,4,6'-Pentachlorobiphenyl (PCB 89)	pg/L	1	1	149
2,2',3,5,5'-Pentachlorobiphenyl (PCB 92)	pg/L	1	1	152
2,2',3,5,6'-Pentachlorobiphenyl (PCB 94)	pg/L	1	1	155
2,2',3,6,6'-Pentachlorobiphenyl (PCB 96)	pg/L	1	1	164
2,2',4,5',6-Pentachlorobiphenyl (PCB 103)	pg/L	1	1	159
2,2',4,6,6'-Pentachlorobiphenyl (PCB 104)	pg/L	1	1	155
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	pg/L	1	1	88
2,3,3',4,5-Pentachlorobiphenyl (PCB 106)	pg/L	1	1	137
2,3,3',4,6-Pentachlorobiphenyl (PCB 109)	pg/L	1	1	135
2,3,3',5,5'-Pentachlorobiphenyl (PCB 111)	pg/L	1	1	149
2,3,3',5,6-Pentachlorobiphenyl (PCB 112)	pg/L	1	1	146
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	pg/L	1	1	99
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	pg/L	1	1	135
2,3',4,5,5'-Pentachlorobiphenyl (PCB 120)	pg/L	1	1	147
2,3',4,5',6-Pentachlorobiphenyl (PCB 121)	pg/L	1	1	157
2,3,3',4',5'-Pentachlorobiphenyl (PCB 122)	pg/L	1	0	--
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	pg/L	1	0	--
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	pg/L	1	0	--
3,3',4,5,5'-Pentachlorobiphenyl (PCB 127)	pg/L	1	0	--
2,2',3,3',4,5'-Hexachlorobiphenyl (PCB 130)	pg/L	1	1	141
2,2',3,3',4,6-Hexachlorobiphenyl (PCB 131)	pg/L	1	1	134
2,2',3,3',4,6'-Hexachlorobiphenyl (PCB 132)	pg/L	1	1	144
2,2',3,3',5,5'-Hexachlorobiphenyl (PCB 133)	pg/L	1	1	140
2,2',3,3',6,6'-Hexachlorobiphenyl (PCB 136)	pg/L	1	1	148
2,2',3,4,4',5-Hexachlorobiphenyl (PCB 137)	pg/L	1	1	136
2,2',3,4,5,5'-Hexachlorobiphenyl (PCB 141)	pg/L	1	1	146
2,2',3,4,5,6-Hexachlorobiphenyl (PCB 142)	pg/L	1	0	--
2,2',3,4,5',6-Hexachlorobiphenyl (PCB 144)	pg/L	1	1	148
2,2',3,4,6,6'-Hexachlorobiphenyl (PCB 145)	pg/L	1	0	--
2,2',3,4',5,5'-Hexachlorobiphenyl (PCB 146)	pg/L	1	1	142
2,2',3,4',5,6'-Hexachlorobiphenyl (PCB 148)	pg/L	1	1	147
2,2',3,4',6,6'-Hexachlorobiphenyl (PCB 150)	pg/L	1	1	150
2,2',3,5,6,6'-Hexachlorobiphenyl (PCB 152)	pg/L	1	1	150
2,2',4,4',6,6'-Hexachlorobiphenyl (PCB 155)	pg/L	1	1	152
2,3,3',4,4',6-Hexachlorobiphenyl (PCB 158)	pg/L	1	1	146
2,3,3',4,5,5'-Hexachlorobiphenyl (PCB 159)	pg/L	1	1	142
2,3,3',4,5',6-Hexachlorobiphenyl (PCB 161)	pg/L	1	0	--
2,3,3',4',5,5'-Hexachlorobiphenyl (PCB 162)	pg/L	1	1	135
2,3,3',4',5',6-Hexachlorobiphenyl (PCB 164)	pg/L	1	1	142
2,3,3',5,5',6-Hexachlorobiphenyl (PCB 165)	pg/L	1	1	140
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	pg/L	1	1	143
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	pg/L	1	0	--
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	pg/L	1	1	155
2,2',3,3',4,5,5'-Heptachlorobiphenyl (PCB 172)	pg/L	1	1	152
2,2',3,3',4,5,6'-Heptachlorobiphenyl (PCB 174)	pg/L	1	1	156
2,2',3,3',4,5',6-Heptachlorobiphenyl (PCB 175)	pg/L	1	1	150
2,2',3,3',4,6,6'-Heptachlorobiphenyl (PCB 176)	pg/L	1	1	152
2,2',3,3',4,5',6'-Heptachlorobiphenyl (PCB 177)	pg/L	1	1	152
2,2',3,3',5,5',6-Heptachlorobiphenyl (PCB 178)	pg/L	1	1	151
2,2',3,3',5,6,6'-Heptachlorobiphenyl (PCB 179)	pg/L	1	1	150
2,2',3,4,4',5,6-Heptachlorobiphenyl (PCB 181)	pg/L	1	1	150
2,2',3,4,4',5,6'-Heptachlorobiphenyl (PCB 182)	pg/L	1	1	144
2,2',3,4,4',6,6'-Heptachlorobiphenyl (PCB 184)	pg/L	1	1	134
2,2',3,4,5,6,6'-Heptachlorobiphenyl (PCB 186)	pg/L	1	1	144
2,2',3,4',5,5',6-Heptachlorobiphenyl (PCB 187)	pg/L	1	1	152

Table A-8b. Results for March 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
2,2',3,4',5,6,6'-Heptachlorobiphenyl (PCB 188)	pg/L	1	1	149
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	pg/L	1	1	141
2,3,3',4,4',5,6-Heptachlorobiphenyl (PCB 190)	pg/L	1	1	151
2,3,3',4,4',5',6-Heptachlorobiphenyl (PCB 191)	pg/L	1	1	149
2,3,3',4,5,5',6-Heptachlorobiphenyl (PCB 192)	pg/L	1	0	--
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (PCB 194)	pg/L	1	1	143
2,2',3,3',4,4',5,6-Octachlorobiphenyl (PCB 195)	pg/L	1	1	139
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (PCB 196)	pg/L	1	1	142
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (PCB 201)	pg/L	1	1	147
2,2',3,3',5,5',6,6'-Octachlorobiphenyl (PCB 202)	pg/L	1	1	142
2,2',3,4,4',5,5',6-Octachlorobiphenyl (PCB 203)	pg/L	1	1	141
2,2',3,4,4',5,6,6'-Octachlorobiphenyl (PCB 204)	pg/L	1	0	--
2,3,3',4,4',5,5',6-Octachlorobiphenyl (PCB 205)	pg/L	1	1	143
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB 206)	pg/L	1	1	137
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (PCB 207)	pg/L	1	1	133
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (PCB 208)	pg/L	1	1	132
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)	pg/L	1	1	32
PCB012 & 013	pg/L	1	1	122
PCB018 & 030	pg/L	1	1	137
PCB020 & 028	pg/L	1	1	103
PCB021 & 033	pg/L	1	1	139
PCB026 & 029	pg/L	1	1	136
PCB040 & 041 & 071	pg/L	1	1	145
PCB044 & 047 & 065	pg/L	1	1	158
PCB045 & 051	pg/L	1	1	158
PCB049 & 069	pg/L	1	1	155
PCB050 & 053	pg/L	1	1	157
PCB059 & 062 & 075	pg/L	1	1	157
PCB061 & 070 & 074 & 076	pg/L	1	1	88
PCB083 & 099	pg/L	1	1	153
PCB085 & 116 & 117	pg/L	1	1	144
PCB086 & 087 & 097 & 108 & 119 & 125	pg/L	1	1	147
PCB088 & 091	pg/L	1	1	160
PCB090 & 101 & 113	pg/L	1	1	157
PCB093 & 095 & 098 & 100 & 102	pg/L	1	1	158
PCB107 & 124	pg/L	1	1	125
PCB110 & 115	pg/L	1	1	144
PCB128 & 166	pg/L	1	1	142
PCB129 & 138 & 160 & 163	pg/L	1	1	145
PCB134 & 143	pg/L	1	1	145
PCB135 & 151 & 154	pg/L	1	1	149
PCB139 & 140	pg/L	1	1	164
PCB147 & 149	pg/L	1	1	149
PCB153 & 168	pg/L	1	1	148
PCB156 & 157	pg/L	1	1	143
PCB171 & 173	pg/L	1	1	153
PCB180 & 193	pg/L	1	1	153
PCB183 & 185	pg/L	1	1	154
PCB197 & 200	pg/L	1	1	145
PCB198 & 199	pg/L	1	1	146
PCB Aroclors				
Aroclor 1016	pg/L	1	0	--
Aroclor 1221	pg/L	1	0	--
Aroclor 1232	pg/L	1	0	--
Aroclor 1242	pg/L	1	0	--

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Table A-8b. Results for March 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
Aroclor 1248	pg/L	1	1	156
Aroclor 1254	pg/L	1	0	--
Aroclor 1260	pg/L	1	1	153
PCB Homologs				
Monochlorobiphenyl	pg/L	1	1	106
Dichlorobiphenyl	pg/L	1	1	128
Trichlorobiphenyl	pg/L	1	1	149
Tetrachlorobiphenyl	pg/L	1	1	154
Pentachlorobiphenyl	pg/L	1	1	153
Hexachlorobiphenyl	pg/L	1	1	147
Heptachlorobiphenyl	pg/L	1	1	153
Octachlorobiphenyl	pg/L	1	1	143
Nonachlorobiphenyl	pg/L	1	1	136
Polychlorinated biphenyls	pg/L	1	1	149
Chlorinated Dioxin/Furans				
2,3,7,8-Tetrachlorodibenzofuran	pg/L	1	1	11
2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/L	1	0	--
1,2,3,7,8-Pentachlorodibenzofuran	pg/L	1	1	0
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/L	1	1	16
2,3,4,7,8-Pentachlorodibenzofuran	pg/L	1	1	16
1,2,3,4,7,8-Hexachlorodibenzofuran	pg/L	1	1	80
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/L	1	1	40
1,2,3,6,7,8-Hexachlorodibenzofuran	pg/L	1	1	17
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/L	1	1	38
1,2,3,7,8,9-Hexachlorodibenzofuran	pg/L	1	1	33
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/L	1	1	45
2,3,4,6,7,8-Hexachlorodibenzofuran	pg/L	1	1	19
1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/L	1	1	29
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/L	1	1	5
1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/L	1	1	103
Chlorinated Dioxin/Furan Homologs				
Tetrachlorodibenzofuran homologs	pg/L	1	1	22
Tetrachlorodibenzo-p-dioxin homologs	pg/L	1	1	48
Pentachlorodibenzofuran homologs	pg/L	1	1	41
Pentachlorodibenzo-p-dioxin homologs	pg/L	1	1	85
Hexachlorodibenzofuran homologs	pg/L	1	1	33
Hexachlorodibenzo-p-dioxin homologs	pg/L	1	1	41
Heptachlorodibenzofuran homologs	pg/L	1	1	43
Heptachlorodibenzo-p-dioxin homologs	pg/L	1	1	1
Octachlorodibenzofuran	pg/L	1	1	110
Octachlorodibenzo-p-dioxin	pg/L	1	1	19
Polycyclic Aromatic Hydrocarbons				
2-Methylnaphthalene	pg/L	1	0	--
Acenaphthene	pg/L	1	0	--
Acenaphthylene	pg/L	1	0	--
Anthracene	pg/L	1	0	--
Benz(a)anthracene	pg/L	1	0	--
Benzo(a)pyrene	pg/L	1	0	--
Benzo(b+j)fluoranthene	pg/L	1	0	--
Benzo(g,h,i)perylene	pg/L	1	0	--
Benzo(k)fluoranthene	pg/L	1	1	54
Chrysene	pg/L	1	1	51

ANC04634
BZTO104(e)004634

Table A-8b. Results for March 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
Dibenz(a,h)anthracene	pg/L	1	0	--
Fluoranthene	pg/L	1	0	--
Fluorene	pg/L	1	0	--
Indeno(1,2,3-cd)pyrene	pg/L	1	1	50
Naphthalene	pg/L	1	0	--
Phenanthrene	pg/L	1	0	--
Pyrene	pg/L	1	0	--
Phthalate Esters				
Bis(2-ethylhexyl) phthalate	pg/L	1	0	--
Butylbenzyl phthalate	pg/L	1	0	--
Dibutyl phthalate	pg/L	1	0	--
Diethyl phthalate	pg/L	1	0	--
Dimethyl phthalate	pg/L	1	0	--
Di-n-octyl phthalate	pg/L	1	0	--
Organochlorine Pesticides				
2,4'-DDD	pg/L	1	1	55
2,4'-DDE	pg/L	1	1	14
2,4'-DDT	pg/L	1	0	--
4,4'-DDD	pg/L	1	1	98
4,4'-DDE	pg/L	1	1	3
4,4'-DDT	pg/L	1	1	172
Aldrin	pg/L	1	1	15
alpha-Endosulfan	pg/L	1	0	--
alpha-Hexachlorocyclohexane	pg/L	1	0	--
beta-Endosulfan	pg/L	1	1	NA
beta-Hexachlorocyclohexane	pg/L	1	0	--
cis-Chlordane	pg/L	1	1	11
cis-Nonachlor	pg/L	1	1	46
delta-Hexachlorocyclohexane	pg/L	1	0	--
Dieldrin	pg/L	1	0	--
Endosulfan sulfate	pg/L	1	0	--
Endrin	pg/L	1	0	--
Endrin aldehyde	pg/L	1	0	--
Endrin ketone	pg/L	1	0	--
gamma-Hexachlorocyclohexane	pg/L	1	0	--
Heptachlor	pg/L	1	0	--
Heptachlor epoxide	pg/L	1	0	--
Hexachlorobenzene	pg/L	1	1	15
Hexachlorobutadiene	pg/L	1	0	--
Methoxychlor	pg/L	1	0	--
Oxychlordane	pg/L	1	1	12
trans-Chlordane	pg/L	1	1	7
trans-Nonachlor	pg/L	1	1	14

Notes:
NA - not applicable
RPD - relative percent difference

ANC04635
BZTO104(e)004635

Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		RPD
		Number Collected	Number Detected	
Peristaltic Samples				
Conventionals				
Total dissolved solids	mg/L	1	1	22
Total suspended solids	mg/L	1	1	7
Perchlorate	ug/L	1	1	62
Dissolved organic carbon	mg/L	1	1	0
Total organic carbon	mg/L	1	1	4
Hardness as $CaCO_3$	mg/L	1	1	1
Butyltins				
Butyltin ion	ug/L	1	0	--
Dibutyltin ion	ug/L	1	0	--
Tributyltin ion	ug/L	1	0	--
Tetrabutyltin ion	ug/L	1	0	--
Total Metals				
Aluminum	ug/L	1	1	4
Antimony	ug/L	1	1	10
Arsenic	ug/L	1	1	0
Cadmium	ug/L	1	1	40
Chromium	ug/L	1	0	--
Copper	ug/L	1	1	2
Lead	ug/L	1	1	0
Mercury	ug/L	1	0	--
Nickel	ug/L	1	1	1
Selenium	ug/L	1	1	40
Silver	ug/L	1	0	--
Thallium	ug/L	--	--	--
Zinc	ug/L	1	1	11
Hexavalent chromium	mg/L	1	0	--
Dissolved Metals				
Aluminum	ug/L	1	1	NA
Antimony	ug/L	1	1	10
Arsenic	ug/L	1	0	0
Cadmium	ug/L	1	0	--
Chromium	ug/L	1	0	--
Copper	ug/L	1	1	2
Lead	ug/L	1	0	--
Mercury	ug/L	1	0	--
Nickel	ug/L	1	1	1
Selenium	ug/L	1	1	40
Silver	ug/L	1	0	--
Thallium	ug/L	--	--	--
Zinc	ug/L	1	0	--
Chlorinated Herbicides				
2,4,5-T	ug/L	1	0	--
2,4-D	ug/L	1	0	--
2,4-DB	ug/L	1	0	--
Dalapon	ug/L	1	0	--

ANC04636
BZTO104(e)004636

Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		RPD
		Number Collected	Number Detected	
Dicamba	ug/L	1	0	--
Dichloroprop	ug/L	1	0	--
Dinoseb	ug/L	1	0	--
MCPA	ug/L	1	0	--
MCPP	ug/L	1	0	--
Silvex	ug/L	1	0	--
Semivolatile Organic Compounds				
1,2,4-Trichlorobenzene	ug/L	1	0	--
1,2-Dichlorobenzene	ug/L	1	0	--
1,3-Dichlorobenzene	ug/L	1	0	--
1,4-Dichlorobenzene	ug/L	1	0	--
2,4-Dinitrotoluene	ug/L	1	0	--
2,6-Dinitrotoluene	ug/L	1	0	--
2-Chloronaphthalene	ug/L	1	0	--
2-Nitroaniline	ug/L	1	0	--
3,3'-Dichlorobenzidine	ug/L	1	0	--
3-Nitroaniline	ug/L	1	0	--
4-Bromophenyl phenyl ether	ug/L	1	0	--
4-Chloroaniline	ug/L	1	0	--
4-Chlorophenyl phenyl ether	ug/L	1	0	--
4-Nitroaniline	ug/L	1	0	--
Aniline	ug/L	1	0	--
Azobenzene	ug/L	1	0	--
Benzoic acid	ug/L	1	0	--
Benzyl alcohol	ug/L	1	0	--
Bis(2-chloroethoxy) methane	ug/L	1	0	--
Bis(2-chloroethyl) ether	ug/L	1	0	--
Bis(2-chloroisopropyl) ether	ug/L	1	0	--
Carbazole	ug/L	1	0	--
Hexachlorobenzene	ug/L	1	0	--
Hexachlorobutadiene	ug/L	1	0	--
Hexachlorocyclopentadiene	ug/L	1	0	--
Hexachloroethane	ug/L	1	0	--
Isophorone	ug/L	1	0	--
Nitrobenzene	ug/L	1	0	--
N-Nitrosodimethylamine	ug/L	1	0	--
N-Nitrosodiphenylamine	ug/L	1	0	--
N-Nitrosodipropylamine	ug/L	1	0	--
Phenols				
2,4,5-Trichlorophenol	ug/L	1	0	--
2,4,6-Trichlorophenol	ug/L	1	0	--
2,4-Dichlorophenol	ug/L	1	0	--
2,4-Dimethylphenol	ug/L	1	0	--
2,4-Dinitrophenol	ug/L	1	0	--
2-Chlorophenol	ug/L	1	0	--
2-Methylphenol	ug/L	1	0	--
2-Nitrophenol	ug/L	1	0	--
4,6-Dinitro-2-methylphenol	ug/L	1	0	--
4-Chloro-3-methylphenol	ug/L	1	0	--
4-Methylphenol	ug/L	1	0	--

ANC04637
BZTO104(e)004637

Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
4-Nitrophenol	ug/L	1	0	--
Pentachlorophenol	ug/L	1	0	--
Phenol	ug/L	1	0	--
Phthalate Esters				
Bis(2-ethylhexyl) phthalate	ug/L	1	0	--
Butylbenzyl phthalate	ug/L	1	0	--
Dibutyl phthalate	ug/L	1	0	--
Diethyl phthalate	ug/L	1	0	--
Dimethyl phthalate	ug/L	1	0	--
Di-n-octyl phthalate	ug/L	1	0	--
Polycyclic Aromatic Hydrocarbons				
2-Methylnaphthalene	ug/L	1	0	--
Acenaphthene	ug/L	1	0	--
Acenaphthylene	ug/L	1	0	--
Anthracene	ug/L	1	0	--
Benz(a)anthracene	ug/L	1	0	--
Benzo(a)pyrene	ug/L	1	0	--
Benzo(b)fluoranthene	ug/L	1	0	--
Benzo(g,h,i)perylene	ug/L	1	0	--
Benzo(k)fluoranthene	ug/L	1	0	--
Chrysene	ug/L	1	0	--
Dibenz(a,h)anthracene	ug/L	1	0	--
Dibenzofuran	ug/L	1	0	--
Fluoranthene	ug/L	1	1	76
Fluorene	ug/L	1	0	--
Indeno(1,2,3-cd)pyrene	ug/L	1	0	--
Naphthalene	ug/L	1	0	--
Phenanthrene	ug/L	1	0	--
Pyrene	ug/L	1	1	23
Organochlorine Pesticides				
2,4'-DDD	ug/L	0	--	--
2,4'-DDE	ug/L	0	--	--
2,4'-DDT	ug/L	0	--	--
4,4'-DDD	ug/L	0	--	--
4,4'-DDE	ug/L	0	--	--
4,4'-DDT	ug/L	0	--	--
Aldrin	ug/L	0	--	--
alpha-Endosulfan	ug/L	0	--	--
alpha-Hexachlorocyclohexane	ug/L	0	--	--
beta-Endosulfan	ug/L	0	--	--
beta-Hexachlorocyclohexane	ug/L	0	--	--
cis-Chlordane	ug/L	0	--	--
cis-Nonachlor	ug/L	0	--	--
delta-Hexachlorocyclohexane	ug/L	0	--	--
Dieldrin	ug/L	0	--	--
Endosulfan sulfate	ug/L	0	--	--
Endrin	ug/L	0	--	--
Endrin aldehyde	ug/L	0	--	--
Endrin ketone	ug/L	0	--	--

ANC04638
BZTO104(e)004638

Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
gamma-Hexachlorocyclohexane	ug/L	0	--	--
Heptachlor	ug/L	0	--	--
Heptachlor epoxide	ug/L	0	--	--
Hexachlorobenzene	ug/L	0	--	--
Hexachlorobutadiene	ug/L	0	--	--
Hexachloroethane	ug/L	0	--	--
Methoxychlor	ug/L	0	--	--
Mirex	ug/L	0	--	--
Oxychlordane	ug/L	0	--	--
Toxaphene	ug/L	0	--	--
trans-Chlordane	ug/L	0	--	--
trans-Nonachlor	ug/L	0	--	--
PCB Aroclors				
Aroclor 1016	ug/L	0	--	--
Aroclor 1221	ug/L	0	--	--
Aroclor 1232	ug/L	0	--	--
Aroclor 1242	ug/L	0	--	--
Aroclor 1248	ug/L	0	--	--
Aroclor 1254	ug/L	0	--	--
Aroclor 1260	ug/L	0	--	--
Aroclor 1262	ug/L	0	--	--
Aroclor 1268	ug/L	0	--	--
XAD Column Samples				
PCB Congeners				
2-Chlorobiphenyl (PCB 1)	pg/L	1	1	24
3-Chlorobiphenyl (PCB 2)	pg/L	1	1	7
4-Chlorobiphenyl (PCB 3)	pg/L	1	1	30
2,2'-Dichlorobiphenyl (PCB 4)	pg/L	1	1	38
2,3-Dichlorobiphenyl (PCB 5)	pg/L	1	0	--
2,3'-Dichlorobiphenyl (PCB 6)	pg/L	1	1	34
2,4-Dichlorobiphenyl (PCB 7)	pg/L	1	1	14
2,4'-Dichlorobiphenyl (PCB 8)	pg/L	1	1	32
2,5-Dichlorobiphenyl (PCB 9)	pg/L	1	1	37
2,6-Dichlorobiphenyl (PCB 10)	pg/L	1	1	36
3,3'-Dichlorobiphenyl (PCB 11)	pg/L	1	1	4
3,5-Dichlorobiphenyl (PCB 14)	pg/L	1	0	--
4,4'-Dichlorobiphenyl (PCB 15)	pg/L	1	1	26
2,2',3-Trichlorobiphenyl (PCB 16)	pg/L	1	1	36
2,2',4-Trichlorobiphenyl (PCB 17)	pg/L	1	1	16
2,2',6-Trichlorobiphenyl (PCB 19)	pg/L	1	1	21
2,3,4'-Trichlorobiphenyl (PCB 22)	pg/L	1	1	36
2,3,5-Trichlorobiphenyl (PCB 23)	pg/L	1	1	NA
2,3,6-Trichlorobiphenyl (PCB 24)	pg/L	1	0	--
2,3',4-Trichlorobiphenyl (PCB 25)	pg/L	1	1	9
2,3',6-Trichlorobiphenyl (PCB 27)	pg/L	1	1	15
2,4',5-Trichlorobiphenyl (PCB 31)	pg/L	1	1	30
2,4',6-Trichlorobiphenyl (PCB 32)	pg/L	1	1	14
2,3',5'-Trichlorobiphenyl (PCB 34)	pg/L	1	1	19
3,3',4-Trichlorobiphenyl (PCB 35)	pg/L	1	0	--
3,3',5-Trichlorobiphenyl (PCB 36)	pg/L	1	0	--

ANC04639
BZTO104(e)004639

Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
3,4,4'-Trichlorobiphenyl (PCB 37)	pg/L	1	1	29
3,4,5-Trichlorobiphenyl (PCB 38)	pg/L	1	1	20
3,4',5-Trichlorobiphenyl (PCB 39)	pg/L	1	0	--
2,2',3,4'-Tetrachlorobiphenyl (PCB 42)	pg/L	1	1	10
2,2',3,5-Tetrachlorobiphenyl (PCB 43)	pg/L	1	1	11
2,2',3,6'-Tetrachlorobiphenyl (PCB 46)	pg/L	1	1	15
2,2',4,5-Tetrachlorobiphenyl (PCB 48)	pg/L	1	1	10
2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	pg/L	1	1	0
2,2',6,6'-Tetrachlorobiphenyl (PCB 54)	pg/L	1	1	6
2,3,3',4-Tetrachlorobiphenyl (PCB 55)	pg/L	1	0	--
2,3,3',4'-Tetrachlorobiphenyl (PCB 56)	pg/L	1	1	20
2,3,3',5-Tetrachlorobiphenyl (PCB 57)	pg/L	1	1	17
2,3,3',5'-Tetrachlorobiphenyl (PCB 58)	pg/L	1	1	NA
2,3,4,4'-Tetrachlorobiphenyl (PCB 60)	pg/L	1	1	17
2,3,4',5-Tetrachlorobiphenyl (PCB 63)	pg/L	1	1	7
2,3,4',6-Tetrachlorobiphenyl (PCB 64)	pg/L	1	1	19
2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	pg/L	1	1	7
2,3',4,5-Tetrachlorobiphenyl (PCB 67)	pg/L	1	0	--
2,3',4,5'-Tetrachlorobiphenyl (PCB 68)	pg/L	1	1	17
2,3',5,5'-Tetrachlorobiphenyl (PCB 72)	pg/L	1	1	20
2,3',5',6-Tetrachlorobiphenyl (PCB 73)	pg/L	1	1	91
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	pg/L	1	1	11
3,3',4,5-Tetrachlorobiphenyl (PCB 78)	pg/L	1	0	--
3,3',4,5'-Tetrachlorobiphenyl (PCB 79)	pg/L	1	1	24
3,3',5,5'-Tetrachlorobiphenyl (PCB 80)	pg/L	1	0	--
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	pg/L	1	0	--
2,2',3,3',4-Pentachlorobiphenyl (PCB 82)	pg/L	1	1	8
2,2',3,3',6-Pentachlorobiphenyl (PCB 84)	pg/L	1	1	19
2,2',3,4,6'-Pentachlorobiphenyl (PCB 89)	pg/L	1	1	11
2,2',3,5,5'-Pentachlorobiphenyl (PCB 92)	pg/L	1	1	32
2,2',3,5,6'-Pentachlorobiphenyl (PCB 94)	pg/L	1	1	24
2,2',3,6,6'-Pentachlorobiphenyl (PCB 96)	pg/L	1	1	12
2,2',4,5',6-Pentachlorobiphenyl (PCB 103)	pg/L	1	1	23
2,2',4,6,6'-Pentachlorobiphenyl (PCB 104)	pg/L	1	1	24
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	pg/L	1	1	5
2,3,3',4,5-Pentachlorobiphenyl (PCB 106)	pg/L	1	1	40
2,3,3',4,6-Pentachlorobiphenyl (PCB 109)	pg/L	1	1	26
2,3,3',5,5'-Pentachlorobiphenyl (PCB 111)	pg/L	1	1	48
2,3,3',5,6-Pentachlorobiphenyl (PCB 112)	pg/L	1	1	33
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	pg/L	1	1	NA
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	pg/L	1	1	21
2,3',4,5,5'-Pentachlorobiphenyl (PCB 120)	pg/L	1	1	46
2,3',4,5',6-Pentachlorobiphenyl (PCB 121)	pg/L	1	1	38
2,3,3',4',5'-Pentachlorobiphenyl (PCB 122)	pg/L	1	1	NA
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	pg/L	1	1	11
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	pg/L	1	0	--
3,3',4,5,5'-Pentachlorobiphenyl (PCB 127)	pg/L	1	0	--
2,2',3,3',4,5'-Hexachlorobiphenyl (PCB 130)	pg/L	1	1	34
2,2',3,3',4,6-Hexachlorobiphenyl (PCB 131)	pg/L	1	1	35
2,2',3,3',4,6'-Hexachlorobiphenyl (PCB 132)	pg/L	1	1	34
2,2',3,3',5,5'-Hexachlorobiphenyl (PCB 133)	pg/L	1	1	42
2,2',3,3',6,6'-Hexachlorobiphenyl (PCB 136)	pg/L	1	1	34

ANC04640
BZTO104(e)004640

Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
2,2',3,4,4',5-Hexachlorobiphenyl (PCB 137)	pg/L	1	1	29
2,2',3,4,5,5'-Hexachlorobiphenyl (PCB 141)	pg/L	1	1	35
2,2',3,4,5,6-Hexachlorobiphenyl (PCB 142)	pg/L	1	0	--
2,2',3,4,5',6-Hexachlorobiphenyl (PCB 144)	pg/L	1	1	34
2,2',3,4,6,6'-Hexachlorobiphenyl (PCB 145)	pg/L	1	1	55
2,2',3,4',5,5'-Hexachlorobiphenyl (PCB 146)	pg/L	1	1	38
2,2',3,4',5,6'-Hexachlorobiphenyl (PCB 148)	pg/L	1	1	40
2,2',3,4',6,6'-Hexachlorobiphenyl (PCB 150)	pg/L	1	1	39
2,2',3,5,6,6'-Hexachlorobiphenyl (PCB 152)	pg/L	1	1	39
2,2',4,4',6,6'-Hexachlorobiphenyl (PCB 155)	pg/L	1	1	43
2,3,3',4,4',6-Hexachlorobiphenyl (PCB 158)	pg/L	1	1	36
2,3,3',4,5,5'-Hexachlorobiphenyl (PCB 159)	pg/L	1	1	31
2,3,3',4,5',6-Hexachlorobiphenyl (PCB 161)	pg/L	1	0	--
2,3,3',4',5,5'-Hexachlorobiphenyl (PCB 162)	pg/L	1	0	--
2,3,3',4',5',6-Hexachlorobiphenyl (PCB 164)	pg/L	1	1	36
2,3,3',5,5',6-Hexachlorobiphenyl (PCB 165)	pg/L	1	1	45
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	pg/L	1	1	31
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	pg/L	1	0	--
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	pg/L	1	1	26
2,2',3,3',4,5,5'-Heptachlorobiphenyl (PCB 172)	pg/L	1	1	28
2,2',3,3',4,5,6'-Heptachlorobiphenyl (PCB 174)	pg/L	1	1	34
2,2',3,3',4,5',6-Heptachlorobiphenyl (PCB 175)	pg/L	1	1	32
2,2',3,3',4,6,6'-Heptachlorobiphenyl (PCB 176)	pg/L	1	1	34
2,2',3,3',4,5',6'-Heptachlorobiphenyl (PCB 177)	pg/L	1	1	34
2,2',3,3',5,5',6-Heptachlorobiphenyl (PCB 178)	pg/L	1	1	35
2,2',3,3',5,6,6'-Heptachlorobiphenyl (PCB 179)	pg/L	1	1	36
2,2',3,4,4',5,6-Heptachlorobiphenyl (PCB 181)	pg/L	1	1	30
2,2',3,4,4',5,6'-Heptachlorobiphenyl (PCB 182)	pg/L	1	1	49
2,2',3,4,4',6,6'-Heptachlorobiphenyl (PCB 184)	pg/L	1	0	--
2,2',3,4,5,6,6'-Heptachlorobiphenyl (PCB 186)	pg/L	1	0	--
2,2',3,4',5,5',6-Heptachlorobiphenyl (PCB 187)	pg/L	1	1	35
2,2',3,4',5,6,6'-Heptachlorobiphenyl (PCB 188)	pg/L	1	1	43
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	pg/L	1	1	26
2,3,3',4,4',5,6-Heptachlorobiphenyl (PCB 190)	pg/L	1	1	29
2,3,3',4,4',5',6-Heptachlorobiphenyl (PCB 191)	pg/L	1	1	33
2,3,3',4,5,5',6-Heptachlorobiphenyl (PCB 192)	pg/L	1	0	--
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (PCB 194)	pg/L	1	1	23
2,2',3,3',4,4',5,6-Octachlorobiphenyl (PCB 195)	pg/L	1	1	18
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (PCB 196)	pg/L	1	1	23
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (PCB 201)	pg/L	1	1	19
2,2',3,3',5,5',6,6'-Octachlorobiphenyl (PCB 202)	pg/L	1	1	28
2,2',3,4,4',5,5',6-Octachlorobiphenyl (PCB 203)	pg/L	1	1	19
2,2',3,4,4',5,6,6'-Octachlorobiphenyl (PCB 204)	pg/L	1	0	--
2,3,3',4,4',5,5',6-Octachlorobiphenyl (PCB 205)	pg/L	1	1	26
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB 206)	pg/L	1	1	6
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (PCB 207)	pg/L	1	1	18
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (PCB 208)	pg/L	1	1	24
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)	pg/L	1	1	36
PCB012 & 013	pg/L	1	1	21
PCB018 & 030	pg/L	1	1	26
PCB020 & 028	pg/L	1	1	24
PCB021 & 033	pg/L	1	1	18

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Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
PCB026 & 029	pg/L	1	1	17
PCB040 & 041 & 071	pg/L	1	1	9
PCB044 & 047 & 065	pg/L	1	1	8
PCB045 & 051	pg/L	1	1	2
PCB049 & 069	pg/L	1	1	4
PCB050 & 053	pg/L	1	1	9
PCB059 & 062 & 075	pg/L	1	1	3
PCB061 & 070 & 074 & 076	pg/L	1	1	9
PCB083 & 099	pg/L	1	1	28
PCB085 & 116 & 117	pg/L	1	1	21
PCB086 & 087 & 097 & 108 & 119 & 125	pg/L	1	1	23
PCB088 & 091	pg/L	1	1	26
PCB090 & 101 & 113	pg/L	1	1	27
PCB093 & 095 & 098 & 100 & 102	pg/L	1	1	22
PCB107 & 124	pg/L	1	1	24
PCB110 & 115	pg/L	1	1	21
PCB128 & 166	pg/L	1	1	29
PCB129 & 138 & 160 & 163	pg/L	1	1	36
PCB134 & 143	pg/L	1	1	36
PCB135 & 151 & 154	pg/L	1	1	38
PCB139 & 140	pg/L	1	1	37
PCB147 & 149	pg/L	1	1	38
PCB153 & 168	pg/L	1	1	37
PCB156 & 157	pg/L	1	1	28
PCB171 & 173	pg/L	1	1	33
PCB180 & 193	pg/L	1	1	30
PCB183 & 185	pg/L	1	1	33
PCB197 & 200	pg/L	1	1	22
PCB198 & 199	pg/L	1	1	24
PCB Aroclors				
Aroclor 1016	pg/L	1	0	--
Aroclor 1221	pg/L	1	0	--
Aroclor 1232	pg/L	1	0	--
Aroclor 1242	pg/L	1	0	--
Aroclor 1248	pg/L	1	1	7
Aroclor 1254	pg/L	1	0	--
Aroclor 1260	pg/L	1	1	30
PCB Homologs				
Monochlorobiphenyl	pg/L	1	1	1
Dichlorobiphenyl	pg/L	1	1	33
Trichlorobiphenyl	pg/L	1	1	21
Tetrachlorobiphenyl	pg/L	1	1	0
Pentachlorobiphenyl	pg/L	1	1	25
Hexachlorobiphenyl	pg/L	1	1	37
Heptachlorobiphenyl	pg/L	1	1	33
Octachlorobiphenyl	pg/L	1	1	23
Nonachlorobiphenyl	pg/L	1	1	12
Polychlorinated biphenyls	pg/L	1	1	5
Chlorinated Dioxin/Furans				

Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
2,3,7,8-Tetrachlorodibenzofuran	pg/L	1	0	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/L	1	0	--
1,2,3,7,8-Pentachlorodibenzofuran	pg/L	1	0	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/L	1	0	--
2,3,4,7,8-Pentachlorodibenzofuran	pg/L	1	0	--
1,2,3,4,7,8-Hexachlorodibenzofuran	pg/L	1	0	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/L	1	0	--
1,2,3,6,7,8-Hexachlorodibenzofuran	pg/L	1	0	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/L	1	1	38
1,2,3,7,8,9-Hexachlorodibenzofuran	pg/L	1	0	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/L	1	0	--
2,3,4,6,7,8-Hexachlorodibenzofuran	pg/L	1	0	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/L	1	0	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/L	1	1	25
1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/L	1	0	--
Chlorinated Dioxin/Furan Homologs				
Tetrachlorodibenzofuran homologs	pg/L	1	1	11
Tetrachlorodibenzo-p-dioxin homologs	pg/L	1	1	8
Pentachlorodibenzofuran homologs	pg/L	1	1	38
Pentachlorodibenzo-p-dioxin homologs	pg/L	1	1	66
Hexachlorodibenzofuran homologs	pg/L	1	0	--
Hexachlorodibenzo-p-dioxin homologs	pg/L	1	1	27
Heptachlorodibenzofuran homologs	pg/L	1	1	57
Heptachlorodibenzo-p-dioxin homologs	pg/L	1	1	26
Octachlorodibenzofuran	pg/L	1	0	--
Octachlorodibenzo-p-dioxin	pg/L	1	1	39
Polycyclic Aromatic Hydrocarbons				
2-Methylnaphthalene	pg/L	1	1	14
Acenaphthene	pg/L	1	1	13
Acenaphthylene	pg/L	1	1	53
Anthracene	pg/L	1	0	--
Benz(a)anthracene	pg/L	1	1	9
Benzo(a)pyrene	pg/L	1	0	--
Benzo(b+j)fluoranthene	pg/L	1	0	--
Benzo(g,h,i)perylene	pg/L	1	1	53
Benzo(k)fluoranthene	pg/L	1	0	--
Chrysene	pg/L	1	1	29
Dibenz(a,h)anthracene	pg/L	1	0	--
Fluoranthene	pg/L	1	1	35
Fluorene	pg/L	1	1	2
Indeno(1,2,3-cd)pyrene	pg/L	1	0	--
Naphthalene	pg/L	1	0	--
Phenanthrene	pg/L	1	1	25
Pyrene	pg/L	1	1	24
Phthalate Esters				
Bis(2-ethylhexyl) phthalate	pg/L	1	1	48
Butylbenzyl phthalate	pg/L	1	1	28
Dibutyl phthalate	pg/L	1	1	28
Diethyl phthalate	pg/L	1	1	1

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Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
Dimethyl phthalate	pg/L	1	0	--
Di-n-octyl phthalate	pg/L	1	1	20
Organochlorine Pesticides				
2,4'-DDD	pg/L	1	1	66
2,4'-DDE	pg/L	1	1	30
2,4'-DDT	pg/L	1	1	96
4,4'-DDD	pg/L	1	1	59
4,4'-DDE	pg/L	1	1	2
4,4'-DDT	pg/L	1	1	91
Aldrin	pg/L	1	1	7
alpha-Endosulfan	pg/L	1	1	7
alpha-Hexachlorocyclohexane	pg/L	1	1	77
beta-Endosulfan	pg/L	1	1	18
beta-Hexachlorocyclohexane	pg/L	1	1	23
cis-Chlordane	pg/L	1	1	4
cis-Nonachlor	pg/L	1	1	6
delta-Hexachlorocyclohexane	pg/L	1	1	56
Dieldrin	pg/L	1	1	7
Endosulfan sulfate	pg/L	1	1	16
Endrin	pg/L	1	0	--
Endrin aldehyde	pg/L	1	0	--
Endrin ketone	pg/L	1	0	--
gamma-Hexachlorocyclohexane	pg/L	1	1	14
Heptachlor	pg/L	1	0	--
Heptachlor epoxide	pg/L	1	1	2
Hexachlorobenzene	pg/L	1	1	1
Hexachlorobutadiene	pg/L	1	1	40
Methoxychlor	pg/L	1	0	--
Oxychlordane	pg/L	1	1	NA
trans-Chlordane	pg/L	1	1	10
trans-Nonachlor	pg/L	1	1	13
XAD Filter Samples				
PCB Congeners				
2-Chlorobiphenyl (PCB 1)	pg/L	0	--	NA
3-Chlorobiphenyl (PCB 2)	pg/L	0	--	NA
4-Chlorobiphenyl (PCB 3)	pg/L	0	--	NA
2,2'-Dichlorobiphenyl (PCB 4)	pg/L	0	--	NA
2,3-Dichlorobiphenyl (PCB 5)	pg/L	0	--	NA
2,3'-Dichlorobiphenyl (PCB 6)	pg/L	0	--	NA
2,4-Dichlorobiphenyl (PCB 7)	pg/L	0	--	NA
2,4'-Dichlorobiphenyl (PCB 8)	pg/L	0	--	NA
2,5-Dichlorobiphenyl (PCB 9)	pg/L	0	--	NA
2,6-Dichlorobiphenyl (PCB 10)	pg/L	0	--	NA
3,3'-Dichlorobiphenyl (PCB 11)	pg/L	0	--	NA
3,5-Dichlorobiphenyl (PCB 14)	pg/L	0	--	NA
4,4'-Dichlorobiphenyl (PCB 15)	pg/L	0	--	NA
2,2',3-Trichlorobiphenyl (PCB 16)	pg/L	0	--	NA
2,2',4-Trichlorobiphenyl (PCB 17)	pg/L	0	--	NA
2,2',6-Trichlorobiphenyl (PCB 19)	pg/L	0	--	NA
2,3,4'-Trichlorobiphenyl (PCB 22)	pg/L	0	--	NA

Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
2,3,5-Trichlorobiphenyl (PCB 23)	pg/L	0	--	NA
2,3,6-Trichlorobiphenyl (PCB 24)	pg/L	0	--	NA
2,3',4-Trichlorobiphenyl (PCB 25)	pg/L	0	--	NA
2,3',6-Trichlorobiphenyl (PCB 27)	pg/L	0	--	NA
2,4',5-Trichlorobiphenyl (PCB 31)	pg/L	0	--	NA
2,4',6-Trichlorobiphenyl (PCB 32)	pg/L	0	--	NA
2,3',5'-Trichlorobiphenyl (PCB 34)	pg/L	0	--	NA
3,3',4-Trichlorobiphenyl (PCB 35)	pg/L	0	--	NA
3,3',5-Trichlorobiphenyl (PCB 36)	pg/L	0	--	NA
3,4,4'-Trichlorobiphenyl (PCB 37)	pg/L	0	--	NA
3,4,5-Trichlorobiphenyl (PCB 38)	pg/L	0	--	NA
3,4',5-Trichlorobiphenyl (PCB 39)	pg/L	0	--	NA
2,2',3,4'-Tetrachlorobiphenyl (PCB 42)	pg/L	0	--	NA
2,2',3,5-Tetrachlorobiphenyl (PCB 43)	pg/L	0	--	NA
2,2',3,6'-Tetrachlorobiphenyl (PCB 46)	pg/L	0	--	NA
2,2',4,5-Tetrachlorobiphenyl (PCB 48)	pg/L	0	--	NA
2,2',5,5'-Tetrachlorobiphenyl (PCB 52)	pg/L	0	--	NA
2,2',6,6'-Tetrachlorobiphenyl (PCB 54)	pg/L	0	--	NA
2,3,3',4-Tetrachlorobiphenyl (PCB 55)	pg/L	0	--	NA
2,3,3',4'-Tetrachlorobiphenyl (PCB 56)	pg/L	0	--	NA
2,3,3',5-Tetrachlorobiphenyl (PCB 57)	pg/L	0	--	NA
2,3,3',5'-Tetrachlorobiphenyl (PCB 58)	pg/L	0	--	NA
2,3,4,4'-Tetrachlorobiphenyl (PCB 60)	pg/L	0	--	NA
2,3,4',5-Tetrachlorobiphenyl (PCB 63)	pg/L	0	--	NA
2,3,4',6-Tetrachlorobiphenyl (PCB 64)	pg/L	0	--	NA
2,3',4,4'-Tetrachlorobiphenyl (PCB 66)	pg/L	0	--	NA
2,3',4,5-Tetrachlorobiphenyl (PCB 67)	pg/L	0	--	NA
2,3',4,5'-Tetrachlorobiphenyl (PCB 68)	pg/L	0	--	NA
2,3',5,5'-Tetrachlorobiphenyl (PCB 72)	pg/L	0	--	NA
2,3',5',6-Tetrachlorobiphenyl (PCB 73)	pg/L	0	--	NA
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	pg/L	0	--	NA
3,3',4,5-Tetrachlorobiphenyl (PCB 78)	pg/L	0	--	NA
3,3',4,5'-Tetrachlorobiphenyl (PCB 79)	pg/L	0	--	NA
3,3',5,5'-Tetrachlorobiphenyl (PCB 80)	pg/L	0	--	NA
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	pg/L	0	--	NA
2,2',3,3',4-Pentachlorobiphenyl (PCB 82)	pg/L	0	--	NA
2,2',3,3',6-Pentachlorobiphenyl (PCB 84)	pg/L	0	--	NA
2,2',3,4,6'-Pentachlorobiphenyl (PCB 89)	pg/L	0	--	NA
2,2',3,5,5'-Pentachlorobiphenyl (PCB 92)	pg/L	0	--	NA
2,2',3,5,6'-Pentachlorobiphenyl (PCB 94)	pg/L	0	--	NA
2,2',3,6,6'-Pentachlorobiphenyl (PCB 96)	pg/L	0	--	NA
2,2',4,5',6-Pentachlorobiphenyl (PCB 103)	pg/L	0	--	NA
2,2',4,6,6'-Pentachlorobiphenyl (PCB 104)	pg/L	0	--	NA
2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	pg/L	0	--	NA
2,3,3',4,5-Pentachlorobiphenyl (PCB 106)	pg/L	0	--	NA
2,3,3',4,6-Pentachlorobiphenyl (PCB 109)	pg/L	0	--	NA
2,3,3',5,5'-Pentachlorobiphenyl (PCB 111)	pg/L	0	--	NA
2,3,3',5,6-Pentachlorobiphenyl (PCB 112)	pg/L	0	--	NA
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	pg/L	0	--	NA
2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	pg/L	0	--	NA
2,3',4,5,5'-Pentachlorobiphenyl (PCB 120)	pg/L	0	--	NA
2,3',4,5',6-Pentachlorobiphenyl (PCB 121)	pg/L	0	--	NA

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Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
2,3,3',4',5'-Pentachlorobiphenyl (PCB 122)	pg/L	0	--	NA
2,3',4,4',5'-Pentachlorobiphenyl (PCB 123)	pg/L	0	--	NA
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	pg/L	0	--	NA
3,3',4,5,5'-Pentachlorobiphenyl (PCB 127)	pg/L	0	--	NA
2,2',3,3',4,5'-Hexachlorobiphenyl (PCB 130)	pg/L	0	--	NA
2,2',3,3',4,6-Hexachlorobiphenyl (PCB 131)	pg/L	0	--	NA
2,2',3,3',4,6'-Hexachlorobiphenyl (PCB 132)	pg/L	0	--	NA
2,2',3,3',5,5'-Hexachlorobiphenyl (PCB 133)	pg/L	0	--	NA
2,2',3,3',6,6'-Hexachlorobiphenyl (PCB 136)	pg/L	0	--	NA
2,2',3,4,4',5-Hexachlorobiphenyl (PCB 137)	pg/L	0	--	NA
2,2',3,4,5,5'-Hexachlorobiphenyl (PCB 141)	pg/L	0	--	NA
2,2',3,4,5,6-Hexachlorobiphenyl (PCB 142)	pg/L	0	--	NA
2,2',3,4,5',6-Hexachlorobiphenyl (PCB 144)	pg/L	0	--	NA
2,2',3,4,6,6'-Hexachlorobiphenyl (PCB 145)	pg/L	0	--	NA
2,2',3,4',5,5'-Hexachlorobiphenyl (PCB 146)	pg/L	0	--	NA
2,2',3,4',5,6'-Hexachlorobiphenyl (PCB 148)	pg/L	0	--	NA
2,2',3,4',6,6'-Hexachlorobiphenyl (PCB 150)	pg/L	0	--	NA
2,2',3,5,6,6'-Hexachlorobiphenyl (PCB 152)	pg/L	0	--	NA
2,2',4,4',6,6'-Hexachlorobiphenyl (PCB 155)	pg/L	0	--	NA
2,3,3',4,4',6-Hexachlorobiphenyl (PCB 158)	pg/L	0	--	NA
2,3,3',4,5,5'-Hexachlorobiphenyl (PCB 159)	pg/L	0	--	NA
2,3,3',4,5',6-Hexachlorobiphenyl (PCB 161)	pg/L	0	--	NA
2,3,3',4',5,5'-Hexachlorobiphenyl (PCB 162)	pg/L	0	--	NA
2,3,3',4',5',6-Hexachlorobiphenyl (PCB 164)	pg/L	0	--	NA
2,3,3',5,5',6-Hexachlorobiphenyl (PCB 165)	pg/L	0	--	NA
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	pg/L	0	--	NA
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	pg/L	0	--	NA
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	pg/L	0	--	NA
2,2',3,3',4,5,5'-Heptachlorobiphenyl (PCB 172)	pg/L	0	--	NA
2,2',3,3',4,5,6'-Heptachlorobiphenyl (PCB 174)	pg/L	0	--	NA
2,2',3,3',4,5',6-Heptachlorobiphenyl (PCB 175)	pg/L	0	--	NA
2,2',3,3',4,6,6'-Heptachlorobiphenyl (PCB 176)	pg/L	0	--	NA
2,2',3,3',4,5',6'-Heptachlorobiphenyl (PCB 177)	pg/L	0	--	NA
2,2',3,3',5,5',6-Heptachlorobiphenyl (PCB 178)	pg/L	0	--	NA
2,2',3,3',5,6,6'-Heptachlorobiphenyl (PCB 179)	pg/L	0	--	NA
2,2',3,4,4',5,6-Heptachlorobiphenyl (PCB 181)	pg/L	0	--	NA
2,2',3,4,4',5,6'-Heptachlorobiphenyl (PCB 182)	pg/L	0	--	NA
2,2',3,4,4',6,6'-Heptachlorobiphenyl (PCB 184)	pg/L	0	--	NA
2,2',3,4,5,6,6'-Heptachlorobiphenyl (PCB 186)	pg/L	0	--	NA
2,2',3,4',5,5',6-Heptachlorobiphenyl (PCB 187)	pg/L	0	--	NA
2,2',3,4',5,6,6'-Heptachlorobiphenyl (PCB 188)	pg/L	0	--	NA
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	pg/L	0	--	NA
2,3,3',4,4',5,6-Heptachlorobiphenyl (PCB 190)	pg/L	0	--	NA
2,3,3',4,4',5',6-Heptachlorobiphenyl (PCB 191)	pg/L	0	--	NA
2,3,3',4,5,5',6-Heptachlorobiphenyl (PCB 192)	pg/L	0	--	NA
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (PCB 194)	pg/L	0	--	NA
2,2',3,3',4,4',5,6-Octachlorobiphenyl (PCB 195)	pg/L	0	--	NA
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (PCB 196)	pg/L	0	--	NA
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (PCB 201)	pg/L	0	--	NA
2,2',3,3',5,5',6,6'-Octachlorobiphenyl (PCB 202)	pg/L	0	--	NA
2,2',3,4,4',5,5',6-Octachlorobiphenyl (PCB 203)	pg/L	0	--	NA
2,2',3,4,4',5,6,6'-Octachlorobiphenyl (PCB 204)	pg/L	0	--	NA

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Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
2,3,3',4,4',5,5',6-Octachlorobiphenyl (PCB 205)	pg/L	0	--	NA
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (PCB 206)	pg/L	0	--	NA
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (PCB 207)	pg/L	0	--	NA
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (PCB 208)	pg/L	0	--	NA
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (PCB 209)	pg/L	0	--	NA
PCB012 & 013	pg/L	0	--	NA
PCB018 & 030	pg/L	0	--	NA
PCB020 & 028	pg/L	0	--	NA
PCB021 & 033	pg/L	0	--	NA
PCB026 & 029	pg/L	0	--	NA
PCB040 & 041 & 071	pg/L	0	--	NA
PCB044 & 047 & 065	pg/L	0	--	NA
PCB045 & 051	pg/L	0	--	NA
PCB049 & 069	pg/L	0	--	NA
PCB050 & 053	pg/L	0	--	NA
PCB059 & 062 & 075	pg/L	0	--	NA
PCB061 & 070 & 074 & 076	pg/L	0	--	NA
PCB083 & 099	pg/L	0	--	NA
PCB085 & 116 & 117	pg/L	0	--	NA
PCB086 & 087 & 097 & 108 & 119 & 125	pg/L	0	--	NA
PCB088 & 091	pg/L	0	--	NA
PCB090 & 101 & 113	pg/L	0	--	NA
PCB093 & 095 & 098 & 100 & 102	pg/L	0	--	NA
PCB107 & 124	pg/L	0	--	NA
PCB110 & 115	pg/L	0	--	NA
PCB128 & 166	pg/L	0	--	NA
PCB129 & 138 & 160 & 163	pg/L	0	--	NA
PCB134 & 143	pg/L	0	--	NA
PCB135 & 151 & 154	pg/L	0	--	NA
PCB139 & 140	pg/L	0	--	NA
PCB147 & 149	pg/L	0	--	NA
PCB153 & 168	pg/L	0	--	NA
PCB156 & 157	pg/L	0	--	NA
PCB171 & 173	pg/L	0	--	NA
PCB180 & 193	pg/L	0	--	NA
PCB183 & 185	pg/L	0	--	NA
PCB197 & 200	pg/L	0	--	NA
PCB198 & 199	pg/L	0	--	NA

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Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		RPD
		Number Collected	Number Detected	
PCB Aroclors				
Aroclor 1016	pg/L	0	--	NA
Aroclor 1221	pg/L	0	--	NA
Aroclor 1232	pg/L	0	--	NA
Aroclor 1242	pg/L	0	--	NA
Aroclor 1248	pg/L	0	--	NA
Aroclor 1254	pg/L	0	--	NA
Aroclor 1260	pg/L	0	--	NA
PCB Homologs				
Monochlorobiphenyl	pg/L	0	--	NA
Dichlorobiphenyl	pg/L	0	--	NA
Trichlorobiphenyl	pg/L	0	--	NA
Tetrachlorobiphenyl	pg/L	0	--	NA
Pentachlorobiphenyl	pg/L	0	--	NA
Hexachlorobiphenyl	pg/L	0	--	NA
Heptachlorobiphenyl	pg/L	0	--	NA
Octachlorobiphenyl	pg/L	0	--	NA
Nonachlorobiphenyl	pg/L	0	--	NA
Polychlorinated biphenyls	pg/L	0	--	NA
Chlorinated Dioxin/Furans				
2,3,7,8-Tetrachlorodibenzofuran	pg/L	1	1	82
2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/L	1	1	NA
1,2,3,7,8-Pentachlorodibenzofuran	pg/L	1	1	83
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/L	1	1	168
2,3,4,7,8-Pentachlorodibenzofuran	pg/L	1	1	92
1,2,3,4,7,8-Hexachlorodibenzofuran	pg/L	1	1	146
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/L	1	1	63
1,2,3,6,7,8-Hexachlorodibenzofuran	pg/L	1	1	101
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/L	1	1	12
1,2,3,7,8,9-Hexachlorodibenzofuran	pg/L	1	1	97
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/L	1	1	61
2,3,4,6,7,8-Hexachlorodibenzofuran	pg/L	1	1	121
1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/L	1	1	153
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/L	1	1	139
1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/L	1	1	150
Chlorinated Dioxin/Furan Homologs				
Tetrachlorodibenzofuran homologs	pg/L	1	1	6
Tetrachlorodibenzo-p-dioxin homologs	pg/L	1	1	161
Pentachlorodibenzofuran homologs	pg/L	1	1	64
Pentachlorodibenzo-p-dioxin homologs	pg/L	1	1	162
Hexachlorodibenzofuran homologs	pg/L	1	1	135
Hexachlorodibenzo-p-dioxin homologs	pg/L	1	1	23
Heptachlorodibenzofuran homologs	pg/L	1	1	159
Heptachlorodibenzo-p-dioxin homologs	pg/L	1	1	136
Octachlorodibenzofuran	pg/L	1	1	163
Octachlorodibenzo-p-dioxin	pg/L	1	1	168

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Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		
		Number Collected	Number Detected	RPD
Polycyclic Aromatic Hydrocarbons				
2-Methylnaphthalene	pg/L	1	0	--
Acenaphthene	pg/L	1	0	--
Acenaphthylene	pg/L	1	0	--
Anthracene	pg/L	1	0	--
Benz(a)anthracene	pg/L	1	1	91
Benzo(a)pyrene	pg/L	1	0	--
Benzo(b+j)fluoranthene	pg/L	1	1	101
Benzo(g,h,i)perylene	pg/L	1	1	103
Benzo(k)fluoranthene	pg/L	1	1	99
Chrysene	pg/L	1	1	97
Dibenz(a,h)anthracene	pg/L	1	0	--
Fluoranthene	pg/L	1	1	88
Fluorene	pg/L	1	1	6
Indeno(1,2,3-cd)pyrene	pg/L	1	1	104
Naphthalene	pg/L	1	1	3
Phenanthrene	pg/L	1	0	--
Pyrene	pg/L	1	0	--
Phthalate Esters				
Bis(2-ethylhexyl) phthalate	pg/L	1	0	--
Butylbenzyl phthalate	pg/L	1	0	--
Dibutyl phthalate	pg/L	1	0	--
Diethyl phthalate	pg/L	1	0	--
Dimethyl phthalate	pg/L	1	1	NA
Di-n-octyl phthalate	pg/L	1	0	--
Organochlorine Pesticides				
2,4'-DDD	pg/L	1	1	184
2,4'-DDE	pg/L	1	1	165
2,4'-DDT	pg/L	1	0	--
4,4'-DDD	pg/L	1	1	181
4,4'-DDE	pg/L	1	1	157
4,4'-DDT	pg/L	1	0	--
Aldrin	pg/L	1	1	155
alpha-Endosulfan	pg/L	1	1	NA
alpha-Hexachlorocyclohexane	pg/L	1	0	--
beta-Endosulfan	pg/L	1	0	--
beta-Hexachlorocyclohexane	pg/L	1	0	--
cis-Chlordane	pg/L	1	1	173
cis-Nonachlor	pg/L	1	0	--
delta-Hexachlorocyclohexane	pg/L	1	0	--
Dieldrin	pg/L	1	1	179
Endosulfan sulfate	pg/L	1	0	--
Endrin	pg/L	1	0	--
Endrin aldehyde	pg/L	1	0	--
Endrin ketone	pg/L	1	0	--
gamma-Hexachlorocyclohexane	pg/L	1	0	--
Heptachlor	pg/L	1	0	--
Heptachlor epoxide	pg/L	1	0	--

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Table A-8c. Results for July 2005 Surface Water Field Replicate Samples.

Analyte Group/Chemical Name	Unit	Field Replicates		RPD
		Number Collected	Number Detected	
Hexachlorobenzene	pg/L	1	0	--
Hexachlorobutadiene	pg/L	1	0	--
Methoxychlor	pg/L	1	0	--
Oxychlordane	pg/L	1	0	--
trans-Chlordane	pg/L	1	1	172
trans-Nonachlor	pg/L	1	1	172

Notes:
NA - not applicable
RPD - relative percent difference

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LWG
LOWER WILLAMETTE GROUP

PORTLAND HARBOR RI/FS

ROUND 2 FIELD SAMPLING PLAN
ROUND 2B SUBSURFACE ADDENDUM

December 29, 2005

Prepared for

The Lower Willamette Group

Prepared by

Integral Consulting Inc.

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LIST OF ACRONYMS

CAS	Columbia Analytical Services
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSM	conceptual site model
EPA	U.S. Environmental Protection Agency
FSP	field sampling plan
GC/ECD	gas chromatography/electron capture detector
GC/MS	gas chromatography/mass spectrometry
LWG	Lower Willamette Group
N&E	nature and extent
NEA	Northeast Analytical
PCBs	polychlorinated biphenyls
QA	quality assurance
QC	quality control
QAPP	quality assurance project plan
RI/FS	remedial investigation and feasibility study
RPG	Registered Professional Geologist (Oregon)
SOPs	standard operating procedures
SVOCs	semivolatile organic compounds
TOC	total organic carbon
TPH	total petroleum hydrocarbon
VOCs	volatile organic compounds

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1.0 INTRODUCTION

The Round 2 Field Sampling Plan for Sediment Sampling and Benthic Toxicity Testing (Round 2 Sediment FSP; Integral et al. 2004a) identified 30 potential Round 2B core locations and target analytes to be sampled in the spring of 2005. This Round 2 Sediment FSP, Round 2B Subsurface Addendum, hereafter referred to as the 2B Addendum, reevaluates these Round 2B subsurface sampling locations and the target analytes. This addendum provides a rationale for any proposed changes to the Round 2 Sediment FSP based on the results of the Round 2A subsurface sampling effort and other information compiled since the Round 2 Sediment FSP was prepared as part of the Portland Harbor Remedial Investigation and Feasibility Study (RI/FS; Integral et al. 2004b).

The objectives for this Round 2B subsurface sampling effort are to 1) supplement the information collected during Round 2A on the nature and extent of sediment contamination in areas that were not sampled in Round 2A due to logistic constraints (e.g., an area was scheduled to be dredged), 2) determine the depth of contamination in areas of likely historical contamination for the FS, and 3) assess potential impacts to sediment quality from the discharge of groundwater in subareas of concern.

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2.0 SAMPLING APPROACH

The Round 2B core collection, core processing, sample handling, and sample analysis and archiving procedures will be identical to those used during the Round 2A subsurface sampling effort conducted from September to November 2004. Those procedures are detailed in the Round 2 FSP (Integral et al. 2004a), and any modifications to those procedures are documented in the Round 2A Subsurface Sediment Field Sampling Report (Integral and Anchor 2005).

If data gaps remain following the evaluation and interpretation of the Round 1 and 2 sediment and tissue data and the development of upland conceptual site model (CSM) site summaries, additional cores may be collected during a subsequent round of sampling (Round 3), currently anticipated for 2006.

2.1 ROUND 2B CORE SAMPLES

Table 2-1 lists the 30 Round 2B target core stations identified in the Round 2 Sediment FSP approved by the U.S Environmental Protection Agency (EPA) (Integral et al. 2004a). Two of these stations, C166 and C311, were sampled in Round 2A as substitutes for two 2A target stations that were inshore of these locations, C167 and C312, respectively, which were initially dropped from the sampling program because they were located on land (see Integral and Anchor 2005,Table 3-1). Subsequently, these stations have been relocated farther offshore, and will be sampled during Round 2B, as discussed below.

Figure 2-1 a – j shows the distribution of the proposed Round 2B core target locations. The 2B stations are shown relative to the actual Round 2A subsurface and surface sample locations and core locations that have been tentatively proposed for Round 3. Note that the 2B target locations plotted in Figure 2-1 represent the actual Round 2A surface sample acquisition location for that station. As with the Round 2A core sampling, the actual sample coordinates for the surface grab sample from a given station (where applicable) will be used as the target location for the core sample at that location. The target coordinates for new stations not previously sampled are based on EPA direction.

Table 2-2 summarizes the stations included in the Round 2B subsurface sampling effort. The table includes the remaining target Round 2B cores from the approved 2004 Sediment FSP, additional stations requested by EPA, , recommendations on whether to retain each core, and if so, a proposed target core length, the originally proposed target analytes, and any revisions to the target analyte list. Changes to the originally proposed 2B effort are based on a review of the information generated since Round 2A sampling, including core log descriptions and analytical results from nearby 2A cores, information presented in the CSM summaries for adjacent upland sites, and information on the Schnitzer dredging projects.

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Based on the target core evaluations presented in Table 2-2, a total of 42 stations will be targeted for Round 2B sampling. As mentioned, two of the original 30 Round 2B cores were collected during Round 2A. All other modifications made from the Round 2 Sediment FSP are discussed below. The revised Round 2B target core locations are shown in Figure 2-1a – j.

Schnitzer Area Subsurface Samples

Eighteen cores planned for Round 2B are located adjacent to the Schnitzer property, either in the International (Schnitzer) Slip or along the property's Willamette River frontage (Table 2-1). These subsurface samples were not collected in Round 2A because Schnitzer had approved permits to conduct dredging in these areas. Figure 2-2a - b shows the areas permitted for dredging in 2004. Eight of the 18 planned Round 2B cores (C082, C083, C084, C087, C088, C090, C091, and C094) are located within the permitted areas, which Schnitzer apparently dredged in October 2004. Information regarding the areas and volume dredged is not currently available but was requested on February 1, 2005 (FitzGerald 2005, pers. comm.). These eight core locations will be collected during Round 2B, as will the 10 core locations outside the permitted dredging areas: C078, C079, C080, C089, C092, C096, C099, C103, C106, and C109 (see Figure 2-1a – j and Table 2-2). As with the Round 2A cores, the target locations for Round 2B cores will be the actual sample coordinates of the surface grab samples collected there in 2004.

The following additions have been made to the analyte lists for Schnitzer Area cores per EPA request (Table 2-2):

- Total petroleum hydrocarbon (TPH) has been added to the analyte list for samples from all Schnitzer/International Slip cores, based on stormwater results for nearby upland facilities presented in the CSM (Integral and GSI 2004)
- Dioxins/furans have been added to the analyte list for cores C092 and C094 at the head of the slip where polychlorinated biphenyls (PCBs) were elevated in Round 2A surface samples and at C084 near outfall #WR-121 that drains runoff from the Calbag Metals "auto fluff" facility (Sanders 2005, pers. comm.)
- Chlorinated pesticides have been added to C084, C087, and C094.

Because the surface grab samples collected at the above stations during Round 2A were not analyzed for these added compounds, the 'A' interval from the above cores will be submitted for these analyses.

Kinder Morgan Subsurface Station

As a result of modifications to the location of station 116 made during the collection of Round 2A surface samples, the target location for C116 is very close

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to Round 2A core C121. Based on evidence of contamination observed in C121, it is proposed that the planned core from station 116 be relocated to a position offshore of C121 to aid in determining the offshore extent of the contamination. It is recommended that the original station 116 target coordinates proposed in the Round 2 Sediment FSP be used for this new station, which will be designated 522. Because no surface sample has been collected at this location, the 0-30 cm surface interval (A) from core C522 will be submitted for analysis.

Arco/BP Subsurface Station

As mentioned earlier, station 167 near the upstream end of the Arco/BP facility was initially dropped during Round 2A surface sampling after it was determined that the target location was onshore. At EPA's request, this station has been relocated offshore of Round 2A station C166. Because no surface sample has been collected at this station, the 0-30 cm surface interval (A) from core C167 will be submitted for analysis.

Siltronics Subsurface Station

Based on visual evidence of contamination observed during processing in Round 2A core C314 near the Siltronics facility, it is recommended that the proposed Round 2B core C315 be relocated to a new station located offshore of C314 to assess the offshore extent of potential contamination. This new station will be designated 523. In addition, C312, a Round 2A station initially dropped due to its onshore target coordinates, will be relocated offshore of C309. Because no surface sample has been collected at either of these locations, the 0-30 cm surface interval (A) from these cores will be submitted for analysis.

Willamette Cove

A potential area of petroleum contamination was identified in subsurface sediments in Willamette Cove in October 2004 during cleanup of the McCormick and Baxter Site (EPA 2005). The Port of Portland and Portland Metro excavated a portion of the upland and beach area at this location, extending to approximately the Metro property boundary at the ordinary low water line. The excavated material was disposed of at an approved landfill in October 2004. The observation of a petroleum sheen in the area of the excavation in May 2005 suggests the presence of petroleum in sediments offshore of this area. At EPA's request, three cores have been added to the 2B list to assess the nature and extent of the petroleum contamination in this portion of Willamette Cove. Two of the cores will be collected at Round 2A surface sample locations, G296 and G303. The third core, C524, will be placed to the north of Round 2A core C282, below the ordinary low water line, at the approximate location shown in Figure 2-1e. Analytes for these cores will include semivolatile organic compounds (SVOCs), pesticides, PCBs, metals, and TPH, as indicated in Table 2-2. Because no surface sample has been

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collected at this location, the 0-30 cm surface interval (A) from core C524 will be submitted for analysis.

Arkema Subsurface Station

Proposed Round 2B core C360 is located inshore of Round 2A core C359, which had visual evidence of contamination at 12 ft below the mudline. As requested by EPA, C360 will be shifted slightly downstream of its original location. In addition, a core will be collected at existing station 358 (located offshore of C359) to assess the offshore extent of potential contamination. It is recommended that C358 be analyzed according to the analyte list for station 360. Since the surface grab sample collected at station 358 during Round 2A was analyzed for all compounds on this list except hexavalent chromium and volatile organic compounds (VOCs), the surface interval of core C358 will be submitted for these two analyses.

U.S. Moorings

Cores will be collected at seven new stations (C525 through C531) along the U.S. Moorings shoreline as requested by EPA for site characterization. The analyte list for these cores will include the full suite of compounds except hexavalent chromium and dioxins/furans. Since no surface samples have been collected at these locations, the A-intervals from these cores will be submitted for analysis.

Willbridge

A new station (C532) will be added upstream of the Willbridge Bulk Fuel Area docks to assess the extent of contamination in that area and the potential groundwater impacts. The analyte list for C532 will be the same as for C381. Since no surface sample has been collected at this location, the A-interval from this core will be submitted for analysis.

Gunderson

Per EPA direction, chlorinate pesticides have been added to the analyte list for station C449. Since the Round 2A surface grab sample at this location did not include this analyte, the A-interval from this core will be submitted for chlorinated pesticide analysis.

2.2 DATA NEEDS

Round 2B subsurface sediment sampling is needed to support the RI site characterization, the FS, and groundwater impacts assessment. A summary of the overall coring approach for Round 2B sampling stations is provided in Table 2-3. For Round 2B, a total of 42 subsurface coring stations have been identified for purposes of site characterization (nature and extent). Of these, fifteen stations will also support FS purposes, and eight will also support the groundwater impacts assessment.

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2.2.1 Sample Type

As in Round 2A, subsurface sediment cores will be collected over water using a vessel-deployed vibracore equipped with either a 14-ft or 20-ft core tube (4-inch diameter). The 20-ft core locations were selected based on Round 2A core observations, existing upland source information from the CSM site summaries, equipment/water depth requirements, and the rationale provided by EPA and its partners. All cores will be collected according to the procedures presented in the Round 2 Sediment FSP (Integral et al. 2004a).

The sampling approaches for Round 2B nature and extent and FS cores will follow those presented in the Round 2 Sediment FSP. Groundwater cores will be processed following the approaches for the N&E or FS cores as appropriate, but sample intervals in GW cores characterized by coarse-grained sediments may be additionally selected for analysis even in the absence of obvious contamination.

In addition to the criteria stated in the Round 2 Sediment FSP for determining sample intervals in the cores, obvious visual breaks (e.g., color change, evidence of contamination) may be used, at the discretion of the field geologist, to mark the boundaries of subsurface sample intervals.

2.2.2 Sample Analyses

As in Round 2A, subsurface sediment collected at all stations in Round 2B will be analyzed for grain size, TOC, total solids, SVOCs, chlorinated pesticides , PCBs, and metals. At selected locations, VOCs, butyltins, dioxins/furans, TPH, chlorinated herbicides, or hexavalent chromium will also analyzed based on proximity to potential sources of these compounds (see Table 2-2). Selected physical parameters that provide preliminary engineering information (i.e., specific gravity, Atterberg limits) will also be analyzed. Samples for specific gravity will be collected at all stations. Samples for Atterberg analysis will also be collected at all stations, and then 10% of the samples will be selected for analysis.

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3.0 PROJECT ORGANIZATION

This section presents the organizational structure for sampling and analysis activities associated with the Round 2B investigation, including team organization and responsibilities, fieldwork, data management, and laboratory analyses.

3.1 TEAM ORGANIZATION AND RESPONSIBILITIES

Key project personnel for the Round 2B investigation are identified in the following table.

Position	Personnel
CERCLA Project Coordinator	Keith Pine, RPG (Integral)
Sampling and Analysis Coordinator	Gene Revelas (Integral)
Field Task Leader	Susan FitzGerald (Integral)
Field Quality Assurance (QA) Manager	Gene Revelas (Integral)
Chemistry QA Manager	Maja Tritt (Integral)

The organizational structure of the lead sampling and analysis personnel and associated laboratories is shown in Figure 3-1 of the Round 2 Sediment FSP (Integral et al. 2004a), and the responsibilities and lines of communication of each position are discussed in Section 3.0 of that document. Additional information on project organization, coordination, and communication between EPA, the Lower Willamette Group (LWG), and the consultant team is provided in the RI/FS Programmatic Work Plan (Integral et al. 2004b).

3.1.1 Key Field Personnel for Subsurface Sampling

In addition to the general project roles described above, key geologists from Integral will provide technical expertise and project oversight to ensure continuity in the subsurface sampling program. Gene Revelas will coordinate the core sampling vessel for all core sample acquisition. Susan FitzGerald or Joss Moore (Integral) will coordinate all core processing and core sample identification. These individuals may also exchange roles as needed during the sampling program. Other qualified Integral and common consultant scientists will work on this project, and their efforts will be directed by these key project personnel. All stratigraphic logs will be prepared by an experienced geologist. Geologic interpretation will be done under the direct supervision of an Oregon Professional Geologist.

3.1.2 Data Management

Tom Schulz (Integral) will have primary responsibility for data management. Integral will continue to utilize the EQuIS database as the primary repository of environmental data.

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3.1.3 Laboratory Services

Laboratory services used during Round 2B will follow the Round 2 Quality Assurance Project Plan (QAPP; Integral and Windward 2004) and the *Corrective Action Plan: SVOC Analyses in Sediment Core Samples* (Integral 2004, pers. comm.), with the exception that Columbia Analytical Services (CAS) will replace Northeast Analytical (NEA) in performing pesticide and PCB analyses. This change will facilitate the completion of these analyses in a timely manner. Severn Trent Laboratories, located in Tacoma, Washington, will perform the herbicide analyses.

CAS will review a selection of NEA's PCB chromatograms from Round 2A prior to interpretation of the Round 2B chromatograms to identify potential differences between the laboratories in procedures for identification of weathered PCBs. Aroclor assignments will additionally be reviewed for consistency with Round 2A during data validation.

Laboratory qualifications were provided in the Round 2 QAPP (Integral and Windward 2004) and Integral (2004, pers. comm.). CAS' standard operation procedures (SOPs) for pesticides and PCBs will be provided to EPA under separate cover.

3.2 COORDINATION WITH EPA

3.2.1 Field Sampling Notification

The Sampling and Analysis Coordinator will notify the EPA Project Manager at least one week prior to beginning field activities so that EPA can schedule any necessary oversight tasks. EPA's Project Manager will contact the Sampling and Analysis Coordinator to coordinate these activities and determine appropriate logistics.

3.2.2 Lab Audits And Split Samples

The chemical laboratories were audited prior to the analysis of Round 2A samples. An additional audit will be conducted, if necessary, based on laboratory performance, as described in the Round 2 QAPP (Integral and Windward 2004).

Split samples for chemical testing can be provided to EPA or its designated representative. Details on the quality control (QC) samples planned for this sampling program are provided in Section 4.9 of the Round 2 Sediment FSP. EPA's Project Manager should contact the Sampling and Analysis Coordinator at least three days in advance to coordinate this activity and determine appropriate logistics. It is recommended that split samples be taken at those stations where blind field replicates are taken so that EPA's comparison samples are evaluated relative to the field and analytical variability measured by the LWG project team.

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3.3 PROJECT SCHEDULE

Actual start dates for the Round 2B sampling will be determined following EPA approval of this Round 2B FSP Addendum. Other conditions that may affect the sampling schedule are weather, river flows and stages, and equipment conditions and availability. Round 2B sampling will begin within 30 days of EPA approval of this FSP. Currently, it is anticipated that the Round 2B subsurface sediment field investigation will be conducted in October 2005. Reporting of Round 2B sediment sampling results is discussed in Section 7.

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4.0 SAMPLE COLLECTION PROCEDURES

All station positioning, core collection and sampling, sample handling, storage, and shipping, record keeping, equipment decontamination, waste disposal, and quality control procedures will follow those described in the Round 2 Sediment FSP (Integral et al. 2004a).

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5.0 LABORATORY ANALYSIS

This section summarizes the physical and chemical analyses performed for the characterization of sediment samples in Round 2B.

The required analyses for each sample that will be collected in Round 2B are listed individually in Table 2-2. Round 2B samples will be analyzed according to methods described in the Round 2 QAPP (Integral and Windward 2004), with modifications described in the *Corrective Action Plan: SVOC Analysis of Sediment Core Samples* (Integral 2004, pers. comm.), and Round 2A Sediment Site Characterization Report (Integral 2005). Analytes, analytical concentration goals, project-specific reporting limits, and analytical methods for sediments are also listed in these documents. Current method reporting limits, method detection limits, and control limits for all analyses will be provided to EPA under separate cover.

All of the sediment samples will be analyzed for metals, SVOCs, PCB Aroclors, and chlorinated pesticides. TPH, butyltins, VOCs, dioxins and furans, chlorinated herbicides, and hexavalent chromium will be analyzed at selected stations. The conventional parameters, grain size, total solids, TOC, and specific gravity, will be analyzed at all stations. Samples for Atterberg limits analysis will also be collected at all stations, and then 10% of the samples will be selected for analysis. A registered geotechnical engineer or geologist will select appropriate samples for Atterberg analysis based on sample descriptions. The intent will be to obtain a representative number and distribution of samples for this analysis.

LWG and EPA will establish an analyte list for PCB congeners and select samples for this analysis after validated PCB Aroclor data are available for review. PCB congener analyses will be completed as described in the Round 2 QAPP (Integral and Windward 2004) and the QAPP addendum for PCB congener analyses (Integral 2004). Detailed laboratory methods, QA procedures, and QA/QC requirements are described in the Round 2 QAPP (Integral and Windward 2004). CAS will analyze SVOCs in the same manner as the Round 2A core and surface sediment samples, as described in *Corrective Action Plan: SVOC Analysis of Sediment Core Samples* (Integral 2004, pers. comm.). A series of three analyses will be used to optimize sensitivity and manage interferences. These include analysis of PAHs by gas chromatography/mass spectrometry (GC/MS) with selected ion monitoring, analysis of tri- through pentachlorinated phenols by gas chromatography/electron capture detector (GC/ECD), and analysis of the remaining SVOCs by GC/MS in full scan mode.

As in Round 2A, the metals, aluminum, chromium, copper, nickel, and zinc, may be analyzed by inductively coupled plasma with optical emission spectrometry (ICP/OES; EPA Method 6010B) rather than ICP with mass spectrometry (ICP/MS; EPA Method 6020). This change will be made to accommodate high levels of analytes or to eliminate matrix interferences in the ICP/MS analysis. When the

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concentrations of these metals are too low to be reliably reported by ICP/OES, the samples will be reanalyzed by ICP/MS to meet project sensitivity requirements. Options for analysis of arsenic and selenium by hydride generation (EPA Methods 7062 and 7742, respectively) were provided in the QAPP. EPA Method 7742 will be used for selenium analyses because isobaric interferences were present in the Round 2A sediment samples for both the primary and secondary selenium isotopes (^{82}Se and ^{77}Se) analyzed by ICP/MS. Analyses for arsenic will be completed by ICP/MS. The greater sensitivity provided by the hydride generation method will likely not be required because arsenic concentrations in the samples are sufficiently high to be detected reliably by ICP/MS.

All samples will be maintained according to the appropriate holding times and temperatures for each analysis, as summarized in Table 4-1 of the Round 2 Sediment FSP (Integral et al. 2004a).

Laboratory QA will be implemented as described in the Round 2 QAPP and according to each laboratories' respective QA programs, plans, and SOPs. Additional information on analytical methods and laboratory QA program plans for each laboratory is provided in the QAPP (Integral and Windward 2004).

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6.0 FIELD DATA MANAGEMENT PLAN

The management of field data generated during Round 2B will be conducted using the forms and sample identification schemes discussed in the Round 2 Sediment FSP (Integral et al. 2004a).

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7.0 REPORTING

Results of the Round 2B subsurface sediment sampling effort will be reported to EPA in accordance with the deliverables schedule provided in the Programmatic Work Plan (Integral et al. 2004b).

A Round 2B sediment field sampling report will be prepared and submitted to EPA within 60 days of completing the Round 2B field sample collection effort described in this FSP. The field sampling report will summarize field sampling activities, including sampling locations (maps), requested sample analyses, sample collection methods, and any deviations from the FSP.

LWG-validated analytical laboratory data will be provided to EPA in an electronic format within 90 days of completion of the sampling event (i.e., when the last sample described in this FSP has been collected). Every effort will be made to comply with this turnaround schedule; however, additional time may be needed to generate final, validated data if technical difficulties are encountered at the laboratory or during data validation.

Round 2B subsurface sediment chemistry results will be reported in tabular format and presented on maps in a Round 2B sediment site characterization summary report. The results of the Round 2B sampling will be incorporated into the Round 2 Comprehensive Site Summary Report.

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8.0 REFERENCES

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FitzGerald, S. 2005. Personal communication (telephone conversation on February 1, 2005 with J. Jakubiak, Schnitzer Steel Industries, Portland, OR, requesting dredging footprint map and volume dredged). Integral Consulting Inc., Mercer Island, WA.

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Integral and GSI. 2004. Portland Harbor RI/FS Conceptual Site Model Update, Draft. Prepared for the Lower Willamette Group, Portland, OR. Integral Consulting Inc., Mercer Island, WA, and Groundwater Solutions, Portland, OR.

Integral and Windward. 2004. Portland Harbor RI/FS Round 2 Quality Assurance Project Plan. Prepared for the Lower Willamette Group, Portland, OR. Integral Consulting Inc., Mercer Island, WA.

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Sanders, D. 2005. Personal communication (email of 7/28/05 to S. Browning, Integral Consulting, Olympia, WA, regarding requested outfall drainage information). City of Portland Bureau of Environmental Services, Portland, OR.

USACE. 2004a. Department of the Army Permit. Schnitzer Steel Industries, Inc. Permit No. 199100099. U.S. Army Corps of Engineers Portland District, Corps of Engineers, Portland, OR.

USACE. 2004b. Department of the Army Permit. Schnitzer Steel Industries, Inc. Permit No. 199200812. U.S. Army Corps of Engineers, Portland District, Corps of Engineers, Portland, OR.

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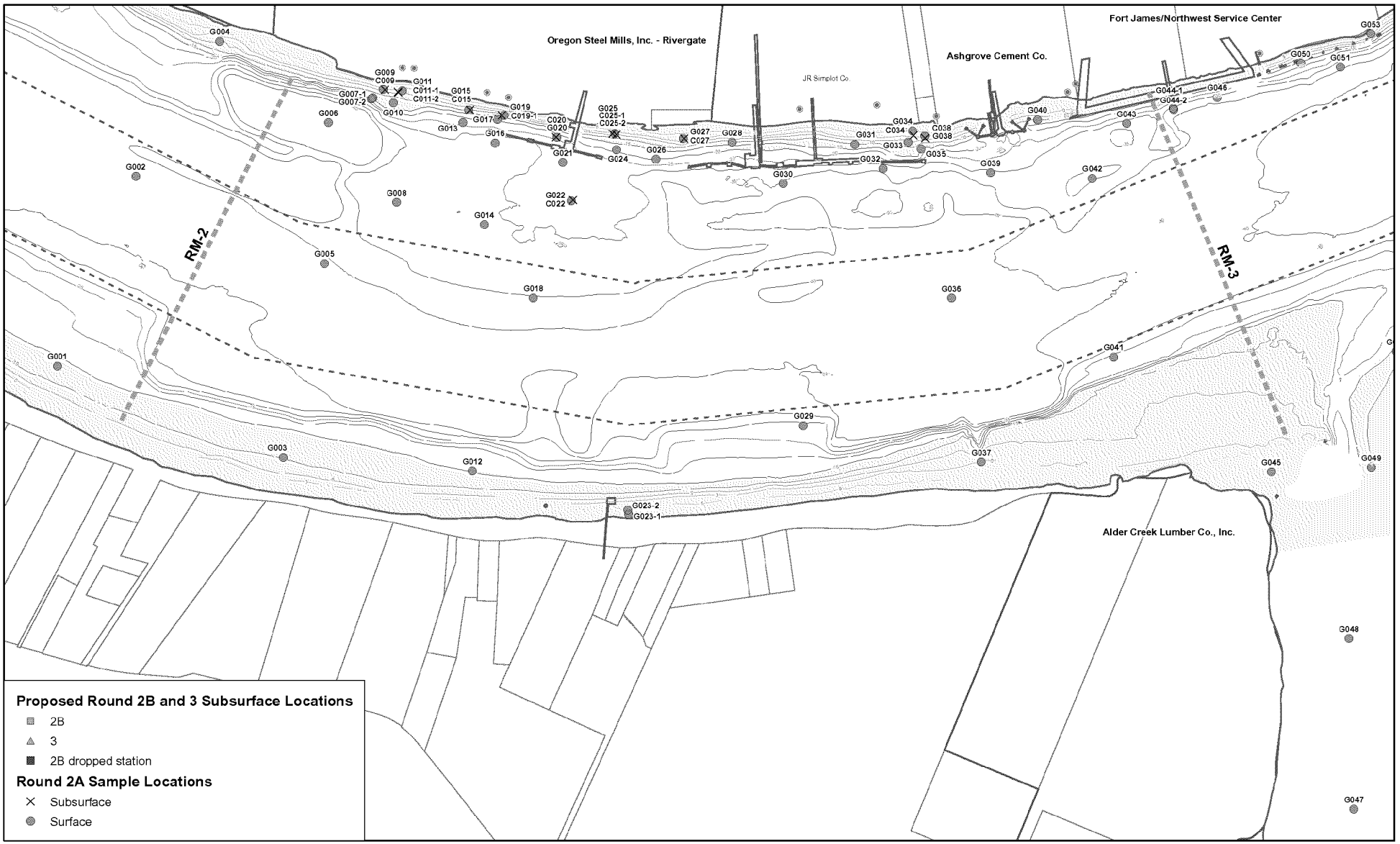

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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\FSP_04_Actual\Round2b_and_3_Subsurface20050110.mxd)
Plot Date: 09/22/2005

Figure 2-1a
Portland Harbor RI/FS
Round 2B Subsurface Sediment Locations

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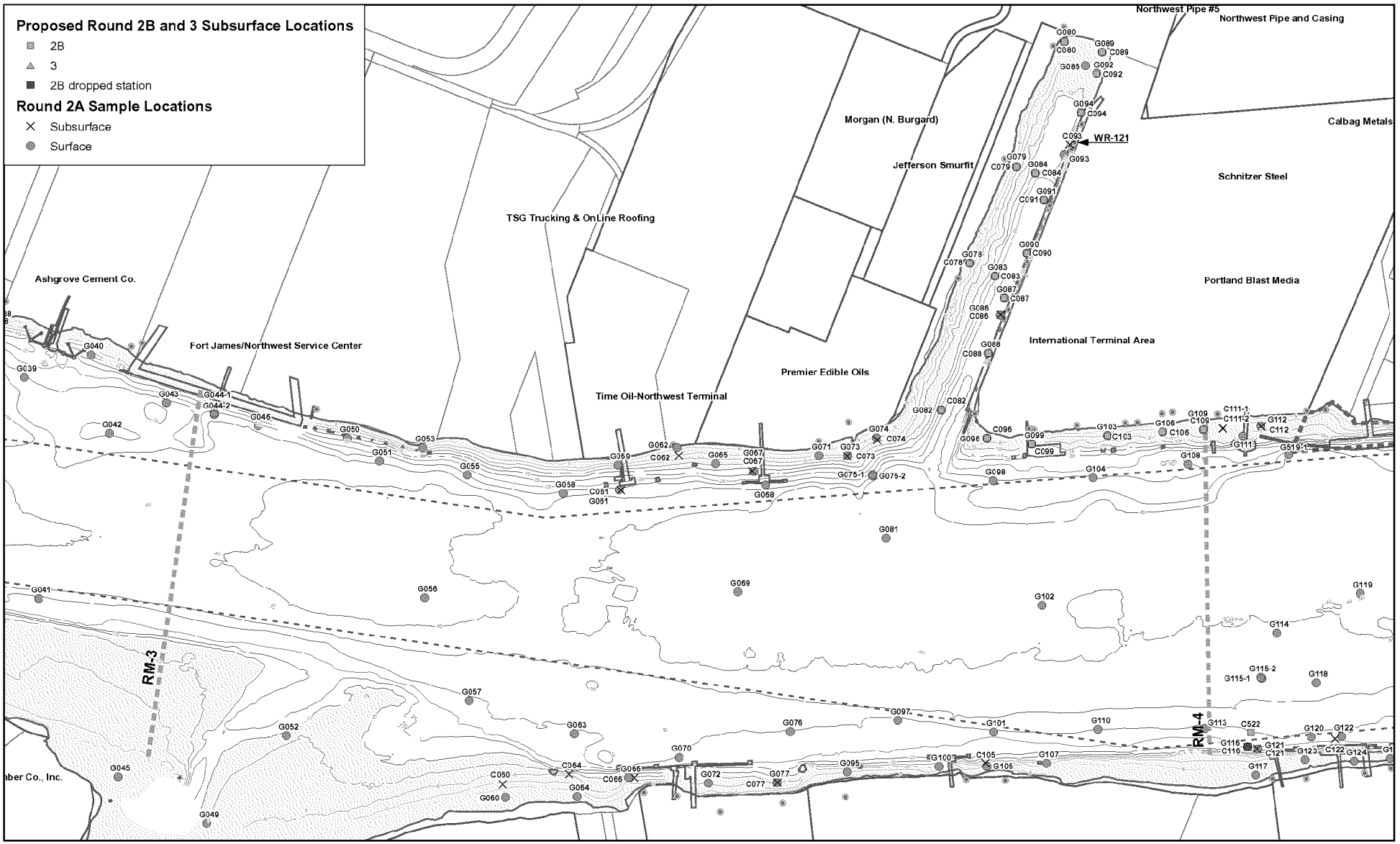

Figure 2-1b
Portland Harbor RI/FS
Round 2B Subsurface Sediment Locations

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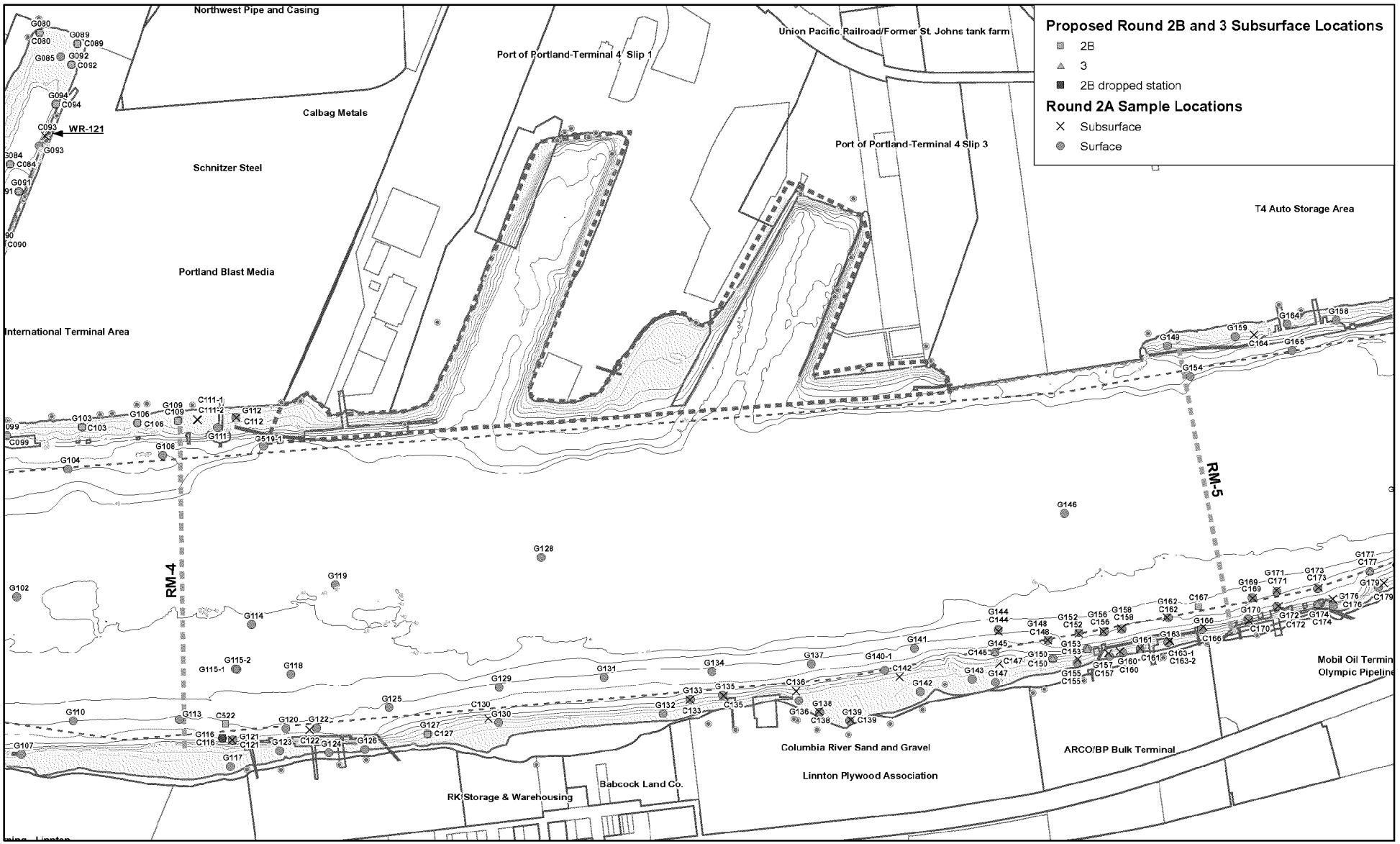

Figure 2-1c
Portland Harbor RI/FS
Round 2B Subsurface Sediment Locations

ANC04673
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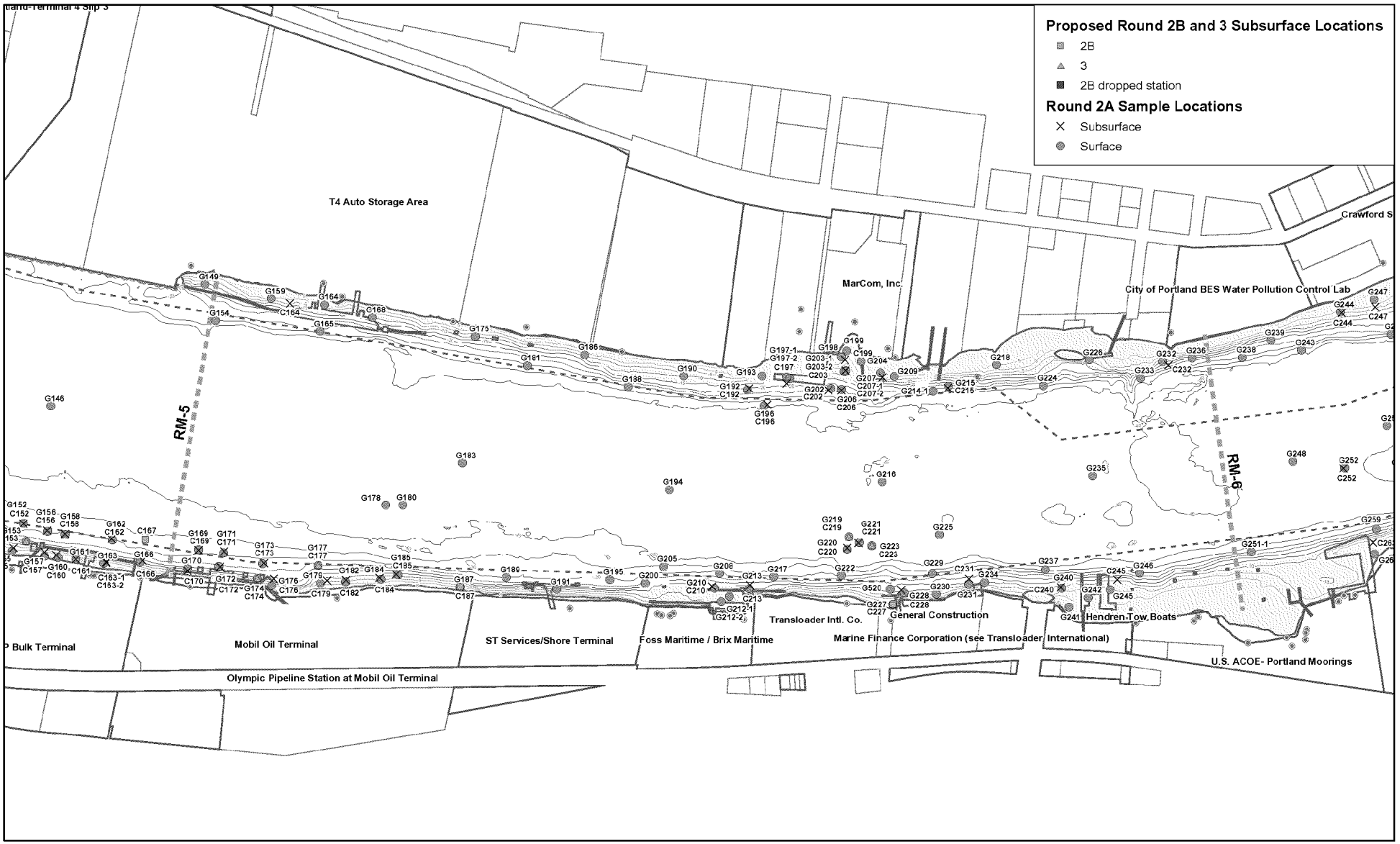

Figure 2-1d
Portland Harbor RI/FS
Round 2B Subsurface Sediment Locations

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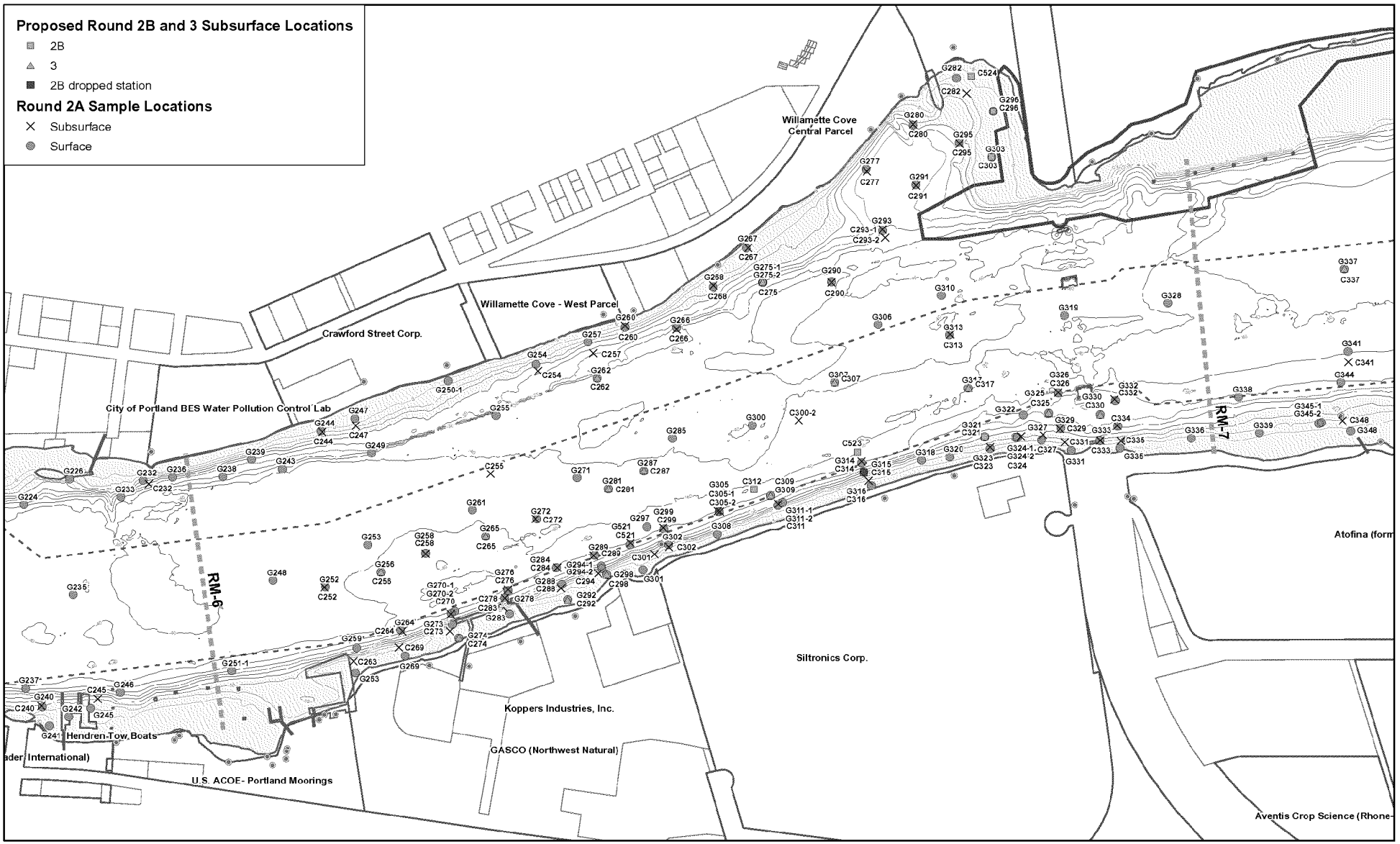

Figure 2-1e
Portland Harbor RI/FS
Round 2B Subsurface Sediment Locations

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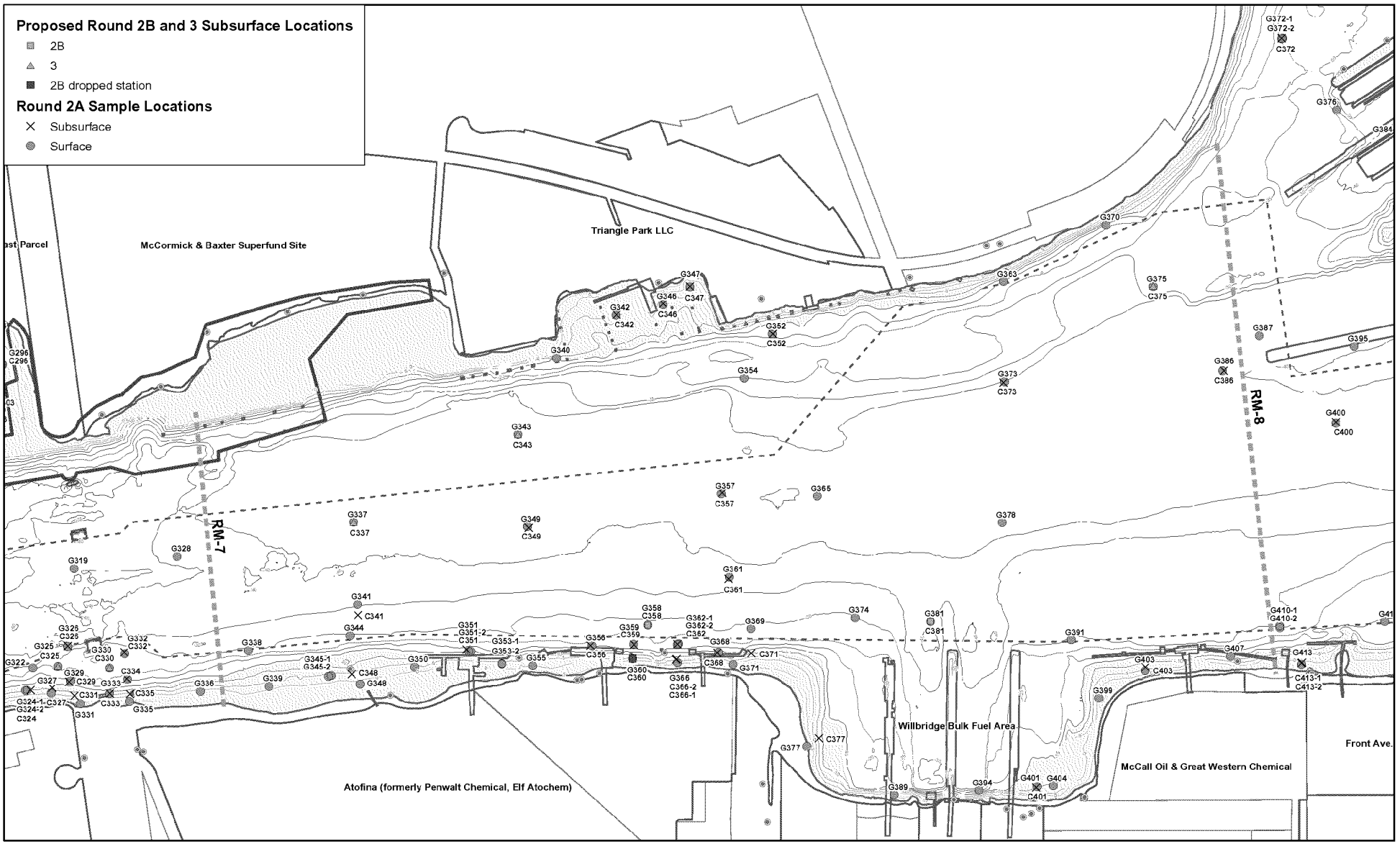

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Figure 2-1f
Portland Harbor RI/FS
Round 2B Subsurface Sediment Locations

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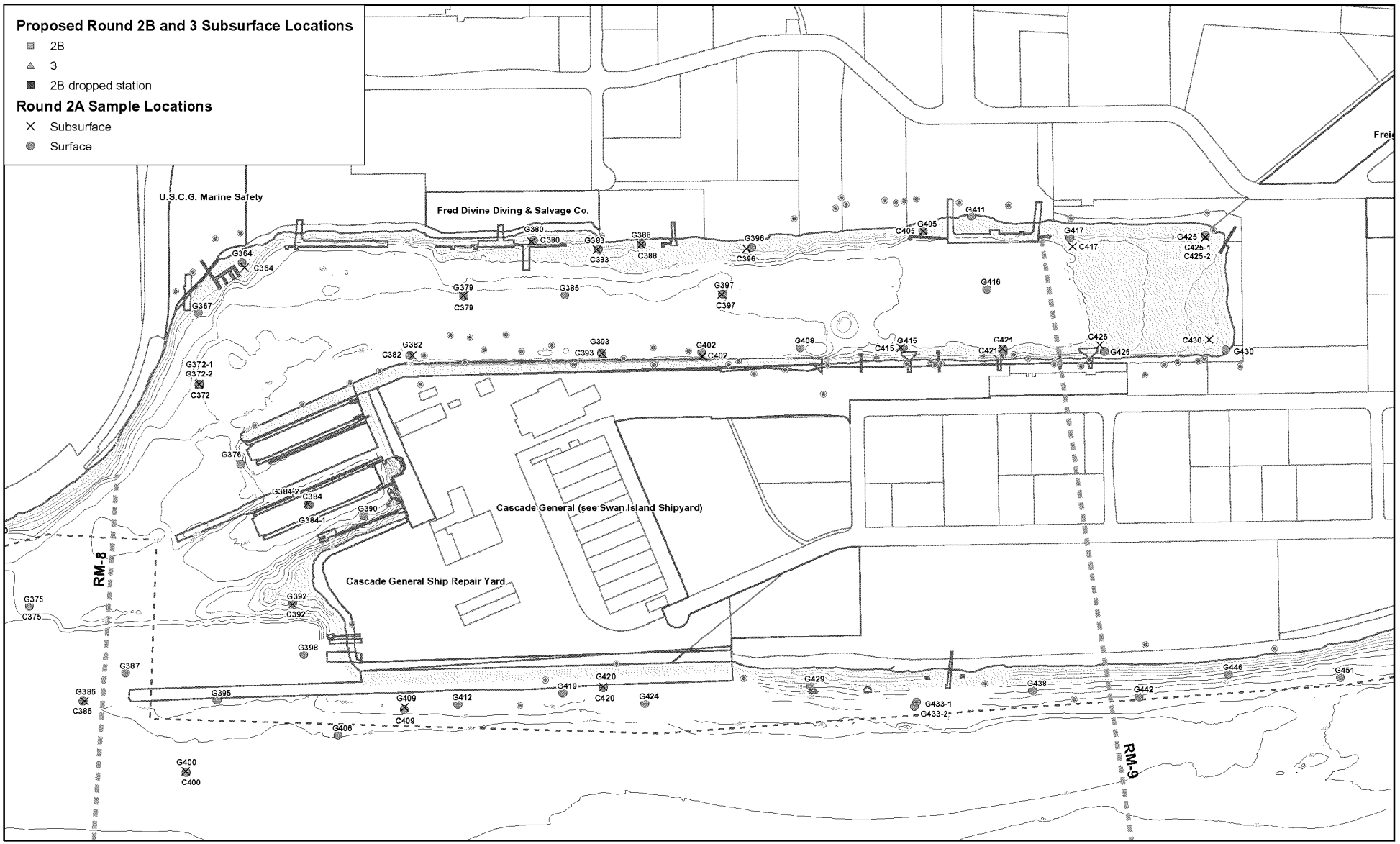

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Figure 2-1g
Portland Harbor RI/FS
Round 2B Subsurface Sediment Locations

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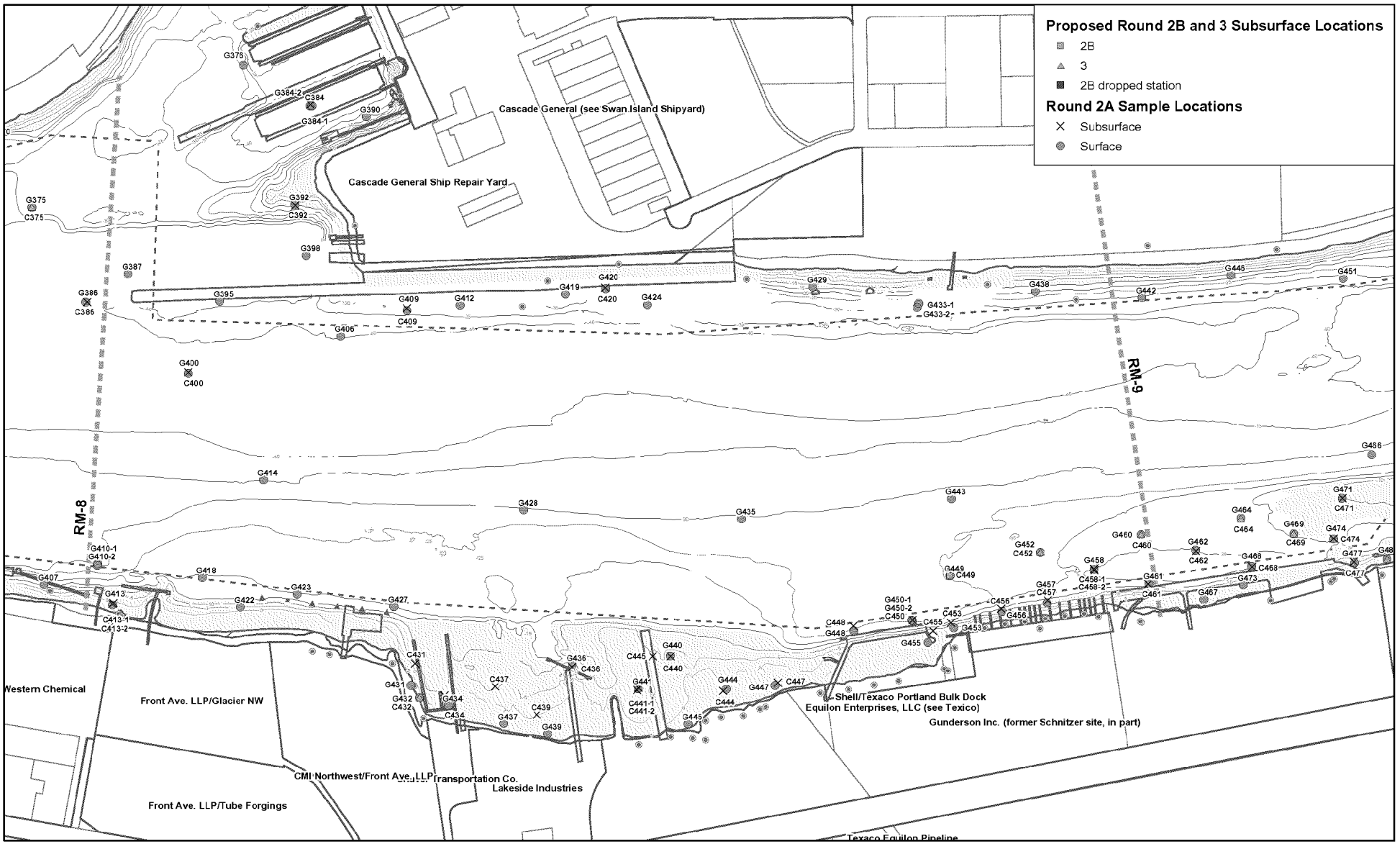

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Figure 2-1h
Portland Harbor RI/FS
Round 2B Subsurface Sediment Locations

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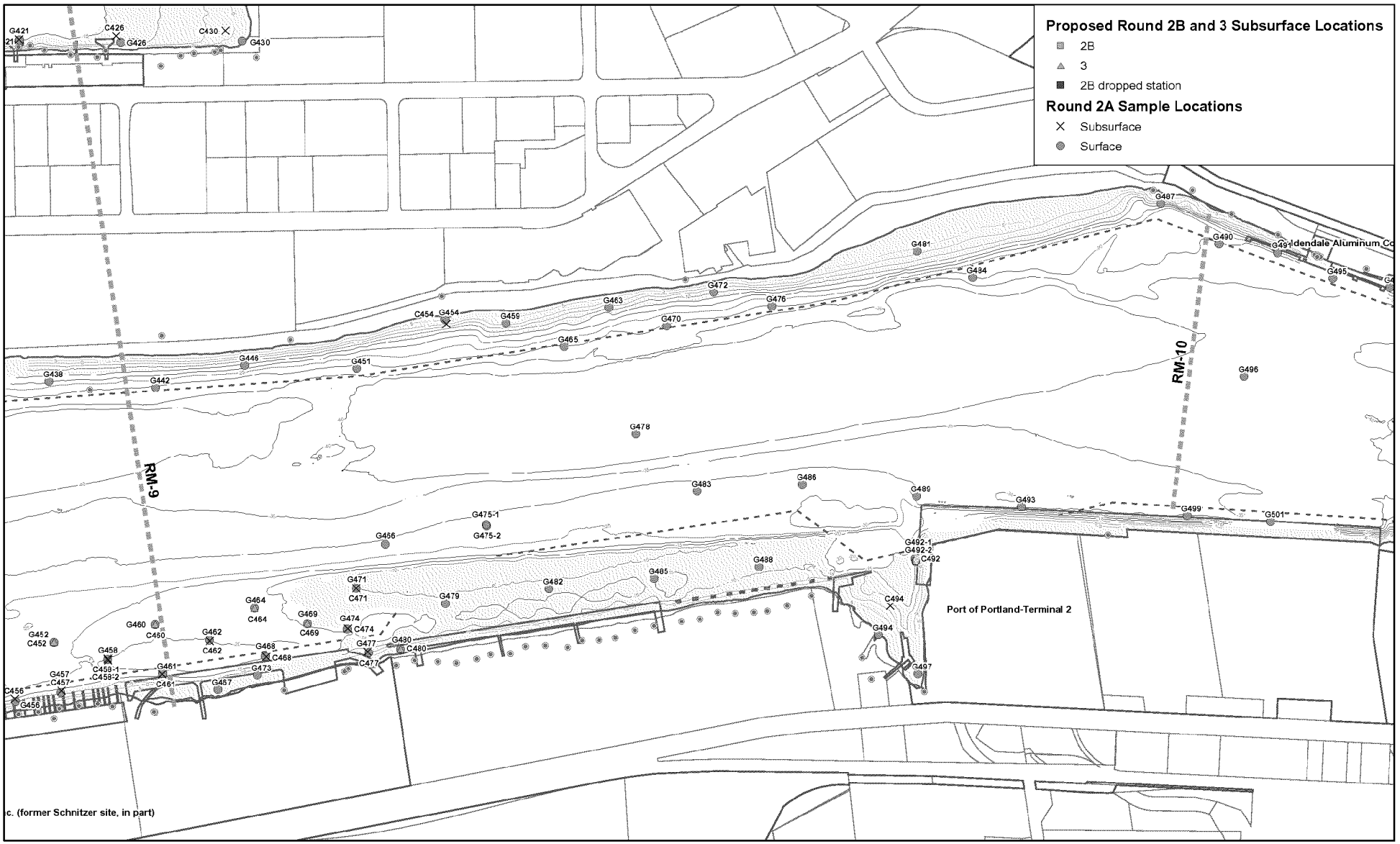

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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\FSP_04_Actual\Round2b_and_3_Subsurface20050110.mxd)
Plot Date: 09/28/2005

Figure 2-1i
Portland Harbor RI/FS
Round 2B Subsurface Sediment Locations

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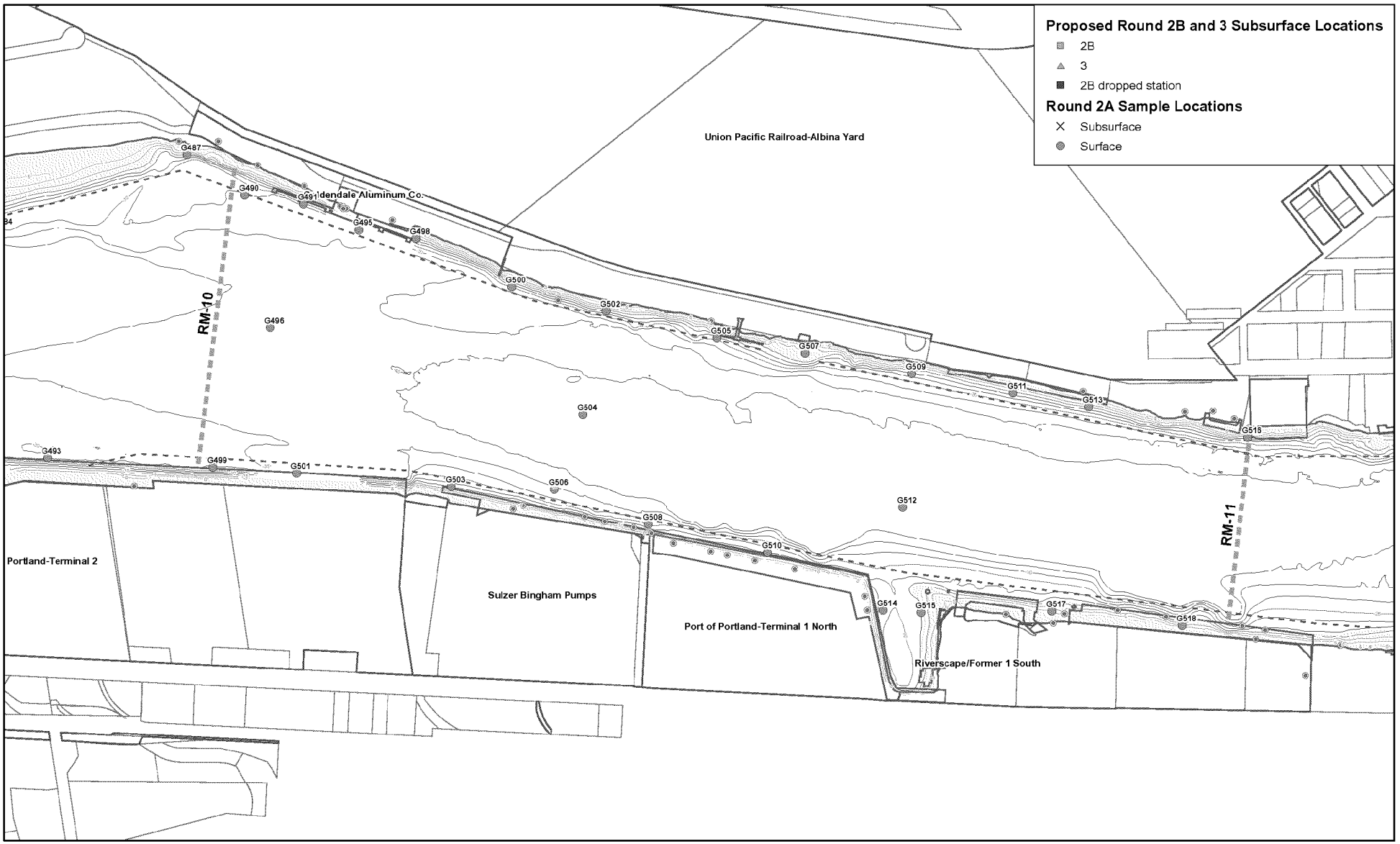

Figure 2-1j
Portland Harbor RI/FS
Round 2B Subsurface Sediment Locations

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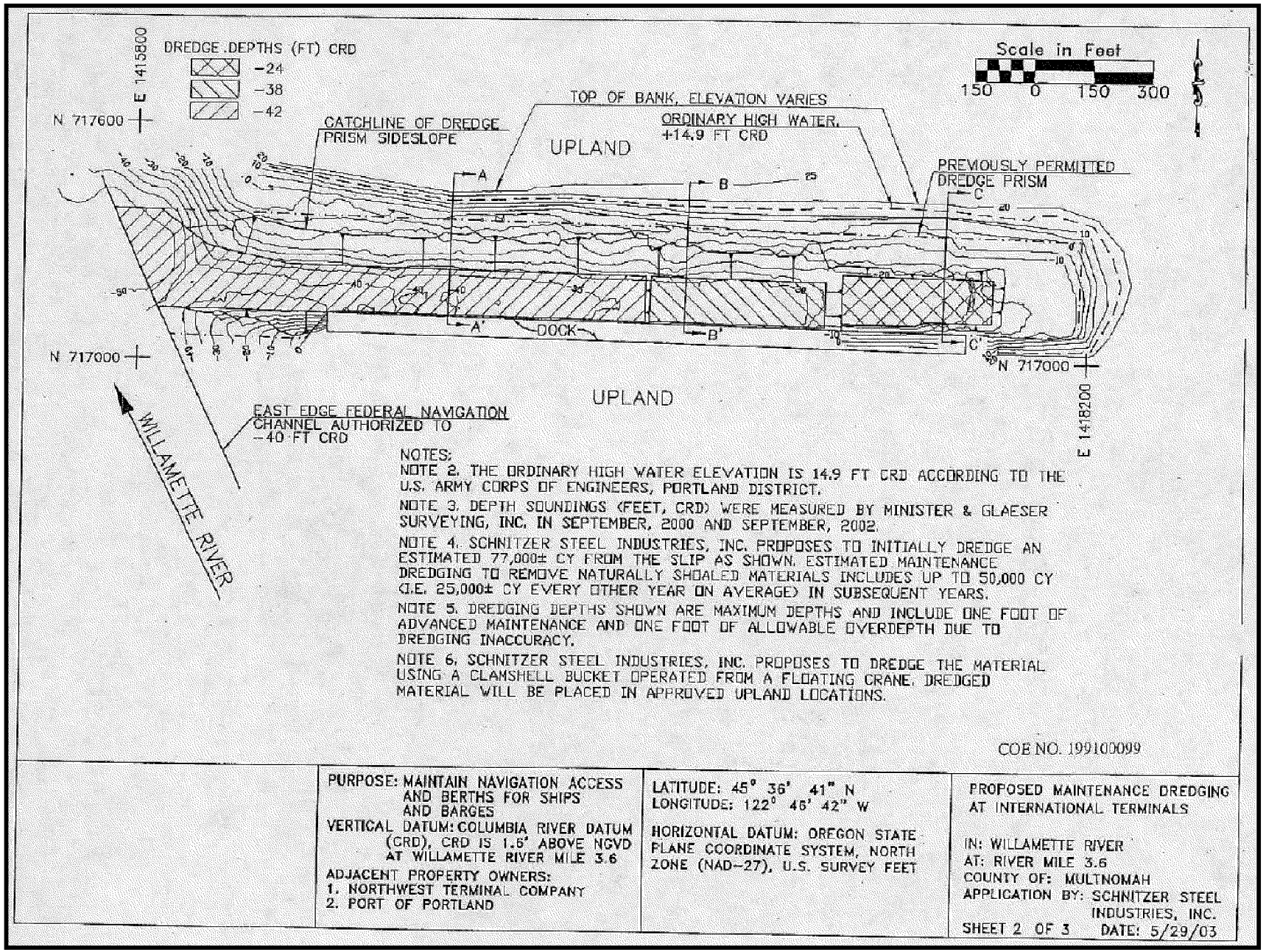

Figure 2-2a
Schnitzer Permitted Dredge Areas - International Slip

USACE. 2004a. Department of the Army Permit. Schnitzer Steel Industries, Inc. Permit No. 199100099.Department of the Army. Portland District, Corps of Engineers, Portland, OR.

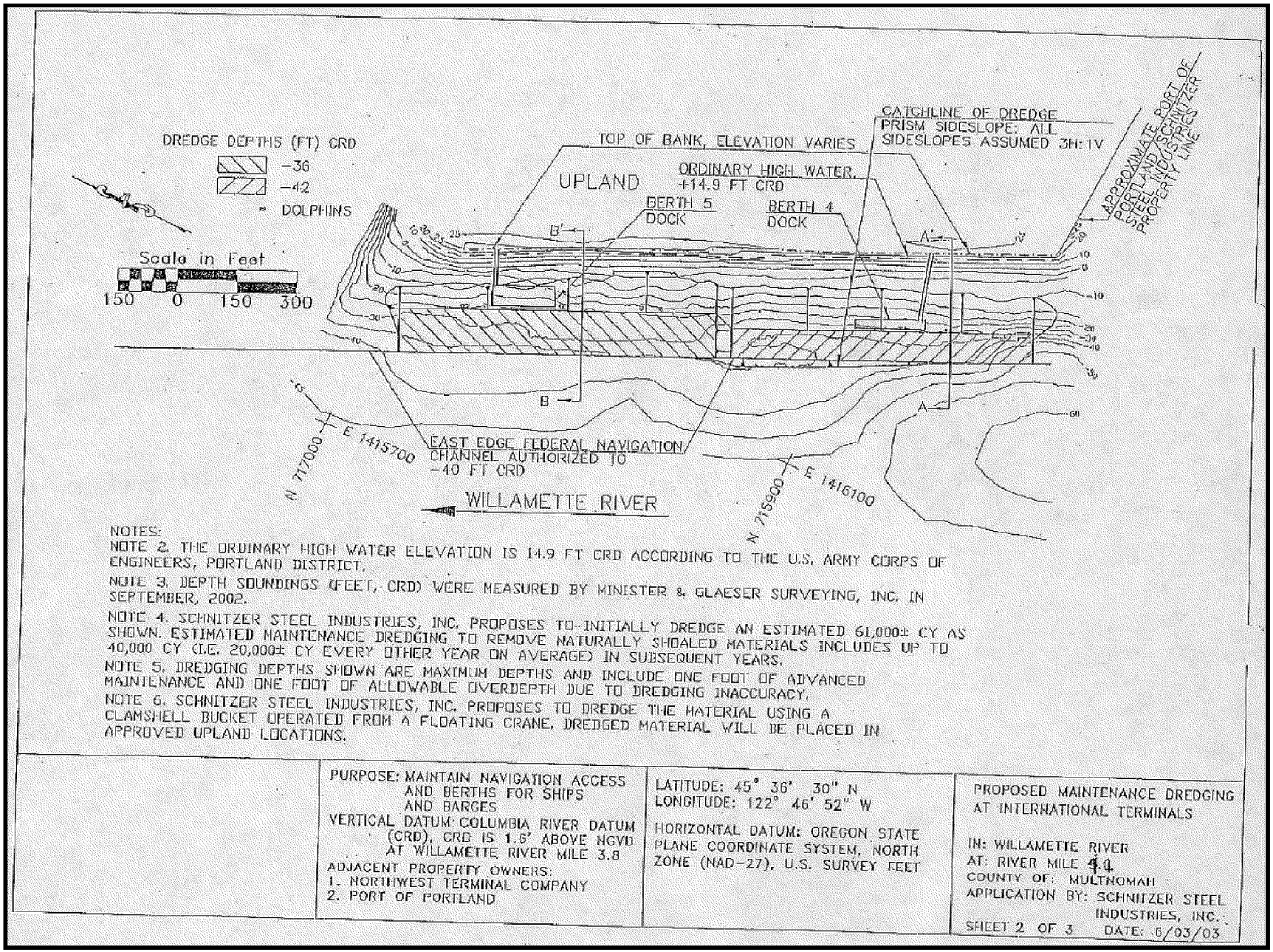

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Figure 2-2b
Schnitzer Permitted Dredge Areas - River Frontage

USACE. 2004b. Department of the Army Permit. Schnitzer Steel Industries, Inc. Permit No. 199200812. Department of the Army. Portland District, Corps of Engineers, Portland, OR.

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Table 2-1. Round 2B Proposed Locations per Round 2 FSP.

Station Number	Nearby Facility	Location
078	International Slip	Off outfall
079	International Slip	Off outfall
080	International Slip	Two outfalls
082	International Slip	Slip close to river
083	International Slip	Mid slip
084	International Slip	Channel far inside Slip
087	International Slip	Outfalls 11, 10
088	International Slip	Outfall 8
089	Northwest Pipe	Outfall 18
090	International Slip	Outfall 12
091	International Slip	Outfall 13
092	International Slip	Outfall 17
094	International Slip	Outfalls 14, 15, 16
096	Schnitzer Steel	Outfall 7
099	Schnitzer Steel	Outfall 6
103	Schnitzer Steel	Outfall 5
106	Schnitzer Steel	Outfall 4
109	Schnitzer Steel	Outfall 3
116	Kinder-Morgan	North end of dock, on -30 ft
127	Kinder-Morgan	South end of dock
166	Exxon/Mobil Oil Terminal	Outfall transect -20 ft/nearshore
187	Exxon/Mobil Oil Terminal	South end of property
227	Marine Finance	Seeps north end of property
311	Siltronics	Transect 14, -5 ft
315	Siltronics	Transect 15, -5 ft
321	Siltronics	Transect 16, -5 ft
360	Arkema	North metal transect, nearshore
381	Willbridge	Off Chevron Pier
449	Gunderson	Gunderson box
492	Terminal 2	Mouth of Slip off outfall
30	Total number Round 2B core stations in approved Round 2 Sediment FSP	

Note:
2B cores 166 and 311 were sampled in 2A.

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Table 2-2 Remaining Round 2B Cores, Sampling Evaluation, Location Recommendations, and Proposed Analytes.

				SAMPLE LOCATION COORDINATES				Round 2B Target Analytes per 2004 Sediment FSP (Table 2-3). Shaded analytes have been added in this 2B addendum.											
Station Number	**Nearby Facility**	**Location**	**Core Type**	**X**	**Y**	**Sample in Round 2B**	**Recommended Core Length, Analytes and Rationale**	**Grain Size**	**Atterberg Limits[a] + specific gravity**	**SVOCs**	**Chlorinated Pesticides**	**PCB Aroclors**	**Metals + Hg**	**TS + TOC**	**Hexavalent Chromium**	**Butyltins**	**TPH**	**VOCs**	**Dioxins/ Furans**	**Herbicides & PCP**
078	International Slip	Off outfall	N&E	7618765.5973	717315.3764	Yes	14 ft, station outside of dredged zone. Outfall is potential source. TPH added to analyte list.	X	X	X	X	X	X	X		X	X	X		
079	International Slip	Off outfall	N&E	7619295.6522	717259.6897	Yes	14 ft / Shallow outside of dredged zone. Outfall is potential source. TPH added to analyte list.	X	X	X	X	X	X	X		X	X	X		
080	International Slip	Two outfalls	N&E	7619963.4694	717247.5546	Yes	14 ft / Shallow station outside of dredged zone. Outfalls are potential source. TPH added to analyte list.	X	X	X	X	X	X	X		X	X	X		
082	International Slip	Slip close to river	N&E	7618030.5683	717198.7430	Yes	14 ft / Station likely in dredged area. TPH added to analyte list.	X	X	X	X	X	X	X		X	X	X		
083	International Slip	Mid Slip	N&E	7618747.9597	717174.2249	Yes	14 ft / Station likely in dredged area. TPH added to analyte list.	X	X	X	X	X	X	X		X	X	X		
084	International Slip	Channel, far inside Slip	N&E	7619299.6983	717161.0898	Yes	14 ft / Station likely in dredged area. FSM 2003[1] historical core nearby reached native sands at -9 ft. TPH and pesticides added to analyte list. Dioxins/furans added due to proximity to Calbag Metals "auto fluff" facility outfall WR-121.	X	X	X	X	X	X	X		X	X	X	X	
087	International Slip	Outfalls 11, 10	N&E	7618660.7879	717094.0062	Yes	14 ft / nearby C086 hit native sands at -4.4 ft, with sheen noted above native material. TPH and pesticides added to analyte list.	X	X	X	X	X	X	X		X	X	X		
088	International Slip	Outfall 8	N&E	7618377.3585	717074.6526	Yes	14 ft / nearby C086 hit native sands at -4.4 ft, with sheen noted above native material. TPH added to analyte list.	X	X	X	X	X	X	X		X	X	X		
089	Northwest Pipe/ International Slip	Outfall 18	N&E	7619978.0485	717053.2123	Yes	20 ft / Station is nearshore, outside of dredged zone. TPH added to analyte list due to stormwater data with detected metals and oil/grease and sludge samples containing PCE and oil/grease.	X	X	X	X	X	X	X		X	X	X		
090	International Slip	Outfall 12	N&E	7618909.5914	717065.7058	Yes	14 ft / Station within dredged area. C086 hit native sands at -4.4 ft, with sheen noted above native material. TPH added to analyte list.	X	X	X	X	X	X	X		X	X	X		
091	International Slip	Outfall 13	N&E	7619188.0222	717074.2648	Yes	14 ft / Station within dredged area. C086 hit native sands at -4.4 ft with sheen noted above native material. TPH added to analyte list.	X	X	X	X	X	X	X		X	X	X		
092	International Slip	Outfall 17	N&E	7619869.4189	717044.1137	Yes	20 ft / Station is nearshore, outside of dredged zone. TPH added to analyte list, stormwater data detected metals and oil/grease and sludge samples contained PCE and oil/grease. Dioxins/furans added due to PCB concentrations detected in surface sample at this station.	X	X	X	X	X	X	X		X	X	X	X	
094	International Slip	Outfalls 14, 15, 16	N&E	7619658.8101	717050.0482	Yes	14 ft / Station within dredged area. TPH and pesticides added to analyte list. Dioxins/furans added due to PCB concentrations detected in surface sample at this station.	X	X	X	X	X	X	X		X	X	X	X	
096	Schnitzer Steel	Outfall 7	FS, N&E	7617975.3508	716935.8507	Yes	20 ft / Station is nearshore. TPH added to analyte list.	X	X	X	X	X	X	X		X	X	X		
099	Schnitzer Steel	Outfall 6	FS, N&E	7618024.5939	716715.6013	Yes	20 ft / Station is nearshore. TPH added to analyte list.	X	X	X	X	X	X	X		X	X	X		
103	Schnitzer Steel	Outfall 5	FS, N&E	7618193.3641	716376.4666	Yes	20 ft / Station is nearshore. TPH added to analyte list.	X	X	X	X	X	X	X		X	X	X		
106	Schnitzer Steel	Outfall 4	FS, N&E	7618305.2965	716124.6582	Yes	20 ft / Station is nearshore. TPH added to analyte list.	X	X	X	X	X	X	X		X	X	X		
109	Schnitzer Steel	Outfall 3	FS, N&E	7618385.3682	715938.1916	Yes	20 ft / Station is nearshore. TPH added to analyte list.	X	X	X	X	X	X	X		X	X	X		
116	Kinder-Morgan	North end of dock, on -30		7616976.5767	715190.1410	No, see 522	The actual G116 grab sample location was collected off target, very close to Round 2A core C121, which showed obvious contamination to 8 ft and appeared to be "native" stiff clay below 8 ft. Upstream 2A core, C122, hit refusal 7 ft below mudline.													
127	Kinder-Morgan	South end of dock	N&E	7617346.3774	714234.3328	Yes	20 ft / Station is nearshore.	X	X	X	X	X	X	X			X	X	X	X
166	SAMPLED IN 2A																			
167	Arco/BP	south end property, offshore	FS, N&E	7619258.2501	710839.1797	Yes	14 ft / station is relocated offshore of Round 2A core C166, in navigation channel. Because there is no surface sample at this location, analyze surface (0-30 cm) core segment as well as subsurface segments as warranted.	X	X	X	X	X	X	X			X	X		
187	Exxon/Mobil Oil Terminal	south end of property	N&E	7620087.9414	709483.7684	Yes	20 ft / nearshore station, from Round 2A: cores downstream show sheen to nearly 12 ft below mudline.	X	X	X	X	X	X	X			X	X		

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Table 2-2 Remaining Round 2B Cores, Sampling Evaluation, Location Recommendations, and Proposed Analytes.

				SAMPLE LOCATION COORDINATES				Round 2B Target Analytes per 2004 Sediment FSP (Table 2-3). Shaded analytes have been added in this 2B addendum.											
Station Number	**Nearby Facility**	**Location**	**Core Type**	**X**	**Y**	**Sample in Round 2B**	**Recommended Core Length, Analytes and Rationale**	**Grain Size**	**Atterberg Limits[a] + specific gravity**	**SVOCs**	**Chlorinated Pesticides**	**PCB Aroclors**	**Metals + Hg**	**TS + TOC**	**Hexavalent Chromium**	**Butyltins**	**TPH**	**VOCs**	**Dioxins/ Furans**	**Herbicides & PCP**
227	Marine Finance	Seeps north end of property	N&E	7621408.8228	707776.6396	Yes	14 ft/ Round 2A cores, C228 and C231, offshore of this location reached refusal on gravel riprap 6 to 7 ft below mudline.	X	X	X	X	X	X	X		X	X			
296	Willamette Cove	Edge of M&B cap	N&E	7627330.5815	705457.2928	Yes	14 ft / Nature and extent core for seep source.	X	X	X	X	X	X	X			X			
303	Willamette Cove	Edge of M&B cap	N&E	7627152.5039	705316.9496	Yes	14 ft / Nature and extent core for seep source	X	X	X	X	X	X	X			X			
311	SAMPLED IN 2A																			
312	Siltronics	Transect 14	FS, N&E	7625122.5321	705160.4381	Yes	14 ft / station is relocated offshore of Round 2A core C309, in navigation channel. Because there is no surface sample at this location, analyze surface (0-30 cm) core segment as well as subsurface segments as warranted.	X	X	X	X	X	X	X			X	X		
315	Siltronics	Transect 15, -5		7625536.3600	704790.3800	No, see 523	Move this core offshore of Round 2A C314 to approximately the -40 ft contour to assess offshore extent of potential contamination. Visual and odiferous evidence of TPH contamination in inshore cores, C314 and C316. New location is renumbered C523, see below.													
321	Siltronics	Transect 16, -5	N&E	7626063.5861	704447.5266	Yes	20 ft / station at -15 ft contour offshore of Round 2A cores C323 and C324. Evidence of contamination in core C323 at approximately -5 ft contour consisted of slight 'sweet' smell in sands from to approxiamtely -10 ft. Upstream Round 2A core C329 along -15 ft contour included sheen to 9.5 ft below mudline	X	X	X	X	X	X	X			X	X	X	X
358	Arkema	Offshore, between north and middle docks	N&E	7628406.2036	702158.0155	Yes	20 ft/ Both downstream and upstream inshore cores, C359 and C362, have evidence of contamination (odors) at depth, to -12 and -10 ft below mudline, respectively. Analyze core surface interval for hexavalent chromium and VOCs since these were not analyzed in the surface grab sample from this station.	X	X	X	X	X	X	X	X			X		
360	Arkema	North, middle transect	N&E	7628179.5483	702148.5431	Yes	20 ft/target location moved per EPA direction.	X	X	X	X	X	X	X	X			X		
381	Willbridge	Off Chevron Pier	N&E	7629326.2147	701090.5390	Yes	14 ft / core in deep water off potential overwater source	X	X	X	X	X	X	X			X	X		
449	Gunderson	Gunderson box	N&E	7633643.6157	696962.8272	Yes	14 ft / evidence of contamination (odors) in cores inshore of this location	X	X	X	X	X	X	X		X				
492	Terminal 2	mouth of Slip off outfall	N&E, FS	7637613.8420	694310.0003	Yes	14 ft/ core off of outfall	X	X	X	X	X	X	X						X
522	Kinder-Morgan	nearshore, just downstream of dock	N&E	**7617048.8500**	**715198.3700**	Yes	14 ft/ reallocate to **original target 116 location** in deep water to determine offshore extent of potential contamination. Because there is no surface sample at this location, analyze surface (0-30 cm) core segment as well as subsurface segments as warranted.	X	X	X	X	X	X	X			X	X		
523	Siltronics	Transect 15, -40	N&E	7625595.8087	704884.5851	Yes	14 ft/ **new core location replaces C315**, see above. Because there is no surface sample at this location, analyze surface (0-30 cm) core segment as well as subsurface segments as warranted.	X	X	X	X	X	X	X			X	X	X	X
524	Willamette Cove	Observed sheen area, below ordinary low water	N&E	7627393.5036	705652.7679	Yes	14 ft / Nature and extent core for seep source. Because there is no surface sample at this location, analyze surface (0-30 cm) core segment as well as subsurface segments as warranted.	X	X	X	X	X	X	X			X			
525	U.S. Moorings	Just upstream of GASCO/U.S. Moorings Property line	N&E, FS, GW	7623299.3020	706143.6635	Yes	20 ft.	X	X	X	X	X	X	X		X	X	X		X
526	U.S. Moorings	Just downstream of GASCO/U.S. Moorings Property line	N&E, FS, GW	7623183.4175	706136.7607	Yes	20 ft.	X	X	X	X	X	X	X		X	X	X		X
527	U.S. Moorings	Just downstream of U.S. Moorings Dock	N&E, FS, GW	7623020.8904	706145.1920	Yes	20 ft.	X	X	X	X	X	X	X		X	X	X		X

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Table 2-2 Remaining Round 2B Cores, Sampling Evaluation, Location Recommendations, and Proposed Analytes.

				SAMPLE LOCATION COORDINATES				Round 2B Target Analytes per 2004 Sediment FSP (Table 2-3). Shaded analytes have been added in this 2B addendum.												
Station Number	**Nearby Facility**	**Location**	**Core Type**	**X**	**Y**	**Sample in Round 2B**	**Recommended Core Length, Analytes and Rationale**	**Grain Size**	**Atterberg Limits[a] + specific gravity**	**SVOCs**	**Chlorinated Pesticides**	**PCB Aroclors**	**Metals + Hg**	**TS + TOC**	**Hexavalent Chromium**	**Butyltins**	**TPH**	**VOCs**	**Dioxins/ Furans**	**Herbicides & PCP**
528	U.S. Moorings	Approximately 100' downstream of U.S. Moorings Dock	N&E, FS, GW	7622878.2528	706166.6886	Yes	20 ft.	X	X	X	X	X	X	X		X	X	X		X
529	U.S. Moorings	Upstream end of U.S. Moorings embayment	N&E, FS, GW	7622686.9457	706208.1956	Yes	20 ft.	X	X	X	X	X	X	X		X	X	X		X
530	U.S. Moorings	Middle of U.S. Moorings embayment	N&E, FS, GW	7622577.8461	706308.6675	Yes	20 ft.	X	X	X	X	X	X	X		X	X	X		X
531	U.S. Moorings	Downstream end of U.S. Moorings embayment	N&E, FS, GW	7622460.2970	706413.2538	Yes	20 ft.	X	X	X	X	X	X	X		X	X	X		X
532	Willbridge	Offshore of petroleum seep	N&E, GW	7629289.3419	700284.8803	Yes	14 ft.	X	X	X	X	X	X	X			X	X		
TOTAL NUMBER 2B STATIONS						**42**		42	42	42	42	42	42	42	2	27	38	36	6	11

Notes:
[1] - FSM 2003.
[3] - CSM (Conceptual Site Model) , Integral and GSI 2004.
Shaded analytes have been added to the station list.
2B cores 311 and 166 were sampled in 2A.

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Table 2-3. Round 2B Coring Approach Summary.

Category	Purpose	Locations	Rationale	Proposed Core Tube Length/ Rationale	Subsampling Approach	Estimated No. Core Segment Samples Analyzed per Location	Analyses
Nature and Extent	Determine nature and extent of contaminants in sediments	Potential current or historical surface/near-surface sources of contamination (e.g., outfalls, over-water activities)	Provides site-wide information of the nature and extent of sediment quality	14 feet (23 stations); 20 feet (19 stations) /Identification of problem areas	Lithologic description of core and sampling. Vertical composites of the two uppermost subsurface lithologic units (between 1-4 feet thick) determined by visual observation (or a deeper interval determined by field screening techniques), as well as any analytes in the bottom-most interval with short holding times, will be submitted for analysis. All other intervals will be composited and archived.	2[1] ; two subsurface units (surface foot sampled by grab)	SVOCs, total metals, chlorinated pesticides and PCBs, grain size, TOC; with VOCs, butyltins, chorinated herbicides, dioxins/furans, hexavalent chromium, and TPH added at selected locations.
Feasibility Study	Determine depth of contamination where historical contamination may be present at depth	Potential current or historical subsurface contamination (e.g., historical outfalls, over-water activities)	Provides general site characterization as well as information that may be used in the FS	14 feet (3 stations); 20 feet (12 stations) / Identify contamination at depth	Lithologic description of core and sampling. Vertical composites of up to four subsurface lithologic units (between 1-4 feet thick) determined by visual observation, to a depth of 8 feet below the mudline. All subsurface intervals below the uppermost two will be composited in intervals at least 2 feet thick. Intervals below 8 feet will be archived. Analytes in the bottom-most interval with short holding times will be submitted for analysis.	2 to 4[1]; up to four 1- to 4-foot subsurface intervals to 8 feet below mudline (surface foot sampled by grab)	Same as N&E cores
Groundwater	Determine if contaminated sediments are present where contaminated groundwater has the potential to intersect the river	Known or potential contaminated groundwater discharge areas to be determined as part of the CSM update	Provides information on contaminant concentrations where groundwater may be discharging through river sediments	14 feet (1 station); 20 feet (7 stations) /Assessment of potential groundwater discharge units	Lithologic description of core and sampling. Vertical composites of the two uppermost subsurface lithologic units (between 1-4 feet thick) determined by visual observation (or a deeper interval determined by field screening techniques), as well as any analytes in the bottom-most interval with short holding times, will be submitted for analysis. Select coarse-grained units or sample intervals may be additionally submitted for analysis. All other intervals will be composited and archived.	2 to 4[1]; up to four 1- to 4-foot subsurface intervals (surface foot sampled by grab)	Same as N & E cores

Notes:

[1] - Up to four subsurface core segments may be analyzed per 20-foot core tube sample. In addition to the estimated number shown, bottom intervals in cores requiring VOC, TPH-G, and/or hexavalent chromium analysis will be submitted initially, as will analytes in surface intervals not collected during surface sampling (i.e., at new station locations or where anlytes have been added to existing stations).

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PORTLAND HARBOR RI/FS

ROUND 2B SUBSURFACE SEDIMENT FIELD SAMPLING REPORT

DRAFT

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December 29, 2005

Prepared for:
The Lower Willamette Group

Prepared by:
Integral Consulting Inc.

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LIST OF ACRONYMS

ASTM	American Society for Testing and Materials
CAS	Columbia Analytical Services
CORS	continuously operating reference station
CSM	conceptual site model
DGPS	differential global positioning system
EDD	electronic data deliverable
EPA	U.S. Environmental Protection Agency
EQuIS	Environmental Quality Information System
ERA	ecological risk assessment
FID	flame ionization detector
FSP	field sampling plan
GC/ECD	gas chromatography/electron capture detection
GC/MS	gas chromatography/mass spectrometry
HHRA	human health risk assessment
HSP	health and safety plan
ICP/MS	inductively coupled plasma/mass spectrometry
ICP/OES	inductively coupled plasma/optical emission spectrometry
LWG	Lower Willamette Group
MSS	Marine Sampling Systems
N&E	nature and extent
NAD	North American Datum
NEA	Northeast Analytical
NOAA	National Oceanic and Atmospheric Administration
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PID	photoionization detector
QA	quality assurance
QC	quality control
QAPP	quality assurance project plan
RI/FS	remedial investigation and feasibility study
RM	river mile
R/V	research vessel
SVOCs	semivolatile organic compounds
SDG	sample delivery group
STL	Severn Trent Laboratories
TOC	total organic carbon
TPH	total petroleum hydrocarbon
TPH-Dx	diesel- and oil-range total petroleum hydrocarbon
TPH-Gx	gasoline-range total petroleum hydrocarbon
VOCs	volatile organic compounds

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1.0 INTRODUCTION

The remedial investigation and feasibility study (RI/FS) of the Portland Harbor Superfund Site includes several rounds of field sampling activities to investigate the nature and extent of contamination at the Site, to assess potential risk to human health and the environment, and to develop cleanup alternatives.

This Round 2 Field Sampling Report describes Round 2B subsurface sampling activities performed from October 18 to October 28, 2005. Field sampling reports for other phases of sampling during Round 2 have been submitted under separate cover.

Except where noted, all Round 2B subsurface sediment field activities, including vessel positioning, sample collection, sample handling and processing, and data management, followed guidelines specified in the Round 2 Field Sampling Plan: Sediment Sampling and Benthic Toxicity Testing (Round 2 FSP; Integral et al. 2004), the Round 2 Field Sampling Plan Round 2B Subsurface Addendum (2B FSP Addendum; Integral 2005a), the Round 2 Quality Assurance Project Plan (QAPP; Integral and Windward 2004), and the Round 2 Health and Safety Plan (HSP; Integral 2004a). The Round 2 FSP was based on a plan developed by the U.S. Environmental Protection Agency (EPA), EPA's partners, and the Lower Willamette Group (LWG).

1.1 ROUND 2 SAMPLING OBJECTIVES

The purpose of Round 2B sampling was to fill in data gaps for the RI, risk assessments, and the FS. The specific objectives of the Round 2B FSP for subsurface sediment sampling was to 1) supplement the information collected during Round 2A on the nature and extent of sediment contamination in areas that were not sampled in Round 2A, 2) determine the depth of contamination in areas of likely historical contamination for the FS, and 3) assess potential impacts to sediment quality from the discharge of groundwater in subareas of concern.

The results of the Round 2B subsurface sampling described here will be presented in the Round 2 Comprehensive Site Characterization Report, which will be prepared in 2006.

1.2 REPORT ORGANIZATION

The remaining sections of this document describe the field collection and sampling procedures used during the Round 2B subsurface sediment coring. Section 2 provides the chronology of sampling activities that took place during this phase of sampling. Section 3 describes the field sampling methods, quality assurance/quality control (QA/QC) samples, and deviations from the FSP and QAPP. Laboratory sample handling and processing, and laboratory deviations

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from the FSP and QAPP, are described in Section 4. Section 5 summarizes the types of data that were generated. Finally, references are provided in Section 6.

Supporting information is provided in several appendices:

- Appendix A: Field Core Log Sheets
- Appendix B: Core Description Forms
- Appendix C: Core Photographs
- Appendix D: Navigation Data.

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2.0 CHRONOLOGY OF ROUND 2 SUBSURFACE SEDIMENT SAMPLING

Subsurface sediment cores were collected during Round 2B from October 18 to October 28, 2005 at 42 locations within the lower Willamette River from approximately river mile (RM) 3.5 to 10 (Figure 2-1). These locations were sampled to support site nature and extent characterization efforts; however, 14 locations also supported FS purposes, and seven locations also supported the assessment of potential groundwater impacts.

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3.0 FIELD SAMPLING PROCEDURES

The following sections describe the detailed procedures and methods used during Round 2B subsurface sediment core collection, including navigation and station positioning, sampling procedures, record keeping, sample handling, storage, and field quality control procedures. Locations sampled during Round 2B are shown in Figure 2-1. Table 3-1 lists the stations, core measurements, collection and processing dates and times, and relevant comments regarding sampling and/or station changes relative to the FSP.

3.1 SAMPLING VESSELS

Marine Sampling Systems (MSS), Burley, WA, provided the research vessel (R/V) *Nancy Anne*, for the Round 2B subsurface sediment sampling program. The R/V *Nancy Anne* is a flat-deck, 36-foot-long catamaran with twin, 120-horsepower engines.

3.2 NAVIGATION AND STATION POSITIONING

Navigation and station positioning were provided by MSS aboard the R/V *Nancy Anne*, using a differential global positioning system (DGPS) and integrated navigation software. Positional accuracies of ±3 meters were achieved with this navigation system. The DGPS receiver was situated over the sampling gear to achieve the most accurate position for each sample. A position was recorded when the sampling device first impacted the sediment surface. Horizontal positions were acquired using a Trimble AG132 DGPS. Real-time differential corrections were obtained from the continuously operating reference station (CORS) site at Appleton, WA.

On the sampling vessel, the Trimble GPS receiver output the station position to the integrated navigation software package. The GPS receiver displayed and transmitted data to the computer in North American Datum 1983 (NAD83) geographic coordinates (latitude/longitude). The integrated navigation system, acting as a data manager, displayed the vessel's position relative to a target sampling location in plan view on a video screen. The screen display and numeric navigation data, including range and bearing to the target sampling location, assisted the vessel operator in approaching and maintaining a station position while sampling.

3.3 SUBSURFACE SEDIMENTS

Round 2B subsurface sample collection and processing procedures followed guidelines specified in the Round 2 FSP (Integral et al. 2004), the 2B FSP

Addendum (Integral 2005a), and the Round 2 QAPP (Integral and Windward 2004). Deviations from the FSP are discussed in Section 3.10.

3.3.1 Core and Sample Collection

A total of 45 subsurface sediment cores were collected from 42 stations during Round 2B. Including field replicates and homogenate split samples, a total of 181 sediment samples were submitted for chemical and/or physical analyses. A listing of the samples submitted for chemical and/or physical analyses is presented in Table 3-2.

Subsurface sediment cores were collected over water using a vessel-deployed vibracore. The vibracore was equipped with either a 14-ft or 20-ft aluminum core tube (4-inch diameter). Twenty-four locations were sampled with the 14-ft tube. However, as specified in the FSP, a 20-ft core tube was used in 21 nearshore areas where deep subsurface sources of contamination were known or suspected.

At each core station, a single core was driven to the maximum core tube length (13 ft for the 14-ft core tubes and 19 ft for the 20-ft core tubes) or the refusal depth. Depth to refusal (the maximum depth the vibracore can be driven into the bottom) and core sample recovery are functions of location-specific sediment textures and stratigraphy.

Aboard the vessel, the cores were cut into segments approximately 4 ft long for handling, storage, and transport. The cutter head at the bottom of the core tube was typically removed. The resulting sampled core lengths (net recovery) ranged from 62 to 99% of the drive lengths (Table 3-1). Net recoveries were good, with 42 of the 45 cores (93%) showing recoveries of 70% or more of the drive length. The three cores with less than 70% recovery were C096 and C099 collected along the Schnitzer riverfront, and C312 collected offshore of Siltronic Corp.

Sampling personnel maintained the field logs as each core was collected. The following information was recorded on the field core logs:

- **Date/Time.** The date and time (local) when vibracoring was begun at each station.
- **Depth to Mudline.** Water depth at the sampling station.
- **Total Drive Length.** The depth of core tube penetration into the subsurface.
- **Recovered Length.** The thickness of the sediment column retained in the core tube prior to sectioning and removal of the core catcher at the base of the tube.
- **Sediment Observations.** The average grain size, color, notable odors, debris, etc. observed at each of the cut ends of the core sections.

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The cores were transferred upright from the sampling vessel to the core processing lab twice daily and were stored upright in lab refrigerators until processing.

At the core processing lab, all cores were opened using a table saw according to the methods described in the Round 2 FSP (Integral et al. 2004).

After the sediment in all segments of a core was exposed, the subsurface sample intervals were determined, based primarily on lithology and the minimum (1 ft) and maximum (approximately 4 ft) thickness criteria as stated in the Round 2 FSP (Integral et al. 2004). Representative samples for volatile organic compound (VOC) and gas-range total petroleum hydrocarbon (TPH-Gx) analyses and headspace screening were collected directly from each sample interval as soon as possible following the core exposure. Headspace screening was performed using a TVA-1000 photoionization detector/flame ionization detector (PID/FID).

The core segments were photographed, and core descriptions were recorded on Sediment Core Log forms using the criteria described in Section 4.6.3 of the Round 2 FSP. Following core description, the sediment from each sample interval was collected and homogenized using individual decontaminated stainless-steel bowls and spoons. All cores were subsampled vertically, with no compositing of sediment from adjacent cores. Sample intervals were selected to be either analyzed or archived based on the criteria described in Section 2.2.2 of the Round 2 FSP (Integral et al. 2004).

Copies of all field log sheets and sample description forms are provided in Appendices A and B. Core photos are provided in Appendix C. Original sample log sheets and core photos are on file in the LWG Project Library at Integral's office in Olympia, WA.

3.3.2 Sample Handling and Processing

Sediment from each sample interval was transferred directly (in the case of volatile analytes) or following homogenization into glass sample jars provided by the analytical laboratories. Sample jars were capped, labeled, bagged individually, and stored in lab refrigerators. Personnel from Floyd Snider collected split samples at the core processing lab from cores collected along the International Terminal Area on behalf of Schnitzer (cores C078 through C109; Table 3-1).

3.4 SAMPLE IDENTIFICATION SCHEME

All samples were assigned a unique identification code, as described in the FSPs, based on a sample designation scheme designed to meet the needs of field personnel, data management, and data users (Integral et al. 2004). Sample identification numbers for each target location are listed in Table 3-2.

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3.5 EQUIPMENT DECONTAMINATION PROCEDURES

Decontamination procedures for all nondedicated (reusable) sampling equipment (e.g., bowls, spoons) followed procedures outlined in the Round 2 FSPs:

- Rinse with tap water.
- Wash with brush and Alconox™ or other phosphate-free detergent.
- Double rinse with deionized water.
- Rinse with 0.1 N nitric acid.
- Rinse with deionized water
- Rinse with methanol.
- Final rinse with deionized water.

In addition to the above procedure, a hexane rinse was used, as needed, to remove residual contamination.

Sample handling equipment was wrapped in aluminum foil following the final deionized water rinse. To minimize sample contamination, gloves were replaced or thoroughly washed using Alconox™ or other phosphate-free detergent and rinsed with distilled water before and after handling each sample. Rinse waters were disposed of through the field laboratory's sanitary sewer.

The station-dedicated core tubes were decontaminated by MSS prior to mobilization to the site. The aluminum core tubes were washed in an Alconox™ solution bath, and the tube interiors were scrubbed with an abrasive pad. The core cutter heads were washed in an acid solution, rinsed with potable water, and then washed with an Alconox™ solution. Both the tubes and core cutter heads were given a final rinse with potable water and were capped until used.

3.6 FIELD QUALITY CONTROL/QUALITY ASSURANCE

The types of quality control (QC) samples that were collected during this phase of the Round 2 sampling program are described below. The numbers of QC samples collected per analyte are listed in Table 3-3.

3.6.1 Field Replicates

Replicate samples were analyzed from field replicate cores collected at three stations (approximately 7% of the 2B core sampling stations), as indicated by the "-2" core ID extension in the Table 3-1 station list. Replicates are samples from a second core collected at a station to allow assessment of within-station variability. Their origin is not revealed to the laboratory (also called a "blind" replicate). Field replicates were generated by collecting an additional core at the sampling

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location, not by subsampling the samples from the original core. These samples were assigned unique identification numbers (see Table 3-2) and were not identified as replicates to the laboratory. The total number of field replicate samples collected per analyte is listed in Table 3-3.

3.6.2 Field Splits

Blind field split samples were analyzed at each of the stations where blind field replicates are collected, or 7% of the total 2B stations (Table 3-1). Split samples are multiple samples taken from a single sample composite after it is fully homogenized. The resulting data provide information on the variability associated with sample handling and laboratory analysis operations. These samples were also assigned unique identification numbers (see Table 3-2) and were not identified as splits to the laboratory. The total number of field split samples collected per analyte is listed in Table 3-3.

3.6.3 Rinsate, Temperature, and Field Trip Blanks

Introduction of chemical contaminants during sampling and analytical activities was assessed by the analysis of blanks. Rinsate blanks, consisting of sampling equipment rinsates, were generated for all chemical parameter groups (except PCB congeners) at a frequency of at least 5% of the sediment samples submitted for analysis to the laboratory. The total number of rinsate blanks collected per analyte is listed in Table 3-3.

Temperature blanks are used to measure and ensure cooler temperature upon receipt to the laboratory. One temperature blank was prepared and submitted with each cooler shipped to the analytical laboratory. The temperature blank consisted of a sample jar containing deionized water that was packed into the cooler in the same manner as the rest of the samples and labeled "temp blank."

Field trip blanks are used to determine if volatile chemicals are introduced to samples during holding or storage prior to analysis. One trip blank was included with each cooler containing samples for analysis of VOCs. The field trip blanks consisted of deionized water sealed in a sample container by the analytical laboratory. The trip blank was generated and transported to and from the field and then returned to the laboratory unopened for analysis.

3.7 SAMPLE STORAGE, TRANSPORT, AND CUSTODY

Filled sample jars were stored in the field lab refrigerators before the jars were transferred to the analytical laboratory. Glass jars were packed to prevent breakage and separated in the shipping container by bubble wrap or other shock-absorbent material. Ice in sealed plastic bags or "blue ice" was then placed in the shipping cooler to maintain a temperature of approximately 4°C.

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The coolers were clearly labeled with sufficient information to enable positive identification. A chain-of-custody form was placed into a resealable plastic bag and taped on the inside lid of the cooler. A temperature blank was added to each cooler as well as a trip blank for samples for volatile analyses (VOCs and gasoline). Each ice chest was sealed with three chain-of-custody seals. Coolers were transported to the laboratory by courier or overnight shipping service.

3.8 FIELD DOCUMENTATION

All field activities and observations were noted in a bound field logbook and/or individual field and sample log forms during fieldwork. Information included personnel, date, time, station designation, sampler, types of samples collected, and general observations. Any changes that occurred at the site (e.g., personnel, responsibilities, deviations from the FSP) and the reasons for these changes were documented.

A sample collection checklist was produced prior to sampling and completed following sampling operations at each station. The checklist included station designations, types of samples to be collected, and whether blind field replicates or additional sample volumes for laboratory QC analyses were collected.

Field data sheets and core description forms were completed for all stations and kept in the project file.

3.9 WASTE DISPOSAL

Investigation-derived waste sediment and debris generated from the subsurface sampling was contained in labeled 55-gallon drums staged in the field lab. A representative sample for disposal characterization was collected on October 28, 2005. All water or sediment spilled on the deck of the sampling vessel was washed into the surface waters at the collection site before proceeding to the next station.

All disposable materials used in sample processing were placed in heavyweight garbage bags and placed in the field lab dumpster for disposal at a solid waste landfill. Liquid wastes from decontamination of the sampling equipment were disposed of into the sanitary sewer system. Used core tubes were washed and recycled.

3.10 DEVIATIONS FROM THE ROUND 2 FSP, QAPP, AND HSP

This section discusses Round 2B sampling deviations from the Round 2 FSP (Integral et al. 2004), the 2B FSP Addendum (Integral 2005a), the Round 2 QAPP (Integral and Windward 2004), and the Round 2 HSP (Integral 2004a).

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3.10.1 Station Positioning

For stations where a surface grab sample was collected during Round 2 surface sediment sampling program, the coordinates of the surface sample served as the target location for the subsurface stations (Integral 2004b). The target coordinates for new stations not previously sampled were selected from site maps per EPA direction. Field conditions and water depth requirements for the operation of the coring equipment occasionally made it necessary to move the subsurface sampling location away from the target coordinates (Figure 2-1). The target and actual sample coordinates for all subsurface stations are included in Appendix D

The EPA-requested station C526, near the downstream Gasco property line, was dropped from the sampling list after it was confirmed that this station is collocated with the Round 2A station C263 (see Figure 2-1d).

Station C533 in Willamette Cove was added to the station list in the field. This station is located within approximately 9 feet of the surface sample G282. Cores that were not collected, were added, or were collected more than approximately 50 feet from their planned target location are listed in Table 3-4. Table 3-4 also includes the distance and direction of each of these stations from the target location and the reason for the location changes.

3.10.2 Core Collection and Sample Processing Procedures

Changes in the proposed station sampling approach (such as core length changes, station additions/deletions) are noted in Table 3-1.

As in Round 2A subsurface sampling, in addition to the criteria stated in the Round 2 FSP for determining sample intervals in the cores, obvious visual breaks (e.g., color change, evidence of contamination) were sometimes used to mark the boundaries of subsurface sample intervals.

The following are other deviations from the Round 2 FSP regarding core collection and sample processing:

- Station C533 in Willamette Cove was added to the station list during field sampling; it is collocated (within approximately 9 feet) with the surface sample G282. The 'A' interval from this core was collected for analysis (Table 3-2).
- As agreed to by the LWG and EPA, Station C492 was sampled with a 20-ft core tube instead of the 14-ft tube proposed in the FSP.
- The FSP sampling strategy for cores identified for the FS called for initial analysis of all subsurface sample intervals from these cores to at least 8 ft below the mudline; however, the sample intervals selected for initial analysis from FS core C103 did not extend to 8 ft.

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- Although care was taken to avoid sampling sediment in contact with the inner surface of the core tubes, insufficient volume or the cohesiveness of the sediment sometimes necessitated collecting this material.
- Samples from C109 and C127 were inadvertently placed in a freezer rather than a refrigerator for storage prior to shipping. As stated in the QAPP, freezing is not an acceptable means of preservation for the grain-size, TPH-gasoline and VOC samples from these cores. While these samples were still submitted for analysis, the results will be appropriately qualified during validation.
- The PID and/or FID in the TVA 1000 was not operational for sample headspace screening during portions of October 21 and 27, 2005.
- Inadvertently, core photographs do not include the interval from 283-297 cm in core C533 or the interval from 324-338 cm in core C523, and no photographs were recorded of C099 below approximately 110 cm and of C127 below 368 cm.

3.10.3 Quality Assurance/Quality Control

All QA/QC requirements for the subsurface samples were met, with few exceptions as follows (Table 3-2):

- A sample for dioxins/furans analysis was mistakenly not collected from the 'A' interval of C092; CAS was requested to subsample the volume submitted for TPH-Diesel for this analysis.
- Samples for pesticides and dioxins/furans analyses were mistakenly not collected from the 'A' interval of C094; CAS was requested to subsample the volume submitted for TPH-Diesel for these analyses.
- Samples for TPH-G were not collected from C524.
- Only one 8-oz archive jar was collected for the 'A' segment of C312 due to limited volume.
- Due to insufficient sediment volume, no archive volume was collected from the 'A' interval of C533.
- Because of the distances between the surface sample locations and the core locations at stations 106 and 109 (113 ft and 62 ft, respectively) the 'A' intervals of these cores were submitted for all station analytes instead of only TPH as stated in the 2B FSP Addendum (Integral 2005a).
- To meet field QA frequency requirements, Columbia Analytical Services (CAS) was requested to subsample the volumes submitted from the 'A' intervals of C082-1 and C082-2 for TBT, and archive jars from the 'D' interval of C082-1 were submitted for that station's analyses (except VOC and TPH-gasoline, which had been submitted at the time of sampling).

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- Field duplicate sediment samples for TPH and dioxins/furans analyses were collected at a frequency slightly less than 5% (Table 3-3).
- Rinsates were not collected for PCB congener analysis.

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4.0 LABORATORY ANALYSES

This section summarizes the physical and chemical analyses performed for the characterization of subsurface sediment samples in Round 2B.

4.1 PHYSICAL AND CHEMICAL ANALYSES

Two laboratories conducted the chemical analyses of subsurface sediment samples. CAS (Kelso, WA; Redding, CA; and Houston, TX) conducted the conventional analyses, geotechnical characteristics, metals, butyltin compounds, petroleum hydrocarbons, VOCs, polychlorinated biphenyl (PCB) Aroclors, chlorinated pesticides, chlorinated dioxins and furans, and semivolatile organic compounds (SVOCs). Severn Trent Laboratories (STL; Tacoma, WA) performed chlorinated herbicide analyses. Analytical methods generally followed those described in the Round 2 QAPP; deviations from the QAPP are detailed in Section 4.3.

The analytical methods used for the subsurface sediment samples are compiled in Table 4-1. Sediment samples were analyzed for metals, SVOCs, chlorinated pesticides, and PCB Aroclors at all stations. TPH, butyltins, VOCs, dioxins and furans, chlorinated herbicides, and hexavalent chromium were analyzed only at selected stations specified by the EPA team. The conventional parameters, grain size, total solids, total organic carbon (TOC), and specific gravity, were analyzed at all stations. Samples for Atterberg limits analysis were collected at all stations, and 10% of the samples will be selected for analysis based on a review by a registered geotechnical engineer or geologist. Samples for analysis of PCB congeners will be selected by LWG and EPA when the PCB Aroclor data are available.

4.2 DATA MANAGEMENT

Once the laboratories have completed their internal QA/QC checks, they export the analytical data (sample, test, batch, and result information) into comma-delimited text files with data columns arranged in an order that is recognized by the project's Environmental Quality Information System (EQuIS) database. These electronic data deliverables (EDDs) are e-mailed to Integral where they are checked for proper EQuIS structure and appended with specific information that was unknown by the labs, such as sampling location, composite information, and field replicate and split information. If any problems are found in the structure of the EDDs, then the laboratory is notified and asked to correct the problem and resubmit the EDD. Each e-mailed EDD transmission, with the original, unaltered EDD attachment, is stored to document and track the laboratories' delivery of electronic data to Integral.

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When the EDDs are correct and complete, they are checked electronically by loading them into the temporary section of Integral's LWG project database. In the process of loading, EQuIS checks the EDDs for correct lookup codes (such as for analytes, test methods, and sample matrices); proper relationships for results, tests, batches, and samples (to ensure all results match with a test, tests with samples, and sample/test pairs with batches); and that all derived samples (such as replicates, splits, and matrix spikes) have corresponding parent samples. In addition to these checks, EQuIS also checks "less important" characteristics, such as date and time formats and text field lengths, to ensure consistency throughout the database.

Any error prevents the EDD from loading until the error is corrected. If errors are found that are related to the way the laboratory is reporting the data or constructing the EDD, then the laboratory is notified and asked to correct the problem and resubmit the EDD. If errors are related to Excel automatically formatting date and time fields, for example, then the error is corrected, and steps are taken to avoid repeats of the problem (such as changing default settings in the software). Each successfully loaded EDD is stored as loaded to document and track the data that are loaded into the LWG project database.

Each verified and accurate EDD is provided to the Round 2 data validation contractor (EcoChem, Seattle, WA) for data review and validation. These EDDs are also stored in a temporary section of the project database where they can be queried and examined, if desired, until validation is complete. As EcoChem completes validation of the data by sample delivery group (SDG) or small groups of SDGs, the validation qualifiers and reason codes are applied to the data in the temporary section of the database. The validated data are then merged into the permanent project database. During the merging process, all previously performed electronic checks are repeated to ensure nothing was incorrectly modified with the application of the validation results.

Several queries have been set up in the permanent project database to translate the data structure to a form compatible with the National Oceanic and Atmospheric Administration's (NOAA) Query Manager. The data translation includes creating station and sample identifiers, converting the sample type code, and changing the date format. The translated data are imported into an Access file provided by NOAA that contained template tables for the Query Manager structure.

Integral's LWG project database contains all of the data reported by the analytical laboratories. This includes field and lab replicates, lab dilutions, results for the same analyte from multiple analytical methods (e.g., hexachlorobenzene by EPA methods 8081A and 8270), and laboratory QC samples such as matrix spikes, surrogates, and method blanks.

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4.3 LABORATORY DEVIATIONS FROM THE ROUND 2 FSP AND QAPP

Round 2B samples are being analyzed according to methods described in the Round 2 QAPP (Integral and Windward 2004), with modifications described in the *Round 2 Quality Assurance Project Plan Corrective Action Plan: SVOC Analysis of Sediment Core Samples* (Integral 2004c), and Round 2A Sediment Site Characterization Report (Integral 2005b).

Additional detail regarding sample analyses and any specific difficulties encountered by the laboratories will be provided in the Round 2 Comprehensive Site Characterization Report.

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5.0 SUMMARY OF SUBSURFACE DATA COLLECTED

A total of 45 sediment cores were collected from 42 stations during the Round 2B subsurface sampling field event conducted from October 18 to October 28, 2005. Including field replicates and homogenate split samples, a total of 181 sediment samples were submitted for chemical and/or physical analyses. As illustrated in Figure 2-1 and Table 3-2, the subsurface sediment sampling program was conducted in close accordance with the sampling program described in the Round 2 FSP (Integral et al. 2004), the 2B FSP Addendum (Integral 2005a), and the Round 2 QAPP. Deviations from the planned approaches are described above.

The subsurface sediment data being generated from this effort will be evaluated in conjunction with the surface sediment and beach sediment data collected in 2004 and reported in 2006 in the Round 2 Comprehensive Site Characterization Report.

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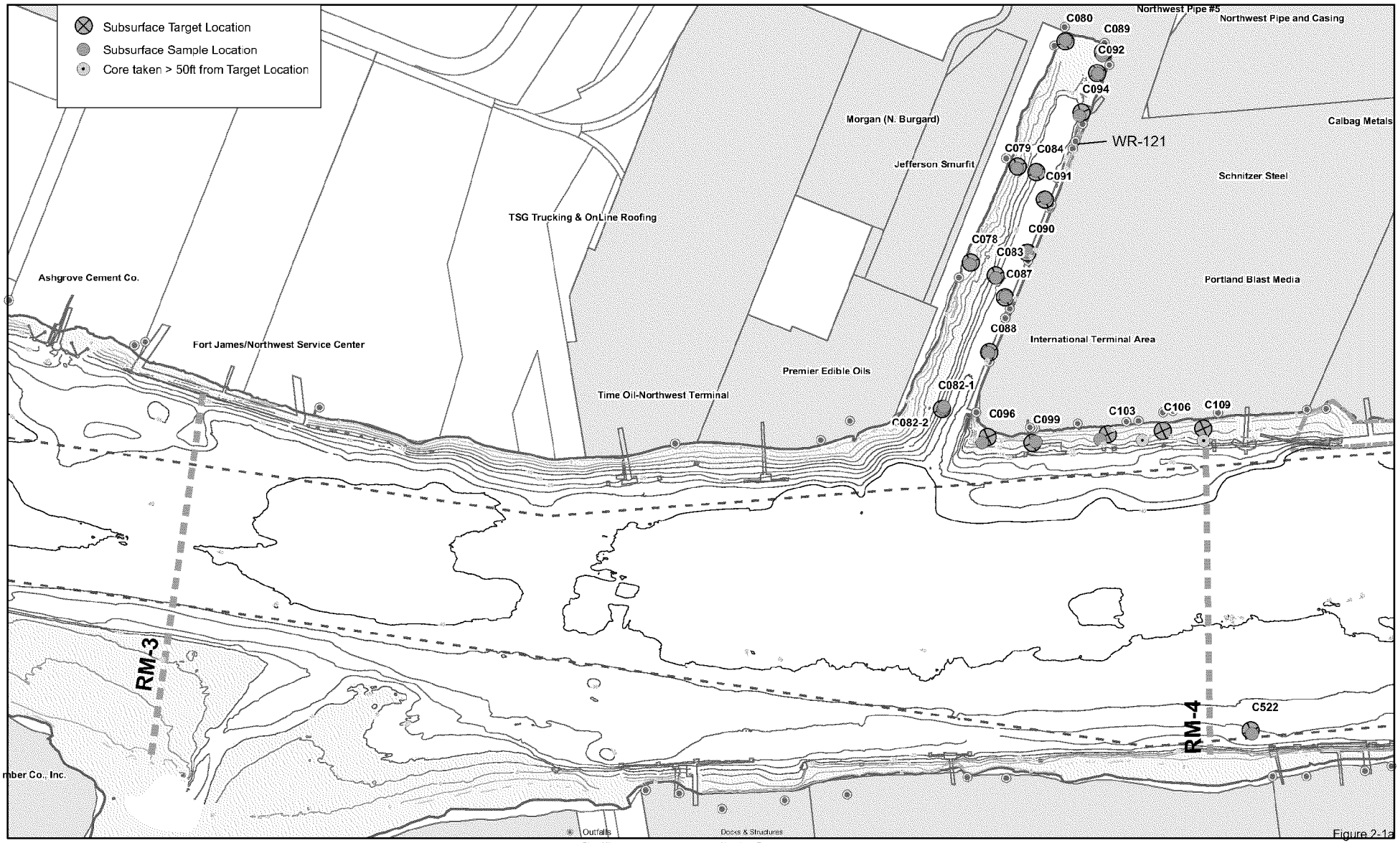

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Figure 2-1a
Portland Harbor RI/FS
Round 2B Subsurface
Field Sampling Report
Actual Subsurface Sediment Locations

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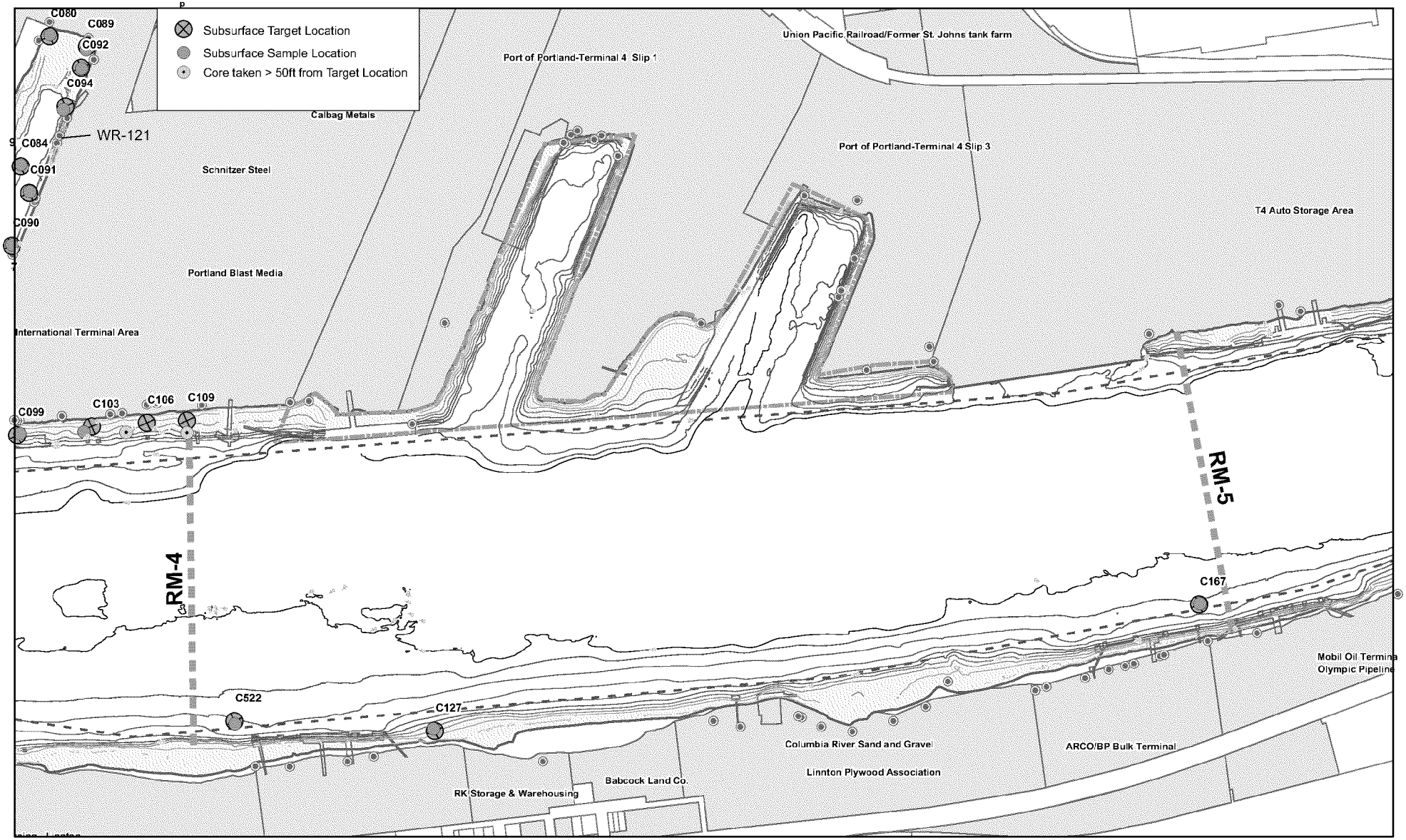

Figure 2-1b
Portland Harbor RI/FS
Round 2B Subsurface
Field Sampling Report
Actual Subsurface Sediment Locations

ANC04710
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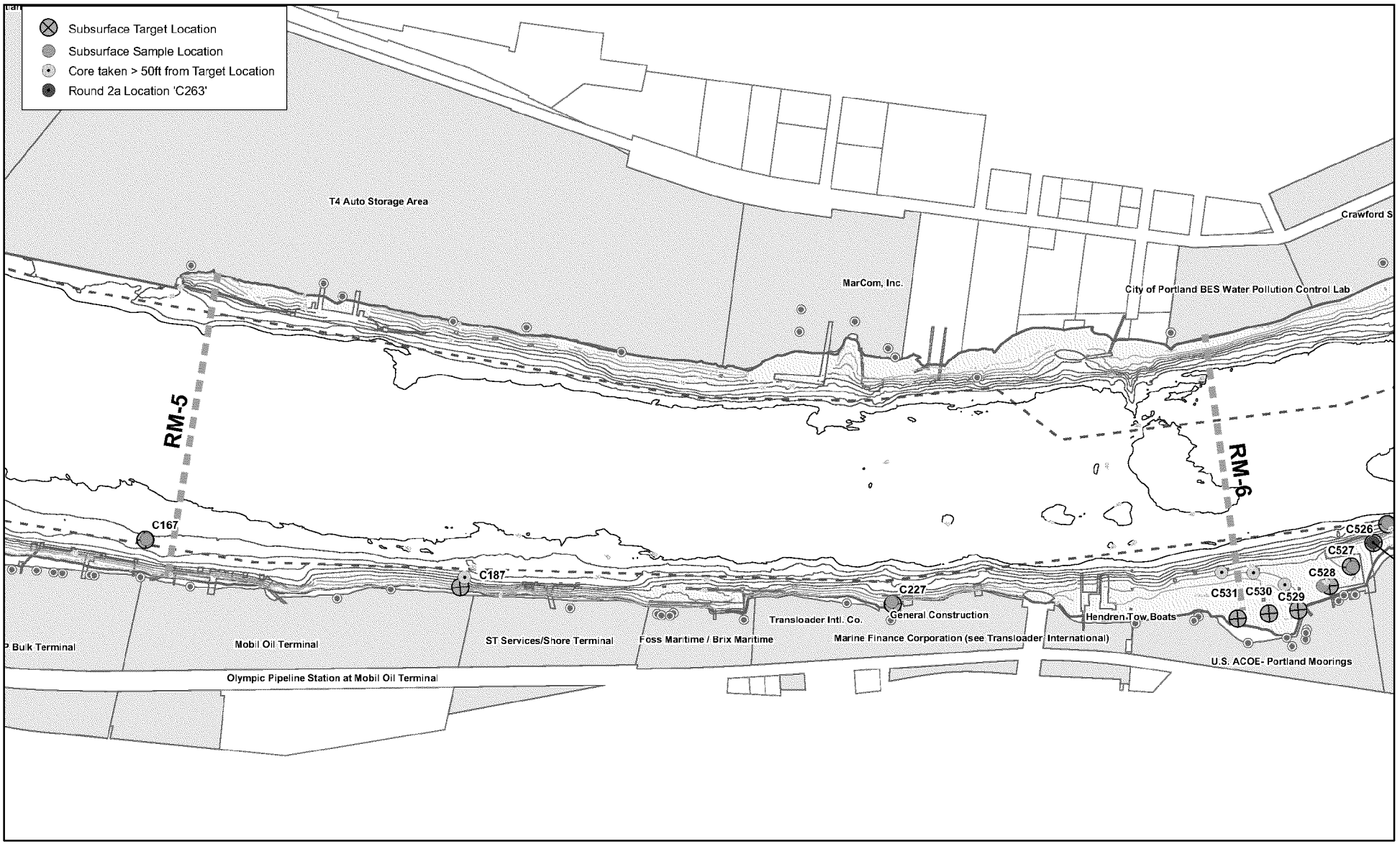

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Feet

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Outfalls
River Miles
T-4 Early Action Site Boundary
McCormick & Baxter Cap Footprint
Docks & Structures
Nearshore Zone
Navigation Channel
River Edge
Upland Source Tax Lots

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Figure 2-1c
Portland Harbor RI/FS
Round 2B Subsurface
Field Sampling Report
Actual Subsurface Sediment Locations

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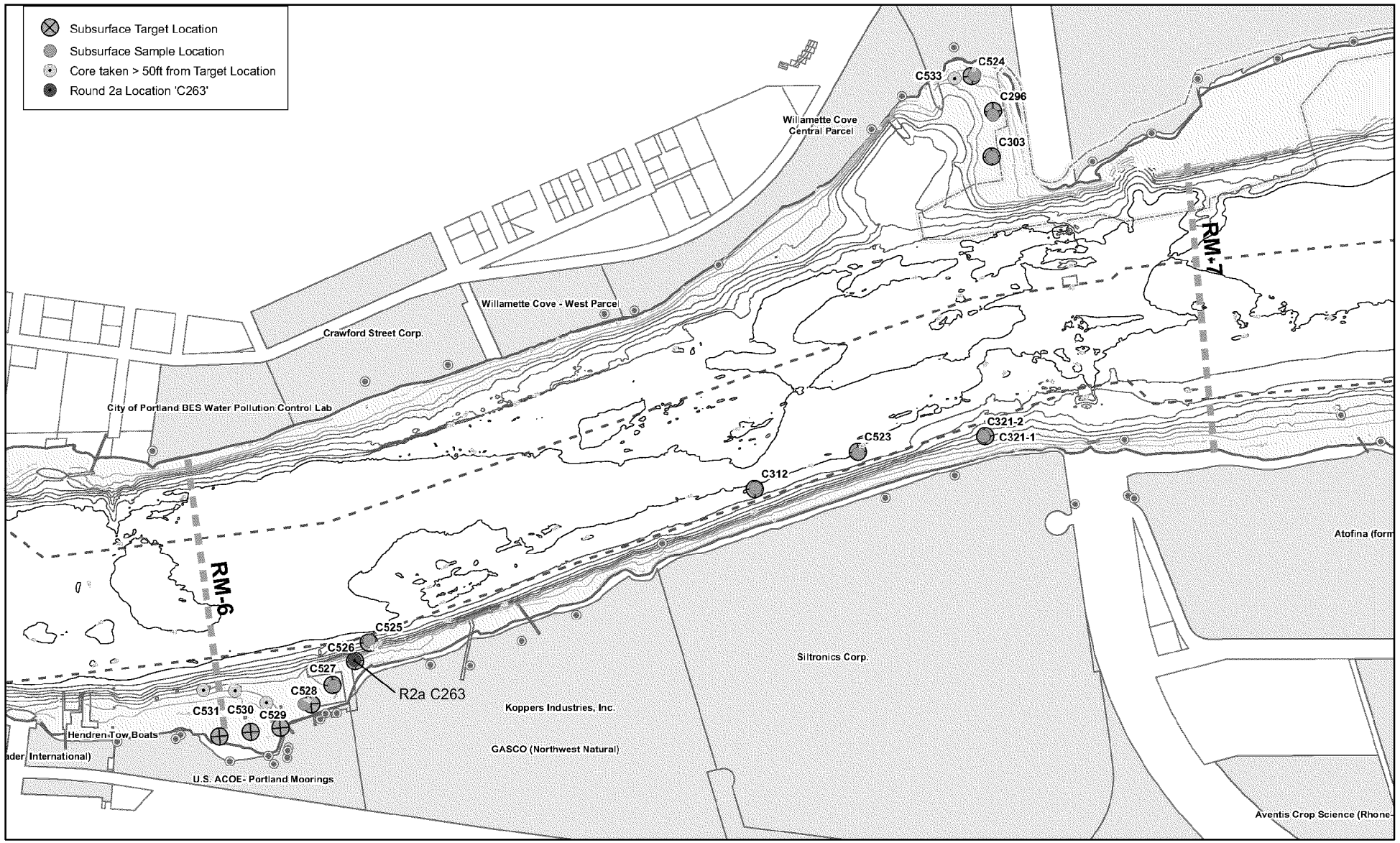

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Outfalls
River Miles
T-4 Early Action Site Boundary
McCormick & Baxter Cap Footprint
Docks & Structures
Nearshore Zone
Navigation Channel
River Edge
Upland Source Tax Lots

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Figure 2-1d
Portland Harbor RI/FS
Round 2B Subsurface
Field Sampling Report
Actual Subsurface Sediment Locations

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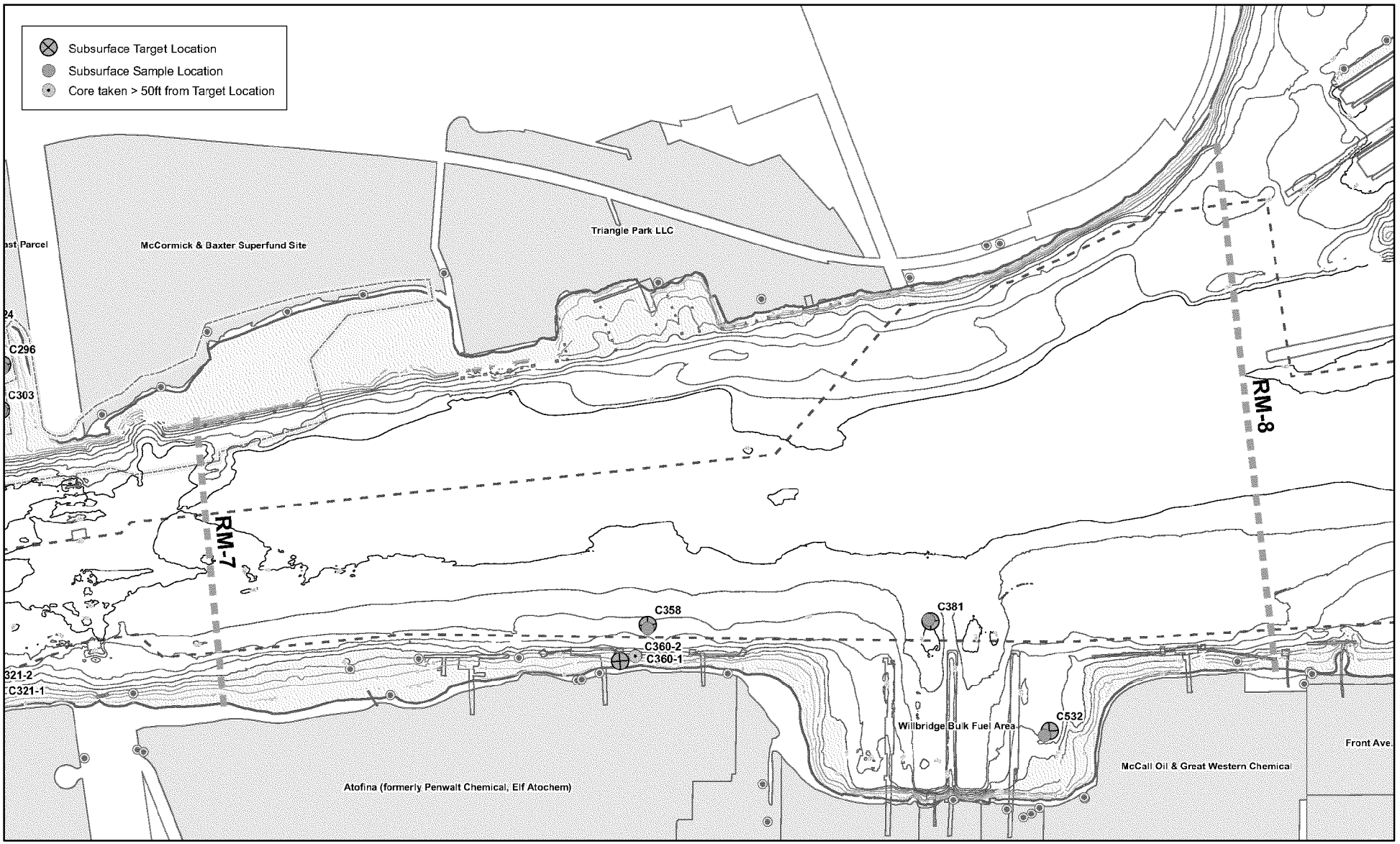

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Figure 2-1e
Portland Harbor RI/FS
Round 2B Subsurface
Field Sampling Report
Actual Subsurface Sediment Locations

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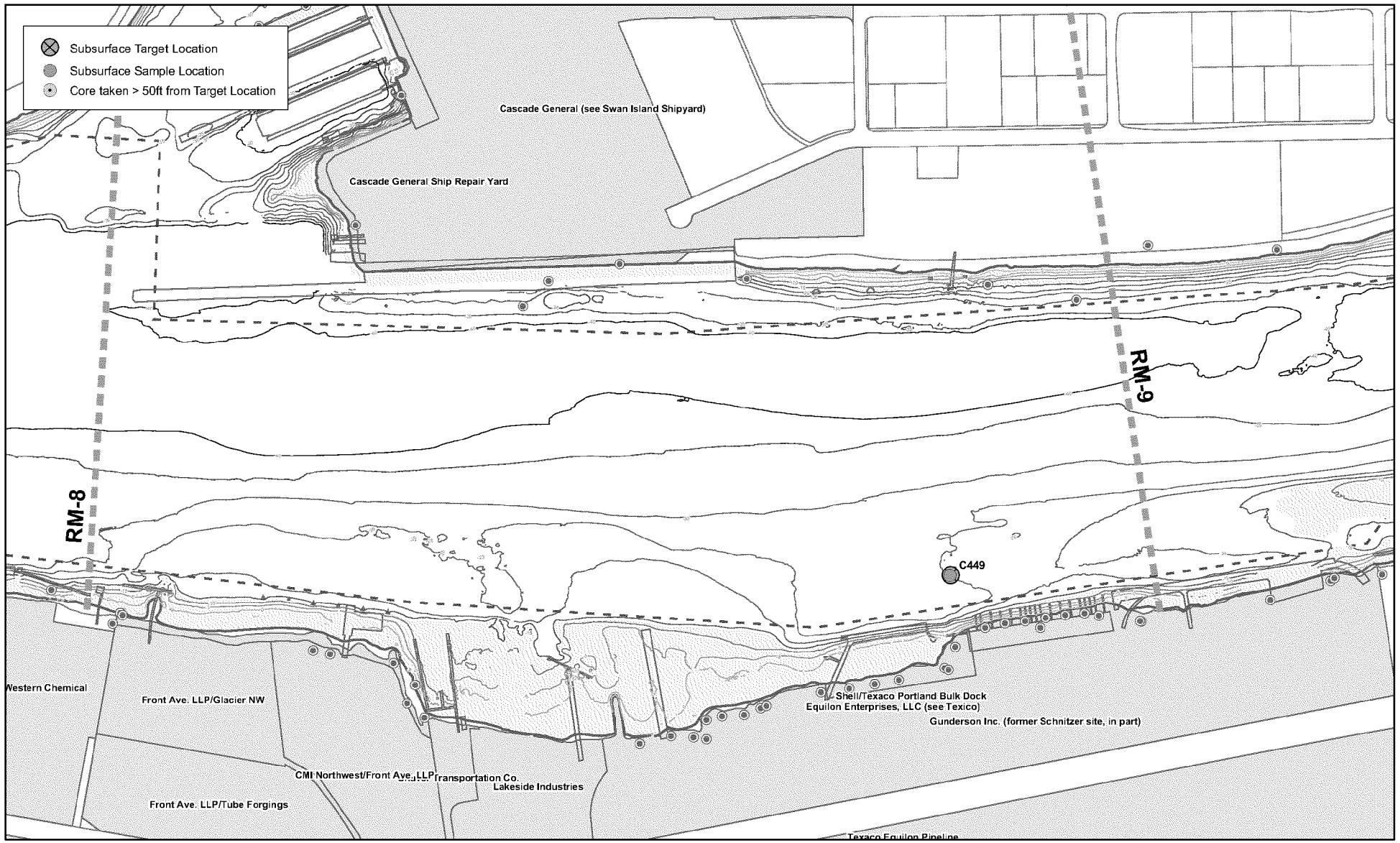

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Figure 2-1f
Portland Harbor RI/FS
Round 2B Subsurface
Field Sampling Report
Actual Subsurface Sediment Locations

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- Outfalls
- River Miles
- T-4 Early Action Site Boundary
- McCormick & Baxter Cap Footprint
- Docks & Structures
- Nearshore Zone
- Navigation Channel
- River Edge
- Upland Source Tax Lots

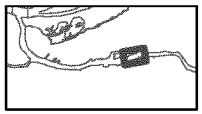

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Figure 2-1g
Portland Harbor RI/FS
Round 2B Subsurface
Field Sampling Report
Actual Subsurface Sediment Locations

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Table 3-1. Round 2B Subsurface Sediment Stations, Core Measurements, and Collection and Processing Dates and Times.

Station Number	Nearby Facility	Location	Core Type	Core Tube Length (ft)	Core Drive Length (ft)	Sampled Core Length (cm)	Sampled Core Length (ft)	Sampled Core Recovery	Collected		Processed		Comment
									Date	Time	Date	Time	
C078	International Slip	Off outfall	N&E	14	13.0	367	12.0	93%	10/20/2005	1058	10/21/2005	0800	Split samples collected by Schnitzer consultant.
C079	International Slip	Off outfall	N&E	14	13.0	364	11.9	92%	10/20/2005	1024	10/20/2005	1645	Split samples collected by Schnitzer consultant.
C080	International Slip	Two outfalls	N&E	14	13.0	336	11.0	85%	10/20/2005	0945	10/20/2005	1445	Split samples collected by Schnitzer consultant.
C082-1	International Slip	Slip close to river	N&E	14	13.0	295	9.7	74%	10/19/2005	1407	10/20/2005	0745	Bottom 21cm of third segment empty, lost during collection. Split samples collected for Schnitzer consultant.
C082-2				14	13.0	297	9.7	75%	10/19/2005	1438	10/20/2005	0840	Field duplicate and split samples collected from this core. Some material (est. 15 cm) lost during collection.
C083	International Slip	Mid Slip	N&E	14	13.0	282	9.3	71%	10/19/2005	1509	10/20/2005	0920	Bottom 1.5 ft lost during collection. Split samples collected by Schnitzer consultant.
C084	International Slip	Channel Far inside Slip	N&E	14	13.0	369	12.1	93%	10/20/2005	1200	10/21/2005	0900	Split samples collected by Schnitzer consultant. PID/FID malfunctionning - no headspace screening.
C087	International Slip	Outfalls 11, 10	N&E	14	13.0	328	10.8	83%	10/20/2005	1130	10/21/2005	1030	Schnitzer collected split samples; "A" interval not technically a split (see core log note). PID not functioning for headspace screening.
C088	International Slip	Outfall 8	N&E	14	13.0	284	9.3	72%	10/19/005	1652	10/20/2005	1200	Sands lost from bottom of core during collection. Split samples collected by Schnitzer consultant.
C089	Northwest Pipe/ International Slip	Outfall 18	N&E	20	19.0	485	15.9	84%	10/24/2005	1554	10/25/2005	0930	Split samples collected by Schnitzer consultant.
C090	International Slip	Outfall 12	N&E	14	12.5	297	9.7	78%	10/19/2005	1548	10/20/2005	1025	Split samples collected by Schnitzer consultant.
C091	International Slip	Outfall 13	N&E	14	13.0	306	10.0	77%	10/19/2005	1625	10/20/2005	1100	Bottom 20 cm lost during collection. Split samples collected by Schnitzer consultant.
C092	International Slip	Outfall 17	N&E	20	19.0	515	16.9	89%	10/24/2005	1505	10/25/2005	0800	Split samples collected by Schnitzer consultant.
C094	International Slip	Outfalls 14, 15, 16	N&E	14	13.0	370	12.1	93%	10/20/2005	0903	10/20/2005	1345	Split samples collected by Schnitzer consultant.
C096	Schnitzer Steel	Outfall 7	FS, N&E	20	18.0	379	12.4	69%	10/24/2005	1154	10/24/2005	1445	Split sample collected by Schnitzer consultant.
C099	Schnitzer Steel	Outfall 6	FS, N&E	20	19.0	368	12.1	64%	10/24/2005	1325	10/24/2005	1600	Split sample collected by Schnitzer consultant.
C103	Schnitzer Steel	Outfall 5	FS, N&E	20	19.0	462	15.2	80%	10/24/2005	1657	10/25/2005	1030	Station moved downstream approx. 49 ft due to water depth/debris restrictions. Split sample collected by Schnitzer consultant; not sampled to 8 ft.
C106	Schnitzer Steel	Outfall 4	FS, N&E	20	19.0	503	16.5	87%	10/25/2005	0926	10/25/2005	1400	Station moved downstream approx. 113 ft due to water depth/debris restrictions. Split sample collected by Schnitzer consultant.
C109	Schnitzer Steel	Outfall 3	FS, N&E	20	19.0	432	14.2	75%	10/25/2005	1147	10/25/2005	1515	Station moved offshore approx. 62 ft due to water depth restrictions.Split sample collected by Schnitzer consultant.
C127	Kinder-Morgan	South end of dock	N&E	20	17.0	466	15.3	90%	10/25/2005	1237	10/25/2005	1615	
C167	Arco/BP	south end property, offshore	FS, N&E	14	13.0	356	11.7	90%	10/18/2005	1629	10/19/2005	1130	
C187	Exxon/Mobil Oil Terminal	south end of property	N&E	20	17.0	418	13.7	81%	10/27/2005	1100	10/28/2005	1010	Station moved offshore approx. 53 ft due to slope, water depth, and rip-rap. 'A' interval archived.

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Table 3-1. Round 2B Subsurface Sediment Stations, Core Measurements, and Collection and Processing Dates and Times.

Station Number	Nearby Facility	Location	Core Type	Core Tube Length (ft)	Core Drive Length (ft)	Sampled Core Length (cm)	Sampled Core Length (ft)	Sampled Core Recovery	Collected		Processed		Comment
									Date	Time	Date	Time	
C227	Marine Finance	Seeps north end of property	N&E	14	7.5	192	6.3	84%	10/19/2005	0845	10/19/2005	1400	
C296	Willamette Cove	Edge of McCormick & Baxter cap	N&E	14	13.0	331	10.9	84%	10/18/2005	1400	10/19/2005	0800	
C303	Willamette Cove	Edge of McCormick & Baxter cap	N&E	14	13.0	282	9.3	71%	10/18/2005	1426	10/19/2005	0845	
C312	Siltronics	Transect 14	FS, N&E	14	13.0	245	8.0	62%	10/18/2005	1545	10/19/2005	1045	
C321-1	Siltronics	Transect 16, -5	N&E	20	18.7	465	15.3	82%	10/27/2005	0838	10/27/2005	1410	
C321-2				20	18.7	491	16.1	86%	10/27/2005	0916	10/27/2005	1530	Field duplicate and split samples collected from this core.
C358	Arkema	Offshore, between north and middle docks	N&E	20	12.5	303	9.9	80%	10/26/2005	1229	10/26/2005	1520	Basalt chunk noted in core catcher during collection.
C360-1	Arkema	North, middle transect	N&E	20	19.0	572	18.8	99%	10/26/2005	1423	10/27/2005	0745	
C360-2				20	19.0	509	16.7	88%	10/26/2005	1459	10/27/2005	0915	Field duplicate and split samples collected from this core.
C381	Willbridge	Off Chevron Pier	N&E	14	13.0	390	12.8	98%	10/18/2005	1155	10/18/2005	1630	
C449	Gunderson	Gunderson box	N&E	14	13.0	321	10.5	81%	10/18/2005	1048	10/18/2005	1330	
C492	Terminal 2	mouth of Slip off outfall	FS, N&E	20	18.0	433	14.2	79%	10/26/2005	1023	10/26/2005	1410	Initially proposed as 14-ft core.
C522	Kinder-Morgan	nearshore, just downstream of dock	N&E	14	11.8	292	9.6	81%	10/19/2005	1238	10/19/2005	1445	
C523	Siltronics	Transect 15, -40	N&E	14	13.0	369	12.1	93%	10/18/2005	1455	10/19/2005	0945	
C524	Willamette Cove	Observed sheen area, below ordinary low water	N&E	14	6.0	142	4.7	78%	10/19/2005	1015	10/19/2005	1600	
C525	U.S. Moorings	Just upstream of GASCO/U.S. Moorings Property line	FS, N&E, GW	20	19.0	427	14.0	74%	10/25/2005	1715	10/26/2005	1110	
C526	U.S. Moorings												Station dropped; collocated with R2A station C263.
C527	U.S. Moorings	Just downstream of U.S. Moorings Dock	FS, N&E, GW	20	19.0	482	15.8	83%	10/25/2005	1638	10/26/2005	0920	
C528	U.S. Moorings	Approximately 100' downstream of U.S. Moorings Dock	FS, N&E, GW	20	19.0	491	16.1	85%	10/25/2005	1533	10/26/2005	0745	
C529	U.S. Moorings	Upstream end of U.S. Moorings embayment	FS, N&E, GW	20	19.0	541	17.7	93%	10/26/2005	1558	10/27/2005	1030	Station moved approx. 143' offshore due to water depth restrictions.
C530	U.S. Moorings	Middle of U.S. Moorings embayment	FS, N&E, GW	20	19.0	544	17.8	94%	10/26/2005	1634	10/27/2005	1200	Station moved approx. 218' offshore due to water depth restrictions. FID malfunction during headspace screening of 'D' interval from this core.
C531	U.S. Moorings	Downstream end of U.S. Moorings embayment	FS, N&E, GW	20	19.0	516	16.9	89%	10/27/2005	1010	10/28/2005	0840	Station moved approx. 243' offshore due to water depth restrictions.
C532	Willbridge		N&E, GW	14	13.0	372	12.2	94%	10/18/2005	1130	10/18/2005	1500	
C533	Willamette Cove		N&E	14	13.0	336	11.0	85%	10/19/2005	1140	10/19/2005	1630	No archive collected for 'A' interval due to limited volume. This core added in the field, collocated w/G282.

Notes:
N&E: Nature and Extent.
FS: Feasibility Study.
GW: Groundwater.

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ANC04717

Table 3-2. Round 2B Subsurface Sediment Chemistry Sample Analyses Matrix.

		Round 2B Target Analytes												
Sample ID	DATE	Grain Size	Atterberg Limits[a] + specific gravity	SVOCs	Chlorinated Pesticides	PCB Aroclors	Metals + Hg	TS + TOC	Hexavalent Chromium	Butyltins	TPH-Diesel/Oil	TPH-Gas	VOCs	Dioxins/ Furans	Herbicides & PCP
LW2-C078-A	10/21/05	A									X	X			
LW2-C078-B	10/21/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C078-C	10/21/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C078-D	10/21/05	A										X	X		
LW2-C079-A	10/20/05	A									X	X			
LW2-C079-B	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C079-C	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C079-D	10/20/05	A										X	X		
LW2-C080-A	10/20/05	A									X	X			
LW2-C080-B	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C080-C	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C080-D	10/20/05	A										X	X		
LW2-C082-A1	10/20/05	A								X	X	X			
LW2-C082-A2	10/20/05	A								R	R	R			
LW2-C082-A3	10/20/05	A									S	S			
LW2-C082-B1	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C082-B2	10/20/05	R	R	R	R	R	R	R		R	R	R	R		
LW2-C082-B3	10/20/05	S	S	S	S	S	S	S		S	S	S	S		
LW2-C082-C1	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C082-C2	10/20/05	R	R	R	R	R	R	R		R	R	R	R		
LW2-C082-C3	10/20/05	S	S	S	S	S	S	S		S	S	S	S		
LW2-C082-D1	10/20/05	X*	X*	X*	X*	X*	X*	X*		X*	X*	X	X		
LW2-C082-D2	10/20/05	R	R	R	R	R	R	R		R	R	R	R		
LW2-C082-D3	10/20/05	S	S	S	S	S	S	S		S	S	S	S		
LW2-C083-A	10/20/05	A									X	X			
LW2-C083-B	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C083-C	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C083-D	10/20/05	A										X	X		
LW2-C084-A	10/21/05	A			X						X	X		X	
LW2-C084-B	10/21/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C084-C	10/21/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C084-D	10/21/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C084-E	10/21/05	A										X	X		
LW2-C087-A	10/21/05	A			X						X	X			
LW2-C087-B	10/21/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C087-C	10/21/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C087-D	10/21/05	A										X	X		
LW2-C088-A	10/20/05	A									X	X			
LW2-C088-B	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C088-C	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C089-A	10/25/05	A									X	X			
LW2-C089-B	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C089-C	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C089-D	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C089-F	10/25/05	A										X	X		
LW2-C090-A	10/20/05	A									X	X			
LW2-C090-B	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C090-C	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C090-D	10/20/05	A										X	X		
LW2-C091-A	10/20/05	A									X	X			

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ANC04718
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Table 3-2. Round 2B Subsurface Sediment Chemistry Sample Analyses Matrix.

		Round 2B Target Analytes												
Sample ID	DATE	Grain Size	Atterberg Limits[a] + specific gravity	SVOCs	Chlorinated Pesticides	PCB Aroclors	Metals + Hg	TS + TOC	Hexavalent Chromium	Butyltins	TPH-Diesel/Oil	TPH-Gas	VOCs	Dioxins/ Furans	Herbicides & PCP
LW2-C091-B	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C091-C	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C091-D	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C092-A	10/25/05	A									X	X		X	
LW2-C092-B	10/25/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C092-C	10/25/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C092-D	10/25/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C092-E	10/25/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C092-F	10/25/05	A										X	X		
LW2-C094-A	10/20/05	A			X						X	X		X	
LW2-C094-B	10/20/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C094-C	10/20/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C094-E	10/20/05	A										X	X		
LW2-C096-A	10/24/05	A									X	X			
LW2-C096-B	10/24/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C096-C	10/24/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C096-D	10/24/05	A										X	X		
LW2-C099-A	10/24/05	A									X	X			
LW2-C099-B	10/24/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C099-C	10/24/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C099-D	10/24/05	A										X	X		
LW2-C103-A	10/25/05	A									X	X			
LW2-C103-B	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C103-D	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C103-E	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C106-A	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C106-B	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C106-C	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C106-D	10/25/05	A													
LW2-C106-E	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C106-F	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C109-A	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C109-B	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C109-C	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C109-D	10/25/05	A													
LW2-C109-E	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C127-B	10/25/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C127-C	10/25/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C127-D	10/25/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C127-F	10/25/05	A										X	X		
LW2-C167-A	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C167-B	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C167-C	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C167-D	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C167-F	10/19/05	A										X	X		
LW2-C187-B	10/28/05	X	X	X	X	X	X	X			X	X	X		
LW2-C187-C	10/28/05	X	X	X	X	X	X	X			X	X	X		
LW2-C187-D	10/28/05	X	X	X	X	X	X	X			X	X	X		
LW2-C187-E	10/28/05	A										X	X		
LW2-C227-B	10/19/05	X	X	X	X	X	X	X		X	X	X			

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ANC04719
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Table 3-2. Round 2B Subsurface Sediment Chemistry Sample Analyses Matrix.

		Round 2B Target Analytes													
Sample ID	DATE	Grain Size	Atterberg Limits[a] + specific gravity	SVOCs	Chlorinated Pesticides	PCB Aroclors	Metals + Hg	TS + TOC	Hexavalent Chromium	Butyltins	TPH-Diesel/Oil	TPH-Gas	VOCs	Dioxins/ Furans	Herbicides & PCP
LW2-C227-C	10/19/05	X	X	X	X	X	X	X		X	X	X			
LW2-C296-B	10/19/05	X	X	X	X	X	X	X			X	X			
LW2-C296-C	10/19/05	X	X	X	X	X	X	X			X	X			
LW2-C296-D	10/19/05	A										X			
LW2-C303-B	10/19/05	X	X	X	X	X	X	X			X	X			
LW2-C303-C	10/19/05	X	X	X	X	X	X	X			X	X			
LW2-C303-D	10/19/05	A										X			
LW2-C312-A	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C312-B	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C312-C	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C321-B1	10/27/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C321-B2	10/27/05	R	R	R	R	R	R	R			R	R	R	R	R
LW2-C321-B3	10/27/05	A									S	S	S	S	S
LW2-C321-C1	10/27/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C321-C2	10/27/05	R	R	R	R	R	R	R			R	R			R
LW2-C321-E1	10/27/05	A										X	X		
LW2-C321-F2	10/27/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C358-A	10/26/05	A	A						X				X		
LW2-C358-B	10/26/05	X	X	X	X	X	X	X	X				X		
LW2-C358-C	10/26/05	X	X	X	X	X	X	X	X				X		
LW2-C358-D	10/26/05	X	X	X	X	X	X	X	X				X		
LW2-C360-B1	10/27/05	X	X	X	X	X	X	X	X				X		
LW2-C360-B2	10/27/05	R	R	R	R	R	R	R	R				R		
LW2-C360-B3	10/27/05	S	S	S	S	S	S	S	S						
LW2-C360-C1	10/27/05	X	X	X	X	X	X	X	X				X		
LW2-C360-C2	10/27/05	R	R	R	R	R	R	R	R				R		
LW2-C360-F1	10/27/05	A							X				X		
LW2-C360-F2	10/27/05	A											R		
LW2-C381-B	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-C381-C	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-C381-E	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-449-A	10/18/05	A			X										
LW2-449-B	10/18/05	X	X	X	X	X	X	X		X					
LW2-449-C	10/18/05	X	X	X	X	X	X	X		X					
LW2-449-E	10/18/05	X	X	X	X	X	X	X		X					
LW2-C492-B	10/26/05	X	X	X	X	X	X	X							X
LW2-C492-C	10/26/05	X	X	X	X	X	X	X							X
LW2-C522-A	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C522-B	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C522-C	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C522-E	10/19/05	A										X	X		
LW2-C523-A	10/19/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C523-B	10/19/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C523-C	10/19/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C523-D	10/19/05	A										X	X		
LW2-C524-A	10/19/05	X	X	X	X	X	X	X			X	[redacted]			
LW2-C524-B	10/19/05	X	X	X	X	X	X	X			X				
LW2-C525-A	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C525-B	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C525-C	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X

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ANC04720
BZTO104(e)004720

Table 3-2. Round 2B Subsurface Sediment Chemistry Sample Analyses Matrix.

		Round 2B Target Analytes													
Sample ID	DATE	Grain Size	Atterberg Limits[a] + specific gravity	SVOCs	Chlorinated Pesticides	PCB Aroclors	Metals + Hg	TS + TOC	Hexavalent Chromium	Butyltins	TPH-Diesel/Oil	TPH-Gas	VOCs	Dioxins/ Furans	Herbicides & PCP
LW2-C525-D	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C525-E	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C527-A	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C527-B	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C527-C	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C527-E	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C528-A	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C528-B	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C528-C	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C528-F	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C529-A	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C529-B	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C529-C	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C529-E	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C530-A	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C530-B	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C530-C	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C530-E	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C531-A	10/28/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C531-B	10/28/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C531-C	10/28/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C531-E	10/28/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C532-A	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-C532-B	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-C532-C	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-C532-E	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-C532-F	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-C533-A	10/19/05	X	X	X	X	X	X	X			X	X			
LW2-C533-B	10/19/05	X	X	X	X	X	X	X			X	X			
LW2-C533-C	10/19/05	X	X	X	X	X	X	X			X	X			
LW2-C533-D	10/19/05	X	X	X	X	X	X	X			X	X			

Notes:

[a]Atterberg Limits will be analyzed on 10% of the samples following review of sediment textures at all stations.

A: Archived volume.

Hg - mercury.

PCP - Pentachlorophenol.

R - Field Replicate sample submitted for analysis.

S - Homogenate Split sample submitted for analysis.

SVOCs - Semivolatile organic compounds.

TOC - Total organic carbon.

TPH - Total petroleum hydrocarbons.

TS - Total solids.

VOCs - Volatile organic compounds.

X - sample submitted for analysis.

*Archived volume was submitted for these analyses.

Shaded cells indicate missing analyses.

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BZTO104(e)004721
ANC04721

Table 3-3. Summary of Round 2 Field and QC Samples Numbers.[a]

Sample Type		# Samples	Field Replicates[a]		Field Homogenate Splits[a]		Field Rinsate Blanks		Total Number of Field Samples[b]
			5 percent	Actual Samples	*2.5 percent*	Actual Samples	*5 percent*	Actual Samples	
Subsurface Sediment									
	SVOCs	124	*6.2*	7	*3.1*	4	*6.2*	7	142
	Pesticides	128	*6.4*	7	*3.2*	4	*6.4*	7	146
	PCB $_{Aroclors}$	124	*6.2*	7	*3.1*	4	*6.2*	7	142
	Metals	124	*6.2*	7	*3.1*	4	*6.2*	7	142
	Hexavalent Chromium	7	*0.4*	2	*0.2*	1	*0.4*	1	11
	Butyltins	79	*4.0*	4	*2.0*	3	*4.0*	6	92
	TPH $_{diesel\text{-}oil}$	130	*6.5*	6	*3.3*	5	*6.5*	7	148
	TPH $_{gasoline}$	149	*7.5*	6	*3.7*	5	*7.5*	8	168
	Volatile Organic Compounds	128	*6.4*	7	*3.2*	4	*6.4*	8	147
	Dioxins/Furans	21	*1.1*	1	*0.5*	1	*1.1*	2	25
	Herbicides & Pentachlorophenol	36	*1.8*	2	*0.9*	1	*1.8*	2	41
	PCB Congeners	0		0		0		0	0

Notes:

[a]All samples are being analyzed for total solids, grain size, total organic carbon, and specific gravity. Ten percent of the surface sediment samples will be analyzed for Atterberg limits based on a review of the sediment texture information contain in the sample description logs. Replicates and split samples are being analyzed for conventionals and chemicals of concern. Conventionals are not included in the rinsate blank analysis. Field QC sample numbers were collected on target frequencies of 5% for field replicates and 2.5% for homogenate splits.

[b]This number includes all sediment QC samples (replicates and splits) as well as the aqueous rinsate blank QC samples.

Shaded cells indicate QC samples collected at frequency of <5 percent.

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Table 3-4. Round 2B Subsurface Sediment Stations Modified from FSP and the Rationale.

Core ID	Total Distance from Target (ft)	Direction Moved	Rationale
C103	49	Downstream	Station moved due to water depth/debris restrictions at target.
C106	113	Downstream	Station moved due to water depth/debris restrictions at target.
C109	62	Offshore	Station moved due to restricted water depth at target.
C187	53	Offshore	Station moved due to restricted water depth at target.
C360-1	81	Upstream	Target coordinates incorrect.
C360-2	79	Upstream	Target coordinates incorrect.
C526			Station dropped; C526 collocated with Round 2A core C263.
C529	143	Offshore	Station moved due to restricted water depth at target.
C530	218	Offshore	Station moved due to restricted water depth at target.
C531	243	Offshore	Station moved due to restricted water depth at target.
C533	9		Station added in the field; collocated with G282.

ANC04723
BZTO104(e)004723

Table 4-1. Laboratory Methods of Analysis for Sediment Samples.

Analytes	Laboratory	Sample Preparation		Quantitative Analysis	
		Protocol	Procedure	Protocol	Procedure
Conventional Analyses	CAS Kelso				
Total solids		NA	--	PSEP 1986	Balance
Grain size		NA	--	PSEP 1986	Sieves and pipette method
Total organic carbon		Plumb 1981	Acid pretreatment	Plumb 1981	Combustion; coulometric titration
Geotechnical characteristics	CAS Redding				
Specific gravity		--	--	ASTM D-854	Gravimeter
Atterberg limits		--	--	ASTM D-4318	Moisture determination
Metals	CAS Kelso				
Antimony, arsenic, cadmium, lead, silver, selenium		EPA 3050	Strong acid digestion	EPA 6020	ICP/MS
Aluminum, chromium, copper, nickel, zinc		EPA 3050	Strong acid digestion	EPA 6010B	ICP/OES
Selenium		EPA 3050	Strong acid digestion	EPA 7742	AAS
Arsenic		EPA 3050	Strong acid digestion	EPA 7062	AAS
Mercury		EPA 7471A	Acid digestion/oxidation	EPA 7471A	CVAA
Hexavalent chromium		EPA 3060A	Alkaline digestion	EPA 7196A	Colorimetry
Butyltins	CAS Kelso	Krone et al. 1989	Solvent extraction Derivatization	Krone et al. 1989	GC/FPD
Petroleum hydrocarbons	CAS Kelso				
Gasoline-range hydrocarbons		NWTPH-Gx	Methanol extraction Purge and trap	NWTPH-Gx	GC/FID
Diesel- and oil-range hydrocarbons		NWTPH-Dx	Sovent extraction Silica gel cleanup (as needed)	NWTPH-Dx	GC/FID
Chlorinated herbicides and pentachlorophenol	STL Tacoma	EPA 8151A	Solvent extraction Esterification	EPA 8151A	GC/MS
Organochlorine pesticides and selected SVOCs	CAS Kelso	EPA 3540 EPA 3620B EPA 3660B	Soxhlet extraction Florisil® cleanup Sulfur cleanup	EPA 8081A	GC/ECD
PCB Aroclors	CAS Kelso	EPA 3545 EPA 3665A EPA 3620B EPA 3660B	Pressurized fluid extraction Sulfuric acid cleanup Florisil® cleanup Sulfur cleanup	EPA 8082	GC/ECD
PCB congeners[a]	Alta	EPA 1668A	Soxhlet/Dean Stark extraction Sulfuric acid cleanup Silica column cleanup	EPA 1668A	HRGC/HRMS
Volatile organic compounds	CAS Kelso	EPA 5035	Purge and trap	EPA 8260B	GC/MS

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BZTO104(e)004724 ANC04724

Table 4-1. Laboratory Methods of Analysis for Sediment Samples.

Analytes	Laboratory	Sample Preparation		Quantitative Analysis	
		Protocol	Procedure	Protocol	Procedure
Semivolatile organic compounds	CAS Kelso				
Tri-, tetra-, and pentachlorophenols[a]		EPA 8151A	Solvent extraction Esterification	EPA 8151A	GC/MS
Polycyclic aromatic hydrocarbons		EPA 3541 EPA 3640A EPA 3630C	Automated Soxhlet extraction Gel permeation chromatography Silica gel cleanup	EPA 8270C	GC/MS - SIM
SVOCs (other than PAHs and tri-, tetra-, and pentachlorophenols)		EPA 3541 EPA 3640A	Automated Soxhlet extraction Gel permeation chromatography	EPA 8270C	GC/MS - LVI
Chlorinated dioxins and furans	CAS Houston	EPA 1613B	Soxhlet/Dean Stark extraction Sulfuric acid cleanup Silica/carbon column cleanup	EPA 1613B	HRGC/HRMS

Notes:

[a] Samples for analysis of PCB congeners will be selected by LWG and EPA when the PCB Aroclor data are available.

AAS - Atomic absorption spectrometry
ASTM - American Society for Testing and Materials
CAS - Columbia Analytical Services
CVAA - cold vapor atomic absorption
EPA - U.S. Environmental Protection Agency
GC/ECD - gas chromatography/electron capture detection
GC/FID - gas chromatography/flame ionization detection
GC/FPD - gas chromatography/flame photometric detection
GC/MS - gas chromatography/mass spectrometry
HRGC/HRMS - high resolution gas chromatography/high resolution mass spectrometry
ICP/OES - inductively coupled plasma/optical emission spectrometry
ICP/MS - inductively coupled plasma - mass spectrometry
KCl - potassium chloride
LVI - large-volume injector
MRL - method reporting limit
NA - not applicable
NEA - Northeast Analytical
TPH - total petroleum hydrocarbon
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PSEP - Puget Sound Estuary Program
SIM - selected ion monitoring
STL - Severn Trent Laboratories
SVOC - semivolatile organic compound

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ANC04725
BZTO104(e)004725

LWG
LOWER WILLAMETTE GROUP

PORTLAND HARBOR RI/FS

ROUND 2B SUBSURFACE SEDIMENT FIELD SAMPLING REPORT

APPENDIX A
FIELD CORE LOG SHEETS

DRAFT

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This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

December 29, 2005

integral consulting inc.

SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C078 pg 1 of 1

Collected:		**Processed:**	
Date: 10/20 /05	Drive Length: 13'	Date: 10/21 /05	
Time: 1058	Tide Level (CRD):	Time: 0800	
Recovery Length: 12.8'	Mudline Depth: 7.7'	Core Length: 367	
Recovery Efficiency:	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB, DD, JH, BJ		Crew: SF BP DB MT IS	

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	0-19 SAND, tr silt, tr gravel SAND IS FINE-MED, brown to v DK brown, loose. Silt occurs in lenses (clayey silt), STIFF, up to 2.5 cm long, AND in sfc layer NO ODOR, NO DEBRIS.	tr	100	tr		124/14	LW2-C078-A (0-30) analyze TPH
SF 30	19-30 SAND, tr silt, SAND IS Dense, fine, v DK gray. Silt occurs in lenses <5 mm thick NO ODOR NO Debris.		100	tr			
30-152	SAND w/ SILT. SAND IS v fine-fine, tr silt, w/ interbeds of SILT + clayey silt. Silt lenses ~1 gm. MAE BEDS up to ~11 cm Thick Mild sulfur odor. SAND IS DENSE. SILT/clayey silts are stiff to v. stiff. MED DK GRAYISH BROWN. FINES BEDS generally WELL DEFINED		75	25		201/18	LW2-C078-B (30-152) analyze
152-279	SILTY SAND. SIMILAR TO ABOVE, BUT W/ INCREASED SILT CONTENT BETWEEN 204-240 cm. TR. SOFT WHITE MATERIAL IN v SMALL LENSES (<1mm) MILD SULFUR ODOR. COLORS AS ABOVE.		~~70~~ 65	~~30~~ 35		84/24	LW2-C078-C (152-279) analyze
279-367	SAND very fine, v well sorted NO ODOR. DK GRAYISH BROWN.		100			302/18	LW2-C078-D (279-367) archive

Core segment breaks at (cm): 0-96; 96-203; 203-311; 311-367 SF

ANC04727
BZTO104(e)004727

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C079 pg 1 of 1

Collected:
Date: 10/20/05 Drive Length: 13'
Time: 1024 Tide Level (CRD): ____
Recovery Length: 12.4' Mudline Depth: 12.1'
Recovery Efficiency: ____ Vessel: *R.V. Nancy Anne* (MSS)
Crew: DR, DD, JH, BJ

Processed:
Date: 10/20/05
Time: 1645
Core Length: 364
Location: FIELD LAB
Crew: NV, SF, JS, IS, MT, BP

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SANDY CLAY. SAND IS FINE, W/ FINE GRAVEL (ROUNDED, 2cm). MED GRAY. COTTAGE-CHEESE-LIKE TEXTURE. TR ROOTLETS & WOOD. NO ODOR	tr	40	60		461/19	LW2-C079-A (0-30) analyze TPH
30-156	CLAY W/ SAND. MED GRAY. SAND IS FINE, TRACE COARSE GRAINS. TRACE ROOTLETS. NO ODOR. SIMILAR LUMPY TEXTURE AS ABOVE. STIFF TO V. STIFF. V. STIFF MATERIAL IS IN LENSES ~5 cm THICK.		20	80		490/25	LW2-C079-B (30-156) analyze
~~156~~	~~Silty SAND SF~~		~~70~~	~~30-50~~			
156-364	SAND W/ SILT. ~~SAND~~ INTERBEDDED AND INTERLAMINATED SAND, SILT, CLAY MIXTURES. SANDS ARE V. FINE TO FINE, DENSE. SILTS & CLAYEY SILTS ARE V. STIFF. TR WOODY ORGANICS. NO ODOR. CLAY DECREASES W/ DEPTH. ~~DK REDDISH GRAY~~ SF DK TO V. DK GRAYISH BROWN.		75	25		960/24	LW2-C079-C (156-274) analyze
						604/19	LW2-C079-D (274-364) archive

Core segment breaks at (cm): 0-102; 102-210; 210-317; 317-364 SF

ANC04728
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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C080 pg 1 of 1

Collected:
Date: 10/20/05 Drive Length: 13'
Time: 0945 Tide Level (CRD):
Recovery Length: 12' Mudline Depth: 4.2'
Recovery Efficiency: Vessel: R.V. Nancy Anne (MSS)
Crew: DR, DD, BJ JH

Processed:
Date: 10/20/05
Time: 1445
Core Length: 336
Location: FIELD LAB
Crew: NV SF JS MT AR BP

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SAND, tr. SILT, SAND IS FINE-MED, DENSE, V. DK GRAY. TR SILT IN SAND AND TR SILT LENSES. LIGHT SHEEN, MOD OILY ODOR. TR ORGANIC DEBRIS.		100	tr		1147/16	LW2-C080-A (0-30) analyze TPH
30-87	SAND, tr SILT. SIMILAR TO ABOVE; SAND IS FINE-MED (TRACE COARSE) tr FINE GRAVEL (9mm, subrounded) tr SILT IN LENSES. MOD SHEEN + MOD TPH ODOR V. DK GRAY	tr	100	tr		1448/18	LW2-C080-B (30-87) analyze
87-189	SAND, tr SILT + CLAY. SAND AS ABOVE, FINE-MED (TRACE COARSE); V. DK GRAY. TRACE ORGANICS (WOODY DEBRIS) LIGHT SHEEN ABOVE ~129cm, MILD TPH ODOR. SILTY CLAY BED FROM 177-179cm, V. STIFF, MED GREENISH GRAY, HIGH PLAST. ABRUPT BASAL CONTACT.		150	tr		1411/18	LW2-C080-C (87-189) analyze
189-336	SANDY CLAY. INTERBEDDED V. FINE SAND, SILT, + CLAY MIXTURES. COLORS RANGE FROM MED BROWNISH GRAY TO GRAYISH BROWN NO ODOR, NO DEBRIS. TR ORGANIC LENSES - ROOTLETS. GRADES TO MED-HIGH PLASTICITY. V STIFF.		30	70		640/18	LW2-C080-D (189-336) archive

Core segment breaks at (cm): 0-82; 87-195; 195-303; 303-336

ANC04729
BZTO104(e)004729

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C082-1 pg 1 of 1

Collected:
Date: 10/19/05 Drive Length: 13'
Time: 1407 Tide Level (CRD):
Recovery Length: 10.9' Mudline Depth: 36.0'
Recovery Efficiency: 84 Vessel: *R.V. Nancy Anne* (MSS)
Crew: DB, DD, JH, BT

Processed:
Date: 10/20/05
Time: 0745
Core Length: 295
Location: FIELD LAB
Crew: GR, SF, MT, JS, MC, BP

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SAND, TR. SILT. SAND IS FINE, V. DK GRAY. NO ODOR, NO ORGANICS TR. SHEEN FLORETS, NO ODOR. TR. GRAVEL (FINE, 1 cm, SUBANG) @ 28 cm. FAINT REDDISH STAIN @ 28-30 cm. SILTY LENSES NEAR SFC. SAND IS DENSE, WELL SORTED	N	100	TR		648/11	LW2-C082-A1 (0-30) analyze TPH
30-137	SAND WITH SILT, SAND AS ABOVE WITH ~20% SILT LENSES & A BED UP TO 1 cm THICK (BED OCCURS @ ~73 cm). SAND IS DENSE, WELL SORTED WOOD CHUNK (NATIVE) @ 66-67 cm. TR FAINT SHEEN @ 36 cm, FAINT REDDISH STAIN @ 32-35 cm. FAINT UNID. "SWEET" ODOR. NO DEBRIS		80	20		310/12	LW2-C082-B1 (30-137) analyze
~~137~~ ~~210~~						549/11	LW2-C082-C1 (137-210) analyze
137-295	SAND, TR. SILT. SAND IS FINE-MED, V. DK GRAY. SILT OCCURS IN LENSES UP TO 1 cm THICK. NO ODOR. SAND IS DENSE, WELL SORTED.		100	TR		33/12	LW2-C082-D1 (210-295) archive
	16 oz SPLITS COLLECTED FOR SCHNITZER'S CONSULTANT SPLIT.						
	BOTTOM 21 cm of 3rd segment empty, LOST DURING COLLECTION.						

Core segment breaks at (cm): 0-103; 103-210; 210-295 SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C082-2pg 1 of 1

Collected:
Date: 10/9/05 Drive Length: 13'
Time: 1438 Tide Level (CRD):
Recovery Length: 11' Mudline Depth: 36.4
Recovery Efficiency: Vessel: R.V. Nancy Anne (MSS)
Crew: DB, DD, JH, BJ

Processed:
Date: 10/20/05
Time: 0940
Core Length: 297
Location: FIELD LAB
Crew: GR NV SF BP JS MT AR

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SAND, TR SILT. SAND IS FINE-MED, WELL SORTED. SILT OCCURS IN LENSES NEAR SED AND IN MATRIX. LIGHT SHEEN, MILD OILY ODOR. V. DK GRAY, DENSE		100	tr		517/12	LW2-C082-A2 -A3 (0-30) analyze TPH
30-96	SAND WITH SILT. SAND IS FINE-MED, V DK GRAY, DENSE. SILT (~20%) OCCURS PRIMARILY IN LENSES + LAMINAE from 0.2-2 cm thick. TR LIGHT SHEEN, MOD OILY ODOR. TR ANGULAR COARSE GRAVEL GRAIN NOTED ON SAMPLING-(30cm)*	tr	80	20		269/14	LW2-C083-B2 -B3 (30-96) analyze
96-204	SAND, TR SILT. SAND AS ABOVE, MED SAND FRACTION APPEARS TO INCREASE W/ DEPTH. OILY ODOR DECREASES W/ DEPTH, NOT NOTED BELOW 138 CM. SILT OCCURS IN LAMINAE + LENSES UP TO ~0.5cm THICK. WELL SORTED, NO DEBRIS.		100	tr		616/15	LW2-C083-C2 -C3 (96-204) analyze
204-297	SAND. FINE-MED. V. DK GRAY WELL SORTED. MILD SULFUR ODOR. NO DEBRIS. MOD. DENSE.		100			189/14	LW2-C083-D2 -D3 (204-297) analyze
	* WOOD DEBRIS NOTED UPON SAMPLING						
	15 cm EMPTY IN 3rd SEGMENT, ACCOUNTED FOR IN DEPTH MEASUREMENTS; MATERIAL LOST DURING COLLECTION						

Core segment breaks at (cm): 0-96; 96-204; 204-297

ANC04731
BZTO104(e)004731

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C083 pg 1 of 1

Collected:
Date: 10/19/05 Drive Length: 13'
Time: 1509 Tide Level (CRD):
Recovery Length: 12.4' Mudline Depth: 33.2
Recovery Efficiency: Vessel: R.V. Nancy Anne (MSS)
Crew: DB, JH, DD, BJ

Processed:
Date: 10/20/05
Time: 0920
Core Length: 282
Location: FIELD LAB
Crew: GR NV SF ARTS, MT, BP

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILTY SAND ~~w/ SILT~~. SAND IS FINE-MED, V. DK GRAY. SILT ~30%, OCCURS IN SAND MATRIX AND IN LENSES & LAMINAE (<0.5 cm). TR ROOTLETS + WOODY DEBRIS. ~~SEEPS~~ LT SHEEN, MILD SULFIDE ODOR, MOD. DENSE.		70	30		1027/15.6	LW2-C083-A (0-30) analyze TPH
30-129	SILTY SAND, INTER~~BEDDED~~LAMINATED SANDS (AS ABOVE) SILTS, + MIXTURES. SILT EST @ 40% overall. LIGHT SHEEN, MILD OILY ODOR. TR ROOTLETS + WOODY DEBRIS. DENSE SAND. SILT SOFT. SILTS ARE DK GRAYISH BROWN, MED. PLAST. (WET) SF		60	40		935/17	LW2-C083-B (30-129) analyze
129-188	SILTY SAND. SAND IS FINE-MED, TR SILT, well-sorted. V. DK GRAY. DENSE. SILT EST @ 30% overall OCCURS PRIMARILY IN LENSES LAMINAE + BEDS (2mm - 11cm) Thick. TRACE SHEEN, MILD TPH ODOR. SILT IN BEDS HAS MED. PLAST., DK GRAYISH BROWN.		70	30		1166/19	LW2-C083-C (129-188) analyze
188-282	SAND, tr silt WELL SORTED, FINE-MED. V. DK GRAY. NO ODOR, NO DEBRIS. SILT OCCURS IN BED @ TOP OF UNIT ~~SEGMENT~~ (DISTURBED), APPROX 1 cm THICK		100	tr		522/14	LW2-C083-D (188-282) archive
	TOP 4 CM OF 2nd SEGMENT AND TOP ~13 cm of 3rd Segment empty, ACCOUNTED FOR IN DEPTH MEASUREMENTS.						

Core segment breaks at (cm): 0-84; 84-188; 188-282

ANC04732
BZTO104(e)004732

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C084 pg 1 of 1

Collected:
Date: 10/20/05 Drive Length: 13'
Time: 1200 Tide Level (CRD):
Recovery Length: 12.6' Mudline Depth: 27.8'
Recovery Efficiency: Vessel: *R.V. Nancy Anne* (MSS)
Crew: DB, DD, JH, BT

Processed:
Date: 10/21/05
Time: 0900
Core Length: 369
Location: FIELD LAB
Crew: NV DB SF BP JS MT

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	FID/PID MALFUNCTIONING Sample ID
0-30	SILT w/ SAND, MED. GRAYISH BROWN V. STIFF CLASTS IN UPPER 6 CM. SILT SAND IS V. FINE to FINE, OCCURS IN LENSES & IN A LAR. near top 6 cm. SOFT, MILD SULFUR ODOR. TRACE ROOTLETS. *		20	80		35/14/8	LW2-C084-A (0-30) analyze TPH Pesticides, Dioxins
30-65	30-51 SILT w/ SAND*, SAND IS V. FINE TO MED. V. FINE SAND OCCURS IN SILT, FINE SAND IN THIN LAMINAE <0.5 cm. THICK SOFT MED GRAYISH BROWN MILD SULFUR ODOR. 51-65 ~~SILTY~~ SANDY SILT TO SAND IS V. FINE V. SOFT. MED GRAYISH BROWN. TRACE WOOD FRAGMENTS. MILD TPH ODOR.		45 40	180 60		11/46 5*	LW2-C084-B (30-65) analyze
65-169	SAND w/ SILT, INTERBEDDED SANDS & SILT-MIXTURES, TRACE CLAY. SANDS ARE V. FINE TO FINE, LOOSE TO 81 cm, w/ LIGHT SHEEN & TPH ODOR. DENSE/ STIFF-V. STIFF BELOW. BEDS UP TO ~7 cm THICK. NO ORGANICS NOTED. NO ODOR BELOW ~81 cm. DK-V. DK GRAYISH BRN.		75 65	25 35		11/66 5F	LW2-C084-C (65-169) analyze
169-369	SILTY SAND, VFINE-FINE SAND, WELL SORTED, w/ INTERBEDS OF SILT & CLAYEY SILT SAND BEDS TYPICALLY WELL DEFINED, 1-20 cm THICK. SILTY BEDS UP TO ~25 cm THICK. MILD SULFUR ODOR, NO NOTICEABLE ORGANICS. SAND DENSE, SILTS STIFF-V. STIFF		65	35		4/12 5F 70/18 5F	LW2-C084-D (169-283) analyze LW2-C084-E (283-369) analyze

* TACKY ODOR NOTED ON A DURING sampling AT 17.0'

Core segment breaks at (cm): 0-103, 103-210, 210-318, 318-369 SF

ANC04733
BZTO104(e)004733

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C087 pg 1 of 1

Collected:		**Processed:**	
Date: 10/20/05	Drive Length: 13'	Date: 10/21/05	
Time: 1130	Tide Level (CRD):	Time: 1030	
Recovery Length: 11.3'	Mudline Depth: 41.2	Core Length: 328	
Recovery Efficiency:	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB, JH, DD, BJ		Crew: NV DB SF MT IS BP	

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SANDY SILT. INTERBEDDED SILT W/SAND & SANDS. SAND IS FINE. V. SOFT TO SOFT. LAMINAE + BEDS (<1-2 cm thick) MOD H_2S odor.		30	70		132	LW2-C087-A (0-30) analyze TPH + PESTICIDES
30-110	SILT W/ SAND. SILT, TR SAND W/ THIN SAND BEDS, LAMINAE + LENSES (UP TO 1 cm thick. SANDS ARE V. FINE-FINE, VERY DK GRAY. SILT IS MOD. STIFF, MED GRAYISH BROWN. MEDIUM PLASTICITY. MILD SULFUR ODOR. TRACE WOODY DEBRIS @ 96 cm.		10	90		1486	LW2-C087-B (30-110) analyze
110-328	SAND, tr. SILT. SAND IS FINE-MED, TR. COARSE. SILT OCCURS AS CLAYEY SILT (HIGH PLAST) + SILT LENSES IN UPPER 20 cm. V. DK GRAYISH BROWN. + SILT SF NO ODOR, NO DEBRIS. SOME FAINT LAMINATIONS APPARENT IN SANDS. COARSE SANDS GENERALLY ANGULAR - SUBANG.		100	tr		1307	LW2-C087-C (110-218) analyze
						248	LW2-C087-D (218-328) archive

FS SAMPLE FROM "A" NOT TECHNICALLY A SPLIT → HAD TO GO BACK + SCRAPE REMNANTS OUT OF CORE TUBE AFTER OUR (LWC) SAMPLE WAS COLLECTED.

BP RECALIBRATED PID/FID FOLLOWING PUMP MALFUNCTION BUT PID STILL DOESN'T APPEAR TO BE OPERATING PROPERLY. READINGS ABOVE ARE FOR FID

Core segment breaks at (cm): 0-110; 110-218; 218-328. SF

ANC04734
BZTO104(e)004734

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C088 pg 1 of 1

Collected:
Date: 10/19/05 Drive Length: 13'
Time: 1652 Tide Level (CRD):
Recovery Length: 11.3' Mudline Depth: 41.7'
Recovery Efficiency: Vessel: *R.V. Nancy Anne* (MSS)
Crew: DB, JH, DD, BJ

Processed:
Date: 10/20/05
Time: 1200
Core Length: 284
Location: FIELD LAB
Crew: NV, SE, JS, BP, MT, AR

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILT WITH SAND. SILT IS MED GRAYISH BROWN, V SOFT TO SOFT. SAND IS FINE, OCCURRING IN SILT MATRIX AND LENSES & LAMINAE UP TO 0.5 cm THICK. MILD SULFUR ODOR.		10	90		1,000/13	LW2-C088-A (0-30) analyze TPH
30-165	SILT WITH SAND. INTERBEDDED SILT, SAND, & MIXTURES. SAND IS FINE TO MED, V. DK GRAY. SILT IS DK GRAYISH BROWN, MED PLASTICITY. LAM. & BEDS (0.1 cm - 2cm THICK). TRACE ORGANICS (ROOT & PLANT DEBRIS) MILD OILY ODOR. ABRUPT BASAL CONTACT.		25	75		739/13	LW2-C088-B (30-165) analyze
165-284	SAND. ~~& SILT LENSES~~ IR SILT. SAND IS FINE-MED, V. DK GRAY, MOD. DENSE. SILT OCCURS IN LENSES ABOVE 191 cm. NO ODOR NO DEBRIS		100	IF		242/12	LW2-C088-C (165-284) analyze
	5 cm gap @ top of 2nd SEGMENT AND ACCOUNTED FOR IN DEPTH MEASUREMENTS. SANDS LOST FROM BOTTOM OF CORE DURING COLLECTION.	48-cm GAP IN TOP OF 3rd SEGMENT					

Core segment breaks at (cm): 0-110; 110-212; 212-284 BF

ANC04735
BZTO104(e)004735

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C089 pg 1 of 1

Collected:
Date: 10/24/05 Drive Length: 19'
Time: 1554 Tide Level (CRD):
Recovery Length: 16.5' Mudline Depth: 13.1
Recovery Efficiency: Vessel: *R.V. Nancy Anne* (MSS)
Crew: DG, DD, BJ, JH

Processed:
Date: 10/25/05
Time: 0930
Core Length: 485
Location: FIELD LAB
Crew: NV, AR, JS, SF, BF, RW

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SAND w/ SILT. SAND IS V.FINE-FINE. V. DK BROWNISH GRAY. LOOSE IN UPPER 20 cm WHERE MOST SILT OCCURS, DENSE BELOW. MOD SHEEN + TPH ODOR. TR. ORGANICS.		80	20		31/787	LW2-C089-A (0-30) analyze TPH
30-98	SAND w/ SILT. SAND IS FINE-MED. V. DK BROWNISH GRAY. WELL SORTED. SILT OCCURS IN LENSES + LAMINAE between 43-70 cm, AND 152-196 cm. lenses 0.2-5 cm thick. TR WOODY ORGANICS BETW 49-55 cm. MOD TO LIGHT SHEEN + TPH ODOR THROUGHOUT, DECREASING W/ DEPTH. ASPHALT BASE CONTACT ~2 cm GLASS SHARD NOTED UPON SAMPLING, tr 2-3 mm subang. gravel (also noted on sampling.	tr	90	10		45/1742	LW2-C089-B (30-98) analyze
196-312	SANDY SILT, INTERBEDDED MIXTURES OF V. FINE SAND, SILTS + CLAY (GRADATIONAL) MED GRAYISH BROWN. TR WOODY DEBRIS @ 294, TR ROOTLETS NEAR TOP OF UNIT. V. STIFF. MILD H_2S ODOR. MED-HIGH PLAST.		30	70		37/1523	LW2-C089-C (98-196) analyze
						39/1923	LW2-C089-D (196-312) analyze
312-485	Clayey SILT w/ SAND. (SAND IS V. FINE, + occurs primarily ABOVE 372 cm. ~~FAINT STRIATION ABOVE~~ MED GRAYISH BROWN. V. STIFF. HIGH PLAST. tr rootlets. TR LIGHT COLORED (PRECIPITATE) MATERIAL @ 335 cm. MILD SULFUR ODOR. SILT, SAND + CLAY MIXTURES, GRADATIONAL		20	80		23/1720	LW2-C089-E (312-334) archive
						26/1990	LW2-C089-F (334-485) archive

Core segment breaks at (cm): 0-98; 98-206; 206-312; 312-420; 420-485 JF

ANC04736
BZTO104(e)004736

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C090 pg 1 of 1

Collected:
Date: 10/19/05 Drive Length: 12.5'
Time: 1548 Tide Level (CRD):
Recovery Length: 10' Mudline Depth: 35.0'
Recovery Efficiency: Vessel: *R.V. Nancy Anne* (MSS)
Crew: DB, DA, BJ, JH

Processed:
Date: 10/20/05
Time: 1025
Core Length: 297
Location: FIELD LAB
Crew: NV, SF, JS, BP, MT, AR

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILT, TR SAND. SILT IS MED GRAYISH BROWN SOFT, SAND IS FINE, DK GRAY, OCCURS IN LENSES + LAMINAE UP TO ~0.3cm. MILD SULFUR ODOR.		tr	100		489/12	LW2-C090-A (0-30) analyze TPH
30-112	30-63 cm SILT (tr SAND AS ABOVE), TR SHEEN FLORET, MILD SULFUR ODOR. MED GRAYISH BRN, SOFT. ABRUPT BASAL CONTACT.		tr	100		617/12	LW2-C090-B (30-112) analyze
	63-73 cm SAND, FINE-MED. V. DK GRAY, WELL SORTED MILD SULFUR ODOR. ABRUPT BASAL CONTACT. DENSE.		100				
	73-112 SILT w/ SAND. INTERLAM. SILT + SAND. SAND EST @ 25% overall. LAM. <5mm thick. STIFF. NO ODOR. SAND IS FINE-MED. V. DK GRAY. TR POSS PAINT FLECK (PURPLE) @ 100 cm. TRACE ORGANIC leaf + WOODY DEBRIS.		25	75			
112-297	SAND. SAND IS FINE-MED, WELL SORTED. DENSE. TR SILT LENSES. NO ODOR, ~~No DEBRIS~~ SF ~~TWIGS~~ THREE LT BLUE + CLEAR SYNTHETIC FIBERS NOTED UPON SAMPLING (~2mm WIDE × 2" LONG). (BLUE FIBERS RESEMBLE FISHING LINE)		100	tr		121/12	LW2-C090-C (112-236) analyze
						312/11	LW2-C090-D (236-297) archive
	C-D break made based on 4' interval max.						

Core segment breaks at (cm): 0-112; 112-219; 219-297.

ANC04737
BZTO104(e)004737

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C091 pg 1 of 1

Collected:
Date: 10/19/05 Drive Length: 13'
Time: 1625 Tide Level (CRD):
Recovery Length: 11.3' Mudline Depth: 35'
Recovery Efficiency: 87% Vessel: *R.V. Nancy Anne* (MSS)
Crew: DR, DD, JH, BJ

Processed:
Date: 10/20/05
Time: 1100
Core Length: 306
Location: FIELD LAB
Crew: NJ, SF, JS, AR, BP, MT

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILT, TR FINE SAND. SILT IS RED GRAYISH BROWN, V. SOFT to SOFT. SAND OCCURS IN SILT MATRIX & ALSO IN LENSES & LAMINAE (1-3mm THICK) BETWEEN 23-27 cm DEPTH. MILD SULFUR ODOR		TR	100		528/12	LW2-C091-A (0-30) analyze TPH
30-143	SILT W/ SAND. SILT AS ABOVE BUT SLIGHTLY STIFFER. SAND IS FINE - MED, - OCCURS IN SILT MATRIX (TRACE) BUT PRIMARILY IN LAMINAE (1MM-5mm), lenses, & thin beds (up to ~1cm thick). TR METHANE VESICLES. MILD ODOR. NO DEBRIS		10	90		560/13	LW2-C091-B (30-143) analyze
143-211	SILTY SAND. INTERLAMINATED SANDS (V. FINE to FINE) & SILT & MIXTURES. SANDS ARE V. DK GRAY, SILTS ARE MED GRAYISH BROWN, SHEEN & MILD-MOD. TPH ODOR. TR ORGANICS (PLANT DEBRIS).		70	30		428/12	LW2-C091-C (143-211) analyze
211-306	SAND. FINE-MED., V. DK GRAY. WELL SORTED. NO ODOR. NO DEBRIS		100			1126/12	LW2-C091-D (211-306) analyze
	TOP 20 cm of 3rd segment empty, material lost from bottom of core during collection. Accounted for in DEPTH MEASUREMENTS						
	"D" analyzed based on FID reading.						

Core segment breaks at (cm): 0-103; 103-211; 211-306 SF

ANC04738
BZTO104(e)004738

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C092 pg 1 of 1

Collected:
Date: 10/24/05 Drive Length: 19'
Time: 1505 Tide Level (CRD):
Recovery Length: 17.4' Mudline Depth: 13.5
Recovery Efficiency: 92% Vessel: *R.V. Nancy Anne* (MSS)
Crew: DB, JH, DD, BT

Processed:
Date: 10/25/05
Time: 0900
Core Length: 515
Location: FIELD LAB
Crew: NJ SF AR BP JS RW

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SANDY SILT. SAND IS F-MED. VERY SOFT MOD GRAY & LIGHT BEIGE MATERIAL, INTERMIXED. LITTLE (~10%) CASTS OF BEIGE/GRAY SILT/CLAY-SIZED MATERIAL UP TO ~3cm WIDE. APPROX 10% WOODY FRAGMENTS, TRACE ROOTLETS. VERY STRONG ROTTEN SMELL.		30	70		508/50	LW2-C092-A (0-30) analyze TPH
30-152	SILTY SAND. SAND IS V.FINE-FINE, V. DK GRAY. LIGHT STRUCTURE, MOD TPH ODOR THROUGHOUT. GRADES FROM SANDY SILT TO SILTY SAND AT ~74cm VERY LOOSE/SOFT (DISTURBED) TO ~74cm, FIRM BELOW. TR CAST OF THE BEIGE/GRAY MATERIAL AND BLACK SILTY MATERIAL (STRONG ODOR) ABOVE 140 cm. APPROX 10% PLANT DEBRIS & WOODY DETRITUS	60	40			1275/50	LW2-C092-B (30-152) analyze
		70	30 SF				
152-212	SILTY SAND SIMILAR TO ABOVE TO 180 cm VERY SOFT TO 150 cm, DENSE BELOW TR LENSES OF LIGHT TO GRAY MATERIAL SIMILAR TO CASTS ABOVE (~3 mm long) AT ~172 cm, BELOW 180cm SILT OCCURS PRIMARILY IN LENSES & BEDS ~0.5cm thick. TRACE FINE GRAVEL, (SANDAL, 1cm) @ 210 cm ABRUPT BASAL CONTACT. MOD STRONG, STR TPH ODOR.	TR	70	30		1667/53	LW2-C092-C (152-212) analyze
212-276	SANDY SILT. INTERBEDDED MIXTURES OF SAND (V.FINE-MED), SILT & CLAY. MOD TPH ODOR & STRENGTH PRIMARILY IN SANDS TRACE WOODY ORGANICS.	30	70			882/38	LW2-C092-D (212-276) analyze
276-426	SILT W/SAND. INTERBEDDED CLAYEY SILTS & SANDY SILTS. SAND IS VERY F.INE. INDISTINCT BEDDING. V. STIFF HIGH PLAST. MED GRAY/OLIVE BROWN TRACE ORGANICS. MILD H_2S ODOR. (LAMINA DILATANCY)		20	80		1310/35	LW2-C092-E (276-426) analyze
426-515						1160/39	LW2-C092-F (426-515) archive
* NOTE: FIELD CREW NOTES TOP OF CORE HIGHLY DISTURBED DURING COLLECTION							

Core segment breaks at (cm): 0-30; 30-140; 140-248; 248-356; 356-464; 464-515. SF

ANC04739
BZTO104(e)004739

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C094 pg 1 of 1

Collected:
Date: 10/20/05 Drive Length: 13'
Time: 0903 Tide Level (CRD):
Recovery Length: 12.4' Mudline Depth: 25'
Recovery Efficiency: Vessel: *R.V. Nancy Anne* (MSS)
Crew: DB, JH, DA, BJ

Processed:
Date: 10/20/05
Time: 1345
Core Length: 370
Location: Field Lab
Crew: NV SF JS AR MTB P

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SANDY SILT. DK GRAYISH BROWN. V. SOFT SO SOFT. TR METHANE VESICLES. TR ORGANICS. MILD SULFUR ODOR. TR CLAY		40	60		951/15	LW2-C094-A (0-30) analyze TPH
30-72	SANT W/ SAND. DK GRAYISH BROWN. SOFT. TR METHANE VESICLES, TR ORGANICS. SAND OCCURS IN SILT MATRIX AND LENSES. TR CLAY LENSES WOOD CHUNK @ 51 cm (~0.5cm thick). FOSS LIGHT SHEEN, MILD TPH ODOR.		20	80		208/20	LW2-C094-B (30-72) analyze
72-370	SANDY SILT. INTERBEDDED SAND, SILT, & CLAY MIXTURES. DK GRAYISH BROWN & DK GRAYISH BROWN BEDS UP TO 3cm thick. SANDS ARE V. FINE TO FINE, DENSE. SILTS/CLAYEY SILTS HAVE MED-HIGH PLASTICITY, VERY STIFF. TR ORGANICS (ROOTLETS & PLANT DEBRIS & ORGANIC LENSES + THIN (mm) LAMINAE. TR SOFT WHITE MATERIAL IN V. SMALL LENSES (1mm thick) ALMOST TO DEPTH (to ~323cm). NO ODOR.		40	60		506/23 660/27 650/22	LW2-C094-C (72-370) SF 198 analyze LW2-C094-D (198-323) archive LW2-C094-E (323-370) archive

Core segment breaks at (cm): 0-107; 107-215; 215-323; 323-370 SF

ANC04740
BZTO104(e)004740

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C096 pg 1 of 1

Collected:
Date: 10/24/05 Drive Length: 19'
Time: 1325 Tide Level (CRD):
Recovery Length: 12.5' Mudline Depth: 15'
Recovery Efficiency: 68% Vessel: R.V. Nancy Anne (MSS)
Crew: DD, AB, BP, JH, RJ

Processed:
Date: 10/24/05
Time: 1445
Core Length: 379
Location: FIELD LAB
Crew: ES JS SP BP MT RW ESP

FS/N-E

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	0-8 cm SAND, tr SILT, v. dk. grayish brown, tr fine gravel (angular 0.5cm), tr rootlets, tr woody debris, no odor		100	tr		518/46	LW2-C096-A (0-30) analyze TPH
	8-30 SANDY SILT. Sand is v fine-fine. Silt is soft, dk grayish brown. Mild odor, tr methane vesicles.		30	70			
30-153	30-46 wood pieces and SILTY SAND. MOSTLY WOODY DEBRIS, INCLUDING one Large (14cm) chunk, v. dk grayish brown. Light sheen, MILD TPH ODOR		65	35		740/54	LW2-C096-B (30-153) analyze
	46-153 SAND, tr SILT. Sand is Fine, v. dk gray, v. well sorted. Silt occurs primarily in upper 81cm (to ~77cm), in sand matrix & lenses. Trace woody debris, occurring above 71cm. Light sheen, oily odor above 86cm.		100	tr			
153-274	SAND w/ SILT. Sand is as Above, Fine, v. dk gray, tr SILT, v. well sorted. Silt occurs as a blocky lens below 181-197 cm and in lenses from 263-266 cm & 270-274cm. Silt has mod plasticity. V. light odor. Silt is dk grayish brown		90	10		518/50	LW2-C096-C (153-274) analyze
274-379	274-349 SAND w/ tr SILT. Sand as above, Fine, v. dk gray, v. well sorted, w/ tr to 1% SILT in lenses up to 1cm thick. Silt is dk grayish brown. Abrupt basal contact.		100	tr		404/59	LW2-C096-D (274-379) archive
	349-379 SANDY SILT w/ tr Sand. Sand is v. Fine to Fine, v. dk reddish gray. Silt occurs primarily in laminae & lenses 1-3mm thick. No odor.		80	20			

Core segment breaks at (cm): 0-90; 90-158; 158-306; 306-379 SP

ANC04741
BZTO104(e)004741

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C099 pg 1 of 1

Collected:		**Processed:**	
Date: 10/24/05	Drive Length: 19'	Date: 10/24/05	
Time: 1325	Tide Level (CRD):	Time: 1600	
Recovery Length: 12.5'	Mudline Depth: 15'	Core Length: 368	
Recovery Efficiency: 68%	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB, DD, BJ, JH, BP		Crew: SF, JS, JJ, MT, RW, BP	

FS/N+C

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	Silt w/ sand. Sand is v. fine - fine. Fine sand occurs primarily in upper 13 cm. Soft, DK grayish brown. Mild sulfur odor. tr rootlets.		25	75		606/48	LW2-C099-A (0-30) analyze TPH
30-152	Sandy Silt. Sand is v. fine-fine. Silt is stiff, ~~SF~~ DK grayish brown. Med-plast (little clay component). Fine sands occur primarily in sandy ~~bed~~ SF laminae. Tr woody debris in lenses, + abed from 98-104 cm. Poss light sheen, poss. light TPH odor.		40	60		762/64	LW2-C099-B (30-152) analyze
152-305	Sandy Silt. Similar to above, but v. fine sand fraction appears decreased. Stiff, DK grayish brown. Fine sand occurs in ~~silty~~ SF silty bed w/ organics (woody) betw. 192-212 cm, and in laminae (1mm-SF (up to ~1 cm thick) occurring below 273 cm. Light sheen + mod. TPH odor on sand laminae below 273 cm. Med-high plasticity.		30	70		1113/56	LW2-C099-C (152-305) analyze
305-368	Sand w/ silt. Sand is fine-med, tr coarse, tr fine gravel. Silt occurs in ~~sf clayey silt~~ lenses, bed + laminae (up to ~1cm thick). Med. grayish brown silt, v. dk ~~grayish~~ SF brownish gray sand. Silt decreases w/ depth, med plast no odor.	tr	80	20		690/51	LW2-C099-D (305-368) archive

Core segment breaks at (cm): 0-110; 110-218; 218-326; 326-368 SF

ANC04742
BZTO104(e)004742

integral consulting inc.

SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C103 pg 1 of 1

Collected:		**Processed:**	
Date: 10/24/05	Drive Length: 19'	Date: 10/25/05	
Time: 1657	Tide Level (CRD):	Time: 1030	
Recovery Length: 15.4'	Mudline Depth: 12.7	Core Length: 462	
Recovery Efficiency:	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB, DD, BJ, JH		Crew: NV, SF, AR, JS, BP, RW	

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILT w/ SAND. SAND IS V. FINE. MED GRAYISH BROWN. MILD SULFUR ODOR. TRACE ROOTLETS. SOFT		25	75		603/43	LW2-C103-A (0-30) analyze TPH
30-~~152~~ 153	30-86 SILT w/ SAND, AS ABOVE. STIFF. MED GRAYISH BROWN. MILD SULFUR ODOR. TR ORGANICS (WOODY PLANT DEBRIS. ABRUPT BASAL CONTACT		25	75		824/36	LW2-C103-B (30-153) analyze
	~~84~~-112 SAND w/ SILT. SAND IS FINE, WELL SORTED, w/ SILT LENSES & LAMINAE 0.1-1cm thick. SAND IS V. DK BROWNISH GRAY, SILT IS MED GRAYISH BROWN. DENSE. NO ODOR. ABRUPT BASAL CONTACT		90	10			
	112-152 SILT w/ SAND, AS ABOVE. STIFF, MED GRAYISH BROWN. NIONG WOODY ORGANICS, TRACE ROOTLETS. TR LIGHT SHEEN, ~~FWD~~ POSS. ODOR.		25	75			
153-363	CLAYEY SILT w/ SAND. SAND IS V. FINE, less abundant than above. MED GRAYISH BROWN, V. STIFF, HIGH PLAST. TR WOODY ORGANICS (APPEARS MILLED) IN LENSES, TR SHEEN FLORETS (heavy sheen lens @ 312 cm), & LIGHT-MOD TPH ODOR. Below ~236 cm, to depth. Abrupt BASAL CONTACT.		10	90		368/56	LW2-C103-C (153-274) ~~analyze~~ SF archive
						302/56	LW2-C103-D (274-363) analyze
363-462	SAND, tr SILT. SAND IS fine-med, V. DK ~~GRAYISH BR~~ SF BROWNISH GRAY. V. WELL SORTED. LIGHT SHEEN FLORETS & TPH ODOR, ~~DENSE~~ SF to ~410 cm. DENSE. TR WOODY DETRITUS IN LAMINA (<0.5cm) @ 444 cm. SILT OCCURS PRIMARILY IN UPPER 13cm.		100	tr		646/53	LW2-C103-E (363-462) analyze

"D" analyzed instead of "C" based on visual contam. C & D are nearly identical in appearance.

3-cm gap @ top of 5th segment is accounted for in depth measurements.

Core segment breaks at (cm): 0-111; 111-219; 219-326; 326-433; 433-462. SF

ANC04743
BZTO104(e)004743

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C106 pg 1 of 1

Collected:
Date: 10/25/05 Drive Length: 19'
Time: 0926 Tide Level (CRD):
Recovery Length: 16.5' Mudline Depth:
Recovery Efficiency: 87 Vessel: R.V. Nancy Anne (MSS)
Crew: DB, DD, JH, BS

Processed:
Date: 10/25/05
Time: 1400
Core Length: 503
Location: FIELD LAB
Crew: NV, SF, JS, BP, AR, RW

FS/NAE

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	Silt w/ SAND. Sand is v fine. Med grayish brown. Soft TR methane vesicles. TR. ROOTLETS mild H_2S odor.		10	90	PID→ FID→	110+/320	LW2-C106-A (0-30) analyze all*
30-461	Silt, w/ SAND. Sand is v fine to fine. Less v fine sand in silt matrix than above (trace) w/ trace ~~fine~~ sand in lenses + laminae (<0.5 cm thick, and a bed from 264-266 cm. TRACE WOOD DEBRIS, DETRITUS, & ROOTLETS throughout. STIFF, med high Plasticity. Mild ~~H2S~~ H2S ODOR. PLASTICITY increases w/ DEPTH (clay component) FAINT BLACK STAIN w/ STRONG OILY ODOR @ 419 cm + 395 cm in silt. ~~STRONG~~ ODOR to DEPTH, INCREASE		10	90		80+/420	LW2-C106-B (30-152) analyze
						102/313	LW2-C106-C (152-274) analyze
						99+/301	LW2-C107-D (274-389) analyze
						98+/311	LW2-C107-E (389-461) analyze
461-503	SANDY SILT. SAND IS FINE, occurs IN LAMINAE + A bed up to 10 cm thick. Mild 'MUSTY' odor. TR light TAN-colored fine material. TR LAMINA + lenses. TR WOODY DEBRIS POSS LIGHT SHEEN.		30	70	PID→ FID→	89+/422	LW2-C107-F (461-503) analyze

* STATION MOVED ~ 1/4' FROM GRAB LOCATION

Core segment breaks at (cm): 0-112; 112-220; 220-328; 328-436; 436-503

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C109 pg 1 of 1

Collected:		**Processed:**	
Date: 10/25/05	Drive Length: 19'	Date: 10/25/05	
Time: 1147	Tide Level (CRD):	Time: 1515	
Recovery Length: 14.4'	Mudline Depth: 18.8	Core Length: 432	
Recovery Efficiency:	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB, DD, BJ, JH		Crew: NV, SF, JS, AR, BP, RW	

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILT W/ SAND. SAND IS V. FINE MED GRAYISH BROWN. SOFT. MILD SULFUR ODOR. TRACE ROOTLETS, TR METHANE VESICLES		20	80	P.D → FID →	56+/207	LW2-C109-A (0-30) analyze all*
30-373	SILT W/ SAND. SILT W/ V. FINE SAND (~10%), W/ TRACE FINE SAND IN LAMINAE (2-<5 mm thick) + IN A SILTY BED FROM 197-199 cm. MAJOR SAND LAM. OCCUR @ 116-121 & FROM 338-373.** PIECE OF LT BLUE HARD PLASTIC FOUND @ ~60 cm UPON SAMPLING MED GRAYISH BROWN. MED-HIGH PLASTICITY, TRACE LIGHT BROWN CLAY LENSES @ 298 cm. ** SAND LAMINAE INCREASE IN BOTTOM 50 cm. TRACE WOODY DEBRIS IN LENSES, TRACE ROOTLETS. MILD - MODERATE TPH ODOR IN SILTY SANDS THROUGHOUT. ABRUPT BASAL CONTACT		15	85		62+/313	LW2-C109-B (30-152) analyze
						60+/284	LW2-C109-C (152-274) analyze
						66+/348	LW2-C109-D (274-373) archive
373-432	SAND, tr SILT. SAND IS FINE-MED V. well sorted. V. DK BROWNISH GRAY. SILT OCCURS IN lenses + lamsf 1-2mm thick. TRACE WOODY DEBRIS. POSS LIGHT ODOR.		100	tr	PID → FID →	63+/600	LW2-C109-E (373-432) analyze

* STATION MOVED ~62' FROM GRAB LOCATION

Core segment breaks at (cm): 0-109; 109-218; 218-325; 325-432.

SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C127 pg 1 of 1

Collected:		**Processed:**	
Date: 10/25/05	Drive Length: 17'	Date: 10/25/05	
Time: 1237	Tide Level (CRD):	Time: 1615	
Recovery Length: 19.25*	Mudline Depth: 13'	Core Length: 466	
Recovery Efficiency:	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB, DD, BJ, JH		Crew: NV, SF, JS, BP, AR, RW	

* GAP IN CORE AS MEASURED IN FIELD (~3')

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	Silt. Silt w/ tr v.fine sand. Mod. ~~stiff~~ stiff. Med grayish brown. Trace methane vesicles. Light sheen, light TPH odor. Tr sand lenses (v. fine)		tr	100		489/52+	LW2-C127-A (0-30) archive
~~30-5~~						314/58+	LW2-C127-B (30-100) analyze
30-184	Silt w/ sand. ~~Silt w/ tr sand~~ ~~Sand is v. fine to~~ ~~fine, occurring~~ Silt w/ tr sand (v. fine), + w/ fine sandy interbeds, lenses, + laminae typically ~0.5cm thick. Largest sandy bed occurs in bottom 20 cm. Mod sheen on sands, mod. TPH odor to both silt + sands. Med grayish brown. Med plasticity. Tr woody debris + plant debris. Abrupt angled basal contact.		15	85		381/57+	LW2-C127-C (100-184) analyze
184-269	Sand. Very fine, well sorted. Dense. V. dk gray. No odor no debris. Very hard betw 230-238 (impenetrable w/ spoon). Color change to med gray (gradual) below 248cm		100			664/54+	LW2-C127-D (184-269) analyze
269-	Clayey silt. Interbedded ~~of~~ silt, clay + mixtures, tr. v. fine sand. Lt gray to dk gray. Tr organic lenses laminae @ 308 + 358cm (1-3mm thick). Silt beds up to 40 cm thick. Clay beds up to 32 cm thick. Mild sulfur odor. Silts are dilatant (rapid)		tr	100		111/57+	LW2-C127-E (269-391) archive
						319/57	LW2-C127-F (391-466) archive

Core segment breaks at (cm): 0-7; 7-100; 100-208; 208-315; 315-423; 423-466 SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C167 pg 1 of 1

Collected:		**Processed:**	
Date: 10/18/05	Drive Length: 13'	Date: 10/19/05	
Time: 1629	Tide Level (CRD):	Time: 1130	
Recovery Length: 12'	Mudline Depth: 43.3'	Core Length: 356	
Recovery Efficiency:	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB, JH, AD, BJ		Crew: GR NV SF MT BP AR	

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILT, tr fine SAND, med grayish brown. tr methane vesicles, mild sulfur odor. tr rootlets, med plast.		tr	100		22/12	LW2-C167-A analyze all (0-30)
30-~~244~~ 201	SILT, tr fine SAND, tr gravel, med grayish brown w/ methane vesicles (~10%). Silt (wet) has ~med-high plast (some clay component) SAND OCCURS IN SILT MATRIX AND AS thin (2mm) lenses + laminae. SILT IS STIFF, MILD SULFUR ODOR. Gravel is coarse (6cm x 2.5cm) subrounded, occurs @ 45 cm. Abrupt basal contact.		tr	100		289/14	LW2-C167-B (30-110) analyze
						250/16	LW2-C167-C (110-~~204~~ 201) analyze
~~204-5~~ 201-225 ~~244~~	Clayey silt w/ SAND. INTERBEDDED SILT & CLAYEY SILT AND SANDS. FINES ARE STIFF, MED BROWNISH GRAY & GRAY, MED TO HIGH PLAST 1 ~~large~~ coarse gravel (subangular, 6cm) @ 226cm - 232cm. SAND IS fine, v. DK GRAY, DENSE. MILD TPH ODOR.	10	20	70		246/17	LW2-C167-D (201-244) analyze
225-244	SAND w/ SILT. SAND IS v. fine to fine. DK GRAY, SILT est @ 10%. FINES INCREASE w/ DEPTH. ~~(COLOR GRADES TO MED OLIVE BROWN IN SF~~		90	10			
244-283	SAND w/ SILT. SAND IS FINE TO V. FINE MED OLIVE BROWN. SILT INCREASES w/ DEPTH. DENSE. NO ODOR.		75	25		20/16	LW2-C167-E (244-283) archive
283-356	SAND. tr SILT. V. FINE - FINE. MED GRAYISH BROWN. DENSE. NO ODOR. WELL SORTED. FAINT V. THIN (1MM) LAMINAE OBSERVED.		100	tr		6/21	LW2-C167-F (283-356) archive
	B/C break @ core tube break.						
	*3cm empty at top of 2nd + 3rd segments accounted for in depth max.						

Core segment breaks at (cm): 0-110; 110-215; 215-320; 320-356

SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C187 pg 1 of 1

Collected:				**Processed:**	
Date:	10/28/05	Drive Length:	17'	Date:	10/28/05
Time:	1100	Tide Level (CRD):		Time:	1010
Recovery Length:	14.6'	Mudline Depth:	23.7	Core Length:	418
Recovery Efficiency:	86%	Vessel:	R.V. *Nancy Anne* (MSS)	Location:	FIELD LAB
Crew:	DB, DO, BJ, JH			Crew:	MT SS AR BP SF Red

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SANDY SILT. INTERBEDDED SAND + SILT. SAND IS V. FINE-FINE. 0-8cm SF SAND BED UNDERLAIN BY SILT W/ SANDY LAMINAE + LENSES. MED DK GRAYISH BROWN. TR ROOTLETS. FAINT TPH ODOR.		40	60		652 / 77+	LW2-C187-A (0-30) archive
30-197	30-183 cm SANDY SILT, W/ GRAVEL. INTERBEDDED SILTS + SAND-SILT MIXTURES. SAND IS V. FINE - FINE W/ COARSE GRAVEL (FINE to COARSE, up to 6 cm long, ANGULAR TO SUBROUNDED. TR WOODY DEBRIS (STICK). PLANT DETRITUS. LIGHT SHEEN + TPH ODOR FROM 30-58 cm ~~(SANDY SILT BED), NO ODOR SF ON SAND BED FROM SF, HEAVIEST~~ MED SHEEN + ODOR @ 150 cm to ~152 cm. TR BLACK STAIN LAMINA (3 mm) @ 166 cm. ABRUPT BASAL CONTACT.	10	40	50		892 / 82+	LW2-C187-B (30-98) analyze
						458 / 75	LW2-C187-C (98-197) analyze
	183-197 SILTY CLAY W/ SAND. GRAY. SAND IS V-FINE. NO ODOR.		10	90			
197-~~309~~ 418	SAND W/ SILT. SAND IS V. FINE-FINE. SILT OCCURS IN LENSES + LAMINAE + THIN BEDS (up to ~1.5 cm). MED GRAY IN UPPER 30 cm, THEN grades to very orange-brown. SAND IS GENERALLY ~~WELL~~ well SORTED EXCEPT FOR SILT BODIES. LIGHT SHEEN NEAR TOP OF UNIT. SILAYEY LAMINAE + THIN BED BETW. 382-392 cm. NO ODOR. SAND SF GRAINSIZES VARY IN BEDS UP TO 56 cm thick, COARSEST (FINE SAND) BETW. 309-345 cm.		90	10		27 / 81	LW2-C187-D (197-~~309~~ 309) analyze
							LW2-C187-E (309-418) archive

* STATION ~52' FROM TARGET DUE TO BANK SLOPE, WATER DEPTH, + RIPRAP. RZA DATA SHOW NO ELEVATED VOLATILE CONC. @ C-187 SO 'A' INTERVAL WILL BE ARCHIVED.

Core segment breaks at (cm): 0-98; 98-206; 206-309; 309-418 SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C227 pg 1 of 1

Collected:
Date: 10/19/05 Drive Length: 7.5'
Time: 0845 Tide Level (CRD):
Recovery Length: 6.4' Mudline Depth: 9.3'
Recovery Efficiency: Vessel: *R.V. Nancy Anne* (MSS)
Crew: AR, DD, JH, BS

Processed:
Date: 10/19/05
Time: 1400
Core Length: 192
Location: FIELD LAB
Crew: NV, SF, SP, GR, AR, MT

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILT, TR V. FINE SAND, DK GRAYISH BROWN, SOFT, LITHE METHANE VESICLES (15%) MILD SULFUR ODOR TRACE ROOTLETS		tr	100		1403/296	LW2-C227-A (0-30) archive
30-192	SILT, AS ABOVE, TR V. FINE SAND, DK GRAYISH BROWN, STIFF BELOW 45cm TR METHANE VESICLES TO TR ROOTLETS MILD SULFUR ODOR FINE SAND (<5mm) OCCUR IN LENSES & LAMINAE PRIMARILY BELOW 94 cm TO 112 cm TR WOODY ORGANICS IN LAMINAE (<5mm) below 63cm to 112 cm.		tr	100		1390/35+	LW2-C227-B (30-113) analyze
						1484/37+	LW2-C227-C (113-192) analyze
	Bed of FINE SAND w/ SILT AND WOODY DETRITUS IN BOTTOM 5 cm.						

Core segment breaks at (cm): 0-113; 113-192

SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C296 pg 1 of 1

Collected:
Date: 10/18/05 Drive Length: 13'
Time: 1400 Tide Level (CRD):
Recovery Length: 11' Mudline Depth: 9.7
Recovery Efficiency: Vessel: R.V. Nancy Anne (MSS)
Crew: DG, DD, JH, BS

Processed:
Date: 10/19/05
Time: 0800
Core Length: 331
Location: FIELD LAB
Crew: SE, GR, BP, AR, MT

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SANDY SILT. SAND IS V. FINE. DK GRAYISH BROWN. SFT. NO ODOR. TRACE ROOTLETS		35	65		11/604 (FID)	LW2-C296-A (0-30) archive
30-216	W/SAND. SILT W/ SILT & TR V.F. SAND. DK GRAYISH BROWN SOFT. MED H_2S odor. MED PLAST. (SAME CLAY COMPONENT) WITH ~10% NATIVE WOODY DEBRIS IN LENSES. TR METHANE VESICLES CLAY FRACTION APPEARS TO INCREASE W/ DEPTH SAND BED (FINE-MED) V. DK GRAY. FROM 195-210 cm.		10	90		17/120 (PID)	LW2-C296-B (30-152) analyze
						15/1385 (FID)	LW2-C296-C (152-216) analyze
216-331	*216-245 CLAYEY SILT DK GRAYISH BROWN MED-HIGH PLAST. V. STIFF NO ODOR. ABRUPT BASAL CONTACT			100		14/509 (FID)	LW2-C296-D (216-331) archive
331	245-331 SAND, TR SILT. WELL SORTED FINE-MED. V. DK GRAY. TRACE SILT LENSES (UP TO 1cm THICK) NO ODOR.		100	TR			
	* THIS CORE SEGMENT DROPPED/DISTURBED DURING CUTTING. THIS SEGMENT APPEARED EARLIER WHEN SAMPLE INTERVALS WERE ASSIGNED.						

Core segment breaks at (cm): 0-109; 109-216; 216-331

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C303 pg 1 of 1

Collected:
Date: 10/19/05 Drive Length: 13
Time: 1426 Tide Level (CRD):
Recovery Length: 9.7 Mudline Depth: 9.2
Recovery Efficiency: Vessel: R.V. Nancy Anne (MSS)
Crew: DB, DO, BJ, JH

Processed:
Date: 10/19/05
Time: 0845
Core Length: 282
Location: FIELD LAB
Crew: SE, GR, NV, BP, AR, MT

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	~~SAMPLE~~ 0-13cm SANDY SILT SAND IS F-VF ~40%. MED GRAYISH BROWN, SOFT. TR WOOD DEBRIS (STICKS) NO ODOR		40	60		15.6/10.8	LW2-C303-A (0-30) archive
	13-30 SILT, TR V FINE SAND MED GRAYISH BRN, STIFF TR METHANE VESICLES, MED PLASTICITY.		tr	100			
30-86	TR SAND (V FINE-FINE). SILT, ~~AS ABOVE~~ w/ ~20% WOODY DEBRIS. MED GRAYISH BRN. STIFF MED SULFUR ODOR. FINE SAND OCCURS IN BED FROM 72-77cm.		tr	100		17.6/15.8	LW2-C303-B (30-86) analyze
86-210	86-95cm WOOD DEBRIS w/ FINE SAND (~10%)	-	-	-		17.6/13.2	LW2-C303-C (86-210) analyze
	95-210 SAND, TR SILT. SAND IS FINE, V. DK GRAY, SILT OCCURS IN SAND MATRIX, DECREASING W/ DEPTH, AND IN LAMINAE + LENSES FROM 0.3 to 1.5cm THICK @ 113cm, 187cm, 193cm & 202cm. FAINT ~~TR~~ SHELL ON SILT @ 113cm. NO ODOR		100	tr			
~~210-~~ 210-282	SAND, FINE, WELL SORTED, V. DK GRAY (w/ red & white grains) NO ODOR. COARSENS SLIGHTLY IN BOTTOM 8cm to include MINOR COARSE SAND + FINE GRAVEL (SUB ROUNDED & subangular)		100			30.1/15.8	LW2-C303-D (210-282) archive

Core segment breaks at (cm): 0-103; 103-210; 210-282 SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C312 pg 1 of 1

Collected:		**Processed:**	
Date: 10/18 /05	Drive Length: 13'	Date: 10/19 /05	
Time: 1545	Tide Level (CRD):	Time: 1045	
Recovery Length: 8.7'	Mudline Depth: 46.7 & 46'	Core Length: 245	
Recovery Efficiency:	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB JH DD BJ		Crew: GR SF NV AR BPMT	

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	CLAYEY SILT, tr SAND (v.fine + fine). SILT is med olive brown, soft MILD TPH ODOR, MED PLAST, tr v.fine SAND trace med SAND IN ~~LENSES~~ SF lenses + laminae (~3mm thick) @ SF		tr	100		690/15.55	LW2-C312-A (0-30) analyze all
30-48	30-48cm CLAYEY SILT AS ABOVE, w/ tr fine SAND IN laminae ~2mm thick, MILD TPH ODOR, TR FAINT SHEEN			100		1000+/17	LW2-C312-B (30-152) analyze
48-65	48-65cm WOODY DEBRIS (NATIVE)	-	-	-			
65-245	65- SAND, TR SILT, SAND IS FINE to med, V. DK GRAY. MILD TPH ODOR. TR. SILT OCCURS AS A LENS BETW. 75-78cm ODOR DECREASES W/ DEPTH, NOT NOTICEABLE BELOW 100cm.		100			197/15.67	LW2-C312-C (152-245) analyze

Core segment breaks at (cm): 0-98; 98-206; 206-245

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C321-1 pg 1 of 2

Collected:		**Processed:**	
Date: 10/27/05	Drive Length: 18.7'	Date: 10/27 /05	
Time: 0838	Tide Level (CRD):	Time: 1410	
Recovery Length: 15.7'	Mudline Depth: 22.0'	Core Length: 465	
Recovery Efficiency: 84%	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DQ, DD, BJ, JH		Crew: JS NV RW AR MTSF, BP	

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SAND, SAND (v.fine-med, v.well sorted), tr SILT w/ lenses, tr fine gravel (subang., 1.5cm) DENSE, MILD TPH ODOR. V.DK GRAY.	tr	100	100SF	tr	1435 / ~~346~~ 50+	LW2-C321-A1 (0-30) archive
30-138	30-44 SILT w/ SAND w/ GRAVEL ~~SANDY SILTS~~ INTERBEDDED SILTS AND SANDS. SAND IS V.DK GRAY, SILTS ARE MED GRAYISH BROWN ~~MISC~~ GRAVEL (COARSE, UP TO 7cm ANGULAR TO ROUNDED) MILD TPH ODOR. ABRUPT BASAL CONTACT. TR UNID. DEBRIS.	25	25	50		346 / 56+	LW2-C321-B1 (30-138) analyze
	44-64 SAND w/ gravel SAND IS V.DK GRAY, FINE, v.well sorted w/ fine-coarse gravel (15-4cm subrounded. Mild TPH odor ABRUPT BASAL CONTACT. DENSE.	10	90				
	64-90 SILT w/ SAND. SILT w/ SAND laminae (v.fine-fine SAND) w/ lenses 1-2mm thick. STIFF.		25	75			
	90-110 SILT. MED GRAY, V.STIFF. MILD TPH ODOR. ABRUPT BASAL CONTACT.			100			
	110-132 SAND w/ SILT. SAND FINE-MED V.DK GRAY DENSE. MILD ODOR. w/ SILT LENSES.						
	132-138 SILT. V.STIFF. MED GRAY "PLASTIC" ODOR.			100			
138-255	SILT w/ SAND. INTERBEDDED SILT, SAND (V-FINE) & CLAY & MIXTURES. TAN TO LIGHT GRAYISH BROWN. V.STIFF MILD 'PLASTIC' ODOR. NO DEBRIS		25	75		26 / 58+	LW2-C321-C1 (138-255) analyze
255-	255-302 SAND w/ SILT. SAND IS v.fine med dk brownish gray. SILT occurs in faint lenses & laminae. V.DENSE. MILD ODOR.		90	10		12 / 41	LW2-C321-D1 (255-394) archive
	302-394 ~~SANDSF~~ SAND w/ SILT. V.DENSE MED GRAY. SAND IS v.fine to fine. NO ODOR. NO DEBRIS. ABRUPT BASAL CONTACT.		75 ~~100~~	25 SF			

Core segment breaks at (cm): 0-104; 104-211; 211-319; 319-424; 424-465

SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C321-2 pg 2 of 2

Collected:
Date: 10/27/05 Drive Length: 18.7'
Time: 0838 Tide Level (CRD):
Recovery Length: 15.7' Mudline Depth: 22.0'
Recovery Efficiency: 84% Vessel: *R.V. Nancy Anne* (MSS)
Crew: DB, DO, BJ, JH

Processed:
Date: 10/27/05
Time: 1410
Core Length: 465
Location: FIELD LAB
Crew: NV SF SJ SMT, BP RWAR

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
394-	394-423 SAND, v. well sorted, fine		100			30/60+	LW2-C321-E
465	v. lt. GRAY. SLIGHT ODOR						(394-465)
						5 ppm	archive
	423-465 Silty v.f. SAND. MED GRAY	tr	50	50			
	SLIGHT ODOR. tr FINE SAND						
	LENS @ 454 cm. COARSE SAND						
	& Sub ang. gravel in bottom 2 cm.						

Core segment breaks at (cm): 0-104; 104-211; 211-319; 319-424; 424-465 SF 10-31-05

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C321-2 pg 1 of 2

Collected:		**Processed:**	
Date: 10/27/05	Drive Length: 18.7'	Date: 10/27/05	
Time: 0716	Tide Level (CRD):	Time: 1530	
Recovery Length: 16.7'	Mudline Depth: 22.2'	Core Length: 465	
Recovery Efficiency: 89%	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB, DD, BJ, JH		Crew: NV BP JSMTARRWSF	

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SAND W/ SILT. SAND IS FINE-MED, V. WELL SORTED, V. DK GRAY. DENSE. SILT OCCURS IN LENSES. TR WOODY DETRITUS. MILD TPH ODOR		90	10		1085/62+	LW2-C321-A2 (0-30) -A3 archive
30-134	30-66 SAND AND SILT. INTERBEDDED SAND (AS ABOVE), AND SILT. SILT OCCURS IN LENSES, LAMINAE, + BEDS (UP TO 10 cm thick). TR WOODY DEBRIS. MOD. TPH ODOR. DENSE SAND. STIFF SILT		50	50		909/63+	LW2-C321-B2 B3 (30-134) analyze
	66-109 SILT W/ SAND. SAND IS V. FINE-FINE, OCCURRING IN LENSES + LAMINAE. SILT IS MED GRAYISH BROWN. LIGHT SHEEN, MILD TPH ODOR. STIFF-V. STIFF		10	90		~~54/62~~	~~LW2-C321-C2SF C3SF~~ ←SF
	109-134 SAND W/ SILT. SAND IS V. FINE-FINE. V. DK GRAY. SILT OCCURS IN BLOCKY LENSES UP TO 25 cm thick. MOD. SHEEN + STRONG ODOR. TR WOODY DEBRIS. HEAVY SHEEN ON CONTACT W/ UNDERLYING SILT		75	25			
134-268	SILT AND SAND. INTERBEDDED SILTS, V. FINE-FINE SANDS + CLAYS + MIXTURES. FREE PROD BLEBS @ 145 cm + 149 cm. MED GRAY. DENSE/V. STIFF. STRONG ODOR, decreases w/ depth to mild. LARGE WOOD CHUNKS (NATIVE) NOTED ON SAMPLING.		50	50	*	62/584	LW2-C321-C2 -C3 (134-268) analyze
268-403	Silty SAND. SAND IS V. FINE. med gray (orangish brown between 294-307 cm). TRACE SHEEN FLORET @ 367 cm. MILD UNID. ODOR. V. DENSE. NO DEBRIS. ABRUPT BASAL CONTACT. SILT CONTENT VARIES, IN BEDS FROM 4 TO 44 cm thick.		60	40		28/68	LW2-C321-D2 D3 (268-403) archive
	* POSS MALFUNCTION						

Core segment breaks at (cm):

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C321-2pg 2 of 2

Collected:
Date: 10/27/05 Drive Length: 14.7'
Time: 0838 Tide Level (CRD):
Recovery Length: 15.7' Mudline Depth: 27.0'
Recovery Efficiency: 84% Vessel: *R.V. Nancy Anne* (MSS)
Crew: DB, DD, BS, JH

Processed:
Date: 10/27 /05
Time: 1530
Core Length: 49.1
Location: FIELD LAB
Crew: JS NV RWAR MT, SF BP

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/ PID (ppm)	Sample ID
403-486	SAND w/ SILT. SAND IS FINE TO V. WELL SORTED IN UPPER 23cm, GRADES TO A SILTY V. FINE SAND. DENSE, MILD ODOR INCREASES w/ DEPTH (SMEAR = MILD "PLASTIC" ODORS).		75	25	PID	15/105 ↗	LW2-C321-E2 E3 (403 - 491) ~~analysis~~ SF analyze
486-491	GRAVEL w/ SAND. FINE-COARSE** GRAVEL (SUBANGULAR TO ROUNDED) UP TO 8cm wide. COARSE, MILD PLASTIC ODOR.	25	25				
	**grains larger than ~1" were excluded from the analysis.						

Core segment breaks at (cm): ~~0-104, 104-211, 211-319, 319-424, 424-491~~ 5F 2F

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C358 pg 1 of 1

Collected:		**Processed:**	
Date: 10/26/05	Drive Length: 12.5'	Date: 10/26/05	
Time: 1229	Tide Level (CRD):	Time: 1520	
Recovery Length: 10.7	Mudline Depth: 38.2	Core Length: 303	
Recovery Efficiency:	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB, DD, BJ, JH		Crew: JS AR BP RW SF	

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILT w/ SAND. SAND IS v fine MED GRAYISH BROWN V.SOFT-SOFT. TR METHANE VESICLES + ROOTLETS NO ODOR.		10	90		1041/49+	LW2-C358-A (0-30) analyze hexch. + VOCs
30-248	Silt w/ SAND. SAND IS v fine-fine. Silt AS Above, w/ tr v fine-fine SAND in lenses + v thin lam. (~1mm) soft to stiff, med grayish brown - GRADING TO DK GT BRN w/ DEPTH. TRACE methane vesicles. trace ROOTLETS. Red synthetic strands noted @ ~ 38cm. lens of black liquid w/ oily odor from 54-56.5cm. Mild unid. chemical odor begins @ ~ 137cm and increases w/ depth. Red, poss paint, chip @ 179cm. Faint black stain band (~1cm Thick) @ 212 cm. ~~One lt brown (beige) silt laminasf (1mm) @ 196cm-5~~ med plast. TR. BEIGE CLAY LENSES + LAMINATE.		<25	>75		714/65+	LW2-C358-B (30-152) analyze
						96/55+	LW2-C358-C (152-248) analyze
248-303	Silt w/ SAND. As above, silt w/ v fine sand and v fine sandy thin beds - laminae. Color change from above to a med. brown. Moderate unid. chemical odor stiff. Tr rootlets + plant debris. Med plast.		<25	>75		81/56+	LW2-C358-D (248-303) analyze

Core segment breaks at (cm): 0-110; 110-218; 218-303

SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C360-1 pg 1 of 1

Collected:
Date: 10/26 /05 Drive Length: 19'
Time: 423 Tide Level (CRD):
Recovery Length: 18.9' Mudline Depth: 15.2
Recovery Efficiency: 99% Vessel: *R.V. Nancy Anne* (MSS)
Crew: DS, DD, BS, JH

Processed:
Date: 10/27 /05
Time: 0745
Core Length: 572
Location: FIELD LNS
Crew: SF GS MT NC RW

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	Silt w/ sand. Sand is v fine-fine. v soft, soft, med gray/ist brown mud. Sl/Fair odor. Ir rootlets.		15	85		96/224	LW2-C360-A1 (0-30) archive
30-90	Silt w/ sand, as Above. Silt w/ v fine sand, trace fine sand lenses (~3mm). Silt. Apparent increase clay content. Med gray/ist brown to 67cm, color change to SF Black stained interval from 67-89 cm. Mod odor in stained zone. Trace rootlets.		15	85		42/18	LW2-C360-B1 (30-90) analyze
90-572	Silt w/ sand, as Above. SF to F med-very brown, trace sand lenses + laminae (v.fine - medium sand), ~3mm thick, ~~w/ depth~~ SF Primarily betw. 174-213mm Trace shell fragments (v.small - 12mm) Trace organics and Mud balls (1-8cm) organics includes mature woody debris (stick, bark), & rootlets & organic lenses clay content appears to increase somewhat w/ depth, trace clay lenses) trace orange lenses @ 440 cm, @ 565 cm (lenses ~3mm thick). Mod to strong chemical odor. Med-high plast.		25	75		39/18	LW2-C360-C1 (90-213) analyze
						13/3	LW2-C360-D1 (213-326) archive
						19/9	LW2-C360-B2 (326-448) archive
						15/7	LW2-C360-F2 (448-572) archive

Core segment breaks at (cm): 0-110; 110-218; 218-326; 326-432; 432-541; 541-572 SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C360-2 pg 1 of 1

Collected:		**Processed:**	
Date: 10/26/05	Drive Length: 19'	Date: 10/27/05	
Time: 1459	Tide Level (CRD):	Time: 0915	
Recovery Length: 17.1'	Mudline Depth: 14.6'	Core Length: 509	
Recovery Efficiency: 90%	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB, AO, BJ, JH		Crew: NV SF JS AR MT RW	

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	Silt w/ sand. Sand is v fine. med grayish brown, soft. Mild sulfur odor, tr methane vesicles.		10	90		31/18+	LW2-C360-A2 -A3 (0-30) archive
30-70	Silt, trace sand. Sand is v fine. soft med grayish brown w/ black stain banding. Sulfur odor, tr rootlets + methane vesicles. Abrupt color change @ ~70 cm.		5	100		73/11+	LW2-C360-B2 -B3 (30-70) analyze
70-509	Silt w/ sand. Silt w/ v fine sand (est 10%) w/ v fine + fine sands in laminae, lenses + thin beds (1cm). Similar to C360-1. Tr Clay laminae. Tr orange lenses, from <1mm to 5mm thick. Organics (trace) as rootlets, woody debris (plant debris, bark sticks), + black organic lenses. Trace black stain in laminae @ 362cm. Tr v small sheen florets (<1mm). Mod. strong chemical odor. Med brown. Med-high plast.		25	75		30/20+	LW2-C360-C2 -C3 (70-180) analyze
						45/21+	LW2-C360-D2 -D3 (180-299) archive
						90/17+	LW2-C360-E2 E3 (299-421) archive
						18/10	LW2-C360-F2 -F3 (421-509) archive

Core segment breaks at (cm): 0-110; 110-214; 214-319; 319-426; 426-509

SS

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C381 pg 1 of 1

Collected:
Date: 10/18/05 Drive Length: 13'
Time: 1155 Tide Level (CRD):
Recovery Length: 13' Mudline Depth: 47.5
Recovery Efficiency: 100 Vessel: R.V. Nancy Anne (MSS)
Crew: DB JH DO BJ

Processed:
Date: 10/18/05
Time: 1630
Core Length: 390
Location: FIELD LAB
Crew: SF JS JS AR BP MT

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/ PID (ppm)	Sample ID
0-30	SILT, TR FINE SAND. SILT W/ LENSES OF FINE to V. FINE SAND (1-3mm thick), MED GRAYISH BROWN. TRACE ROOTLETS LENSE (0.5cm) OF HARD TAN CLAY @ 20 cm. TR. WOOD DEBRIS SOFT IN UPPER 6cm, STIFF BELOW. MED PLAST.		tr	100		1235/48	LW2-C381-A (0-30) archive
30-152	CLAYEY SILT. MED BROWN TR FINE SAND IN THIN (1-4mm) LAMINAE between 115-122 cm. LENSES OF TAN CLAY @ 49cm (HARD) & 56cm. STIFF. MED-HIGH PLAST. CLAY CONTENT INCREASES BELOW 123 cm. MILD SULFUR ODOR		tr	100		938/39	LW2-C381-B (30-152) analyze
152-201	~~CLAYEY SILT SF~~ SILTY CLAY. V. STIFF TR LENSES V. FINE SAND. MED-DK GRAYISH BROWN. NO ODOR		tr	100		561/39	LW2-C381-C (152-271) analyze
201-222	SANDY CLAY. CLAY IS LIGHT GRAY, INTERMIXED W/ CLAYEY SILT AS ABOVE. CLAY MATERIAL APPEARS GRANULAR IN SOME AREAS, FINE SAND SIZED, W/ BLACK FINE-SAND SIZED PARTICLES. V. STIFF ~~HSF~~ TO HARD. NO ODOR		40	60			
222-271	SILTY CLAY, AS ABOVE IN 152-201 cm. MILD SULFUR ODOR STIFF		tr	100			"
271-339	SILTY CLAY, TR V. FINE SAND, DK GRAYISH BROWN. W/ WOODY (NATIVE) ORGANIC LENSES MILD SULFUR ODOR V. STIFF. SAND CONTENT INCREASES IN LAST 10 cm IN THIN (1mm) SANDY LAMINAE ~~of SANDY SILT SF~~		tr	100		387/63	LW2-C381-D (271-339) archive
339-390	CLAYEY SAND. MED GRAY. DENSE SAND IS V. FINE TO FINE, INTER-BEDDED W/ SILTY CLAY & CLAYEY SAND MIXTURES. NO ODOR.		55	45		210/35	LW2-C381-E (339-390) analyze

Core segment breaks at (cm): 0-108; 108-215; 215-323; 323-390 SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C449 pg 1 of 1

Collected:
Date: 10/18/05 Drive Length: 13'
Time: 1048 Tide Level (CRD):
Recovery Length: 11' Mudline Depth: 31.7'
Recovery Efficiency: 85% Vessel: R.V. Nancy Anne (MSS)
Crew: DB JH DD BJ

Processed:
Date: 10/18/05
Time: 1330
Core Length: 321
Location: FIELD LAB
Crew: SF BP JS AR WT JS

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILT, TR V FINE SAND, V. SOFT MED GRAYISH BRN, TR ROOTLETS, MILD SULFUR ODOR		tr	100		588/37	LW2-C449-A (0-30) ANALYZE PEST
30-94	SILT, SAME AS ABOVE TR ROOTLETS AND LENSES OF PLANT DEBRIS, MILD SULFUR ODOR.		tr	100		548/50	LW2-C449-B (30-94) ANALYZE
94-145	SANDY SILT, INTERBEDDED SILT (MED GREENISH BRN), AND SILTY FINE SAND (DK GRAYISH BRN), TR ORGANIC LAMINAE (1MM) IN SILT AND SAND (ROOTLETS, PLANT DEBRIS), STIFF SILT & LOOSE SAND, MILD SULFUR ODOR. SAND EST @ 35%, SILT MED PLAST		35	65		586/52	LW2-C449-C (94-145) ANALYZE
145-321	SILT, TR V FINE SAND MED GREENISH BRN, STIFF, TR ORGANICS AND TR ORGANIC LAMINAE (1MM) @ 182 & 189 cm, MILD SULFUR ODOR, MED PLAST.		tr	100		224/52	LW2-C449-D (145-267) ARCHIVE
						382/71	LW2-C449-E (267-321) ANALYZE

Core segment breaks at (cm): 0-107.5; 107.5-215.5; 215.5-321

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C492 pg 1 of 1

Collected:
Date: 10/26/05 Drive Length: 18'
Time: 1023 Tide Level (CRD):
Recovery Length: 14.4' Mudline Depth: 17.2'
Recovery Efficiency: Vessel: *R.V. Nancy Anne* (MSS)
Crew: DS, BD, JH, BS

Processed:
Date: 10/26/05
Time: 1410
Core Length: 433
Location: FIELD LAB
Crew: SF JS BP AR RW

FS

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	Silt w/ v.fine sand, med grayish brown, v. soft to soft, mica, sulfur odor. Trace rootlets + plant debris		15	85		625/49+	LW2-C492-A (0-30) archive
30-154	Sandy Silt. Sand = f Silt as above w/ v.fine sandy beds + laminae (beds up to ~10cm thick? ie from 119-129 cm), med grayish brown. Stiff, Trace rootlets, mild sulfur odor. Trace fine sand. Abrupt basal contact.		30	70		317/61+	LW2-C492-B (30-154) analyze
154-433	SAND, sand (fine-med, tr coarse), trace silt, trace gravel (fine + coarse subang-subrounded up to 4cm long). Silt occurs in a 1-cm thick bed @ 313cm and in 2-cm lenses @ 328cm + 373cm. Gravel increases w/ depth to ~10% at sample E. No odor	tr	100	tr		429/60+	LW2-C492-C (154-274) analyze
						156/58+	LW2-C492-D (274-389) archive
						103/59+	LW2-C492-E (389-433) archive

Core segment breaks at (cm): 0-112; 112-220; 220-328; 328-433

SF

ANC04762
BZTO104(e)004762

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C522 pg 1 of 1

Collected:		**Processed:**	
Date: 10/19/05	Drive Length: 11.8'	Date: 10/19/05	
Time: 1238	Tide Level (CRD):	Time: 1445	
Recovery Length: 10.1'	Mudline Depth: 40.7'	Core Length: 292	
Recovery Efficiency:	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB, JH, DD, BJ		Crew: GR NV SF BP MT AR	

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	Silt, tr v.fine sand. Med grayish brown. Soft. Tr. METHANE vesicles. MILD UNID. ODOR. TRACE ROOTLETS		tr	100	1000+ SF	~~[illegible]~~ 19	LW2-C522-A (0-30) analyze all
30-86	SILT, Tr. v.fine-fine sand. SILT AS above w/ trace fine sand occurring in laminae, lenses, v.a bed from 55-60 cm. Light sheen, poss TPH odor. ~10% methane vesicles. ABRUPT BASAL CONTACT. SILT IS STIFF		tr	100	SF	1000+ ~~[illegible]~~ 25	LW2-C522-B (30-86) analyze
86-130	SAND, v.fine. DK GRAY. DENSE. LIGHT ODOR (POSS.TPH). THIN BEDS (~0.5 cm thick) of v. DK gray HARD v.fine SAND (w/ NO ODOR) @ 128, 131, + lens of same @ 134 cm.		100		SF	1000+ ~~[illegible]~~ 22	LW2-C522-C (86-130) analyze
130-163	Silty v.fine SAND. Med olive gray to med grayish brown. Sulfur odor. Dense. Organic lens (2mm thick) @ 140 cm. TRACE BLACK STAIN (NO ODOR) @ 143 cm. ABRUPT BASAL CONTACT		65	35		180/24	LW2-C522-D (130-163) archive
163-292	SAND w/ SILT. V. FINE to FINE SAND w/ 10% SILT, TR. CLAY, ~~[illegible]~~ DARK GRAY. CLAYS OCCUR PRIMARILY IN LENSES + ~~[illegible]~~ SILTY BEDS up to ~8 cm thick. TR ORGANICS IN THIN (1-2mm) laminae @ top of unit and @ 276 cm.		90	10		5/27	LW2-C522-E (163-292) archive
	7 cm EMPTY @ top of 2nd segment; accounted for in DEPTH measurements.						

Core segment breaks at (cm): 0-109; 109-210; 210-292. SF

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BZTO104(e)004763

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C523 pg 1 of 1

Collected:
Date: 10/18/05 Drive Length: 13'
Time: 1455 Tide Level (CRD):
Recovery Length: 12.5 Mudline Depth: 44.7
Recovery Efficiency: Vessel: *R.V. Nancy Anne* (MSS)
Crew: DB, DO, JH, GJ

Processed:
Date: 10/19/05
Time: 0945
Core Length: 369
Location: FIELD LAB
Crew: SF NV GR BP MT AR

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILTY SAND, ALTERNATING BEDS OF SILT (TR FINE SAND), AND SAND (FINE-MED SAND), LARGEST SILT BED FROM 0-10 cm. V. soft, med. OLIVE BROWN. MILD H_2S odor. LARGEST SAND BED FROM 10-25 cm, TR FINE GRAVEL (SUBANG, UP TO 5 mm) ~~COARSE SAND~~ SF MILD TPH ODOR. 25-30 CM - ALT BEDS 1-2 cm THICK.		65	35		1510/13	LW2-C523-A (0-30) analyze all
30-118	SAND W/ SILT. INTERBEDDED. FINE SAND, ~~M~~ SILT, V. DK GRAY. MILD ODOR. ~~DENSE~~ LOOSE. SILT IS MED GRAYISH BROWN, W/ ~~LITTLE~~ SF CLAY. MED-HIGH PLAST., STIFF. SILT LENS @ 95 cm INCLUDES black stain + MOD TPH ODOR. BEDS UP TO ~10 cm CLAYEY THICK.		80	20		1003+/14.11	LW2-C523-B (30-118) analyze
118-268	SAND, TR SILT. SAND IS FINE, V. DK GRAY. CLAYEY SILT OCCURS AS LENSES (SOME BLOCKY) UP TO 2 cm Thick. SAND IS DENSE, SILT IS V. STIFF. MILD SULFUR ODOR.		100	tr	*	227/156	LW2-C523-C (118-268) analyze
268-369	SANDY SILT, INTERBEDDED CLAYEY SILT AND FINE SAND. CLAYEY SILT IS MED GRAYISH BRN, MED-HIGH PLAST., V. STIFF. SAND IS FINE, V. DK ~~GRAYISH~~ BROWNISH GRAY, DENSE. MILD SULFUR ODOR.		30	70		42.2/23+	LW2-C523-D (268-369) archive
	* Approximate → second attempt at screening. Calculator error on 1st Attempt.						

Core segment breaks at (cm): 0-106; 106-213; 213-320; 320-369 SC

ANC04764
BZTO104(e)004764

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C524 pg 1 of 1

Collected:
Date: 10/19/05 Drive Length: 6'
Time: 1015 Tide Level (CRD):
Recovery Length: 5'10" Mudline Depth: 5.9'
Recovery Efficiency: Vessel: R.V. Nancy Anne (MSS)
Crew: DB, DD, JH, BJ

Processed:
Date: 10/19/05
Time: 1600
Core Length: 142
Location: FIELD LAB
Crew: NW, GR, SF, AR, MT, BP

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	Mostly WOODY DEBRIS (Chunks w/ SILTY FINE SAND. LIGHT SHEEN + TPH ODOR.	-	-	-		1,551 / 24.7	LW2-C524-A (0-30) analyze all
30-109	SILT w/ SAND. INTERBEDDED SILT, CLAYEY SILT, AND SANDS. SANDS ARE FINE. FINES ARE STIFF w/ MED "HIGH" PLASTICITY MED GRAYISH BROWN. W/ ~20% woody debris IN BEDS UP TO 5cm THICK. SANDY BEDS UP TO 18cm Thick, MOD. LOOSE. LT-MOD TPH ODOR + LIGHT SHEEN ASSOC w/ WOODY DEBRIS + SANDS		25	75		2,668 / 353	LW2-C524-B (30-109) analyze
109-142	WOODY DETRITUS, LIGHT TPH ODOR.	-	-	-		425 / 368	LW2-C524-C (109-142) archive
	INADVERTENTLY MISSED TPH-G ANALYSIS						
	UPPER 40cm OF SECOND SEGMENT IS empty, ACCOUNTED FOR THIS IN DEPTH measurements.						

Core segment breaks at (cm): 0-109; 109-142

ANC04765
BZTO104(e)004765

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C525 pg 1 of 1

Collected:		**Processed:**	
Date: 10/25/05	Drive Length: 19'	Date: 10/26/05	
Time: 1715	Tide Level (CRD):	Time: 1110	
Recovery Length: 14.4'	Mudline Depth: 35.3	Core Length: 427	
Recovery Efficiency: 75%	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB, DD, JH, BJ		Crew: SF JS AR BC RW	

FS, GW

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	SI/CI	Photo ID	FID/PID (ppm)	Sample ID
0-30	SANDY SILT. SAND IS V.FINE-FINE. Med grayish brown soft, tr methane vesicles. TR BLACK STAIN IN FINE-SAND LENSES (MOD TPH ODOR), @SF TR WOOD DEBRIS, W/ LITTLE GRAVEL (FINE + COARSE), ANGULAR, BLACK, LOW DENSITY, RESIN-LIKE. (APPROX 20% of volume in unit) 1 worm (<1mm thick) noted @ ~4cm		35	65		502/42+	LW2-C525-A (0-30) analyze all
30-236	Silt w/ SAND. Silt, tr v.fine sand w/ v.fine-fine sand in lenses + laminae. SILT IS STIFF-V.STIFF, MED-HIGH PLAST., MED GRAYISH BROWN. TR ORGANICS (PLANT DETRITUS). BLACK STAINING IN LENSES, LAMINAE + BANDS, INCREASING W/ DEPTH, UP TO ~2-3cm thick, occurring on both silts + sands		20	80		411/51+	LW2-C525-B (30-127) analyze
						981/61+	LW2-C525-C (127-236) analyze
236-341	Silty SAND. SAND IS v.fine-fine. V. DK GRAY, LIGHT-HEAVY SHEEN, STRONG TPH ODOR. Some (>25%) woody plant detritus, tr silt/clay lenses (med brownish gray). Fairly uniform appearance throughout. ABRUPT BASAL CONTACT.		60	40		566/70+	LW2-C525-D (236-341) analyze
341-427	SAND. SAND (FINE-MED), well sorted, w/ tr silt in lenses (0.2-3cm) laminae (1-2mm) and thin beds (1cm thick). SAND IS ~~MED~~ BROWNISH GRAY, DENSE, MOD TPH odor to sands. BLACK STAIN + SHEEN ON ~~SOME~~ SF ~~SILTS~~ SILT LENS FROM 363-366cm					725/51+	LW2-C525-E (341-427) analyze

Core segment breaks at (cm):

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C527 pg 1 of 1

Collected:		**Processed:**	
Date: 10/25/05	Drive Length: 19'	Date: 10/26 /05	
Time: 1638	Tide Level (CRD):	Time: 0920	
Recovery Length: 16'	Mudline Depth: 11.8'	Core Length: 482	
Recovery Efficiency:	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB DD JH BJ		Crew: JS BP AR SF RW	

FS/GW

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	Silt w/ sand. Sand is v. fine-fine. Soft, med grayish brown. 5-10% methane vesicles. TR rootlets. Mild odor.		25	75		110/34	LW2-C527-A (0-30) analyze all
30-152	Silt w/ sand. Silt w/ tr sand (v. fine) w/ tr fine sand in lenses. Sand in silt decreases below ~60 cm. Stiff. Med grayish brown. TR methane vesicles. TR rootlets. TR faint black stain in fine sand lenses starting @ 45 cm. Black organic lens from 69-71 cm. Mild sulfur odor.		10	90		352/42	LW2-C527-B (30-152) analyze
152-250	Silt w/ sand. Silt w/ tr v. fine sand, as above w/ tr fine med sand in lenses & laminae (~2-4mm thick). TR gravel (fine, subangular ~0.5 cm diam. isolated) @ 205 cm. Faint black staining in bands on silt, and heavier black stain assoc. w/ most sand laminae. Stiff. Mild-mod tarry odor.		10	90		372/48	LW2-C527-C (152-250) analyze
250-482	~~Sandy silt~~ Silt w/ sand. Silt w/ tr sand (v. fine), w/ v. fine-fine sand in laminae *organic beds. Approx 25% organic laminae and beds (woody detritus, plant debris, rootlets), the ~~largest~~ thickest of which extend from 257-270 cm, 272-289 cm, and from 387-397 cm. Black staining typically assoc. w/ the organic beds/laminae, but also occurs in the silt matrix. Mod-strong TPH + H_2S odors. Heavy sheen on organic bed @ 405-407 cm.		25	75		347/59	LW2-C527-D (250-352) archive
						183/84	LW2-C527-E (352-482) analyze

* 2-cm gap @ top of 3rd segment accounted for in depth measurements

Core segment breaks at (cm): 0-109; 109-217; 217-322*; 322-430; 430-482 SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C528 pg 1 of 1

Collected:
Date: 10/25/05 Drive Length: 19'
Time: 1533 Tide Level (CRD):
Recovery Length: 16.3' Mudline Depth: 16.2'
Recovery Efficiency: Vessel: *R.V. Nancy Anne* (MSS)
Crew: DB, JH, DA, BS

Processed:
Date: 10/26/05
Time: 0745
Core Length: 491
Location: FIELD LAB
Crew: JS, AR, SE, BP, RW

FS, GW

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILT, tr v.f. SAND, SOFT, MOD gmyish brown, tr methane vesicles, tr plant debris, mild sulfur odor		tr	100		146/28+	LW2-C528-A (0-30) all analytes
30-451	SILT, tr v.f. SAND, AS ABOVE, STIFF, tr methane vesicles, mod gmyish brown to v. dk gmyish brown, tr plant debris, FOSSILS. SLIGHT Black staining @ 143cm, increasing below. TR FINE SAND IN lenses + laminae (1-3mm Thick) @ 145cm, Abd IN laminae + beds below 398cm (base) 1-3 cm up to 10 cm thick (398-406cm). Black staining IN bands up to 14cm thick occur from 154cm to depth. Mod sheen on some bands. Tarry odor. Abrupt basal contact tr metal debris @ 397cm. 4-cm diam. Pipe segment @ 346cm.					310/24+	LW2-C528-B (30-152) analyze
						312/15	LW2-C528-C (152-274) analyze
						274/25+	LW2-C528-D (274-386) archive
						31/28	LW2-C528-E (386-451) archive
451-491	SAND, FINE SAND tr silt, well sorted, DK brownish gmy, w/tr silt lenses (1-3mm Thick). DENSE, MOD SULFUR ODOR		100	tr		8/15	LW2-C528-F (451-491) analyze

Core segment breaks at (cm): 0-110; 110-218; 218-325; 325-433; 433-491

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C529 pg 1 of 1

Collected:		**Processed:**	
Date: 10/26 /05	Drive Length: 19'	Date: 10/27 /05	
Time: 1558	Tide Level (CRD):	Time: 1030	
Recovery Length: 18'	Mudline Depth: 11.8'	Core Length: 541	
Recovery Efficiency:	Vessel: *R.V. Nancy Anne* (MSS)	Location: FIELD LAB	
Crew: DB DD JH BJ		Crew: SF NV AR MT RWJS	

FS/GW

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILT, SILT w/ tr v.fine sand soft, med grayish brown tr methane vesicles, tr rootlets. No odor		tr	100		411/29	LW2-C529-A (0-30) all analytes
30-541	SILT, AS ABOVE. Silt, tr v.fine ~~sand~~ sand. Med grayish brown tr methane vesicles, tr rootlets. No ODOR to 154cm, MILD-MOD BELOW. trace v.fine-fine sand lenses (~2mm thick) FAINT BLACK STAIN BEGINNING @ ~154 cm, MILD TPH ODOR, STAINING OCCURS IN BANDS UP TO APPROX 1cm thick below at intervals of 1 to ~30cm. Heavy sheen on thin bed w/ v.fine sand & organic detritus from 285-286cm. TR FINE SAND BED FROM 434-435cm. MED-HIGH PLAST. STIFF TO V. STIFF W/ DEPTH		tr	100		380/29+	LW2-C529-B (30-152) analyze
						430/23	LW2-C529-C (152-274) analyze
						430/32+	LW2-C529-D (274-431) archive
						380/36+	LW2-C529-E (431-541) analyze

STATION LOCATED ~143' FROM TARGET DUE TO WATER DEPTH RESTRICTIONS

Core segment breaks at (cm): 0-108 ; 108-216; 216-323; 323-431 ; 431-541 SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C530 pg 1 of 1

Collected:
Date: 10/26 /05 Drive Length: 19'
Time: 1634 Tide Level (CRD):
Recovery Length: 18.2' Mudline Depth: 13.8
Recovery Efficiency: Vessel: *R.V. Nancy Anne* (MSS)
Crew: DS JH BJ PD

Processed:
Date: 10/27 /05
Time: 1200
Core Length: 544
Location: FIELD LAB
Crew: MT JS AR SF RW NV

FS/GW

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILT w/ SAND. SILT, wk v.fine sand a/l TC FINE SAND LENSES. MED GRAYISH BROWN. <10% METHANE VESICLES TR ROOTLETS+ FIBROUS PLANT DEBRIS. MILD SULFUR ODOR, SOFT.		15	85		209/ 29+	LW2-C530-A (0-30) analyze all
30-544	SILT w/ SAND, AS ABOVE. SILT, w/v.fine SAND + ~~w/ fine-med SAND~~ w/ SAND LENSES, & w/ v.fine-fine SAND IN LENSES, laminae+ beds. LENSES+ LAM. typically (ar~0.5 cm Thick) Beds typically 1cm up to 8cm Thick. med-high plast. Black STAINING IN BANDS + lenses starts @ ~45cm, increases in frequency w/ depth. TPH odor ~~to~~ to 22cm. Trace light brown (fan) clay lenses + organics (rootlets) + inorganic bed (woody detritus) @ 414-415		15	85		106/ 42+	LW2-C530-B (30-152) analyze
						300+/ 80+	LW2-C530-C (152-274) analyze
						12+*/ 50+	LW2-C530-D (274-410) archive
						389/ 62+	LW2-C530-E (410-544) analyze

* FLAME-OUT ON FID (EXCESSIVE QUENCHING)

Core segment breaks at (cm): 0-103; 103-210; 210-318; 318-426; 426-544 SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C531 pg 1 of 1

Collected:
Date: 10/27/05 Drive Length: 19'
Time: 1010 Tide Level (CRD):
Recovery Length: 17.2' Mudline Depth:
Recovery Efficiency: 91% Vessel: *R.V. Nancy Anne* (MSS)
Crew: DB, DD, BJ, JH

Processed:
Date: 10/28/05
Time: 0840
Core Length: 516
Location: FIELD LAB
Crew: SF JS AR BD MT RW

FS/GW

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILT w/ SAND. SAND IS V. FINE. MED GRAYISH BROWN. SOFT TO STIFF. V. FINE SAND INCREASES @ 20 cm. MILD ODOR (SOLVENT). TR METHANE VESICLES. TR ROOTLETS & ORGANIC DETRITUS. TR POSS RED PAINT FLECK.		25	75		580+/100+	LW2-C531-A (0-30) analyze all
30-371	SILT w/ SAND. SILT w/ SAND & WITH SAND IN LENSES, LAMINAE, & BEDS. SAND IS V FINE-FINE. TRACE SF. LIGHT SHEEN + DIST ODOR FROM 10 TO 371 cm. TOP OF UNIT FAINT BLACK STAINING STARTING @ 95 cm. BANDS INCREASE IN PROMINANCE + THICKNESS BELOW. TR CLAY LAMINAE (DK BROWN). SILT MASSIVE IS ~~DK GRAY~~ MED GRAYISH BROWN. TR METHANE VESICLES. POSS FREE PRODUCT (HEAVY SHEEN BLEBS IN A FINE SAND BED @ 307 - 310 cm. THICKEST BAND OF STAIN OCCURS FROM 239-244 cm, DECREASE TO FAINT BELOW ~~STAINING SF~~ NO STAIN BANDS BELOW 347 cm OBVIOUS. THICKEST SAND BEDS LOCATED FROM 163-170 cm and 360-371 cm. MED PLAST.		25	75		122+/110	LW2-C531-B (30-152) analyze
						1100+/114	LW2-C531-C (152-274) analyze
						340/97	LW2-C531-D (274-371) archive
371-516	SILT + SAND, INTERBEDDED w/ LAMINAR SILT AND SAND (V. FINE-FINE) + MIXTURES. SANDY BEDS UP TO 31 cm THICK, SILTY BEDS UP TO 45 cm THICK. DENSE/V. STIFF. SILT HAS MED PLAST. TRACE ORGANIC DETRITAL LAMINAE (1-2 MM THICK). NO ODOR.		50	50		313/184+	LW2-C531-E (371-516) analyze

Core segment breaks at (cm): 0-110; 110-218; 218-325; 325-432; 432-516 SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C532 pg 1 of 1

Collected:
Date: 10/18/05 Drive Length: 13'
Time: 1130 Tide Level (CRD):
Recovery Length: 12.5' Mudline Depth: 29.6
Recovery Efficiency: 96% Vessel: *R.V. Nancy Anne* (MSS)
Crew: DB JH DD BT

Processed:
Date: 10/18/05
Time: 1500
Core Length: 372
Location: FIELD LAB
Crew: SF IS JS ARMT BP

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	SILT, TR V.F.NE SAND, MED GRAYISH BROWN, SOFT TR ROOTLETS + PLANT DEBRIS + METHANE VESICLES. MLD SULFUR ODOR.		tr	100		641/33	LW2-C532-A (0-30) ANALYZE
30-99	SANDY SILT. SAND IS FINE TO V FINE MED GRAYISH BROWN, W/ DK GRAY SAND LENSES. STIFF TRACE ROOTLETS + WOODY LAMINAE (1MM). POSS LT SHEEN + ODOR. SAND EST @ 40%		40	60		835/89	LW2-C352-B (30-99) ANALYZE
99-198	SILT, TR V.F.NE SAND, TR THN LENSES + TR THIN LAMINAE OF F.NE SAND. MED GRAYISH BROWN. SAND LENSES ARE DK GRAY. STIFF. MLD TPH ODOR. SAND CONTENT SLIGHTLY INCREASES W/ DEPTH. MED PLAST.		tr	100		550/65	LW2-C352-C (99-198) ANALYZE
198-293	CLAYEY SILT. MED GRAYISH BROWN V. STIFF. TR. LENS OF BLACK STAIN @ 278 cm. MOD TPH ODOR. MED-HIGH PLAST.			100		574/67	LW2-C352-D (198-293) ARCHIVE
293-338	CLAYEY SILT W/ SAND. SAND IS F.NE AND OCCURS PRIMARILY IN THIN LAMINAE + LENSES (1-10 mm) TR ROOTLETS + PLANT DEBRIS. MOD TO STRONG TPH ODOR. LENS OF HARD OLIVE-COLORED CLAY 3mm thick by 1.5 cm long @ 311 cm. SAND CONTENT INCREASES IN LAST 6 CM TO SANDY SILT. STRONG TPH ODOR ABRUPT BASAL CONTACT.		20	80		501/87	LW2-C353-E (293-338) ANALYZE
338-372	FINE SAND. MED-DK GRAY WITH STIFF CLAY IN LAST 3 CM. MILD TPH ODOR. SF DENSE.		90	10		1004/48	LW2-C353-F (338-372) ANALYZE

Core segment breaks at (cm): 0-108; 108-215; 215-323; 323.5-372 SF

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SEDIMENT CORE LOG

PROJECT: Portland Harbor RI/FS **Core ID:** LW2-C533 pg 1 of 1

Collected:
Date: 10/19/05 Drive Length: 13'
Time: 1140 Tide Level (CRD):
Recovery Length: 12'2" Mudline Depth: 10.7'
Recovery Efficiency: Vessel: R.V. Nancy Anne (MSS)
Crew: DB, DD, JTH, BS

Processed:
Date: 10/19/05
Time: 1630
Core Length: 336
Location: FIELD LAB
Crew: GRNV SEMT GPAR

Depth in Core (cm)	Lithologic Description: (Grainsize, color, density/consistency, odor, organics, debris)	Grain Size (%) G	S	Si/Cl	Photo ID	FID/PID (ppm)	Sample ID
0-30	0-26 WOODY DETRITUS. 26-30 SILT. MED GRAY/SH BROWN MED PLASTICITY. MILD ODOR, TRACE WHITE GRAINS (PRECIPITATES?).			100		187/30+	LW2-C533-A (0-30) analyze all
30-234 SF 112	SILT, TR SAND. SILT AS ABOVE TRACE METHANE VESICLES. SAND (FINE) OCCURS PRIMARILY IN A BED BETW. 54-62 cm. BUT ALSO IN THIN (1-5mm) LAMINAE & lenses throughout. MED PLASTICITY, STIFF. MILD SULFUR ODOR & TR WOODY DEBRIS V.fine SAND fraction APPEARANT in bottom 9 cm.		tr	100		354/30	LW2-C533-B (30-112) analyze
SF 234						574/28+	LW2-C533-C (112-234) analyze
234-336	SAND W/ SILT. SAND (v.fine to fine) w/ trace silt AND SILT lenses. DK GRAY, NO ODOR. SAND IS DENSE SILT LENSES FROM 0.5-2 cm THICK MED PLASTICITY. SILT CONTENT IN SAND MATRIX DECREASES BELOW 296 cm					1270/32+	LW2-C533-D (234-336) analyze
	* NO ARCHIVE COLLECTED FOR C533-A DUE TO LIMITED VOLUME						
	4cm + 18cm GAP AT + NEAR top of 2nd segment, AND 9cm GAP at top of 3rd segment, & 2cm GAP at top of 4th segment ALL ACCOUNTED FOR IN depth measurements. THIS CORE WAS ADDED IN THE FIELD & IS COLLOCATED W/ C-252. ANALYTE LIST IS SAME AS FOR C-524.						

Core segment breaks at (cm): 0-112; 112-197cm; 197cm-296; 296-336 SF

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File Name:\2\Round 2B Subsurface FSR\2005-12-29_R2B_SUBSURFACE_FSR_APPB.pdf

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ROUND 2B SUBSURFACE SEDIMENT FIELD SAMPLING REPORT

APPENDIX D
NAVIGATION DATA

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December 29, 2005

Appendix D. Navigation Data* (Actual vs. Target)

Core ID	Actual Easting	Actual Northing	Target Easting	Target Northing
C078	7618755.77468112	717315.045743069	7618765.59733	717315.37642
C079	7619286.23874376	717258.739286945	7619295.65221	717259.68969
C080	7619970.30772432	717247.969935724	7619963.46937	717247.55463
C082-1	7618030.46528783	717195.098311581	7618030.56830	717198.74303
C082-2	7618042.81165225	717194.141441806	7618030.56830	717198.74303
C083	7618735.47609726	717170.321685775	7618747.95967	717174.22486
C084	7619307.44073075	717163.303208828	7619299.69828	717161.08980
C087	7618665.46035927	717093.266349925	7618660.78787	717094.00620
C088	7618370.64017629	717078.489994259	7618377.35853	717074.65261
C089	7619961.35309868	717051.250794194	7619978.04848	717053.21226
C090	7618913.01923588	717066.216987725	7618909.59144	717065.70578
C091	7619195.71324882	717074.655785523	7619188.02215	717074.26478
C092	7619866.75730354	717040.541039567	7619869.41798	717044.11370
C094	7619640.17134846	717054.829096317	7619658.81010	717050.04823
C096	7617939.13252734	716952.680777623	7617975.35082	716935.85067
C099	7618035.77882913	716703.734379889	7618024.59387	716715.60130
C103	7618154.94694858	716406.125125306	7618193.36405	716376.46662
C106	7618224.33755645	716204.153224944	7618305.29645	716124.65815
C109	7618327.14115902	715916.126626545	7618385.36820	715938.19156
C127	7617353.90101983	714243.846895512	7617346.37743	714234.33275
C167	7619263.87479707	710835.926046880	7619258.25011	710839.17973
C187	7620139.12088380	709497.525975686	7620087.94135	709483.76842
C227	7621415.08411199	707786.798562356	7621408.82276	707776.63960
C296	7627314.46065021	705445.582438730	7627330.58148	705457.29281
C303	7627150.74688656	705315.174675326	7627152.50385	705316.94960
C312	7625127.97656465	705158.742583881	7625122.53213	705160.43811
C321-1	7626058.53463243	704450.099017840	7626063.58605	704447.52660
C321-2	7626057.78297873	704453.767504376	7626063.58605	704447.52660
C358	7628393.10108930	702147.436363252	7628406.20358	702158.01548
C360-1	7628248.92970688	702106.450057505	7628179.548	702148.5431
C360-2	7628246.79650711	702106.509248560	7628179.548	702148.5431
C381	7629325.23749716	701101.508663869	7629326.21467	701090.53904
C449	7633639.75831297	696962.325246768	7633643.61572	696962.82716
C492	7637597.32940211	694315.314130411	7637613.84204	694310.00030
C522	7617035.04099377	715190.309724338	7617048.85000	715198.37000
C523	7625590.11854267	704875.933975013	7625595.80873	704884.58508
C524	7627408.36599990	705644.803170612	7627393.50359	705652.76792
C525	7623306.26714838	706147.077430988	7623299.30198	706143.66354
C527	7623022.06267652	706135.581128306	7623020.89038	706145.19199
C528	7622855.88932233	706192.517416429	7622878.25284	706166.68861
C529	7622739.66854843	706341.068392909	7622686.94567	706208.19561
C530	7622683.48984543	706499.488109677	7622577.84606	706308.66748
C531	7622584.88152840	706621.405603765	7622460.29700	706413.25377
C532	7629257.05714593	700289.391886081	7629289.34187	700284.88033
C533	7627332.48687894	705710.136336470	7627338.69963*	705703.27648*

* Surface sample G282 coordinates

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PORTLAND HARBOR RI/FS

ROUND 2B SUBSUFACE SEDIMENT DATA REPORT

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May 22, 2006

Prepared for
The Lower Willamette Group

Prepared by
Integral Consulting Inc.

IC06-0014

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LIST OF ACRONYMS

CAS	Columbia Analytical Services
CLP	Contract Laboratory Program
EDD	electronic data deliverable
EPA	U.S. Environmental Protection Agency
EQuIS	Environmental Quality Information System
FSP	field sampling plan
FSR	field sampling report
LWG	Lower Willamette Group
NOAA	National Oceanic & Atmospheric Administration
PARCC	precision, accuracy, representativeness, completeness, comparability
PCB	polychlorinated biphenyl
PCDD/Fs	polychlorinated dibenzo-p-dioxin/furans
QA	quality assurance
QC	quality control
QAPP	quality assurance project plan
PCP	pentachlorophenal
RI/FS	remedial investigation and feasibility study
RM	river mile
SCRA	site characterization and risk assessment
SDG	sample delivery group
SOPs	standard operating procedures
STL	Severn Trent Laboratories
SVOCs	semivolatile organic compounds
TPH	total petroleum hydrocarbons
VOCs	volatile organic compounds

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This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

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1.0 INTRODUCTION

The remedial investigation and feasibility study (RI/FS) of the Portland Harbor Superfund Site includes several rounds of field sampling activities to investigate the nature and extent of contamination in the in-water portion of the Site, to assess potential risk to human health and the environment, and to develop cleanup alternatives.

Round 2 sampling activities included collection of the following types of data:

- Physical system survey data
- Surface and subsurface sediment chemistry and physical data
- Tissue chemistry data
- Benthic toxicity data
- Surface water chemistry data
- Groundwater, transition zone water, and sediment chemistry data
- Preliminary natural attenuation sampling (e.g., radioisotope cores).

Results from each of these collection efforts are documented under separate cover.

This Round 2B Subsurface Sediment Data Report summarizes the results from the October 18-28, 2005, sample collection effort designed to supplement the Round 2A subsurface sediment data set. A detailed description of the Round 2B subsurface sediment sampling is included in the Round 2B Subsurface Sediment Field Sampling Report (FSR; Integral 2005c).

Except where noted in the FSR, all Round 2B subsurface sediment field activities, including navigational positioning, sample collection, sample handling and processing, and data management, followed guidelines specified in the Round 2 Field Sampling Plan for Sediment Sampling and Benthic Toxicity Testing (FSP; Integral et al. 2004), Round 2B FSP Subsurface Addendum (FSP Addendum; Integral 2005a), the Round 2 Quality Assurance Project Plan (QAPP; Integral and Windward 2004); and the Round 2 Health and Safety Plan (Integral 2004a) as approved by EPA. The Round 2B FSP Subsurface Addendum was based on a plan developed by the U.S. Environmental Protection Agency (EPA), EPA's partners, and the Lower Willamette Group (LWG 2005).

1.1 ROUND 2B SAMPLING OBJECTIVES

The purpose of Round 2B sampling was to fill in data gaps for the RI, risk assessments, and the FS. The specific objectives of the Round 2B FSP for subsurface sediment sampling included the following:

- Supplement the information collected during Round 2A on the nature and extent of sediment contamination in areas that were not sampled in Round 2A
- Determine the depth of contamination in areas of likely historical contamination for the FS
- Assess potential impacts to sediment quality from the discharge of groundwater in subareas of concern.

Interpretation of the Round 2B subsurface sampling results described here will be presented in the Round 2 Comprehensive Site Characterization Report, which will be prepared later in 2006.

1.2 REPORT ORGANIZATION

The remaining sections of this document include a summary of the data collection activities (Section 2); details on the laboratory sample analyses, data quality reviews, and data management (Section 3); the chemical results (Section 4); and references (Section 5).

Supporting information is provided in the following three appendices:

- **Appendix A**: Round 2B Core Logs
- **Appendix B**: Data Quality Summary
- **Appendix C**: Data Validation Reports (on CD)
- **Appendix D**: Site Characterization and Risk Assessment (SCRA) Database, Excel Flat File Format (on CD).

2.0 DATA COLLECTION ACTIVITIES

During the October 18-28, 2005 sampling event, subsurface sediment cores were collected at 42 locations within the lower Willamette River from approximately river mile (RM) 3.5 to RM 10 (Figure 2-1a-g). These locations were sampled to support site nature and extent characterization efforts; however, 14 locations also supported FS purposes, and seven locations also supported the assessment of potential groundwater impacts. Table 2-1 lists the stations, core measurements, collection and processing dates and times, and relevant comments regarding sampling and/or station changes relative to the FSP. Table 2-2 lists the core samples selected for analysis and the chemical analyses performed on each sample. Core logs are provided in Appendix A.

Round 2B sediment sampling and processing followed the procedures specified in the Round 2 FSP (Integral et al. 2004), FSP Addendum (Integral 2005a), and the Round 2 QAPP (Integral and Windward 2004). Deviations from the FSP and QAPP are discussed in the FSR (Integral 2005c) and summarized in Section 3.5 in this data report.

3.0 LABORATORY ANALYSES AND DATA MANAGEMENT

This section describes the laboratory methods used to analyze the subsurface sediment samples. Any deviations from the analytical methods detailed in the QAPP are described below. The data management subsection describes the data validation process from receipt of the laboratory data package to the generation of a final validated electronic data deliverable (EDD). Furthermore, it describes how the SCRA database was compiled into a series of compatible Excel tables, which were then distributed to the SCRA data users. A summary of Round 2B sediment data quality is provided in Appendix B, and the data validation reports are provided in Appendix C.

3.1 PHYSICAL AND CHEMICAL ANALYSES

Two laboratories conducted the chemical analyses of subsurface sediment samples. Columbia Analytical Services (CAS; Kelso, WA, Redding, CA, and Houston, TX) conducted the conventional analyses, geotechnical characteristics, metals, butyltin compounds, TPH, volatile organic compounds (VOCs), polychlorinated biphenyl (PCB) Aroclors, chlorinated pesticides, polychlorinated dibenzo-p-dioxin/furans (PCDD/Fs), and semivolatile organic compounds (SVOCs). Severn Trent Laboratories (STL; Tacoma, WA) performed chlorinated herbicide and pentachlorophenol (PCP) analyses. Analytical methods followed those described in the Round 2 QAPP; deviations from the QAPP were detailed in the Round 2B Subsurface Sediment FSR (Integral 2005c) and are summarized in Section 3.5 below.

The analytical methods used for the subsurface sediment samples are compiled in Table 3-1. Sediment samples were analyzed for metals, SVOCs, chlorinated pesticides, and PCB Aroclors at all stations. TPH, butyltins, VOCs, PCDD/Fs, chlorinated herbicides, PCP, and hexavalent chromium were analyzed only at selected stations specified by the EPA team. The conventional parameters (grain size, total solids, total organic carbon, and specific gravity) were analyzed at all stations.

Analyses of Round 2B sediment samples for Atterberg limits and PCB congeners are tiered. Samples for Atterberg limits analysis were collected at all stations, but only 10% of the samples will be selected for analysis based on a review by a registered geotechnical engineer or geologist. In addition, a subset of Round 2B samples for PCB congeners will be selected based on the Round 2B PCB Aroclors results. The selection process and recommended list of samples for PCB congener analysis will be described in a separate memorandum for agency review and comment. Once the samples are selected, analyzed, and validated, the results and data validation packages will be submitted separately.

3.2 DATA VALIDATION

As required by the Round 2 QAPP (Integral and Windward 2004), approximately 10% of the subsurface sediment data were fully validated, and the remaining data were subjected to Level 3 data validation, which includes the evaluation and assessment of the sample results and applicable quality control results reported by the laboratory. The data validation subcontractor for the Round 2B subsurface sediment data was EcoChem, Inc., located in Seattle, WA. The first data package for each analytical method was additionally submitted to the EPA for data validation by EPA's Quality Assurance (QA) Office.

The inorganic, organic, and PCDD/F data were validated in accordance with guidance specified by the *USEPA Contract Laboratory Program* [CLP] *National Functional Guidelines for Inorganic and Organic Data Review*, by EPA Region 10 standard operating procedures (SOPs) for validation of PCDD/F data (EPA 1994, 1996, 1999), and by *Guidance on Environmental Data Verification and Validation* (EPA 2002). Modifications were made to the Functional Guidelines to accommodate quality assurance/quality control (QA/QC) requirements of the non-CLP methods that were used for this project. Data qualifiers were assigned during data validation if applicable control limits were not met, in accordance with the EPA data validation guidelines and the QC requirements included in the referenced methods. The data validation qualifiers and definitions are summarized in Table 3-2.

The following laboratory deliverables were reviewed during Level 3 and full data validation:

- The case narrative discussing analytical problems (if any) and procedures.
- Chain-of-custody documentation and laboratory sample receipt logs.
- Instrument calibration results.
- Method blank results.
- Results for laboratory quality control samples required by the referenced method, including laboratory control sample/laboratory control sample duplicate analyses, matrix spike/matrix spike duplicate analyses, surrogate recoveries, and other method specific quality control samples (e.g., serial dilutions for inductively coupled plasma analyses).
- Results for field quality control samples (i.e., equipment blanks, field duplicates, and field split samples).
- Analytical results for the surface water samples.
- For data packages subjected to full validation, in addition to review and assessment of the documentation identified above, the validation included verification of reported concentrations for the field and QC samples,

verification of intermediate transcriptions, and review of instrument data such as mass spectra to verify analyte identification procedures.

After completing the data validation activities for each subsurface sediment sample type, a data quality report and a tabular summary of qualified data were generated by EcoChem. The EcoChem data quality reports are included in Appendix C. EcoChem chemists added data validation qualifiers that were assigned during validation to the laboratory report forms and to the laboratory EDDs. The revised EDDs and the hard-copy data validation reports were submitted as the project deliverable. The revised EDDs were then incorporated into the project database, as described in Section 3.4.

3.3 DATA QUALITY AND USABILITY

Data generated in the field and at the laboratories were verified and validated according to the criteria and procedures described in the Round 2 QAPP (Integral and Windward 2004). Data quality and usability were evaluated based on the results of the data validation and the data quality objectives for the Round 2 data. The performance criteria in the QAPP included project analytical goals for precision, accuracy, representativeness, completeness, and comparability (PARCC) of the Round 2 data.

The precision, accuracy, representativeness, and comparibility of the data were assessed during data validation, as described in the Round 2 QAPP. Completeness is calculated by comparing the total number of acceptable data (non-rejected data) to the total number of data points generated. Completeness for the Round 2B subsurface sediment sampling effort was greater than 98% overall, which exceeds the QAPP completeness objective of 95%. Completeness for the Round 2B data is summarized by parameter group in Table 3-3. Completeness ranged from 94 to 100% for the various parameter groups.

The EcoChem validation reports (Appendix C) provide detailed information on the data quality issues and data validation qualifiers for each parameter group, for each laboratory data package. Qualified chemistry data for Round 2B subsurface sediment cores are included in Table 4-1a–b. A complete list of qualified results with reason codes is provided in the data validation reports in Appendix C.

3.4 FIELD QUALITY CONTROL/QUALITY ASSURANCE

The types of QC samples that were collected during the Round 2B subsurface sediment sampling program are described below. The numbers of QC samples collected per analyte are listed in Table 3-4.

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3.4.1 Field Replicates

Replicate samples were analyzed from field replicate cores collected at three stations (approximately 7% of the 2B core sampling stations), as indicated by the "-2" core ID extension in Table 2-1. Replicates are samples from a second core collected at a station to allow assessment of within-station variability. Their origin is not revealed to the laboratory (also called a "blind" replicate). Field replicates were generated by collecting an additional core at the sampling location, not by subsampling the samples from the original core. These samples were assigned unique identification numbers (see Table 2-1) and were not identified as replicates to the laboratory. The total number of field replicate samples collected per analyte is listed in Table 3-4.

3.4.2 Field Splits

Blind field split samples were analyzed at each of the stations where blind field replicates were collected, or 7% of the total Round 2B stations (see Table 2-1). Split samples are multiple samples taken from a single sample composite after it is fully homogenized. The resulting data provide information on the variability associated with sample handling and laboratory analysis operations. These samples were also assigned unique identification numbers (see Table 2-1) and were not identified as splits to the laboratory. The total number of field split samples collected per analyte is listed in Table 3-4.

3.4.3 Field Rinsate Blanks

Introduction of chemical contaminants during sampling and analytical activities was assessed by the analysis of blanks. Rinsate blanks, consisting of sampling equipment rinsates, were generated for all chemical parameter groups at a frequency of at least 5% of the sediment samples submitted for analysis to the laboratory. The total number of rinsate blanks collected per analyte is listed in Table 3-4.

3.4.4 Summary of Qualified Data

Selected data not meeting the data quality criteria were qualified as undetected, estimated, tentatively identified, or rejected during validation, in accordance with the Round 2 QAPP. A tabular summary of the results, with the data qualifiers, is included in Table 4-1a–b. Data qualified as undetected are usable for all intended purposes. Data qualified as estimated or tentatively identified are usable for all intended purposes, with the knowledge that these data may be less precise or less accurate than unqualified data. Rejected data are not usable for any purpose. Concentrations associated with rejected data have been removed from the database, and an "R" qualifier is retained to flag the results that were removed.

3.5 LABORATORY DEVIATIONS FROM ROUND 2 QAPP

Round 2B sediment core samples were analyzed according to methods described in the Round 2 QAPP (Integral and Windward 2004), with modifications described in the *Round 2 Quality Assurance Project Plan Corrective Action Plan: SVOC Analysis of Surface Sediment Samples* (Integral 2004b), and the Round 2A Sediment Site Characterization Summary Report (Integral 2005b).

As noted in Table 2-2, two samples (C524-A and C524-B) for total petroleum hydrocarbons – gasoline range (TPH-G) were not analyzed because samples were not collected in appropriate jars (i.e., 2 oz. jars with septa). No further action was taken because 1) TPH-G analyses can not be performed on frozen archive samples, and 2) the lead scientist felt that sediment core samples collected from Station C533 located less than 100 ft away from Station C524 provided adequate spatial coverage for this parameter.

Two samples (C127-C and C127-D) were inadvertently analyzed for butyltins. The Round 2B FSP Subsurface Addendum did not include these samples for butyltins analysis.

Samples LW2-C533-D, LW2-C296-C, LW2-C303-C, LW2-C523-A, LW2-C523-B, and LW2-C523-C were originally extracted for organochlorine pesticides and PCB Aroclors within the holding time of 14 days for refrigerated sediment samples. However, the original extracts were lost during the course of sample preparation procedures, and the samples had to be re-extracted. The re-extraction was completed 19 days after collection, 5 days past holding time expiration. The positive results and reporting limits for these samples were qualified as estimated (J/UJ) due to the holding time exceedance. Because the holding time exceedance was relatively short, any effect on the accuracy of the data is expected to be minimal.

Sample LW2-C092-A was extracted for PCDD/Fs, 55 days after collection, outside the holding time of 45 days. All positive results and reporting limits for this sample were estimated (J/UJ) due to the holding time exceedance. Overall, 25 PCDD/F results (4.3% of the sediment PCDD/F results) were estimated based on holding time outliers.

The selected data qualified as noted above are fully usable for all data uses summarized in the Round 2 FSP and Round 2B FSP Addendum.

3.6 DATA MANAGEMENT

Once the laboratories completed their internal QA/QC checks, they exported the analytical data (sample, test, batch, and result information) into comma-delimited text files with data columns arranged in an order that was recognized by the project's Environmental Quality Information System (EQuIS) database. These EDDs were e-mailed to Integral where they were checked for proper EQuIS

structure and appended with specific information that was unknown by the labs, such as sampling location, composite information, and field replicate and split information. If any problems were found in the structure of the EDDs, then the laboratories were notified and asked to correct the problem and resubmit the EDD. Each emailed EDD transmission, with the original, unaltered EDD attachment, was stored to document and track the laboratories' delivery of electronic data to Integral.

When the EDD was corrected and complete, they were checked electronically by loading them into the temporary section of Integral's LWG project database. In the process of loading, EQuIS checked the EDDs for correct lookup codes (such as for analytes, test methods, and sample matrices); proper relationships for results, tests, batches, and samples (to ensure all results matched with a test, tests with samples, and sample/test pairs with batches); and that all derived samples (such as replicates, splits, and matrix spikes) had corresponding parent samples.

In addition to these checks, EQuIS also checked "less important" characteristics, such as date and time formats and text field lengths, to ensure consistency throughout the database. Any error prevents the EDD from loading until the error is corrected. If errors were found that were related to the way the laboratories reported the data or constructed the EDD, then the laboratories were notified and asked to correct the problem and resubmit the EDD. If errors were related to Excel automatically formatting date and time fields, for example, then the error was corrected and steps were taken to avoid repeats of the problem (such as changing default settings in the software). Successfully loaded EDDs were saved to document and track the data that were loaded into Integral's LWG project database.

Each verified and accurate EDD was provided to the Round 2 data validation contractor (EcoChem, Seattle, WA) for data review and validation. These EDDs were also stored in a temporary section of the project database, where they could be queried and examined, if desired, until validation was complete. As EcoChem completed validation of the data by sample delivery group (SDG) or small groups of SDGs, the validator qualifiers and reason codes were applied to the data in the temporary section of the database. The validated data were then merged into the permanent project database. During the merging process, all previously performed electronic checks were repeated to ensure nothing was incorrectly modified with the application of the validation results.

Several queries were set up in the permanent project database to translate the data structure to a form compatible with the National Oceanic & Atmospheric Administration's (NOAA's) Query Manager. The data translation included creating station and sample identifiers, converting the sample type code, and changing the date format. The translated data were imported into an Access file provided by NOAA that contained template tables for the Query Manager structure.

Integral's LWG project database contains all of the data reported by the analytical laboratories. This includes field and lab replicates, lab dilutions, results for the same analyte from multiple analytical methods (SW8270 and SW8270-SIM, for example), and laboratory QA samples such as matrix spikes, surrogates, and method blanks. The data handling rules described in *Guidelines for Data Averaging and Treatment of Non-detected Values for the Round 1 Database* (Kennedy Jenks et al. 2004) were used to create a data set for the SCRA data users that was simpler: the data set contained only one result per analyte per sample and excluded all of the laboratory QA results. This involved creating a SCRA database that excluded lab QA results, contained only the most appropriate dilution result and analytical method for each analyte, and contained the average of replicates. Excluding the lab QA results was a simple database querying step. Selection of the most appropriate dilution was either done by the reporting laboratory or by the data validator. Selection of the most appropriate analytical method was described in the guidelines document and was accomplished by flagging the appropriate method in the project database.

The guidelines document described the rules used for averaging data and carrying qualifiers. Because it was the most data manipulation intensive procedure, the data were divided into subgroups and approximately 40% of each subgroup was verified. If any problems were found with the averaging, then 100% of the subgroup was verified and problems were corrected. The preliminary SCRA database was compiled into a series of database-compatible Excel tables and distributed to the SCRA data users. The SCRA database is provided on CD in Appendix D.

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4.0 ROUND 2B RESULTS

A total of 45 sediment cores were collected from 42 stations during the Round 2B subsurface sampling field event conducted from October 18-28, 2005. Including field replicates and homogenate split samples, a total of 181 sediment samples were submitted for chemical and/or physical analyses. Table 4-1a–b lists the results of the Round 2B subsurface sediment sampling effort.

The subsurface sediment data generated from this effort will be evaluated in conjunction with the surface sediment and beach sediment data collected in 2004, and will be reported in the Round 2 Comprehensive Site Characterization Report later in 2006.

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Table 2-1. Round 2B Subsurface Sediment Stations, Core Measurements, and Collection and Processing Dates and Times.

Station Number	Nearby Facility	Location	Core Type	Core Tube Length (ft)	Core Drive Length (ft)	Sampled Core Length (cm)	Sampled Core Length (ft)	Sampled Core Recovery	Collected Date	Collected Time	Processed Date	Processed Time	Comment
C078	International Slip	Off outfall	N&E	14	13.0	367	12.0	93%	10/20/2005	1058	10/21/2005	0800	Split samples collected by Schnitzer consultant.
C079	International Slip	Off outfall	N&E	14	13.0	364	11.9	92%	10/20/2005	1024	10/20/2005	1645	Split samples collected by Schnitzer consultant.
C080	International Slip	Two outfalls	N&E	14	13.0	336	11.0	85%	10/20/2005	0945	10/20/2005	1445	Split samples collected by Schnitzer consultant.
C082-1	International Slip	Slip close to river	N&E	14	13.0	295	9.7	74%	10/19/2005	1407	10/20/2005	0745	Bottom 21cm of third segment empty, lost during collection. Split samples collected for Schnitzer consultant.
C082-2				14	13.0	297	9.7	75%	10/19/2005	1438	10/20/2005	0840	Field duplicate and split samples collected from this core. Some material (est. 15 cm) lost during collection.
C083	International Slip	Mid Slip	N&E	14	13.0	282	9.3	71%	10/19/2005	1509	10/20/2005	0920	Bottom 1.5 ft lost during collection. Split samples collected by Schnitzer consultant.
C084	International Slip	Channel Far inside Slip	N&E	14	13.0	369	12.1	93%	10/20/2005	1200	10/21/2005	0900	Split samples collected by Schnitzer consultant. PID/FID malfunctionning - no headspace screening.
C087	International Slip	Outfalls 11, 10	N&E	14	13.0	328	10.8	83%	10/20/2005	1130	10/21/2005	1030	Schnitzer collected split samples; "A" interval not technically a split (see core log note). PID not functioning for headspace screening.
C088	International Slip	Outfall 8	N&E	14	13.0	284	9.3	72%	10/19/005	1652	10/20/2005	1200	Sands lost from bottom of core during collection. Split samples collected by Schnitzer consultant.
C089	Northwest Pipe/ International Slip	Outfall 18	N&E	20	19.0	485	15.9	84%	10/24/2005	1554	10/25/2005	0930	Split samples collected by Schnitzer consultant.
C090	International Slip	Outfall 12	N&E	14	12.5	297	9.7	78%	10/19/2005	1548	10/20/2005	1025	Split samples collected by Schnitzer consultant.
C091	International Slip	Outfall 13	N&E	14	13.0	306	10.0	77%	10/19/2005	1625	10/20/2005	1100	Bottom 20 cm lost during collection. Split samples collected by Schnitzer consultant.
C092	International Slip	Outfall 17	N&E	20	19.0	515	16.9	89%	10/24/2005	1505	10/25/2005	0800	Split samples collected by Schnitzer consultant.
C094	International Slip	Outfalls 14, 15, 16	N&E	14	13.0	370	12.1	93%	10/20/2005	0903	10/20/2005	1345	Split samples collected by Schnitzer consultant.
C096	Schnitzer Steel	Outfall 7	FS, N&E	20	19.0	379	12.4	65%	10/24/2005	1154	10/24/2005	1445	Split sample collected by Schnitzer consultant.
C099	Schnitzer Steel	Outfall 6	FS, N&E	20	19.0	368	12.1	64%	10/24/2005	1325	10/24/2005	1600	Split sample collected by Schnitzer consultant.
C103	Schnitzer Steel	Outfall 5	FS, N&E	20	19.0	462	15.2	80%	10/24/2005	1657	10/25/2005	1030	Station moved downstream approx. 49 ft due to water depth/debris restrictions. Split sample collected by Schnitzer consultant: not sampled to 8 ft.
C106	Schnitzer Steel	Outfall 4	FS, N&E	20	19.0	503	16.5	87%	10/25/2005	0926	10/25/2005	1400	Station moved downstream approx. 113 ft due to water depth/debris restrictions. Split sample collected by Schnitzer consultant.
C109	Schnitzer Steel	Outfall 3	FS, N&E	20	19.0	432	14.2	75%	10/25/2005	1147	10/25/2005	1515	Station moved offshore approx. 62 ft due to water depth restrictions.Split sample collected by Schnitzer consultant.
C127	Kinder-Morgan	South end of dock	N&E	20	17.0	466	15.3	90%	10/25/2005	1237	10/25/2005	1615	
C167	Arco/BP	south end property, offshore	FS, N&E	14	13.0	356	11.7	90%	10/18/2005	1629	10/19/2005	1130	
C187	Exxon/Mobil Oil Terminal	south end of property	N&E	20	17.0	418	13.7	81%	10/27/2005	1100	10/28/2005	1010	Station moved offshore approx. 53 ft due to slope, water depth, and rip-rap. 'A' interval archived.

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Table 2-1. Round 2B Subsurface Sediment Stations, Core Measurements, and Collection and Processing Dates and Times.

Station Number	Nearby Facility	Location	Core Type	Core Tube Length (ft)	Core Drive Length (ft)	Sampled Core Length (cm)	Sampled Core Length (ft)	Sampled Core Recovery	Collected		Processed		Comment
									Date	Time	Date	Time	
C227	Marine Finance	Seeps north end of property	N&E	14	7.5	192	6.3	84%	10/19/2005	0845	10/19/2005	1400	
C296	Willamette Cove	Edge of McCormick & Baxter cap	N&E	14	13.0	331	10.9	84%	10/18/2005	1400	10/19/2005	0800	
C303	Willamette Cove	Edge of McCormick & Baxter cap	N&E	14	13.0	282	9.3	71%	10/18/2005	1426	10/19/2005	0845	
C312	Siltronics	Transect 14	FS, N&E	14	13.0	245	8.0	62%	10/18/2005	1545	10/19/2005	1045	
C321-1	Siltronics	Transect 16, -5	N&E	20	18.7	465	15.3	82%	10/27/2005	0838	10/27/2005	1410	
C321-2				20	18.7	491	16.1	86%	10/27/2005	0916	10/27/2005	1530	Field duplicate and split samples collected from this core.
C358	Arkema	Offshore, between north and middle docks	N&E	20	12.5	303	9.9	80%	10/26/2005	1229	10/26/2005	1520	Basalt chunk noted in core catcher during collection.
C360-1	Arkema	North, middle transect	N&E	20	19.0	572	18.8	99%	10/26/2005	1423	10/27/2005	0745	
C360-2				20	19.0	509	16.7	88%	10/26/2005	1459	10/27/2005	0915	Field duplicate and split samples collected from this core.
C381	Willbridge	Off Chevron Pier	N&E	14	13.0	390	12.8	98%	10/18/2005	1155	10/18/2005	1630	
C449	Gunderson	Gunderson box	N&E	14	13.0	321	10.5	81%	10/18/2005	1048	10/18/2005	1330	
C492	Terminal 2	mouth of Slip off outfall	FS, N&E	20	18.0	433	14.2	79%	10/26/2005	1023	10/26/2005	1410	Initially proposed as 14-ft core.
C522	Kinder-Morgan	nearshore, just downstream of dock	N&E	14	11.8	292	9.6	81%	10/19/2005	1238	10/19/2005	1445	
C523	Siltronics	Transect 15, -40	N&E	14	13.0	369	12.1	93%	10/18/2005	1455	10/19/2005	0945	
C524	Willamette Cove	Observed sheen area, below ordinary low water	N&E	14	6.0	142	4.7	78%	10/19/2005	1015	10/19/2005	1600	
C525	U.S. Moorings	Just upstream of GASCO/U.S. Moorings Property line	FS, N&E, GW	20	19.0	427	14.0	74%	10/25/2005	1715	10/26/2005	1110	
C526	U.S. Moorings												Station dropped; collocated with R2A station C263.
C527	U.S. Moorings	Just downstream of U.S. Moorings Dock	FS, N&E, GW	20	19.0	482	15.8	83%	10/25/2005	1638	10/26/2005	0920	
C528	U.S. Moorings	Approximately 100' downstream of U.S. Moorings Dock	FS, N&E, GW	20	19.0	491	16.1	85%	10/25/2005	1533	10/26/2005	0745	
C529	U.S. Moorings	Upstream end of U.S. Moorings embayment	FS, N&E, GW	20	19.0	541	17.7	93%	10/26/2005	1558	10/27/2005	1030	Station moved approx. 143' offshore due to water depth restrictions.
C530	U.S. Moorings	Middle of U.S. Moorings embayment	FS, N&E, GW	20	19.0	544	17.8	94%	10/26/2005	1634	10/27/2005	1200	Station moved approx. 218' offshore due to water depth restrictions. FID malfunction during headspace screening of 'D' interval from this core.
C531	U.S. Moorings	Downstream end of U.S. Moorings embayment	FS, N&E, GW	20	19.0	516	16.9	89%	10/27/2005	1010	10/28/2005	0810	Station moved approx. 243' offshore due to water depth restrictions.
C532	Willbridge	Southern end of site and off the main dock and towards the channel	N&E, GW	14	13.0	372	12.2	94%	10/18/2005	1130	10/18/2005	1500	
C533	Willamette Cove	Nearshore off the east parcel	N&E	14	13.0	336	11.0	85%	10/19/2005	1140	10/19/2005	1630	No archive collected for 'A' interval due to limited volume. This core added in the field, collocated w/G282.

Notes:

N&E - Nature and Extent
FS - Feasibility Study
GW - Groundwater

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ANC04795

Table 2-2. Round 2B Subsurface Sediment Chemistry Sample Analyses.

		Round 2B Target Analytes													
Sample ID	DATE	Grain Size	Atterberg Limits[a] + specific gravity	SVOCs	Chlorinated Pesticides	PCB Aroclors	Metals + Hg	TS + TOC	Hexavalent Chromium	Butyltins	TPH-Diesel/Oil	TPH-Gas	VOCs	Dioxins/ Furans	Herbicides & PCP
LW2-C078-A	10/21/05	A									X	X			
LW2-C078-B	10/21/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C078-C	10/21/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C078-D	10/21/05	A										X	X		
LW2-C079-A	10/20/05	A									X	X			
LW2-C079-B	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C079-C	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C079-D	10/20/05	A										X	X		
LW2-C080-A	10/20/05	A									X	X			
LW2-C080-B	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C080-C	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C080-D	10/20/05	A										X	X		
LW2-C082-A1	10/20/05	A								X	X	X			
LW2-C082-A2	10/20/05	A								R	R	R			
LW2-C082-A3	10/20/05	A									S	S			
LW2-C082-B1	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C082-B2	10/20/05	R	R	R	R	R	R	R		R	R	R	R		
LW2-C082-B3	10/20/05	S	S	S	S	S	S	S		S	S	S	S		
LW2-C082-C1	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C082-C2	10/20/05	R	R	R	R	R	R	R		R	R	R	R		
LW2-C082-C3	10/20/05	S	S	S	S	S	S	S		S	S	S	S		
LW2-C082-D1	10/20/05	X*	X*	X*	X*	X*	X*	X*		X*	X*	X	X		
LW2-C082-D2	10/20/05	R	R	R	R	R	R	R		R	R	R	R		
LW2-C082-D3	10/20/05	S	S	S	S	S	S	S		S	S	S	S		
LW2-C083-A	10/20/05	A									X	X			
LW2-C083-B	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C083-C	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C083-D	10/20/05	A										X	X		
LW2-C084-A	10/21/05	A			X						X	X		X	
LW2-C084-B	10/21/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C084-C	10/21/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C084-D	10/21/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C084-E	10/21/05	A										X	X		
LW2-C087-A	10/21/05	A			X						X	X			
LW2-C087-B	10/21/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C087-C	10/21/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C087-D	10/21/05	A										X	X		
LW2-C088-A	10/20/05	A									X	X			
LW2-C088-B	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C088-C	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C089-A	10/25/05	A									X	X			
LW2-C089-B	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C089-C	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C089-D	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C089-F	10/25/05	A										X	X		
LW2-C090-A	10/20/05	A									X	X			
LW2-C090-B	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C090-C	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C090-D	10/20/05	A										X	X		

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Table 2-2. Round 2B Subsurface Sediment Chemistry Sample Analyses.

		Round 2B Target Analytes													
Sample ID	DATE	Grain Size	Atterberg Limits[a] + specific gravity	SVOCs	Chlorinated Pesticides	PCB Aroclors	Metals + Hg	TS + TOC	Hexavalent Chromium	Butyltins	TPH-Diesel/Oil	TPH-Gas	VOCs	Dioxins/ Furans	Herbicides & PCP
LW2-C091-A	10/20/05	A									X	X			
LW2-C091-B	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C091-C	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C091-D	10/20/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C092-A	10/25/05	A									X	X		X	
LW2-C092-B	10/25/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C092-C	10/25/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C092-D	10/25/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C092-E	10/25/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C092-F	10/25/05	A										X	X		
LW2-C094-A	10/20/05	A			X						X	X		X	
LW2-C094-B	10/20/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C094-C	10/20/05	X	X	X	X	X	X	X		X	X	X	X	X	
LW2-C094-E	10/20/05	A										X	X		
LW2-C096-A	10/24/05	A									X	X			
LW2-C096-B	10/24/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C096-C	10/24/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C096-D	10/24/05	A										X	X		
LW2-C099-A	10/24/05	A									X	X			
LW2-C099-B	10/24/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C099-C	10/24/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C099-D	10/24/05	A										X	X		
LW2-C103-A	10/25/05	A									X	X			
LW2-C103-B	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C103-D	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C103-E	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C106-A	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C106-B	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C106-C	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C106-D	10/25/05	A													
LW2-C106-E	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C106-F	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C109-A	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C109-B	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C109-C	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C109-D	10/25/05	A													
LW2-C109-E	10/25/05	X	X	X	X	X	X	X		X	X	X	X		
LW2-C127-B	10/25/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C127-C	10/25/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C127-D	10/25/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C127-F	10/25/05	A										X	X		
LW2-C167-A	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C167-B	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C167-C	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C167-D	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C167-F	10/19/05	A										X	X		
LW2-C187-B	10/28/05	X	X	X	X	X	X	X			X	X	X		
LW2-C187-C	10/28/05	X	X	X	X	X	X	X			X	X	X		
LW2-C187-D	10/28/05	X	X	X	X	X	X	X			X	X	X		

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Table 2-2. Round 2B Subsurface Sediment Chemistry Sample Analyses.

		Round 2B Target Analytes													
Sample ID	DATE	Grain Size	Atterberg Limits[a] + specific gravity	SVOCs	Chlorinated Pesticides	PCB Aroclors	Metals + Hg	TS + TOC	Hexavalent Chromium	Butyltins	TPH-Diesel/Oil	TPH-Gas	VOCs	Dioxins/ Furans	Herbicides & PCP
LW2-C187-E	10/28/05	A										X	X		
LW2-C227-B	10/19/05	X	X	X	X	X	X	X		X	X	X			
LW2-C227-C	10/19/05	X	X	X	X	X	X	X		X	X	X			
LW2-C296-B	10/19/05	X	X	X	X	X	X	X			X	X			
LW2-C296-C	10/19/05	X	X	X	X	X	X	X			X	X			
LW2-C296-D	10/19/05	A										X			
LW2-C303-B	10/19/05	X	X	X	X	X	X	X			X	X			
LW2-C303-C	10/19/05	X	X	X	X	X	X	X			X	X			
LW2-C303-D	10/19/05	A										X			
LW2-C312-A	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C312-B	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C312-C	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C321-B1	10/27/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C321-B2	10/27/05	R	R	R	R	R	R	R			R	R	R	R	R
LW2-C321-B3	10/27/05	A									S	S	S	S	S
LW2-C321-C1	10/27/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C321-C2	10/27/05	R	R	R	R	R	R	R			R	R			R
LW2-C321-E1	10/27/05	A										X	X		
LW2-C321-E2	10/27/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C358-A	10/26/05	A	A						X				X		
LW2-C358-B	10/26/05	X	X	X	X	X	X	X	X				X		
LW2-C358-C	10/26/05	X	X	X	X	X	X	X	X				X		
LW2-C358-D	10/26/05	X	X	X	X	X	X	X	X				X		
LW2-C360-B1	10/27/05	X	X	X	X	X	X	X	X				X		
LW2-C360-B2	10/27/05	R	R	R	R	R	R	R	R				R		
LW2-C360-B3	10/27/05	S	S	S	S	S	S	S	S						
LW2-C360-C1	10/27/05	X	X	X	X	X	X	X	X				X		
LW2-C360-C2	10/27/05	R	R	R	R	R	R	R	R				R		
LW2-C360-F1	10/27/05	A							X				X		
LW2-C360-F2	10/27/05	A											R		
LW2-C381-B	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-C381-C	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-C381-E	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-449-A	10/18/05	A			X										
LW2-449-B	10/18/05	X	X	X	X	X	X	X		X					
LW2-449-C	10/18/05	X	X	X	X	X	X	X		X					
LW2-449-E	10/18/05	X	X	X	X	X	X	X		X					
LW2-C492-B	10/26/05	X	X	X	X	X	X	X							X
LW2-C492-C	10/26/05	X	X	X	X	X	X	X							X
LW2-C522-A	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C522-B	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C522-C	10/19/05	X	X	X	X	X	X	X			X	X	X		
LW2-C522-E	10/19/05	A										X	X		
LW2-C523-A	10/19/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C523-B	10/19/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C523-C	10/19/05	X	X	X	X	X	X	X			X	X	X	X	X
LW2-C523-D	10/19/05	A										X	X		
LW2-C524-A	10/19/05	X	X	X	X	X	X	X			X				
LW2-C524-B	10/19/05	X	X	X	X	X	X	X			X				

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Table 2-2. Round 2B Subsurface Sediment Chemistry Sample Analyses.

		Round 2B Target Analytes													
Sample ID	DATE	Grain Size	Atterberg Limits[a] + specific gravity	SVOCs	Chlorinated Pesticides	PCB Aroclors	Metals + Hg	TS + TOC	Hexavalent Chromium	Butyltins	TPH-Diesel/Oil	TPH-Gas	VOCs	Dioxins/ Furans	Herbicides & PCP
LW2-C525-A	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C525-B	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C525-C	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C525-D	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C525-E	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C527-A	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C527-B	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C527-C	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C527-E	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C528-A	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C528-B	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C528-C	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C528-F	10/26/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C529-A	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C529-B	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C529-C	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C529-E	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C530-A	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C530-B	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C530-C	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C530-E	10/27/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C531-A	10/28/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C531-B	10/28/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C531-C	10/28/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C531-E	10/28/05	X	X	X	X	X	X	X		X	X	X	X		X
LW2-C532-A	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-C532-B	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-C532-C	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-C532-E	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-C532-F	10/18/05	X	X	X	X	X	X	X			X	X	X		
LW2-C533-A	10/19/05	X	X	X	X	X	X	X			X	X			
LW2-C533-B	10/19/05	X	X	X	X	X	X	X			X	X			
LW2-C533-C	10/19/05	X	X	X	X	X	X	X			X	X			
LW2-C533-D	10/19/05	X	X	X	X	X	X	X			X	X			

Notes:

[a]Atterberg Limits will be analyzed on 10% of the samples following review of sediment textures at all stations.

A: Archived volume.

Hg - mercury.

PCP - Pentachlorophenol.

R - Field replicate sample submitted for analysis.

S - Homogenate split sample submitted for analysis.

SVOCs - Semivolatile organic compounds.

TOC - Total organic carbon.

TPH - Total petroleum hydrocarbons.

TS - Total solids.

VOCs - Volatile organic compounds.

X - sample submitted for analysis.

*Archived volume was submitted for these analyses.

Shaded cells indicate missing analyses.

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BZTO104(e)004799
ANC04799

Table 3-1. Laboratory Methods for Round 2B Subsurface Sediment Samples.

Analytes	Laboratory	Sample Preparation		Quantitative Analysis	
		Protocol	Procedure	Protocol	Procedure
Conventional Analyses	CAS				
Specific gravity		--	--	ASTM D-854	Gravimetric
Total solids		--	--	EPA 160.3	Gravimetric
Grain size		--	--	PSEP 1986	Sieves and pipette method
Total organic carbon		PSEP 1986	Acid pretreatment	PSEP 1986	Combustion; coulometric titration
Metals/Inorganics	CAS				
Aluminum, chromium, copper, nickel, zinc		EPA 3050	Strong acid digestion	EPA 6010B	ICP/AES
Antimony, arsenic, cadmium, lead, silver		EPA 3050	Strong acid digestion	EPA 6020	ICP/MS
Selenium		EPA 3050 EPA 7742	Strong acid digestion Hydride generation	EPA 7742	AAS
Mercury		EPA 7471A	Acid digestion/oxidation	EPA 7471A	CVAAS
Hexavalent chromium		EPA 3060A	Alkaline digestion	EPA 7196A	Colorimetry
Butyltins	CAS	Krone et al. 1989	Solvent extraction Derivatization	Krone et. al 1989	GC/FPD
Petroleum Hydrocarbons	CAS				
Gasoline-range hydrocarbons		NWTPH-Gx	Methanol extraction Purge and trap	NWTPH-Gx	GC/FID
Diesel- and oil-range hydrocarbons		NWTPH-Dx	Sovent extraction Silica gel cleanup (as needed)	NWTPH-Dx	GC/FID
Chlorinated Herbicides and Pentachlorophenol	STL	EPA 8151A	Solvent extraction Esterification	EPA 8151A	GC/MS
Organochlorine Pesticides and Selected SVOCs	CAS	EPA 3540 EPA 3620B EPA 3660B	Soxhlet extraction Florisil® cleanup Sulfur cleanup	EPA 8081A	GC/ECD
PCB Aroclors	CAS	EPA 3545 EPA 3665A EPA 3620B EPA 3660B	Pressurized fluid extraction Sulfuric acid cleanup Florisil® cleanup Sulfur cleanup	EPA 8082	GC/ECD
Volatile Organic Compounds	CAS	EPA 5035	Purge and trap	EPA 8260B	GC/MS
Semivolatile Organic Compounds[a]	CAS	EPA 3545 EPA 3640A	Pressurized fluid extraction Gel permeation chromatography	EPA 8270C	GC/MS

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BZTO104(e)004800 ANC04800

Table 3-1. Laboratory Methods for Round 2B Subsurface Sediment Samples.

Analytes	Laboratory	Sample Preparation		Quantitative Analysis	
		Protocol	Procedure	Protocol	Procedure
Polycyclic Aromatic Hydrocarbons	CAS	EPA 3541 EPA 3640A EPA 3630C	Automated Soxhlet extraction Gel permeation chromatography Silica gel cleanup	EPA 8270-SIM	GC/MS - SIM
PCDD/Fs	CAS	EPA 1613B	Soxhlet/Dean Stark extraction Sulfuric acid cleanup Silica/carbon column cleanup	EPA 1613B	HRGC/HRMS

Notes:

[a] Includes phenols and phthalate esters.

AAS - atomic absorption spectrometry
ASTM - American Society for Testing and Materials
CAS - Columbia Analytical Services
CVAAS - cold vapor atomic absorption spectrometry
EPA - U.S. Environmental Protection Agency
GC/ECD - gas chromatography/electron capture detection
GC/FID - gas chromatography/flame ionization detection
GC/FPD - gas chromatography/flame photometric detection
GC/MS - gas chromatography/mass spectrometry
HRGC/HRMS - high resolution gas chromatography/high resolution mass spectrometry
ICP/AES - inductively coupled plasma/atomic emission spectrometry
ICP/MS - inductively coupled plasma/mass spectrometry
NWTPH - Northwest total petroleum hydrocarbon
PSEP - Puget Sound Estuary Program
SIM - selected ion monitoring
STL - Severn Trent Laboratories
SVOCs - semivolatile organic compounds
PCDD/Fs - polychlorinated dibenzo-p-dioxins/furans

ANC04801
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Table 3-2. Data Validation Qualifiers and Definitions.

Data Qualifier	Definition
U	The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
J	The associated numerical value is an estimated quantity.
R	Rejected.
NJ	Presumptive evidence of the presence of the material at an estimated quantity.
UJ	The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.
T	The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table 3-3. Percent Completeness by Parameter Group.

Analysis	Total # of Data Points[1]	Number of Data Points		Completeness (%)
		Accepted	Rejected	
Butyltins	356	354	2	99
Conventionals[2]	453	453	0	100
Dioxin/furan homologs	230	230	0	100
PCDD/Fs	345	345	0	100
Grain size	1768	1768	0	100
Herbicides	390	390	0	100
Metals	1642	1642	0	100
Organochlorine pesticides	3920	3920	0	100
PAHs	2468	2468	0	100
PCB Aroclors	1224	1224	0	100
Petroleum	446	446	0	100
Phenols	2259	2239	20	99
Phthalates	816	816	0	100
SVOCs	4912	4885	27	99
VOCs	6811	6419	392	94
Round 2B Core Sediment Sampling Project Total	**28040**	**27599**	**441**	**>98**

Notes:

[1] Totals include field replicates and split samples and exclude field blanks

[2] Includes specific gravity, total solids, and total organic carbon

ANC04803
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Table 3-4. Summary of Round 2B Subsurface Sediment Field and QC Samples.

Sample Type	# Samples	Field Replicates[a]	Field Splits[1]	Field Rinsate Blanks	Total Number of Field Samples[2]
SVOCs	124	7	4	7	142
Pesticides	128	7	4	7	146
PCB Aroclors	124	7	4	7	142
Metals	124	7	4	7	142
Hexavalent Chromium	7	2	1	1	11
Butyltins	79	4	3	6	92
TPH diesel-oil	130	6	5	7	148
TPH gasoline	149	6	5	8	168
VOCs	128	7	4	8	147
PCDD/Fs	21	1	1	2	25
Herbicides & Pentachlorophenol	36	2	1	2	41

Notes:

[1] Field QC sample numbers were collected on target frequencies of 5% for field replicates and 2.5% for homogenate splits.

[2] This number includes all sediment QC samples (replicates and splits) as well as the aqueous rinsate blank QC samples.

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

			Location Name	C078	C078	C078	C078	C079	C079	C079	C079	C080	C080	C080	C080	C082	C082-2
			X_Easting	7618756	7618756	7618756	7618756	7619286	7619286	7619286	7619286	7619970	7619970	7619970	7619970	7618030	7618043
			Y_Northing	717315	717315	717315	717315	717259	717259	717259	717259	717248	717248	717248	717248	717195	717195
			Sample ID	LW2-C078-A	LW2-C078-B	LW2-C078-C	LW2-C078-D	LW2-C079-A	LW2-C079-B	LW2-C079-C	LW2-C079-D	LW2-C080-A	LW2-C080-B	LW2-C080-C	LW2-C080-D	LW2-C082-A1	LW2-C082-A2
			Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	field rep
			Parent Sample														LW2-C082-A1
			Sample Date	10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005
			Depth Interval	0 - 30 cm	30 - 152 cm	152 - 279 cm	279 - 367 cm	0 - 30 cm	30 - 156 cm	156 - 274 cm	274 - 364 cm	0 - 30 cm	30 - 87 cm	87 - 189 cm	189 - 336 cm	0 - 30 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**															
PCB Aroclors																	
Aroclor 1016	12674-11-2	µg/kg			1.6 U	1.6 U			1.7 U	1.6 U			1.4 U	1.4 U			
Aroclor 1221	11104-28-2	µg/kg			1.6 U	1.6 U			1.7 U	1.6 U			1.4 U	1.4 U			
Aroclor 1232	11141-16-5	µg/kg			1.6 U	1.6 U			1.7 U	1.6 U			1.4 U	1.4 U			
Aroclor 1242	53469-21-9	µg/kg			1.6 U	1.6 U			1.7 U	1.6 U			1.4 U	1.4 U			
Aroclor 1248	12672-29-6	µg/kg			1.6 U	1.6 U			1.7 U	1.6 U			1.4 U	1.4 U			
Aroclor 1254	11097-69-1	µg/kg			1.6 U	1.6 U			1.7 U	1.6 U			22 J	2.7 U			
Aroclor 1260	11096-82-5	µg/kg			1.6 U	1.6 U			2.2 J	1.6 U			20	3.1 U			
Aroclor 1262	37324-23-5	µg/kg			1.6 U	1.6 U			1.7 U	1.6 U			1.4 U	1.4 U			
Aroclor 1268	11100-14-4	µg/kg			1.6 U	1.6 U			1.7 U	1.6 U			1.4 U	1.4 U			
Total PCB Aroclors	12767-79-2	µg/kg			1.6 UT	1.6 UT			2.2 JT	1.6 UT			42 JT	3.1 UT			
Butyltins																	
Butyltin ion	78763-54-9	µg/kg			0.043 U	0.043 U			0.054 U	0.044 U			0.081 J	0.039 U		0.41 J	0.35 J
Dibutyltin ion	14488-53-0	µg/kg			0.14 U	0.12 U			0.62 U	0.29 U			0.45 U	0.13 U		5.8	3.7
Tributyltin ion	36643-28-4	µg/kg			0.08 U	0.08 U			1.1 U	0.081 U			1.1 U	0.071 U		200	39
Tetrabutyltin	1461-25-2	µg/kg			0.1 U	0.1 U			0.11 U	0.11 U			0.089 U	0.089 U		4.9	1.6 J
Conventionals																	
Total solids	TSO	percent	74.4	70.6	70.7	72.2	66.2	65.3	69.3 T	73.6 T	76.8	79.5	78.9	65.5	78.8	73.7 T	
Total organic carbon	TOC	percent		0.443 T	0.48			0.59	0.29			0.19	0.08				
Specific gravity	SPEC_GRAV	NA		1.85 T	1.84			1.68	1.77 T			1.99	1.95				
PCDD/F Homologs																	
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g															
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g															
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g															
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g															
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g															
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g															
Pentachlorodibenzofuran homologs	30402-15-4	pg/g															
Hexachlorodibenzofuran homologs	55684-94-1	pg/g															
Heptachlorodibenzofuran homologs	38998-75-3	pg/g															
Octachlorodibenzofuran	39001-02-0	pg/g															
PCDD/Fs																	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g															
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g															
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g															
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g															
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g															
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g															
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g															
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g															
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g															
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g															
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g															

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BZTO104(e)004805
ANC04805

Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

		Location Name	C078	C078	C078	C078	C079	C079	C079	C079	C080	C080	C080	C080	C082	C082-2
		X_Easting	7618756	7618756	7618756	7618756	7619286	7619286	7619286	7619286	7619970	7619970	7619970	7619970	7618030	7618043
		Y_Northing	717315	717315	717315	717315	717259	717259	717259	717259	717248	717248	717248	717248	717195	717195
		Sample ID	LW2-C078-A	LW2-C078-B	LW2-C078-C	LW2-C078-D	LW2-C079-A	LW2-C079-B	LW2-C079-C	LW2-C079-D	LW2-C080-A	LW2-C080-B	LW2-C080-C	LW2-C080-D	LW2-C082-A1	LW2-C082-A2
		Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	field rep
		Parent Sample														LW2-C082-A1
		Sample Date	10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005
		Depth Interval	0 - 30 cm	30 - 152 cm	152 - 279 cm	279 - 367 cm	0 - 30 cm	30 - 156 cm	156 - 274 cm	274 - 364 cm	0 - 30 cm	30 - 87 cm	87 - 189 cm	189 - 336 cm	0 - 30 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g														
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g														
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g														
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g														
Octachlorodibenzofuran	39001-02-0	pg/g														
Grain Size																
Medium gravel	GS_MG	percent		0	0			0	0			2.1	0			
Fine gravel	GS_FG	percent		0	0			0.09	0.1			2	1.11			
Very coarse sand	GS_VCS	percent		0.09	0.2			3.75	0.53			2.08	0.93			
Coarse sand	GS_CS	percent		0.24	0.13			4.2	0.54			17.3	13.4			
Medium sand	GS_MS	percent		9.96	1.89			3.76	2.36			56.6	58.8			
Fine sand	GS_FS	percent		37.8	35.2			8.83	24.3			13.5	16			
Very fine sand	GS_VFS	percent		19.2	21.9			13.6	22.3			1.79	3.33			
Coarse silt	GS_CSILT	percent		9.56	13.8			10.8	14.3			0.6	2.11			
Medium silt	GS_MSILT	percent		6.62	8.88			12.2	11			0.57	1.27			
Fine silt	GS_FSILT	percent		4.7	5.74			10.7	7.66			0.49	0.79			
Very fine silt	GS_VFSILT	percent		3	3.1			9.26	4.55			0.54	0.77			
8-9 Phi clay	GS_CCLAY	percent		1.86	1.96			8.07	3.46			0.38	0.68			
>9 Phi clay	GS_MFCLAY	percent		5	5.47			16.9	6.79			0.74	1.33			
Chlorinated Herbicides																
2,4,5-T	93-76-5	µg/kg														
2,4-D	94-75-7	µg/kg														
2,4-DB	94-82-6	µg/kg														
Dalapon	75-99-0	µg/kg														
Dicamba	1918-00-9	µg/kg														
Dichloroprop	120-36-5	µg/kg														
Dinoseb	88-85-7	µg/kg														
MCPA	94-74-6	µg/kg														
MCPP	93-65-2	µg/kg														
Silvex	93-72-1	µg/kg														
Metals																
Aluminum	7429-90-5	mg/kg		19200 T	18200			31600	22300			13000	12300			
Antimony	7440-36-0	mg/kg		0.125 JT	0.14 J			0.15 J	0.13 J			0.24 J	0.11 J			
Arsenic	7440-38-2	mg/kg		2.72 T	2.64			3.39	2.85			2.72	2			
Cadmium	7440-43-9	mg/kg		0.107 T	0.125			0.225	0.124			0.225	0.083 UJ			
Chromium	7440-47-3	mg/kg		32.3 T	27.5			36.8	32			17.4	17.2			
Chromium hexavalent	18540-29-9	mg/kg														
Copper	7440-50-8	mg/kg		22.6 T	25.3			33.5 J	28 J			17.8 J	15.9 J			
Lead	7439-92-1	mg/kg		3.97 T	4.38			10.1	5.16			26.1	5.66			
Mercury	7439-97-6	mg/kg		0.391	0.025			0.041	0.03			0.033	0.019 J			
Nickel	7440-02-0	mg/kg		29.6 JT	28.7 J			30.6 J	29.1 J			18.1 J	20 J			
Selenium	7782-49-2	mg/kg		0.12 UT	0.13 U			0.07 J	0.1 U			0.02 U	0.02 U			
Silver	7440-22-4	mg/kg		0.312 T	0.339			0.383 J	0.329 J			0.209 J	0.196 J			
Zinc	7440-66-6	mg/kg		66.2 T	63.8			85.1	63			155	69.4			

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

		Location Name	C078	C078	C078	C078	C079	C079	C079	C079	C080	C080	C080	C080	C080	C082	C082-2
		X_Easting	7618756	7618756	7618756	7618756	7619286	7619286	7619286	7619286	7619970	7619970	7619970	7619970	7619970	7618030	7618043
		Y_Northing	717315	717315	717315	717315	717259	717259	717259	717259	717248	717248	717248	717248	717248	717195	717195
		Sample ID	LW2-C078-A	LW2-C078-B	LW2-C078-C	LW2-C078-D	LW2-C079-A	LW2-C079-B	LW2-C079-C	LW2-C079-D	LW2-C080-A	LW2-C080-B	LW2-C080-C	LW2-C080-D	LW2-C082-A1	LW2-C082-A2
		Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	field rep
		Parent Sample														LW2-C082-A1
		Sample Date	10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005
		Depth Interval	0 - 30 cm	30 - 152 cm	152 - 279 cm	279 - 367 cm	0 - 30 cm	30 - 156 cm	156 - 274 cm	274 - 364 cm	0 - 30 cm	30 - 87 cm	87 - 189 cm	189 - 336 cm	0 - 30 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
Polycyclic Aromatic Hydrocarbons																
2-Methylnaphthalene	91-57-6	µg/kg		0.49 U	0.49 U			0.53 U	0.49 U			2.7	2 J			
Acenaphthene	83-32-9	µg/kg		0.23 U	0.23 U			0.25 U	0.24 U			22	4.8			
Acenaphthylene	208-96-8	µg/kg		0.32 U	0.32 U			0.36 J	0.32 U			5.7	3.1			
Anthracene	120-12-7	µg/kg		0.32 U	0.32 U			0.46 U	0.32 U			110	24			
Fluorene	86-73-7	µg/kg		0.27 U	0.27 U			0.3 U	0.28 U			23	3.7			
Naphthalene	91-20-3	µg/kg		0.5 U	0.5 U	0.49 U		0.54 U	0.51 U	0.48 U		7.7	0.45 U	0.54 U		
Phenanthrene	85-01-8	µg/kg		0.47 U	0.47 U			2.6 U	0.48 U			5700	230			
Dibenz(a,h)anthracene	53-70-3	µg/kg		0.37 U	0.37 U			0.48 J	0.38 U			7.8	10			
Benz(a)anthracene	56-55-3	µg/kg		0.23 U	0.23 U			2.7 U	0.24 U			140	79			
Benzo(a)pyrene	50-32-8	µg/kg		0.32 U	0.32 U			4.9 U	0.32 U			69	32			
Benzo(b)fluoranthene	205-99-2	µg/kg		0.68 U	0.68 U			3.4 U	0.7 U			60	31			
Benzo(g,h,i)perylene	191-24-2	µg/kg		0.49 J	0.88 J			6.3 U	0.34 U			63	33			
Benzo(k)fluoranthene	207-08-9	µg/kg		0.47 U	0.47 U			3.2 U	0.48 U			62	23			
Chrysene	218-01-9	µg/kg		0.59 U	0.58 U			3.8 U	0.6 U			180	110			
Fluoranthene	206-44-0	µg/kg		0.49 U	0.49 U			6.5 J	0.49 U			2600	290			
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg		0.63 J	0.38 J			4.9 U	0.35 U			55	20			
Pyrene	129-00-0	µg/kg		0.51 U	0.51 U			9 J	0.52 U			1800	500			
Low Molecular Weight PAHs	LPAH	µg/kg		0.5 UT	0.5 UT			0.36 JT	0.51 UT			5870 T	268 JT			
High Molecular Weight PAHs	HPAH	µg/kg		1.12 JT	1.26 JT			16 JT	0.7 UT			5040 T	1130 T			
Total PAHs	130498-29-2	µg/kg		1.12 JT	1.26 JT			16.3 JT	0.7 UT			10900 T	1400 JT			
Chlorinated Pesticides																
2,4'-DDD	53-19-0	µg/kg		0.077 U	0.077 U			0.083 U	0.078 U			2.5 J	1.2 J			
2,4'-DDE	3424-82-6	µg/kg		0.08 U	0.08 U			0.086 U	0.081 U			0.11 U	0.071 U			
2,4'-DDT	789-02-6	µg/kg		0.26 U	0.26 U			0.069 U	0.065 U			1.6 J	0.058 U			
4,4'-DDD	72-54-8	µg/kg		0.12 U	0.12 U			0.13 U	0.12 U			2.7	0.27 NJ			
4,4'-DDE	72-55-9	µg/kg		0.061 U	0.061 U			0.066 U	0.062 U			1.2 J	0.17 U			
4,4'-DDT	50-29-3	µg/kg		0.57 NJ	0.38 U			0.22 U	0.21 U			1.4	0.18 U			
Total of 4,4'-DDD, -DDE, -DDT	PP_DDT3ISO	µg/kg		0.57 JT	0.38 UT			0.22 UT	0.21 UT			5.3 JT	0.27 JT			
Aldrin	309-00-2	µg/kg		0.14 UJ	0.14 UJ			0.15 U	0.14 U			0.2 U	0.12 U			
alpha-Hexachlorocyclohexane	319-84-6	µg/kg		0.11 U	0.11 U			0.12 U	0.12 U			0.097 U	0.098 U			
beta-Hexachlorocyclohexane	319-85-7	µg/kg		0.2 U	0.17 U			0.19 U	0.18 U			0.63 NJ	0.16 U			
delta-Hexachlorocyclohexane	319-86-8	µg/kg		0.13 U	0.083 U			0.089 U	0.084 U			0.074 U	0.074 U			
gamma-Hexachlorocyclohexane	58-89-9	µg/kg		0.14 U	0.14 U			0.15 U	0.14 U			0.12 U	0.12 U			
cis-Chlordane	5103-71-9	µg/kg		0.07 U	0.07 U			0.076 U	0.071 U			0.2 U	0.063 U			
trans-Chlordane	5103-74-2	µg/kg		0.071 U	0.071 U			0.077 U	0.073 U			0.88 U	0.086 U			
Oxychlordane	27304-13-8	µg/kg		0.095 U	0.095 U			0.11 U	0.097 U			0.085 U	0.085 UJ			
cis-Nonachlor	5103-73-1	µg/kg		0.09 U	0.068 U			0.074 U	0.07 U			0.32 U	0.17 UJ			
trans-Nonachlor	39765-80-5	µg/kg		0.044 U	0.044 U			0.048 U	0.045 U			0.2 U	0.11 UJ			
Total Chlordanes	TOTCHLDANE	µg/kg		0.095 UT	0.095 UT			0.11 UT	0.097 UT			0.88 UT	0.17 UJT			
Dieldrin	60-57-1	µg/kg		0.12 U	0.12 U			0.13 U	0.12 U			0.11 U	0.11 U			
alpha-Endosulfan	959-98-8	µg/kg		0.054 U	0.054 U			0.059 U	0.055 U			0.24 U	0.049 U			
beta-Endosulfan	33213-65-9	µg/kg		0.083 U	0.083 U			0.089 U	0.084 U			0.073 U	0.074 U			
Endosulfan sulfate	1031-07-8	µg/kg		0.085 U	0.085 U			0.092 U	0.087 U			0.076 U	0.077 U			
Endrin	72-20-8	µg/kg		0.13 U	0.092 U			0.1 U	0.094 U			0.2 U	0.083 U			

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C078	C078	C078	C078	C079	C079	C079	C079	C080	C080	C080	C080	C082	C082-2
	X_Easting		7618756	7618756	7618756	7618756	7619286	7619286	7619286	7619286	7619970	7619970	7619970	7619970	7618030	7618043
	Y_Northing		717315	717315	717315	717315	717259	717259	717259	717259	717248	717248	717248	717248	717195	717195
	Sample ID		LW2-C078-A	LW2-C078-B	LW2-C078-C	LW2-C078-D	LW2-C079-A	LW2-C079-B	LW2-C079-C	LW2-C079-D	LW2-C080-A	LW2-C080-B	LW2-C080-C	LW2-C080-D	LW2-C082-A1	LW2-C082-A2
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	field rep
	Parent Sample															LW2-C082-A1
	Sample Date		10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005
	Depth Interval		0 - 30 cm	30 - 152 cm	152 - 279 cm	279 - 367 cm	0 - 30 cm	30 - 156 cm	156 - 274 cm	274 - 364 cm	0 - 30 cm	30 - 87 cm	87 - 189 cm	189 - 336 cm	0 - 30 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
Endrin aldehyde	7421-93-4	µg/kg		0.11 U	0.1 U			0.11 U	0.11 U			0.2 U	0.089 U			
Endrin ketone	53494-70-5	µg/kg		0.08 U	0.08 U			0.086 U	0.081 U			0.44 U	0.071 U			
Heptachlor	76-44-8	µg/kg		0.083 U	0.083 U			0.089 U	0.084 U			0.099 J	0.074 U			
Heptachlor epoxide	1024-57-3	µg/kg		0.094 U	0.094 U			0.11 U	0.096 U			0.56 NJ	0.084 U			
Methoxychlor	72-43-5	µg/kg		0.085 U	0.085 U			0.092 U	0.087 U			0.076 U	0.077 U			
Mirex	2385-85-5	µg/kg		0.064 U	0.064 U			0.069 U	0.065 U			0.26 U	0.058 UJ			
Toxaphene	8001-35-2	µg/kg		6.8 U	5.3 U			5.7 U	5.4 U			32 U	21 U			
Petroleum Hydrocarbons																
Gasoline range hydrocarbons	GRH	mg/kg	3.85 JT	1.5 U	5.8 J	4.1 J	1.6 U	1.6 U	1.5 U	1.4 U	1.4 U	1.3 U	1.3 U	1.6 U	1.3 UT	1.4 UT
Diesel range hydrocarbons	DRH	mg/kg	8 J	4.9 U	4.9 U		16 J	5.3 U	4.9 U		54 J	81 J	18.5 JT		27 J	36.5 JT
Residual range hydrocarbons	RRH	mg/kg	34 J	14 J	12 J		76 J	32 J	15 J		170 J	270 J	41 JT		120 J	140 JT
Total petroleum hydrocarbons	TPH	mg/kg	45.9 JT	14 JT	17.8 JT		92 JT	32 JT	15 JT		224 JT	351 JT	59.5 JT		147 JT	177 JT
Phenols																
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg		0.61 U	0.61 U			1.2 U	2.2 J			0.76 J	0.55 U			
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg		0.6 U	0.6 U			0.65 U	0.61 U			0.53 U	0.54 U			
2,4,5-Trichlorophenol	95-95-4	µg/kg		0.47 U	0.47 U			3.5 U	0.48 U			3 U	0.42 U			
2,4,6-Trichlorophenol	88-06-2	µg/kg		0.36 U	0.36 U			0.39 U	0.37 U			0.32 U	0.32 U			
2,4-Dichlorophenol	120-83-2	µg/kg		2.6 U	2.6 U			2.8 U	2.6 U			2.3 U	23 U			
2,4-Dimethylphenol	105-67-9	µg/kg		7.8 U	7.8 U			R	R			7 U	70 U			
2,4-Dinitrophenol	51-28-5	µg/kg		51 U	51 U			56 U	52 U			46 U	460 U			
2-Chlorophenol	95-57-8	µg/kg		2.5 U	2.5 U			2.7 U	2.5 U			2.2 U	22 U			
2-Methylphenol	95-48-7	µg/kg		4.9 U	4.9 U			5.3 U	4.9 U			4.3 U	44 U			
2-Nitrophenol	88-75-5	µg/kg		3.7 U	3.7 U			4 U	3.8 U			3.3 U	33 U			
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg		2.5 U	2.5 U			2.7 U	2.5 U			2.2 U	22 U			
4-Chloro-3-methylphenol	59-50-7	µg/kg		3 U	3 U			3.3 U	3.1 U			2.7 U	27 U			
4-Methylphenol	106-44-5	µg/kg		4.2 U	4.2 U			4.5 U	4.2 U			3.7 U	37 U			
4-Nitrophenol	100-02-7	µg/kg		43 U	43 U			46 U	44 U			38 U	390 U			
Pentachlorophenol	87-86-5	µg/kg		0.66 U	0.66 U			0.71 U	7.2 U			2.9 J	0.59 U			
Phenol	108-95-2	µg/kg		11 J	2.7 U			8.3 U	10 U			2.4 U	25 U			
Phthalates																
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg		16 U	4.1 U			3.6 U	2.5 U			17 U	22 U			
Butylbenzyl phthalate	85-68-7	µg/kg		2.2 U	2.2 U			2.3 U	2.2 U			1.9 U	20 U			
Dibutyl phthalate	84-74-2	µg/kg		4.2 U	6.4 U			6 U	5.4 U			3.3 U	33 U			
Diethyl phthalate	84-66-2	µg/kg		5 U	5 U			5.4 U	5.1 U			4.5 U	45 U			
Dimethyl phthalate	131-11-3	µg/kg		2.6 U	2.6 U			2.8 U	2.6 U			2.3 U	23 U			
Di-n-octyl phthalate	117-84-0	µg/kg		1.7 U	1.7 U			1.9 U	1.8 U			1.6 U	16 U			
Semivolatile Organic Compounds																
1,2,4-Trichlorobenzene	120-82-1	µg/kg		2.2 U	2.2 U			2.3 U	2.2 U			1.9 U	20 U			
1,2-Dichlorobenzene	95-50-1	µg/kg		1.9 U	1.9 U			2 U	1.9 U			1.7 U	17 U			
1,3-Dichlorobenzene	541-73-1	µg/kg		2.3 U	2.3 U			2.5 U	2.4 U			2.1 U	21 U			
1,4-Dichlorobenzene	106-46-7	µg/kg		0.17 U	0.17 U	0.17 U		0.19 U	0.18 U	0.17 U		0.16 U	0.16 U	0.19 U		
2,4-Dinitrotoluene	121-14-2	µg/kg		4 U	4 U			4.3 U	4.1 U			3.6 U	36 U			
2,6-Dinitrotoluene	606-20-2	µg/kg		4 U	4 U			4.3 U	4.1 U			3.6 U	36 U			
2-Chloronaphthalene	91-58-7	µg/kg		5.1 U	5.1 U			5.6 U	5.2 U			4.6 U	46 U			

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C078	C078	C078	C078	C079	C079	C079	C079	C080	C080	C080	C080	C082	C082-2
	X_Easting		7618756	7618756	7618756	7618756	7619286	7619286	7619286	7619286	7619970	7619970	7619970	7619970	7618030	7618043
	Y_Northing		717315	717315	717315	717315	717259	717259	717259	717259	717248	717248	717248	717248	717195	717195
	Sample ID		LW2-C078-A	LW2-C078-B	LW2-C078-C	LW2-C078-D	LW2-C079-A	LW2-C079-B	LW2-C079-C	LW2-C079-D	LW2-C080-A	LW2-C080-B	LW2-C080-C	LW2-C080-D	LW2-C082-A1	LW2-C082-A2
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	field rep
	Parent Sample															LW2-C082-A1
	Sample Date		10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005
	Depth Interval		0 - 30 cm	30 - 152 cm	152 - 279 cm	279 - 367 cm	0 - 30 cm	30 - 156 cm	156 - 274 cm	274 - 364 cm	0 - 30 cm	30 - 87 cm	87 - 189 cm	189 - 336 cm	0 - 30 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
2-Nitroaniline	88-74-4	µg/kg		3.9 U	3.9 U			4.2 U	3.9 U			3.4 U	35 U			
3,3'-Dichlorobenzidine	91-94-1	µg/kg		5.3 U	5.3 U			5.7 U	5.4 U			4.7 U	47 U			
3-Nitroaniline	99-09-2	µg/kg		3.7 U	3.7 U			4 U	3.8 U			3.3 U	33 U			
4-Bromophenyl phenyl ether	101-55-3	µg/kg		2 U	2 U			2.2 U	2.1 U			1.8 U	18 U			
4-Chloroaniline	106-47-8	µg/kg		3 U	3 U			3.3 U	3.1 U			2.7 U	27 U			
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg		2.9 U	2.9 U			3.1 U	2.9 U			2.6 U	26 U			
4-Nitroaniline	100-01-6	µg/kg		4.9 U	4.9 U			5.3 U	4.9 U			4.3 U	44 U			
Aniline	62-53-3	µg/kg		2.2 U	2.2 U			2.3 U	2.2 U			1.9 U	20 U			
Azobenzene	103-33-3	µg/kg		3.4 U	3.4 U			3.7 U	3.5 U			3.1 U	31 U			
Benzoic acid	65-85-0	µg/kg		140 U	140 U			150 U	140 U			130 U	1300 U			
Benzyl alcohol	100-51-6	µg/kg		5.3 U	5.3 U			5.7 U	5.4 U			4.7 U	47 U			
Bis(2-chloroethoxy) methane	111-91-1	µg/kg		1.9 U	1.9 U			2 U	1.9 U			1.7 U	17 U			
Bis(2-chloroethyl) ether	111-44-4	µg/kg		3.4 U	3.4 U			3.7 U	3.5 U			3.1 U	31 U			
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg		1.7 U	1.7 U			1.9 U	1.8 U			1.6 U	16 U			
Carbazole	86-74-8	µg/kg		1.9 U	1.9 U			2 U	1.9 U			3.1 J	17 U			
Dibenzofuran	132-64-9	µg/kg		0.25 U	0.25 U			0.27 U	0.25 U			11	4.6			
Hexachlorobenzene	118-74-1	µg/kg		0.068 U	0.068 U			0.074 U	0.07 U			0.2 U	0.061 U			
Hexachlorobutadiene	87-68-3	µg/kg		0.27 U	0.93 U			0.3 UJ	0.65 J			0.39 J	0.49 J			
Hexachlorocyclopentadiene	77-47-4	µg/kg		22 U	22 U			23 U	22 U			19 U	200 U			
Hexachloroethane	67-72-1	µg/kg		0.074 U	0.69 J			0.43 UJ	0.76 UJ			0.066 UJ	0.066 UJ			
Isophorone	78-59-1	µg/kg		2.3 U	2.3 U			2.5 U	2.4 U			2.1 U	21 U			
Nitrobenzene	98-95-3	µg/kg		2.9 U	2.9 U			3.1 U	2.9 U			2.6 U	26 U			
N-Nitrosodimethylamine	62-75-9	µg/kg		8.7 U	8.7 U			9.4 UJ	8.8 UJ			7.7 U	78 U			
N-Nitrosodiphenylamine	86-30-6	µg/kg		3.2 U	3.2 U			3.4 U	3.2 U			2.8 U	28 U			
N-Nitrosodipropylamine	621-64-7	µg/kg		4.6 U	4.6 U			5 U	4.7 U			4.1 U	41 U			
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg		0.044 U	0.044 U	0.043 U		0.048 U	0.045 U	0.043 U		0.039 U	0.04 U	0.048 U		
1,1,1-Trichloroethane	71-55-6	µg/kg		0.084 U	0.084 U	0.082 U		0.091 U	0.086 U	0.081 U		0.075 U	0.075 U	0.091 U		
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg		0.14 U	0.14 U	0.14 U		0.15 U	0.14 U	0.14 U		0.13 U	0.13 U	0.15 U		
1,1,2-Trichloroethane	79-00-5	µg/kg		0.084 U	0.084 U	0.082 U		0.091 U	0.086 U	0.081 U		0.075 U	0.075 U	0.091 U		
1,1-Dichloroethane	75-34-3	µg/kg		0.081 U	0.081 U	0.079 U		0.088 U	0.083 U	0.078 U		0.072 U	0.073 U	0.088 U		
1,2,3-Trichloropropane	96-18-4	µg/kg		0.16 U	0.16 U	0.16 U		0.17 U	0.16 U	0.15 U		0.14 U	0.14 U	0.17 U		
1,2-Dichloroethane	107-06-2	µg/kg		0.044 U	0.044 U	0.043 U		0.048 U	0.045 U	0.043 U		0.039 U	0.04 U	0.048 U		
1,2-Dichloropropane	78-87-5	µg/kg		0.05 U	0.05 U	0.049 U		0.054 U	0.051 U	0.048 U		0.045 U	0.045 U	0.054 U		
1,4-Dichloro-trans-2-butene	110-57-6	µg/kg		0.73 UJ	0.73 UJ	0.71 UJ		0.79 U	0.74 U	0.7 U		0.65 U	0.65 U	0.78 U		
2-Chloroethyl vinyl ether	110-75-8	µg/kg		0.22 U	0.22 U	0.21 U		0.23 U	0.22 U	0.21 U		0.19 U	0.2 U	0.23 U		
Acetone	67-64-1	µg/kg		14 UJ	40 UJ	44 UJ		7.2 U	26 U	15 U		20 U	37 U	32 U		
Acrolein	107-02-8	µg/kg		R	R	R		R	R	R		R	R	R		
Acrylonitrile	107-13-1	µg/kg		R	R	R		0.36 U	0.34 U	0.32 U		0.29 U	0.3 U	0.36 U		
Benzene	71-43-2	µg/kg		0.067 U	0.066 U	0.085 U		0.06 U	0.28 U	0.054 U		0.17 J	0.069 U	0.06 U		
Toluene	108-88-3	µg/kg		0.22 U	0.22 U	0.62 U		0.23 U	1.6 U	0.21 U		0.33 J	0.2 U	0.23 U		
Ethylbenzene	100-41-4	µg/kg		0.11 U	0.11 U	0.099 U		0.11 U	0.11 U	0.097 U		0.09 U	0.09 U	0.11 U		
m,p-Xylene	179601-23-1	µg/kg		0.19 U	0.19 U	0.19 U		0.2 U	0.19 U	0.18 U		0.17 U	0.17 U	0.2 U		
o-Xylene	95-47-6	µg/kg		0.11 U	0.11 U	0.11 U		0.12 U	0.11 U	0.11 U		0.095 U	0.096 U	0.12 U		
Xylene	1330-20-7	µg/kg		0.19 UT	0.19 UT	0.19 UT		0.2 UT	0.19 UT	0.18 UT		0.17 UT	0.17 UT	0.2 UT		
BTEX	BTEX	µg/kg		0.22 UT	0.22 UT	0.62 UT		0.23 UT	1.6 UT	0.21 UT		0.5 JT	0.2 UT	0.23 UT		

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C078	C078	C078	C078	C079	C079	C079	C079	C080	C080	C080	C080	C082	C082-2
	X_Easting		7618756	7618756	7618756	7618756	7619286	7619286	7619286	7619286	7619970	7619970	7619970	7619970	7618030	7618043
	Y_Northing		717315	717315	717315	717315	717259	717259	717259	717259	717248	717248	717248	717248	717195	717195
	Sample ID		LW2-C078-A	LW2-C078-B	LW2-C078-C	LW2-C078-D	LW2-C079-A	LW2-C079-B	LW2-C079-C	LW2-C079-D	LW2-C080-A	LW2-C080-B	LW2-C080-C	LW2-C080-D	LW2-C082-A1	LW2-C082-A2
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	field rep
	Parent Sample															LW2-C082-A1
	Sample Date		10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005
	Depth Interval		0 - 30 cm	30 - 152 cm	152 - 279 cm	279 - 367 cm	0 - 30 cm	30 - 156 cm	156 - 274 cm	274 - 364 cm	0 - 30 cm	30 - 87 cm	87 - 189 cm	189 - 336 cm	0 - 30 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
Bromochloromethane	74-97-5	µg/kg		0.085 U	0.085 U	0.084 U		0.092 U	0.087 U	0.082 U		0.076 U	0.077 U	0.092 U		
Bromodichloromethane	75-27-4	µg/kg		0.097 U	0.097 U	0.095 U		0.11 U	0.098 U	0.093 U		0.086 U	0.087 U	0.11 U		
Bromoform	75-25-2	µg/kg		0.066 U	0.066 U	0.064 U		0.071 U	0.067 U	0.063 U		0.058 U	0.059 U	0.071 U		
Bromomethane	74-83-9	µg/kg		0.53 U	0.53 U	0.52 U		0.57 U	0.54 U	0.51 U		0.47 U	0.47 U	0.57 U		
Carbon disulfide	75-15-0	µg/kg		0.19 U	0.19 U	0.19 U		0.2 U	0.19 U	0.18 U		0.17 U	0.17 U	0.2 U		
Carbon tetrachloride	56-23-5	µg/kg		0.15 U	0.15 U	0.14 U		0.16 U	0.15 U	0.14 U		0.13 U	0.13 U	0.16 U		
Chlorobenzene	108-90-7	µg/kg		0.1 U	0.1 U	0.097 U		0.11 U	0.11 U	0.096 U		0.089 U	0.089 U	0.11 U		
Chlorodibromomethane	124-48-1	µg/kg		0.097 U	0.097 U	0.095 U		0.11 U	0.098 U	0.093 U		0.086 U	0.087 U	0.11 U		
Chloroethane	75-00-3	µg/kg		0.4 U	0.4 U	0.39 U		0.43 U	0.41 U	0.39 U		0.36 U	0.36 U	0.43 U		
Chloroform	67-66-3	µg/kg		0.08 U	0.08 U	0.078 U		0.086 U	0.081 U	0.077 U		0.071 U	0.071 U	0.086 U		
Chloromethane	74-87-3	µg/kg		0.27 U	0.27 U	0.27 U		0.3 U	0.28 U	0.26 U		0.24 U	0.25 U	0.3 U		
cis-1,3-Dichloropropene	10061-01-5	µg/kg		0.044 U	0.044 U	0.043 U		0.048 U	0.045 U	0.043 U		0.039 U	0.04 U	0.048 U		
Dichlorodifluoromethane	75-71-8	µg/kg		0.16 UJ	0.16 UJ	0.16 UJ		0.17 U	0.16 U	0.15 U		0.14 U	0.14 U	0.17 U		
Ethylene dibromide	106-93-4	µg/kg		0.073 U	0.073 U	0.071 U		0.079 U	0.074 U	0.07 U		0.065 U	0.065 U	0.078 U		
Isopropylbenzene	98-82-8	µg/kg		0.063 U	0.063 U	0.061 U		0.068 U	0.064 U	0.06 U		0.056 U	0.056 U	0.068 U		
Methyl iodide	74-88-4	µg/kg		0.95 U	0.95 U	0.93 U		1.1 U	0.97 U	0.92 U		0.85 U	0.85 U	1.1 U		
Methyl isobutyl ketone	108-10-1	µg/kg		R	R	R		0.37 U	0.35 U	0.33 U		0.31 U	0.31 U	0.37 U		
Methyl N-butyl ketone	591-78-6	µg/kg		R	R	R		0.99 U	0.93 U	0.88 U		0.81 U	0.82 U	0.98 U		
Methyl tert-butyl ether	1634-04-4	µg/kg		0.056 U	0.056 U	0.055 U		0.06 U	0.057 U	0.054 U		0.05 U	0.05 U	0.06 U		
Methylene bromide	74-95-3	µg/kg		0.12 U	0.12 U	0.12 U		0.13 U	0.12 U	0.12 U		0.11 U	0.11 U	0.13 U		
Methylene chloride	75-09-2	µg/kg		2.2 U	2.7 U	6.9 U		1.7 U	5 U	2.2 U		4 U	6 U	2.3 U		
Methylethyl ketone	78-93-3	µg/kg		R	7.1 J	R		R	3.9 J	R		R	R	5.5 J		
Styrene	100-42-5	µg/kg		0.11 U	0.12 U	0.11 U		0.15 U	0.11 U	0.11 U		0.094 U	0.22 U	0.13 U		
Tetrachloroethene	127-18-4	µg/kg		0.14 U	0.14 U	0.14 U		0.15 U	0.47 J	0.14 U		0.23 J	0.13 U	0.15 U		
trans-1,2-Dichloroethene	156-60-5	µg/kg		0.27 U	0.27 U	0.27 U		0.3 U	0.28 U	0.26 U		0.24 U	0.25 U	0.3 U		
trans-1,3-Dichloropropene	10061-02-6	µg/kg		0.063 U	0.063 U	0.061 U		0.068 U	0.064 U	0.06 U		0.056 U	0.056 U	0.068 U		
Trichloroethene	79-01-6	µg/kg		0.088 U	0.088 U	0.086 U		0.095 U	0.09 U	0.085 U		0.078 U	0.079 U	0.095 U		
Trichlorofluoromethane	75-69-4	µg/kg		0.12 UJ	0.12 UJ	0.12 UJ		0.13 U	0.12 U	0.12 U		0.11 U	0.11 U	0.13 U		
Vinyl acetate	108-05-4	µg/kg		R	R	R		R	R	R		R	R	R		
Vinyl chloride	75-01-4	µg/kg		0.13 U	0.13 U	0.12 U		0.14 U	0.13 U	0.12 U		0.11 U	0.11 U	0.13 U		
Vinylidene chloride	75-35-4	µg/kg		0.12 U	0.12 U	0.12 U		0.13 U	0.12 U	0.12 U		0.11 U	0.11 U	0.13 U		

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ANC04810
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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C082	C082-2	C082	C082-2	C082	C082-2	C083	C083	C083	C083	C084	C084	C084	C084
	X_Easting		7618030	7618043	7618030	7618043	7618030	7618043	7618735	7618735	7618735	7618735	7619307	7619307	7619307	7619307
	Y_Northing		717195	717195	717195	717195	717195	717195	717170	717170	717170	717170	717163	717163	717163	717163
	Sample ID		LW2-C082-B1	LW2-C082-B2	LW2-C082-C1	LW2-C082-C2	LW2-C082-D1	LW2-C082-D2	LW2-C083-A	LW2-C083-B	LW2-C083-C	LW2-C083-D	LW2-C084-A	LW2-C084-B	LW2-C084-C	LW2-C084-D
	Sample Type Code		normal	field rep	normal	field rep	normal	field rep	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample			LW2-C082-B1		LW2-C082-C1		LW2-C082-D1								
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/21/2005	10/21/2005	10/21/2005	10/21/2005
	Depth Interval		30 - 137 cm	30 - 137 cm	137 - 210 cm	137 - 210 cm	210 - 295 cm	210 - 295 cm	0 - 30 cm	30 - 129 cm	129 - 188 cm	188 - 282 cm	0 - 30 cm	30 - 65 cm	65 - 169 cm	169 - 283 cm
Chemical Name	**CAS No**	**Unit**														
PCB Aroclors																
Aroclor 1016	12674-11-2	µg/kg	1.5 U	1.5 UT	1.5 U	1.5 UT	1.3 U	1.4 UT		1.8 U	1.6 U			2 U	1.7 U	1.6 U
Aroclor 1221	11104-28-2	µg/kg	1.5 U	1.5 UT	1.5 U	1.5 UT	1.3 U	1.4 UT		1.8 U	1.6 U			2 U	1.7 U	1.6 U
Aroclor 1232	11141-16-5	µg/kg	1.5 U	1.5 UT	1.5 U	1.5 UT	1.3 U	1.4 UT		1.8 U	1.6 U			2 U	1.7 U	1.6 U
Aroclor 1242	53469-21-9	µg/kg	1.5 U	1.5 UT	1.5 U	1.5 UT	1.3 U	1.4 UT		1.8 U	1.6 U			2 U	1.7 U	1.6 U
Aroclor 1248	12672-29-6	µg/kg	14	8.6 T	1.5 U	1.5 UT	1.3 U	1.4 UT		1.8 U	1.6 U			2 U	1.7 U	1.6 U
Aroclor 1254	11097-69-1	µg/kg	33 J	22 JT	1.5 U	4.05 JT	1.3 U	1.4 UT		130 J	150 J			180	20 J	1.6 U
Aroclor 1260	11096-82-5	µg/kg	20	18 T	1.5 U	3.75 JT	1.3 U	1.4 UT		75	84			110	16	1.6 U
Aroclor 1262	37324-23-5	µg/kg	1.5 U	1.5 UT	1.5 U	1.5 UT	1.3 U	1.4 UT		1.8 U	1.6 U			2 U	1.7 U	1.6 U
Aroclor 1268	11100-14-4	µg/kg	1.5 U	1.5 UT	1.5 U	1.5 UT	1.3 U	1.4 UT		1.8 U	1.6 U			2 U	1.7 U	1.6 U
Total PCB Aroclors	12767-79-2	µg/kg	67 JT	48.6 JT	1.5 UT	7.8 JT	1.3 UT	1.4 UT		205 JT	234 JT			290 T	36 JT	1.6 UT
Butyltins																
Butyltin ion	78763-54-9	µg/kg	0.05 U	0.925 JT	0.039 U	UT	0.034 U	0.037 UT		0.94 J	0.39 J			2.6	0.11 U	0.044 U
Dibutyltin ion	14488-53-0	µg/kg	0.89 U	5.85 T	0.1 U	0.13 UT	0.05 U	0.06 UT		18	1.5			20	0.52 U	0.12 U
Tributyltin ion	36643-28-4	µg/kg	7.5	80 T	0.35 U	0.073 UT	0.23 U	0.069 UT		630	4			68	1.5 U	0.082 U
Tetrabutyltin	1461-25-2	µg/kg	0.095 U	2.2 JT	0.091 U	0.091 UT	0.079 U	0.35 JT		14	0.85 J			1.7 J	0.11 U	0.11 U
Conventionals																
Total solids	TSO	percent	74.1	74 T	77.2	77.5 T	88.9 T	81.3 T	69.1	64.3	70.9	84.8	57.6	56.9	68.1	69
Total organic carbon	TOC	percent	0.273 T	0.31 T	0.05	0.195 T	0.12 T	0.11 JT		1.03	0.51			1.07	0.6	0.6
Specific gravity	SPEC_GRAV	NA	1.91 T	1.9 T	1.99	1.94 T	2.19 T	2.04 T		1.68	1.81			1.58	1.8	1.85
PCDD/F Homologs																
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g											0.305	0.372	0.063	0.004 U
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g											0.277	0.53	0.011 U	0.008 U
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g											6.896	5.845	1.535	0.009 U
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g											46.066	36.782	5.717	0.089
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g											248.632	168.945	24.222	0.241 J
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g											1.751	1.718	0.403	0.004 U
Pentachlorodibenzofuran homologs	30402-15-4	pg/g											3.245	3.844	0.91	0.004 U
Hexachlorodibenzofuran homologs	55684-94-1	pg/g											7.231	6.962	1.419	0.004 U
Heptachlorodibenzofuran homologs	38998-75-3	pg/g											18.955	12.806	2.124	0.009 U
Octachlorodibenzofuran	39001-02-0	pg/g											35.151	9.749	1.095 J	0.085 J
PCDD/Fs																
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g											0.046 U	0.034 U	0.006 U	0.004 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g											0.145 J	0.147 U	0.011 U	0.008 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g											0.183 J	0.158 U	0.039 J	0.009 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g											0.97 J	0.884 J	0.203 J	0.01 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g											0.608 J	0.546 J	0.151 J	0.009 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g											24.211	18.696	2.741	0.038 J
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g											248.632	168.945	24.222	0.241 J
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g											0.291 J	0.201 U	0.082 U	0.004 U
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g											0.117 U	0.139 J	0.032 U	0.004 U
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g											0.167 J	0.156 J	0.044 U	0.004 U
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g											0.505 J	0.458 J	0.1 J	0.004 U

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C082	C082-2	C082	C082-2	C082	C082-2	C083	C083	C083	C083	C084	C084	C084	C084
	X_Easting		7618030	7618043	7618030	7618043	7618030	7618043	7618735	7618735	7618735	7618735	7619307	7619307	7619307	7619307
	Y_Northing		717195	717195	717195	717195	717195	717195	717170	717170	717170	717170	717163	717163	717163	717163
	Sample ID		LW2-C082-B1	LW2-C082-B2	LW2-C082-C1	LW2-C082-C2	LW2-C082-D1	LW2-C082-D2	LW2-C083-A	LW2-C083-B	LW2-C083-C	LW2-C083-D	LW2-C084-A	LW2-C084-B	LW2-C084-C	LW2-C084-D
	Sample Type Code		normal	field rep	normal	field rep	normal	field rep	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample			LW2-C082-B1		LW2-C082-C1		LW2-C082-D1								
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/21/2005	10/21/2005	10/21/2005	10/21/2005
	Depth Interval		30 - 137 cm	30 - 137 cm	137 - 210 cm	137 - 210 cm	210 - 295 cm	210 - 295 cm	0 - 30 cm	30 - 129 cm	129 - 188 cm	188 - 282 cm	0 - 30 cm	30 - 65 cm	65 - 169 cm	169 - 283 cm
Chemical Name	**CAS No**	**Unit**														
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g											0.238 J	0.24 J	0.054 J	0.004 U
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g											0.02 J	0.013 U	0.007 U	0.005 U
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g											0.312 J	0.315 J	0.068 J	0.004 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g											6.74	5.478	1.064 J	0.009 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g											0.326 J	0.218 J	0.034 J	0.011 U
Octachlorodibenzofuran	39001-02-0	pg/g											35.151	9.749	1.095 J	0.085 J
Grain Size																
Medium gravel	GS_MG	percent	0.2	2.96 T	0	0 T	0	0 T		0	0.1			0	0	0 T
Fine gravel	GS_FG	percent	0.16	0.985 T	0.14	0.36 T	0.03	0.03 T		0.18	0.04			0.38	0.3	0 T
Very coarse sand	GS_VCS	percent	0.41	0.775 T	0.19	0.26 T	0.38	0.575 T		0.62	0.25			0.37	0.75	0.207 T
Coarse sand	GS_CS	percent	9.49	12.2 T	9.42	5.19 T	10.4	13.5 T		1.67	3.84			0.72	0.86	0.117 T
Medium sand	GS_MS	percent	57.1	54.6 T	59.7	55.2 T	69.4	65.4 T		20.1	42			7.97	6.53	3.35 T
Fine sand	GS_FS	percent	21.6	16 T	26.6	28.1 T	18.9	20.1 T		20.8	21.8			16.8	23.8	40.4 T
Very fine sand	GS_VFS	percent	2.49	2.31 T	1.71	2.45 T	0.56	1 T		13.6	7.95			17.5	16.5	10.9 T
Coarse silt	GS_CSILT	percent	1.23	1.53 T	0.46	1.42 T	0.27	0.3 T		8.84	4.38			14	12.5	13.8 T
Medium silt	GS_MSILT	percent	1.41	2.3 T	0.59	2.07 T	0.05	0.19 T		9.73	5.3			13.7	15.2	11.9 T
Fine silt	GS_FSILT	percent	1.8	1.81 T	0.47	1.5 T	0.06	0.105 T		7.19	4.9			9.68	8.73	7.01 T
Very fine silt	GS_VFSILT	percent	1.05	1.5 T	0.06	0.95 T	0.11	0.02 T		5.66	3.22			6.89	4.52	3.51 T
8-9 Phi clay	GS_CCLAY	percent	0.75	0.968 T	0.19	0.545 T	0.04	0.205 T		2.89	2.01			4.05	2.7	2.55 T
>9 Phi clay	GS_MFCLAY	percent	0.84	1.14 T	0.33	0.985 T	0.14	0.235 T		6.9	3.19			8.2	7.15	6.82 T
Chlorinated Herbicides																
2,4,5-T	93-76-5	µg/kg														
2,4-D	94-75-7	µg/kg														
2,4-DB	94-82-6	µg/kg														
Dalapon	75-99-0	µg/kg														
Dicamba	1918-00-9	µg/kg														
Dichloroprop	120-36-5	µg/kg														
Dinoseb	88-85-7	µg/kg														
MCPA	94-74-6	µg/kg														
MCPP	93-65-2	µg/kg														
Silvex	93-72-1	µg/kg														
Metals																
Aluminum	7429-90-5	mg/kg	12500	14800 T	11700	16000 T	16400 T	13300 T		25600	18300			31100	19100	18100
Antimony	7440-36-0	mg/kg	0.18 J	0.205 JT	0.14 J	0.15 JT	0.07 JT	0.095 JT		0.43 J	0.56 J			0.39 J	0.21 J	0.14 J
Arsenic	7440-38-2	mg/kg	2.25	2.5 T	1.85	2.3 T	1.65 T	1.96 T		3.97	2.45			4.35	2.37	2.42
Cadmium	7440-43-9	mg/kg	0.118	0.157 T	0.072	0.126 T	0.0765 T	0.08 T		0.301	0.248			0.418	0.183	0.18
Chromium	7440-47-3	mg/kg	18	20.6 T	17.3	21.1 T	15.3 T	17.4 T		33.3	27.4			43.7	29.7	28.1
Chromium hexavalent	18540-29-9	mg/kg														
Copper	7440-50-8	mg/kg	18.8	26.4 T	16.1	17.8 T	14.9 T	16.9 T		43.9	26.6 J			42.5	28.7	26.9
Lead	7439-92-1	mg/kg	9.06	10.2 T	3.12	5.63 T	2.4 T	2.44 T		21.9	17.8			31.9	9.29	6.09
Mercury	7439-97-6	mg/kg	0.072	0.0575 T	0.033	0.0345 T	0.01 J	0.012 JT		0.095	0.108			0.131	0.07	0.055
Nickel	7440-02-0	mg/kg	18 J	21.2 JT	23 J	24.1 JT	18.1 JT	20 JT		28.2 J	24.5 J			32.8 J	28 J	29.1 J
Selenium	7782-49-2	mg/kg	0.07 U	0.02 UT	0.03 U	0.02 UT	0.02 UJT	0.02 UT		0.04 U	0.07 U			0.15 U	0.12 U	0.13 U
Silver	7440-22-4	mg/kg	0.245	0.263 T	0.217	0.232 T	0.023 UT	0.204 T		0.433	0.399 J			0.472	0.309	0.284
Zinc	7440-66-6	mg/kg	75.5	102 T	55.7	66.3 T	47.6 T	52 T		141	105			161	74.3	66.3

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C082	C082-2	C082	C082-2	C082	C082-2	C083	C083	C083	C083	C084	C084	C084	C084
	X_Easting		7618030	7618043	7618030	7618043	7618030	7618043	7618735	7618735	7618735	7618735	7619307	7619307	7619307	7619307
	Y_Northing		717195	717195	717195	717195	717195	717195	717170	717170	717170	717170	717163	717163	717163	717163
	Sample ID		LW2-C082-B1	LW2-C082-B2	LW2-C082-C1	LW2-C082-C2	LW2-C082-D1	LW2-C082-D2	LW2-C083-A	LW2-C083-B	LW2-C083-C	LW2-C083-D	LW2-C084-A	LW2-C084-B	LW2-C084-C	LW2-C084-D
	Sample Type Code		normal	field rep	normal	field rep	normal	field rep	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample			LW2-C082-B1		LW2-C082-C1		LW2-C082-D1								
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/21/2005	10/21/2005	10/21/2005	10/21/2005
	Depth Interval		30 - 137 cm	30 - 137 cm	137 - 210 cm	137 - 210 cm	210 - 295 cm	210 - 295 cm	0 - 30 cm	30 - 129 cm	129 - 188 cm	188 - 282 cm	0 - 30 cm	30 - 65 cm	65 - 169 cm	169 - 283 cm
Chemical Name	**CAS No**	**Unit**														
Polycyclic Aromatic Hydrocarbons																
2-Methylnaphthalene	91-57-6	µg/kg	7.5	9.2 T	0.69 J	1.85 JT	0.39 U	0.54 JT		7.6	9.6			3.5	1.6 J	0.5 U
Acenaphthene	83-32-9	µg/kg	4	4.85 T	0.21 U	0.545 JT	0.19 U	0.2 UT		16	6.1			13	1.4 J	0.24 U
Acenaphthylene	208-96-8	µg/kg	3.6	6.95 T	0.29 U	1.5 JT	0.25 U	0.28 UT		19	14			4.5	1.4 J	0.32 U
Anthracene	120-12-7	µg/kg	7.4	15.5 T	0.29 U	3.05 JT	0.25 U	0.28 UT		28	18			16	3	0.32 U
Fluorene	86-73-7	µg/kg	4.4	6 T	0.25 U	1.26 JT	0.22 U	0.24 UT		11	6.1			7.6	1.5 J	0.28 U
Naphthalene	91-20-3	µg/kg	20	24 T	0.46 U	0.46 UT	0.4 U	0.43 UT		34	33	0.42 U		9	0.52 U	0.51 U
Phenanthrene	85-01-8	µg/kg	22	39.5 T	0.68 J	8.9 T	0.38 U	0.41 UT		91	54			63	12	0.48 U
Dibenz(a,h)anthracene	53-70-3	µg/kg	3.8	11.2 T	0.34 U	2.07 JT	0.3 U	0.32 UT		18	11			20	1.2 J	0.38 U
Benz(a)anthracene	56-55-3	µg/kg	25	73 T	0.54 J	18.3 T	0.19 U	0.2 UT		100	66			89	9.2	0.24 U
Benzo(a)pyrene	50-32-8	µg/kg	34	103 T	0.57 J	20.4 T	0.25 U	0.28 UT		180	110			130	15	0.32 U
Benzo(b)fluoranthene	205-99-2	µg/kg	26	70 T	0.63 U	14 T	0.55 U	0.59 UT		150	82			120	12	0.7 U
Benzo(g,h,i)perylene	191-24-2	µg/kg	35	86.5 T	0.61 J	15.9 T	0.67 J	0.29 UT		200	130			110	15	0.34 U
Benzo(k)fluoranthene	207-08-9	µg/kg	22	61.5 T	0.43 U	11.8 T	0.38 U	0.41 UT		100	74			94	8.6	0.48 U
Chrysene	218-01-9	µg/kg	34	96.5 T	0.54 U	19 T	0.5 J	0.51 UT		160	110			120	13	0.6 U
Fluoranthene	206-44-0	µg/kg	27	92 T	0.72 J	22.7 T	0.39 U	0.49 JT		150	73			160	19	0.5 U
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	31	82.5 T	0.65 J	15.3 T	0.55 J	0.3 UT		160	110			110	14	0.35 U
Pyrene	129-00-0	µg/kg	74	150 T	0.49 J	31.5 T	0.41 U	0.54 JT		280	220			180	28	0.53 U
Low Molecular Weight PAHs	LPAH	µg/kg	68.9 T	106 T	1.37 JT	17.1 JT	0.4 UT	0.54 JT		207 T	141 T			117 T	20.9 JT	0.51 UT
High Molecular Weight PAHs	HPAH	µg/kg	312 T	826 T	3.58 JT	171 JT	1.72 JT	1.03 JT		1500 T	986 T			1130 T	135 JT	0.7 UT
Total PAHs	130498-29-2	µg/kg	381 T	932 T	4.95 JT	188 JT	1.72 JT	1.57 JT		1700 T	1130 T			1250 T	156 JT	0.7 UT
Chlorinated Pesticides																
2,4'-DDD	53-19-0	µg/kg	2.6 J	2 JT	0.07 U	0.37 JT	0.062 U	0.067 UT		1.8 U	1.8 U		1.1 U	2 U	0.77 U	0.16 U
2,4'-DDE	3424-82-6	µg/kg	0.26 U	0.93 JT	0.073 U	0.073 UT	0.13 U	0.069 UT		1.1 U	0.35 U		0.54 U	0.2 U	0.12 U	0.082 U
2,4'-DDT	789-02-6	µg/kg	1.2	1 T	0.059 U	0.28 JT	0.051 U	0.056 UT		5 J	5.3 J		2.7	6.5	0.74 J	0.16 U
4,4'-DDD	72-54-8	µg/kg	2.3	1.7 T	0.11 U	0.375 T	0.33 U	0.11 UT		1.2	1.3		1.1	1.6	0.26 J	0.13 U
4,4'-DDE	72-55-9	µg/kg	1.3 J	1.1 JT	0.056 UJ	0.245 T	0.049 U	0.053 UT		1.2 NJ	1.4 NJ		0.72 NJ	1.4 NJ	0.42 J	0.063 U
4,4'-DDT	50-29-3	µg/kg	1.4 J	1.65 NJT	0.65 J	0.19 UT	0.16 U	0.18 UT		5.9	6		3.1	7.7 J	0.92	0.29 U
Total of 4,4'-DDD, -DDE, -DDT	PP_DDT3ISO	µg/kg	5 JT	4.45 JT	0.65 JT	0.62 T	0.33 UT	0.18 UT		8.3 JT	8.7 JT		4.92 JT	10.7 JT	1.6 JT	0.29 UT
Aldrin	309-00-2	µg/kg	0.13 U	0.13 NJT	0.13 U	0.12 UJT	0.12 U	0.12 UJT		0.15 UJ	0.14 UJ		0.2 UJ	0.24 UJ	0.14 UJ	0.14 UJ
alpha-Hexachlorocyclohexane	319-84-6	µg/kg	0.11 U	0.11 UT	0.1 U	0.1 UT	0.18 J	0.095 UT		0.12 U	0.13 U		0.14 U	0.14 U	0.12 U	0.12 U
beta-Hexachlorocyclohexane	319-85-7	µg/kg	0.17 U	0.16 UT	0.16 U	0.16 UT	0.14 U	0.15 UT		0.33 U	0.17 U		0.21 U	0.22 U	0.18 U	0.18 U
delta-Hexachlorocyclohexane	319-86-8	µg/kg	0.079 U	0.21 JT	0.076 U	0.075 UT	0.066 U	0.072 UT		0.091 U	0.13 U		0.11 U	0.11 U	0.086 U	0.085 U
gamma-Hexachlorocyclohexane	58-89-9	µg/kg	0.13 U	0.13 UT	0.12 U	0.12 UT	0.11 U	0.12 UT		0.15 U	0.13 U		0.16 U	0.17 U	0.14 U	0.14 U
cis-Chlordane	5103-71-9	µg/kg	0.067 UJ	0.066 UT	0.064 UJ	0.064 UT	0.056 U	0.061 UT		0.27 U	0.2 U		0.39 U	0.47 U	0.12 U	0.072 U
trans-Chlordane	5103-74-2	µg/kg	0.51 J	0.57 T	0.065 UJ	0.15 JT	0.057 U	0.062 UT		3 J	3.2 J		1.5 U	3.6 J	0.52 U	0.073 U
Oxychlordane	27304-13-8	µg/kg	0.095 U	0.15 UJT	0.087 U	0.087 UT	0.2 U	0.083 UT		0.11 U	0.095 U		0.12 U	0.17 U	0.099 U	0.098 U
cis-Nonachlor	5103-73-1	µg/kg	0.85 U	0.2 UJT	0.063 U	0.062 UT	0.055 U	0.059 UT		0.38 U	0.37 U		0.29 U	0.45 U	0.2 U	0.08 U
trans-Nonachlor	39765-80-5	µg/kg	0.18 NJ	0.22 UJT	0.041 U	0.04 UT	0.036 U	0.039 UT		1.1 U	0.23 U		0.62 U	0.2 U	0.2 U	0.045 U
Total Chlordanes	TOTCHLDANE	µg/kg	0.69 JT	0.57 T	0.087 UT	0.15 JT	0.2 UT	0.083 UT		3 JT	3.2 JT		1.5 UT	3.6 JT	0.52 UT	0.098 UT
Dieldrin	60-57-1	µg/kg	0.11 UJ	0.11 UT	0.11 UJ	0.11 UT	0.091 U	0.099 UT		0.13 U	0.61 U		0.2 U	0.92 U	0.12 U	0.12 U
alpha-Endosulfan	959-98-8	µg/kg	0.085 U	0.12 UT	0.05 U	0.049 UT	0.043 U	0.047 UT		0.33 U	0.33 U		0.27 U	0.35 U	0.056 U	0.056 U
beta-Endosulfan	33213-65-9	µg/kg	0.11 NJ	0.18 JT	0.076 U	0.075 UT	0.066 U	0.072 UT		0.38 U	0.39 U		0.2 U	0.44 U	0.086 U	0.085 U
Endosulfan sulfate	1031-07-8	µg/kg	0.2 UJ	0.08 UT	0.078 UJ	0.078 UT	0.068 U	0.074 UT		0.094 U	0.085 U		0.11 U	0.11 U	0.089 U	0.2 U
Endrin	72-20-8	µg/kg	0.088 U	0.087 UT	0.085 U	0.084 UT	0.074 U	0.08 UT		0.72 NJ	0.69 NJ		0.16 J	0.8 NJ	0.096 U	0.095 U

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ANC04813
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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C082	C082-2	C082	C082-2	C082	C082-2	C083	C083	C083	C083	C084	C084	C084	C084
	X_Easting		7618030	7618043	7618030	7618043	7618030	7618043	7618735	7618735	7618735	7618735	7619307	7619307	7619307	7619307
	Y_Northing		717195	717195	717195	717195	717195	717195	717170	717170	717170	717170	717163	717163	717163	717163
	Sample ID		LW2-C082-B1	LW2-C082-B2	LW2-C082-C1	LW2-C082-C2	LW2-C082-D1	LW2-C082-D2	LW2-C083-A	LW2-C083-B	LW2-C083-C	LW2-C083-D	LW2-C084-A	LW2-C084-B	LW2-C084-C	LW2-C084-D
	Sample Type Code		normal	field rep	normal	field rep	normal	field rep	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample			LW2-C082-B1		LW2-C082-C1		LW2-C082-D1								
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/21/2005	10/21/2005	10/21/2005	10/21/2005
	Depth Interval		30 - 137 cm	30 - 137 cm	137 - 210 cm	137 - 210 cm	210 - 295 cm	210 - 295 cm	0 - 30 cm	30 - 129 cm	129 - 188 cm	188 - 282 cm	0 - 30 cm	30 - 65 cm	65 - 169 cm	169 - 283 cm
Chemical Name	**CAS No**	**Unit**														
Endrin aldehyde	7421-93-4	µg/kg	0.095 U	0.093 UT	0.091 U	0.091 UT	0.08 U	0.086 UT		0.33 U	0.38 U		0.21 U	0.51 U	0.11 U	0.11 U
Endrin ketone	53494-70-5	µg/kg	0.36 UJ	1.1 JT	0.16 UJ	0.29 JT	0.064 U	0.069 UT		0.26 U	0.22 U		0.43 U	0.099 U	0.21 U	0.082 U
Heptachlor	76-44-8	µg/kg	0.079 U	0.104 JT	0.076 U	0.075 UT	0.08 U	0.072 UT		0.091 U	0.23 U		0.11 U	0.11 U	0.086 U	0.085 U
Heptachlor epoxide	1024-57-3	µg/kg	0.2 U	0.088 UT	0.086 U	0.085 UT	0.075 U	0.082 UT		0.11 U	0.094 U		0.12 U	0.31 U	0.097 U	0.096 U
Methoxychlor	72-43-5	µg/kg	0.081 U	0.08 UT	0.078 U	0.078 UT	0.068 U	0.074 UT		0.46 U	0.21 U		0.32 U	0.52 U	0.16 U	0.087 U
Mirex	2385-85-5	µg/kg	0.061 U	0.2 UJT	0.059 U	0.058 UT	0.051 U	0.056 UT		1.1 J	0.07 U		0.22 U	0.2 U	0.067 U	0.066 U
Toxaphene	8001-35-2	µg/kg	16 U	15 UT	4.8 U	7.7 UT	18 U	4.6 UT		79 U	55 U		49 U	77 U	16 U	5.4 U
Petroleum Hydrocarbons																
Gasoline range hydrocarbons	GRH	mg/kg	1.4 U	1.4 UT	1.3 U	1.3 UT	1.2 U	1.3 UT	1.7 J	2.1 J	3.4 J	1.2 U	3.5 J	7.2 J	4 J	1.5 J
Diesel range hydrocarbons	DRH	mg/kg	38 JT	92.3 JT	5 J	21 JT	3.9 UT	4.2 UT	49 J	130 J	150 J		120 J	210 J	37 J	5 U
Residual range hydrocarbons	RRH	mg/kg	108 JT	223 JT	16 U	52 JT	6.7 UT	4.4 UT	190 J	410 J	350 J		550 J	820 J	110 J	19 J
Total petroleum hydrocarbons	TPH	mg/kg	146 JT	315 JT	5 JT	73 JT	6.7 UT	4.4 UT	241 JT	542 JT	503 JT		674 JT	1040 JT	151 JT	20.5 JT
Phenols																
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg	3 U	2.6 UT	0.56 U	0.56 UT	0.49 U	0.53 UT		2.5 U	2.1 U			3.8 U	0.64 U	0.63 U
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg	0.57 U	0.56 UT	0.55 U	0.55 UT	0.48 U	0.52 UT		0.66 U	0.6 U			3.7 U	0.62 U	0.61 U
2,4,5-Trichlorophenol	95-95-4	µg/kg	0.45 U	0.44 UT	0.43 U	0.43 UT	2.1 U	0.41 UT		2.7 U	0.47 U			2.9 U	0.49 U	0.48 U
2,4,6-Trichlorophenol	88-06-2	µg/kg	0.34 U	0.34 UT	0.33 U	0.33 UT	0.29 U	0.31 UT		0.39 U	0.36 U			2.2 U	0.37 U	0.37 U
2,4-Dichlorophenol	120-83-2	µg/kg	2.5 U	2.4 UT	2.4 U	2.4 UT	2.1 U	2.3 UT		5.6 U	5.1 U			3.2 U	2.7 U	2.7 U
2,4-Dimethylphenol	105-67-9	µg/kg	7.5 U	7.4 UT	7.2 U	7.1 UT	6.3 U	6.8 UT		18 U	16 U			9.7 U	8.1 U	8 U
2,4-Dinitrophenol	51-28-5	µg/kg	49 U	48 UT	47 U	47 UT	41 U	45 UT		120 U	110 U			64 U	53 U	53 U
2-Chlorophenol	95-57-8	µg/kg	2.3 U	2.3 UT	2.3 U	2.2 UT	2 U	2.1 UT		5.3 U	4.8 U			3 U	2.5 U	2.5 U
2-Methylphenol	95-48-7	µg/kg	4.6 U	4.6 UT	4.5 U	4.4 UT	3.9 U	4.2 UT		11 U	9.6 U			6 U	5 U	5 U
2-Nitrophenol	88-75-5	µg/kg	3.6 U	3.5 UT	3.4 U	3.4 UT	3 U	3.2 UT		8.1 U	7.4 U			4.6 U	3.9 U	3.8 U
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	2.3 U	2.3 UT	2.3 U	2.2 UT	2 U	2.1 UT		5.3 U	4.8 U			3 U	2.5 U	2.5 U
4-Chloro-3-methylphenol	59-50-7	µg/kg	2.9 U	2.8 UT	2.8 U	2.8 UT	2.4 U	2.6 UT		6.6 U	6 U			3.7 U	3.1 U	3.1 U
4-Methylphenol	106-44-5	µg/kg	4 U	5.95 JT	3.8 U	3.8 UT	3.3 U	3.6 UT		12 J	9.6 J			5.1 U	4.3 U	4.3 U
4-Nitrophenol	100-02-7	µg/kg	41 U	40 UT	39 U	39 UT	34 U	37 UT		94 U	85 U			53 U	45 U	44 U
Pentachlorophenol	87-86-5	µg/kg	0.63 U	0.62 UT	0.6 U	0.6 UT	0.53 U	0.57 UT		0.72 U	0.65 U			4.1 U	0.68 U	0.67 U
Phenol	108-95-2	µg/kg	2.6 U	4.65 JT	2.5 U	2.5 UT	2.2 U	2.4 UT		50 U	31 U			24 J	13 J	7.9 J
Phthalates																
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	130	29 UT	5.2 U	5.9 UT	2 U	6.9 UT		100 U	36 U			170	13 U	6.8 U
Butylbenzyl phthalate	85-68-7	µg/kg	2.1 U	2 UT	2 U	2 UT	1.7 U	1.9 UT		8.8 J	4.3 U			2.7 U	12 U	2.2 U
Dibutyl phthalate	84-74-2	µg/kg	7.4 J	5.3 JT	4.6 J	5.7 JT	3 U	5.2 JT		12 U	9.5 U			17 U	7.7 U	4.4 U
Diethyl phthalate	84-66-2	µg/kg	4.8 U	4.7 UT	4.6 U	4.6 UT	4 U	4.3 UT		11 U	9.9 U			6.2 U	5.2 U	5.1 U
Dimethyl phthalate	131-11-3	µg/kg	2.5 U	2.4 UT	2.4 U	2.4 UT	2.1 U	2.3 UT		5.6 U	5.1 U			3.2 U	2.7 U	2.7 U
Di-n-octyl phthalate	117-84-0	µg/kg	1.7 U	1.6 UT	1.6 U	1.6 UT	1.4 U	1.5 UT		3.8 U	3.4 U			2.2 U	8.9 U	1.8 U
Semivolatile Organic Compounds																
1,2,4-Trichlorobenzene	120-82-1	µg/kg	2.1 U	2 UT	2 U	2 UT	1.7 U	1.9 UT		4.7 U	4.3 U			2.7 U	2.3 U	2.2 U
1,2-Dichlorobenzene	95-50-1	µg/kg	1.8 U	1.8 UT	1.7 U	1.7 UT	1.5 U	1.6 UT		4.1 U	3.7 U			2.3 U	2 U	1.9 U
1,3-Dichlorobenzene	541-73-1	µg/kg	2.2 U	2.2 UT	2.1 U	2.1 UT	1.9 UJ	2 UT		5 U	4.6 U			2.9 U	2.4 U	2.4 U
1,4-Dichlorobenzene	106-46-7	µg/kg	0.17 U	0.16 UT	0.16 U	0.16 UT	0.14 U	0.15 UT		0.19 U	0.17 U	0.15 U		0.22 U	0.18 U	0.18 U
2,4-Dinitrotoluene	121-14-2	µg/kg	3.8 U	3.8 UT	3.7 U	3.7 UT	3.2 U	3.5 UT		8.8 U	7.9 U			5 U	4.2 U	4.1 U
2,6-Dinitrotoluene	606-20-2	µg/kg	3.8 U	3.8 UT	3.7 U	3.7 UT	3.2 U	3.5 UT		8.8 U	7.9 U			5 U	4.2 U	4.1 U
2-Chloronaphthalene	91-58-7	µg/kg	4.9 U	4.8 UT	4.7 U	4.7 UT	4.1 U	4.5 UT		12 U	11 U			6.4 U	5.3 U	5.3 U

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ANC04814
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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C082	C082-2	C082	C082-2	C082	C082-2	C083	C083	C083	C083	C084	C084	C084	C084
	X_Easting		7618030	7618043	7618030	7618043	7618030	7618043	7618735	7618735	7618735	7618735	7619307	7619307	7619307	7619307
	Y_Northing		717195	717195	717195	717195	717195	717195	717170	717170	717170	717170	717163	717163	717163	717163
	Sample ID		LW2-C082-B1	LW2-C082-B2	LW2-C082-C1	LW2-C082-C2	LW2-C082-D1	LW2-C082-D2	LW2-C083-A	LW2-C083-B	LW2-C083-C	LW2-C083-D	LW2-C084-A	LW2-C084-B	LW2-C084-C	LW2-C084-D
	Sample Type Code		normal	field rep	normal	field rep	normal	field rep	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample			LW2-C082-B1		LW2-C082-C1		LW2-C082-D1								
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/21/2005	10/21/2005	10/21/2005	10/21/2005
	Depth Interval		30 - 137 cm	30 - 137 cm	137 - 210 cm	137 - 210 cm	210 - 295 cm	210 - 295 cm	0 - 30 cm	30 - 129 cm	129 - 188 cm	188 - 282 cm	0 - 30 cm	30 - 65 cm	65 - 169 cm	169 - 283 cm
Chemical Name	**CAS No**	**Unit**														
2-Nitroaniline	88-74-4	µg/kg	3.7 U	3.6 UT	3.5 U	3.5 UT	3.1 U	3.4 UT		8.4 U	7.7 U			4.8 U	4 U	4 U
3,3'-Dichlorobenzidine	91-94-1	µg/kg	5 U	5 UT	4.8 U	4.8 UT	4.2 U	4.6 UT		12 U	11 U			6.6 U	28 U	5.4 U
3-Nitroaniline	99-09-2	µg/kg	3.6 U	3.5 UT	3.4 U	3.4 UT	3 U	3.2 UT		8.1 U	7.4 U			4.6 U	3.9 U	3.8 U
4-Bromophenyl phenyl ether	101-55-3	µg/kg	1.9 U	1.9 UT	1.9 U	1.9 UT	1.6 U	1.8 UT		4.4 U	4 U			2.5 U	2.1 U	2.1 U
4-Chloroaniline	106-47-8	µg/kg	2.9 U	2.8 UT	2.8 U	2.8 UT	2.4 U	2.6 UT		6.6 U	6 U			3.7 U	3.1 U	3.1 U
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg	2.7 U	2.7 UT	2.6 U	2.6 UT	2.3 U	2.5 UT		6.3 U	5.7 U			3.6 U	3 U	2.9 U
4-Nitroaniline	100-01-6	µg/kg	4.6 U	4.6 UT	4.5 U	4.4 UT	3.9 U	4.2 UT		11 U	9.6 U			6 U	5 U	5 U
Aniline	62-53-3	µg/kg	2.1 U	2 UT	2 U	3 JT	1.7 U	1.9 UT		6.9 J	5.2 J			2.7 U	2.3 U	2.2 U
Azobenzene	103-33-3	µg/kg	3.3 U	3.2 UT	3.2 U	3.1 UT	2.8 U	3 UT		7.5 U	6.8 U			4.3 U	3.6 U	3.5 U
Benzoic acid	65-85-0	µg/kg	130 U	130 UT	130 U	130 UT	110 U	UT		300 U	280 U			170 U	150 U	140 U
Benzyl alcohol	100-51-6	µg/kg	5 U	5 UT	4.8 U	4.8 UT	4.2 U	4.6 UT		12 U	11 U			6.6 U	5.5 U	5.4 U
Bis(2-chloroethoxy) methane	111-91-1	µg/kg	1.8 U	1.8 UT	1.7 U	1.7 UT	1.5 U	1.6 UT		4.1 U	3.7 U			2.3 U	2 U	1.9 U
Bis(2-chloroethyl) ether	111-44-4	µg/kg	3.3 U	3.2 UT	3.2 U	3.1 UT	2.8 U	3 UT		7.5 U	6.8 U			4.3 U	3.6 U	3.5 U
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg	1.7 U	1.6 UT	1.6 U	1.6 UT	1.4 U	1.5 UT		3.8 U	3.4 U			2.2 U	1.8 U	1.8 U
Carbazole	86-74-8	µg/kg	2.2 J	3 JT	1.7 U	1.7 UT	1.5 U	1.6 UT		12 J	4.8 J			11	2 U	1.9 U
Dibenzofuran	132-64-9	µg/kg	3.1	3.45 T	0.23 U	0.88 JT	0.2 U	0.21 UT		6.7	4.4			2.8	0.55 J	0.25 U
Hexachlorobenzene	118-74-1	µg/kg	0.065 U	0.36 JT	0.063 UJ	0.062 UT	0.15 J	0.059 UT		0.2 U	0.096 U		0.084 U	0.2 U	0.11 U	0.07 U
Hexachlorobutadiene	87-68-3	µg/kg	0.26 U	0.26 UJT	0.25 U	0.25 UT	0.41 UJ	0.24 UT		0.85	0.8 J		0.33 U	0.34 U	0.28 U	0.32 U
Hexachlorocyclopentadiene	77-47-4	µg/kg	21 U	20 UT	20 U	20 UT	17 U	19 UT		47 U	43 U			27 U	23 U	22 U
Hexachloroethane	67-72-1	µg/kg	0.64 U	0.23 UJT	0.068 U	0.28 UJT	1.4 UJ	0.064 UJT		0.2 J	0.45 UJ		0.29 U	0.46	0.42	0.47 J
Isophorone	78-59-1	µg/kg	2.2 U	2.2 UT	2.1 U	2.1 UT	1.9 U	2 UT		5 U	4.6 U			2.9 U	2.4 U	2.4 U
Nitrobenzene	98-95-3	µg/kg	2.7 U	2.7 UT	2.6 U	2.6 UT	2.3 U	2.5 UT		6.3 U	5.7 U			3.6 U	3 U	2.9 U
N-Nitrosodimethylamine	62-75-9	µg/kg	8.3 U	8.2 UT	8 U	7.9 UT	7 U	7.5 UT		19 U	18 U			11 U	9 U	8.9 U
N-Nitrosodiphenylamine	86-30-6	µg/kg	3 U	3 UT	2.9 U	2.9 UT	2.5 UJ	2.8 UT		6.9 U	6.3 U			3.9 U	3.3 U	3.2 U
N-Nitrosodipropylamine	621-64-7	µg/kg	4.4 U	4.3 UT	4.2 U	4.2 UT	3.7 U	4 UT		10 U	9.1 U			5.7 U	4.7 U	4.7 U
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	0.042 U	0.042 UT	0.041 U	0.04 UT	0.035 U	0.039 UT		0.049 U	0.044 U	0.037 U		0.055 U	0.046 U	0.045 U
1,1,1-Trichloroethane	71-55-6	µg/kg	0.08 U	0.079 UT	0.077 U	0.076 UT	0.067 U	0.073 UT		0.092 U	0.084 U	0.07 U		0.11 U	0.087 U	0.086 U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	0.13 U	0.13 UT	0.13 U	0.13 UT	0.11 U	0.12 UT		0.15 U	0.14 U	0.12 U		0.17 U	0.15 U	0.14 U
1,1,2-Trichloroethane	79-00-5	µg/kg	0.08 U	0.079 UT	0.077 U	0.076 UT	0.067 U	0.073 UT		0.092 U	0.084 U	0.07 U		0.11 U	0.087 U	0.086 U
1,1-Dichloroethane	75-34-3	µg/kg	0.077 U	0.076 UT	0.074 U	0.074 UT	0.064 U	0.071 UT		0.089 U	0.081 U	0.068 U		0.11 U	0.084 U	0.083 U
1,2,3-Trichloropropane	96-18-4	µg/kg	0.15 U	0.15 UT	0.15 U	0.15 UT	0.13 U	0.14 UT		0.18 U	0.16 U	0.13 U		0.2 U	0.17 U	0.16 U
1,2-Dichloroethane	107-06-2	µg/kg	0.042 U	0.042 UT	0.041 U	0.04 UT	0.035 U	0.039 UT		0.049 U	0.044 U	0.037 U		0.055 U	0.046 U	0.045 U
1,2-Dichloropropane	78-87-5	µg/kg	0.048 U	0.047 UT	0.046 U	0.046 UT	0.04 U	0.043 UT		0.055 U	0.05 U	0.042 U		0.062 U	0.052 U	0.051 U
1,4-Dichloro-trans-2-butene	110-57-6	µg/kg	0.69 U	0.68 UT	0.67 U	0.66 UT	0.58 U	0.63 UT		0.8 U	0.72 U	0.61 U		0.9 UJ	0.75 UJ	0.74 UJ
2-Chloroethyl vinyl ether	110-75-8	µg/kg	0.21 U	0.2 UT	0.2 U	0.2 UT	0.17 U	0.19 UT		0.24 U	0.22 U	0.18 U		0.27 U	0.23 U	0.22 U
Acetone	67-64-1	µg/kg	22 U	14 UT	18 U	21 UT	5.8 U	13 UT		10	12	13		14 UJ	18 UJ	48 UJ
Acrolein	107-02-8	µg/kg	R	R	R	R	R	R		R	R	R		R	R	R
Acrylonitrile	107-13-1	µg/kg	0.32 U	0.31 UT	0.3 U	0.3 UT	0.26 U	0.29 UT		0.36 U	0.33 U	0.28 U		R	R	R
Benzene	71-43-2	µg/kg	0.075 J	0.124 JT	0.051 U	0.12 JT	0.044 U	0.048 UT		0.07 J	0.11 J	0.046 U		0.069 U	0.058 U	0.13 U
Toluene	108-88-3	µg/kg	0.23 J	0.25 JT	0.2 U	0.28 JT	0.17 U	0.19 UT		0.24 U	0.22 U	0.18 U		0.27 U	0.23 U	0.52 U
Ethylbenzene	100-41-4	µg/kg	0.096 U	0.095 UT	0.092 U	0.092 UT	0.08 U	0.088 UT		0.12 U	0.11 U	0.084 U		0.13 U	0.11 U	0.11 U
m,p-Xylene	179601-23-1	µg/kg	0.18 U	0.18 UT	0.17 U	0.17 UT	0.15 U	0.16 UT		0.21 U	0.19 U	0.16 U		0.23 U	0.2 U	0.19 U
o-Xylene	95-47-6	µg/kg	0.11 U	0.1 UT	0.098 U	0.097 UT	0.084 U	0.093 UT		0.12 U	0.11 U	0.089 U		0.14 U	0.12 U	0.11 U
Xylene	1330-20-7	µg/kg	0.18 UT	0.18 UT	0.17 UT	0.17 UT	0.15 UT	0.16 UT		0.21 UT	0.19 UT	0.16 UT		0.23 UT	0.2 UT	0.19 UT
BTEX	BTEX	µg/kg	0.305 JT	0.374 JT	0.2 UT	0.4 JT	0.17 UT	0.19 UT		0.07 JT	0.11 JT	0.18 UT		0.27 UT	0.23 UT	0.52 UT

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name	C082	C082-2	C082	C082-2	C082	C082-2	C083	C083	C083	C083	C084	C084	C084	C084
	X_Easting	7618030	7618043	7618030	7618043	7618030	7618043	7618735	7618735	7618735	7618735	7619307	7619307	7619307	7619307
	Y_Northing	717195	717195	717195	717195	717195	717195	717170	717170	717170	717170	717163	717163	717163	717163
	Sample ID	LW2-C082-B1	LW2-C082-B2	LW2-C082-C1	LW2-C082-C2	LW2-C082-D1	LW2-C082-D2	LW2-C083-A	LW2-C083-B	LW2-C083-C	LW2-C083-D	LW2-C084-A	LW2-C084-B	LW2-C084-C	LW2-C084-D
	Sample Type Code	normal	field rep	normal	field rep	normal	field rep	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample		LW2-C082-B1		LW2-C082-C1		LW2-C082-D1								
	Sample Date	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/21/2005	10/21/2005	10/21/2005	10/21/2005
	Depth Interval	30 - 137 cm	30 - 137 cm	137 - 210 cm	137 - 210 cm	210 - 295 cm	210 - 295 cm	0 - 30 cm	30 - 129 cm	129 - 188 cm	188 - 282 cm	0 - 30 cm	30 - 65 cm	65 - 169 cm	169 - 283 cm
Chemical Name	**CAS No**	**Unit**													
Bromochloromethane	74-97-5	µg/kg	0.081 U	0.08 UT	0.078 U	0.078 UT	0.068 U	0.074 UT		0.094 U	0.085 U	0.071 U		0.11 U	0.089 U	0.087 U
Bromodichloromethane	75-27-4	µg/kg	0.092 U	0.091 UT	0.089 U	0.088 UT	0.077 U	0.084 UT		0.11 U	0.096 U	0.081 U		0.12 U	0.1 U	0.099 U
Bromoform	75-25-2	µg/kg	0.063 U	0.062 UT	0.06 U	0.06 UT	0.052 U	0.057 UT		0.072 U	0.065 U	0.055 U		0.081 U	0.068 U	0.067 U
Bromomethane	74-83-9	µg/kg	0.5 U	0.5 UT	0.48 U	0.48 UT	0.42 U	0.46 UT		0.58 U	0.53 U	0.44 U		0.66 U	0.55 U	0.54 U
Carbon disulfide	75-15-0	µg/kg	0.18 U	0.18 UT	0.17 U	0.17 UT	0.15 U	0.35 JT		0.21 U	0.19 U	0.16 U		0.37 J	0.2 U	0.19 J
Carbon tetrachloride	56-23-5	µg/kg	0.14 U	0.14 UT	0.13 U	0.13 UT	0.12 U	0.13 UT		0.16 U	0.14 U	0.12 U		0.18 U	0.15 U	0.15 U
Chlorobenzene	108-90-7	µg/kg	0.095 U	0.093 UT	0.091 U	0.091 UT	0.079 U	0.086 UT		0.11 U	0.099 U	0.083 U		0.13 U	0.11 U	0.11 U
Chlorodibromomethane	124-48-1	µg/kg	0.092 U	0.091 UT	0.089 U	0.088 UT	0.077 U	0.084 UT		0.11 U	0.096 U	0.081 U		0.12 U	0.1 U	0.099 U
Chloroethane	75-00-3	µg/kg	0.38 U	0.38 UT	0.37 U	0.37 UT	0.32 U	0.35 UT		0.44 U	0.4 U	0.34 U		0.5 U	0.42 U	0.41 U
Chloroform	67-66-3	µg/kg	0.076 U	0.075 UT	0.073 U	0.073 UT	0.063 U	0.069 UT		0.088 U	0.079 U	0.067 U		0.099 U	0.083 U	0.082 U
Chloromethane	74-87-3	µg/kg	0.26 U	0.26 UT	0.25 U	0.25 UT	0.22 U	0.24 UT		0.3 U	0.27 U	0.23 U		0.34 U	0.28 U	0.28 U
cis-1,3-Dichloropropene	10061-01-5	µg/kg	0.042 U	0.042 UT	0.041 U	0.04 UT	0.035 U	0.039 UT		0.049 U	0.044 U	0.037 U		0.055 U	0.046 U	0.045 U
Dichlorodifluoromethane	75-71-8	µg/kg	0.15 U	0.15 UT	0.15 U	0.15 UT	0.13 U	0.14 UT		0.18 U	0.16 U	0.13 U		0.2 UJ	0.17 UJ	0.16 UJ
Ethylene dibromide	106-93-4	µg/kg	0.069 U	0.068 UT	0.067 U	0.066 UT	0.058 U	0.063 UT		0.08 U	0.072 U	0.061 U		0.09 U	0.075 U	0.074 U
Isopropylbenzene	98-82-8	µg/kg	0.06 U	0.059 UT	0.057 U	0.057 UT	0.05 U	0.055 UT		0.069 U	0.063 U	0.052 U		0.078 U	0.065 U	0.064 U
Methyl iodide	74-88-4	µg/kg	0.91 U	0.89 UT	0.87 U	0.87 UT	0.76 U	0.83 UT		1.1 U	0.95 U	0.8 U		1.2 U	0.99 U	0.98 U
Methyl isobutyl ketone	108-10-1	µg/kg	0.33 U	0.32 UT	0.32 U	0.31 UT	0.27 U	0.3 UT		0.38 U	0.34 U	0.29 U		R	R	R
Methyl N-butyl ketone	591-78-6	µg/kg	0.87 U	0.85 UT	0.83 U	0.83 UT	0.72 U	0.79 UT		1 U	0.91 U	0.76 U		R	R	R
Methyl tert-butyl ether	1634-04-4	µg/kg	0.053 U	0.052 UT	0.051 U	0.051 UT	0.044 U	0.048 UT		0.061 U	0.056 U	0.046 U		0.069 U	0.058 U	0.057 U
Methylene bromide	74-95-3	µg/kg	0.12 U	0.11 UT	0.11 U	0.11 UT	0.092 U	0.11 UT		0.13 U	0.12 U	0.097 U		0.15 U	0.13 U	0.12 U
Methylene chloride	75-09-2	µg/kg	5 U	3.7 UT	4 U	5.6 UT	1.2 U	2.4 UT		2.3 U	2.5 U	2.2 U		1.9 U	1.7 U	6.5 U
Methylethyl ketone	78-93-3	µg/kg	R	R	R	R	R	R		R	R	R		R	R	R
Styrene	100-42-5	µg/kg	0.1 U	0.099 UT	0.096 U	0.26 JT	0.083 U	0.091 UT		0.16 J	0.22 J	0.13 J		0.14 U	0.11 U	0.11 U
Tetrachloroethene	127-18-4	µg/kg	0.47 J	0.35 JT	0.23 J	0.45 JT	0.11 U	0.12 UT		0.15 U	0.14 U	0.12 U		0.17 U	0.15 U	0.14 U
trans-1,2-Dichloroethene	156-60-5	µg/kg	0.26 U	0.26 UT	0.25 U	0.25 UT	0.22 U	0.24 UT		0.3 U	0.27 U	0.23 U		0.34 U	0.28 U	0.28 U
trans-1,3-Dichloropropene	10061-02-6	µg/kg	0.06 U	0.059 UT	0.057 U	0.057 UT	0.05 U	0.055 UT		0.069 U	0.063 U	0.052 U		0.078 U	0.065 U	0.064 U
Trichloroethene	79-01-6	µg/kg	0.084 U	0.083 UT	0.081 U	0.08 UT	0.07 U	0.077 UT		0.097 U	0.088 U	0.074 U		0.11 U	0.092 U	0.09 U
Trichlorofluoromethane	75-69-4	µg/kg	0.11 U	0.11 UT	0.11 U	0.11 UT	0.091 U	0.1 UT		0.13 U	0.12 U	0.096 U		0.15 UJ	0.12 UJ	0.12 UJ
Vinyl acetate	108-05-4	µg/kg	R	R	R	R	R	R		R	R	R		R	R	R
Vinyl chloride	75-01-4	µg/kg	0.12 U	0.12 UT	0.12 U	0.11 UT	0.096 U	0.11 UT		0.14 U	0.12 U	0.11 U		0.15 U	0.13 U	0.13 U
Vinylidene chloride	75-35-4	µg/kg	0.12 U	0.11 UT	0.11 U	0.11 UT	0.092 U	0.11 UT		0.13 U	0.12 U	0.097 U		0.15 U	0.13 U	0.12 U

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BZTO104(e)004816 ANC04816

Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C084	C087	C087	C087	C087	C088	C088	C088	C089	C089	C089	C089	C089	C090
	X_Easting		7619307	7618665	7618665	7618665	7618665	7618371	7618371	7618371	7619961	7619961	7619961	7619961	7619961	7618913
	Y_Northing		717163	717093	717093	717093	717093	717078	717078	717078	717051	717051	717051	717051	717051	717066
	Sample ID		LW2-C084-E	LW2-C087-A	LW2-C087-B	LW2-C087-C	LW2-C087-D	LW2-C088-A	LW2-C088-B	LW2-C088-C	LW2-C089-A	LW2-C089-B	LW2-C089-C	LW2-C089-D	LW2-C089-F	LW2-C090-A
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/20/2005	10/20/2005	10/20/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/20/2005
	Depth Interval		283 - 369 cm	0 - 30 cm	30 - 110 cm	110 - 218 cm	218 - 328 cm	0 - 30 cm	30 - 165 cm	165 - 284 cm	0 - 30 cm	30 - 98 cm	98 - 196 cm	196 - 312 cm	334 - 485 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
PCB Aroclors																
Aroclor 1016	12674-11-2	µg/kg			1.9 U	1.5 U			1.8 U	1.4 U		15 U	1.4 U	1.7 U		
Aroclor 1221	11104-28-2	µg/kg			1.9 U	1.5 U			1.8 U	1.4 U		15 U	1.4 U	1.7 U		
Aroclor 1232	11141-16-5	µg/kg			1.9 U	1.5 U			1.8 U	1.4 U		15 U	1.4 U	1.7 U		
Aroclor 1242	53469-21-9	µg/kg			1.9 U	1.5 U			1.8 U	1.4 U		15 U	1.4 U	1.7 U		
Aroclor 1248	12672-29-6	µg/kg			54	1.5 U			1.8 U	1.4 U		15 U	1.4 U	1.7 U		
Aroclor 1254	11097-69-1	µg/kg			130 J	6.5 J			130	5.9		3200	46	1.7 U		
Aroclor 1260	11096-82-5	µg/kg			100	8.5			160	5.1		15 U	1.4 U	1.7 U		
Aroclor 1262	37324-23-5	µg/kg			1.9 U	1.5 U			1.8 U	1.4 U		15 U	1.4 U	1.7 U		
Aroclor 1268	11100-14-4	µg/kg			1.9 U	1.5 U			1.8 U	1.4 U		15 U	1.4 U	1.7 U		
Total PCB Aroclors	12767-79-2	µg/kg			284 JT	15 JT			290 T	11 T		3200 T	46 T	1.7 UT		
Butyltins																
Butyltin ion	78763-54-9	µg/kg			2.1	0.04 U			6.8	0.036 U		0.43 J	0.038 U	0.045 U		
Dibutyltin ion	14488-53-0	µg/kg			20	0.56 J			48	0.32 U		1.4 J	0.04 U	0.094 U		
Tributyltin ion	36643-28-4	µg/kg			85	4			450	2.4		8.6	0.57 U	0.52 U		
Tetrabutyltin	1461-25-2	µg/kg			2.1 J	0.094 U			5.2	0.084 U		0.095 U	0.089 U	0.11 U		
Conventionals																
Total solids	TSO	percent	72.7	59.1 T	60.2	75	79.1 T	52.6	61.4	84	65	74.1	77.6 T	67.7	64.8	56.7
Total organic carbon	TOC	percent			0.41	1.29			1.25	0.08		0.67	0.21	0.81		
Specific gravity	SPEC_GRAV	NA			1.61	1.98			1.64	2.08		1.86	2	1.73		
PCDD/F Homologs																
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g														
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g														
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g														
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g														
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g														
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g														
Pentachlorodibenzofuran homologs	30402-15-4	pg/g														
Hexachlorodibenzofuran homologs	55684-94-1	pg/g														
Heptachlorodibenzofuran homologs	38998-75-3	pg/g														
Octachlorodibenzofuran	39001-02-0	pg/g														
PCDD/Fs																
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g														
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g														
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g														
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g														
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g														
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g														
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g														
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g														
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g														
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g														
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g														

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ANC04817
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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

		Location Name	C084	C087	C087	C087	C087	C088	C088	C088	C089	C089	C089	C089	C089	C090
		X_Easting	7619307	7618665	7618665	7618665	7618665	7618371	7618371	7618371	7619961	7619961	7619961	7619961	7619961	7618913
		Y_Northing	717163	717093	717093	717093	717093	717078	717078	717078	717051	717051	717051	717051	717051	717066
		Sample ID	LW2-C084-E	LW2-C087-A	LW2-C087-B	LW2-C087-C	LW2-C087-D	LW2-C088-A	LW2-C088-B	LW2-C088-C	LW2-C089-A	LW2-C089-B	LW2-C089-C	LW2-C089-D	LW2-C089-F	LW2-C090-A
		Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
		Parent Sample														
		Sample Date	10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/20/2005	10/20/2005	10/20/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/20/2005
		Depth Interval	283 - 369 cm	0 - 30 cm	30 - 110 cm	110 - 218 cm	218 - 328 cm	0 - 30 cm	30 - 165 cm	165 - 284 cm	0 - 30 cm	30 - 98 cm	98 - 196 cm	196 - 312 cm	334 - 485 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g														
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g														
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g														
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g														
Octachlorodibenzofuran	39001-02-0	pg/g														
Grain Size																
Medium gravel	GS_MG	percent			0	0.12			0.73	0		0.67	0	0		
Fine gravel	GS_FG	percent			0.03	0.34			0.24	0.24		0.12	0.13	0		
Very coarse sand	GS_VCS	percent			0.12	0.52			0.5	0.33		0.6	0.4	0.03		
Coarse sand	GS_CS	percent			0.96	12.5			1.62	15.9		7.24	6.39	0.15		
Medium sand	GS_MS	percent			15.5	66.7			19.8	66.2		55.5	55.2	0.32		
Fine sand	GS_FS	percent			15.5	11.8			16.3	14		21.9	20.6	4.97		
Very fine sand	GS_VFS	percent			11	1.42			10.7	1		3.68	4.38	22.8		
Coarse silt	GS_CSILT	percent			8.63	1.1			9.39	0.37		2.52	3.46	25.5		
Medium silt	GS_MSILT	percent			13	1.27			10.3	0.44		2.11	2.44	18		
Fine silt	GS_FSILT	percent			10.2	1			9.04	0.35		1.27	1.68	9.47		
Very fine silt	GS_VFSILT	percent			8.04	0.72			7.34	0.37		1.56	1.48	7.58		
8-9 Phi clay	GS_CCLAY	percent			5.02	0.53			4.77	0.15		1.2	1.01	3.76		
>9 Phi clay	GS_MFCLAY	percent			11	0.8			8.54	0.4		1.41	2.1	9.21		
Chlorinated Herbicides																
2,4,5-T	93-76-5	µg/kg														
2,4-D	94-75-7	µg/kg														
2,4-DB	94-82-6	µg/kg														
Dalapon	75-99-0	µg/kg														
Dicamba	1918-00-9	µg/kg														
Dichloroprop	120-36-5	µg/kg														
Dinoseb	88-85-7	µg/kg														
MCPA	94-74-6	µg/kg														
MCPP	93-65-2	µg/kg														
Silvex	93-72-1	µg/kg														
Metals																
Aluminum	7429-90-5	mg/kg			30200	14200			24500	10200		11200	11600	25200		
Antimony	7440-36-0	mg/kg			0.43 J	0.13 J			0.74 J	0.12 J		0.74 J	0.14 J	0.13 J		
Arsenic	7440-38-2	mg/kg			4.23	3.37			5.03	1.34		2.64	2.06	2.56		
Cadmium	7440-43-9	mg/kg			0.385	0.083			0.471	0.049 UJ		0.279	0.072	0.123		
Chromium	7440-47-3	mg/kg			37.4	17.2			35.3	15.1		21.5	16.6	32.2		
Chromium hexavalent	18540-29-9	mg/kg														
Copper	7440-50-8	mg/kg			48.4	17.6			53.5 J	14 J		22.9	14.1	31.7		
Lead	7439-92-1	mg/kg			29.8	3.84			43.8	3.73		45.5	4.21	5.24		
Mercury	7439-97-6	mg/kg			0.117	0.018 JT			0.129	0.014 J		0.187	0.021	0.039		
Nickel	7440-02-0	mg/kg			28.1 J	21.3 J			28.4 J	19.5 J		20.6	16.7	28.3		
Selenium	7782-49-2	mg/kg			0.14 U	0.03 U			0.08 J	0.02 U		0.03 U	0.03 U	0.03 U		
Silver	7440-22-4	mg/kg			0.483	0.237			0.495 J	0.199 J		0.289	0.219	0.365		
Zinc	7440-66-6	mg/kg			158	58.4			197	50.4		132	51.4	67.9		

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C084	C087	C087	C087	C087	C088	C088	C088	C089	C089	C089	C089	C089	C090
	X_Easting		7619307	7618665	7618665	7618665	7618665	7618371	7618371	7618371	7619961	7619961	7619961	7619961	7619961	7618913
	Y_Northing		717163	717093	717093	717093	717093	717078	717078	717078	717051	717051	717051	717051	717051	717066
	Sample ID		LW2-C084-E	LW2-C087-A	LW2-C087-B	LW2-C087-C	LW2-C087-D	LW2-C088-A	LW2-C088-B	LW2-C088-C	LW2-C089-A	LW2-C089-B	LW2-C089-C	LW2-C089-D	LW2-C089-F	LW2-C090-A
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/20/2005	10/20/2005	10/20/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/20/2005
	Depth Interval		283 - 369 cm	0 - 30 cm	30 - 110 cm	110 - 218 cm	218 - 328 cm	0 - 30 cm	30 - 165 cm	165 - 284 cm	0 - 30 cm	30 - 98 cm	98 - 196 cm	196 - 312 cm	334 - 485 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
Polycyclic Aromatic Hydrocarbons																
2-Methylnaphthalene	91-57-6	µg/kg			5.6	0.85 J			11	0.43 J		87	2.8	0.51 U		
Acenaphthene	83-32-9	µg/kg			8.7	0.39 J			31	0.57 J		220	2.3 J	0.24 U		
Acenaphthylene	208-96-8	µg/kg			5.5	0.38 J			9.5	0.33 J		20	0.99 J	0.33 U		
Anthracene	120-12-7	µg/kg			13	0.78 J			27	0.75 J		130	3.6	0.33 U		
Fluorene	86-73-7	µg/kg			5.4	0.31 J			19	0.37 J		190	2.6	0.29 U		
Naphthalene	91-20-3	µg/kg	0.49 U		14	0.47 U	0.45 U		34	0.42 U		61	0.45 U	0.52 U	0.55 U	
Phenanthrene	85-01-8	µg/kg			47	2.8			160	3		1100	24	0.49 U		
Dibenz(a,h)anthracene	53-70-3	µg/kg			14	0.37 J			27	1.8 J		23	0.59 J	0.39 U		
Benz(a)anthracene	56-55-3	µg/kg			58	2.8			120	3.6		210	6.5	0.24 U		
Benzo(a)pyrene	50-32-8	µg/kg			86	3.4			150	6.4		190	6.1	0.33 U		
Benzo(b)fluoranthene	205-99-2	µg/kg			80	3.5			150	4.5		180	5.1	0.71 U		
Benzo(g,h,i)perylene	191-24-2	µg/kg			82	3.3			140	7.4		170	5.7	0.34 U		
Benzo(k)fluoranthene	207-08-9	µg/kg			66	2.4 J			110	4.7		130	4.3	0.49 U		
Chrysene	218-01-9	µg/kg			79	3.6			170	5.5		290	9.8	0.61 U		
Fluoranthene	206-44-0	µg/kg			96	4			290	3.7		920	16	0.51 U		
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg			82	3.1			130	6.8		160	5.3	0.36 U		
Pyrene	129-00-0	µg/kg			120	7			340	8.7		890	23	0.54 U		
Low Molecular Weight PAHs	LPAH	µg/kg			99.2 T	5.51 JT			292 T	5.45 JT		1810 T	36.3 JT	0.52 UT		
High Molecular Weight PAHs	HPAH	µg/kg			763 T	33.5 JT			1630 T	53.1 JT		3160 T	82.4 JT	0.71 UT		
Total PAHs	130498-29-2	µg/kg			862 T	39 JT			1920 T	58.6 JT		4970 T	119 JT	0.71 UT		
Chlorinated Pesticides																
2,4'-DDD	53-19-0	µg/kg		1.2 NJ	1.7 U	0.39 U			1.9 U	0.5 J		27 U	0.48 U	0.08 U		
2,4'-DDE	3424-82-6	µg/kg		0.38 U	0.86 U	0.075 U			0.95 U	0.067 U		2 U	0.81 U	0.083 U		
2,4'-DDT	789-02-6	µg/kg		1.8	4.5	0.62			6 J	0.39 J		170 NJ	2.3 J	0.25 U		
4,4'-DDD	72-54-8	µg/kg		1.3	1.5	0.12 U			1.7	0.2 J		4.8 J	0.11 UJ	0.13 UJ		
4,4'-DDE	72-55-9	µg/kg		1.3 J	1.6 NJ	0.098 J			3 NJ	0.15 J		2 UJ	0.055 UJ	0.064 UJ		
4,4'-DDT	50-29-3	µg/kg		0.34 U	0.81 U	0.19 U			0.96 U	0.45		81 J	1.4 J	0.21 UJ		
Total of 4,4'-DDD, -DDE, -DDT	PP_DDT3ISO	µg/kg		2.6 JT	3.1 JT	0.098 JT			4.7 JT	0.8 JT		85.8 JT	1.4 JT	0.21 UJT		
Aldrin	309-00-2	µg/kg		0.25 UJ	0.16 UJ	0.13 UJ			0.16 U	0.12 U		0.13 UJ	0.12 UJ	0.14 UJ		
alpha-Hexachlorocyclohexane	319-84-6	µg/kg		0.13 U	0.13 U	0.11 U			0.2 U	0.092 U		0.11 UJ	0.098 U	0.12 U		
beta-Hexachlorocyclohexane	319-85-7	µg/kg		0.2 U	0.58 U	0.16 U			0.2 U	0.15 U		0.17 UJ	0.16 U	0.18 U		
delta-Hexachlorocyclohexane	319-86-8	µg/kg		0.13 U	0.11 U	0.078 U			0.27 U	0.07 U		0.28 UJ	0.074 U	0.086 U		
gamma-Hexachlorocyclohexane	58-89-9	µg/kg		0.16 U	0.16 U	0.13 U			0.15 U	0.11 U		0.14 UJ	0.12 U	0.14 U		
cis-Chlordane	5103-71-9	µg/kg		0.082 U	0.35 U	0.066 U			0.29 U	0.059 U		0.43 UJ	0.2 UJ	0.073 UJ		
trans-Chlordane	5103-74-2	µg/kg		1.1 U	2.7 J	0.25			2 J	0.21 U		74 J	1.2 UJ	0.074 UJ		
Oxychlordane	27304-13-8	µg/kg		0.12 U	0.12 U	0.09 U			0.11 U	0.08 U		0.5 U	0.085 U	0.099 U		
cis-Nonachlor	5103-73-1	µg/kg		0.28 U	0.38 U	0.2 U			0.36 U	0.058 U		1.9 U	0.2 U	0.071 U		
trans-Nonachlor	39765-80-5	µg/kg		0.2 U	0.28 U	0.042 U			0.2 U	0.037 U		23 U	0.53 U	0.046 U		
Total Chlordanes	TOTCHLDANE	µg/kg		1.1 UT	2.7 JT	0.25 T			2 JT	0.21 UT		74 JT	1.2 UJT	0.099 UT		
Dieldrin	60-57-1	µg/kg		0.14 U	0.62 U	0.11 U			0.14 U	0.096 U		8.5 UJ	0.22 UJ	0.12 UJ		
alpha-Endosulfan	959-98-8	µg/kg		0.2 U	0.29 U	0.051 U			0.062 U	0.046 U		24 U	0.2 U	0.057 U		
beta-Endosulfan	33213-65-9	µg/kg		0.23 U	0.45 U	0.078 U			1.6 J	0.07 U		1.7 UJ	0.074 UJ	0.086 UJ		
Endosulfan sulfate	1031-07-8	µg/kg		0.1 U	0.1 U	0.099 U			3.5 NJ	0.072 U		0.21 UJ	0.076 U	0.089 U		
Endrin	72-20-8	µg/kg		0.11 U	0.81 NJ	0.087 U			0.33 NJ	0.078 U		11 J	0.32 J	0.097 UJ		

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C084	C087	C087	C087	C087	C088	C088	C088	C089	C089	C089	C089	C089	C090
	X_Easting		7619307	7618665	7618665	7618665	7618665	7618371	7618371	7618371	7619961	7619961	7619961	7619961	7619961	7618913
	Y_Northing		717163	717093	717093	717093	717093	717078	717078	717078	717051	717051	717051	717051	717051	717066
	Sample ID		LW2-C084-E	LW2-C087-A	LW2-C087-B	LW2-C087-C	LW2-C087-D	LW2-C088-A	LW2-C088-B	LW2-C088-C	LW2-C089-A	LW2-C089-B	LW2-C089-C	LW2-C089-D	LW2-C089-F	LW2-C090-A
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/20/2005	10/20/2005	10/20/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/20/2005
	Depth Interval		283 - 369 cm	0 - 30 cm	30 - 110 cm	110 - 218 cm	218 - 328 cm	0 - 30 cm	30 - 165 cm	165 - 284 cm	0 - 30 cm	30 - 98 cm	98 - 196 cm	196 - 312 cm	334 - 485 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
Endrin aldehyde	7421-93-4	µg/kg		0.2 U	0.3 U	0.094 U			0.29 U	0.084 U		6.3 J	0.11 NJ	0.11 U		
Endrin ketone	53494-70-5	µg/kg		1.8 NJ	0.094 U	0.33 U			1.9 U	0.12 U		1.5 NJ	0.071 UJ	0.083 UJ		
Heptachlor	76-44-8	µg/kg		0.097 U	0.097 U	0.078 U			0.095 U	0.07 U		0.079 UJ	0.074 UJ	0.086 UJ		
Heptachlor epoxide	1024-57-3	µg/kg		0.11 U	0.11 U	0.088 U			0.11 U	0.079 U		2.2 UJ	0.084 UJ	0.098 UJ		
Methoxychlor	72-43-5	µg/kg		0.3 U	0.1 U	0.08 U			0.79 U	0.072 U		0.49 UJ	0.076 U	0.089 U		
Mirex	2385-85-5	µg/kg		0.3 NJ	0.2 U	0.06 U			0.074 U	0.054 U		0.061 U	0.057 U	0.067 U		
Toxaphene	8001-35-2	µg/kg		34 U	88 U	20 U			170 U	12 U		1400 U	20 U	8.8 U		
Petroleum Hydrocarbons																
Gasoline range hydrocarbons	GRH	mg/kg	1.4 U	1.8 J	2.9 J	1.4 U	1.3 U	2 U	1.7 U	1.6 J	13 J	28 J	1.3 J	1.5 UT	1.6 U	2.2 J
Diesel range hydrocarbons	DRH	mg/kg		80 J	230 J	15.5 JT		120 J	240 J	6.2 J	1300 J	1400 JT	59 J	7.1 J		120 J
Residual range hydrocarbons	RRH	mg/kg		380 J	800 J	56 JT		560 J	850 J	20 J	3600 J	2400 JT	110 J	42 U		540 J
Total petroleum hydrocarbons	TPH	mg/kg		462 JT	1030 JT	71.5 JT		680 JT	1090 JT	27.8 JT	4910 JT	3830 JT	170 JT	7.1 JT		662 JT
Phenols																
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg			8.4 U	0.58 U			6.1 U	6 U		5.9 U	0.55 U	0.64 U		
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg			0.7 U	0.56 U			0.69 U	0.5 U		5.7 U	0.54 U	0.63 U		
2,4,5-Trichlorophenol	95-95-4	µg/kg			4.8 U	1.2 U			8.1 U	0.4 U		4.5 U	2 U	0.49 U		
2,4,6-Trichlorophenol	88-06-2	µg/kg			0.42 U	0.34 U			0.41 U	0.3 U		3.4 U	0.32 U	0.37 U		
2,4-Dichlorophenol	120-83-2	µg/kg			3 U	2.4 U			15 U	2.2 U		25 U	4.6 U	2.7 U		
2,4-Dimethylphenol	105-67-9	µg/kg			9.2 U	7.4 U			45 U	6.6 U		75 U	14 U	8.2 U		
2,4-Dinitrophenol	51-28-5	µg/kg			60 U	48 U			300 U	43 U		490 U	92 U	54 U		
2-Chlorophenol	95-57-8	µg/kg			2.9 U	2.3 U			14 U	2.1 U		23 U	4.4 U	2.6 U		
2-Methylphenol	95-48-7	µg/kg			5.7 U	4.6 U			28 U	4.1 U		46 U	8.7 U	5.1 U		
2-Nitrophenol	88-75-5	µg/kg			4.4 U	3.5 U			22 U	3.1 U		36 U	6.6 U	3.9 U		
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg			2.9 U	2.3 U			14 U	2.1 U		23 U	4.4 U	2.6 U		
4-Chloro-3-methylphenol	59-50-7	µg/kg			3.5 U	2.8 U			18 U	2.5 U		29 U	5.4 U	3.2 U		
4-Methylphenol	106-44-5	µg/kg			4.9 U	3.9 U			24 U	3.5 U		44 J	7.4 U	4.3 U		
4-Nitrophenol	100-02-7	µg/kg			50 U	40 U			250 U	36 U		410 U	76 U	45 U		
Pentachlorophenol	87-86-5	µg/kg			0.77 U	0.62 U			0.75 U	0.55 U		6.3 U	0.59 U	0.68 U		
Phenol	108-95-2	µg/kg			8.7 J	6.8 J			16 U	2.3 U		26 U	4.9 U	2.9 U		
Phthalates																
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg			110	10 U			230 U	5.5 U		140 U	14 U	20 U		
Butylbenzyl phthalate	85-68-7	µg/kg			2.5 U	2 U			81	1.8 U		21 U	3.8 U	2.3 U		
Dibutyl phthalate	84-74-2	µg/kg			8.4 U	4.3 U			22 U	5 U		36 U	7.8 U	5.7 U		
Diethyl phthalate	84-66-2	µg/kg			5.9 U	4.7 U			29 U	4.2 U		48 U	8.9 U	5.2 U		
Dimethyl phthalate	131-11-3	µg/kg			3 U	2.4 U			15 U	2.2 U		25 U	4.6 U	2.7 U		
Di-n-octyl phthalate	117-84-0	µg/kg			2 U	1.6 U			9.8 U	1.5 U		17 U	3.1 U	1.8 U		
Semivolatile Organic Compounds																
1,2,4-Trichlorobenzene	120-82-1	µg/kg			2.5 U	2 U			13 U	1.8 U		21 U	3.8 U	2.3 U		
1,2-Dichlorobenzene	95-50-1	µg/kg			2.2 U	1.8 U			11 U	1.6 U		18 U	3.3 U	2 U		
1,3-Dichlorobenzene	541-73-1	µg/kg			2.7 U	2.2 U			14 U	2 U		22 U	4.1 U	2.4 U		
1,4-Dichlorobenzene	106-46-7	µg/kg	0.17 U		0.2 U	0.16 U	0.16 U		0.2 U	0.15 U		0.17 U	0.16 U	0.18 U	0.19 U	
2,4-Dinitrotoluene	121-14-2	µg/kg			4.7 U	3.8 U			23 U	3.4 U		38 U	7.1 U	4.2 U		
2,6-Dinitrotoluene	606-20-2	µg/kg			4.7 U	3.8 U			23 U	3.4 U		38 U	7.1 U	4.2 U		
2-Chloronaphthalene	91-58-7	µg/kg			6 U	4.8 U			30 U	4.3 U		49 U	9.2 U	5.4 U		

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C084	C087	C087	C087	C087	C088	C088	C088	C089	C089	C089	C089	C089	C090
	X_Easting		7619307	7618665	7618665	7618665	7618665	7618371	7618371	7618371	7619961	7619961	7619961	7619961	7619961	7618913
	Y_Northing		717163	717093	717093	717093	717093	717078	717078	717078	717051	717051	717051	717051	717051	717066
	Sample ID		LW2-C084-E	LW2-C087-A	LW2-C087-B	LW2-C087-C	LW2-C087-D	LW2-C088-A	LW2-C088-B	LW2-C088-C	LW2-C089-A	LW2-C089-B	LW2-C089-C	LW2-C089-D	LW2-C089-F	LW2-C090-A
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/20/2005	10/20/2005	10/20/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/20/2005
	Depth Interval		283 - 369 cm	0 - 30 cm	30 - 110 cm	110 - 218 cm	218 - 328 cm	0 - 30 cm	30 - 165 cm	165 - 284 cm	0 - 30 cm	30 - 98 cm	98 - 196 cm	196 - 312 cm	334 - 485 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
2-Nitroaniline	88-74-4	µg/kg			4.5 U	3.6 U			22 U	3.3 U		37 U	6.9 U	4 U		
3,3'-Dichlorobenzidine	91-94-1	µg/kg			6.2 U	5 U			31 U	4.5 U		50 U	9.4 U	5.5 U		
3-Nitroaniline	99-09-2	µg/kg			4.4 U	3.5 U			22 U	3.1 U		36 U	6.6 U	3.9 U		
4-Bromophenyl phenyl ether	101-55-3	µg/kg			2.4 U	1.9 U			12 U	1.7 U		19 U	3.6 U	2.1 U		
4-Chloroaniline	106-47-8	µg/kg			3.5 U	2.8 U			18 U	2.5 U		29 U	5.4 U	3.2 U		
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg			3.4 U	2.7 U			17 U	2.4 U		27 U	5.1 U	3 U		
4-Nitroaniline	100-01-6	µg/kg			5.7 U	4.6 U			28 U	4.1 U		46 U	8.7 U	5.1 U		
Aniline	62-53-3	µg/kg			2.5 U	2 U			13 U	1.8 U		21 U	3.8 U	2.3 U		
Azobenzene	103-33-3	µg/kg			4 U	3.2 U			20 U	2.9 U		33 U	6.1 U	3.6 U		
Benzoic acid	65-85-0	µg/kg			160 U	130 U			790 U	R		1300 U	250 U	150 U		
Benzyl alcohol	100-51-6	µg/kg			6.2 U	5 U			31 U	4.5 U		50 U	9.4 U	5.5 U		
Bis(2-chloroethoxy) methane	111-91-1	µg/kg			2.2 U	1.8 U			11 U	1.6 U		18 U	3.3 U	2 U		
Bis(2-chloroethyl) ether	111-44-4	µg/kg			4 U	3.2 U			20 U	2.9 U		33 U	6.1 U	3.6 U		
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg			2 U	1.6 U			9.8 U	1.5 U		17 U	3.1 U	1.8 U		
Carbazole	86-74-8	µg/kg			6.7 J	1.8 U			14 J	1.6 U		18 U	3.3 U	2 U		
Dibenzofuran	132-64-9	µg/kg			3.3	0.25 J			9.2	0.3 J		44	0.62 J	0.26 U		
Hexachlorobenzene	118-74-1	µg/kg		0.08 U	0.08 U	0.064 U			0.2 U	0.058 UJ		0.2 UJ	0.061 U	0.18 U		
Hexachlorobutadiene	87-68-3	µg/kg		0.32 U	0.32 U	0.26 U			0.57 UJ	0.23 UJ		0.26 U	0.25 U	0.29 U		
Hexachlorocyclopentadiene	77-47-4	µg/kg			25 U	20 U			130 U	18 U		210 U	38 U	23 U		
Hexachloroethane	67-72-1	µg/kg		0.51 J	0.4	0.37 U			0.61 J	0.32 UJ		0.095 U	0.16 U	0.37 U		
Isophorone	78-59-1	µg/kg			2.7 U	2.2 U			14 U	2 U		22 U	4.1 U	2.4 U		
Nitrobenzene	98-95-3	µg/kg			3.4 U	2.7 U			17 U	2.4 U		27 U	5.1 U	3 U		
N-Nitrosodimethylamine	62-75-9	µg/kg			11 U	8.2 U			50 U	7.3 U		83 U	16 U	9.1 U		
N-Nitrosodiphenylamine	86-30-6	µg/kg			3.7 U	3 U			18 U	2.7 U		30 U	5.6 U	3.3 U		
N-Nitrosodipropylamine	621-64-7	µg/kg			5.4 U	4.3 U			27 U	3.9 U		44 U	8.2 U	4.8 U		
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	0.043 U		0.052 U	0.042 U	0.04 U		0.051 U	0.037 U		0.042 U	0.04 U	0.046 U	0.048 U	
1,1,1-Trichloroethane	71-55-6	µg/kg	0.082 U		0.099 U	0.079 U	0.076 U		0.097 U	0.071 U		0.08 U	0.075 U	0.088 U	0.092 U	
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	0.14 U		0.16 U	0.13 U	0.13 U		0.16 U	0.12 U		0.13 U	0.13 U	0.15 U	0.15 U	
1,1,2-Trichloroethane	79-00-5	µg/kg	0.082 U		0.099 U	0.079 U	0.076 U		0.097 U	0.071 U		0.08 U	0.075 U	0.088 U	0.092 U	
1,1-Dichloroethane	75-34-3	µg/kg	0.079 U		0.095 U	0.076 U	0.073 U		0.093 U	0.068 U		0.077 U	0.073 U	0.085 U	0.088 U	
1,2,3-Trichloropropane	96-18-4	µg/kg	0.16 U		0.19 U	0.15 U	0.15 U		0.18 U	0.14 U		0.15 U	0.14 U	0.17 U	0.17 U	
1,2-Dichloroethane	107-06-2	µg/kg	0.043 U		0.052 U	0.042 U	0.04 U		0.051 U	0.037 U		0.042 U	0.04 U	0.046 U	0.048 U	
1,2-Dichloropropane	78-87-5	µg/kg	0.049 U		0.059 U	0.047 U	0.045 U		0.058 U	0.042 U		0.048 U	0.045 U	0.052 U	0.055 U	
1,4-Dichloro-trans-2-butene	110-57-6	µg/kg	0.71 UJ		0.85 UJ	0.68 UJ	0.66 UJ		0.84 U	0.61 U		0.69 U	0.65 UJ	0.76 U	0.79 U	
2-Chloroethyl vinyl ether	110-75-8	µg/kg	0.21 U		0.25 U	0.2 U	0.2 U		0.25 U	0.18 U		0.21 U	0.19 U	0.23 U	0.24 U	
Acetone	67-64-1	µg/kg	90 J		26 UJ	19 UJ	19 UJ		62 U	15 U		15 U	41	16 U	130	
Acrolein	107-02-8	µg/kg	R		R	R	R		R	R		R	R	R	R	
Acrylonitrile	107-13-1	µg/kg	R		R	R	R		0.38 U	0.28 U		0.32 U	0.3 U	0.34 U	0.36 U	
Benzene	71-43-2	µg/kg	0.054 U		0.065 U	0.12 U	0.05 U		0.064 U	0.047 U		0.053 U	0.05 U	0.071 J	0.061 U	
Toluene	108-88-3	µg/kg	0.31 U		0.25 U	0.38 U	0.2 U		0.25 U	0.18 U		0.21 U	0.19 U	0.23 U	0.24 U	
Ethylbenzene	100-41-4	µg/kg	0.098 U		0.12 U	0.095 U	0.091 U		0.12 U	0.085 U		0.096 U	0.09 U	0.11 U	0.11 U	
m,p-Xylene	179601-23-1	µg/kg	0.18 U		0.22 U	0.18 U	0.17 U		0.22 U	0.16 U		0.2 J	0.17 U	0.2 U	0.21 U	
o-Xylene	95-47-6	µg/kg	0.11 U		0.13 U	0.1 U	0.096 U		0.13 U	0.09 U		0.11 U	0.095 U	0.12 U	0.12 U	
Xylene	1330-20-7	µg/kg	0.18 UT		0.22 UT	0.18 UT	0.17 UT		0.22 UT	0.16 UT		0.2 JT	0.17 UT	0.2 UT	0.21 UT	
BTEX	BTEX	µg/kg	0.31 UT		0.25 UT	0.38 UT	0.2 UT		0.25 UT	0.18 UT		0.2 JT	0.19 UT	0.071 JT	0.24 UT	

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name	C084	C087	C087	C087	C087	C088	C088	C088	C089	C089	C089	C089	C089	C090
	X_Easting	7619307	7618665	7618665	7618665	7618665	7618371	7618371	7618371	7619961	7619961	7619961	7619961	7619961	7618913
	Y_Northing	717163	717093	717093	717093	717093	717078	717078	717078	717051	717051	717051	717051	717051	717066
	Sample ID	LW2-C084-E	LW2-C087-A	LW2-C087-B	LW2-C087-C	LW2-C087-D	LW2-C088-A	LW2-C088-B	LW2-C088-C	LW2-C089-A	LW2-C089-B	LW2-C089-C	LW2-C089-D	LW2-C089-F	LW2-C090-A
	Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample														
	Sample Date	10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/21/2005	10/20/2005	10/20/2005	10/20/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/20/2005
	Depth Interval	283 - 369 cm	0 - 30 cm	30 - 110 cm	110 - 218 cm	218 - 328 cm	0 - 30 cm	30 - 165 cm	165 - 284 cm	0 - 30 cm	30 - 98 cm	98 - 196 cm	196 - 312 cm	334 - 485 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**													
Bromochloromethane	74-97-5	µg/kg	0.083 U		0.1 U	0.08 U	0.077 U		0.098 U	0.072 U		0.081 U	0.076 U	0.089 U	0.093 U	
Bromodichloromethane	75-27-4	µg/kg	0.094 U		0.12 U	0.091 U	0.087 U		0.12 U	0.081 U		0.092 U	0.087 U	0.11 U	0.11 U	
Bromoform	75-25-2	µg/kg	0.064 U		0.077 U	0.062 U	0.059 U		0.075 U	0.055 U		0.063 U	0.059 U	0.068 U	0.071 U	
Bromomethane	74-83-9	µg/kg	0.51 U		0.62 U	0.5 U	0.48 U		0.61 U	0.45 U		0.5 U	0.47 U	0.55 U	0.58 U	
Carbon disulfide	75-15-0	µg/kg	0.26 J		0.22 U	0.18 U	0.17 U		0.59 J	0.16 U		0.21 J	0.2 J	0.2 U	0.29 J	
Carbon tetrachloride	56-23-5	µg/kg	0.14 U		0.17 U	0.14 U	0.13 U		0.17 U	0.12 U		0.14 U	0.13 U	0.15 U	0.16 U	
Chlorobenzene	108-90-7	µg/kg	0.097 U		0.12 U	0.094 U	0.09 U		0.12 U	0.084 U		0.095 U	0.089 U	0.11 U	0.11 U	
Chlorodibromomethane	124-48-1	µg/kg	0.094 U		0.12 U	0.091 U	0.087 U		0.12 U	0.081 U		0.092 U	0.087 U	0.11 U	0.11 U	
Chloroethane	75-00-3	µg/kg	0.39 U		0.47 U	0.38 U	0.36 U		0.46 U	0.34 U		0.38 U	0.36 U	0.42 U	0.44 U	
Chloroform	67-66-3	µg/kg	0.078 U		0.094 U	0.075 U	0.072 U		0.092 U	0.067 U		0.076 U	0.071 U	0.083 U	0.087 U	
Chloromethane	74-87-3	µg/kg	0.27 U		0.32 U	0.26 U	0.25 U		0.31 U	0.23 U		0.26 U	0.25 U	0.29 U	0.3 U	
cis-1,3-Dichloropropene	10061-01-5	µg/kg	0.043 U		0.052 U	0.042 U	0.04 U		0.051 U	0.037 U		0.042 U	0.04 U	0.046 U	0.048 U	
Dichlorodifluoromethane	75-71-8	µg/kg	0.16 UJ		0.19 UJ	0.15 UJ	0.15 UJ		0.18 U	0.14 U		0.15 U	0.14 U	0.17 U	0.17 U	
Ethylene dibromide	106-93-4	µg/kg	0.071 U		0.085 U	0.068 U	0.066 U		0.084 U	0.061 U		0.069 U	0.065 U	0.076 U	0.079 U	
Isopropylbenzene	98-82-8	µg/kg	0.061 U		0.074 U	0.059 U	0.057 U		0.072 U	0.053 U		0.06 U	0.056 U	0.065 U	0.068 U	
Methyl iodide	74-88-4	µg/kg	0.93 U		1.2 U	0.9 U	0.86 U		1.1 U	0.8 U		0.91 U	0.85 U	0.99 U	1.1 U	
Methyl isobutyl ketone	108-10-1	µg/kg	R		R	R	R		0.4 U	0.29 U		0.33 U	0.31 U	0.36 U	0.38 U	
Methyl N-butyl ketone	591-78-6	µg/kg	R		R	R	R		1.1 U	0.77 U		0.87 U	0.82 U	0.95 U	0.99 U	
Methyl tert-butyl ether	1634-04-4	µg/kg	0.054 U		0.065 U	0.052 U	0.05 U		0.064 U	0.047 U		0.053 U	0.05 U	0.058 U	0.061 U	
Methylene bromide	74-95-3	µg/kg	0.12 U		0.14 U	0.11 U	0.11 U		0.14 U	0.098 U		0.12 U	0.11 U	0.13 U	0.13 U	
Methylene chloride	75-09-2	µg/kg	6.4 U		1.7 U	5.7 U	3.5 U		2.3 U	4.9 U		4.9 U	5.9 U	2.5 U	6.6 U	
Methylethyl ketone	78-93-3	µg/kg	16 J		R	R	R		8.4 J	R		R	R	R	28 J	
Styrene	100-42-5	µg/kg	0.11 U		0.13 U	0.099 U	0.095 U		0.13 U	0.21 J		0.1 U	0.094 U	0.11 U	0.12 U	
Tetrachloroethene	127-18-4	µg/kg	0.56 J		0.16 U	0.13 U	0.13 U		0.16 U	0.12 U		0.13 U	0.13 U	0.15 U	0.15 U	
trans-1,2-Dichloroethene	156-60-5	µg/kg	0.27 U		0.32 U	0.26 U	0.25 U		0.31 U	0.23 U		0.26 U	0.25 U	0.29 U	0.3 U	
trans-1,3-Dichloropropene	10061-02-6	µg/kg	0.061 U		0.074 U	0.059 U	0.057 U		0.072 U	0.053 U		0.06 U	0.056 U	0.065 U	0.068 U	
Trichloroethene	79-01-6	µg/kg	0.086 U		0.11 U	0.083 U	0.08 U		0.11 U	0.074 U		0.084 U	0.079 U	0.092 U	0.096 U	
Trichlorofluoromethane	75-69-4	µg/kg	0.12 UJ		0.14 UJ	0.11 UJ	0.11 UJ		0.14 U	0.097 U		0.11 U	0.11 U	0.12 U	0.13 U	
Vinyl acetate	108-05-4	µg/kg	R		R	R	R		R	R		R	R	R	R	
Vinyl chloride	75-01-4	µg/kg	0.12 U		0.15 U	0.12 U	0.11 U		0.14 U	0.11 U		0.12 U	0.11 U	0.13 U	0.14 U	
Vinylidene chloride	75-35-4	µg/kg	0.12 U		0.14 U	0.11 U	0.11 U		0.14 U	0.098 U		0.12 U	0.11 U	0.13 U	0.13 U	

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C090	C090	C090	C091	C091	C091	C091	C092	C092	C092	C092	C092	C092	C094
	X_Easting		7618913	7618913	7618913	7619196	7619196	7619196	7619196	7619867	7619867	7619867	7619867	7619867	7619867	7619640
	Y_Northing		717066	717066	717066	717075	717075	717075	717075	717041	717041	717041	717041	717041	717041	717055
	Sample ID		LW2-C090-B	LW2-C090-C	LW2-C090-D	LW2-C091-A	LW2-C091-B	LW2-C091-C	LW2-C091-D	LW2-C092-A	LW2-C092-B	LW2-C092-C	LW2-C092-D	LW2-C092-E	LW2-C092-F	LW2-C094-A
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/20/2005
	Depth Interval		30 - 112 cm	112 - 236 cm	236 - 297 cm	0 - 30 cm	30 - 143 cm	143 - 211 cm	211 - 306 cm	0 - 30 cm	30 - 152 cm	152 - 212 cm	212 - 276 cm	276 - 426 cm	426 - 515 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
PCB Aroclors																
Aroclor 1016	12674-11-2	µg/kg	1.8 U	1.4 U			2 U	2 U	1.5 U		110 U	110 U	1.6 U	1.7 U		
Aroclor 1221	11104-28-2	µg/kg	1.8 U	1.4 U			2 U	2 U	1.5 U		110 U	110 U	1.6 U	1.7 U		
Aroclor 1232	11141-16-5	µg/kg	1.8 U	1.4 U			2 U	2 U	1.5 U		110 U	110 U	1.6 U	1.7 U		
Aroclor 1242	53469-21-9	µg/kg	1.8 U	1.4 U			2 U	2 U	1.5 U		110 U	110 U	1.6 U	1.7 U		
Aroclor 1248	12672-29-6	µg/kg	70	1.4 U			2 U	2 U	1.5 U		110 U	110 U	1.6 U	1.7 U		
Aroclor 1254	11097-69-1	µg/kg	130	1.4 U			200 J	260 J	1.5 U		26000	15000	82	1.7 U		
Aroclor 1260	11096-82-5	µg/kg	230	4.7 J			120	220	1.5 U		110 U	110 U	78	1.7 U		
Aroclor 1262	37324-23-5	µg/kg	1.8 U	1.4 U			2 U	2 U	1.5 U		110 U	110 U	1.6 U	1.7 U		
Aroclor 1268	11100-14-4	µg/kg	1.8 U	1.4 U			2 U	2 U	1.5 U		110 U	110 U	1.6 U	1.7 U		
Total PCB Aroclors	12767-79-2	µg/kg	430 T	4.7 JT			320 JT	480 JT	1.5 UT		26000 T	15000 T	160 T	1.7 UT		
Butyltins																
Butyltin ion	78763-54-9	µg/kg	4.6	0.037 U			1.5 J	1.2 J	0.04 U		20	0.049 U	0.044 U	0.045 U		
Dibutyltin ion	14488-53-0	µg/kg	20	0.051 U			11	13	0.11 U		30	8.6	0.52 J	0.057 U		
Tributyltin ion	36643-28-4	µg/kg	110	0.068 U			45	40	0.074 U		68	20	0.36 U	0.27 U		
Tetrabutyltin	1461-25-2	µg/kg	1.9 J	0.085 U			0.13 U	0.13 U	0.092 U		0.17 U	0.12 U	0.22 U	0.11 U		
Conventionals																
Total solids	TSO	percent	64.3	82.9 T	79.2 T	51.2	55.9	57.5	76.2	25	43.2	62.2	69	67.7	67.6	57.5
Total organic carbon	TOC	percent	0.92	0.03 J			1.24 T	1.24	0.04 J		5.46 T	2.49	1.43	0.87		
Specific gravity	SPEC_GRAV	NA	1.71 T	2.08			1.56 T	1.59	2.02		1.4 T	1.68	1.77	1.71		
PCDD/F Homologs																
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g								0.855 J	2.709	7.169	0.402	0.108		1.31
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g								2.401 J	8.638	9.317	2.4	0.008 U		2.897
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g								26.798 J	63.589	64.093	5.81	0.166		21.823
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g								245.148 J	472.339	638.017	21.829	1.002		149.323
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g								1029.605 J	1541.494	2071.524 J	89.312	3.263		582.679
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g								17.404 J	43.226	79.49	7.276	0.016 U		9.937
Pentachlorodibenzofuran homologs	30402-15-4	pg/g								25.087 J	55.885	66.685	20.297	0.007 U		14.197
Hexachlorodibenzofuran homologs	55684-94-1	pg/g								34.397 J	91.696	104.939	25.372	0.01 U		20.92
Heptachlorodibenzofuran homologs	38998-75-3	pg/g								61.179 J	128.579	171.092	36.974	0.351		33.182
Octachlorodibenzofuran	39001-02-0	pg/g								89.338 J	93.807	136.305	9.433	0.246 J		28.807
PCDD/Fs																
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g								0.033 UJ	0.302 U	0.22 J	0.087 U	0.008 U		0.083 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g								0.542 J	1.184 J	1.236 J	0.168 J	0.008 U		0.327 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g								0.681 J	1.157 J	1.401 J	0.075 U	0.007 U		0.421 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g								3.01 J	10.326	10.118 J	0.665 J	0.008 U		3.095
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g								1.623 J	2.592 J	2.608 J	0.38 U	0.007 U		1.449 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g								86.829 J	198.348	239.726	8.004	0.371 J		70.06
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g								1029.605 J	1541.494	2071.524 J	89.312	3.263		582.679
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g								4.414 J	5.551	6.874	0.643	0.016 U		1.095
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g								1.661 J	2.101	2.369	0.157 J	0.007 U		0.479 J
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g								1.643 J	4.593	4.681	0.313 U	0.007 U		0.551 J
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g								4.903 J	10.124	9.929	0.69 U	0.01 U		1.113 J

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C090	C090	C090	C091	C091	C091	C091	C092	C092	C092	C092	C092	C092	C094
	X_Easting		7618913	7618913	7618913	7619196	7619196	7619196	7619196	7619867	7619867	7619867	7619867	7619867	7619867	7619640
	Y_Northing		717066	717066	717066	717075	717075	717075	717075	717041	717041	717041	717041	717041	717041	717055
	Sample ID		LW2-C090-B	LW2-C090-C	LW2-C090-D	LW2-C091-A	LW2-C091-B	LW2-C091-C	LW2-C091-D	LW2-C092-A	LW2-C092-B	LW2-C092-C	LW2-C092-D	LW2-C092-E	LW2-C092-F	LW2-C094-A
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/20/2005
	Depth Interval		30 - 112 cm	112 - 236 cm	236 - 297 cm	0 - 30 cm	30 - 143 cm	143 - 211 cm	211 - 306 cm	0 - 30 cm	30 - 152 cm	152 - 212 cm	212 - 276 cm	276 - 426 cm	426 - 515 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g								1.559 J	4.328	4.161	0.621 J	0.011 U		0.56 J
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g								0.148 UJ	0.263 J	0.192 J	0.117 U	0.013 U		0.036 J
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g								0.968 J	2.582	2.588	1.119 J	0.011 U		0.35 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g								18.696 J	42.369	53.885	19.279	0.19 J		10.223
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g								2.561 J	3.689	3.824	0.176 U	0.021 U		0.465 J
Octachlorodibenzofuran	39001-02-0	pg/g								89.338 J	93.807	136.305	9.433	0.246 J		28.807
Grain Size																
Medium gravel	GS_MG	percent	0	0			0 T	0	0		2.23	0.34	0	0		
Fine gravel	GS_FG	percent	0.13	0.12			0.287 T	0.05	0.05		3.08	2.04	0.18	0		
Very coarse sand	GS_VCS	percent	0.32	0.55			0.4 T	0.59	0.33		3.4	3.19	0.46	0.1		
Coarse sand	GS_CS	percent	1.78	18.5			0.817 T	1.12	12.2		4.82	10.1	4.23	0.25		
Medium sand	GS_MS	percent	20.2	66.6			5.48 T	8.79	64.1		10.1	37.8	21.1	0.49		
Fine sand	GS_FS	percent	18.1	13.2			13.8 T	13.8	20.3		17.7	18.8	7.8	1.29		
Very fine sand	GS_VFS	percent	14.1	0.64			17.2 T	18.7	0.99		17.8	7.79	8.26	10.4		
Coarse silt	GS_CSILT	percent	9.27	0.2			12.7 T	16.1	0.3		9.02	3.78	13.1	24.2		
Medium silt	GS_MSILT	percent	11.6	0.21			14.3 T	13.1	0.21		7.95	3.28	13.8	25.3		
Fine silt	GS_FSILT	percent	7.42	0.09			12.1 T	8.89	0.19		5.92	3.05	9.69	13.3		
Very fine silt	GS_VFSILT	percent	6.09	0			10.3 T	6.7	0.11		6.91	3.54	7.43	9.24		
8-9 Phi clay	GS_CCLAY	percent	3.42	0.12			6.56 T	4.5	0.03		4.96	1.9	4.39	4.58		
>9 Phi clay	GS_MFCLAY	percent	6.57	0.31			8.59 T	9.04	0.22		6.25	3.54	10.5	10.7		
Chlorinated Herbicides																
2,4,5-T	93-76-5	µg/kg														
2,4-D	94-75-7	µg/kg														
2,4-DB	94-82-6	µg/kg														
Dalapon	75-99-0	µg/kg														
Dicamba	1918-00-9	µg/kg														
Dichloroprop	120-36-5	µg/kg														
Dinoseb	88-85-7	µg/kg														
MCPA	94-74-6	µg/kg														
MCPP	93-65-2	µg/kg														
Silvex	93-72-1	µg/kg														
Metals																
Aluminum	7429-90-5	mg/kg	41300	11900			34400 T	32200	18700		16600	13700	21600	22300		
Antimony	7440-36-0	mg/kg	0.58 J	0.09 J			0.49 JT	0.65 J	0.11 J		3.21 J	4.09 J	0.33 J	0.13 J		
Arsenic	7440-38-2	mg/kg	3.79	1.26			3.56 T	3.3	1.27		18.3	14.3	3.33	2.66		
Cadmium	7440-43-9	mg/kg	0.394	0.077			0.397 T	0.49	0.06 UJ		1.95	0.784	0.314	0.147		
Chromium	7440-47-3	mg/kg	49.2	14.4			47.4 T	46.4	21.2		63.3	36.1	31.2	29		
Chromium hexavalent	18540-29-9	mg/kg														
Copper	7440-50-8	mg/kg	91.2 J	15.1 J			62.4 JT	59.4 J	32.2 J		113	72.4	37	30.3		
Lead	7439-92-1	mg/kg	35.9	2.44			33.8 T	184	2.51		167	83.3	44.4	5.58		
Mercury	7439-97-6	mg/kg	0.199	0.013 JT			0.171	0.238	0.025		0.057	0.03	0.236	0.039		
Nickel	7440-02-0	mg/kg	32.6 J	19.3 J			33 JT	32.2 J	23.6 J		31.8	27.1	23.8	23.5		
Selenium	7782-49-2	mg/kg	0.09 U	0.07 U			0.08 UT	0.12	0.02 U		0.15 U	0.1 U	0.14 U	0.05 U		
Silver	7440-22-4	mg/kg	0.416 J	0.212 J			0.485 JT	0.502 J	0.18 J		0.6	0.354	0.502	0.335		
Zinc	7440-66-6	mg/kg	197	51.7			163 T	175	53.6		672	450	150	66.4		

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C090	C090	C090	C091	C091	C091	C091	C092	C092	C092	C092	C092	C092	C094
	X_Easting		7618913	7618913	7618913	7619196	7619196	7619196	7619196	7619867	7619867	7619867	7619867	7619867	7619867	7619640
	Y_Northing		717066	717066	717066	717075	717075	717075	717075	717041	717041	717041	717041	717041	717041	717055
	Sample ID		LW2-C090-B	LW2-C090-C	LW2-C090-D	LW2-C091-A	LW2-C091-B	LW2-C091-C	LW2-C091-D	LW2-C092-A	LW2-C092-B	LW2-C092-C	LW2-C092-D	LW2-C092-E	LW2-C092-F	LW2-C094-A
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/20/2005
	Depth Interval		30 - 112 cm	112 - 236 cm	236 - 297 cm	0 - 30 cm	30 - 143 cm	143 - 211 cm	211 - 306 cm	0 - 30 cm	30 - 152 cm	152 - 212 cm	212 - 276 cm	276 - 426 cm	426 - 515 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
Polycyclic Aromatic Hydrocarbons																
2-Methylnaphthalene	91-57-6	µg/kg	5.3	0.42 U			5	6.8	0.45 U		390	74	28	9.5		
Acenaphthene	83-32-9	µg/kg	13	0.2 U			15	15	0.21 U		1100	3900	820	17		
Acenaphthylene	208-96-8	µg/kg	4.4	0.27 U			7.4	9.7	0.29 U		48	42	36	9		
Anthracene	120-12-7	µg/kg	23	0.27 U			23	25	0.29 U		4100	4200	250	16		
Fluorene	86-73-7	µg/kg	10	0.24 U			11	14	0.25 U		2200	4100	460	12		
Naphthalene	91-20-3	µg/kg	13	0.43 U	0.44 U		14	21	0.46 U		240	58	47	25	0.52 U	
Phenanthrene	85-01-8	µg/kg	94	0.42 J			100	100	0.76 J		12000	24000	1400	60		
Dibenz(a,h)anthracene	53-70-3	µg/kg	25	0.32 U			27	27	0.35 U		710	500	34	11		
Benz(a)anthracene	56-55-3	µg/kg	100	0.32 J			130	120	0.73 J		3800	3600	260	63		
Benzo(a)pyrene	50-32-8	µg/kg	130	0.27 U			180	170	1 J		2700	1800	270	94		
Benzo(b)fluoranthene	205-99-2	µg/kg	130	0.59 U			170	150	0.85 J		3300	2000	210	72		
Benzo(g,h,i)perylene	191-24-2	µg/kg	120	0.28 U			170	170	1.3 J		1700	950	260	78		
Benzo(k)fluoranthene	207-08-9	µg/kg	100	0.4 U			120	120	0.79 J		2200	1700	180	63		
Chrysene	218-01-9	µg/kg	160	0.5 U			180	170	1.1 J		5400	4300	360	85		
Fluoranthene	206-44-0	µg/kg	200	0.71 J			250	230	1.2 J		12000	18000	970	110		
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	110	0.3 U			160	150	0.77 J		1900	950	250	76		
Pyrene	129-00-0	µg/kg	230	0.58 J			320	310	2.1 J		13000	21000	1200	130		
Low Molecular Weight PAHs	LPAH	µg/kg	163 T	0.42 JT			175 T	192 T	0.76 JT		20100 T	36400 T	3040 T	149 T		
High Molecular Weight PAHs	HPAH	µg/kg	1310 T	1.61 JT			1710 T	1620 T	9.84 JT		46700 T	54800 T	3990 T	782 T		
Total PAHs	130498-29-2	µg/kg	1470 T	2.03 JT			1880 T	1810 T	10.6 JT		66800 T	91200 T	7040 T	931 T		
Chlorinated Pesticides																
2,4'-DDD	53-19-0	µg/kg	2.8 U	0.16 J			1.9 U	2.3 U	0.071 U		400 U	330 U	0.69 U	0.2 U		16 U
2,4'-DDE	3424-82-6	µg/kg	1.2 U	0.084 U			0.31 U	0.22 U	0.074 U		20 U	20 U	0.2 U	0.083 U		6.3 U
2,4'-DDT	789-02-6	µg/kg	9.9 J	0.2 U			6.4 J	7.7	0.077 J		1500 J	790 J	2.8 J	0.067 U		35 J
4,4'-DDD	72-54-8	µg/kg	1.5	0.11 U			2.7	2.3	0.11 U		12 UJ	13 UJ	0.69 J	0.13 UJ		9.2
4,4'-DDE	72-55-9	µg/kg	1.1 NJ	0.053 U			1.9 NJ	5.4 NJ	0.057 U		20 UJ	2.2 UJ	0.2 UJ	0.064 UJ		4.3 U
4,4'-DDT	50-29-3	µg/kg	11	0.17 U			6.8 J	1.3 U	0.19 U		36 NJ	64 UJ	0.58 UJ	0.21 UJ		32
Total of 4,4'-DDD, -DDE, -DDT	PP_DDT3ISO	µg/kg	13.6 JT	0.17 UT			11.4 JT	7.7 JT	0.19 UT		36 JT	64 UJT	0.69 JT	0.21 UJT		41.2 T
Aldrin	309-00-2	µg/kg	0.22 UJ	0.12 UJ			0.17 U	0.17 U	0.13 U		20 UJ	3 UJ	0.53 NJ	0.14 UJ		1.7 U
alpha-Hexachlorocyclohexane	319-84-6	µg/kg	0.12 U	0.094 U			0.19 U	0.2 U	0.11 U		2 U	0.77 U	0.14 U	0.12 U		1.4 U
beta-Hexachlorocyclohexane	319-85-7	µg/kg	0.62 U	0.15 U			0.4 U	0.42	0.16 U		2.8 U	6.2 U	0.18 U	0.18 U		2.1 U
delta-Hexachlorocyclohexane	319-86-8	µg/kg	0.2 U	0.071 U			0.11 U	0.13 U	0.077 U		14 U	2 U	0.085 U	0.086 U		1.1 U
gamma-Hexachlorocyclohexane	58-89-9	µg/kg	0.21 U	0.12 U			0.17 U	0.16 U	0.13 U		4.5 NJ	1.7 J	0.23 U	0.14 U		1.6 U
cis-Chlordane	5103-71-9	µg/kg	0.25 U	0.06 U			0.5 U	0.43 U	0.065 U		6.2 UJ	4.9 UJ	0.43 UJ	0.073 UJ		2 U
trans-Chlordane	5103-74-2	µg/kg	3.6 J	0.13 J			3.4 J	4.2 J	0.068 U		460 J	490 NJ	1.4 J	0.074 UJ		14 J
Oxychlordane	27304-13-8	µg/kg	0.11 U	0.082 U			0.18 J	0.12 U	0.088 U		5.1 U	2.1 U	0.098 U	0.099 U		1.2 U
cis-Nonachlor	5103-73-1	µg/kg	0.41 U	0.32 U			0.44 U	0.52 U	0.063 U		650 U	330 U	1.6 U	0.071 U		2.8 U
trans-Nonachlor	39765-80-5	µg/kg	1.1 U	0.038 U			0.21 U	0.33 NJ	0.041 U		150 U	120 U	0.2 U	0.046 U		6.9 U
Total Chlordanes	TOTCHLDANE	µg/kg	3.6 JT	0.13 JT			3.58 JT	4.53 JT	0.088 UT		460 JT	490 JT	1.4 JT	0.099 UT		14 JT
Dieldrin	60-57-1	µg/kg	1.3 U	0.097 U			1.4 U	1 U	0.11 U		100 J	0.8 UJ	1.2 UJ	0.12 UJ		1.4 U
alpha-Endosulfan	959-98-8	µg/kg	0.34 U	0.047 U			0.33 U	0.35 U	0.05 U		180 NJ	34 U	0.2 U	0.057 U		2 U
beta-Endosulfan	33213-65-9	µg/kg	1.9	0.071 U			0.5 U	2.7 NJ	0.077 U		26 U	8.1 UJ	0.31 UJ	0.086 UJ		1.1 U
Endosulfan sulfate	1031-07-8	µg/kg	0.2 U	0.073 U			0.11 U	0.11 U	0.079 U		0.6 U	0.6 U	0.087 U	0.089 U		1.1 U
Endrin	72-20-8	µg/kg	0.29 U	0.079 U			0.73 NJ	1.1 NJ	0.086 U		74 J	40 J	0.32 NJ	0.097 UJ		1.8 J

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C090	C090	C090	C091	C091	C091	C091	C092	C092	C092	C092	C092	C092	C094
	X_Easting		7618913	7618913	7618913	7619196	7619196	7619196	7619196	7619867	7619867	7619867	7619867	7619867	7619867	7619640
	Y_Northing		717066	717066	717066	717075	717075	717075	717075	717041	717041	717041	717041	717041	717041	717055
	Sample ID		LW2-C090-B	LW2-C090-C	LW2-C090-D	LW2-C091-A	LW2-C091-B	LW2-C091-C	LW2-C091-D	LW2-C092-A	LW2-C092-B	LW2-C092-C	LW2-C092-D	LW2-C092-E	LW2-C092-F	LW2-C094-A
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/20/2005
	Depth Interval		30 - 112 cm	112 - 236 cm	236 - 297 cm	0 - 30 cm	30 - 143 cm	143 - 211 cm	211 - 306 cm	0 - 30 cm	30 - 152 cm	152 - 212 cm	212 - 276 cm	276 - 426 cm	426 - 515 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
Endrin aldehyde	7421-93-4	µg/kg	0.39 U	0.085 U			0.47 U	0.54 U	0.092 U		90 J	41 J	0.2 U	0.11 U		2.4 U
Endrin ketone	53494-70-5	µg/kg	3.2 U	0.2 U			0.19 U	0.2 U	0.074 U		19 UJ	16 J	0.45 UJ	0.083 UJ		12 NJ
Heptachlor	76-44-8	µg/kg	0.091 U	0.071 U			0.11 U	0.11 U	0.077 U		26 UJ	0.58 UJ	0.085 UJ	0.086 UJ		1.1 U
Heptachlor epoxide	1024-57-3	µg/kg	0.11 U	0.08 U			0.19 U	0.24 U	0.087 U		17 UJ	6.3 UJ	0.16 UJ	0.098 UJ		1.2 U
Methoxychlor	72-43-5	µg/kg	1.5 U	0.073 U			0.57 U	0.63 U	0.079 U		5 U	2.3 U	0.087 U	0.089 U		1.1 U
Mirex	2385-85-5	µg/kg	0.18 U	0.055 U			0.081 U	0.2 U	0.06 U		3.2 U	2 U	0.2 U	0.067 U		2.1 NJ
Toxaphene	8001-35-2	µg/kg	120 U	20 U			110 U	160 U	4.9 U		17000 U	9800 U	51 U	20 U		570 U
Petroleum Hydrocarbons																
Gasoline range hydrocarbons	GRH	mg/kg	2.2 J	1.3 U	1.3 U	2.2 J	1.8 U	13 J	1.4 U	13.5 JT	150 J	100 J	90 J	2.8 J	1.5 U	1.8 U
Diesel range hydrocarbons	DRH	mg/kg	130 J	4.2 U		150 J	300 J	440 J	4.5 UT	1200 J	3500 J	3200 J	800 J	7.8 J		340 J
Residual range hydrocarbons	RRH	mg/kg	510 J	4.9 U		740 J	1000 J	1300 J	6.1 JT	6700 J	11000 J	6900 J	1500 J	55 U		1500 J
Total petroleum hydrocarbons	TPH	mg/kg	642 JT	4.9 UT		892 JT	1300 JT	1750 JT	6.1 JT	7910 JT	14700 JT	10200 JT	2390 JT	10.6 JT		1840 JT
Phenols																
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg	7.7 U	0.53 U			6 U	8.6 U	6.6 U		10 U	7 U	0.63 U	0.64 U		
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg	0.66 U	0.51 U			0.76 U	0.74 U	0.56 U		9.8 U	10 U	0.61 U	0.63 U		
2,4,5-Trichlorophenol	95-95-4	µg/kg	7.7 U	0.4 U			0.6 U	6.8 U	0.44 U		7.7 U	5.7 U	2.8 U	0.49 U		
2,4,6-Trichlorophenol	88-06-2	µg/kg	0.39 U	0.31 U			0.45 U	0.44 U	0.33 U		5.8 U	4.1 U	2.1 U	0.37 U		
2,4-Dichlorophenol	120-83-2	µg/kg	5.6 U	2.2 U			17 U	16 U	2.4 U		42 U	58 U	53 U	2.7 U		
2,4-Dimethylphenol	105-67-9	µg/kg	18 U	6.7 U			50 U	48 U	7.3 U		130 U	180 U	160 U	8.2 U		
2,4-Dinitrophenol	51-28-5	µg/kg	120 U	44 U			330 U	320 U	48 U		840 U	1200 U	1100 U	54 U		
2-Chlorophenol	95-57-8	µg/kg	5.3 U	2.1 U			16 U	15 U	2.3 U		40 U	55 U	50 U	2.6 U		
2-Methylphenol	95-48-7	µg/kg	11 U	4.2 U			31 U	30 U	4.5 U		79 U	110 U	99 U	5.1 U		
2-Nitrophenol	88-75-5	µg/kg	8.1 U	3.2 U			24 U	23 U	3.5 U		61 U	84 U	76 U	3.9 U		
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	5.3 U	2.1 U			16 U	15 U	2.3 U		40 U	55 U	50 U	2.6 U		
4-Chloro-3-methylphenol	59-50-7	µg/kg	6.6 U	2.6 U			19 U	19 U	2.8 U		49 U	68 U	61 U	3.2 U		
4-Methylphenol	106-44-5	µg/kg	11 J	3.6 U			26 U	26 U	3.9 U		68 U	94 U	85 U	4.3 U		
4-Nitrophenol	100-02-7	µg/kg	94 U	37 U			270 U	270 U	40 U		700 U	970 U	870 U	45 U		
Pentachlorophenol	87-86-5	µg/kg	0.72 U	0.56 U			0.83 U	0.8 U	0.61 U		11 U	7.4 U	0.67 U	0.68 U		
Phenol	108-95-2	µg/kg	14 U	4.9 U			22 J	17 U	2.5 U		44 U	62 U	56 U	5.2 J		
Phthalates																
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	480	7.3 U			160 U	120 U	5.8 U		2800	1600	50 U	17 U		
Butylbenzyl phthalate	85-68-7	µg/kg	43	1.9 U			14 U	14 U	2 U		430	130 J	44 U	2.3 U		
Dibutyl phthalate	84-74-2	µg/kg	32 U	3.6 U			24 U	23 U	4.9 U		100 U	84 U	76 U	3.9 U		
Diethyl phthalate	84-66-2	µg/kg	11 U	4.3 U			32 U	31 U	4.6 U		82 U	120 U	110 U	5.2 U		
Dimethyl phthalate	131-11-3	µg/kg	5.6 U	2.2 U			17 U	16 U	2.4 U		42 U	58 U	53 U	2.7 U		
Di-n-octyl phthalate	117-84-0	µg/kg	3.8 U	1.5 U			11 U	11 U	1.6 U		28 U	39 U	35 U	1.8 U		
Semivolatile Organic Compounds																
1,2,4-Trichlorobenzene	120-82-1	µg/kg	4.7 U	1.9 U			14 U	14 U	2 U		35 U	49 U	44 U	2.3 U		
1,2-Dichlorobenzene	95-50-1	µg/kg	4.1 U	1.6 U			12 U	12 U	1.8 U		31 U	42 U	38 U	2 U		
1,3-Dichlorobenzene	541-73-1	µg/kg	5 U	2 U			15 U	14 U	2.1 U		38 U	52 U	47 U	2.4 U		
1,4-Dichlorobenzene	106-46-7	µg/kg	0.19 U	0.15 U	0.15 U		0.22 U	0.21 U	0.16 U		0.28 U	0.2 U	0.18 U	0.18 U	0.18 U	
2,4-Dinitrotoluene	121-14-2	µg/kg	8.8 U	3.4 U			26 U	25 U	3.7 U		65 U	91 U	82 U	4.2 U		
2,6-Dinitrotoluene	606-20-2	µg/kg	8.8 U	3.4 U			26 U	25 U	3.7 U		65 U	91 U	82 U	4.2 U		
2-Chloronaphthalene	91-58-7	µg/kg	12 U	4.4 U			33 U	32 U	4.8 U		84 U	120 U	110 U	5.4 U		

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name	C090	C090	C090	C091	C091	C091	C091	C092	C092	C092	C092	C092	C092	C094
	X_Easting	7618913	7618913	7618913	7619196	7619196	7619196	7619196	7619867	7619867	7619867	7619867	7619867	7619867	7619640
	Y_Northing	717066	717066	717066	717075	717075	717075	717075	717041	717041	717041	717041	717041	717041	717055
	Sample ID	LW2-C090-B	LW2-C090-C	LW2-C090-D	LW2-C091-A	LW2-C091-B	LW2-C091-C	LW2-C091-D	LW2-C092-A	LW2-C092-B	LW2-C092-C	LW2-C092-D	LW2-C092-E	LW2-C092-F	LW2-C094-A
	Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample														
	Sample Date	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/20/2005
	Depth Interval	30 - 112 cm	112 - 236 cm	236 - 297 cm	0 - 30 cm	30 - 143 cm	143 - 211 cm	211 - 306 cm	0 - 30 cm	30 - 152 cm	152 - 212 cm	212 - 276 cm	276 - 426 cm	426 - 515 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**													
2-Nitroaniline	88-74-4	µg/kg	8.4 U	3.3 U			25 U	24 U	3.6 U		63 U	87 U	79 U	4 U		
3,3'-Dichlorobenzidine	91-94-1	µg/kg	12 U	4.5 U			34 U	33 U	4.9 U		86 U	120 U	110 U	5.5 U		
3-Nitroaniline	99-09-2	µg/kg	8.1 U	3.2 U			24 U	23 U	3.5 U		61 U	84 U	76 U	3.9 U		
4-Bromophenyl phenyl ether	101-55-3	µg/kg	4.4 U	1.7 U			13 U	13 U	1.9 U		33 U	46 U	41 U	2.1 U		
4-Chloroaniline	106-47-8	µg/kg	6.6 U	2.6 U			19 U	19 U	2.8 U		49 U	68 U	61 U	3.2 U		
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg	6.3 U	2.5 U			18 U	18 U	2.7 U		47 U	65 U	58 U	3 U		
4-Nitroaniline	100-01-6	µg/kg	11 U	4.2 U			31 U	30 U	4.5 U		79 U	110 U	99 U	5.1 U		
Aniline	62-53-3	µg/kg	4.7 U	1.9 U			14 U	14 U	2 U		35 U	49 U	44 U	2.3 U		
Azobenzene	103-33-3	µg/kg	7.5 U	3 U			22 U	21 U	3.2 U		56 U	78 U	70 U	3.6 U		
Benzoic acid	65-85-0	µg/kg	300 U	120 U			860 U	840 U	130 U		2300 U	3100 U	2800 U	150 U		
Benzyl alcohol	100-51-6	µg/kg	12 U	4.5 U			34 U	33 U	4.9 U		86 U	120 U	110 U	5.5 U		
Bis(2-chloroethoxy) methane	111-91-1	µg/kg	4.1 U	1.6 U			12 U	12 U	1.8 U		31 U	42 U	38 U	2 U		
Bis(2-chloroethyl) ether	111-44-4	µg/kg	7.5 U	3 U			22 U	21 U	3.2 U		56 U	78 U	70 U	3.6 U		
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg	3.8 U	1.5 U			11 U	11 U	1.6 U		28 U	39 U	35 U	1.8 U		
Carbazole	86-74-8	µg/kg	15 J	1.6 U			12 J	14 J	1.8 U		850	330	38 U	2 U		
Dibenzofuran	132-64-9	µg/kg	4.7	0.21 U			4.7	5.3	0.23 U		480	190	110	7.1		
Hexachlorobenzene	118-74-1	µg/kg	0.2 U	0.059 U			0.19 U	0.095 U	0.063 U		2 U	0.48 U	0.07 U	0.071 U		0.84 U
Hexachlorobutadiene	87-68-3	µg/kg	0.58 NJ	0.24 U			0.82 J	1.2 UJ	0.25 UJ		1.9 U	1.9 U	0.28 U	0.29 U		3.4 UJ
Hexachlorocyclopentadiene	77-47-4	µg/kg	47 U	19 U			140 U	140 U	20 U		350 U	490 U	440 U	23 U		
Hexachloroethane	67-72-1	µg/kg	0.34 J	0.66 UJ			0.27 UJ	0.33 NJ	0.29 J		1.7 U	0.52 U	0.16 U	0.17 U		0.91 UJ
Isophorone	78-59-1	µg/kg	5 U	2 U			15 U	14 U	2.1 U		38 U	52 U	47 U	2.4 U		
Nitrobenzene	98-95-3	µg/kg	6.3 U	2.5 U			18 U	18 U	2.7 U		47 U	65 U	58 U	3 U		
N-Nitrosodimethylamine	62-75-9	µg/kg	19 U	7.4 U			55 U	54 U	8.1 U		150 U	200 U	180 U	9.1 U		
N-Nitrosodiphenylamine	86-30-6	µg/kg	6.9 U	2.7 U			20 U	20 U	2.9 U		51 U	71 U	64 U	3.3 U		
N-Nitrosodipropylamine	621-64-7	µg/kg	10 U	3.9 U			29 U	28 U	4.2 U		75 U	110 U	93 U	4.8 U		
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	0.049 U	0.038 U	0.039 U		0.056 U	0.054 U	0.041 U		0.072 U	0.05 U	0.045 U	0.046 U	0.046 U	
1,1,1-Trichloroethane	71-55-6	µg/kg	0.092 U	0.072 U	0.073 U		0.11 U	0.11 U	0.078 U		0.14 U	0.095 U	0.086 U	0.088 U	0.088 U	
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	0.15 U	0.12 U	0.12 U		0.18 U	0.17 U	0.13 U		0.23 U	13 U	0.14 U	0.15 U	0.15 U	
1,1,2-Trichloroethane	79-00-5	µg/kg	0.092 U	0.072 U	0.073 U		0.11 U	0.11 U	0.078 U		0.14 U	0.095 U	0.086 U	0.088 U	0.088 U	
1,1-Dichloroethane	75-34-3	µg/kg	0.089 U	0.07 U	0.071 U		0.11 U	0.1 U	0.075 U		0.14 U	0.092 U	0.083 U	0.085 U	0.085 U	
1,2,3-Trichloropropane	96-18-4	µg/kg	0.18 U	0.14 U	0.14 U		0.2 U	0.2 U	0.15 U		0.26 U	0.18 U	0.16 U	0.17 U	0.17 U	
1,2-Dichloroethane	107-06-2	µg/kg	0.049 U	0.038 U	0.039 U		0.056 U	0.054 U	0.041 U		0.072 U	0.05 U	0.045 U	0.046 U	0.046 U	
1,2-Dichloropropane	78-87-5	µg/kg	0.055 U	0.043 U	0.044 U		0.063 U	0.061 U	0.046 U		0.082 U	0.057 U	0.051 U	0.052 U	0.052 U	
1,4-Dichloro-trans-2-butene	110-57-6	µg/kg	0.8 U	0.62 U	0.63 U		0.92 U	0.89 U	0.67 U		1.2 U	0.82 U	0.74 U	0.76 U	0.76 U	
2-Chloroethyl vinyl ether	110-75-8	µg/kg	0.24 U	0.19 U	0.19 U		0.27 U	0.27 U	0.2 U		0.35 U	0.25 U	0.22 U	0.23 U	0.23 U	
Acetone	67-64-1	µg/kg	19	9.7	8.1		31 U	5.2 U	17 U		3.8 U	29 U	14 U	21 U	140	
Acrolein	107-02-8	µg/kg	R	R	R		R	R	R		R	R	R	R	R	
Acrylonitrile	107-13-1	µg/kg	0.36 U	0.28 U	0.29 U		0.42 U	0.4 U	0.31 U		0.54 U	0.37 U	0.34 U	0.34 U	0.35 U	
Benzene	71-43-2	µg/kg	0.2 J	0.048 U	0.048 U		0.07 U	0.068 U	0.052 U		7.1	0.063 U	0.057 U	0.058 U	0.058 U	
Toluene	108-88-3	µg/kg	0.44 J	0.19 U	0.19 U		0.27 U	0.27 U	0.2 U		31	1.3 U	0.22 U	0.23 U	0.23 U	
Ethylbenzene	100-41-4	µg/kg	0.12 U	0.086 U	0.088 U		0.13 U	0.13 U	0.094 U		200	3.3	0.11 U	0.22 J	0.11 U	
m,p-Xylene	179601-23-1	µg/kg	0.21 U	0.16 U	0.16 U		0.24 U	0.23 U	0.18 U		4100	19	0.19 U	0.82 J	0.27 J	
o-Xylene	95-47-6	µg/kg	0.31 J	0.091 U	0.093 U		0.14 U	0.14 U	0.099 U		830	5.9	0.72 J	0.32 J	0.12 U	
Xylene	1330-20-7	µg/kg	0.31 JT	0.16 UT	0.16 UT		0.24 UT	0.23 UT	0.18 UT		4930 T	24.9 T	0.72 JT	1.14 JT	0.27 JT	
BTEX	BTEX	µg/kg	0.95 JT	0.19 UT	0.19 UT		0.27 UT	0.27 UT	0.2 UT		5168.1 T	28.2 T	0.72 JT	1.36 JT	0.27 JT	

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C090	C090	C090	C091	C091	C091	C091	C092	C092	C092	C092	C092	C092	C094
	X_Easting		7618913	7618913	7618913	7619196	7619196	7619196	7619196	7619867	7619867	7619867	7619867	7619867	7619867	7619640
	Y_Northing		717066	717066	717066	717075	717075	717075	717075	717041	717041	717041	717041	717041	717041	717055
	Sample ID		LW2-C090-B	LW2-C090-C	LW2-C090-D	LW2-C091-A	LW2-C091-B	LW2-C091-C	LW2-C091-D	LW2-C092-A	LW2-C092-B	LW2-C092-C	LW2-C092-D	LW2-C092-E	LW2-C092-F	LW2-C094-A
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/20/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/20/2005
	Depth Interval		30 - 112 cm	112 - 236 cm	236 - 297 cm	0 - 30 cm	30 - 143 cm	143 - 211 cm	211 - 306 cm	0 - 30 cm	30 - 152 cm	152 - 212 cm	212 - 276 cm	276 - 426 cm	426 - 515 cm	0 - 30 cm
Chemical Name	**CAS No**	**Unit**														
Bromochloromethane	74-97-5	µg/kg	0.094 U	0.073 U	0.074 U		0.11 U	0.11 U	0.079 U		0.14 U	0.097 U	0.087 U	0.089 U	0.089 U	
Bromodichloromethane	75-27-4	µg/kg	0.11 U	0.083 U	0.084 U		0.13 U	0.12 U	0.09 U		0.16 U	0.11 U	0.099 U	0.11 U	0.11 U	
Bromoform	75-25-2	µg/kg	0.072 U	0.056 U	0.057 U		0.083 U	0.08 U	0.061 U		0.11 U	0.074 U	0.067 U	0.068 U	0.069 U	
Bromomethane	74-83-9	µg/kg	0.58 U	0.45 U	0.46 U		0.67 U	0.65 U	0.49 U		0.86 U	0.6 U	0.54 U	0.55 U	0.55 U	
Carbon disulfide	75-15-0	µg/kg	0.21 U	0.16 U	0.16 U		0.29 J	0.32 J	0.18 U		0.55 J	0.28 J	0.32 J	0.2 U	0.28 J	
Carbon tetrachloride	56-23-5	µg/kg	0.16 U	0.12 U	0.13 U		0.18 U	0.18 U	0.13 U		0.23 U	0.16 U	0.15 U	0.15 U	0.15 U	
Chlorobenzene	108-90-7	µg/kg	0.11 U	0.085 U	0.087 U		0.13 U	0.13 U	0.092 U		0.17 U	0.12 U	0.11 U	0.11 U	0.11 U	
Chlorodibromomethane	124-48-1	µg/kg	0.11 U	0.083 U	0.084 U		0.13 U	0.12 U	0.09 U		0.16 U	0.11 U	0.099 U	0.11 U	0.11 U	
Chloroethane	75-00-3	µg/kg	0.44 U	0.34 U	0.35 U		0.51 U	0.49 U	0.37 U		0.65 U	0.46 U	0.41 U	0.42 U	0.42 U	
Chloroform	67-66-3	µg/kg	0.088 U	0.068 U	0.069 U		0.11 U	0.098 U	0.074 U		0.13 U	0.091 U	0.082 U	0.083 U	0.083 U	
Chloromethane	74-87-3	µg/kg	0.3 U	0.24 U	0.24 U		0.34 U	0.34 U	0.25 U		0.44 U	0.31 U	0.28 U	0.29 U	0.29 U	
cis-1,3-Dichloropropene	10061-01-5	µg/kg	0.049 U	0.038 U	0.039 U		0.056 U	0.054 U	0.041 U		0.072 U	0.05 U	0.045 U	0.046 U	0.046 U	
Dichlorodifluoromethane	75-71-8	µg/kg	0.18 U	0.14 U	0.14 U		0.2 U	0.2 U	0.15 U		0.26 U	0.18 U	0.16 U	0.17 U	0.17 U	
Ethylene dibromide	106-93-4	µg/kg	0.08 U	0.062 U	0.063 U		0.092 U	0.089 U	0.067 U		0.12 U	0.082 U	0.074 U	0.076 U	0.076 U	
Isopropylbenzene	98-82-8	µg/kg	0.069 U	0.054 U	0.055 U		0.079 U	0.077 U	0.058 U		51	2.8	0.064 U	0.065 U	0.066 U	
Methyl iodide	74-88-4	µg/kg	1.1 U	0.82 U	0.83 U		1.2 U	1.2 U	0.88 U		1.6 U	1.1 U	0.98 U	0.99 U	1 U	
Methyl isobutyl ketone	108-10-1	µg/kg	0.38 U	0.3 U	0.3 U		0.43 U	0.42 U	0.32 U		0.56 U	0.39 U	0.35 U	0.36 U	0.36 U	
Methyl N-butyl ketone	591-78-6	µg/kg	1 U	0.78 U	0.79 U		1.2 U	1.2 U	0.84 U		1.5 U	1.1 U	9.3	0.95 U	0.95 U	
Methyl tert-butyl ether	1634-04-4	µg/kg	0.061 U	0.048 U	0.048 U		0.07 U	0.068 U	0.052 U		0.091 U	0.063 U	0.057 U	0.058 U	0.058 U	
Methylene bromide	74-95-3	µg/kg	0.13 U	0.1 U	0.11 U		0.15 U	0.15 U	0.11 U		0.19 U	0.14 U	0.12 U	0.13 U	0.13 U	
Methylene chloride	75-09-2	µg/kg	3.8 U	2.7 U	2.3 U		2 U	1.9 U	4 U		0.68 U	3.6 U	2.4 U	2.6 U	6.3 U	
Methylethyl ketone	78-93-3	µg/kg	R	R	R		3.9 J	R	R		R	R	R	R	27 J	
Styrene	100-42-5	µg/kg	0.24 J	0.23 J	0.14 J		0.14 U	0.15 J	0.16 J		0.18 U	0.12 U	0.11 U	0.11 U	0.11 U	
Tetrachloroethene	127-18-4	µg/kg	0.28 J	0.12 U	0.12 U		0.18 U	0.17 U	0.13 U		3.3	0.16 U	0.14 U	0.15 U	0.15 U	
trans-1,2-Dichloroethene	156-60-5	µg/kg	0.3 U	0.24 U	0.24 U		0.34 U	0.34 U	0.25 U		0.44 U	0.31 U	0.28 U	0.29 U	0.29 U	
trans-1,3-Dichloropropene	10061-02-6	µg/kg	0.069 U	0.054 U	0.055 U		0.079 U	0.077 U	0.058 U		0.11 U	0.071 U	0.064 U	0.065 U	0.066 U	
Trichloroethene	79-01-6	µg/kg	0.097 U	0.076 U	0.077 U		0.12 U	0.11 U	0.082 U		0.15 U	0.1 U	0.09 U	0.092 U	0.092 U	
Trichlorofluoromethane	75-69-4	µg/kg	0.13 U	0.099 U	0.1 U		0.15 U	0.15 U	0.11 U		0.19 U	0.14 U	0.12 U	0.12 U	0.12 U	
Vinyl acetate	108-05-4	µg/kg	R	R	R		R	R	R		R	R	R	R	R	
Vinyl chloride	75-01-4	µg/kg	0.14 U	0.11 U	0.11 U		0.16 U	0.15 U	0.12 U		0.2 U	0.14 U	0.13 U	0.13 U	0.13 U	
Vinylidene chloride	75-35-4	µg/kg	0.13 U	0.1 U	0.11 U		0.15 U	0.15 U	0.11 U		0.19 U	0.14 U	0.12 U	0.13 U	0.13 U	

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C094	C094	C094	C096	C096	C096	C096	C099	C099	C099	C099	C103	C103	C103
	X_Easting		7619640	7619640	7619640	7617939	7617939	7617939	7617939	7618036	7618036	7618036	7618036	7618155	7618155	7618155
	Y_Northing		717055	717055	717055	716953	716953	716953	716953	716704	716704	716704	716704	716406	716406	716406
	Sample ID		LW2-C094-B	LW2-C094-C	LW2-C094-E	LW2-C096-A	LW2-C096-B	LW2-C096-C	LW2-C096-D	LW2-C099-A	LW2-C099-B	LW2-C099-C	LW2-C099-D	LW2-C103-A	LW2-C103-B	LW2-C103-D
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/25/2005	10/25/2005	10/25/2005
	Depth Interval		30 - 72 cm	72 - 198 cm	323 - 370 cm	0 - 30 cm	30 - 153 cm	153 - 274 cm	274 - 379 cm	0 - 30 cm	30 - 152 cm	152 - 305 cm	305 - 368 cm	0 - 30 cm	30 - 153 cm	274 - 363 cm
Chemical Name	**CAS No**	**Unit**														
PCB Aroclors																
Aroclor 1016	12674-11-2	µg/kg	21 U	1.7 U			430 U	1.5 U			2.1 U	1.9 U			2 U	1.9 U
Aroclor 1221	11104-28-2	µg/kg	21 U	1.7 U			110 U	1.5 U			2.1 U	1.9 U			2 U	1.9 U
Aroclor 1232	11141-16-5	µg/kg	21 U	1.7 U			410 U	1.5 U			2.1 U	1.9 U			2 U	1.9 U
Aroclor 1242	53469-21-9	µg/kg	21 U	1.7 U			330 U	1.5 U			2.1 U	1.9 U			2 U	1.9 U
Aroclor 1248	12672-29-6	µg/kg	21 U	1.7 U			460 U	1.5 U			2.1 U	1.9 U			2 U	1.9 U
Aroclor 1254	11097-69-1	µg/kg	1300	3.4 J			630 J	1.5 U			330	190 U			77 J	130 U
Aroclor 1260	11096-82-5	µg/kg	690	1.7 U			270 U	1.5 U			2.1 U	130			49	91 U
Aroclor 1262	37324-23-5	µg/kg	21 U	1.7 U			15 U	1.5 U			2.1 U	1.9 U			2 U	1.9 U
Aroclor 1268	11100-14-4	µg/kg	21 U	1.7 U			15 U	1.5 U			2.1 U	1.9 U			2 U	33 J
Total PCB Aroclors	12767-79-2	µg/kg	1990 T	3.4 JT			630 JT	1.5 UT			330 T	130 T			126 JT	33 JT
Butyltins																
Butyltin ion	78763-54-9	µg/kg	5	0.046 U			0.24 J	0.04 U			1.6 J	0.14 J			1.2 J	0.68 J
Dibutyltin ion	14488-53-0	µg/kg	39	0.2 U			1.7	0.064 U			21	0.71 J			12	1.9
Tributyltin ion	36643-28-4	µg/kg	140	0.086 U			7.2	0.27 U			40	0.42 U			32	0.53 U
Tetrabutyltin	1461-25-2	µg/kg	1.9 J	0.11 U			0.091 U	0.093 U			0.13 U	0.12 U			0.13 U	0.12 U
Conventionals																
Total solids	TSO	percent	53.4	65.7 T	64	56.3	77.3	75.6	78.4	52	54.4	58.7	78.4	52.5	57.3	60.5
Total organic carbon	TOC	percent	2.04	2.81			0.687 T	0.16			2.56	2.4			2.77	1.87
Specific gravity	SPEC_GRAV	NA	1.51	1.7			1.92 T	2.01			1.51	1.57			1.56	1.56
PCDD/F Homologs																
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g	2.036	0.047 UT												
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g	3.261	0.043 UT												
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g	28.523	0.066 UT												
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g	172.379	0.191 T												
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g	722.19	1.83 JT												
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g	12.216	0.038 UT												
Pentachlorodibenzofuran homologs	30402-15-4	pg/g	12.264	0.034 UT												
Hexachlorodibenzofuran homologs	55684-94-1	pg/g	34.783	0.041 UT												
Heptachlorodibenzofuran homologs	38998-75-3	pg/g	51.33	0.05 UT												
Octachlorodibenzofuran	39001-02-0	pg/g	35.431	0.193 UT												
PCDD/Fs																
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g	0.212 J	0.047 UT												
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g	0.496 J	0.043 UT												
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g	0.601 U	0.058 UT												
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g	4.727	0.066 UT												
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g	2.138	0.062 UT												
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g	74.127	0.084 UT												
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g	722.19	1.83 JT												
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g	1.599	0.038 UT												
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g	1.596 J	0.033 UT												
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g	1.166 J	0.034 UT												
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g	2.579	0.039 UT												

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C094	C094	C094	C096	C096	C096	C096	C099	C099	C099	C099	C103	C103	C103
	X_Easting		7619640	7619640	7619640	7617939	7617939	7617939	7617939	7618036	7618036	7618036	7618036	7618155	7618155	7618155
	Y_Northing		717055	717055	717055	716953	716953	716953	716953	716704	716704	716704	716704	716406	716406	716406
	Sample ID		LW2-C094-B	LW2-C094-C	LW2-C094-E	LW2-C096-A	LW2-C096-B	LW2-C096-C	LW2-C096-D	LW2-C099-A	LW2-C099-B	LW2-C099-C	LW2-C099-D	LW2-C103-A	LW2-C103-B	LW2-C103-D
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/25/2005	10/25/2005	10/25/2005
	Depth Interval		30 - 72 cm	72 - 198 cm	323 - 370 cm	0 - 30 cm	30 - 153 cm	153 - 274 cm	274 - 379 cm	0 - 30 cm	30 - 152 cm	152 - 305 cm	305 - 368 cm	0 - 30 cm	30 - 153 cm	274 - 363 cm
Chemical Name	**CAS No**	**Unit**														
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g	1.115	0.041 UT												
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g	0.223 U	0.065 UT												
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g	0.816 J	0.042 UT												
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g	16.631	0.05 UT												
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g	0.95 J	0.087 UT												
Octachlorodibenzofuran	39001-02-0	pg/g	35.431	0.193 UT												
Grain Size																
Medium gravel	GS_MG	percent	0	0			0	0			0	0			0	0
Fine gravel	GS_FG	percent	1.64	0.04			0.19	0.27			0.28	0.1			0.12	0.05
Very coarse sand	GS_VCS	percent	1.25	0.71			0.46	0.94			0.25	0.38			0.18	0.31
Coarse sand	GS_CS	percent	1.65	0.67			9.48	26.9			0.75	1.27			1.35	0.29
Medium sand	GS_MS	percent	5.23	0.68			61.2	54.3			2.99	6.6			13.8	0.47
Fine sand	GS_FS	percent	14.9	10.4			22	11.2			4.15	6.94			10	1.31
Very fine sand	GS_VFS	percent	17.3	23.3			3.31	2.57			15	15.9			11.2	8.11
Coarse silt	GS_CSILT	percent	10.9	18.7			1.14	1.12			20.2	15.7			15.2	12.9
Medium silt	GS_MSILT	percent	10.2	12.3			0.51	1.29			21.2	14.2			19.1	26
Fine silt	GS_FSILT	percent	9.11	9.7			0.47	0.65			12.7	10			10.8	16.6
Very fine silt	GS_VFSILT	percent	9.78	7.04			0.5	0.65			6.72	7.45			7.78	14
8-9 Phi clay	GS_CCLAY	percent	7.95	5.21			0.29	0.31			4.24	5.34			4.3	9.08
>9 Phi clay	GS_MFCLAY	percent	11	11.7			0.41	0.78			9.48	9.69			8.07	12.7
Chlorinated Herbicides																
2,4,5-T	93-76-5	µg/kg														
2,4-D	94-75-7	µg/kg														
2,4-DB	94-82-6	µg/kg														
Dalapon	75-99-0	µg/kg														
Dicamba	1918-00-9	µg/kg														
Dichloroprop	120-36-5	µg/kg														
Dinoseb	88-85-7	µg/kg														
MCPA	94-74-6	µg/kg														
MCPP	93-65-2	µg/kg														
Silvex	93-72-1	µg/kg														
Metals																
Aluminum	7429-90-5	mg/kg	28900	29400			11000	9510			28200	24100 T			27200	27600
Antimony	7440-36-0	mg/kg	1.41 J	0.15 J			0.32 J	0.1 J			0.34 J	0.325 JT			0.28 J	0.27 J
Arsenic	7440-38-2	mg/kg	5.7	2.66			4.24	2.51			4.02	3.22 T			4.04	3.74
Cadmium	7440-43-9	mg/kg	0.895	0.12			0.268	0.062			0.49	0.545 T			0.389	0.527
Chromium	7440-47-3	mg/kg	60	35.7			17.2	15.4			36.4	33 T			34.4	36
Chromium hexavalent	18540-29-9	mg/kg														
Copper	7440-50-8	mg/kg	85.1 J	33.2 J			16.6	13.9			53.5	45.1 T			44.5	49.2
Lead	7439-92-1	mg/kg	101	6.32			16.9 J	3.81 J			35.7 J	32.4 JT			29.2	27.9
Mercury	7439-97-6	mg/kg	0.384	0.061			0.075	0.0155 JT			0.131	0.411			0.107	0.115
Nickel	7440-02-0	mg/kg	36.6 J	30.2 J			19.4	16.3			27.5	25.8 T			28.9	29.2
Selenium	7782-49-2	mg/kg	0.12	0.04 J			0.03 U	0.03 U			0.05 U	0.13 UT			0.06 U	0.1 U
Silver	7440-22-4	mg/kg	0.602 J	0.35 J			0.157	0.091			0.405	0.448 T			0.511	0.812
Zinc	7440-66-6	mg/kg	347	65.3			81.4	49.5			213	179 T			173	155

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C094	C094	C094	C096	C096	C096	C096	C099	C099	C099	C099	C103	C103	C103
	X_Easting		7619640	7619640	7619640	7617939	7617939	7617939	7617939	7618036	7618036	7618036	7618036	7618155	7618155	7618155
	Y_Northing		717055	717055	717055	716953	716953	716953	716953	716704	716704	716704	716704	716406	716406	716406
	Sample ID		LW2-C094-B	LW2-C094-C	LW2-C094-E	LW2-C096-A	LW2-C096-B	LW2-C096-C	LW2-C096-D	LW2-C099-A	LW2-C099-B	LW2-C099-C	LW2-C099-D	LW2-C103-A	LW2-C103-B	LW2-C103-D
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/25/2005	10/25/2005	10/25/2005
	Depth Interval		30 - 72 cm	72 - 198 cm	323 - 370 cm	0 - 30 cm	30 - 153 cm	153 - 274 cm	274 - 379 cm	0 - 30 cm	30 - 152 cm	152 - 305 cm	305 - 368 cm	0 - 30 cm	30 - 153 cm	274 - 363 cm
Chemical Name	**CAS No**	**Unit**														
Polycyclic Aromatic Hydrocarbons																
2-Methylnaphthalene	91-57-6	µg/kg	13	0.52 U			93	0.74 U			25	230			15	68
Acenaphthene	83-32-9	µg/kg	120	0.66 J			62	2.1 J			42	320			20	100
Acenaphthylene	208-96-8	µg/kg	28	0.34 U			130	4			36	100			6.7	38
Anthracene	120-12-7	µg/kg	84	0.34 U			140	6.7			46	340			17	160
Fluorene	86-73-7	µg/kg	78	0.29 U			69	2.1 J			31	260			15	75
Naphthalene	91-20-3	µg/kg	44	0.54 U	0.55 U		350	5.2	0.45 U		75	880	0.45 U		35	190
Phenanthrene	85-01-8	µg/kg	620	2.8			2400	28			210	2000			72	740
Dibenz(a,h)anthracene	53-70-3	µg/kg	70	0.4 U			240	1.2 J			40	97			9.8	43
Benz(a)anthracene	56-55-3	µg/kg	390	0.73 J			2300	15			220	800			56	360
Benzo(a)pyrene	50-32-8	µg/kg	510	0.34 U			3000	14			320	1100			78	540
Benzo(b)fluoranthene	205-99-2	µg/kg	450	0.74 U			1500	8.3			230	630			66	350
Benzo(g,h,i)perylene	191-24-2	µg/kg	490	0.36 U			2000	9.7			280	1000			67	530
Benzo(k)fluoranthene	207-08-9	µg/kg	360	0.51 U			1700	7.3			190	680			52	280
Chrysene	218-01-9	µg/kg	600	0.86 J			3100	21			300	1100			75	480
Fluoranthene	206-44-0	µg/kg	990	1.9 J			5300	26			420	2100			100	1100
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	460	0.37 U			1900	8			260	860			66	460
Pyrene	129-00-0	µg/kg	1200	2 J			6700	46			530	2800			130	1500
Low Molecular Weight PAHs	LPAH	µg/kg	987 T	3.46 JT			3240 T	48.1 JT			465 T	4130 T			181 T	1370 T
High Molecular Weight PAHs	HPAH	µg/kg	5520 T	5.49 JT			27700 T	157 JT			2790 T	11200 T			700 T	5640 T
Total PAHs	130498-29-2	µg/kg	6510 T	8.95 JT			31000 T	205 JT			3260 T	15300 T			881 T	7010 T
Chlorinated Pesticides																
2,4'-DDD	53-19-0	µg/kg	24 U	0.2 U			6.5 U	0.11 U			5.9 U	34 J			1.4 U	10 J
2,4'-DDE	3424-82-6	µg/kg	14 U	0.2 U			15 U	0.075 U			0.47 U	2 U			0.33 U	0.093 U
2,4'-DDT	789-02-6	µg/kg	58 J	0.15 U			18 J	0.06 U			14 J	14 U			2.2	3.2 NJ
4,4'-DDD	72-54-8	µg/kg	11	0.13 U			3.6	0.11 U			19	53			2.3 J	41 J
4,4'-DDE	72-55-9	µg/kg	10 NJ	0.2 U			1.6 U	0.057 U			12 NJ	19 J			3 J	14 NJ
4,4'-DDT	50-29-3	µg/kg	59	0.22 U			9.7 U	0.19 U			19 J	380			3.1 J	170 J
Total of 4,4'-DDD, -DDE, -DDT	PP_DDT3ISO	µg/kg	80 JT	0.22 UT			3.6 T	0.19 UT			50 JT	452 JT			8.4 JT	225 JT
Aldrin	309-00-2	µg/kg	1.8 U	0.15 U			0.13 U	0.13 U			0.18 U	3.2 U			0.21 UJ	0.2 UJ
alpha-Hexachlorocyclohexane	319-84-6	µg/kg	1.5 U	0.12 U			0.1 U	0.11 U			0.23 U	2.7 U			0.14 U	0.13 U
beta-Hexachlorocyclohexane	319-85-7	µg/kg	2.3 U	0.19 U			0.21 U	0.16 U			0.23 U	4.1 U			0.27 U	0.2 U
delta-Hexachlorocyclohexane	319-86-8	µg/kg	1.1 U	0.089 U			5.1 U	0.077 U			0.11 U	2 U			0.11 U	0.096 U
gamma-Hexachlorocyclohexane	58-89-9	µg/kg	1.8 U	0.15 U			6.9 J	0.13 U			0.21 U	3.2 U			0.17 U	0.43 U
cis-Chlordane	5103-71-9	µg/kg	0.92 U	0.075 U			0.2 U	0.065 U			1.1 U	1.7 U			0.086 UJ	0.2 UJ
trans-Chlordane	5103-74-2	µg/kg	22 J	0.12 U			6.1 J	0.067 U			7.5 J	13 NJ			1.4 UJ	1.4 UJ
Oxychlordane	27304-13-8	µg/kg	1.3 U	0.11 U			0.36 U	0.089 U			0.13 U	2.3 U			0.13 J	0.56 NJ
cis-Nonachlor	5103-73-1	µg/kg	3.2 U	0.074 U			0.55 U	0.064 U			0.33 U	2.7 U			0.33 U	0.71 U
trans-Nonachlor	39765-80-5	µg/kg	13 U	0.048 U			2.9 U	0.042 U			0.29 U	2.8 U			0.23 U	0.2 U
Total Chlordanes	TOTCHLDANE	µg/kg	22 JT	0.12 UT			6.1 JT	0.089 UT			7.5 JT	13 JT			0.13 JT	0.56 JT
Dieldrin	60-57-1	µg/kg	12 U	0.2 U			1.2 U	0.11 U			1.6 U	2.8 U			1.3 UJ	3.6 UJ
alpha-Endosulfan	959-98-8	µg/kg	3.1 U	0.058 U			9.5 J	0.051 U			0.38 U	1.3 U			0.067 U	0.069 U
beta-Endosulfan	33213-65-9	µg/kg	2.8 U	0.089 U			0.32 U	0.077 U			0.35 U	2 U			0.2 UJ	0.42 UJ
Endosulfan sulfate	1031-07-8	µg/kg	1.2 U	0.092 U			0.078 U	0.08 U			0.12 U	2.1 U			0.11 U	0.1 U
Endrin	72-20-8	µg/kg	6.3 J	0.099 U			1.9 J	0.086 U			1.9 NJ	2.3 U			0.12 UJ	0.2 UJ

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C094	C094	C094	C096	C096	C096	C096	C099	C099	C099	C099	C103	C103	C103
	X_Easting		7619640	7619640	7619640	7617939	7617939	7617939	7617939	7618036	7618036	7618036	7618036	7618155	7618155	7618155
	Y_Northing		717055	717055	717055	716953	716953	716953	716953	716704	716704	716704	716704	716406	716406	716406
	Sample ID		LW2-C094-B	LW2-C094-C	LW2-C094-E	LW2-C096-A	LW2-C096-B	LW2-C096-C	LW2-C096-D	LW2-C099-A	LW2-C099-B	LW2-C099-C	LW2-C099-D	LW2-C103-A	LW2-C103-B	LW2-C103-D
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/25/2005	10/25/2005	10/25/2005
	Depth Interval		30 - 72 cm	72 - 198 cm	323 - 370 cm	0 - 30 cm	30 - 153 cm	153 - 274 cm	274 - 379 cm	0 - 30 cm	30 - 152 cm	152 - 305 cm	305 - 368 cm	0 - 30 cm	30 - 153 cm	274 - 363 cm
Chemical Name	**CAS No**	**Unit**														
Endrin aldehyde	7421-93-4	µg/kg	4.2 NJ	0.11 U			1.4 J	0.093 U			0.93 NJ	2.4 U			0.2 U	0.2 U
Endrin ketone	53494-70-5	µg/kg	1.1 U	0.086 U			0.16 U	0.075 U			0.11 U	7.3 U			1.6 NJ	3.3 NJ
Heptachlor	76-44-8	µg/kg	1.1 U	0.089 U			0.076 U	0.077 U			0.11 U	2 U			0.11 UJ	0.096 UJ
Heptachlor epoxide	1024-57-3	µg/kg	5.3 U	0.2 U			1.3 U	0.088 U			0.13 U	2.3 U			1.1 NJ	0.11 UJ
Methoxychlor	72-43-5	µg/kg	4.5 U	0.092 U			0.078 U	0.08 U			0.2 U	2.1 U			0.49 U	0.58 U
Mirex	2385-85-5	µg/kg	17	0.069 U			0.2 U	0.06 U			0.2 U	1.6 U			0.079 U	0.2 U
Toxaphene	8001-35-2	µg/kg	650 U	20 U			180 U	7.9 U			310 U	300 U			36 U	110 U
Petroleum Hydrocarbons																
Gasoline range hydrocarbons	GRH	mg/kg	6.5 J	1.6 U	1.6 UT	1.8 UT	1.3 U	1.4 U	1.3 U	2 U	1.9 U	9.9 J	1.3 U	2 U	1.8 U	37 J
Diesel range hydrocarbons	DRH	mg/kg	700 J	5.2 U		72 J	70 J	4.5 U		84 J	220 J	600 J		76 J	170 J	700 J
Residual range hydrocarbons	RRH	mg/kg	2200 J	34 J		270 J	130 J	10 J		360 J	630 J	1100 J		310 J	440 J	1400 J
Total petroleum hydrocarbons	TPH	mg/kg	2910 JT	34 JT		342 JT	200 JT	10 JT		444 JT	850 JT	1710 JT		386 JT	610 JT	2140 JT
Phenols																
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg	8.1 U	0.66 U			22 U	0.57 U			6.6 U	8.6 U			3.7 U	0.72 U
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg	7.9 U	0.64 U			2.8 U	0.56 U			1.1 U	1.1 U			0.74 U	0.7 U
2,4,5-Trichlorophenol	95-95-4	µg/kg	6.2 U	0.51 U			2.2 U	2.3 J			6 J	6.6 U			2 U	4.4 U
2,4,6-Trichlorophenol	88-06-2	µg/kg	4.7 U	0.39 U			1.7 U	0.34 U			0.46 U	0.43 U			0.44 U	0.42 U
2,4-Dichlorophenol	120-83-2	µg/kg	17 U	2.8 U			4.7 U	2.4 U			6.7 U	62 U			6.3 U	15 U
2,4-Dimethylphenol	105-67-9	µg/kg	52 U	8.4 U			15 U	7.3 U			21 U	190 U			20 U	46 U
2,4-Dinitrophenol	51-28-5	µg/kg	340 U	55 U			94 U	48 U			140 U	1300 U			130 U	300 U
2-Chlorophenol	95-57-8	µg/kg	16 U	2.6 U			4.4 U	2.3 U			6.3 U	58 U			6 U	15 U
2-Methylphenol	95-48-7	µg/kg	32 U	5.2 U			8.8 U	4.5 U			13 U	120 U			12 U	29 U
2-Nitrophenol	88-75-5	µg/kg	25 U	4 U			6.8 U	3.5 U			9.6 U	89 U			9.1 U	22 U
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	16 U	2.6 U			4.4 U	2.3 U			6.3 U	58 U			6 U	15 U
4-Chloro-3-methylphenol	59-50-7	µg/kg	20 U	3.2 U			5.5 U	2.8 U			7.8 U	72 U			7.4 U	18 U
4-Methylphenol	106-44-5	µg/kg	28 U	4.5 U			20 J	3.9 U			38	240			16 J	78
4-Nitrophenol	100-02-7	µg/kg	290 U	46 U			78 U	40 U			120 U	1100 U			110 U	250 U
Pentachlorophenol	87-86-5	µg/kg	8.7 U	0.71 U			3 U	0.61 U			1.7 J	0.79 U			0.81 U	5 J
Phenol	108-95-2	µg/kg	18 U	2.9 U			19 U	6.7 U			11 U	65 U			6.7 U	16 U
Phthalates																
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	1500	23 U			20 U	7.3 U			3600	73 U			62 U	15 U
Butylbenzyl phthalate	85-68-7	µg/kg	120	2.3 U			3.9 U	2 U			62	52 U			17 J	13 U
Dibutyl phthalate	84-74-2	µg/kg	57 U	5.1 U			6.8 U	6.5 U			17 U	89 U			9.1 U	22 U
Diethyl phthalate	84-66-2	µg/kg	33 U	5.4 U			9.1 U	4.7 U			13 U	120 U			13 U	29 U
Dimethyl phthalate	131-11-3	µg/kg	17 U	2.8 U			4.7 U	2.4 U			6.7 U	62 U			6.3 U	15 U
Di-n-octyl phthalate	117-84-0	µg/kg	12 U	1.9 U			3.2 U	1.6 U			4.5 U	41 U			4.2 U	10 U
Semivolatile Organic Compounds																
1,2,4-Trichlorobenzene	120-82-1	µg/kg	15 U	2.3 U			3.9 U	2 U			5.6 U	52 U			5.3 U	13 U
1,2-Dichlorobenzene	95-50-1	µg/kg	13 U	2 U			3.4 U	1.8 U			4.8 U	45 U			4.6 U	11 U
1,3-Dichlorobenzene	541-73-1	µg/kg	15 U	2.5 U			4.2 U	2.2 U			5.9 U	55 U			5.6 U	14 U
1,4-Dichlorobenzene	106-46-7	µg/kg	0.23 U	0.19 U	0.19 U		0.16 U	0.16 U	0.16 U		0.23 U	0.21 U	0.16 U		0.21 U	0.2 U
2,4-Dinitrotoluene	121-14-2	µg/kg	27 U	4.3 U			7.3 U	3.8 U			11 U	96 U			9.8 U	24 U
2,6-Dinitrotoluene	606-20-2	µg/kg	27 U	4.3 U			7.3 U	3.8 U			11 U	96 U			9.8 U	24 U
2-Chloronaphthalene	91-58-7	µg/kg	34 U	5.5 U			9.4 U	4.8 U			14 U	130 U			13 U	30 U

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C094	C094	C094	C096	C096	C096	C096	C099	C099	C099	C099	C103	C103	C103
	X_Easting		7619640	7619640	7619640	7617939	7617939	7617939	7617939	7618036	7618036	7618036	7618036	7618155	7618155	7618155
	Y_Northing		717055	717055	717055	716953	716953	716953	716953	716704	716704	716704	716704	716406	716406	716406
	Sample ID		LW2-C094-B	LW2-C094-C	LW2-C094-E	LW2-C096-A	LW2-C096-B	LW2-C096-C	LW2-C096-D	LW2-C099-A	LW2-C099-B	LW2-C099-C	LW2-C099-D	LW2-C103-A	LW2-C103-B	LW2-C103-D
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/25/2005	10/25/2005	10/25/2005
	Depth Interval		30 - 72 cm	72 - 198 cm	323 - 370 cm	0 - 30 cm	30 - 153 cm	153 - 274 cm	274 - 379 cm	0 - 30 cm	30 - 152 cm	152 - 305 cm	305 - 368 cm	0 - 30 cm	30 - 153 cm	274 - 363 cm
Chemical Name	**CAS No**	**Unit**														
2-Nitroaniline	88-74-4	µg/kg	26 U	4.2 U			7 U	3.6 U			10 U	92 U			9.5 U	23 U
3,3'-Dichlorobenzidine	91-94-1	µg/kg	35 U	5.7 U			9.6 U	4.9 U			14 U	130 U			13 U	31 U
3-Nitroaniline	99-09-2	µg/kg	25 U	4 U			6.8 U	3.5 U			9.6 U	89 U			9.1 U	22 U
4-Bromophenyl phenyl ether	101-55-3	µg/kg	14 U	2.2 U			3.7 U	1.9 U			5.2 U	48 U			4.9 U	12 U
4-Chloroaniline	106-47-8	µg/kg	20 U	3.2 U			5.5 U	2.8 U			7.8 U	72 U			7.4 U	18 U
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg	19 U	3.1 U			5.2 U	2.7 U			7.4 U	69 U			7 U	17 U
4-Nitroaniline	100-01-6	µg/kg	32 U	5.2 U			8.8 U	4.5 U			13 U	120 U			12 U	29 U
Aniline	62-53-3	µg/kg	15 U	2.3 U			3.9 U	2 U			5.6 U	52 U			5.3 U	13 U
Azobenzene	103-33-3	µg/kg	23 U	3.7 U			6.3 U	3.2 U			8.9 U	82 U			8.4 U	20 U
Benzoic acid	65-85-0	µg/kg	900 U	150 U			250 U	130 U			360 U	3300 U			340 U	800 U
Benzyl alcohol	100-51-6	µg/kg	35 U	5.7 U			9.6 U	4.9 U			14 U	130 U			13 U	31 U
Bis(2-chloroethoxy) methane	111-91-1	µg/kg	13 U	2 U			3.4 U	1.8 U			4.8 U	45 U			4.6 U	11 U
Bis(2-chloroethyl) ether	111-44-4	µg/kg	23 U	3.7 U			6.3 U	3.2 U			8.9 U	82 U			8.4 U	20 U
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg	12 U	1.9 U			3.2 UJ	1.6 U			4.5 UJ	41 U			4.2 U	10 U
Carbazole	86-74-8	µg/kg	25 J	2 U			20 J	1.8 U			15 J	45 U			5.7 J	11 U
Dibenzofuran	132-64-9	µg/kg	16	0.26 U			15	0.82 J			16	120			8.1	19
Hexachlorobenzene	118-74-1	µg/kg	0.9 U	0.074 U			1.3 U	0.064 U			0.089 U	1.7 U			0.084 U	0.08 U
Hexachlorobutadiene	87-68-3	µg/kg	3.6 UJ	0.6 UJ			0.47 J	0.26 UJ			0.35 UJ	6.5 UJ			0.34 U	0.32 U
Hexachlorocyclopentadiene	77-47-4	µg/kg	150 U	23 U			39 U	20 U			56 U	520 U			53 U	130 U
Hexachloroethane	67-72-1	µg/kg	0.98 UJ	0.35 UJ			0.2 UJ	0.32 UJ			0.2 UJ	1.8 UJ			0.45	0.2 U
Isophorone	78-59-1	µg/kg	15 U	2.5 U			4.2 U	2.2 U			5.9 U	55 U			5.6 U	14 U
Nitrobenzene	98-95-3	µg/kg	19 U	3.1 U			5.2 U	2.7 U			7.4 U	69 U			7 U	17 U
N-Nitrosodimethylamine	62-75-9	µg/kg	58 U	9.3 U			16 U	8.1 U			23 U	210 U			22 U	51 U
N-Nitrosodiphenylamine	86-30-6	µg/kg	21 U	3.4 U			5.7 U	3 U			9.5 J	98 J			7.7 U	19 U
N-Nitrosodipropylamine	621-64-7	µg/kg	30 U	4.9 U			8.3 U	4.3 U			12 U	110 U			12 U	27 U
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	0.059 U	0.048 U	0.049 U		0.041 U	0.042 U	0.04 U		0.057 U	0.053 U	0.04 U		0.055 U	0.052 U
1,1,1-Trichloroethane	71-55-6	µg/kg	0.12 U	0.09 U	0.093 U		0.077 U	0.079 U	0.076 U		0.11 U	0.11 U	0.076 U		0.11 U	0.098 U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	0.18 U	0.15 U	0.15 U		0.13 U	0.13 U	0.13 U		0.18 U	3.1 U	0.13 U		0.17 U	4.7 U
1,1,2-Trichloroethane	79-00-5	µg/kg	0.12 U	0.09 U	0.093 U		0.077 U	0.079 U	0.076 U		0.11 U	0.11 U	0.076 U		0.11 U	0.098 U
1,1-Dichloroethane	75-34-3	µg/kg	0.11 U	0.087 U	0.09 U		0.074 U	0.076 U	0.073 U		0.11 U	0.098 U	0.073 U		0.1 U	0.095 U
1,2,3-Trichloropropane	96-18-4	µg/kg	0.21 U	0.17 U	0.18 U		0.15 U	0.15 U	0.15 U		0.21 U	0.19 U	0.15 U		0.2 U	0.19 U
1,2-Dichloroethane	107-06-2	µg/kg	0.059 U	0.048 U	0.049 U		0.041 U	0.042 U	0.04 U		0.057 U	0.053 U	0.04 U		0.055 U	0.052 U
1,2-Dichloropropane	78-87-5	µg/kg	0.066 U	0.054 U	0.055 U		0.046 U	0.047 U	0.045 U		0.065 U	0.06 U	0.045 U		0.062 U	0.058 U
1,4-Dichloro-trans-2-butene	110-57-6	µg/kg	0.96 U	0.78 U	0.8 U		0.66 U	0.68 U	0.66 U		0.94 U	0.87 U	0.66 U		0.9 U	0.85 U
2-Chloroethyl vinyl ether	110-75-8	µg/kg	0.29 U	0.23 U	0.24 U		0.2 U	0.2 U	0.2 U		0.28 U	0.26 U	0.2 U		0.27 U	0.25 U
Acetone	67-64-1	µg/kg	44 U	21 U	47 U		12 U	44 U	17 U		28 U	19 U	42 U		25	23
Acrolein	107-02-8	µg/kg	R	R	R		R	R	R		R	R	R		R	R
Acrylonitrile	107-13-1	µg/kg	0.44 U	0.36 U	0.36 U		0.3 U	0.31 U	0.3 U		0.43 U	0.4 U	0.3 U		0.41 U	0.39 U
Benzene	71-43-2	µg/kg	0.074 U	0.087 J	0.062 J		0.11 J	0.052 U	0.05 U		0.072 U	0.067 U	0.05 U		0.069 U	0.065 U
Toluene	108-88-3	µg/kg	0.29 U	0.23 U	0.24 U		0.25 U	0.2 U	0.2 U		0.28 U	0.26 U	0.2 U		0.27 U	0.25 U
Ethylbenzene	100-41-4	µg/kg	0.14 U	0.11 U	0.12 U		0.092 U	0.094 U	0.091 U		0.14 U	0.13 U	0.091 U		0.13 U	0.12 U
m,p-Xylene	179601-23-1	µg/kg	0.25 U	0.2 U	0.21 U		0.17 U	0.18 U	0.17 U		0.24 U	0.23 U	0.17 U		0.23 U	0.22 U
o-Xylene	95-47-6	µg/kg	0.18 J	0.12 U	0.12 U		0.098 U	0.1 U	0.096 U		0.14 U	0.13 U	0.096 U		0.14 U	0.17 J
Xylene	1330-20-7	µg/kg	0.18 JT	0.2 UT	0.21 UT		0.17 UT	0.18 UT	0.17 UT		0.24 UT	0.23 UT	0.17 UT		0.23 UT	0.17 JT
BTEX	BTEX	µg/kg	0.18 JT	0.087 JT	0.062 JT		0.11 JT	0.2 UT	0.2 UT		0.28 UT	0.26 UT	0.2 UT		0.27 UT	0.17 JT

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C094	C094	C094	C096	C096	C096	C096	C099	C099	C099	C099	C103	C103	C103
	X_Easting		7619640	7619640	7619640	7617939	7617939	7617939	7617939	7618036	7618036	7618036	7618036	7618155	7618155	7618155
	Y_Northing		717055	717055	717055	716953	716953	716953	716953	716704	716704	716704	716704	716406	716406	716406
	Sample ID		LW2-C094-B	LW2-C094-C	LW2-C094-E	LW2-C096-A	LW2-C096-B	LW2-C096-C	LW2-C096-D	LW2-C099-A	LW2-C099-B	LW2-C099-C	LW2-C099-D	LW2-C103-A	LW2-C103-B	LW2-C103-D
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/20/2005	10/20/2005	10/20/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/24/2005	10/25/2005	10/25/2005	10/25/2005
	Depth Interval		30 - 72 cm	72 - 198 cm	323 - 370 cm	0 - 30 cm	30 - 153 cm	153 - 274 cm	274 - 379 cm	0 - 30 cm	30 - 152 cm	152 - 305 cm	305 - 368 cm	0 - 30 cm	30 - 153 cm	274 - 363 cm
Chemical Name	**CAS No**	**Unit**														
Bromochloromethane	74-97-5	µg/kg	0.12 U	0.092 U	0.094 U		0.078 U	0.08 U	0.077 U		0.12 U	0.11 U	0.077 U		0.11 U	0.1 U
Bromodichloromethane	75-27-4	µg/kg	0.13 U	0.11 U	0.11 U		0.088 U	0.09 U	0.087 U		0.13 U	0.12 U	0.087 U		0.12 U	0.12 U
Bromoform	75-25-2	µg/kg	0.087 U	0.071 U	0.072 U		0.06 U	0.061 U	0.059 U		0.085 U	0.079 U	0.059 U		0.081 U	0.077 U
Bromomethane	74-83-9	µg/kg	0.7 U	0.57 U	0.58 U		0.48 U	0.49 U	0.48 U		0.69 U	0.64 U	0.48 U		0.65 U	0.62 U
Carbon disulfide	75-15-0	µg/kg	0.42 J	0.2 U	0.21 U		0.3 J	0.24 J	0.17 U		0.24 U	0.23 U	0.2 J		0.23 U	0.33 J
Carbon tetrachloride	56-23-5	µg/kg	0.19 U	0.16 U	0.16 U		0.13 U	0.14 U	0.13 U		0.19 U	0.17 U	0.13 U		0.18 U	0.17 U
Chlorobenzene	108-90-7	µg/kg	0.14 U	0.11 U	0.11 U		0.091 U	0.093 U	0.09 U		0.13 U	0.12 U	0.09 U		0.13 U	0.12 U
Chlorodibromomethane	124-48-1	µg/kg	0.13 U	0.11 U	0.11 U		0.088 U	0.09 U	0.087 U		0.13 U	0.12 U	0.087 U		0.12 U	0.12 U
Chloroethane	75-00-3	µg/kg	0.53 U	0.43 U	0.44 U		0.37 U	0.38 U	0.36 U		0.52 U	0.48 U	0.36 U		0.49 U	0.47 U
Chloroform	67-66-3	µg/kg	0.11 U	0.086 U	0.088 U		0.073 U	0.075 U	0.072 U		0.11 U	0.096 U	0.072 U		0.098 U	0.093 U
Chloromethane	74-87-3	µg/kg	0.36 U	0.29 U	0.3 U		0.25 U	0.26 U	0.25 U		0.35 U	0.33 U	0.25 U		0.34 U	0.32 U
cis-1,3-Dichloropropene	10061-01-5	µg/kg	0.059 U	0.048 U	0.049 U		0.041 U	0.042 U	0.04 U		0.057 U	0.053 U	0.04 U		0.055 U	0.052 U
Dichlorodifluoromethane	75-71-8	µg/kg	0.21 U	0.17 U	0.18 U		0.15 U	0.15 U	0.15 U		0.21 U	0.19 U	0.15 U		0.2 U	0.19 UJ
Ethylene dibromide	106-93-4	µg/kg	0.096 U	0.078 U	0.08 U		0.066 U	0.068 U	0.066 U		0.094 U	0.087 U	0.066 U		0.09 U	0.085 U
Isopropylbenzene	98-82-8	µg/kg	0.083 U	0.067 U	0.069 U		0.057 U	0.059 U	0.057 U		0.081 U	0.075 U	0.057 U		0.077 U	0.19 J
Methyl iodide	74-88-4	µg/kg	1.3 U	1.1 U	1.1 U		0.87 U	0.89 U	0.86 U		1.3 U	1.2 U	0.86 U		1.2 U	1.2 U
Methyl isobutyl ketone	108-10-1	µg/kg	0.45 U	0.37 U	0.38 U		0.32 U	0.32 U	0.31 U		0.45 U	0.41 U	0.31 U		0.42 U	0.4 U
Methyl N-butyl ketone	591-78-6	µg/kg	1.2 U	0.98 U	1 U		0.83 U	0.85 U	0.82 U		1.2 U	1.1 U	0.82 U		1.2 U	1.1 U
Methyl tert-butyl ether	1634-04-4	µg/kg	0.074 U	0.06 U	0.061 U		0.051 U	0.052 U	0.05 U		0.072 U	0.067 U	0.05 U		0.069 U	0.065 U
Methylene bromide	74-95-3	µg/kg	0.16 U	0.13 U	0.13 U		0.11 U	0.11 U	0.11 U		0.16 U	0.14 U	0.11 U		0.15 U	0.14 U
Methylene chloride	75-09-2	µg/kg	2.2 U	2.8 U	4.1 U		4.8 U	3.7 U	3.7 U		2.8 U	2.7 U	6.2 U		2.3 U	1.1 U
Methylethyl ketone	78-93-3	µg/kg	5.6 J	R	9.4 J		R	6.3 J	R		3.7 J	R	4.5 J		3.7 UJ	4.7 J
Styrene	100-42-5	µg/kg	0.14 U	0.12 U	0.12 U		0.096 U	0.098 U	0.095 U		0.14 U	0.13 U	0.095 U		0.13 U	0.13 U
Tetrachloroethene	127-18-4	µg/kg	0.18 U	0.15 U	0.4 J		0.13 U	0.13 U	0.13 U		0.18 U	0.17 U	0.13 U		0.17 U	0.16 U
trans-1,2-Dichloroethene	156-60-5	µg/kg	0.36 U	0.29 U	0.3 U		0.25 U	0.26 U	0.25 U		0.35 U	0.33 U	0.25 U		0.34 U	0.32 U
trans-1,3-Dichloropropene	10061-02-6	µg/kg	0.083 U	0.067 U	0.069 U		0.057 U	0.059 U	0.057 U		0.081 U	0.075 U	0.057 U		0.077 U	0.073 U
Trichloroethene	79-01-6	µg/kg	0.12 U	0.095 U	0.097 U		0.081 U	0.083 U	0.08 U		0.12 U	0.11 U	0.08 U		0.11 U	0.11 U
Trichlorofluoromethane	75-69-4	µg/kg	0.16 U	0.13 U	0.13 U		0.11 U	0.11 U	0.11 U		0.15 U	0.14 U	0.11 U		0.15 U	0.14 U
Vinyl acetate	108-05-4	µg/kg	R	R	R		R	R	R		R	R	R		R	R
Vinyl chloride	75-01-4	µg/kg	0.16 U	0.13 U	0.14 U		0.11 U	0.12 U	0.11 U		0.16 U	0.15 U	0.11 U		0.15 U	0.15 U
Vinylidene chloride	75-35-4	µg/kg	0.16 U	0.13 U	0.13 U		0.11 U	0.11 U	0.11 U		0.16 U	0.14 U	0.11 U		0.15 U	0.14 U

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C103	C106	C106	C106	C106	C106	C109	C109	C109	C109
	X_Easting		7618155	7618224	7618224	7618224	7618224	7618224	7618327	7618327	7618327	7618327
	Y_Northing		716406	716204	716204	716204	716204	716204	715916	715916	715916	715916
	Sample ID		LW2-C103-E	LW2-C106-A	LW2-C106-B	LW2-C106-C	LW2-C106-E	LW2-C106-F	LW2-C109-A	LW2-C109-B	LW2-C109-C	LW2-C109-E
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample											
	Sample Date		10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005
	Depth Interval		363 - 462 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	389 - 461 cm	461 - 503 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	373 - 432 cm
Chemical Name	**CAS No**	**Unit**										
PCB Aroclors												
Aroclor 1016	12674-11-2	µg/kg	1.5 U	2.2 U	2.1 U	1.9 U	1.9 U	1.6 U	2.2 U	2.1 U	2 U	1.5 U
Aroclor 1221	11104-28-2	µg/kg	1.5 U	2.2 U	2.1 U	1.9 U	1.9 U	1.6 U	2.2 U	2.1 U	2 U	1.5 U
Aroclor 1232	11141-16-5	µg/kg	1.5 U	2.2 U	2.1 U	1.9 U	1.9 U	1.6 U	2.2 U	2.1 U	2 U	1.5 U
Aroclor 1242	53469-21-9	µg/kg	1.5 U	25 J	2.1 U	1.9 U	1.9 U	1.6 U	30	52 J	2 U	1.5 U
Aroclor 1248	12672-29-6	µg/kg	1.5 U	2.2 U	29	1.9 U	1.9 U	1.6 U	2.2 U	2.1 U	46	1.5 U
Aroclor 1254	11097-69-1	µg/kg	1.5 U	20 J	55	65 J	120 U	1.6 U	17 J	100 J	56 J	1.5 U
Aroclor 1260	11096-82-5	µg/kg	13	14	44	55 J	130 J	20 J	18	71	83	1.5 U
Aroclor 1262	37324-23-5	µg/kg	1.5 U	2.2 U	2.1 U	1.9 U	1.9 U	1.6 U	2.2 U	2.1 U	2 U	1.5 U
Aroclor 1268	11100-14-4	µg/kg	1.5 U	2.2 U	2.1 U	1.9 U	26	13	2.2 U	2.1 U	2 U	1.5 U
Total PCB Aroclors	12767-79-2	µg/kg	13 T	59 JT	128 T	120 JT	156 JT	33 JT	65 JT	223 JT	185 JT	1.5 UT
Butyltins												
Butyltin ion	78763-54-9	µg/kg	0.039 U	3.2	1.6 J	0.11 J	0.23 J	0.22 J	2.9	2.3	0.13 J	0.04 U
Dibutyltin ion	14488-53-0	µg/kg	0.037 U	20	16	0.58 J	0.41 J	0.61 J	8	25	0.89 J	0.066 U
Tributyltin ion	36643-28-4	µg/kg	0.45 U	16	29	1.3 U	0.42 U	0.29 U	15	93	1.3 U	0.36 U
Tetrabutyltin	1461-25-2	µg/kg	0.091 U	0.14 U	0.13 U	0.12 U	0.12 U	0.097 U	0.14 U	2.2 J	0.13 U	0.092 U
Conventionals												
Total solids	TSO	percent	77.2	52.1	54.5 T	59.4	60.5	72.4	51.7	54.7	57.6	76.1
Total organic carbon	TOC	percent	0.36	1.9	2.1	2.29	2.71	1.28	1.74	2.41	2.78	0.1
Specific gravity	SPEC_GRAV	NA	1.9	1.45 T	1.49	1.55	1.56	1.77	1.56	1.51	1.53	1.99 T
PCDD/F Homologs												
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g										
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g										
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g										
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g										
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g										
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g										
Pentachlorodibenzofuran homologs	30402-15-4	pg/g										
Hexachlorodibenzofuran homologs	55684-94-1	pg/g										
Heptachlorodibenzofuran homologs	38998-75-3	pg/g										
Octachlorodibenzofuran	39001-02-0	pg/g										
PCDD/Fs												
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g										
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g										
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g										
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g										
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g										
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g										
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g										
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g										
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g										
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g										
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g										

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C103	C106	C106	C106	C106	C106	C109	C109	C109	C109
	X_Easting		7618155	7618224	7618224	7618224	7618224	7618224	7618327	7618327	7618327	7618327
	Y_Northing		716406	716204	716204	716204	716204	716204	715916	715916	715916	715916
	Sample ID		LW2-C103-E	LW2-C106-A	LW2-C106-B	LW2-C106-C	LW2-C106-E	LW2-C106-F	LW2-C109-A	LW2-C109-B	LW2-C109-C	LW2-C109-E
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample											
	Sample Date		10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005
	Depth Interval		363 - 462 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	389 - 461 cm	461 - 503 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	373 - 432 cm
Chemical Name	**CAS No**	**Unit**										
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g										
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g										
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g										
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g										
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g										
Octachlorodibenzofuran	39001-02-0	pg/g										
Grain Size												
Medium gravel	GS_MG	percent	0.32 T	0	0	0	0	0.05	0	0.61	0	0
Fine gravel	GS_FG	percent	0.313 T	0	0	0.28	0.09	0.2	0	0	0.23	0.01
Very coarse sand	GS_VCS	percent	0.6 T	0.45	0.26	0.54	0.86	1.05	0.7	0.49	0.65	0.15
Coarse sand	GS_CS	percent	8.32 T	0.23	0.34	1.84	0.93	7.12	0.41	0.78	0.93	9.92
Medium sand	GS_MS	percent	62.1 T	0.8	1.13	10	1.23	35.6	0.63	4.17	1.47	65.3
Fine sand	GS_FS	percent	22.8 T	4.44	1.84	5.65	1.97	14.3	5.35	4.8	4.62	20.6
Very fine sand	GS_VFS	percent	1.99 T	18.7	9.53	10.7	8.24	6.62	20.6	12.5	13.3	1.53
Coarse silt	GS_CSILT	percent	0.653 T	16.8	12.8	13.2	13.9	6.05	23.2	18.7	14.1	0.5
Medium silt	GS_MSILT	percent	0.607 T	20.8	26.3	20	21.7	9.11	14.7	20.4	21.1	0.56
Fine silt	GS_FSILT	percent	0.53 T	12.1	16.8	12.5	17.3	5.77	11.3	12.1	15	0.1
Very fine silt	GS_VFSILT	percent	0.407 T	9.39	11.2	8.67	12.8	4.9	7.77	8.82	12.3	0.37
8-9 Phi clay	GS_CCLAY	percent	0.33 T	6.51	6.59	6.06	8.61	2.91	6.12	5.29	6.15	0.18
>9 Phi clay	GS_MFCLAY	percent	0.447 T	8.69	12.3	9.91	12	4.34	9.14	9.78	11	0.04
Chlorinated Herbicides												
2,4,5-T	93-76-5	µg/kg										
2,4-D	94-75-7	µg/kg										
2,4-DB	94-82-6	µg/kg										
Dalapon	75-99-0	µg/kg										
Dicamba	1918-00-9	µg/kg										
Dichloroprop	120-36-5	µg/kg										
Dinoseb	88-85-7	µg/kg										
MCPA	94-74-6	µg/kg										
MCPP	93-65-2	µg/kg										
Silvex	93-72-1	µg/kg										
Metals												
Aluminum	7429-90-5	mg/kg	10800	32900	32600	30200	27500	14900	41200	27700	26300	9820
Antimony	7440-36-0	mg/kg	0.13 J	0.17 J	0.21 J	0.23 J	0.39 J	0.4 J	0.2 J	0.33 J	0.28 J	0.09 J
Arsenic	7440-38-2	mg/kg	2.7	4.69	4.74	3.57	4.1	4.28	3.52	3.49	3.77	2.21
Cadmium	7440-43-9	mg/kg	0.092	0.388	0.447	0.479	0.903	0.638	0.35	0.668	0.552	0.061
Chromium	7440-47-3	mg/kg	15.3	37.1	36.8	34.5	37.1	24.4	43.7	39.2	35	14.7
Chromium hexavalent	18540-29-9	mg/kg										
Copper	7440-50-8	mg/kg	14.1	49.9	49.5	57.4	61.6	29.7	84.5	62.1	54.4	14.3
Lead	7439-92-1	mg/kg	7.2	19.3	31.8	33.9 J	29 J	25.4 J	17.2 J	35.9 J	36.7 J	2.71 J
Mercury	7439-97-6	mg/kg	0.033	0.078	0.088	0.145	0.446	0.45	0.268	0.101	0.228	0.013 J
Nickel	7440-02-0	mg/kg	19.2	29.9	31.6	23.9	26.6	19.7	29.8	28.5	27.2	17
Selenium	7782-49-2	mg/kg	0.03 U	0.15 U	0.15 U	0.18 U	0.23 U	0.15 U	0.16 U	0.14 U	0.14 U	0.03 U
Silver	7440-22-4	mg/kg	0.235	0.534	0.598	0.476	0.976	0.399	0.506	0.557	0.589	0.081
Zinc	7440-66-6	mg/kg	54.3	128	155	216	167	124	128	187	209	47.9

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C103	C106	C106	C106	C106	C106	C109	C109	C109	C109
	X_Easting		7618155	7618224	7618224	7618224	7618224	7618224	7618327	7618327	7618327	7618327
	Y_Northing		716406	716204	716204	716204	716204	716204	715916	715916	715916	715916
	Sample ID		LW2-C103-E	LW2-C106-A	LW2-C106-B	LW2-C106-C	LW2-C106-E	LW2-C106-F	LW2-C109-A	LW2-C109-B	LW2-C109-C	LW2-C109-E
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample											
	Sample Date		10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005
	Depth Interval		363 - 462 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	389 - 461 cm	461 - 503 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	373 - 432 cm
Chemical Name	**CAS No**	**Unit**										
Polycyclic Aromatic Hydrocarbons												
2-Methylnaphthalene	91-57-6	µg/kg	1.4 J	4.2	0.64 U	180	63	36	7	60	390	0.6 J
Acenaphthene	83-32-9	µg/kg	0.91 J	9.3	0.3 U	230	130	38	23	53	580	0.39 J
Acenaphthylene	208-96-8	µg/kg	2 J	3.7	0.41 U	31	58	56	11	17	50	2.2 J
Anthracene	120-12-7	µg/kg	2.4 J	9.5	0.41 U	86	160	100	18	57	210	5
Fluorene	86-73-7	µg/kg	0.84 J	5.4	0.36 U	150	86	41	14	50	410	0.79 J
Naphthalene	91-20-3	µg/kg	0.46 U	12	0.65 U	370	210	170	23	190	350	0.46 U
Phenanthrene	85-01-8	µg/kg	15	32	1.2 J	540	830	490	83	290	1400	9.5
Dibenz(a,h)anthracene	53-70-3	µg/kg	1.1 J	5.2	0.49 U	23	65	42	16	30	43	0.92 J
Benz(a)anthracene	56-55-3	µg/kg	9.9	29	0.3 U	150	390	260	84	160	280	11
Benzo(a)pyrene	50-32-8	µg/kg	16	41	0.41 U	210	630	410	120	210	320	11
Benzo(b)fluoranthene	205-99-2	µg/kg	11	35	0.9 U	140	390	280	90	180	210	6.1
Benzo(g,h,i)perylene	191-24-2	µg/kg	15	32	0.43 U	200	700	450	100	180	300	7.5
Benzo(k)fluoranthene	207-08-9	µg/kg	9.7	28	0.62 U	130	340	230	75	130	190	6.7
Chrysene	218-01-9	µg/kg	14	44	0.77 U	200	550	370	110	230	360	12
Fluoranthene	206-44-0	µg/kg	16	52	0.99 J	470	1200	810	140	400	880	19
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	13	33	0.45 U	180	540	370	97	170	260	6.7
Pyrene	129-00-0	µg/kg	30	60	0.89 J	550	1700	1100	170	450	970	28
Low Molecular Weight PAHs	LPAH	µg/kg	22.6 JT	76.1 T	1.2 JT	1590 T	1540 T	931 T	179 T	717 T	3390 T	18.5 JT
High Molecular Weight PAHs	HPAH	µg/kg	136 JT	359 T	1.88 JT	2250 T	6510 T	4320 T	1000 T	2140 T	3810 T	109 JT
Total PAHs	130498-29-2	µg/kg	158 JT	435 T	3.08 JT	3840 T	8040 T	5250 T	1180 T	2860 T	7200 T	127 JT
Chlorinated Pesticides												
2,4'-DDD	53-19-0	µg/kg	0.23 U	1.8 J	1.4 U	13 U	6.3 J	0.31 J	1.1 U	2 U	3.3 J	0.2 U
2,4'-DDE	3424-82-6	µg/kg	0.36 U	0.11 U	0.29 U	1.9 U	0.2 U	0.2 U	0.11 U	0.29 U	0.34 U	0.074 U
2,4'-DDT	789-02-6	µg/kg	0.66 NJ	1.1 J	2	6.4 U	4.3 U	0.34 U	0.7 U	3.6 J	2.9	0.06 U
4,4'-DDD	72-54-8	µg/kg	0.11 UJ	2.2 J	3 J	18	14	0.2 U	2	3.1 J	8.2 J	0.11 UJ
4,4'-DDE	72-55-9	µg/kg	0.056 UJ	3.2 J	4 J	9.1 U	13 NJ	0.06 U	2.6	3.6 J	7 J	0.057 UJ
4,4'-DDT	50-29-3	µg/kg	0.43 UJ	0.59 UJ	2.8 UJ	93	11 J	0.2 U	1.1	7.9 NJ	3.1 J	0.19 UJ
Total of 4,4'-DDD, -DDE, -DDT	PP_DDT3ISO	µg/kg	0.43 UJT	5.4 JT	7 JT	111 T	38 JT	0.2 UT	5.7 T	14.6 JT	18.3 JT	0.19 UJT
Aldrin	309-00-2	µg/kg	0.2 UJ	0.57 J	0.18 UJ	3.2 U	0.64 NJ	0.13 U	0.31 U	0.18 UJ	0.89 NJ	0.13 UJ
alpha-Hexachlorocyclohexane	319-84-6	µg/kg	0.1 U	0.15 U	0.2 U	2.6 U	0.13 U	0.11 U	0.15 U	0.15 U	0.15 U	0.11 U
beta-Hexachlorocyclohexane	319-85-7	µg/kg	0.16 U	0.34 U	0.39 U	4.1 U	0.58 U	0.22 U	0.24 U	0.27 U	0.23 U	0.16 U
delta-Hexachlorocyclohexane	319-86-8	µg/kg	0.076 U	0.12 U	0.11 U	2 U	0.2 U	0.081 U	0.12 U	0.2 U	0.11 U	0.077 U
gamma-Hexachlorocyclohexane	58-89-9	µg/kg	0.12 U	0.18 U	0.18 U	3.1 U	0.38 U	0.2 U	0.18 U	0.17 U	0.25 U	0.13 U
cis-Chlordane	5103-71-9	µg/kg	0.064 UJ	0.22 UJ	0.091 UJ	1.7 U	0.2 U	0.068 U	0.2 U	0.09 UJ	0.086 UJ	0.065 UJ
trans-Chlordane	5103-74-2	µg/kg	0.27 UJ	0.78 J	1.4	4.7	2.3 J	0.24 U	0.94	1.9 J	1.9 J	0.066 UJ
Oxychlordane	27304-13-8	µg/kg	0.087 UJ	0.23 U	0.16 U	2.3 U	0.25 U	0.093 U	0.13 U	0.2 U	0.52 J	0.089 U
cis-Nonachlor	5103-73-1	µg/kg	0.2 UJ	0.35 U	0.34 U	1.7 U	0.68 U	0.48 U	0.41 U	0.37 U	0.4 U	0.064 U
trans-Nonachlor	39765-80-5	µg/kg	0.12 UJ	0.3	0.28 NJ	1.2 U	0.2 U	0.19 U	0.24	0.2 U	0.33 U	0.041 U
Total Chlordanes	TOTCHLDANE	µg/kg	0.27 UJT	1.08 JT	1.68 JT	4.7 T	2.3 JT	0.48 UT	1.18 T	1.9 JT	2.42 JT	0.089 UT
Dieldrin	60-57-1	µg/kg	0.11 UJ	0.81 UJ	0.8 UJ	4.1 U	2 U	0.3 U	0.88 U	0.74 UJ	1.3 UJ	0.11 UJ
alpha-Endosulfan	959-98-8	µg/kg	0.05 U	0.31 U	0.2 U	1.3 U	0.096 U	0.053 U	0.24 U	0.27 U	0.066 U	0.05 U
beta-Endosulfan	33213-65-9	µg/kg	0.076 UJ	0.12 UJ	0.2 UJ	2 U	4.7 NJ	0.081 U	0.12 U	0.2 UJ	0.7 J	0.077 UJ
Endosulfan sulfate	1031-07-8	µg/kg	0.078 U	0.79 U	0.2 U	2.1 U	0.1 U	0.083 U	0.33 U	0.3 U	0.11 U	0.079 U
Endrin	72-20-8	µg/kg	0.085 UJ	0.13 UJ	0.2 UJ	2.2 U	0.22 U	0.09 U	0.13 U	0.21 UJ	1 NJ	0.086 UJ

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C103	C106	C106	C106	C106	C106	C109	C109	C109	C109
	X_Easting		7618155	7618224	7618224	7618224	7618224	7618224	7618327	7618327	7618327	7618327
	Y_Northing		716406	716204	716204	716204	716204	716204	715916	715916	715916	715916
	Sample ID		LW2-C103-E	LW2-C106-A	LW2-C106-B	LW2-C106-C	LW2-C106-E	LW2-C106-F	LW2-C109-A	LW2-C109-B	LW2-C109-C	LW2-C109-E
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample											
	Sample Date		10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005
	Depth Interval		363 - 462 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	389 - 461 cm	461 - 503 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	373 - 432 cm
Chemical Name	**CAS No**	**Unit**										
Endrin aldehyde	7421-93-4	µg/kg	0.091 U	0.14 U	0.13 U	2.4 U	0.12 U	0.097 U	0.14 U	0.2 U	0.13 U	0.092 U
Endrin ketone	53494-70-5	µg/kg	0.19 J	0.35 UJ	0.5 NJ	1.9 U	0.3 U	0.52 U	0.17 U	1.8 NJ	2.3 NJ	0.074 UJ
Heptachlor	76-44-8	µg/kg	0.11 UJ	0.12 UJ	0.11 UJ	2 U	0.096 U	0.081 U	0.12 U	0.11 UJ	0.11 UJ	0.077 UJ
Heptachlor epoxide	1024-57-3	µg/kg	0.086 UJ	0.34 NJ	0.2 UJ	2.3 U	0.11 U	0.13 U	0.24 U	0.2 U	1.5 NJ	0.087 U
Methoxychlor	72-43-5	µg/kg	0.078 U	0.88 U	0.25 U	2.1 U	0.32 U	0.083 U	0.12 U	0.48 U	0.11 U	0.079 U
Mirex	2385-85-5	µg/kg	0.2 UJ	0.22 U	0.084 U	1.6 U	0.25 U	0.2 U	0.16 U	0.4 J	0.2 U	0.06 U
Toxaphene	8001-35-2	µg/kg	18 U	40 U	60 U	130 U	210 U	20 U	23 U	49 U	58 U	4.9 U
Petroleum Hydrocarbons												
Gasoline range hydrocarbons	GRH	mg/kg	1.3 U	2 U	1.9 U	2.3 J	44 J	12 JT	2 U	1.9 U	3.8 J	1.4 U
Diesel range hydrocarbons	DRH	mg/kg	38 JT	98 J	170 J	270 J	820 J	385 JT	72 J	200 J	410 J	4.5 U
Residual range hydrocarbons	RRH	mg/kg	135 JT	410 J	570 J	640 J	1500 J	885 JT	340 J	580 J	830 J	6.9 J
Total petroleum hydrocarbons	TPH	mg/kg	173 JT	508 JT	740 JT	912 JT	2360 JT	1280 JT	412 JT	780 JT	1240 JT	6.9 JT
Phenols												
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg	0.56 U	1.6 U	3.8 U	8.4 U	7.2 U	0.6 U	0.84 U	1.8 U	10 U	0.57 U
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg	0.55 U	0.81 U	0.78 U	0.71 U	7 U	0.59 U	0.82 U	0.77 U	0.73 U	0.56 U
2,4,5-Trichlorophenol	95-95-4	µg/kg	2.8 U	8.9 U	3.8 U	8.4 U	5.5 U	5 U	0.64 U	5.4 J	7.7 U	6 J
2,4,6-Trichlorophenol	88-06-2	µg/kg	0.33 U	0.48 U	0.47 U	0.43 U	4.2 U	0.35 U	0.49 U	0.46 U	0.44 U	0.33 U
2,4-Dichlorophenol	120-83-2	µg/kg	2.4 U	3.5 U	3.4 U	6.1 U	15 U	2.5 U	3.5 U	3.3 U	16 U	2.4 U
2,4-Dimethylphenol	105-67-9	µg/kg	7.2 U	11 U	11 U	19 U	46 U	7.6 U	11 U	11 U	48 U	7.3 U
2,4-Dinitrophenol	51-28-5	µg/kg	47 U	70 U	67 U	130 UJ	300 U	50 U	70 U	66 U	320 U	48 U
2-Chlorophenol	95-57-8	µg/kg	2.3 U	3.3 U	3.2 U	5.8 U	15 U	2.4 U	3.3 U	3.2 U	15 U	2.3 U
2-Methylphenol	95-48-7	µg/kg	4.5 U	6.6 U	6.4 U	12 U	29 U	4.7 U	6.6 U	6.3 U	30 U	4.5 U
2-Nitrophenol	88-75-5	µg/kg	3.4 U	5 U	4.9 U	8.8 U	22 U	3.6 U	5.1 U	4.8 U	23 U	3.5 U
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	2.3 U	3.3 U	3.2 U	5.8 U	15 U	2.4 U	3.3 U	3.2 U	15 U	2.3 U
4-Chloro-3-methylphenol	59-50-7	µg/kg	2.8 U	4.1 U	3.9 U	7.1 U	18 U	3 U	4.1 U	3.9 U	19 U	2.8 U
4-Methylphenol	106-44-5	µg/kg	3.8 U	5.6 U	21	73	160	130	26	43	51	3.9 U
4-Nitrophenol	100-02-7	µg/kg	39 U	58 U	56 U	110 U	250 U	42 U	59 U	55 U	270 U	40 U
Pentachlorophenol	87-86-5	µg/kg	8.3	0.89 U	2.1 J	0.78 U	8.7 J	0.64 U	9.6 U	1.6 J	2.2 J	0.72 U
Phenol	108-95-2	µg/kg	2.5 U	4.5 J	9.9 J	6.4 U	27 U	2.7 U	10 U	11 U	17 U	4.1 U
Phthalates												
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	6.9 U	130	57 U	33 U	15 U	2.4 U	230	490	40 U	5.2 U
Butylbenzyl phthalate	85-68-7	µg/kg	2 U	30	16	5.1 U	13 U	2.1 U	29	220	14 U	2 U
Dibutyl phthalate	84-74-2	µg/kg	5 U	12 U	8.6 U	9.5 U	22 U	11 U	13 U	32 U	23 U	4.2 U
Diethyl phthalate	84-66-2	µg/kg	4.6 U	6.8 U	6.5 U	12 U	29 U	4.9 U	6.8 U	6.4 U	31 U	4.6 U
Dimethyl phthalate	131-11-3	µg/kg	2.4 U	3.5 U	3.4 U	6.1 U	15 U	2.5 U	3.5 U	3.3 U	16 U	2.4 U
Di-n-octyl phthalate	117-84-0	µg/kg	1.6 U	2.4 U	2.3 U	4.1 U	10 U	1.7 U	2.4 U	2.2 U	11 U	1.6 U
Semivolatile Organic Compounds												
1,2,4-Trichlorobenzene	120-82-1	µg/kg	2 U	2.9 U	2.8 U	5.1 U	13 U	2.1 U	3 U	2.8 U	14 U	2 U
1,2-Dichlorobenzene	95-50-1	µg/kg	1.7 U	2.5 U	2.5 U	4.4 U	11 U	1.8 U	2.6 U	2.4 U	12 U	1.8 U
1,3-Dichlorobenzene	541-73-1	µg/kg	2.1 U	3.1 U	3 U	5.4 U	14 U	2.3 U	3.1 U	3 U	14 U	2.2 U
1,4-Dichlorobenzene	106-46-7	µg/kg	0.16 U	0.24 U	0.23 U	0.21 U	0.2 U	0.17 U	0.24 U	0.22 U	0.21 U	0.16 U
2,4-Dinitrotoluene	121-14-2	µg/kg	3.7 U	5.4 U	5.2 U	9.5 U	24 U	3.9 U	5.5 U	5.2 U	25 U	3.7 U
2,6-Dinitrotoluene	606-20-2	µg/kg	3.7 U	5.4 U	5.2 U	9.5 U	24 U	3.9 U	5.5 U	5.2 U	25 U	3.7 U
2-Chloronaphthalene	91-58-7	µg/kg	4.7 U	7 U	6.7 U	13 U	30 U	5 U	7 U	6.6 U	32 U	4.8 U

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C103	C106	C106	C106	C106	C106	C109	C109	C109	C109
	X_Easting		7618155	7618224	7618224	7618224	7618224	7618224	7618327	7618327	7618327	7618327
	Y_Northing		716406	716204	716204	716204	716204	716204	715916	715916	715916	715916
	Sample ID		LW2-C103-E	LW2-C106-A	LW2-C106-B	LW2-C106-C	LW2-C106-E	LW2-C106-F	LW2-C109-A	LW2-C109-B	LW2-C109-C	LW2-C109-E
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample											
	Sample Date		10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005
	Depth Interval		363 - 462 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	389 - 461 cm	461 - 503 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	373 - 432 cm
Chemical Name	**CAS No**	**Unit**										
2-Nitroaniline	88-74-4	µg/kg	3.5 U	5.2 U	5.1 U	9.1 U	23 U	3.8 U	5.3 U	5 U	24 U	3.6 U
3,3'-Dichlorobenzidine	91-94-1	µg/kg	4.8 U	7.2 U	6.9 U	13 U	31 U	5.2 U	7.2 U	6.8 U	33 U	4.9 U
3-Nitroaniline	99-09-2	µg/kg	3.4 U	5 U	4.9 U	8.8 U	22 U	3.6 U	5.1 U	4.8 U	23 U	3.5 U
4-Bromophenyl phenyl ether	101-55-3	µg/kg	1.9 U	2.7 U	2.6 U	4.8 U	12 U	2 U	2.8 U	2.6 U	13 U	1.9 U
4-Chloroaniline	106-47-8	µg/kg	2.8 U	4.1 U	3.9 U	7.1 U	18 U	3 U	4.1 U	3.9 U	19 U	2.8 U
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg	2.6 U	3.9 U	3.8 U	6.8 U	17 U	2.8 U	3.9 U	3.7 U	18 U	2.7 U
4-Nitroaniline	100-01-6	µg/kg	4.5 U	6.6 U	6.4 U	12 U	29 U	4.7 U	6.6 U	6.3 U	30 U	4.5 U
Aniline	62-53-3	µg/kg	2 U	2.9 U	2.8 U	5.1 U	13 U	2.1 U	3 U	2.8 U	14 U	2 U
Azobenzene	103-33-3	µg/kg	3.2 U	4.7 U	4.5 U	8.1 U	20 U	3.4 U	4.7 U	4.4 U	21 U	3.2 U
Benzoic acid	65-85-0	µg/kg	130 U	190 U	180 U	330 U	800 U	140 U	190 U	180 U	840 U	130 U
Benzyl alcohol	100-51-6	µg/kg	4.8 U	7.2 U	6.9 U	13 U	31 U	5.2 U	7.2 U	6.8 U	33 U	4.9 U
Bis(2-chloroethoxy) methane	111-91-1	µg/kg	1.7 U	2.5 U	2.5 U	4.4 U	11 U	1.8 U	2.6 U	2.4 U	12 U	1.8 U
Bis(2-chloroethyl) ether	111-44-4	µg/kg	3.2 U	4.7 U	4.5 U	8.1 U	20 U	3.4 U	4.7 U	4.4 U	21 U	3.2 U
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg	1.6 U	2.4 U	2.3 U	4.1 UJ	10 U	1.7 U	2.4 U	2.2 U	11 U	1.6 U
Carbazole	86-74-8	µg/kg	1.7 U	3 J	5.9 J	14 J	11 U	15	6.7 J	18	12 U	1.8 U
Dibenzofuran	132-64-9	µg/kg	0.29 J	2.3 J	0.32 U	100	24 J	12	5.6	31	270	0.26 J
Hexachlorobenzene	118-74-1	µg/kg	0.063 U	0.093 U	0.09 U	1.7 U	0.08 U	0.067 U	0.093 U	0.088 U	0.2 U	0.064 U
Hexachlorobutadiene	87-68-3	µg/kg	0.25 UJ	0.37 U	0.36 U	4.8 U	0.74 UJ	0.27 UJ	0.37 UJ	0.35 U	0.33 U	0.25 U
Hexachlorocyclopentadiene	77-47-4	µg/kg	20 U	29 U	28 U	51 U	130 U	21 U	30 U	28 U	140 U	20 U
Hexachloroethane	67-72-1	µg/kg	0.11 UJ	0.22 U	0.2 U	1.8 UJ	0.2 UJ	0.19 UJ	0.2 UJ	0.2 U	0.091 U	0.22 U
Isophorone	78-59-1	µg/kg	2.1 U	3.1 U	3 U	5.4 U	14 U	2.3 U	3.1 U	3 U	14 U	2.2 U
Nitrobenzene	98-95-3	µg/kg	2.6 U	3.9 U	3.8 U	6.8 U	17 U	2.8 U	3.9 U	3.7 U	18 U	2.7 U
N-Nitrosodimethylamine	62-75-9	µg/kg	8 U	12 U	12 U	21 U	51 U	8.5 U	12 U	12 U	53 U	8.1 U
N-Nitrosodiphenylamine	86-30-6	µg/kg	2.9 U	4.3 U	4.1 U	7.5 U	19 U	3.1 U	4.3 U	4.1 U	33 J	2.9 U
N-Nitrosodipropylamine	621-64-7	µg/kg	4.2 U	6.2 U	6 U	11 U	27 U	4.5 U	6.2 U	5.9 U	28 U	4.3 U
Volatile Organic Compounds												
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	0.041 U	0.06 U	0.058 U	0.053 U	0.052 U	0.043 U	0.06 U	0.057 U	0.054 U	0.041 U
1,1,1-Trichloroethane	71-55-6	µg/kg	0.077 U	0.12 U	0.11 U	0.1 U	0.098 U	0.082 U	0.12 U	0.11 U	0.11 U	0.078 U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	0.13 U	0.19 U	0.18 U	0.17 U	0.16 U	4.6 U	0.19 U	0.18 U	3.3 U	0.13 U
1,1,2-Trichloroethane	79-00-5	µg/kg	0.077 U	0.12 U	0.11 U	0.1 U	0.098 U	0.082 U	0.12 U	0.11 U	0.11 U	0.078 U
1,1-Dichloroethane	75-34-3	µg/kg	0.074 U	0.11 U	0.11 U	0.096 U	0.095 U	0.079 U	0.12 U	0.11 U	0.099 U	0.075 U
1,2,3-Trichloropropane	96-18-4	µg/kg	0.15 U	0.22 U	0.21 U	0.19 U	0.19 U	0.16 U	0.22 U	0.21 U	0.2 U	0.15 U
1,2-Dichloroethane	107-06-2	µg/kg	0.041 U	0.06 U	0.058 U	0.053 U	0.052 U	0.043 U	0.06 U	0.057 U	0.054 U	0.041 U
1,2-Dichloropropane	78-87-5	µg/kg	0.046 U	0.068 U	0.065 U	0.059 U	0.058 U	0.049 U	0.068 U	0.064 U	0.061 U	0.046 U
1,4-Dichloro-trans-2-butene	110-57-6	µg/kg	0.67 U	0.98 U	0.95 U	0.86 U	0.85 U	0.71 U	0.99 U	0.94 U	0.89 U	0.68 U
2-Chloroethyl vinyl ether	110-75-8	µg/kg	0.2 U	0.29 U	0.28 U	0.26 U	0.25 U	0.21 U	0.3 U	0.28 U	0.27 U	0.2 U
Acetone	67-64-1	µg/kg	51	7.5 J	35	32	31	75	19	30	24	32
Acrolein	107-02-8	µg/kg	R	R	R	R	R	R	R	R	R	R
Acrylonitrile	107-13-1	µg/kg	0.3 U	0.45 U	0.43 U	0.39 U	0.39 U	0.32 U	0.45 U	0.43 U	0.4 U	0.31 U
Benzene	71-43-2	µg/kg	0.21 J	0.075 U	0.073 U	0.066 U	0.13 J	0.46 J	0.076 U	0.12 J	0.068 U	0.14 J
Toluene	108-88-3	µg/kg	0.54 U	0.29 U	0.28 U	0.26 U	0.25 U	1.4	0.3 U	0.28 U	0.27 U	0.26 J
Ethylbenzene	100-41-4	µg/kg	0.092 U	0.14 U	0.14 U	0.12 U	0.12 U	0.099 U	0.14 U	0.13 U	0.13 U	0.094 U
m,p-Xylene	179601-23-1	µg/kg	0.17 U	0.25 U	0.25 U	0.22 U	0.22 U	0.18 U	0.26 U	0.24 U	0.23 U	0.2 J
o-Xylene	95-47-6	µg/kg	0.098 U	0.15 U	0.14 U	0.17 J	0.13 U	0.11 U	0.15 U	0.14 U	0.36 J	0.099 U
Xylene	1330-20-7	µg/kg	0.17 UT	0.25 UT	0.25 UT	0.17 JT	0.22 UT	0.18 UT	0.26 UT	0.24 UT	0.36 JT	0.2 JT
BTEX	BTEX	µg/kg	0.21 JT	0.29 UT	0.28 UT	0.17 JT	0.13 JT	1.86 JT	0.3 UT	0.12 JT	0.36 JT	0.6 JT

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Table 4-1a. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name	C103	C106	C106	C106	C106	C106	C109	C109	C109	C109
	X_Easting	7618155	7618224	7618224	7618224	7618224	7618224	7618327	7618327	7618327	7618327
	Y_Northing	716406	716204	716204	716204	716204	716204	715916	715916	715916	715916
	Sample ID	LW2-C103-E	LW2-C106-A	LW2-C106-B	LW2-C106-C	LW2-C106-E	LW2-C106-F	LW2-C109-A	LW2-C109-B	LW2-C109-C	LW2-C109-E
	Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample										
	Sample Date	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/25/2005
	Depth Interval	363 - 462 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	389 - 461 cm	461 - 503 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	373 - 432 cm
Chemical Name	**CAS No**	**Unit**									
Bromochloromethane	74-97-5	µg/kg	0.078 U	0.12 U	0.12 U	0.11 U	0.1 U	0.083 U	0.12 U	0.11 U	0.11 U	0.079 U
Bromodichloromethane	75-27-4	µg/kg	0.089 U	0.14 U	0.13 U	0.12 U	0.12 U	0.094 U	0.14 U	0.13 U	0.12 U	0.09 U
Bromoform	75-25-2	µg/kg	0.06 U	0.089 U	0.086 U	0.078 U	0.077 U	0.064 U	0.089 U	0.085 U	0.08 U	0.061 U
Bromomethane	74-83-9	µg/kg	0.48 U	0.72 U	0.69 U	0.63 U	0.62 U	0.52 U	0.72 U	0.68 U	0.65 U	0.49 U
Carbon disulfide	75-15-0	µg/kg	0.17 U	0.25 U	0.25 U	0.28 J	0.29 J	0.52 J	0.26 U	0.24 U	0.29 J	0.18 U
Carbon tetrachloride	56-23-5	µg/kg	0.13 U	0.2 U	0.19 U	0.17 U	0.17 U	0.14 U	0.2 U	0.19 U	0.18 U	0.14 U
Chlorobenzene	108-90-7	µg/kg	0.091 U	0.14 U	0.13 U	0.12 U	0.12 U	0.097 U	0.14 U	0.13 U	0.13 U	0.092 U
Chlorodibromomethane	124-48-1	µg/kg	0.089 U	0.14 U	0.13 U	0.12 U	0.12 U	0.094 U	0.14 U	0.13 U	0.12 U	0.09 U
Chloroethane	75-00-3	µg/kg	0.37 U	0.54 U	0.52 U	0.48 U	0.47 U	0.39 U	0.55 U	0.52 U	0.49 U	0.37 U
Chloroform	67-66-3	µg/kg	0.073 U	0.11 U	0.11 U	0.095 U	0.093 U	0.078 U	0.11 U	0.11 U	0.098 U	0.074 U
Chloromethane	74-87-3	µg/kg	0.25 U	0.37 U	0.36 U	0.32 U	0.32 U	0.27 U	0.37 U	0.35 U	0.33 U	0.25 U
cis-1,3-Dichloropropene	10061-01-5	µg/kg	0.041 U	0.06 U	0.058 U	0.053 U	0.052 U	0.043 U	0.06 U	0.057 U	0.054 U	0.041 U
Dichlorodifluoromethane	75-71-8	µg/kg	0.15 UJ	0.22 UJ	0.21 UJ	0.19 U	0.19 U	0.16 U	0.22 U	0.21 U	0.2 U	0.15 U
Ethylene dibromide	106-93-4	µg/kg	0.067 U	0.098 U	0.095 U	0.086 U	0.085 U	0.071 U	0.099 U	0.094 U	0.089 U	0.068 U
Isopropylbenzene	98-82-8	µg/kg	0.057 U	0.085 U	0.082 U	0.075 U	0.11 J	0.061 U	0.086 U	0.081 U	0.23 J	0.058 U
Methyl iodide	74-88-4	µg/kg	0.87 U	1.3 U	1.3 U	1.2 U	1.2 U	0.93 U	1.3 U	1.3 U	1.2 U	0.89 U
Methyl isobutyl ketone	108-10-1	µg/kg	0.32 U	0.47 U	0.45 U	0.41 U	0.4 U	0.34 U	0.47 U	0.44 U	0.42 U	0.32 U
Methyl N-butyl ketone	591-78-6	µg/kg	0.83 U	1.3 U	1.2 U	1.1 U	1.1 U	0.89 U	1.3 U	1.2 U	1.2 U	0.85 U
Methyl tert-butyl ether	1634-04-4	µg/kg	0.051 U	0.075 U	0.073 U	0.066 U	0.065 U	0.054 U	0.076 U	0.072 U	0.068 U	0.052 U
Methylene bromide	74-95-3	µg/kg	0.11 U	0.16 U	0.16 U	0.14 U	0.14 U	0.12 U	0.16 U	0.15 U	0.15 U	0.11 U
Methylene chloride	75-09-2	µg/kg	7.6 U	1.1 U	1.1 U	2.1 U	0.82 U	5.5 U	0.86 U	0.93 U	0.78 U	7.1 U
Methylethyl ketone	78-93-3	µg/kg	R	R	7.3 J	5.2 J	6.6 J	14 J	3.5 J	6.5 J	5.4 J	5.7 J
Styrene	100-42-5	µg/kg	0.096 U	0.15 U	0.14 U	0.13 U	0.13 U	0.11 U	0.15 U	0.14 U	0.13 U	0.31 U
Tetrachloroethene	127-18-4	µg/kg	0.13 U	0.19 U	0.18 U	0.17 U	0.16 U	0.14 U	0.19 U	0.18 U	0.17 U	0.13 U
trans-1,2-Dichloroethene	156-60-5	µg/kg	0.25 U	0.37 U	0.36 U	0.32 U	0.32 U	0.27 U	0.37 U	0.35 U	0.33 U	0.25 U
trans-1,3-Dichloropropene	10061-02-6	µg/kg	0.057 U	0.085 U	0.082 U	0.075 U	0.073 U	0.061 U	0.086 U	0.081 U	0.077 U	0.058 U
Trichloroethene	79-01-6	µg/kg	0.081 U	0.12 U	0.12 U	0.11 U	0.11 U	0.086 U	0.12 U	0.12 U	0.11 U	0.082 U
Trichlorofluoromethane	75-69-4	µg/kg	0.11 U	0.16 U	0.16 U	0.14 U	0.14 U	0.12 U	0.16 U	0.15 U	0.15 U	0.11 U
Vinyl acetate	108-05-4	µg/kg	R	R	R	R	R	R	R	R	R	R
Vinyl chloride	75-01-4	µg/kg	0.12 U	0.17 U	0.16 U	0.15 U	0.15 U	0.12 U	0.17 U	0.16 U	0.15 U	0.12 U
Vinylidene chloride	75-35-4	µg/kg	0.11 U	0.16 U	0.16 U	0.14 U	0.14 U	0.12 U	0.16 U	0.15 U	0.15 U	0.11 U

Notes:
See Table 3-2 for definitions of data qualifiers.

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C127	C127	C127	C127	C167	C167	C167	C167	C167	C187	C187	C187	C187	C227
	X_Easting		7617354	7617354	7617354	7617354	7619264	7619264	7619264	7619264	7619264	7620139	7620139	7620139	7620139	7621415
	Y_Northing		714244	714244	714244	714244	710836	710836	710836	710836	710836	709498	709498	709498	709498	707787
	Sample ID		LW2-C127-B	LW2-C127-C	LW2-C127-D	LW2-C127-F	LW2-C167-A	LW2-C167-B	LW2-C167-C	LW2-C167-D	LW2-C167-F	LW2-C187-B	LW2-C187-C	LW2-C187-D	LW2-C187-E	LW2-C227-B
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005	10/19/2005
	Depth Interval		30 - 100 cm	100 - 184 cm	184 - 269 cm	391 - 466 cm	0 - 30 cm	30 - 110 cm	110 - 201 cm	201 - 244 cm	283 - 356 cm	30 - 98 cm	98 - 197 cm	197 - 309 cm	309 - 418 cm	30 - 113 cm
Chemical Name	**CAS No**	**Unit**														
PCB Aroclors																
Aroclor 1016	12674-11-2	µg/kg	1.9 U	1.9 U	1.5 U		2.7 U	2.1 U	2 U	4.3 U		24 U	1.7 U	1.5 U		5.5 U
Aroclor 1221	11104-28-2	µg/kg	1.9 U	1.9 U	1.5 U		2.7 U	2.1 U	2 U	1.6 U		40 U	1.7 U	1.5 U		5.5 U
Aroclor 1232	11141-16-5	µg/kg	1.9 U	1.9 U	1.5 U		2.7 U	2.1 U	2 U	8.1 U		24 U	1.7 U	1.5 U		5.5 U
Aroclor 1242	53469-21-9	µg/kg	1.9 U	1.9 U	1.5 U		2.7 U	2.1 U	2 U	4.4 U		24 U	1.7 U	1.5 U		5.5 U
Aroclor 1248	12672-29-6	µg/kg	1.9 U	1.9 U	1.5 U		2.7 U	8.1	35	8.1 U		26 U	1.7 U	1.5 U		5.5 U
Aroclor 1254	11097-69-1	µg/kg	38 U	30 U	1.5 U		2.7 U	28	70	21 U		42 U	68 U	1.5 U		21 U
Aroclor 1260	11096-82-5	µg/kg	44	50	1.5 U		4.1	15	48	10 U		70	24 J	1.5 U		18 J
Aroclor 1262	37324-23-5	µg/kg	1.9 U	1.9 U	1.5 U		2.7 U	2.1 U	2 U	1.6 U		17 U	1.7 U	1.5 U		5.5 U
Aroclor 1268	11100-14-4	µg/kg	1.9 U	1.9 U	1.5 U		2.7 U	2.1 U	2 U	1.6 U		17 U	1.7 U	1.5 U		5.5 U
Total PCB Aroclors	12767-79-2	µg/kg	44 T	50 T	1.5 UT		4.1 T	51.1 T	153 T	21 UT		70 T	24 JT	1.5 UT		18 JT
Butyltins																
Butyltin ion	78763-54-9	µg/kg	0.098 U	0.051 U	R											0.86 J
Dibutyltin ion	14488-53-0	µg/kg	0.51 J	0.33 U	0.082 U											6.7
Tributyltin ion	36643-28-4	µg/kg	0.44 U	0.39 U	0.31 U											23
Tetrabutyltin	1461-25-2	µg/kg	0.12 U	0.12 U	0.095 U											1.2 U
Conventionals																
Total solids	TSO	percent	58.8	58.9	74 T	73.6	42	52.4	56.5	69.8	73.6 T	66.8	66.7	78	73.5	55
Total organic carbon	TOC	percent	2.23	2.3	0.06		2.79	2.24	0.3	1.96		1.26	1.72	0.03 J		2.71 T
Specific gravity	SPEC_GRAV	NA	1.57	1.59	1.81		1.36 T	1.49	1.55	1.86		1.73	1.7	2		1.53 T
PCDD/F Homologs																
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g	0.485	0.585	0.007 U											
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g	0.175	0.94	0.008 U											
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g	5.122	5.062	0.223											
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g	41.931	34.952	1.263											
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g	177.073	150.668	5.056											
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g	3.046	4.274	0.019 U											
Pentachlorodibenzofuran homologs	30402-15-4	pg/g	6.264	9.298	0.007 U											
Hexachlorodibenzofuran homologs	55684-94-1	pg/g	9.468	9.126	0.158											
Heptachlorodibenzofuran homologs	38998-75-3	pg/g	16.317	15.689	0.134											
Octachlorodibenzofuran	39001-02-0	pg/g	11.334	8.13	0.291 U											
PCDD/Fs																
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g	0.01 U	0.013 U	0.007 U											
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g	0.009 U	0.072 U	0.008 U											
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g	0.083 J	0.071 J	0.012 U											
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g	0.522 J	0.513 J	0.013 U											
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g	0.236 J	0.234 J	0.012 U											
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g	16.668	14.402	0.548 J											
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g	177.073	150.668	5.056											
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g	0.818	0.881	0.019 U											
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g	1.283 J	0.751 J	0.007 U											
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g	0.581 J	0.451 J	0.007 U											
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g	2.637	1.05 J	0.034 J											
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g	0.773 J	0.672 J	0.007 U											

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C127	C127	C127	C127	C167	C167	C167	C167	C167	C187	C187	C187	C187	C227
	X_Easting		7617354	7617354	7617354	7617354	7619264	7619264	7619264	7619264	7619264	7620139	7620139	7620139	7620139	7621415
	Y_Northing		714244	714244	714244	714244	710836	710836	710836	710836	710836	709498	709498	709498	709498	707787
	Sample ID		LW2-C127-B	LW2-C127-C	LW2-C127-D	LW2-C127-F	LW2-C167-A	LW2-C167-B	LW2-C167-C	LW2-C167-D	LW2-C167-F	LW2-C187-B	LW2-C187-C	LW2-C187-D	LW2-C187-E	LW2-C227-B
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005	10/19/2005
	Depth Interval		30 - 100 cm	100 - 184 cm	184 - 269 cm	391 - 466 cm	0 - 30 cm	30 - 110 cm	110 - 201 cm	201 - 244 cm	283 - 356 cm	30 - 98 cm	98 - 197 cm	197 - 309 cm	309 - 418 cm	30 - 113 cm
Chemical Name	**CAS No**	**Unit**														
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g	0.058 J	0.025 J	0.008 U											
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g	0.169 J	0.198 U	0.008 U											
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g	5.144	6.482	0.134 J											
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g	0.69 J	0.315 J	0.019 U											
Octachlorodibenzofuran	39001-02-0	pg/g	11.334	8.13	0.291 U											
Grain Size																
Medium gravel	GS_MG	percent	0	0	0 T		0	0	0	0		6.52	1.46	0		0.03 T
Fine gravel	GS_FG	percent	0	0	0.02 T		0	0.09	0.07	0.22		1.46	3.33	0.1		0.477 T
Very coarse sand	GS_VCS	percent	0.84	0.31	0.14 T		0.6	0.35	0.37	0.06		2.61	2.81	0.42		1.15 T
Coarse sand	GS_CS	percent	0.75	0.61	1.05 T		1.44	1.59	1.6	1.96		12.5	7.83	0.45		2.07 T
Medium sand	GS_MS	percent	1.78	1.94	2.71 T		2.84	5.98	3.75	5.4		31.5	22.1	7.61		4.94 T
Fine sand	GS_FS	percent	7.91	8.7	38.2 T		2.94	3.51	4.14	13.1		9.24	13.8	33.8		6.29 T
Very fine sand	GS_VFS	percent	18.9	17.3	41.3 T		5.57	6.68	9.18	23.2		9.01	10.1	35.1		14.1 T
Coarse silt	GS_CSILT	percent	14.8	13.3	9.96 T		17.7	14.2	15.5	20.4		7.97	7.44	14.2		19.3 T
Medium silt	GS_MSILT	percent	19.8	21.2	2.6 T		25.3	26	22.7	11.7		6.58	9.2	4.49		18.6 T
Fine silt	GS_FSILT	percent	12.9	12.7	0.893 T		17.1	16.3	18	8.87		4.25	7.82	1.53		11 T
Very fine silt	GS_VFSILT	percent	9.09	9.86	0.62 T		11.1	10.5	9.9	4.71		4.01	6.07	1.16		7.79 T
8-9 Phi clay	GS_CCLAY	percent	5.86	5.15	0.227 T		5.23	4.76	5.12	2.75		2.37	3.38	0.56		5.34 T
>9 Phi clay	GS_MFCLAY	percent	8.08	9.04	0.543 T		12	9.95	11.4	4.84		4.51	7.16	1.01		9.15 T
Chlorinated Herbicides																
2,4,5-T	93-76-5	µg/kg	0.59 U	0.66 U	0.51 U											
2,4-D	94-75-7	µg/kg	0.4 U	0.46 U	0.35 U											
2,4-DB	94-82-6	µg/kg	0.6 U	0.67 U	0.51 U											
Dalapon	75-99-0	µg/kg	0.36 U	0.4 U	0.31 U											
Dicamba	1918-00-9	µg/kg	1.3 U	1.4 U	1.1 U											
Dichloroprop	120-36-5	µg/kg	0.65 U	0.73 U	0.55 U											
Dinoseb	88-85-7	µg/kg	0.82 U	0.92 U	0.7 U											
MCPA	94-74-6	µg/kg	0.86 U	0.97 U	0.74 U											
MCPP	93-65-2	µg/kg	0.79 U	0.88 U	0.67 U											
Silvex	93-72-1	µg/kg	0.59 U	0.66 U	0.51 U											
Metals																
Aluminum	7429-90-5	mg/kg	34100	24300	7880		28500	24100	29800	16700		14100	21500	9150		32300
Antimony	7440-36-0	mg/kg	0.29 J	0.24 J	0.15 J		0.22 J	0.22 J	0.24 J	0.17 J		0.2 J	0.13 J	0.1 J		0.49 J
Arsenic	7440-38-2	mg/kg	3.04	4.06	1.64		4.75	4.64	4.64	4.4		2.76	3.37	2.57		8.49
Cadmium	7440-43-9	mg/kg	0.427	0.399	0.187		0.295	0.343	0.464	0.251		0.236	0.244	0.125		0.314
Chromium	7440-47-3	mg/kg	37.9	31.1	11.6		36	33.4	35.9	20.8		21.4	25.3	11		37.8
Chromium hexavalent	18540-29-9	mg/kg														
Copper	7440-50-8	mg/kg	68.8	42.8	16.9		50.9	45.3	45.4	24.3		26.6 J	30 J	14.5 J		74.5 J
Lead	7439-92-1	mg/kg	24.7 J	23.7 J	4.88 J		20.2	25	48.6	13.5		22.2 J	20.8 J	5.3 J		23.9
Mercury	7439-97-6	mg/kg	0.366	0.21	0.011 J		0.098	0.085	0.106	0.046		0.174	0.125	0.01 JT		0.009 U
Nickel	7440-02-0	mg/kg	26.6	26.9	17.9		30.3	28.9	29.6	19.7		19.2 J	21.3 J	11.3 J		28.4 J
Selenium	7782-49-2	mg/kg	0.1 U	0.11 U	0.16 U		0.17 U	0.17 U	0.15 U	0.05 U		0.03 U	0.03 U	0.03 U		0.21 U
Silver	7440-22-4	mg/kg	0.529	0.486	0.148		0.588	0.622	0.712	0.382		0.445	0.565	0.295		0.445 J
Zinc	7440-66-6	mg/kg	139	123	52.8		138	136	186	98.5		145	99.1	52.8		141

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C127	C127	C127	C127	C167	C167	C167	C167	C167	C187	C187	C187	C187	C227
	X_Easting		7617354	7617354	7617354	7617354	7619264	7619264	7619264	7619264	7619264	7620139	7620139	7620139	7620139	7621415
	Y_Northing		714244	714244	714244	714244	710836	710836	710836	710836	710836	709498	709498	709498	709498	707787
	Sample ID		LW2-C127-B	LW2-C127-C	LW2-C127-D	LW2-C127-F	LW2-C167-A	LW2-C167-B	LW2-C167-C	LW2-C167-D	LW2-C167-F	LW2-C187-B	LW2-C187-C	LW2-C187-D	LW2-C187-E	LW2-C227-B
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005	10/19/2005
	Depth Interval		30 - 100 cm	100 - 184 cm	184 - 269 cm	391 - 466 cm	0 - 30 cm	30 - 110 cm	110 - 201 cm	201 - 244 cm	283 - 356 cm	30 - 98 cm	98 - 197 cm	197 - 309 cm	309 - 418 cm	30 - 113 cm
Chemical Name	**CAS No**	**Unit**														
Polycyclic Aromatic Hydrocarbons																
2-Methylnaphthalene	91-57-6	µg/kg	430	340	1.2 J		9.1	46	110	18		83	200	1.6 J		15
Acenaphthene	83-32-9	µg/kg	1600	1600	4.4		30	120	670	89		490	2200	1.4 J		230
Acenaphthylene	208-96-8	µg/kg	250	340	2.2 J		22	36	65	32		140	260	1.4 J		19
Anthracene	120-12-7	µg/kg	610	750	3.2		45	98	160	39		240	3300	3.6		84
Fluorene	86-73-7	µg/kg	890	1000	2.3 J		19	97	420	44		340	1900	1.7 J		210
Naphthalene	91-20-3	µg/kg	970	1300	6.8	0.48 U	33	130	200	50	0.48 U	230	720	11	0.48 U	36
Phenanthrene	85-01-8	µg/kg	6500	9400	25		130	500	1500	430		2900	22000	16		770
Dibenz(a,h)anthracene	53-70-3	µg/kg	150	330	1.8 J		23	34	70	23		130	640	1.3 J		50
Benz(a)anthracene	56-55-3	µg/kg	1200	2500	11		140	200	480	200		1100	5600	10		280
Benzo(a)pyrene	50-32-8	µg/kg	1800	3600	19		240	300	630	290		1600	8700	16		370
Benzo(b)fluoranthene	205-99-2	µg/kg	1000	2100	12		160	200	430	190		980	5000	11		310
Benzo(g,h,i)perylene	191-24-2	µg/kg	1700	3300	19		230	290	550	250		1400	7200	17		310
Benzo(k)fluoranthene	207-08-9	µg/kg	1000	1800	10		150	190	410	150		960	4500	8.4		230
Chrysene	218-01-9	µg/kg	1700	3400	16		180	270	630	270		1500	7200	13		380
Fluoranthene	206-44-0	µg/kg	4400	9000	37		260	510	1300	550		3000	21000	20		720
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	1400	2800	16		210	270	520	220		1200	6800	14		300
Pyrene	129-00-0	µg/kg	5700	11000	52		310	570	1500	720		4100	27000	55		710
Low Molecular Weight PAH	LPAH	µg/kg	11300 T	14700 T	45.1 JT		288 T	1030 T	3130 T	702 T		4420 T	30600 T	36.7 JT		1360 T
High Molecular Weight PAH	HPAH	µg/kg	20100 T	39800 T	194 JT		1900 T	2830 T	6520 T	2860 T		16000 T	93600 T	166 JT		3660 T
Total PAHs	130498-29-2	µg/kg	31300 T	54600 T	239 JT		2190 T	3860 T	9650 T	3570 T		20400 T	124000 T	202 JT		5020 T
Chlorinated Pesticides																
2,4'-DDD	53-19-0	µg/kg	29	31	0.6 U		1	1.9 J	4.3	2.5 U		82	31	0.2 U		5 J
2,4'-DDE	3424-82-6	µg/kg	1 U	3.1 U	0.3 U		0.14 U	0.11 U	0.2 U	0.2 U		6.5 U	3.8 U	0.072 U		1 U
2,4'-DDT	789-02-6	µg/kg	0.39 U	3.5 U	0.062 U		0.16 U	0.81 U	1.7 J	0.72 U		6.6 U	31 U	0.058 U		0.66 U
4,4'-DDD	72-54-8	µg/kg	68 J	50 J	0.45 UJ		1.8	5.9	6.7	4.1		150	47	0.33 U		9.1 J
4,4'-DDE	72-55-9	µg/kg	20 NJ	14 NJ	0.2 UJ		0.93 J	3.8 J	4.5 J	1.4 J		50 NJ	3.8 U	0.056 U		3.8 J
4,4'-DDT	50-29-3	µg/kg	23 J	4.9 J	0.19 UJ		3 J	3.8 J	2.5 J	0.65 J		25	9.6 J	0.18 U		5.5 J
Total of 4,4'-DDD, -DDE, -DDT	PP_DDT3ISO	µg/kg	111 JT	68.9 JT	0.45 UJT		5.73 JT	13.5 JT	13.7 JT	6.15 JT		225 JT	56.6 JT	0.33 UT		18.4 JT
Aldrin	309-00-2	µg/kg	2.4 UJ	2.2 UJ	0.13 UJ		0.23 U	0.18 U	0.24 U	0.31 U		3.6 U	6.6 U	0.12 U		0.47 UJ
alpha-Hexachlorocyclohexane	319-84-6	µg/kg	0.66 U	0.71 U	0.11 U		0.19 U	0.15 U	0.14 U	0.12 U		1.2 U	1.2 U	0.099 U		0.39 U
beta-Hexachlorocyclohexane	319-85-7	µg/kg	1.1 U	3.2 NJ	0.17 U		0.29 U	0.23 U	0.36 U	0.46 J		1.8 U	1.8 U	0.16 U		1 U
delta-Hexachlorocyclohexane	319-86-8	µg/kg	0.5 U	0.5 U	0.079 U		0.14 U	0.12 U	0.11 U	0.084 U		1.6 J	1.2 U	0.075 U		0.43 UJ
gamma-Hexachlorocyclohexane	58-89-9	µg/kg	0.79 U	1.2 U	0.13 U		0.22 U	0.21 U	0.76 NJ	0.2 U		1.4 U	1.4 U	0.12 U		1.3 J
cis-Chlordane	5103-71-9	µg/kg	0.42 UJ	0.99 UJ	0.067 UJ		0.12 UJ	0.094 UJ	0.29 UJ	0.071 UJ		0.74 UJ	2.4 UJ	0.063 UJ		1 UJ
trans-Chlordane	5103-74-2	µg/kg	2.5 UJ	1.9 UJ	0.14 UJ		0.18 J	0.56 J	1.2 NJ	0.2 UJ		4.1 UJ	2.4 UJ	0.065 UJ		0.72 J
Oxychlordane	27304-13-8	µg/kg	1.7 J	4.1 J	0.63 U		0.16 U	0.21	0.16 NJ	0.17 J		10 NJ	1.3 NJ	0.086 U		0.34 U
cis-Nonachlor	5103-73-1	µg/kg	2.5 U	2.4 U	0.2 U		0.2 U	0.43 U	1.2 U	0.35 U		2.7 U	3.7 U	0.2 U		0.63 U
trans-Nonachlor	39765-80-5	µg/kg	1.9 U	3 U	0.043 U		0.074 U	0.2 U	0.2 U	0.37 U		2 U	7.5 U	0.04 U		0.64 NJ
Total Chlordanes	TOTCHLDANE	µg/kg	1.7 JT	4.1 JT	0.63 UT		0.18 JT	0.77 JT	1.36 JT	0.17 JT		10 JT	1.3 JT	0.2 UT		1.36 JT
Dieldrin	60-57-1	µg/kg	1 UJ	0.99 UJ	0.11 UJ		0.2 UJ	0.16 UJ	0.15 UJ	0.12 UJ		2 UJ	1.2 UJ	0.11 UJ		0.4 UJ
alpha-Endosulfan	959-98-8	µg/kg	0.66 U	0.33 U	0.052 U		0.091 U	0.073 U	0.068 U	0.2 U		0.57 U	4.7 U	0.049 U		1 U
beta-Endosulfan	33213-65-9	µg/kg	1.1 UJ	2.1 UJ	0.079 UJ		0.14 U	0.12 U	0.21 U	0.084 U		0.87 U	0.87 U	0.075 U		0.45 J
Endosulfan sulfate	1031-07-8	µg/kg	0.52 U	0.51 U	0.082 U		0.15 UJ	0.12 UJ	0.91 UJ	0.086 UJ		0.9 U	0.9 U	0.077 U		1 UJ
Endrin	72-20-8	µg/kg	0.71 UJ	1.2 UJ	0.089 UJ		0.16 U	0.13 U	0.37 U	0.098 U		0.98 UJ	2.9 UJ	0.084 UJ		0.33 UJ
Endrin aldehyde	7421-93-4	µg/kg	1 U	2 U	0.095 U		0.2 U	0.34 U	0.9 U	0.32 U		5.3 U	2 U	0.2 U		0.4 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C127	C127	C127	C127	C167	C167	C167	C167	C167	C187	C187	C187	C187	C227
	X_Easting		7617354	7617354	7617354	7617354	7619264	7619264	7619264	7619264	7619264	7620139	7620139	7620139	7620139	7621415
	Y_Northing		714244	714244	714244	714244	710836	710836	710836	710836	710836	709498	709498	709498	709498	707787
	Sample ID		LW2-C127-B	LW2-C127-C	LW2-C127-D	LW2-C127-F	LW2-C167-A	LW2-C167-B	LW2-C167-C	LW2-C167-D	LW2-C167-F	LW2-C187-B	LW2-C187-C	LW2-C187-D	LW2-C187-E	LW2-C227-B
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005	10/19/2005
	Depth Interval		30 - 100 cm	100 - 184 cm	184 - 269 cm	391 - 466 cm	0 - 30 cm	30 - 110 cm	110 - 201 cm	201 - 244 cm	283 - 356 cm	30 - 98 cm	98 - 197 cm	197 - 309 cm	309 - 418 cm	30 - 113 cm
Chemical Name	**CAS No**	**Unit**														
Endrin ketone	53494-70-5	µg/kg	2.1 J	1.8 UJ	0.076 UJ		0.2 UJ	0.22 UJ	2.2 UJ	0.37 UJ		2.5 U	0.84 U	0.2 U		0.28 UJ
Heptachlor	76-44-8	µg/kg	0.5 UJ	0.5 UJ	0.079 UJ		0.14 U	0.12 U	0.11 U	0.084 U		0.87 U	0.87 U	0.075 U		0.29 U
Heptachlor epoxide	1024-57-3	µg/kg	0.61 U	0.57 U	0.09 U		0.16 U	0.2 U	0.39 U	0.2 J		0.99 UJ	0.99 UJ	0.085 UJ		0.81 UJ
Methoxychlor	72-43-5	µg/kg	2.3 U	2.9 U	0.082 U		0.38 U	0.12 U	0.11 U	0.2 U		3.8	8.2 U	0.077 U		0.3 UJ
Mirex	2385-85-5	µg/kg	0.39 U	0.39 U	0.062 U		0.11 U	0.086 U	0.08 U	0.065 U		0.68 U	2.8 U	0.058 U		0.63 U
Toxaphene	8001-35-2	µg/kg	110 U	77 U	5.1 U		12 U	14 U	38 U	23 U		140 U	160 U	4.8 U		110 U
Petroleum Hydrocarbons																
Gasoline range hydrocarbons	GRH	mg/kg	11 J	21 J	1.4 U	1.4 U	2.4 U	2 U	3.3 J	2.3 J	1.4 U	8.5 J	14 J	1.3 U	1.4 U	1.9 U
Diesel range hydrocarbons	DRH	mg/kg	610 J	585 JT	4.7 U		210 J	380 J	300 J	76 J		350 J	730 J	4.4 U		120 J
Residual range hydrocarbons	RRH	mg/kg	970 J	960 JT	6.9 J		830 J	1100 J	680 J	170 J		530 J	1000 J	9.1 U		490 J
Total petroleum hydrocarbons	TPH	mg/kg	1590 JT	1570 JT	6.9 JT		1040 JT	1480 JT	983 JT	248 JT		889 JT	1740 JT	9.1 UT		610 JT
Phenols																
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg	8.4 U	0.76 U	0.59 U		1.1 U	4.9 U	5.1 U	0.62 U		6.5 U	6.5 U	0.56 U		0.79 U
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg	0.72 U	0.72 U	0.57 U		1 U	0.81 U	0.75 U	0.61 U		6.3 U	12 U	0.54 U		0.77 U
2,4,5-Trichlorophenol	95-95-4	µg/kg	8.4 U	7 U	3.3 J		0.79 U	3.2 J	5.3 J	4.8 U		5 U	5 U	2.9 J		2.4 U
2,4,6-Trichlorophenol	88-06-2	µg/kg	3.3 U	0.43 U	0.34 U		0.6 U	0.48 U	1.7 U	0.36 U		3.8 U	3.8 U	0.33 U		0.46 U
2,4-Dichlorophenol	120-83-2	µg/kg	62 U	62 U	2.5 U		4.3 U	6.9 U	6.4 U	2.6 U		14 U	54 U	2.4 U		3.3 U
2,4-Dimethylphenol	105-67-9	µg/kg	190 U	190 U	7.5 U		14 U	21 U	20 U	7.9 U		42 U	170 U	7.1 U		10 U
2,4-Dinitrophenol	51-28-5	µg/kg	1300 U	1300 U	49 U		86 U	140 UJ	130 U	52 U		R	R	R		66 U
2-Chlorophenol	95-57-8	µg/kg	58 U	58 U	2.4 U		4.1 U	6.5 U	6.1 U	2.5 U		13 U	51 U	2.2 U		3.1 U
2-Methylphenol	95-48-7	µg/kg	120 U	120 U	4.7 U		8.1 U	13 U	13 U	4.9 U		26 U	110 U	4.4 U		6.2 U
2-Nitrophenol	88-75-5	µg/kg	89 U	89 U	3.6 U		6.2 U	10 U	9.3 U	3.8 U		20 U	78 U	3.4 U		4.8 U
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	58 U	58 U	2.4 U		4.1 U	6.5 U	6.1 U	2.5 U		13 UJ	51 UJ	2.2 UJ		3.1 U
4-Chloro-3-methylphenol	59-50-7	µg/kg	72 U	72 U	2.9 U		5 U	8.1 U	7.5 U	3.1 U		16 U	63 U	2.7 U		3.9 U
4-Methylphenol	106-44-5	µg/kg	110 J	120 J	4 U		18	57	49	5 J		22 U	94 J	3.8 U		11
4-Nitrophenol	100-02-7	µg/kg	0.48 U	0.54 U	0.41 U		72 U	120 U	110 U	43 U		230 U	900 U	39 U		55 U
Pentachlorophenol	87-86-5	µg/kg	2.8 J	4 J	0.63 U		1.1 U	2.4 J	3.1 J	0.66 U		6.9 U	6.9 U	0.59 U		2.1 J
Phenol	108-95-2	µg/kg	74 U	65 U	4.6 U		10 J	17 J	9.4 J	2.8 U		15 U	57 U	2.5 U		14 J
Phthalates																
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	58 U	58 U	6.4 U		66	110	140	13 U		46 U	51 U	5.2 U		48 U
Butylbenzyl phthalate	85-68-7	µg/kg	52 U	51 U	2.1 U		6.9 J	5.8 U	5.4 U	2.2 U		12 U	45 U	2.3 J		2.8 U
Dibutyl phthalate	84-74-2	µg/kg	89 U	89 U	3.6 U		16	10 U	12 J	4.9 J		20 U	78 U	5 U		6 J
Diethyl phthalate	84-66-2	µg/kg	120 U	120 U	4.8 U		8.4 U	14 U	13 U	5.1 U		27 U	110 U	4.5 U		6.4 U
Dimethyl phthalate	131-11-3	µg/kg	62 U	62 U	2.5 U		4.3 U	6.9 U	6.4 U	2.6 U		14 U	54 U	2.4 U		3.3 U
Di-n-octyl phthalate	117-84-0	µg/kg	41 U	41 U	1.7 U		2.9 U	4.6 U	4.3 U	1.8 U		9 U	36 U	1.6 U		2.2 U
Semivolatile Organic Compounds																
1,2,4-Trichlorobenzene	120-82-1	µg/kg	52 U	51 U	2.1 U		3.6 U	5.8 U	5.4 U	2.2 U		12 U	45 U	2 U		2.8 U
1,2-Dichlorobenzene	95-50-1	µg/kg	45 U	45 U	1.8 U		3.1 U	5 U	4.7 U	1.9 U		9.8 U	39 U	1.7 U		2.4 U
1,3-Dichlorobenzene	541-73-1	µg/kg	55 U	55 U	2.2 U		3.9 U	6.2 U	5.7 U	2.3 U		12 U	48 U	2.1 U		3 U
1,4-Dichlorobenzene	106-46-7	µg/kg	0.21 U	0.21 U	0.17 U	0.17 U	0.29 U	0.23 U	0.22 U	0.18 U	0.17 U	0.18 U	0.18 U	0.16 U	0.17 U	3.5 U
2,4-Dinitrotoluene	121-14-2	µg/kg	96 U	96 U	3.8 U		6.7 U	11 U	10 U	4.1 U		21 U	84 U	3.6 U		5.1 U
2,6-Dinitrotoluene	606-20-2	µg/kg	96 U	96 U	3.8 U		6.7 U	11 U	10 U	4.1 U		21 U	84 U	3.6 U		5.1 U
2-Chloronaphthalene	91-58-7	µg/kg	130 U	130 U	4.9 U		8.6 U	14 U	13 U	5.2 U		27 U	110 U	4.7 U		6.6 U
2-Nitroaniline	88-74-4	µg/kg	92 U	92 U	3.7 U		6.5 U	11 U	9.6 U	3.9 U		21 U	81 U	3.5 U		5 U

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ANC04844
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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C127	C127	C127	C127	C167	C167	C167	C167	C167	C187	C187	C187	C187	C227
	X_Easting		7617354	7617354	7617354	7617354	7619264	7619264	7619264	7619264	7619264	7620139	7620139	7620139	7620139	7621415
	Y_Northing		714244	714244	714244	714244	710836	710836	710836	710836	710836	709498	709498	709498	709498	707787
	Sample ID		LW2-C127-B	LW2-C127-C	LW2-C127-D	LW2-C127-F	LW2-C167-A	LW2-C167-B	LW2-C167-C	LW2-C167-D	LW2-C167-F	LW2-C187-B	LW2-C187-C	LW2-C187-D	LW2-C187-E	LW2-C227-B
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005	10/19/2005
	Depth Interval		30 - 100 cm	100 - 184 cm	184 - 269 cm	391 - 466 cm	0 - 30 cm	30 - 110 cm	110 - 201 cm	201 - 244 cm	283 - 356 cm	30 - 98 cm	98 - 197 cm	197 - 309 cm	309 - 418 cm	30 - 113 cm
Chemical Name	**CAS No**	**Unit**														
3,3'-Dichlorobenzidine	91-94-1	µg/kg	130 U	130 U	5.1 U		8.9 U	15 U	14 U	5.4 U		28 U	120 U	4.8 U		6.8 U
3-Nitroaniline	99-09-2	µg/kg	89 U	89 U	3.6 U		6.2 U	10 U	9.3 U	3.8 U		20 U	78 U	3.4 U		4.8 U
4-Bromophenyl phenyl ether	101-55-3	µg/kg	48 U	48 U	1.9 U		3.4 U	5.4 U	5 U	2.1 U		11 U	42 U	1.8 U		2.6 U
4-Chloroaniline	106-47-8	µg/kg	72 U	72 U	2.9 U		5 U	8.1 U	7.5 U	3.1 U		16 U	63 U	2.7 U		3.9 U
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg	69 U	68 U	2.8 U		4.8 U	7.7 U	7.1 U	2.9 U		15 U	60 U	2.6 U		3.7 U
4-Nitroaniline	100-01-6	µg/kg	120 U	120 U	4.7 U		8.1 U	13 U	13 U	4.9 U		26 U	110 U	4.4 U		6.2 U
Aniline	62-53-3	µg/kg	52 U	51 U	2.1 U		3.6 U	5.8 U	5.4 U	2.2 U		12 U	45 U	2 U		18 J
Azobenzene	103-33-3	µg/kg	82 U	82 U	3.3 U		5.8 U	9.2 U	8.5 U	3.5 U		18 U	72 U	3.1 U		4.4 U
Benzoic acid	65-85-0	µg/kg	3300 U	3300 U	140 U		230 U	370 U	340 U	140 U		R	R	R		180 U
Benzyl alcohol	100-51-6	µg/kg	130 U	130 U	5.1 U		8.9 U	15 U	14 U	5.4 U		28 U	120 U	4.8 U		6.8 U
Bis(2-chloroethoxy) methane	111-91-1	µg/kg	45 U	45 U	1.8 U		3.1 U	5 U	4.7 U	1.9 U		9.8 U	39 U	1.7 U		2.4 U
Bis(2-chloroethyl) ether	111-44-4	µg/kg	82 U	82 U	3.3 U		5.8 U	9.2 U	8.5 U	3.5 U		18 U	72 U	3.1 U		4.4 U
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg	41 U	41 U	1.7 U		2.9 U	4.6 UJ	4.3 U	1.8 U		9 U	36 U	1.6 U		2.2 U
Carbazole	86-74-8	µg/kg	45 U	45 U	1.8 U		8.8 J	21	47	5.6 J		31 J	56 J	1.7 U		25
Dibenzofuran	132-64-9	µg/kg	100	110	0.35 J		6.3	33	150	5.5		40	88	0.32 J		34
Hexachlorobenzene	118-74-1	µg/kg	0.42 U	0.5 J	0.065 U		0.12 U	0.16 J	0.34	0.069 U		1 U	1.2 U	0.11 J		0.24 U
Hexachlorobutadiene	87-68-3	µg/kg	1.7 U	1.7 U	0.26 U		0.46 U	0.84 U	0.38 U	0.28 U		2.9 UJ	2.9 UJ	0.25 UJ		0.95 UJ
Hexachlorocyclopentadiene	77-47-4	µg/kg	520 U	510 U	21 U		36 U	58 U	54 U	22 U		120 U	450 U	20 U		28 U
Hexachloroethane	67-72-1	µg/kg	0.45 U	0.45 U	0.2 U		1.6 U	0.1 U	0.96 J	0.28		0.78 UJ	0.78 UJ	0.3 UJ		0.26 U
Isophorone	78-59-1	µg/kg	55 U	55 U	2.2 U		3.9 U	6.2 U	5.7 U	2.3 U		12 U	48 U	2.1 U		3 U
Nitrobenzene	98-95-3	µg/kg	69 U	68 U	2.8 U		4.8 U	7.7 U	7.1 U	2.9 U		15 U	60 U	2.6 U		3.7 U
N-Nitrosodimethylamine	62-75-9	µg/kg	210 U	210 U	8.3 U		15 U	24 U	22 U	8.8 U		46 U	190 U	7.9 U		12 U
N-Nitrosodiphenylamine	86-30-6	µg/kg	75 U	75 U	3 U		5.3 U	8.4 U	7.8 U	3.2 U		17 U	66 U	2.9 U		4 U
N-Nitrosodipropylamine	621-64-7	µg/kg	110 U	110 U	4.4 U		7.7 U	13 U	12 U	4.6 U		24 U	96 U	4.2 U		5.9 U
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	0.053 U	0.053 U	0.043 U	0.043 U	0.074 U	0.06 U	0.055 U	0.045 U	0.043 U	0.047 U	0.047 U	0.04 U	0.043 U	
1,1,1-Trichloroethane	71-55-6	µg/kg	0.11 U	0.11 U	0.081 U	0.081 U	0.15 U	0.12 U	0.11 U	0.085 U	0.081 U	0.089 U	0.089 U	0.076 U	0.081 U	
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	0.17 U	2.9 U	0.14 U	0.14 U	0.23 U	0.19 U	0.17 U	0.89 J	0.14 U	0.83 U	1.7 U	0.13 U	0.14 U	
1,1,2-Trichloroethane	79-00-5	µg/kg	0.11 U	0.11 U	0.081 U	0.081 U	0.15 U	0.12 U	0.11 U	0.085 U	0.081 U	0.089 U	0.089 U	0.076 U	0.081 U	
1,1-Dichloroethane	75-34-3	µg/kg	0.097 U	0.097 U	0.078 U	0.078 U	0.14 U	0.11 U	0.11 U	0.082 U	0.078 U	0.086 U	0.086 U	0.074 U	0.078 U	
1,2,3-Trichloropropane	96-18-4	µg/kg	0.19 U	0.19 U	0.15 U	0.15 U	0.27 U	0.21 U	0.2 U	0.16 U	0.15 U	0.17 U	0.17 U	0.15 U	0.15 U	
1,2-Dichloroethane	107-06-2	µg/kg	0.053 U	0.053 U	0.043 U	0.043 U	0.074 U	0.06 U	0.055 U	0.045 U	0.043 U	0.047 U	0.047 U	0.04 U	0.043 U	
1,2-Dichloropropane	78-87-5	µg/kg	0.06 U	0.06 U	0.048 U	0.048 U	0.084 U	0.067 U	0.062 U	0.051 U	0.048 U	0.053 U	0.053 U	0.045 U	0.048 U	
1,4-Dichloro-trans-2-burene	110-57-6	µg/kg	0.87 U	0.87 U	0.7 UJ	0.7 U	1.3 U	0.98 U	0.91 U	0.74 U	0.7 U	0.77 U	0.77 U	0.66 U	0.7 U	
2-Chloroethyl vinyl ether	110-75-8	µg/kg	0.26 U	0.26 U	0.21 U	0.21 U	0.36 U	0.29 U	0.27 U	0.22 U	0.21 U	0.23 U	0.23 U	0.2 U	0.21 U	
Acetone	67-64-1	µg/kg	24	21	9.2	6.8	37 U	28 U	29 U	24 U	12 U	12	15	9.2 J	6.2 J	
Acrolein	107-02-8	µg/kg	R	R	R	R	R	R	R	R	R	R	R	R	R	
Acrylonitrile	107-13-1	µg/kg	0.4 U	0.4 U	0.32 U	0.32 U	0.55 U	0.44 U	0.41 U	0.33 U	0.32 U	0.35 U	0.35 U	0.3 U	0.32 U	
Benzene	71-43-2	µg/kg	0.086 J	0.25 J	0.053 U	0.053 U	0.093 U	0.077 J	0.07 U	0.1 J	0.13 J	0.059 U	0.059 U	0.2 J	0.054 U	
Toluene	108-88-3	µg/kg	0.26 U	0.63 J	0.21 U	0.21 U	0.36 U	0.29 U	0.27 U	0.27 U	0.21 U	0.23 U	0.23 U	0.36 J	0.21 U	
Ethylbenzene	100-41-4	µg/kg	0.13 U	0.13 U	0.097 U	0.097 U	0.17 U	0.14 U	0.13 U	0.11 U	0.097 U	0.11 U	0.11 U	0.092 U	0.097 U	
m,p-Xylene	179601-23-1	µg/kg	0.23 U	0.23 U	0.18 U	0.18 U	0.31 U	0.25 U	0.24 U	0.19 U	0.18 U	0.2 U	0.2 U	0.17 U	0.18 U	
o-Xylene	95-47-6	µg/kg	0.3 J	0.29 J	0.11 U	0.11 U	0.18 U	0.15 U	0.15 J	0.13 J	0.11 U	0.26 J	0.12 U	0.097 U	0.11 U	
Xylene	1330-20-7	µg/kg	0.3 JT	0.29 JT	0.18 UT	0.18 UT	0.31 UT	0.25 UT	0.15 JT	0.13 JT	0.18 UT	0.26 JT	0.2 UT	0.17 UT	0.18 UT	
BTEX	BTEX	µg/kg	0.386 JT	1.17 JT	0.21 UT	0.21 UT	0.36 UT	0.077 JT	0.15 JT	0.23 JT	0.13 JT	0.26 JT	0.23 UT	0.56 JT	0.21 UT	
Bromochloromethane	74-97-5	µg/kg	0.11 U	0.11 U	0.082 U	0.082 U	0.15 U	0.12 U	0.11 U	0.086 U	0.082 U	0.09 U	0.09 U	0.077 U	0.082 U	

ANC04845
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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C127	C127	C127	C127	C167	C167	C167	C167	C167	C187	C187	C187	C187	C227
	X_Easting		7617354	7617354	7617354	7617354	7619264	7619264	7619264	7619264	7619264	7620139	7620139	7620139	7620139	7621415
	Y_Northing		714244	714244	714244	714244	710836	710836	710836	710836	710836	709498	709498	709498	709498	707787
	Sample ID		LW2-C127-B	LW2-C127-C	LW2-C127-D	LW2-C127-F	LW2-C167-A	LW2-C167-B	LW2-C167-C	LW2-C167-D	LW2-C167-F	LW2-C187-B	LW2-C187-C	LW2-C187-D	LW2-C187-E	LW2-C227-B
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/25/2005	10/25/2005	10/25/2005	10/25/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005	10/19/2005
	Depth Interval		30 - 100 cm	100 - 184 cm	184 - 269 cm	391 - 466 cm	0 - 30 cm	30 - 110 cm	110 - 201 cm	201 - 244 cm	283 - 356 cm	30 - 98 cm	98 - 197 cm	197 - 309 cm	309 - 418 cm	30 - 113 cm
Chemical Name	**CAS No**	**Unit**														
Bromodichloromethane	75-27-4	µg/kg	0.12 U	0.12 U	0.093 U	0.093 U	0.17 U	0.13 U	0.13 U	0.098 U	0.093 U	0.11 U	0.11 U	0.088 U	0.093 U	
Bromoform	75-25-2	µg/kg	0.079 U	0.079 U	0.063 U	0.063 U	0.11 U	0.088 U	0.082 U	0.066 U	0.063 U	0.069 U	0.069 U	0.059 U	0.063 U	
Bromomethane	74-83-9	µg/kg	0.63 U	0.63 U	0.51 U	0.51 U	0.89 U	0.71 U	0.66 U	0.54 U	0.51 U	0.56 U	0.56 U	0.48 U	0.51 U	
Carbon disulfide	75-15-0	µg/kg	0.24 J	0.25 J	0.18 U	0.18 U	0.31 U	0.25 U	0.24 U	0.25 J	0.32 J	0.2 U	0.2 U	0.17 U	0.18 U	
Carbon tetrachloride	56-23-5	µg/kg	0.17 U	0.17 U	0.14 U	0.14 U	0.24 U	0.19 U	0.18 U	0.15 U	0.14 U	0.15 U	0.15 U	0.13 U	0.14 U	
Chlorobenzene	108-90-7	µg/kg	0.12 U	0.12 U	0.095 U	0.096 U	0.17 U	0.14 U	0.13 U	0.11 U	0.096 U	0.11 U	0.11 U	0.09 U	0.096 U	
Chlorodibromomethane	124-48-1	µg/kg	0.12 U	0.12 U	0.093 U	0.093 U	0.17 U	0.13 U	0.13 U	0.098 U	0.093 U	0.11 U	0.11 U	0.088 U	0.093 U	
Chloroethane	75-00-3	µg/kg	0.48 U	0.48 U	0.38 U	0.39 U	0.67 U	0.54 U	0.5 U	0.41 U	0.39 U	0.42 U	0.42 U	0.36 U	0.39 U	
Chloroform	67-66-3	µg/kg	0.096 U	0.096 U	0.076 U	0.077 U	0.14 U	0.11 U	0.1 U	0.081 U	0.077 U	0.084 U	0.084 U	0.072 U	0.077 U	
Chloromethane	74-87-3	µg/kg	0.33 U	0.33 U	0.26 U	0.26 U	0.46 U	0.37 U	0.34 U	0.28 U	0.26 U	0.29 U	0.29 U	0.25 U	0.26 U	
cis-1,3-Dichloropropene	10061-01-5	µg/kg	0.053 U	0.053 U	0.043 U	0.043 U	0.074 U	0.06 U	0.055 U	0.045 U	0.043 U	0.047 U	0.047 U	0.04 U	0.043 U	
Dichlorodifluoromethane	75-71-8	µg/kg	0.19 U	0.19 U	0.15 U	0.15 U	0.27 U	0.21 U	0.2 U	0.16 U	0.15 U	0.17 U	0.17 U	0.15 U	0.15 U	
Ethylene dibromide	106-93-4	µg/kg	0.087 U	0.087 U	0.07 U	0.07 U	0.13 U	0.098 U	0.091 U	0.074 U	0.07 U	0.077 U	0.077 U	0.066 U	0.07 U	
Isopropylbenzene	98-82-8	µg/kg	0.076 J	0.16 J	0.06 U	0.06 U	0.11 U	0.084 U	0.078 U	0.064 U	0.06 U	0.066 U	0.066 U	0.057 U	0.06 U	
Methyl iodide	74-88-4	µg/kg	1.2 U	1.2 U	0.91 U	0.92 U	1.6 U	1.3 U	1.2 U	0.96 U	0.92 U	1.1 U	1.1 U	0.86 U	0.92 U	
Methyl isobutyl ketone	108-10-1	µg/kg	0.41 U	0.41 U	0.33 U	0.33 U	0.58 U	0.46 U	0.43 U	0.35 U	0.33 U	0.36 U	0.36 U	0.31 U	0.33 U	
Methyl N-butyl ketone	591-78-6	µg/kg	1.1 U	1.1 U	0.87 U	0.87 U	1.6 U	1.3 U	1.2 U	0.92 U	0.88 U	0.96 U	0.96 U	0.83 U	0.88 U	
Methyl tert-butyl ether	1634-04-4	µg/kg	0.067 U	0.067 U	0.053 U	0.053 U	0.093 U	0.075 U	0.07 U	0.056 U	0.054 U	0.059 U	0.059 U	0.05 U	0.054 U	
Methylene bromide	74-95-3	µg/kg	0.14 U	0.14 U	0.12 U	0.12 U	0.2 U	0.16 U	0.15 U	0.12 U	0.12 U	0.13 U	0.13 U	0.11 U	0.12 U	
Methylene chloride	75-09-2	µg/kg	0.96 U	1.4 U	3.5 U	1.4 U	1.7 U	1.7 U	2.8 U	3.7 U	5.8 U	2.3 U	2.3 U	2 U	3.2 U	
Methylethyl ketone	78-93-3	µg/kg	4.4 J	R	R	R	5.7 J	3.6 J	5 J	R	R	R	R	R	R	
Styrene	100-42-5	µg/kg	0.13 U	0.13 U	0.11 U	0.11 U	0.18 U	0.15 U	0.14 U	0.11 U	0.11 U	0.12 U	0.12 U	0.095 U	0.11 U	
Tetrachloroethene	127-18-4	µg/kg	0.17 U	0.17 U	0.14 U	0.14 U	0.23 U	0.19 U	0.17 U	0.14 U	0.27 J	0.15 U	0.15 U	0.13 U	0.14 U	
trans-1,2-Dichloroethene	156-60-5	µg/kg	0.33 U	0.33 U	0.26 U	0.26 U	0.46 U	0.37 U	0.34 U	0.28 U	0.26 U	0.29 U	0.29 U	0.25 U	0.26 U	
trans-1,3-Dichloropropene	10061-02-6	µg/kg	0.075 U	0.075 U	0.06 U	0.06 U	0.11 U	0.084 U	0.078 U	0.064 U	0.06 U	0.066 U	0.066 U	0.057 U	0.06 U	
Trichloroethene	79-01-6	µg/kg	0.11 U	0.11 U	0.085 U	0.085 U	0.15 U	0.12 U	0.11 U	0.089 U	0.085 U	0.093 U	0.093 U	0.08 U	0.085 U	
Trichlorofluoromethane	75-69-4	µg/kg	0.14 U	0.14 U	0.11 U	0.12 U	0.2 U	0.16 U	0.15 U	0.12 U	0.12 U	0.13 U	0.13 U	0.11 U	0.12 U	
Vinyl acetate	108-05-4	µg/kg	R	R	R	R	R	R	R	R	R	R	R	R	R	
Vinyl chloride	75-01-4	µg/kg	0.15 U	0.15 U	0.12 U	0.12 U	0.21 U	0.17 U	0.16 U	0.13 U	0.12 U	0.13 U	0.13 U	0.11 U	0.12 U	
Vinylidene chloride	75-35-4	µg/kg	0.14 U	0.14 U	0.12 U	0.12 U	0.2 U	0.16 U	0.15 U	0.12 U	0.12 U	0.13 U	0.13 U	0.11 U	0.12 U	

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

			Location Name	C227	C296	C296	C296	C303	C303	C303	C312	C312	C312	C321	C321-2	C321	C321-2
			X_Easting	7621415	7627314	7627314	7627314	7627151	7627151	7627151	7625128	7625128	7625128	7626059	7626057	7626059	7626057
			Y_Northing	707787	705446	705446	705446	705315	705315	705315	705159	705159	705159	704450	704453	704450	704453
			Sample ID	LW2-C227-C	LW2-C296-B	LW2-C296-C	LW2-C296-D	LW2-C303-B	LW2-C303-C	LW2-C303-D	LW2-C312-A	LW2-C312-B	LW2-C312-C	LW2-C321-B1	LW2-C321-B2	LW2-C321-C1	LW2-C321-C2
			Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	field rep	normal	field rep
			Parent Sample												LW2-C321-B1		LW2-C321-C1
			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	10/19/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005
			Depth Interval	113 - 192 cm	30 - 152 cm	152 - 216 cm	216 - 331 cm	30 - 86 cm	86 - 210 cm	210 - 282 cm	0 - 30 cm	30 - 152 cm	152 - 245 cm	30 - 138 cm	30 - 138 cm	138 - 255 cm	138 - 255 cm
Chemical Name	**CAS No**	**Unit**															
PCB Aroclors																	
Aroclor 1016	12674-11-2	µg/kg		5.5 U	2.2 UJ	1.8 UJ		5.5 U	1.5 UJ		2.2 U	5.3 U	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U
Aroclor 1221	11104-28-2	µg/kg		5.5 U	2.2 UJ	1.8 UJ		5.5 U	1.5 UJ		2.2 U	11 U	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U
Aroclor 1232	11141-16-5	µg/kg		5.5 U	2.2 UJ	1.8 UJ		5.5 U	1.5 UJ		2.2 U	8.1 U	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U
Aroclor 1242	53469-21-9	µg/kg		5.5 U	2.2 UJ	1.8 UJ		5.5 U	1.5 UJ		2.2 U	6.7 U	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U
Aroclor 1248	12672-29-6	µg/kg		5.5 U	24 J	1.8 UJ		25	1.5 UJ		54	8.5 U	1.4 U	17 J	21	1.6 U	1.6 U
Aroclor 1254	11097-69-1	µg/kg		45 J	45 J	1.8 UJ		68	1.5 UJ		45 U	6.5 U	1.4 U	27 J	44 J	1.6 U	1.6 U
Aroclor 1260	11096-82-5	µg/kg		34	50 J	1.8 UJ		70	1.5 UJ		74 J	19 U	1.4 U	22	38	1.6 U	1.6 U
Aroclor 1262	37324-23-5	µg/kg		5.5 U	2.2 UJ	1.8 UJ		5.5 U	1.5 UJ		2.2 U	1.6 U	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U
Aroclor 1268	11100-14-4	µg/kg		5.5 U	2.2 UJ	1.8 UJ		5.5 U	1.5 UJ		2.2 U	1.6 U	1.4 U	1.6 U	1.6 U	1.6 U	1.6 U
Total PCB Aroclors	12767-79-2	µg/kg		79 JT	119 JT	1.8 UJT		163 T	1.5 UJT		128 JT	19 UT	1.4 UT	66 JT	103 JT	1.6 UT	1.6 UT
Butyltins																	
Butyltin ion	78763-54-9	µg/kg		2.3													
Dibutyltin ion	14488-53-0	µg/kg		18													
Tributyltin ion	36643-28-4	µg/kg		45													
Tetrabutyltin	1461-25-2	µg/kg		0.5 J													
Conventionals																	
Total solids	TSO	percent		57	51.8	63.3	75.9	52	77.8	81.6 T	51	71.7	80	72.1	69.4 T	72.6 T	72.9
Total organic carbon	TOC	percent		2.37	4.44 T	1.16		6.48	0.22		1.74	0.49	0.03 J	0.74	1.06	0.03 J	0.09
Specific gravity	SPEC_GRAV	NA		1.52	1.44 T	1.73		1.49	1.98		1.49	1.9	2.09	1.8	1.76 T	1.82	1.87
PCDD/F Homologs																	
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g												0.368	1.08 T	0.046	
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g												1.058	1.72 T	0.012 U	
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g												10.929	17.7 T	0.498	
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g												52.943	145 T	1.177	
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g												340.358	781 T	4.486	
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g												1.304	2.97 T	0.006 U	
Pentachlorodibenzofuran homologs	30402-15-4	pg/g												4.937	13.3 T	0.005 U	
Hexachlorodibenzofuran homologs	55684-94-1	pg/g												18.527	55.7 T	0.086	
Heptachlorodibenzofuran homologs	38998-75-3	pg/g												33.153	99.2 T	0.171	
Octachlorodibenzofuran	39001-02-0	pg/g												33.244	106 T	0.2 J	
PCDD/Fs																	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g												0.157 U	0.373 JT	0.004 U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g												0.06 U	0.175 JT	0.012 U	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g												0.104 J	0.217 JT	0.011 U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g												1.04 J	2.99 JT	0.012 U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g												0.333 J	0.751 JT	0.066 J	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g												24.483	78.7 T	0.521 J	
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g												340.358	781 T	4.486	
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g												0.168 U	0.282 T	0.071 U	
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g												0.138 J	0.446 JT	0.004 U	
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g												0.152 J	0.42 JT	0.005 U	
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g												1.173 J	4.4 T	0.023 J	
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g												0.585 J	1.86 JT	0.006 U	

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

		Location Name	C227	C296	C296	C296	C303	C303	C303	C312	C312	C312	C321	C321-2	C321	C321-2
		X_Easting	7621415	7627314	7627314	7627314	7627151	7627151	7627151	7625128	7625128	7625128	7626059	7626057	7626059	7626057
		Y_Northing	707787	705446	705446	705446	705315	705315	705315	705159	705159	705159	704450	704453	704450	704453
		Sample ID	LW2-C227-C	LW2-C296-B	LW2-C296-C	LW2-C296-D	LW2-C303-B	LW2-C303-C	LW2-C303-D	LW2-C312-A	LW2-C312-B	LW2-C312-C	LW2-C321-B1	LW2-C321-B2	LW2-C321-C1	LW2-C321-C2
		Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	field rep	normal	field rep
		Parent Sample												LW2-C321-B1		LW2-C321-C1
		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	10/19/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005
		Depth Interval	113 - 192 cm	30 - 152 cm	152 - 216 cm	216 - 331 cm	30 - 86 cm	86 - 210 cm	210 - 282 cm	0 - 30 cm	30 - 152 cm	152 - 245 cm	30 - 138 cm	30 - 138 cm	138 - 255 cm	138 - 255 cm
Chemical Name	**CAS No**	**Unit**														
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g											0.03 J	0.077 JT	0.007 U	
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g											0.543 J	1.78 JT	0.006 U	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g											8.254	29.8 T	0.055 J	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g											0.772 J	2.82 JT	0.007 U	
Octachlorodibenzofuran	39001-02-0	pg/g											33.244	106 T	0.2 J	
Grain Size																
Medium gravel	GS_MG	percent		6.42	1.98		2.9 T	0.02		0	0.13	0	0	0.18	0	0.26
Fine gravel	GS_FG	percent	0.55	1.28	0.72		1.94 T	0.43		0.44	0.36	0.15	0.15	0.52	0	0.2
Very coarse sand	GS_VCS	percent	1.24	1.16	0.57		2.19 T	0.42		0.88	0.4	1.08	0.67	0.67	0.77	1.79
Coarse sand	GS_CS	percent	1.57	1.12	7.28		2.36 T	4.71		2.95	11.4	19.6	6.55	3.47	1.52	3.86
Medium sand	GS_MS	percent	1.63	1.48	17		4.83 T	44.6		17.3	61.8	70.2	34.1	22.4	1.84	6.56
Fine sand	GS_FS	percent	4.7	1.34	5.17		7.01 T	35.1		5.7	12.3	9.06	11.4	13.5	1.36	3.36
Very fine sand	GS_VFS	percent	10.8	3.2	4.53		8.75 T	6.21		6.03	3.19	0.55	7.91	10.7	4.99	7.72
Coarse silt	GS_CSILT	percent	15.3	8.41	8.34		11.2 T	2.43		5.57	2.41	0.2	9.29	10.6	27.8	22
Medium silt	GS_MSILT	percent	23.3	17	14.4		15.3 T	1.48		19.5	1.61	0.11	8.89	12.3	27.6	25.2
Fine silt	GS_FSILT	percent	14.5	25.2	13.7		13.2 T	1.12		15	1.78	0.13	7.51	11.9	17.6	12.1
Very fine silt	GS_VFSILT	percent	8.1	16.8	9.19		9.49 T	0.98		9.64	1.55	0.1	3.88	5.89	8.13	6.55
8-9 Phi clay	GS_CCLAY	percent	5.53	7.76	4		4.63 T	0.75		4.12	0.99	0.11	2.02	4.23	3.08	3.29
>9 Phi clay	GS_MFCLAY	percent	10.4	15.5	7.45		9.89 T	1		9.77	1.5	0.21	6.71	8.61	5.58	4.3
Chlorinated Herbicides																
2,4,5-T	93-76-5	µg/kg											0.51 U	0.53 UT	0.52 U	0.51 U
2,4-D	94-75-7	µg/kg											0.35 U	0.37 UT	0.36 U	0.35 U
2,4-DB	94-82-6	µg/kg											0.51 U	0.54 UT	0.52 U	0.52 U
Dalapon	75-99-0	µg/kg											0.31 U	0.32 UT	0.31 U	0.31 U
Dicamba	1918-00-9	µg/kg											1.1 U	1.1 UT	1.1 U	1.1 U
Dichloroprop	120-36-5	µg/kg											0.56 U	0.58 UT	0.57 U	0.56 U
Dinoseb	88-85-7	µg/kg											0.7 U	0.74 UT	0.72 U	0.71 U
MCPA	94-74-6	µg/kg											0.74 U	0.78 UT	0.75 U	0.74 U
MCPP	93-65-2	µg/kg											0.68 U	0.71 UT	0.69 U	0.68 U
Silvex	93-72-1	µg/kg											0.51 U	0.53 UT	0.52 U	0.51 U
Metals																
Aluminum	7429-90-5	mg/kg	38100	24800 T	24600		25800	16100		25100	18100	11100	16500	19000	12900	11000
Antimony	7440-36-0	mg/kg	0.3 J	0.42 JT	0.17 J		0.26 J	0.1 J		0.26 J	0.15 J	0.11 J	0.14 J	0.18 J	0.17 J	0.2 J
Arsenic	7440-38-2	mg/kg	4.53	5.45 T	4.05		4.68	2.24		3.74	2.14	1.47	3.09	3.33	5.46	3.8
Cadmium	7440-43-9	mg/kg	3.47	0.585 T	0.212		0.401	0.078		0.373	0.134	0.06 J	0.306	0.334	0.139	0.165
Chromium	7440-47-3	mg/kg	45.2	35 T	28.9		32.2	19.4		33.4	20.9	13.4	21.8	24.3	14.3	14.1
Chromium hexavalent	18540-29-9	mg/kg														
Copper	7440-50-8	mg/kg	74.5 J	93.4 T	39.4		56.8	24.1		45.3	24.2	14.5	29.3	33.3	24.4	24.1
Lead	7439-92-1	mg/kg	45.5	54.7 T	20.9		33.2	4.24		33.7	8.11	3.73	22.3	38.7	9.21	11.4
Mercury	7439-97-6	mg/kg	0.086	0.967	0.219		0.404	0.027		0.094	0.044	0.015 JT	0.133	0.135	0.026	0.037
Nickel	7440-02-0	mg/kg	28.6 J	25.5 T	27.1		26.6	21		24.9	21.8	15.7	20.7	22.8	17.2	17.9
Selenium	7782-49-2	mg/kg	0.19 U	0.15 UT	0.16 U		0.16 U	0.05 U		0.18 U	0.05 U	0.04 U	0.03 U	0.03 U	0.03 U	0.03 U
Silver	7440-22-4	mg/kg	0.574 J	0.848 T	0.423		0.551	0.198		0.654	0.292	0.186	0.507	0.508	0.364	0.362
Zinc	7440-66-6	mg/kg	139	200 T	82		160	54		194	82.3	51.3	101	134	69.3	71

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

			Location Name	C227	C296	C296	C296	C303	C303	C303	C312	C312	C312	C321	C321-2	C321	C321-2
			X_Easting	7621415	7627314	7627314	7627314	7627151	7627151	7627151	7625128	7625128	7625128	7626059	7626057	7626059	7626057
			Y_Northing	707787	705446	705446	705446	705315	705315	705315	705159	705159	705159	704450	704453	704450	704453
			Sample ID	LW2-C227-C	LW2-C296-B	LW2-C296-C	LW2-C296-D	LW2-C303-B	LW2-C303-C	LW2-C303-D	LW2-C312-A	LW2-C312-B	LW2-C312-C	LW2-C321-B1	LW2-C321-B2 field rep LW2-C321-B1	LW2-C321-C1	LW2-C321-C2 field rep LW2-C321-C1
			Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal		normal	
			Parent Sample														
			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	10/19/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005
			Depth Interval	113 - 192 cm	30 - 152 cm	152 - 216 cm	216 - 331 cm	30 - 86 cm	86 - 210 cm	210 - 282 cm	0 - 30 cm	30 - 152 cm	152 - 245 cm	30 - 138 cm	30 - 138 cm	138 - 255 cm	138 - 255 cm
Chemical Name	**CAS No**	**Unit**															
Polycyclic Aromatic Hydrocarbons																	
2-Methylnaphthalene	91-57-6	µg/kg		14	120	16		120	8		120	46	1.7 J	30	46.5 T	0.47 U	11
Acenaphthene	83-32-9	µg/kg		150	130	12		270	2.7		4000	280	0.66 J	70	840 T	0.23 U	310
Acenaphthylene	208-96-8	µg/kg		26	51	22		85	3		300	53	0.34 J	7.1	14 T	0.31 U	7 J
Anthracene	120-12-7	µg/kg		96	86	17		170	7.8		3300	160	0.67 J	25	55 T	0.31 U	420
Fluorene	86-73-7	µg/kg		110	100	16		110	3.8		2800	240	1.4 J	16	330 T	0.27 U	450
Naphthalene	91-20-3	µg/kg		41	470	65		380	12		250	71	12	61	66.5 T	0.49 U	7.1 U
Phenanthrene	85-01-8	µg/kg		570	420	95		1000	20		8400	2100	3.6	110	570 T	1.1 J	1800
Dibenz(a,h)anthracene	53-70-3	µg/kg		71	28	7		92	3.2		140	45	0.33 U	7.1	9 T	0.36 U	8.2 J
Benz(a)anthracene	56-55-3	µg/kg		390	210	53		660	37		1800	490	1.8 J	82	119 T	0.44 J	330
Benzo(a)pyrene	50-32-8	µg/kg		520	230	65		680	34		1900	540	2.7	64	89.5 T	0.45 J	130
Benzo(b)fluoranthene	205-99-2	µg/kg		400	200	45		470	18		1100	310	1.6 J	57	63.5 T	0.67 U	150
Benzo(g,h,i)perylene	191-24-2	µg/kg		440	250	71		430	14		1400	400	2.2 J	40	61 T	0.39 J	26
Benzo(k)fluoranthene	207-08-9	µg/kg		330	140	40		430	24		1300	320	1.7 J	48	57.5 T	0.46 U	140
Chrysene	218-01-9	µg/kg		500	280	62		800	38		2200	610	2.1 J	97	132 T	0.57 U	370
Fluoranthene	206-44-0	µg/kg		980	630	140		1400	44		6700	1600	3.9	140	255 T	1.1 J	1400
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg		400	220	60		440	16		1400	370	1.7 J	39	48.5 T	0.38 J	34
Pyrene	129-00-0	µg/kg		1000	770	170		1500	59		7000	2000	5.4	180	320 T	1.6 J	1500
Low Molecular Weight PAH	LPAH	µg/kg		1010 T	1380 T	243 T		2140 T	57.3 T		19200 T	2950 T	20.4 JT	319 T	1920 T	1.1 JT	3000 JT
High Molecular Weight PAH	HPAH	µg/kg		5030 T	2960 T	713 T		6900 T	287 T		24900 T	6690 T	23.1 JT	754 T	1160 T	4.36 JT	4090 JT
Total PAHs	130498-29-2	µg/kg		6040 T	4340 T	956 T		9040 T	345 T		44100 T	9640 T	43.5 JT	1070 T	3080 T	5.46 JT	7090 JT
Chlorinated Pesticides																	
2,4'-DDD	53-19-0	µg/kg		5	5.7 J	0.086 UJ		12	1.1 UJ		10 J	7.1	0.4 U	4.1 U	2.6 J	0.29 U	0.2 U
2,4'-DDE	3424-82-6	µg/kg		1 U	1.5 J	0.2 UJ		0.9 U	0.072 UJ		0.36 U	0.18 U	0.07 U	1 U	1.5	0.078 U	0.077 U
2,4'-DDT	789-02-6	µg/kg		1.7	1.8 UJ	0.072 UJ		4.6 U	0.19 UJ		4.5 J	13	0.057 U	1 U	0.32 U	0.062 U	0.2 U
4,4'-DDD	72-54-8	µg/kg		9 J	8.5 J	0.14 UJ		17 J	0.2 UJ		14	12	0.52	3.3 J	3.9 J	0.35 J	1.2 J
4,4'-DDE	72-55-9	µg/kg		4.3 J	6.3 NJ	0.068 UJ		4.7 NJ	0.2 UJ		5.8 J	1.8 J	0.054 NJ	2.2 UJ	3 J	0.064 UJ	0.45 NJ
4,4'-DDT	50-29-3	µg/kg		6.3 J	8.7 J	0.23 UJ		110 J	0.18 UJ		240 J	270 J	0.49 NJ	1.2 J	2 J	0.2 UJ	0.2 UJ
Total of 4,4'-DDD, -DDE, -DDT	PP_DDT3ISO	µg/kg		19.6 JT	23.5 JT	0.23 UJT		132 JT	0.2 UJT		260 JT	284 JT	1.06 JT	4.5 JT	8.9 JT	0.35 JT	1.65 JT
Aldrin	309-00-2	µg/kg		1.1 UJ	0.31 J	0.15 UJ		3.3 U	0.12 UJ		0.75 U	0.95 U	0.12 U	0.65 UJ	0.14 UJ	0.13 UJ	0.13 UJ
alpha-Hexachlorocyclohexane	319-84-6	µg/kg		0.39 U	0.22 UJ	0.13 UJ		0.67 U	0.099 UJ		0.16 U	0.11 U	0.097 U	0.54 UJ	0.12 UJ	0.11 UJ	0.15 UJ
beta-Hexachlorocyclohexane	319-85-7	µg/kg		0.6 U	0.24 UJ	0.19 UJ		2.7 J	0.16 UJ		0.24 U	0.38	0.79 U	0.84 UJ	0.18 UJ	0.17 UJ	0.17 UJ
delta-Hexachlorocyclohexane	319-86-8	µg/kg		0.29 UJ	0.15 UJ	0.092 UJ		0.35 U	0.075 UJ		0.16 U	0.081 U	0.073 U	0.41 UJ	0.084 UJ	0.08 UJ	0.08 UJ
gamma-Hexachlorocyclohexane	58-89-9	µg/kg		0.46 U	0.31 UJ	0.15 UJ		1 U	0.12 UJ		1.1 U	0.19 U	0.2 U	0.64 UJ	0.2 UJ	0.13 UJ	0.29 UJ
cis-Chlordane	5103-71-9	µg/kg		0.25 UJ	0.2 UJ	0.084 UJ		1 UJ	0.063 UJ		0.12 UJ	0.093 NJ	0.062 UJ	0.34 UJ	0.2 UJ	0.068 UJ	0.41 NJ
trans-Chlordane	5103-74-2	µg/kg		1.2 UJ	0.91 UJ	0.079 UJ		1.6 UJ	0.17 UJ		1.1 UJ	0.14 NJ	0.063 UJ	0.87 UJ	0.96 UJ	0.069 UJ	0.2 UJ
Oxychlordane	27304-13-8	µg/kg		0.34 U	0.28 J	0.11 UJ		1.9 NJ	1.7 UJ		0.37 J	0.42	0.084 U	0.47 U	0.25 U	0.093 UJ	0.092 U
cis-Nonachlor	5103-73-1	µg/kg		1.2 U	1.3 UJ	0.076 UJ		3 U	0.095 UJ		1.4 U	8.3 U	0.06 U	1.5	3.1 NJ	0.067 UJ	0.87 NJ
trans-Nonachlor	39765-80-5	µg/kg		0.29 U	0.2 UJ	0.049 UJ		1.5 U	0.12 UJ		0.2 U	0.22 U	0.039 U	0.22 U	0.045 U	0.043 UJ	0.31 NJ
Total Chlordanes	TOTCHLDANE	µg/kg		1.2 UJT	0.28 JT	0.11 UJT		1.9 JT	1.7 UJT		0.37 JT	0.653 JT	0.084 UT	1.5 T	3.1 JT	0.093 UJT	1.59 JT
Dieldrin	60-57-1	µg/kg		1 UJ	0.16 UJ	0.13 UJ		1 UJ	0.11 UJ		0.43 UJ	0.2 UJ	0.1 UJ	0.56 UJ	0.12 UJ	0.12 UJ	0.74 J
alpha-Endosulfan	959-98-8	µg/kg		1 U	0.074 UJ	0.061 UJ		0.72 NJ	0.2 UJ		0.24 NJ	0.23 U	0.048 U	0.27 U	0.055 U	0.053 U	0.053 U
beta-Endosulfan	33213-65-9	µg/kg		0.66 UJ	1 J	0.092 UJ		1.1 NJ	0.19 UJ		0.2 U	0.31 U	0.073 U	0.52 U	0.3 U	0.08 U	0.08 U
Endosulfan sulfate	1031-07-8	µg/kg		0.93 UJ	0.12 UJ	0.095 UJ		4.3 UJ	0.078 UJ		0.22 UJ	0.084 UJ	0.075 UJ	4.2 UJ	0.49 UJ	0.083 UJ	0.083 UJ
Endrin	72-20-8	µg/kg		1.4 UJ	0.13 UJ	0.11 UJ		0.33 U	0.14 UJ		0.48 NJ	0.31 U	0.082 U	0.46 UJ	0.094 UJ	0.09 UJ	0.48 UJ
Endrin aldehyde	7421-93-4	µg/kg		1.1 U	0.14 UJ	0.12 UJ		1.5 U	0.09 UJ		1.8 U	0.098 U	0.088 U	0.89 U	0.2 U	0.097 U	0.86

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C227	C296	C296	C296	C303	C303	C303	C312	C312	C312	C321	C321-2	C321	C321-2
	X_Easting		7621415	7627314	7627314	7627314	7627151	7627151	7627151	7625128	7625128	7625128	7626059	7626057	7626059	7626057
	Y_Northing		707787	705446	705446	705446	705315	705315	705315	705159	705159	705159	704450	704453	704450	704453
	Sample ID		LW2-C227-C	LW2-C296-B	LW2-C296-C	LW2-C296-D	LW2-C303-B	LW2-C303-C	LW2-C303-D	LW2-C312-A	LW2-C312-B	LW2-C312-C	LW2-C321-B1	LW2-C321-B2	LW2-C321-C1	LW2-C321-C2
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	field rep	normal	field rep
	Parent Sample													LW2-C321-B1		LW2-C321-C1
	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	10/19/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005
	Depth Interval		113 - 192 cm	30 - 152 cm	152 - 216 cm	216 - 331 cm	30 - 86 cm	86 - 210 cm	210 - 282 cm	0 - 30 cm	30 - 152 cm	152 - 245 cm	30 - 138 cm	30 - 138 cm	138 - 255 cm	138 - 255 cm
Chemical Name	**CAS No**	**Unit**														
Endrin ketone	53494-70-5	µg/kg	1 UJ	1.5 NJ	0.089 UJ		2.2 UJ	0.2 UJ		2.1 NJ	0.57 UJ	0.2 UJ	1 UJ	1.4 NJ	0.078 UJ	0.2 UJ
Heptachlor	76-44-8	µg/kg	0.29 U	0.31 J	0.092 UJ		0.29 U	0.075 UJ		0.12 U	0.081 U	0.073 U	0.41 UJ	0.084 UJ	0.08 UJ	0.08 UJ
Heptachlor epoxide	1024-57-3	µg/kg	0.86 UJ	0.8 J	0.26 UJ		0.94 U	0.085 UJ		0.53 U	0.2 U	0.083 U	0.46 UJ	0.49 UJ	0.091 UJ	0.16 J
Methoxychlor	72-43-5	µg/kg	0.3 UJ	0.37 UJ	0.095 UJ		3.9 J	0.078 UJ		0.76 U	0.36 U	0.075 U	0.42 U	0.087 U	0.083 U	0.68 U
Mirex	2385-85-5	µg/kg	1 U	0.16 NJ	0.072 UJ		1 U	0.058 UJ		0.089 U	0.063 U	0.057 U	0.32 U	0.099 U	0.062 UJ	0.062 U
Toxaphene	8001-35-2	µg/kg	66 U	43 UJ	16 UJ		110 U	10 UJ		69 U	26 U	4.7 U	70 U	70 U	5.1 U	28 U
Petroleum Hydrocarbons																
Gasoline range hydrocarbons	GRH	mg/kg	1.8 U	4.9 J	1.6 U	1.4 U	3.9 J	1.3 UT	1.3 U	3.15 JT	1.4 U	1.3 U	4.6 J	130 JT	17 J	3.2 J
Diesel range hydrocarbons	DRH	mg/kg	210 J	800 J	120 J		500 J	5.85 JT		560 J	110 J	4.3 UT	105 JT	160 JT	4.7 U	110 J
Residual range hydrocarbons	RRH	mg/kg	580 J	1500 J	280 J		1100 J	14 UT		830 J	190 J	4 UT	235 JT	335 JT	8.8 U	45 J
Total petroleum hydrocarbons	TPH	mg/kg	790 JT	2300 JT	400 JT		1600 JT	5.85 JT		1390 JT	300 JT	4.3 UT	345 JT	625 JT	17 JT	158 JT
Phenols																
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg	0.76 U	9.4 U	0.68 U		8.2 U	0.56 U		4.4 J	0.6 U	0.54 U	0.6 U	7.1 UT	0.6 U	1.7 U
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg	0.74 U	0.82 U	2.4 U		0.81 U	0.54 U		0.83 U	0.59 U	0.53 U	0.59 U	0.61 UT	0.58 U	0.58 U
2,4,5-Trichlorophenol	95-95-4	µg/kg	8.8 U	1 U	0.53 U		9.6 U	0.43 U		1.9 U	2.2 U	3.9 NJ	3.6 U	4.4 JT	2.1 J	2.5 U
2,4,6-Trichlorophenol	88-06-2	µg/kg	0.44 U	0.49 U	0.4 U		0.49 U	0.33 U		8.6 J	0.35 U	0.32 U	3.5 U	0.36 UT	0.35 U	4.7 U
2,4-Dichlorophenol	120-83-2	µg/kg	16 U	7 U	5.7 U		7 U	2.4 U		18 U	5.1 U	2.3 U	2.5 U	14 U	2.5 U	2.5 U
2,4-Dimethylphenol	105-67-9	µg/kg	49 U	22 U	18 U		22 U	7.1 U		54 U	16 U	6.9 U	7.7 U	40 U	7.6 U	7.6 U
2,4-Dinitrophenol	51-28-5	µg/kg	320 U	140 UJ	120 UJ		140 UJ	47 U		360 UJ	110 UJ	45 U	50 U	270 U	50 U	50 U
2-Chlorophenol	95-57-8	µg/kg	15 U	6.6 U	5.4 U		6.6 U	2.2 U		17 U	4.8 U	2.2 U	2.4 U	13 U	2.4 U	2.4 U
2-Methylphenol	95-48-7	µg/kg	30 U	14 U	11 U		14 U	4.4 U		34 U	9.5 U	4.3 U	4.8 U	25 U	4.7 U	4.7 U
2-Nitrophenol	88-75-5	µg/kg	23 U	11 U	8.3 U		10 U	3.4 U		26 U	7.3 U	3.3 U	3.7 U	19 U	3.6 U	3.6 U
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	15 U	6.6 U	5.4 U		6.6 U	2.2 U		17 U	4.8 U	2.2 U	2.4 U	13 U	2.4 U	2.4 U
4-Chloro-3-methylphenol	59-50-7	µg/kg	19 U	8.2 U	6.7 U		8.1 U	2.7 U		21 U	5.9 U	2.7 U	3 U	16 U	2.9 U	2.9 U
4-Methylphenol	106-44-5	µg/kg	26 U	120	34		100	3.8 U		30 J	8.9 J	3.7 U	21	37 J	4 U	4 U
4-Nitrophenol	100-02-7	µg/kg	270 U	120 U	95 U		120 U	39 U		300 U	84 U	38 U	0.41 U	0.43 UT	0.42 U	0.41 U
Pentachlorophenol	87-86-5	µg/kg	7.5 J	9.6 U	2 U		4.1 J	1.5 U		8.1 U	0.65 U	0.58 U	1 J	1.3 JT	0.64 U	0.64 U
Phenol	108-95-2	µg/kg	17 U	13 J	6.1 U		21 J	2.6 J		19 U	5.3 U	2.4 U	2.7 U	14 U	2.7 U	2.7 U
Phthalates																
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	130 U	40 U	10 U		52 U	7.3 U		82 U	26 U	3.7 U	39 U	49 U	5.3 U	5.7 U
Butylbenzyl phthalate	85-68-7	µg/kg	14 U	5.8 U	4.8 U		5.8 U	2 U		15 U	4.2 U	1.9 U	2.1 U	11 U	2.1 U	2.1 U
Dibutyl phthalate	84-74-2	µg/kg	23 U	11 U	8.3 U		10 U	3.9 J		26 U	7.3 U	4.2 J	7.1 U	19 U	5.8 U	3.6 U
Diethyl phthalate	84-66-2	µg/kg	31 U	14 U	12 U		14 U	4.5 U		35 U	9.8 U	4.4 U	4.9 U	26 U	4.9 U	4.9 U
Dimethyl phthalate	131-11-3	µg/kg	16 U	7 U	5.7 U		7 U	2.4 U		18 U	5.1 U	2.3 U	2.5 U	14 U	2.5 U	2.5 U
Di-n-octyl phthalate	117-84-0	µg/kg	11 U	4.7 U	3.8 U		4.7 U	1.6 U		12 U	3.4 U	1.5 U	1.7 U	8.7 U	1.7 U	1.7 U
Semivolatile Organic Compounds																
1,2,4-Trichlorobenzene	120-82-1	µg/kg	14 U	5.8 U	4.8 U		5.8 U	2 U		15 U	4.2 U	1.9 U	2.1 U	11 U	2.1 U	2.1 U
1,2-Dichlorobenzene	95-50-1	µg/kg	12 U	5.1 U	4.2 U		5 U	1.7 U		13 U	3.7 U	1.7 U	19	9.4 U	4.5 J	1.8 U
1,3-Dichlorobenzene	541-73-1	µg/kg	15 U	6.2 U	5.1 U		6.2 U	2.1 U		16 U	4.5 U	2 U	2.3 U	12 U	2.3 U	2.2 U
1,4-Dichlorobenzene	106-46-7	µg/kg	17 U	7.4 U	6.1 U		7.4 U	2.5 U		0.24 U	0.17 U	0.15 U	20	19 JT	5.8	5.4 J
2,4-Dinitrotoluene	121-14-2	µg/kg	25 U	11 U	8.9 U		11 U	3.6 U		28 U	7.9 U	3.5 U	3.9 U	21 U	3.9 U	3.9 U
2,6-Dinitrotoluene	606-20-2	µg/kg	25 U	11 U	8.9 U		11 U	3.6 U		28 U	7.9 U	3.5 U	3.9 U	21 U	3.9 U	3.9 U
2-Chloronaphthalene	91-58-7	µg/kg	32 U	14 U	12 U		14 U	4.7 U		36 U	11 U	4.5 U	5 U	27 U	5 U	5 U
2-Nitroaniline	88-74-4	µg/kg	24 U	11 U	8.6 U		11 U	3.5 U		27 U	7.6 U	3.4 U	3.8 U	20 U	3.8 U	3.8 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C227	C296	C296	C296	C303	C303	C303	C312	C312	C312	C321	C321-2	C321	C321-2
	X_Easting		7621415	7627314	7627314	7627314	7627151	7627151	7627151	7625128	7625128	7625128	7626059	7626057	7626059	7626057
	Y_Northing		707787	705446	705446	705446	705315	705315	705315	705159	705159	705159	704450	704453	704450	704453
	Sample ID		LW2-C227-C	LW2-C296-B	LW2-C296-C	LW2-C296-D	LW2-C303-B	LW2-C303-C	LW2-C303-D	LW2-C312-A	LW2-C312-B	LW2-C312-C	LW2-C321-B1	LW2-C321-B2	LW2-C321-C1	LW2-C321-C2
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	field rep	normal	field rep
	Parent Sample													LW2-C321-B1		LW2-C321-C1
	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	10/19/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005
	Depth Interval		113 - 192 cm	30 - 152 cm	152 - 216 cm	216 - 331 cm	30 - 86 cm	86 - 210 cm	210 - 282 cm	0 - 30 cm	30 - 152 cm	152 - 245 cm	30 - 138 cm	30 - 138 cm	138 - 255 cm	138 - 255 cm
Chemical Name	**CAS No**	**Unit**														
3,3'-Dichlorobenzidine	91-94-1	µg/kg	33 U	15 U	12 U		15 U	4.8 U		37 U	11 U	4.7 U	5.2 U	27 U	5.1 U	5.1 U
3-Nitroaniline	99-09-2	µg/kg	23 U	11 U	8.3 U		10 U	3.4 U		26 U	7.3 U	3.3 U	3.7 U	19 U	3.6 U	3.6 U
4-Bromophenyl phenyl ether	101-55-3	µg/kg	13 U	5.5 U	4.5 U		5.4 U	1.8 U		14 U	4 U	1.8 U	2 U	11 U	2 U	2 U
4-Chloroaniline	106-47-8	µg/kg	19 U	8.2 U	6.7 U		8.1 U	2.7 U		21 U	5.9 U	2.7 U	3 U	16 U	2.9 U	2.9 U
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg	18 U	7.8 U	6.4 U		7.7 U	2.6 U		20 U	5.6 U	2.5 U	2.8 U	15 U	2.8 U	2.8 U
4-Nitroaniline	100-01-6	µg/kg	30 U	14 U	11 U		14 U	4.4 U		34 U	9.5 U	4.3 U	4.8 U	25 U	4.7 U	4.7 U
Aniline	62-53-3	µg/kg	21 J	5.8 U	4.8 U		5.8 U	2 U		15 U	4.2 U	1.9 U	2.1 U	11 U	2.1 U	2.1 U
Azobenzene	103-33-3	µg/kg	22 U	9.3 U	7.6 U		9.3 U	3.1 U		24 U	6.7 U	3 U	3.4 U	18 U	3.4 U	3.3 U
Benzoic acid	65-85-0	µg/kg	850 U	380 U	310 U		370 U	130 U		950 U	270 U	120 U	R	R	R	R
Benzyl alcohol	100-51-6	µg/kg	33 U	15 U	12 U		15 U	4.8 U		37 U	11 U	4.7 U	5.2 U	27 U	5.1 U	5.1 U
Bis(2-chloroethoxy) methane	111-91-1	µg/kg	12 U	5.1 U	4.2 U		5 U	1.7 U		13 U	3.7 U	1.7 U	1.9 U	9.4 U	1.8 U	1.8 U
Bis(2-chloroethyl) ether	111-44-4	µg/kg	22 U	9.3 U	7.6 U		9.3 U	3.1 U		24 U	6.7 U	3 U	3.4 U	18 U	3.4 U	3.3 U
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg	11 U	4.7 UJ	3.8 UJ		4.7 UJ	1.6 U		12 UJ	3.4 UJ	1.5 U	1.7 U	8.7 U	1.7 U	1.7 U
Carbazole	86-74-8	µg/kg	54	5.1 U	4.2 U		27	1.7 U		51	3.7 U	1.7 U	5.8 J	9.4 U	1.8 U	55
Dibenzofuran	132-64-9	µg/kg	44	64	9.4		55	1.2 J		420	23	0.59 J	10	33.5 T	0.24 U	180
Hexachlorobenzene	118-74-1	µg/kg	0.24 U	0.093 UJ	0.11 UJ		1.4 U	0.062 UJ		0.56 NJ	0.067 U	0.06 U	0.34 UJ	0.13 U	0.067 U	0.13 U
Hexachlorobutadiene	87-68-3	µg/kg	0.95 UJ	0.37 UJ	0.31 UJ		1.2 U	0.25 UJ		0.68 NJ	0.27 U	0.24 U	1.4 U	0.28 U	0.27 UJ	0.27 U
Hexachlorocyclopentadiene	77-47-4	µg/kg	140 U	58 U	48 U		58 U	20 U		150 U	42 U	19 U	21 U	110 U	21 U	21 U
Hexachloroethane	67-72-1	µg/kg	0.26 U	0.2 UJ	0.3 UJ		0.39 U	0.2 UJ		2.1	0.32 J	0.4 U	0.4 UJ	0.19 UJ	0.79 J	0.43 UJ
Isophorone	78-59-1	µg/kg	15 U	6.2 U	5.1 U		6.2 U	2.1 U		16 U	4.5 U	2 U	2.3 U	12 U	2.3 U	2.2 U
Nitrobenzene	98-95-3	µg/kg	18 U	7.8 U	6.4 U		7.7 U	2.6 U		20 U	5.6 U	2.5 U	2.8 U	15 U	2.8 U	2.8 U
N-Nitrosodimethylamine	62-75-9	µg/kg	54 U	24 U	20 U		24 U	7.9 U		60 U	18 U	7.7 U	8.5 U	45 U	8.4 U	8.4 U
N-Nitrosodiphenylamine	86-30-6	µg/kg	20 U	8.5 U	7 U		8.5 U	2.9 U		22 U	6.2 U	2.8 U	3.1 U	16 U	3.1 U	3.1 U
N-Nitrosodipropylamine	621-64-7	µg/kg	29 U	13 U	11 U		13 U	4.2 U		32 U	9 U	4 U	4.5 U	24 U	4.5 U	4.4 U
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg								0.061 U	0.044 U	0.039 U	0.043 U	0.045 UT	0.043 U	
1,1,1-Trichloroethane	71-55-6	µg/kg								0.12 U	0.083 U	0.074 U	0.082 U	0.085 UT	0.082 U	
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg								0.19 U	0.14 U	0.12 U	0.14 U	0.14 UT	0.14 U	
1,1,2-Trichloroethane	79-00-5	µg/kg								0.12 U	0.083 U	0.074 U	0.082 U	0.085 UT	0.082 U	
1,1-Dichloroethane	75-34-3	µg/kg								0.12 U	0.08 U	0.072 U	0.08 U	0.083 UT	0.079 U	
1,2,3-Trichloropropane	96-18-4	µg/kg								0.22 U	0.16 U	0.14 U	0.16 U	0.16 UT	0.16 U	
1,2-Dichloroethane	107-06-2	µg/kg								0.061 U	0.044 U	0.039 U	0.043 U	0.045 UT	0.043 U	
1,2-Dichloropropane	78-87-5	µg/kg								0.069 U	0.049 U	0.044 U	0.049 U	0.051 UT	0.049 U	
1,4-Dichloro-trans-2-burene	110-57-6	µg/kg								1 UJ	0.72 U	0.64 U	0.71 U	0.74 UT	0.71 U	
2-Chloroethyl vinyl ether	110-75-8	µg/kg								0.3 UJ	0.21 U	0.19 U	0.21 U	0.22 UT	0.21 U	
Acetone	67-64-1	µg/kg								12 J	14 U	32 U	16	58 T	10 J	
Acrolein	107-02-8	µg/kg								R	R	R	R	R	R	
Acrylonitrile	107-13-1	µg/kg								0.46 UJ	0.33 U	0.29 U	0.32 U	0.34 UT	0.32 U	
Benzene	71-43-2	µg/kg								0.26 J	0.086 J	0.049 U	0.055 U	0.057 UT	0.24 J	
Toluene	108-88-3	µg/kg								0.86 U	0.21 U	0.19 U	0.21 U	0.22 UT	0.21 U	
Ethylbenzene	100-41-4	µg/kg								0.14 U	0.1 U	0.089 U	0.099 U	0.11 UT	0.098 U	
m,p-Xylene	179601-23-1	µg/kg								0.26 U	0.19 U	0.17 U	0.19 U	0.19 UT	0.18 U	
o-Xylene	95-47-6	µg/kg								0.15 U	0.11 U	0.094 U	0.11 U	0.11 UT	0.11 U	
Xylene	1330-20-7	µg/kg								0.26 UT	0.19 UT	0.17 UT	0.19 UT	0.19 UT	0.18 UT	
BTEX	BTEX	µg/kg								0.26 JT	0.086 JT	0.19 UT	0.21 UT	0.22 UT	0.24 JT	
Bromochloromethane	74-97-5	µg/kg								0.12 U	0.084 U	0.075 U	0.084 U	0.087 UT	0.083 U	

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

		Location Name	C227	C296	C296	C296	C303	C303	C303	C312	C312	C312	C321	C321-2	C321	C321-2
		X_Easting	7621415	7627314	7627314	7627314	7627151	7627151	7627151	7625128	7625128	7625128	7626059	7626057	7626059	7626057
		Y_Northing	707787	705446	705446	705446	705315	705315	705315	705159	705159	705159	704450	704453	704450	704453
		Sample ID	LW2-C227-C	LW2-C296-B	LW2-C296-C	LW2-C296-D	LW2-C303-B	LW2-C303-C	LW2-C303-D	LW2-C312-A	LW2-C312-B	LW2-C312-C	LW2-C321-B1	LW2-C321-B2	LW2-C321-C1	LW2-C321-C2
		Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	field rep	normal	field rep
		Parent Sample												LW2-C321-B1		LW2-C321-C1
		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	10/19/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005
		Depth Interval	113 - 192 cm	30 - 152 cm	152 - 216 cm	216 - 331 cm	30 - 86 cm	86 - 210 cm	210 - 282 cm	0 - 30 cm	30 - 152 cm	152 - 245 cm	30 - 138 cm	30 - 138 cm	138 - 255 cm	138 - 255 cm
Chemical Name	**CAS No**	**Unit**														
Bromodichloromethane	75-27-4	µg/kg								0.14 U	0.095 U	0.085 U	0.095 U	0.098 UT	0.094 U	
Bromoform	75-25-2	µg/kg								0.091 U	0.065 U	0.058 U	0.064 U	0.067 UT	0.064 U	
Bromomethane	74-83-9	µg/kg								0.73 U	0.52 U	0.47 U	0.52 U	0.54 UT	0.51 U	
Carbon disulfide	75-15-0	µg/kg								0.26 U	0.19 U	0.17 U	0.21 U	0.27 UT	0.18 U	
Carbon tetrachloride	56-23-5	µg/kg								0.2 U	0.14 U	0.13 U	0.14 U	0.15 UT	0.14 U	
Chlorobenzene	108-90-7	µg/kg								0.14 U	0.098 U	0.088 U	1.7	20 T	6.1	
Chlorodibromomethane	124-48-1	µg/kg								0.14 U	0.095 U	0.085 U	0.095 U	0.098 UT	0.094 U	
Chloroethane	75-00-3	µg/kg								0.55 U	0.4 U	0.35 U	0.39 U	0.41 UT	0.39 U	
Chloroform	67-66-3	µg/kg								0.11 U	0.079 U	0.07 U	0.078 U	0.081 UT	0.078 U	
Chloromethane	74-87-3	µg/kg								0.38 U	0.27 U	0.24 U	0.27 U	0.28 UT	0.27 U	
cis-1,3-Dichloropropene	10061-01-5	µg/kg								0.061 U	0.044 U	0.039 U	0.043 U	0.045 UT	0.043 U	
Dichlorodifluoromethane	75-71-8	µg/kg								0.22 U	0.16 U	0.14 U	0.16 U	0.16 UT	0.16 U	
Ethylene dibromide	106-93-4	µg/kg								0.1 U	0.072 U	0.064 U	0.071 U	0.074 UT	0.071 U	
Isopropylbenzene	98-82-8	µg/kg								0.094 J	0.062 U	0.055 U	0.062 U	0.064 UT	0.061 U	
Methyl iodide	74-88-4	µg/kg								1.4 U	0.94 U	0.84 U	0.93 U	0.97 UT	0.93 U	
Methyl isobutyl ketone	108-10-1	µg/kg								0.48 U	0.34 U	0.3 U	0.34 U	0.35 UT	0.34 U	
Methyl N-butyl ketone	591-78-6	µg/kg								1.3 U	0.9 U	0.8 U	0.89 U	0.93 UT	0.89 U	
Methyl tert-butyl ether	1634-04-4	µg/kg								0.077 U	0.055 U	0.049 U	0.055 U	0.057 UT	0.054 U	
Methylene bromide	74-95-3	µg/kg								0.17 U	0.12 U	0.11 U	0.12 U	0.12 UT	0.12 U	
Methylene chloride	75-09-2	µg/kg								0.74 U	3.3 U	4.8 U	6.3 U	5.4 UT	6.7 U	
Methylethyl ketone	78-93-3	µg/kg								R	R	R	2.1 J	10.7 JT	R	
Styrene	100-42-5	µg/kg								0.15 U	0.11 U	0.13 U	0.11 U	0.11 UT	0.11 U	
Tetrachloroethene	127-18-4	µg/kg								0.19 U	0.14 U	0.3 J	0.14 U	0.14 UT	0.14 U	
trans-1,2-Dichloroethene	156-60-5	µg/kg								0.38 U	0.27 U	0.24 U	0.27 U	0.28 UT	0.27 U	
trans-1,3-Dichloropropene	10061-02-6	µg/kg								0.087 U	0.062 U	0.055 U	0.062 U	0.064 UT	0.061 U	
Trichloroethene	79-01-6	µg/kg								0.13 U	0.087 U	0.078 U	0.086 U	0.09 UT	0.086 U	
Trichlorofluoromethane	75-69-4	µg/kg								0.16 U	0.12 U	0.11 U	0.12 U	0.12 UT	0.12 U	
Vinyl acetate	108-05-4	µg/kg								R	R	R	R	R	R	
Vinyl chloride	75-01-4	µg/kg								0.57 J	0.96 J	0.11 U	0.12 U	0.13 UT	0.55 J	
Vinylidene chloride	75-35-4	µg/kg								0.17 U	0.12 U	0.11 U	0.12 U	0.12 UT	0.12 U	

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

			Location Name	C321	C321-2	C358	C358	C358	C358	C360	C360-2	C360	C360-2	C360	C360-2	C381	C381
			X_Easting	7626059	7626057	7628393	7628393	7628393	7628393	7628249	7628247	7628249	7628247	7628249	7628247	7629325	7629325
			Y_Northing	704450	704453	702147	702147	702147	702147	702106	702107	702106	702107	702106	702107	701102	701102
			Sample ID	LW2-C321-E1	LW2-C321-E2	LW2-C358-A	LW2-C358-B	LW2-C358-C	LW2-C358-D	LW2-C360-B1	LW2-C360-B2	LW2-C360-C1	LW2-C360-C2	LW2-C360-F1	LW2-C360-F2	LW2-C381-B	LW2-C381-C
			Sample Type Code	normal	field rep	normal	normal	normal	normal	normal	field rep	normal	field rep	normal	field rep	normal	normal
			Parent Sample		LW2-C321-E1						LW2-C360-B1		LW2-C360-C1		LW2-C360-F1		
			Sample Date	10/27/2005	10/27/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/18/2005	10/18/2005
			Depth Interval	394 - 465 cm	394 - 465 cm	0 - 30 cm	30 - 152 cm	152 - 248 cm	248 - 303 cm	30 - 90 cm	30 - 90 cm	90 - 213 cm	90 - 213 cm	448 - 572 cm	448 - 572 cm	30 - 152 cm	152 - 271 cm
Chemical Name	**CAS No**	**Unit**															
PCB Aroclors																	
Aroclor 1016	12674-11-2	µg/kg			1.4 U		7.9 U	2 U	33 U	23 U	27 UT	150 U	150 U			1.9 U	1.8 U
Aroclor 1221	11104-28-2	µg/kg			1.4 U		6.6 U	2 U	21 U	78 U	54 UT	86 U	76 U			1.9 U	1.8 U
Aroclor 1232	11141-16-5	µg/kg			1.4 U		8.9 U	2 U	38 U	34 U	33 UT	170 U	200 U			1.9 U	1.8 U
Aroclor 1242	53469-21-9	µg/kg			1.4 U		5 U	2 U	42 U	23 U	25 UT	110 U	110 U			1.9 U	1.8 U
Aroclor 1248	12672-29-6	µg/kg			1.4 U		9.7 U	39	37 U	38 U	37 UT	140 U	150 U			10	1.8 U
Aroclor 1254	11097-69-1	µg/kg			1.4 U		18 U	57 J	38 U	45 U	41 UT	110 U	130 U			21 J	1.8 U
Aroclor 1260	11096-82-5	µg/kg			1.4 U		18	39	44 U	46 U	92 UT	110 U	110 U			14	1.8 U
Aroclor 1262	37324-23-5	µg/kg			1.4 U		2.2 U	2 U	32 U	23 U	27 UT	79 U	79 U			1.9 U	1.8 U
Aroclor 1268	11100-14-4	µg/kg			1.4 U		2.2 U	2 U	10 U	23 U	24 UT	31 U	24 U			1.9 U	1.8 U
Total PCB Aroclors	12767-79-2	µg/kg			1.4 UT		18 T	135 JT	44 UT	78 UT	92 UT	170 UT	200 UT			45 JT	1.8 UT
Butyltins																	
Butyltin ion	78763-54-9	µg/kg															
Dibutyltin ion	14488-53-0	µg/kg															
Tributyltin ion	36643-28-4	µg/kg															
Tetrabutyltin	1461-25-2	µg/kg															
Conventionals																	
Total solids	TSO	percent		75.2	78.8	42.7	50.9 T	55	55.3 T	48.1	46.3 T	55.5	52.8	61.3 T	61.2	61	62.2
Total organic carbon	TOC	percent			0.02 U		2.21	2.14	2	2.08	2.16 T	0.91	2.27			1.19	1.13 T
Specific gravity	SPEC_GRAV	NA			2.04		1.44	1.51	1.53	1.45	1.42 T	1.44	1.51			1.62	1.6
PCDD/F Homologs																	
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g			0.035 T												
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g			0.01 UT												
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g			0.229 T												
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g			0.591 T												
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g			2.42 JT												
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g			0.004 UT												
Pentachlorodibenzofuran homologs	30402-15-4	pg/g			0.003 UT												
Hexachlorodibenzofuran homologs	55684-94-1	pg/g			0.097 T												
Heptachlorodibenzofuran homologs	38998-75-3	pg/g			0.241 T												
Octachlorodibenzofuran	39001-02-0	pg/g			0.25 JT												
PCDD/Fs																	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g			0.003 UT												
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g			0.01 UT												
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g			0.008 UT												
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g			0.009 UT												
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g			0.058 JT												
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g			0.267 JT												
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g			2.42 JT												
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g			0.004 UT												
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g			0.003 UT												
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g			0.003 UT												
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g			0.021 JT												
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g			0.005 UT												

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

			Location Name	C321	C321-2	C358	C358	C358	C358	C360	C360-2	C360	C360-2	C360	C360-2	C381	C381
			X_Easting	7626059	7626057	7628393	7628393	7628393	7628393	7628249	7628247	7628249	7628247	7628249	7628247	7629325	7629325
			Y_Northing	704450	704453	702147	702147	702147	702147	702106	702107	702106	702107	702106	702107	701102	701102
			Sample ID	LW2-C321-E1	LW2-C321-E2	LW2-C358-A	LW2-C358-B	LW2-C358-C	LW2-C358-D	LW2-C360-B1	LW2-C360-B2	LW2-C360-C1	LW2-C360-C2	LW2-C360-F1	LW2-C360-F2	LW2-C381-B	LW2-C381-C
			Sample Type Code	normal	field rep	normal	normal	normal	normal	normal	field rep	normal	field rep	normal	field rep	normal	normal
			Parent Sample		LW2-C321-E1						LW2-C360-B1		LW2-C360-C1		LW2-C360-F1		
			Sample Date	10/27/2005	10/27/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/18/2005	10/18/2005
			Depth Interval	394 - 465 cm	394 - 465 cm	0 - 30 cm	30 - 152 cm	152 - 248 cm	248 - 303 cm	30 - 90 cm	30 - 90 cm	90 - 213 cm	90 - 213 cm	448 - 572 cm	448 - 572 cm	30 - 152 cm	152 - 271 cm
Chemical Name	**CAS No**	**Unit**															
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g			0.006 UT												
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g			0.005 UT												
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g			0.077 JT												
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g			0.01 UT												
Octachlorodibenzofuran	39001-02-0	pg/g			0.25 JT												
Grain Size																	
Medium gravel	GS_MG	percent			0		0	0	0	0	0 T	0	0			0	0
Fine gravel	GS_FG	percent			1.96		0	0.07	0	0.68	0.3 T	0.25	0.31			0	0.03
Very coarse sand	GS_VCS	percent			0.86		0.2	0.21	0.29	0.75	0.885 T	0.63	0.93			0.31	0.45
Coarse sand	GS_CS	percent			0.87		0.44	0.19	0.25	0.45	0.54 T	0.49	0.63			0.27	0.88
Medium sand	GS_MS	percent			5.19		0.7	0.4	0.5	1.43	0.765 T	1.83	2.15			0.42	0.62
Fine sand	GS_FS	percent			12.3		1.83	1.29	1.4	3.79	2.24 T	3.41	3.98			2.72	1.13
Very fine sand	GS_VFS	percent			37.1		8.2	6.8	7.92	9.26	7.45 T	9.79	9.31			6.98	7.18
Coarse silt	GS_CSILT	percent			26.4		21.6	20.6	7.87	16.7	16 T	11.3	9.98			11.5	12.9
Medium silt	GS_MSILT	percent			8.08		32.6	28.3	25.8	28.6	31.1 T	19.8	23.5			22.1	17.2
Fine silt	GS_FSILT	percent			2.75		13.1	16.5	23.2	16	16.9 T	15.8	16.7			23.8	26.2
Very fine silt	GS_VFSILT	percent			1.64		7.17	6.95	10.6	8.94	9.64 T	9.92	10.9			12.6	14.9
8-9 Phi clay	GS_CCLAY	percent			0.42		2.14	4.07	5.33	4.91	4.48 T	7.05	5.62			6.7	6.78
>9 Phi clay	GS_MFCLAY	percent			1.29		4.65	11	18.9	11.3	12.5 T	16.1	18.1			13	11.1
Chlorinated Herbicides																	
2,4,5-T	93-76-5	µg/kg			0.52 U												
2,4-D	94-75-7	µg/kg			0.35 U												
2,4-DB	94-82-6	µg/kg			0.52 U												
Dalapon	75-99-0	µg/kg			0.31 U												
Dicamba	1918-00-9	µg/kg			1.1 U												
Dichloroprop	120-36-5	µg/kg			0.57 U												
Dinoseb	88-85-7	µg/kg			0.72 U												
MCPA	94-74-6	µg/kg			0.75 U												
MCPP	93-65-2	µg/kg			0.69 U												
Silvex	93-72-1	µg/kg			0.52 U												
Metals																	
Aluminum	7429-90-5	mg/kg			8970		20300	23200	22500	29500	28600 T	28800	31000			27300	28700
Antimony	7440-36-0	mg/kg			0.11 J		0.17 J	0.15 J	0.17 J	0.2 J	0.24 JT	0.16 J	0.15 J			0.16 J	0.11 J
Arsenic	7440-38-2	mg/kg			1.28		3.8	3.86	4.17	9.24	5.15 T	3.83	4.05			3.58	2.93
Cadmium	7440-43-9	mg/kg			0.1		0.305	0.448	0.182	0.32	0.489 T	0.211	0.35			0.258	0.178
Chromium	7440-47-3	mg/kg			12.2		33.6	35.1	31	49.1	54.6 T	41.8	49.3			33.9	32.2
Chromium hexavalent	18540-29-9	mg/kg				0.2 UJT	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UT	0.2 UT	0.2 U	0.2 U	0.2 U			
Copper	7440-50-8	mg/kg			16		49.6	50.6	45.4	70.9	76.5 T	51.5	58.2			43.5	37.9
Lead	7439-92-1	mg/kg			5.27		33.7	35.6	34	26.9	34.8 T	33.5	40			15.8	5.15
Mercury	7439-97-6	mg/kg			0.0125 JT		0.077	0.107	0.101	0.09	0.101 T	0.168	0.112			0.05	0.033
Nickel	7440-02-0	mg/kg			14.7		22.2	24.9	21.7	28.8	29.8 T	29.3	31			30.7	26.4
Selenium	7782-49-2	mg/kg			0.03 U		0.12 U	0.1 U	0.09 U	0.05 U	0.05 UT	0.05 U	0.05 U			0.04 U	0.04 U
Silver	7440-22-4	mg/kg			0.282		0.709	0.864	0.775	0.631	0.722 T	0.81	0.892			0.466	0.351
Zinc	7440-66-6	mg/kg			52.8		123	137	153	130	143 T	175	184			121	71.5

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C321	C321-2	C358	C358	C358	C358	C360	C360-2	C360	C360-2	C360	C360-2	C381	C381
	X_Easting		7626059	7626057	7628393	7628393	7628393	7628393	7628249	7628247	7628249	7628247	7628249	7628247	7629325	7629325
	Y_Northing		704450	704453	702147	702147	702147	702147	702106	702107	702106	702107	702106	702107	701102	701102
	Sample ID		LW2-C321-E1	LW2-C321-E2	LW2-C358-A	LW2-C358-B	LW2-C358-C	LW2-C358-D	LW2-C360-B1	LW2-C360-B2	LW2-C360-C1	LW2-C360-C2	LW2-C360-F1	LW2-C360-F2	LW2-C381-B	LW2-C381-C
	Sample Type Code		normal	field rep	normal	normal	normal	normal	normal	field rep	normal	field rep	normal	field rep	normal	normal
	Parent Sample			LW2-C321-E1						LW2-C360-B1		LW2-C360-C1		LW2-C360-F1		
	Sample Date		10/27/2005	10/27/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/18/2005	10/18/2005
	Depth Interval		394 - 465 cm	394 - 465 cm	0 - 30 cm	30 - 152 cm	152 - 248 cm	248 - 303 cm	30 - 90 cm	30 - 90 cm	90 - 213 cm	90 - 213 cm	448 - 572 cm	448 - 572 cm	30 - 152 cm	152 - 271 cm
Chemical Name	**CAS No**	**Unit**														
Polycyclic Aromatic Hydrocarbons																
2-Methylnaphthalene	91-57-6	µg/kg		0.48 U		17	19	4.2	7	5.2 T	24	12			2.6	0.55 U
Acenaphthene	83-32-9	µg/kg		0.21 U		5.2	4.2 U	2.8 U	9.6	9.35 T	12	4.4			2.5 J	0.26 U
Acenaphthylene	208-96-8	µg/kg		0.28 U		3.1	3.3	2.8	5	5.1 T	7.6	5.5			1.4 J	0.36 U
Anthracene	120-12-7	µg/kg		0.28 U		13	5.9	2.7 U	16	15.5 T	14	11			3.2 U	0.36 U
Fluorene	86-73-7	µg/kg		0.25 U		5.9	3.9 U	2.9 U	11	9.05 T	14	6.6			2.3 J	0.31 U
Naphthalene	91-20-3	µg/kg	0.47 U	0.45 U	1.1 U	7.7	9.6	5.3	12	12.5 T	24	14	3.5	1.2 U	0.58 U	0.57 U
Phenanthrene	85-01-8	µg/kg		0.72 J		43	21	13	48	45 T	110	50			5.3 J	1.2 U
Dibenz(a,h)anthracene	53-70-3	µg/kg		0.33 U		4.9 U	2.9 U	2.3 U	5.7	10.2 T	5.6	5.5			0.91 J	0.42 U
Benz(a)anthracene	56-55-3	µg/kg		0.54 J		45	23	21	54	54.5 T	58	38			8.3	0.28 U
Benzo(a)pyrene	50-32-8	µg/kg		0.28 U		45	26	24	57	65.5 T	57	45			8.4	0.36 U
Benzo(b)fluoranthene	205-99-2	µg/kg		0.61 U		38	23	18	63	85 T	53	51			7.3	0.78 U
Benzo(g,h,i)perylene	191-24-2	µg/kg		0.53 J		30	23	16	48	54 T	47	35			8	0.37 U
Benzo(k)fluoranthene	207-08-9	µg/kg		0.42 U		29	21	19	44	51.5 T	41	35			6	0.54 U
Chrysene	218-01-9	µg/kg		0.53 U		55	33	30	82	80 T	81	58			11	0.66 U
Fluoranthene	206-44-0	µg/kg		0.73 J		53	37	30	140	120 T	130	63			8.2 J	1.1 U
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg		0.31 U		25	20	17	46	54.5 T	45	36			7	0.39 U
Pyrene	129-00-0	µg/kg		0.7 J		79	45	38	160	145 T	150	77			10 J	1.5 U
Low Molecular Weight PAH	LPAH	µg/kg		0.72 JT		94.9 T	58.8 T	25.3 T	109 T	102 T	206 T	104 T			14.1 JT	1.2 UT
High Molecular Weight PAH	HPAH	µg/kg		2.5 JT		399 T	251 T	213 T	700 T	720 T	668 T	444 T			75.1 JT	1.5 UT
Total PAHs	130498-29-2	µg/kg		3.22 JT		494 T	310 T	238 T	808 T	822 T	873 T	547 T			89.2 JT	1.5 UT
Chlorinated Pesticides																
2,4'-DDD	53-19-0	µg/kg		0.069 U		10	5.2	9.2	0.12 U	130 T	70 J	61			1.4 NJ	0.28 U
2,4'-DDE	3424-82-6	µg/kg		0.072 U		1.8 NJ	1.9 U	2.2 U	12 NJ	26 JT	2.1 U	2 U			0.13 U	0.091 U
2,4'-DDT	789-02-6	µg/kg		0.058 U		1.7	2.2	2.6	5.7 U	195 T	16 J	19			0.75	0.2 U
4,4'-DDD	72-54-8	µg/kg		0.11 UJ		28	7.9	13	0.18 UJ	325 JT	99 J	140 J			0.74 J	0.14 UJ
4,4'-DDE	72-55-9	µg/kg		0.055 UJ		9.6	7.6	6 J	0.09 UJ	130 JT	19 J	23 J			1.4 J	0.07 UJ
4,4'-DDT	50-29-3	µg/kg		0.18 UJ		29	55	96	380 J	1650 JT	350 J	380 J			1.2 J	0.23 UJ
Total of 4,4'-DDD, -DDE, -DDT	PP_DDT3ISO	µg/kg		0.18 UJT		66.6 T	70.5 T	115 JT	380 JT	2110 JT	468 JT	543 JT			3.34 JT	0.23 UJT
Aldrin	309-00-2	µg/kg		0.12 UJ		0.93 U	0.85 U	0.85 U	0.2 UJ	4.1 UJT	3.4 UJ	1.8 UJ			0.16 UJ	0.15 UJ
alpha-Hexachlorocyclohexane	319-84-6	µg/kg		0.098 UJ		0.77 U	0.7 U	0.7 U	0.17 UJ	3.4 UJT	2.8 UJ	1.5 UJ			0.13 U	0.13 U
beta-Hexachlorocyclohexane	319-85-7	µg/kg		0.16 UJ		1.2 U	1.1 U	1.1 U	1.6 NJ	5.3 UJT	4.4 UJ	2.3 UJ			0.25 U	0.2 U
delta-Hexachlorocyclohexane	319-86-8	µg/kg		0.074 UJ		0.58 U	0.53 U	0.53 U	0.13 UJ	2.6 UJT	2.1 UJ	1.1 UJ			0.14 UJ	0.094 UJ
gamma-Hexachlorocyclohexane	58-89-9	µg/kg		0.12 UJ		0.92 U	1 U	0.84 U	2.7 UJ	4 UJT	3.4 UJ	2 UJ			0.16 U	0.2 U
cis-Chlordane	5103-71-9	µg/kg		0.063 UJ		0.49 U	0.45 U	0.45 U	0.11 UJ	2.2 UJT	1.8 UJ	1.6 J			0.31 UJ	0.079 UJ
trans-Chlordane	5103-74-2	µg/kg		0.064 UJ		0.79 J	1.2 UJ	3.5 J	3.4 J	9.4 JT	14 NJ	4.7 UJ			0.35 UJ	0.088 UJ
Oxychlordane	27304-13-8	µg/kg		0.086 U		0.67 U	0.61 U	0.61 U	0.14 U	3 UT	2.5 U	1.6 NJ			0.11 U	0.11 U
cis-Nonachlor	5103-73-1	µg/kg		0.061 U		0.62 NJ	0.99 U	0.44 U	0.1 U	260 JT	5.4 U	3.7 U			0.22 U	0.078 U
trans-Nonachlor	39765-80-5	µg/kg		0.04 U		0.31 U	0.29 U	1.1 U	0.7 U	1.4 UT	1.2 U	2 U			0.08 J	0.06 U
Total Chlordanes	TOTCHLDANE	µg/kg		0.086 UT		1.41 JT	1.2 UJT	3.5 JT	3.4 JT	269 JT	14 JT	3.2 JT			0.08 JT	0.11 UT
Dieldrin	60-57-1	µg/kg		0.11 UJ		0.8 UJ	0.73 UJ	0.73 UJ	0.7 UJ	3.5 UJT	4.9 J	4.3 J			0.2 UJ	0.13 UJ
alpha-Endosulfan	959-98-8	µg/kg		0.049 U		0.38 U	0.35 U	0.35 U	0.77	2.5 JT	1.4 U	0.79 J			0.063 U	0.2 U
beta-Endosulfan	33213-65-9	µg/kg		0.074 U		0.58 U	0.53 U	2.7	2.4 U	2.6 UT	16 U	1.1 U			0.16 J	0.094 UJ
Endosulfan sulfate	1031-07-8	µg/kg		0.077 UJ		0.6 U	0.55 U	0.55 U	1.8 UJ	2.7 UJT	2.2 UJ	1.2 UJ			0.29 UJ	0.48 UJ
Endrin	72-20-8	µg/kg		0.083 UJ		0.65 U	0.6 U	0.83 U	2 UJ	180 JT	6.4 UJ	4.2 UJ			0.23 J	0.14 UJ
Endrin aldehyde	7421-93-4	µg/kg		0.089 U		0.7 U	0.64 U	1 NJ	0.15 U	3.1 UT	5.5 U	4.6 U			0.2 U	0.12 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C321	C321-2	C358	C358	C358	C358	C360	C360-2	C360	C360-2	C360	C360-2	C381	C381
	X_Easting		7626059	7626057	7628393	7628393	7628393	7628393	7628249	7628247	7628249	7628247	7628249	7628247	7629325	7629325
	Y_Northing		704450	704453	702147	702147	702147	702147	702106	702107	702106	702107	702106	702107	701102	701102
	Sample ID		LW2-C321-E1	LW2-C321-E2	LW2-C358-A	LW2-C358-B	LW2-C358-C	LW2-C358-D	LW2-C360-B1	LW2-C360-B2	LW2-C360-C1	LW2-C360-C2	LW2-C360-F1	LW2-C360-F2	LW2-C381-B	LW2-C381-C
	Sample Type Code		normal	field rep	normal	normal	normal	normal	normal	field rep	normal	field rep	normal	field rep	normal	normal
	Parent Sample			LW2-C321-E1						LW2-C360-B1		LW2-C360-C1		LW2-C360-F1		
	Sample Date		10/27/2005	10/27/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/18/2005	10/18/2005
	Depth Interval		394 - 465 cm	394 - 465 cm	0 - 30 cm	30 - 152 cm	152 - 248 cm	248 - 303 cm	30 - 90 cm	30 - 90 cm	90 - 213 cm	90 - 213 cm	448 - 572 cm	448 - 572 cm	30 - 152 cm	152 - 271 cm
Chemical Name	**CAS No**	**Unit**														
Endrin ketone	53494-70-5	µg/kg		0.072 UJ		0.56 U	0.51 U	0.51 U	0.2 UJ	2.5 UJT	4.1 UJ	2.5 UJ			0.23 UJ	0.091 UJ
Heptachlor	76-44-8	µg/kg		0.074 UJ		0.58 U	0.53 U	0.53 U	0.2 UJ	2.6 UJT	2.1 UJ	1.1 UJ			0.096 U	0.094 U
Heptachlor epoxide	1024-57-3	µg/kg		0.084 UJ		0.66 U	1.2 J	2	0.74 NJ	2.9 UJT	4.8 UJ	5.3 UJ			0.24 UJ	0.11 UJ
Methoxychlor	72-43-5	µg/kg		0.077 U		0.6 U	0.55 U	0.55 U	1.3 U	2.7 UT	2.2 U	2 U			0.099 UJ	0.097 UJ
Mirex	2385-85-5	µg/kg		0.058 U		0.45 U	0.41 U	0.41 U	0.094 U	2 UT	1.7 U	0.86 U			0.074 U	0.098 U
Toxaphene	8001-35-2	µg/kg		4.7 U		42 U	96 U	130 U	38 U	170 UT	370 U	310 U			16 U	7.9 U
Petroleum Hydrocarbons																
Gasoline range hydrocarbons	GRH	mg/kg	31 J	3 J											3.3 U	1.7 U
Diesel range hydrocarbons	DRH	mg/kg		4.4 UT											56 J	7.8 J
Residual range hydrocarbons	RRH	mg/kg		7.2 UT											210 J	81 J
Total petroleum hydrocarbons	TPH	mg/kg		3 JT											266 JT	88.8 JT
Phenols																
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg		0.55 U		0.86 U	7.9 U	91 U	9 U	9.4 UT	90 U	94 U			8.1 U	0.7 U
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg		0.54 U		0.84 U	7.7 U	7.7 U	8.8 U	9.2 UT	18 U	33 NJ			0.69 U	0.68 U
2,4,5-Trichlorophenol	95-95-4	µg/kg		1.5 U		1.2 U	6 U	6 U	6.9 U	7.2 UT	90 U	27 U			1.7 U	0.54 U
2,4,6-Trichlorophenol	88-06-2	µg/kg		0.32 U		0.5 U	4.6 U	17 J	5.2 U	5.5 UT	1200	1400			0.41 U	0.41 U
2,4-Dichlorophenol	120-83-2	µg/kg		2.3 U		3.6 U	3.3 U	5 J	3.8 U	4.7 JT	17 U	18 U			3 U	2.9 U
2,4-Dimethylphenol	105-67-9	µg/kg		7 U		11 U	10 U	10 U	12 U	12 UT	50 U	53 U			R	R
2,4-Dinitrophenol	51-28-5	µg/kg		46 U		72 U	66 U	66 U	75 U	79 UT	330 U	350 U			60 U	58 U
2-Chlorophenol	95-57-8	µg/kg		2.2 U		3.4 U	5.3 J	31	4.2 J	3.7 UT	16 U	20 J			2.8 U	2.8 U
2-Methylphenol	95-48-7	µg/kg		4.4 U		6.8 U	6.2 U	6.2 U	7.1 U	7.4 UT	31 U	33 U			5.6 U	5.5 U
2-Nitrophenol	88-75-5	µg/kg		3.3 U		5.2 U	4.8 U	4.8 U	5.5 U	5.7 UT	24 U	25 U			4.3 U	4.2 U
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg		2.2 U		3.4 U	3.1 U	3.1 U	3.6 U	3.7 UT	16 U	17 U			2.8 U	2.8 U
4-Chloro-3-methylphenol	59-50-7	µg/kg		2.7 U		4.2 U	3.9 U	3.9 U	4.4 U	4.6 UT	19 U	20 U			3.5 U	3.4 U
4-Methylphenol	106-44-5	µg/kg		3.7 U		52	450	56	12	24 T	27 U	28 U			4.8 U	4.7 U
4-Nitrophenol	100-02-7	µg/kg		0.42 U		60 U	55 U	55 U	63 U	66 UT	280 U	290 U			50 U	49 U
Pentachlorophenol	87-86-5	µg/kg		0.59 U		0.92 U	8.4 U	8.4 U	9.6 U	10 UT	8.3 U	8.8 U			0.76 U	0.74 U
Phenol	108-95-2	µg/kg		2.5 U		12 J	78	120	12 J	16 JT	18 U	18 U			16 U	13 U
Phthalates																
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg		5 U		76 J	59 J	55 J	550	740 T	130 U	110 U			25 U	5 U
Butylbenzyl phthalate	85-68-7	µg/kg		2 U		3 U	2.8 U	2.8 U	3.2 U	10 JT	14 U	15 U			2.5 U	2.5 U
Dibutyl phthalate	84-74-2	µg/kg		5.2 U		14	6.4 J	5.1 J	260	245 T	24 U	25 U			11 U	6.5 U
Diethyl phthalate	84-66-2	µg/kg		4.5 U		7 U	6.4 U	6.4 U	7.3 U	7.6 UT	32 U	34 U			5.8 U	5.7 U
Dimethyl phthalate	131-11-3	µg/kg		2.3 U		3.6 U	3.3 U	3.3 U	3.8 U	4 UT	17 U	18 U			3 U	2.9 U
Di-n-octyl phthalate	117-84-0	µg/kg		1.6 U		2.4 U	2.2 U	2.2 U	2.5 U	2.7 UT	11 U	12 U			2 U	2 U
Semivolatile Organic Compounds																
1,2,4-Trichlorobenzene	120-82-1	µg/kg		2 U		3 U	2.8 U	2.8 U	3.2 U	3.3 UT	14 U	15 U			2.5 U	2.5 U
1,2-Dichlorobenzene	95-50-1	µg/kg		5.6 J		2.6 U	2.4 U	2.4 U	2.8 U	2.9 UT	12 U	13 U			2.2 U	2.1 U
1,3-Dichlorobenzene	541-73-1	µg/kg		2.1 U		3.2 U	3 U	2.9 U	3.4 U	3.5 UT	15 U	16 U			2.7 U	2.6 U
1,4-Dichlorobenzene	106-46-7	µg/kg	4.6	3.9 J	0.29 U	0.24 U	0.22 U	0.22 U	0.25 U	0.27 UT	0.22 U	0.23 U	0.2 U	0.2 U	0.2 U	0.2 U
2,4-Dinitrotoluene	121-14-2	µg/kg		3.6 U		5.6 U	5.1 U	5.1 U	5.9 U	6.1 UT	26 U	27 U			4.6 U	4.6 U
2,6-Dinitrotoluene	606-20-2	µg/kg		3.6 U		5.6 U	5.1 U	5.1 U	5.9 U	6.1 UT	26 U	27 U			4.6 U	4.6 U
2-Chloronaphthalene	91-58-7	µg/kg		4.6 U		7.2 U	6.6 U	6.6 U	7.5 U	7.9 UT	33 U	35 U			6 U	5.8 U
2-Nitroaniline	88-74-4	µg/kg		3.5 U		5.4 U	5 U	4.9 U	5.7 U	5.9 UT	25 U	26 U			4.5 U	4.4 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C321	C321-2	C358	C358	C358	C358	C360	C360-2	C360	C360-2	C360	C360-2	C381	C381
	X_Easting		7626059	7626057	7628393	7628393	7628393	7628393	7628249	7628247	7628249	7628247	7628249	7628247	7629325	7629325
	Y_Northing		704450	704453	702147	702147	702147	702147	702106	702107	702106	702107	702106	702107	701102	701102
	Sample ID		LW2-C321-E1	LW2-C321-E2	LW2-C358-A	LW2-C358-B	LW2-C358-C	LW2-C358-D	LW2-C360-B1	LW2-C360-B2	LW2-C360-C1	LW2-C360-C2	LW2-C360-F1	LW2-C360-F2	LW2-C381-B	LW2-C381-C
	Sample Type Code		normal	field rep	normal	normal	normal	normal	normal	field rep	normal	field rep	normal	field rep	normal	normal
	Parent Sample			LW2-C321-E1						LW2-C360-B1		LW2-C360-C1		LW2-C360-F1		
	Sample Date		10/27/2005	10/27/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/18/2005	10/18/2005
	Depth Interval		394 - 465 cm	394 - 465 cm	0 - 30 cm	30 - 152 cm	152 - 248 cm	248 - 303 cm	30 - 90 cm	30 - 90 cm	90 - 213 cm	90 - 213 cm	448 - 572 cm	448 - 572 cm	30 - 152 cm	152 - 271 cm
Chemical Name	**CAS No**	**Unit**														
3,3'-Dichlorobenzidine	91-94-1	µg/kg		4.7 U		7.4 U	6.8 U	6.8 U	7.7 U	8.1 UT	34 U	36 U			6.1 U	6 U
3-Nitroaniline	99-09-2	µg/kg		3.3 U		5.2 U	4.8 U	4.8 U	5.5 U	5.7 UT	24 U	25 U			4.3 U	4.2 U
4-Bromophenyl phenyl ether	101-55-3	µg/kg		1.8 U		2.8 U	2.6 U	2.6 U	3 U	3.1 UT	13 U	14 U			2.3 U	2.3 U
4-Chloroaniline	106-47-8	µg/kg		2.7 U		4.2 U	3.9 U	3.9 U	4.4 U	4.6 UT	19 U	20 U			3.5 U	3.4 U
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg		2.6 U		4 U	3.7 U	3.7 U	4.2 U	4.4 UT	19 U	19 U			3.3 U	3.3 U
4-Nitroaniline	100-01-6	µg/kg		4.4 U		6.8 U	6.2 U	6.2 U	7.1 U	7.4 UT	31 U	33 U			5.6 U	5.5 U
Aniline	62-53-3	µg/kg		2 U		3 U	2.8 U	2.8 U	3.2 U	3.3 UT	14 U	15 U			2.5 U	2.5 U
Azobenzene	103-33-3	µg/kg		3.1 U		4.8 U	4.4 U	4.4 U	5 U	5.3 UT	22 U	23 U			4 U	3.9 U
Benzoic acid	65-85-0	µg/kg		R		200 U	180 U	180 U	R	R	R	R			160 U	160 U
Benzyl alcohol	100-51-6	µg/kg		4.7 U		7.4 U	6.8 U	6.8 U	7.7 U	8.1 UT	34 U	36 U			6.1 U	6 U
Bis(2-chloroethoxy) methane	111-91-1	µg/kg		1.7 U		2.6 U	2.4 U	2.4 U	2.8 U	2.9 UT	12 U	13 U			2.2 U	2.1 U
Bis(2-chloroethyl) ether	111-44-4	µg/kg		3.1 U		4.8 U	4.4 U	4.4 U	5 U	5.3 UT	22 U	23 U			4 U	3.9 U
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg		1.6 U		2.4 U	2.2 U	2.2 U	2.5 U	2.7 UT	11 U	12 U			2 U	2 U
Carbazole	86-74-8	µg/kg		1.7 U		3.8 J	2.9 J	2.4 U	8.4 J	9.2 JT	12 U	13 U			2.2 U	2.1 U
Dibenzofuran	132-64-9	µg/kg		0.22 U		1.9 U	1.7 U	1.9 U	4.6	4 T	7.6 U	3.4			1.7 J	0.28 U
Hexachlorobenzene	118-74-1	µg/kg		0.061 U		0.48 U	1.9 U	2 U	0.54 J	2.1 UT	14	8.4			0.1 NJ	0.078 U
Hexachlorobutadiene	87-68-3	µg/kg		0.25 U		1.9 U	1.8 U	1.8	0.4 U	3.1 UT	6.9 U	4.9			1.4 UJ	1.6 J
Hexachlorocyclopentadiene	77-47-4	µg/kg		20 U		30 U	28 U	28 U	32 U	33 UT	140 U	150 U			25 U	25 U
Hexachloroethane	67-72-1	µg/kg		0.44 UJ		0.52 UJ	0.95 J	4.7 J	5.1 J	5.7 JT	31 J	12 J			0.32 U	0.85 NJ
Isophorone	78-59-1	µg/kg		2.1 U		3.2 U	3 U	2.9 U	3.4 U	3.5 UT	15 U	16 U			2.7 U	2.6 U
Nitrobenzene	98-95-3	µg/kg		2.6 U		4 U	3.7 U	3.7 U	4.2 U	4.4 UT	19 U	19 U			3.3 U	3.3 U
N-Nitrosodimethylamine	62-75-9	µg/kg		7.8 U		13 U	12 U	12 U	13 U	14 UT	55 U	58 U			10 U	9.9 U
N-Nitrosodiphenylamine	86-30-6	µg/kg		2.8 U		4.4 U	4 U	4 U	4.6 U	4.8 UT	20 U	21 U			3.7 U	3.6 U
N-Nitrosodipropylamine	621-64-7	µg/kg		4.1 U		6.4 U	5.9 U	5.8 U	6.7 U	7 UT	29 U	31 U			5.3 U	5.2 U
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	0.042 U	0.04 U	0.073 U	0.062 U	0.057 U	0.057 U	0.065 U	0.068 U	0.056 U	0.059 U	0.05 U	0.051 U	0.051 U	0.05 U
1,1,1-Trichloroethane	71-55-6	µg/kg	0.079 U	0.075 U	0.14 U	0.12 U	0.11 U	0.11 U	0.13 U	0.13 U	0.11 U	0.12 U	0.096 U	0.097 U	0.097 U	0.095 U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	0.13 U	0.13 U	0.23 U	0.2 U	0.18 U	0.18 U	0.2 U	0.21 U	0.18 U	0.19 U	3.2 U	0.16 U	0.16 U	0.16 U
1,1,2-Trichloroethane	79-00-5	µg/kg	0.079 U	0.075 U	0.14 U	0.12 U	0.11 U	0.11 U	0.13 U	0.13 U	0.11 U	0.12 U	0.096 U	0.097 U	0.097 U	0.095 U
1,1-Dichloroethane	75-34-3	µg/kg	0.076 U	0.073 U	0.14 U	0.12 U	0.11 U	0.11 U	0.19 J	0.27 J	0.54 J	0.59 J	0.092 U	0.094 U	0.094 U	0.092 U
1,2,3-Trichloropropane	96-18-4	µg/kg	0.15 U	0.14 U	0.26 U	0.22 U	0.2 U	0.2 U	0.23 U	0.24 U	0.2 U	0.21 U	0.18 U	0.18 U	0.19 U	0.18 U
1,2-Dichloroethane	107-06-2	µg/kg	0.042 U	0.04 U	0.073 U	0.062 U	0.057 U	0.057 U	0.065 U	0.068 U	0.056 U	0.059 U	0.05 U	0.051 U	0.051 U	0.05 U
1,2-Dichloropropane	78-87-5	µg/kg	0.047 U	0.045 U	0.082 U	0.07 U	0.064 U	0.064 U	0.073 U	0.076 U	0.064 U	0.067 U	0.057 U	0.058 U	0.058 U	0.057 U
1,4-Dichloro-trans-2-burene	110-57-6	µg/kg	0.68 U	0.65 U	1.2 U	1.1 U	0.93 U	0.93 U	1.1 U	1.2 U	0.92 U	0.97 U	0.83 U	0.84 U	0.84 U	0.82 U
2-Chloroethyl vinyl ether	110-75-8	µg/kg	0.2 U	0.2 U	0.36 U	0.3 U	0.28 U	0.28 U	0.32 U	0.33 U	0.28 U	0.29 U	0.25 U	0.25 U	0.25 U	0.25 U
Acetone	67-64-1	µg/kg	7.4	19	10 J	40 U	27 U	110	44	46	26	32	57	80	23 U	39 U
Acrolein	107-02-8	µg/kg	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Acrylonitrile	107-13-1	µg/kg	0.31 U	0.3 U	0.54 U	0.46 U	0.42 U	0.42 U	0.48 U	0.5 U	0.42 U	0.44 U	0.38 U	0.38 U	0.38 U	0.37 U
Benzene	71-43-2	µg/kg	0.14 J	0.05 U	0.092 U	0.13 J	0.15 J	0.33 J	0.16 J	0.21 J	0.28 J	0.28 J	0.42 J	0.42 J	0.064 U	0.063 U
Toluene	108-88-3	µg/kg	0.2 U	0.2 U	0.36 U	0.46 U	4.6	15	0.38 J	0.35 J	4.9	5.1	7.1	4.4	0.25 U	0.25 U
Ethylbenzene	100-41-4	µg/kg	0.095 U	0.091 U	0.17 U	0.15 U	0.13 U	0.13 J	0.15 U	0.16 U	0.13 U	0.14 U	0.12 U	0.12 U	0.12 U	0.12 U
m,p-Xylene	179601-23-1	µg/kg	0.18 U	0.17 U	0.31 U	0.26 U	0.24 U	0.35 J	0.28 U	0.29 U	0.41 J	0.47 J	0.51 J	0.34 J	0.22 U	0.21 U
o-Xylene	95-47-6	µg/kg	0.1 U	0.096 U	0.18 U	0.18 J	0.15 J	0.26 J	0.22 J	0.26 J	0.16 J	0.17 J	0.31 J	0.21 J	0.13 U	0.13 U
Xylene	1330-20-7	µg/kg	0.18 UT	0.17 UT	0.31 UT	0.18 JT	0.15 JT	0.61 JT	0.22 JT	0.26 JT	0.57 JT	0.64 JT	0.82 JT	0.55 JT	0.22 UT	0.21 UT
BTEX	BTEX	µg/kg	0.14 JT	0.2 UT	0.36 UT	0.31 JT	4.9 JT	16.07 JT	0.76 JT	0.82 JT	5.75 JT	6.02 JT	8.34 JT	5.37 JT	0.25 UT	0.25 UT
Bromochloromethane	74-97-5	µg/kg	0.08 U	0.077 U	0.15 U	0.12 U	0.11 U	0.11 U	0.13 U	0.14 U	0.11 U	0.12 U	0.097 U	0.099 U	0.099 U	0.097 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C321	C321-2	C358	C358	C358	C358	C360	C360-2	C360	C360-2	C360	C360-2	C381	C381
	X_Easting		7626059	7626057	7628393	7628393	7628393	7628393	7628249	7628247	7628249	7628247	7628249	7628247	7629325	7629325
	Y_Northing		704450	704453	702147	702147	702147	702147	702106	702107	702106	702107	702106	702107	701102	701102
	Sample ID		LW2-C321-E1	LW2-C321-E2	LW2-C358-A	LW2-C358-B	LW2-C358-C	LW2-C358-D	LW2-C360-B1	LW2-C360-B2	LW2-C360-C1	LW2-C360-C2	LW2-C360-F1	LW2-C360-F2	LW2-C381-B	LW2-C381-C
	Sample Type Code		normal	field rep	normal	normal	normal	normal	normal	field rep	normal	field rep	normal	field rep	normal	normal
	Parent Sample			LW2-C321-E1						LW2-C360-B1		LW2-C360-C1		LW2-C360-F1		
	Sample Date		10/27/2005	10/27/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/18/2005	10/18/2005
	Depth Interval		394 - 465 cm	394 - 465 cm	0 - 30 cm	30 - 152 cm	152 - 248 cm	248 - 303 cm	30 - 90 cm	30 - 90 cm	90 - 213 cm	90 - 213 cm	448 - 572 cm	448 - 572 cm	30 - 152 cm	152 - 271 cm
Chemical Name	**CAS No**	**Unit**														
Bromodichloromethane	75-27-4	µg/kg	0.091 U	0.087 U	0.16 U	0.14 U	0.13 U	0.13 U	0.15 U	0.15 U	0.13 U	0.13 U	0.11 U	0.12 U	0.12 U	0.11 U
Bromoform	75-25-2	µg/kg	0.062 U	0.059 U	0.11 U	0.092 U	0.084 U	0.084 U	0.096 U	0.1 U	0.083 U	0.088 U	0.075 U	0.076 U	0.076 U	0.074 U
Bromomethane	74-83-9	µg/kg	0.5 U	0.47 U	0.87 U	0.74 U	0.68 U	0.68 U	0.77 U	0.81 U	0.67 U	0.71 U	0.6 U	0.61 U	0.61 U	0.6 U
Carbon disulfide	75-15-0	µg/kg	0.18 U	0.18 U	0.31 U	0.26 U	0.24 U	1.2	0.47 U	0.64 U	0.49 U	0.47 U	0.81 U	1.5	0.22 U	0.21 U
Carbon tetrachloride	56-23-5	µg/kg	0.14 U	0.13 U	0.24 U	0.2 U	0.18 U	0.18 U	0.21 U	0.22 U	0.18 U	0.19 U	0.16 U	0.17 U	0.17 U	0.16 U
Chlorobenzene	108-90-7	µg/kg	4.3	0.56 J	0.17 U	0.14 U	0.35 J	0.49 J	0.76 J	0.37 J	0.25 J	0.28 J	0.52 J	0.12 U	0.12 U	0.12 U
Chlorodibromomethane	124-48-1	µg/kg	0.091 U	0.087 U	0.16 U	0.14 U	0.13 U	0.13 U	0.15 U	0.15 U	0.13 U	0.13 U	0.11 U	0.12 U	0.12 U	0.11 U
Chloroethane	75-00-3	µg/kg	0.38 U	0.36 U	0.66 U	0.56 U	0.51 U	0.51 U	0.59 U	0.61 U	0.51 U	0.54 U	0.46 U	0.46 U	0.46 U	0.46 U
Chloroform	67-66-3	µg/kg	0.075 U	0.072 U	0.14 U	0.12 U	2	70	0.71 J	2.1	140	140	45	45	0.092 U	0.091 U
Chloromethane	74-87-3	µg/kg	0.26 U	0.25 U	0.45 U	0.38 U	0.35 U	3.7	0.4 U	0.42 U	0.35 U	0.47 J	0.31 U	0.38 J	0.32 U	0.31 U
cis-1,3-Dichloropropene	10061-01-5	µg/kg	0.042 U	0.04 U	0.073 U	0.062 U	0.057 U	0.057 U	0.065 U	0.068 U	0.056 U	0.059 U	0.05 U	0.051 U	0.051 U	0.05 U
Dichlorodifluoromethane	75-71-8	µg/kg	0.15 U	0.14 U	0.26 U	0.22 U	0.2 U	0.2 U	0.23 U	0.24 U	0.2 U	0.21 U	0.18 U	0.18 U	0.19 U	0.18 U
Ethylene dibromide	106-93-4	µg/kg	0.068 U	0.065 U	0.12 U	0.11 U	0.093 U	0.093 U	0.11 U	0.12 U	0.092 U	0.097 U	0.083 U	0.084 U	0.084 U	0.082 U
Isopropylbenzene	98-82-8	µg/kg	0.059 U	0.056 U	0.11 U	0.099 J	0.08 U	0.08 U	0.092 U	0.096 U	0.095 J	0.092 J	0.39 J	0.21 J	0.073 U	0.071 U
Methyl iodide	74-88-4	µg/kg	0.9 U	0.86 U	1.6 U	1.4 U	1.3 U	1.3 U	1.4 U	1.5 U	1.3 U	1.3 U	1.1 U	1.1 U	1.1 U	1.1 U
Methyl isobutyl ketone	108-10-1	µg/kg	0.32 U	0.31 U	0.57 U	0.48 U	0.44 U	1.8 J	0.5 U	0.53 U	1.8 J	2.1	0.39 U	0.98 J	0.4 U	0.47 U
Methyl N-butyl ketone	591-78-6	µg/kg	0.86 U	0.82 U	1.5 U	1.3 U	1.2 U	1.2 U	1.4 U	1.4 U	1.2 U	1.3 U	1.1 U	1.1 U	1.1 U	1.1 U
Methyl tert-butyl ether	1634-04-4	µg/kg	0.052 U	0.05 U	0.092 U	0.078 U	0.071 U	0.071 U	0.082 U	0.085 U	0.071 U	0.074 U	0.063 U	0.064 U	0.064 U	0.063 U
Methylene bromide	74-95-3	µg/kg	0.11 U	0.11 U	0.2 U	0.17 U	0.15 U	0.15 U	0.18 U	0.18 U	0.15 U	0.16 U	0.14 U	0.14 U	0.14 U	0.14 U
Methylene chloride	75-09-2	µg/kg	4 U	7.5 U	4.5 U	0.62 U	0.53 U	0.74 U	3.6 U	2.8 U	4.6 U	4.7 U	4.6 U	4.9 U	2.6 U	2.1 U
Methylethyl ketone	78-93-3	µg/kg	R	R	R	8.3 J	3.6 J	19 J	9.1 J	9 J	R	R	10 J	15 J	R	5.7 J
Styrene	100-42-5	µg/kg	0.099 U	0.094 U	0.18 U	0.15 U	0.14 U	0.14 U	0.16 U	0.17 U	0.14 U	0.15 U	0.12 U	0.13 U	0.13 U	0.12 U
Tetrachloroethene	127-18-4	µg/kg	0.13 U	0.13 U	0.23 U	0.2 U	1.6	1.5	0.2 U	0.21 U	4	4.1	0.16 U	0.16 U	0.16 U	0.16 U
trans-1,2-Dichloroethene	156-60-5	µg/kg	0.26 U	0.25 U	0.45 U	0.38 U	0.35 U	0.35 U	0.4 U	0.42 U	0.35 U	0.36 U	0.31 U	0.32 U	0.32 U	0.31 U
trans-1,3-Dichloropropene	10061-02-6	µg/kg	0.059 U	0.056 U	0.11 U	0.088 U	0.08 U	0.08 U	0.092 U	0.096 U	0.08 U	0.084 U	0.071 U	0.072 U	0.073 U	0.071 U
Trichloroethene	79-01-6	µg/kg	0.083 U	0.079 U	0.15 U	0.13 U	0.12 U	0.12 U	0.13 U	0.14 U	0.12 U	0.12 U	0.1 U	0.11 U	0.11 U	0.1 U
Trichlorofluoromethane	75-69-4	µg/kg	0.11 U	0.11 U	0.19 U	0.17 U	0.15 U	0.15 U	0.17 U	0.18 U	0.15 U	0.16 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinyl acetate	108-05-4	µg/kg	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Vinyl chloride	75-01-4	µg/kg	0.27 J	0.11 U	0.2 U	0.17 U	0.16 U	0.16 U	0.18 U	0.19 U	0.16 U	0.17 U	0.14 U	0.14 U	0.14 U	0.14 U
Vinylidene chloride	75-35-4	µg/kg	0.11 U	0.11 U	0.2 U	0.17 U	0.15 U	0.15 U	0.18 U	0.18 U	0.15 U	0.16 U	0.14 U	0.14 U	0.14 U	0.14 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C381	C449	C449	C449	C449	C492	C492	C522	C522	C522	C522	C523	C523	C523
	X_Easting		7629325	7633640	7633640	7633640	7633640	7637597	7637597	7617035	7617035	7617035	7617035	7625590	7625590	7625590
	Y_Northing		701102	696962	696962	696962	696962	694315	694315	715190	715190	715190	715190	704876	704876	704876
	Sample ID		LW2-C381-E	LW2-C449-A	LW2-C449-B	LW2-C449-C	LW2-C449-E	LW2-C492-B	LW2-C492-C	LW2-C522-A	LW2-C522-B	LW2-C522-C	LW2-C522-E	LW2-C523-A	LW2-C523-B	LW2-C523-C
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/26/2005	10/26/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
	Depth Interval		339 - 390 cm	0 - 30 cm	30 - 94 cm	94 - 145 cm	267 - 321 cm	30 - 154 cm	154 - 274 cm	0 - 30 cm	30 - 86 cm	86 - 130 cm	163 - 292 cm	0 - 30 cm	30 - 118 cm	118 - 268 cm
Chemical Name	**CAS No**	**Unit**														
PCB Aroclors																
Aroclor 1016	12674-11-2	µg/kg	1.6 U		2.2 U	2 U	2.1 U	1.9 U	1.4 U	2.3 U	1.9 U	1.5 U		1.7 UJ	1.9 UJ	1.6 UJ
Aroclor 1221	11104-28-2	µg/kg	1.6 U		2.2 U	2 U	2.1 U	1.9 U	1.4 U	2.3 U	1.9 U	1.5 U		1.7 UJ	1.9 UJ	1.6 UJ
Aroclor 1232	11141-16-5	µg/kg	1.6 U		2.2 U	2 U	2.1 U	1.9 U	1.4 U	2.3 U	1.9 U	1.5 U		1.7 UJ	1.9 UJ	1.6 UJ
Aroclor 1242	53469-21-9	µg/kg	1.6 U		2.2 U	2 U	2.1 U	1.9 U	1.4 U	2.3 U	1.9 U	1.5 U		1.7 UJ	1.9 UJ	1.6 UJ
Aroclor 1248	12672-29-6	µg/kg	1.6 U		7	2 U	2.1 U	1.9 U	1.4 U	2.3 U	25	1.5 U		1.7 UJ	24 J	1.6 UJ
Aroclor 1254	11097-69-1	µg/kg	1.6 U		6.9 J	5 J	30 J	1.9 U	1.4 U	31 J	49 J	1.5 U		6.1 J	23 UJ	5.2 UJ
Aroclor 1260	11096-82-5	µg/kg	1.6 U		7.1	7.6	34	33	1.4 U	22	32	1.5 U		8.8 J	31 J	8.5 UJ
Aroclor 1262	37324-23-5	µg/kg	1.6 U		2.2 U	2 U	2.1 U	1.9 U	1.4 U	2.3 U	1.9 U	1.5 U		1.7 UJ	1.9 UJ	1.6 UJ
Aroclor 1268	11100-14-4	µg/kg	1.6 U		2.2 U	2 U	2.1 U	1.9 U	1.4 U	2.3 U	1.9 U	1.5 U		1.7 UJ	1.9 UJ	1.6 UJ
Total PCB Aroclors	12767-79-2	µg/kg	1.6 UT		21 JT	12.6 JT	64 JT	33 T	1.4 UT	53 JT	106 JT	1.5 UT		14.9 JT	55 JT	8.5 UJT
Butyltins																
Butyltin ion	78763-54-9	µg/kg			0.31 J	0.29 J	1.4 J									
Dibutyltin ion	14488-53-0	µg/kg			1.1 J	1 J	4.2									
Tributyltin ion	36643-28-4	µg/kg			2.1	2.5	12									
Tetrabutyltin	1461-25-2	µg/kg			0.14 U	0.13 U	0.53 J									
Conventionals																
Total solids	TSO	percent	69.4 T	40.1 T	50.4	57.5	54.9	60.2	82	48.6	59.4	73.4	73.6 T	66.9	60.2 T	70.1
Total organic carbon	TOC	percent	0.3		1.93	1.53	2.48	1.34	0.04 J	1.99	2.11	0.06 U		0.64	1.45	0.52
Specific gravity	SPEC_GRAV	NA	1.81 T		1.48 T	1.58	1.51	1.62	2.09	1.45	1.58	1.89		1.74	1.69	1.88
PCDD/F Homologs																
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g												0.011 U	0.599	0.223 T
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g												0.019 U	1.032	0.083 T
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g												0.428	9.553	1.06 T
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g												2.953	63.719	8.2 JT
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g												11.054	179.842	40.4 JT
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g												0.35	6.416	1.81 T
Pentachlorodibenzofuran homologs	30402-15-4	pg/g												0.599	9.8	2.23 T
Hexachlorodibenzofuran homologs	55684-94-1	pg/g												0.644	14.9	2.55 T
Heptachlorodibenzofuran homologs	38998-75-3	pg/g												0.641	11.693	3.14 T
Octachlorodibenzofuran	39001-02-0	pg/g												0.579 J	10.185	3.24 JT
PCDD/Fs																
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g												0.011 U	0.019 U	0.007 UT
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g												0.019 U	0.102 J	0.012 UT
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g												0.012 U	0.028 U	0.01 UT
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g												0.081 J	0.85 J	0.149 JT
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g												0.013 U	0.186 J	0.049 UT
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g												1.315 J	31.223 J	3.78 JT
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g												11.054	179.842	40.4 JT
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g												0.172 U	2.212	0.637 T
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g												0.119 J	3.959	0.552 JT
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g												0.055 J	1.331 J	0.239 JT
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g												0.204 J	7.684	0.909 JT
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g												0.064 J	1.988 J	0.337 JT

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

		Location Name	C381	C449	C449	C449	C449	C492	C492	C522	C522	C522	C522	C523	C523	C523
		X_Easting	7629325	7633640	7633640	7633640	7633640	7637597	7637597	7617035	7617035	7617035	7617035	7625590	7625590	7625590
		Y_Northing	701102	696962	696962	696962	696962	694315	694315	715190	715190	715190	715190	704876	704876	704876
		Sample ID	LW2-C381-E	LW2-C449-A	LW2-C449-B	LW2-C449-C	LW2-C449-E	LW2-C492-B	LW2-C492-C	LW2-C522-A	LW2-C522-B	LW2-C522-C	LW2-C522-E	LW2-C523-A	LW2-C523-B	LW2-C523-C
		Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
		Parent Sample														
		Sample Date	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/26/2005	10/26/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
		Depth Interval	339 - 390 cm	0 - 30 cm	30 - 94 cm	94 - 145 cm	267 - 321 cm	30 - 154 cm	154 - 274 cm	0 - 30 cm	30 - 86 cm	86 - 130 cm	163 - 292 cm	0 - 30 cm	30 - 118 cm	118 - 268 cm
Chemical Name	**CAS No**	**Unit**														
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g												0.009 U	0.012 U	0.0155 JT
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g												0.01 U	0.246 J	0.055 UT
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g												0.252 J	4.351 J	1.39 JT
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g												0.034 J	1.172 J	0.236 JT
Octachlorodibenzofuran	39001-02-0	pg/g												0.579 J	10.185	3.24 JT
Grain Size																
Medium gravel	GS_MG	percent	0		0 T	0	0	0	0			0.32		0.44	0	0
Fine gravel	GS_FG	percent	0		0 T	0	0	0.08	0.41	0.62	0.65			1.83	0.46	0.23
Very coarse sand	GS_VCS	percent	0.04		0.177 T	0.24	0.32	0.21	1.47	1.33	1.16	0.42		4.35	0.97	0.37
Coarse sand	GS_CS	percent	0.07		0.25 T	0.48	0.37	0.38	27.1	0.98	1.2	0.28		20.6	1.96	0.87
Medium sand	GS_MS	percent	0.16		0.3 T	0.71	0.27	1.24	63	1.54	3.94	1.38		47.2	27.8	37.8
Fine sand	GS_FS	percent	9.34		1.67 T	13.6	0.88	1.62	7.19	3.51	11.1	35.9		3.76	28.6	40.4
Very fine sand	GS_VFS	percent	26.5		12.8 T	27	6.15	11.7	0.48	8.29	18.3	43		2.15	7.85	4.76
Coarse silt	GS_CSILT	percent	20		21.3 T	15.6	13.2	31.7	0.19	14.3	15.2	10.6		3.67	6.06	3.19
Medium silt	GS_MSILT	percent	15.3		25.8 T	14.9	25.9	26.9	0.12	24.1	14.7	4.14		5.12	7.03	3.47
Fine silt	GS_FSILT	percent	10.7		14.7 T	10.4	19.2	9.6	0.29	15.9	11	1.41		4.42	7.1	2.79
Very fine silt	GS_VFSILT	percent	5.85		8.73 T	5.65	12.2	5.56	0.03	11.5	7.53	0.64		2.72	4.01	2.04
8-9 Phi clay	GS_CCLAY	percent	2.78		6.77 T	4.05	7.67	3.38	0.08	5.79	4.38	0.19		1.56	2.64	1.07
>9 Phi clay	GS_MFCLAY	percent	8.77		7.72 T	7.01	14.6	5.66	0.23	10.7	8.63	0.73		2.53	4.88	1.91
Chlorinated Herbicides																
2,4,5-T	93-76-5	µg/kg						0.55 U	0.45 U					0.53 U	0.5 UJ	0.54 U
2,4-D	94-75-7	µg/kg						0.38 U	0.31 U					0.36 U	0.34 UJ	0.37 U
2,4-DB	94-82-6	µg/kg						0.56 U	0.45 U					0.54 U	0.51 UJ	0.55 U
Dalapon	75-99-0	µg/kg						0.33 U	0.27 U					0.32 U	0.3 UJ	0.33 U
Dicamba	1918-00-9	µg/kg						1.2 U	0.97 U					1.1 U	1.1 UJ	1.2 U
Dichloroprop	120-36-5	µg/kg						0.6 U	0.49 U					0.58 U	0.55 UJ	0.59 U
Dinoseb	88-85-7	µg/kg						0.76 U	0.62 U					0.73 U	0.69 UJ	0.75 U
MCPA	94-74-6	µg/kg						0.8 U	0.65 U					0.77 U	0.73 UJ	0.79 U
MCPP	93-65-2	µg/kg						0.73 U	0.6 U					0.7 U	0.67 UJ	0.72 U
Silvex	93-72-1	µg/kg						0.55 U	0.45 U					0.53 U	0.5 UJ	0.54 U
Metals																
Aluminum	7429-90-5	mg/kg	25500		30600 T	22700	38000	15100	7220	30800	24300	17800		16200	22800	12600
Antimony	7440-36-0	mg/kg	0.12 J		0.19 JT	0.16 J	0.26 J	0.13 J	0.09 J	0.26 J	0.23 J	0.24 J		0.14 J	0.21 J	0.11 J
Arsenic	7440-38-2	mg/kg	2.1		4.11 T	3.21	4.69	2.3	1.48	4.5	3.94	1.19		2.93	3.56	2.15
Cadmium	7440-43-9	mg/kg	0.16		0.243 T	0.226	0.448	0.115 J	0.008 UJ	0.392	0.343	0.107		0.149	0.277	0.098
Chromium	7440-47-3	mg/kg	32.9		37.2 T	30.2	43.6	21.3	11.3	37.9	29.5	20		21.3	28.8	19.5
Chromium hexavalent	18540-29-9	mg/kg														
Copper	7440-50-8	mg/kg	35.1		44.4 T	34.8	55.9	26.2	13.6	52.7 J	46.7 J	35.8 J		22.2	34.1	17.6
Lead	7439-92-1	mg/kg	5.15		13 T	12.4	31.9	16.7	3.05	30.8	29.4	5.19		11.9	22.1	12
Mercury	7439-97-6	mg/kg	0.092		0.055	0.054	0.305	0.038	0.0185 JT	0.099	0.106	0.0135 JT		0.034	0.142	0.028
Nickel	7440-02-0	mg/kg	32.8		28 T	27.4	32	16.2	15.4	28.9 J	23.5 J	10.4 J		18.9	26.9	21.9
Selenium	7782-49-2	mg/kg	0.02 U		0.09 UT	0.12 U	0.18 U	0.1 U	0.04 U	0.17 U	0.15 U	0.26 U		0.12 U	0.16 U	0.09 U
Silver	7440-22-4	mg/kg	0.32		0.511 T	0.402	0.753	0.365	0.211	0.659 J	0.504 J	0.211 J		0.343	0.526	0.238
Zinc	7440-66-6	mg/kg	85.9		102 T	102	148	116	42.8	151	160	62.6		92.8	137	60.5

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

			Location Name	C381	C449	C449	C449	C449	C492	C492	C522	C522	C522	C522	C523	C523	C523
			X_Easting	7629325	7633640	7633640	7633640	7633640	7637597	7637597	7617035	7617035	7617035	7617035	7625590	7625590	7625590
			Y_Northing	701102	696962	696962	696962	696962	694315	694315	715190	715190	715190	715190	704876	704876	704876
			Sample ID	LW2-C381-E	LW2-C449-A	LW2-C449-B	LW2-C449-C	LW2-C449-E	LW2-C492-B	LW2-C492-C	LW2-C522-A	LW2-C522-B	LW2-C522-C	LW2-C522-E	LW2-C523-A	LW2-C523-B	LW2-C523-C
			Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
			Parent Sample														
			Sample Date	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/26/2005	10/26/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
			Depth Interval	339 - 390 cm	0 - 30 cm	30 - 94 cm	94 - 145 cm	267 - 321 cm	30 - 154 cm	154 - 274 cm	0 - 30 cm	30 - 86 cm	86 - 130 cm	163 - 292 cm	0 - 30 cm	30 - 118 cm	118 - 268 cm
Chemical Name	**CAS No**	**Unit**															
Polycyclic Aromatic Hydrocarbons																	
2-Methylnaphthalene	91-57-6	µg/kg		0.5 U		1.1 J	1.9 J	1.8 J	2.8	0.42 U	37	65	1.4 J		87	140	31
Acenaphthene	83-32-9	µg/kg		0.24 U		1.4 J	3.5	1.7 J	4.6	0.2 U	130	210	4.4		2900	2600	390
Acenaphthylene	208-96-8	µg/kg		0.32 U		1.9 J	3.1	2 J	20	0.27 U	22	68	1.5 J		62	130	17
Anthracene	120-12-7	µg/kg		0.33 U		2.8 U	5.3 U	2.7 U	31	0.27 U	51	94	1.9 J		940	590	83
Fluorene	86-73-7	µg/kg		0.28 U		1.5 J	2.6	2.1 J	12	0.24 U	83	100	0.94 J		1700	1200	180
Naphthalene	91-20-3	µg/kg		0.51 U		4.6 U	6.8	6.6	6.3	1.5 U	83	230	0.48 U	0.48 U	160	340	59
Phenanthrene	85-01-8	µg/kg		1.6 U		7.5 J	21 J	18 J	210	0.95 U	430	990	23		3900	1000	230
Dibenz(a,h)anthracene	53-70-3	µg/kg		0.38 U		1.3 J	2.2 J	0.98 J	9.6	0.4 U	26	50	1.3 J		38	98	17
Benz(a)anthracene	56-55-3	µg/kg		0.68 U		12	18	9.2	100	0.75 U	130	300	6.7		370	980	130
Benzo(a)pyrene	50-32-8	µg/kg		0.51 U		14	20	10	160	0.55 U	190	520	11		430	1300	170
Benzo(b)fluoranthene	205-99-2	µg/kg		0.7 U		12	15	9.1	100	0.64 U	140	310	6.7		290	850	110
Benzo(g,h,i)perylene	191-24-2	µg/kg		0.34 U		14	19	11	150	0.78 U	220	520	13		370	1100	130
Benzo(k)fluoranthene	207-08-9	µg/kg		0.48 U		12	16	9.4	96	0.61 U	110	270	6.7		230	790	96
Chrysene	218-01-9	µg/kg		0.61 U		18	24	14	140	0.71 U	190	400	9.6		500	1300	180
Fluoranthene	206-44-0	µg/kg		2 U		14 J	26 J	30 J	360	1.3 U	430	900	15		1500	3300	440
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg		0.35 U		10	15	8.3	130	0.76 U	180	450	10		340	1000	130
Pyrene	129-00-0	µg/kg		2 U		16 J	30 J	34 J	450	1.3 U	520	1100	32		1400	4800	610
Low Molecular Weight PAH	LPAH	µg/kg		1.6 UT		13.4 JT	38.9 JT	32.2 JT	287 T	1.5 UT	836 T	1760 T	33.1 JT		9750 T	6000 T	990 T
High Molecular Weight PAH	HPAH	µg/kg		2 UT		123 JT	185 JT	136 JT	1700 T	1.3 UT	2140 T	4820 T	112 JT		5470 T	15500 T	2010 T
Total PAHs	130498-29-2	µg/kg		2 UT		137 JT	224 JT	168 JT	1980 T	1.5 UT	2970 T	6580 T	145 JT		15200 T	21500 T	3000 T
Chlorinated Pesticides																	
2,4'-DDD	53-19-0	µg/kg		0.079 U	0.86 U	0.83 U	1.1 U	0.65 U	1 U	0.066 U	2.9 J	4.4	0.19 J		2.1 J	40 J	10 J
2,4'-DDE	3424-82-6	µg/kg		0.082 U	0.33 U	0.12 U	0.098 U	0.37 U	0.47 U	0.2 U	0.12 U	0.2 U	0.077 U		0.37 NJ	0.47 UJ	1 UJ
2,4'-DDT	789-02-6	µg/kg		0.066 U	1.1 J	0.61 J	0.45 J	1.4	1.2 NJ	0.055 U	1.1	1.5 U	0.062 U		0.65 UJ	0.38 UJ	2.4 UJ
4,4'-DDD	72-54-8	µg/kg		0.13 UJ	1.8 J	1.3 J	1.2 J	1.3 J	1.9 NJ	0.2 U	3.8 J	6.9 J	0.29 J		3.5 J	72 J	16 J
4,4'-DDE	72-55-9	µg/kg		0.063 UJ	3.6 J	2.3 J	1.6 J	3.2 J	6.2 NJ	0.22 U	2.2 J	2.9 J	0.097 UJ		1.4 J	18 NJ	4.8 J
4,4'-DDT	50-29-3	µg/kg		0.21 UJ	1.2 J	0.98 J	0.77 J	1.9 J	2.3 U	0.18 U	6.2 J	7.2 J	0.2 UJ		0.45 NJ	24 J	4 J
Total of 4,4'-DDD, -DDE, -DDT	PP_DDT3ISO	µg/kg		0.21 UJT	6.6 JT	4.58 JT	3.57 JT	6.4 JT	8.1 JT	0.22 UT	12.2 JT	17 JT	0.29 JT		5.35 JT	114 JT	24.8 JT
Aldrin	309-00-2	µg/kg		0.14 UJ	0.9 J	0.28 J	0.3 UJ	0.17 UJ	0.78 U	0.12 U	0.2 UJ	0.16 UJ	0.13 UJ		0.55 UJ	0.78 UJ	0.67 UJ
alpha-Hexachlorocyclohexane	319-84-6	µg/kg		0.12 U	0.2 U	0.16 U	0.14 U	0.15 U	0.64 U	0.094 U	0.16 U	0.13 U	0.11 UJ		0.14 UJ	0.65 UJ	0.55 UJ
beta-Hexachlorocyclohexane	319-85-7	µg/kg		0.18 U	0.88 U	0.24 U	0.3 U	0.63 J	1 U	0.15 U	0.26 U	0.41 U	0.31 U		1.1 NJ	2.2 J	0.86 UJ
delta-Hexachlorocyclohexane	319-86-8	µg/kg		0.084 UJ	0.15 UJ	0.12 UJ	0.11 UJ	0.23 UJ	0.49 U	0.071 U	0.12 UJ	0.098 UJ	0.08 UJ		0.14 J	0.49 UJ	0.42 UJ
gamma-Hexachlorocyclohexane	58-89-9	µg/kg		0.14 U	0.23 U	0.19 U	0.16 U	0.17 U	0.77 U	0.12 U	0.2 U	0.3 U	0.13 U		0.67 J	1 UJ	1.3 NJ
cis-Chlordane	5103-71-9	µg/kg		0.071 UJ	0.13 UJ	0.36 UJ	0.31 UJ	0.25 UJ	0.42 U	0.06 U	0.61 UJ	0.22 UJ	0.067 UJ		0.074 UJ	0.41 UJ	1.7 UJ
trans-Chlordane	5103-74-2	µg/kg		0.073 UJ	0.96 J	0.53 J	0.55 J	0.97 UJ	0.54 UJ	0.061 UJ	0.57 UJ	0.69 J	0.069 U		0.24 UJ	0.42 UJ	0.36 UJ
Oxychlordane	27304-13-8	µg/kg		0.097 U	0.17 U	0.14 U	0.2 U	0.26 J	1.2 U	0.082 U	0.23 U	0.12 U	0.092 U		0.11 UJ	1.3 UJ	0.48 UJ
cis-Nonachlor	5103-73-1	µg/kg		0.07 U	0.12 U	0.3 U	0.084 U	0.24 U	3.1 J	0.059 U	0.38 U	0.37 U	0.066 U		0.2 UJ	1.2 UJ	1 UJ
trans-Nonachlor	39765-80-5	µg/kg		0.045 U	0.35 J	0.41	0.25	0.24 U	0.26 U	0.057 U	0.23 U	0.21 U	0.043 UJ		0.29 UJ	0.26 UJ	1.9 UJ
Total Chlordanes	TOTCHLDANE	µg/kg		0.097 UT	1.31 JT	0.94 JT	0.8 JT	0.26 JT	3.1 JT	0.082 UT	0.61 UJT	0.69 JT	0.092 UT		0.29 UJT	1.3 UJT	1.9 UJT
Dieldrin	60-57-1	µg/kg		0.12 UJ	0.2 UJ	0.58 UJ	0.48 UJ	0.33 UJ	0.67 UJ	0.098 UJ	0.33 UJ	0.38 UJ	0.11 UJ		0.37 UJ	1 UJ	1 UJ
alpha-Endosulfan	959-98-8	µg/kg		0.055 U	0.29 U	0.2 U	0.27 U	0.24 NJ	1.3 U	0.047 U	0.079 U	0.064 U	0.052 U		0.057 UJ	0.32 UJ	1.8 UJ
beta-Endosulfan	33213-65-9	µg/kg		0.084 UJ	0.15 UJ	0.12 UJ	0.12 UJ	0.35 J	0.49 U	0.071 U	0.13 NJ	0.2 UJ	0.08 U		0.18 J	0.49 UJ	0.42 UJ
Endosulfan sulfate	1031-07-8	µg/kg		0.087 UJ	0.15 UJ	0.2 UJ	1.1 UJ	0.62 UJ	0.5 U	0.074 U	0.55 UJ	0.73 UJ	0.082 UJ		0.09 UJ	0.51 UJ	0.43 UJ
Endrin	72-20-8	µg/kg		0.095 UJ	0.17 UJ	0.13 UJ	0.12 UJ	0.12 UJ	0.54 U	0.08 U	0.14 UJ	0.24 UJ	0.089 UJ		0.29 UJ	0.55 UJ	1 UJ
Endrin aldehyde	7421-93-4	µg/kg		0.11 U	0.35 U	0.24 U	0.4 U	0.33 U	0.59 U	0.086 U	0.15 U	0.79 U	0.096 U		0.5 NJ	1.8 UJ	0.5 UJ

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

			Location Name	C381	C449	C449	C449	C449	C492	C492	C522	C522	C522	C522	C523	C523	C523
			X_Easting	7629325	7633640	7633640	7633640	7633640	7637597	7637597	7617035	7617035	7617035	7617035	7625590	7625590	7625590
			Y_Northing	701102	696962	696962	696962	696962	694315	694315	715190	715190	715190	715190	704876	704876	704876
			Sample ID	LW2-C381-E	LW2-C449-A	LW2-C449-B	LW2-C449-C	LW2-C449-E	LW2-C492-B	LW2-C492-C	LW2-C522-A	LW2-C522-B	LW2-C522-C	LW2-C522-E	LW2-C523-A	LW2-C523-B	LW2-C523-C
			Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
			Parent Sample														
			Sample Date	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/26/2005	10/26/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
			Depth Interval	339 - 390 cm	0 - 30 cm	30 - 94 cm	94 - 145 cm	267 - 321 cm	30 - 154 cm	154 - 274 cm	0 - 30 cm	30 - 86 cm	86 - 130 cm	163 - 292 cm	0 - 30 cm	30 - 118 cm	118 - 268 cm
Chemical Name	**CAS No**	**Unit**															
Endrin ketone	53494-70-5	µg/kg		0.082 UJ	0.58 NJ	0.33 NJ	0.39 UJ	0.36 UJ	2.4 J	0.069 U	0.38 UJ	0.86 UJ	0.089 UJ		0.084 UJ	1.6 J	0.4 UJ
Heptachlor	76-44-8	µg/kg		0.084 U	0.15 U	0.12 U	0.38 U	0.11 U	0.49 U	0.071 U	0.12 U	0.098 U	0.08 U		0.2 UJ	0.49 UJ	0.54 NJ
Heptachlor epoxide	1024-57-3	µg/kg		0.096 UJ	1.1 UJ	0.81 J	0.59 J	0.84 NJ	0.55 U	0.081 U	0.35 UJ	0.45 UJ	0.09 UJ		0.15 J	0.56 UJ	0.48 UJ
Methoxychlor	72-43-5	µg/kg		0.087 UJ	0.19 UJ	0.34 UJ	0.11 UJ	0.11 UJ	1 U	0.074 U	0.61 UJ	0.11 UJ	0.082 UJ		0.74 UJ	1.5 UJ	0.43 UJ
Mirex	2385-85-5	µg/kg		0.066 U	0.17 U	0.12 U	0.079 U	0.16 U	0.38 U	0.055 U	0.093 U	0.076 U	0.079 U		0.068 UJ	0.38 UJ	0.33 UJ
Toxaphene	8001-35-2	µg/kg		5.4 U	18 U	12 U	8.9 U	31 U	91 U	4.6 U	29 U	48 U	5.1 U		29 UJ	140 UJ	170 UJ
Petroleum Hydrocarbons																	
Gasoline range hydrocarbons	GRH	mg/kg		1.5 U							3.2 J	5.2 J	1.4 U	1.4 U	1.5 U	2.6 J	1.5 U
Diesel range hydrocarbons	DRH	mg/kg		5 U							220 J	230 J	9.4 JT		120 J	260 J	38 J
Residual range hydrocarbons	RRH	mg/kg		36 J							520 J	440 J	13.9 JT		260 J	530 J	100 J
Total petroleum hydrocarbons	TPH	mg/kg		36 JT							743 JT	675 JT	23.3 JT		380 JT	793 JT	138 JT
Phenols																	
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg		0.63 U		4.1 U	0.75 U	0.79 U	0.72 U	0.53 U	11 U	0.73 U	12 U		0.84 J	83 U	22 U
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg		0.61 U		0.84 U	0.74 U	0.77 U	0.7 U	0.52 U	0.87 U	0.71 U	0.58 U		0.63 U	7.4 U	0.6 U
2,4,5-Trichlorophenol	95-95-4	µg/kg		1.6 J		0.66 U	4.9 J	4.2 U	3.3 J	3.7 NJ	11 U	4.1 U	0.45 U		4.2 U	45 J	4.2 U
2,4,6-Trichlorophenol	88-06-2	µg/kg		0.37 U		0.5 U	0.44 U	0.46 U	0.42 U	0.31 U	0.94 U	0.43 U	0.35 U		0.38 U	3.6 U	0.36 U
2,4-Dichlorophenol	120-83-2	µg/kg		2.7 U		3.6 U	3.2 U	3.3 U	3 U	2.2 U	19 U	16 U	2.5 U		5.4 U	29	2.6 U
2,4-Dimethylphenol	105-67-9	µg/kg		R		R	R	R	9.2 U	6.8 U	57 U	47 U	7.5 U		17 U	19 U	7.9 U
2,4-Dinitrophenol	51-28-5	µg/kg		53 U		72 U	63 U	66 U	60 U	44 U	380 U	310 U	50 U		110 UJ	130 UJ	52 U
2-Chlorophenol	95-57-8	µg/kg		2.5 U		3.4 U	3 U	3.1 U	2.9 U	2.1 U	18 U	15 U	2.4 U		5.1 U	6 J	2.5 U
2-Methylphenol	95-48-7	µg/kg		5 U		6.8 U	6 U	6.2 U	5.7 U	4.2 U	35 U	29 U	4.7 U		11 U	12 U	4.9 U
2-Nitrophenol	88-75-5	µg/kg		3.8 U		5.2 U	4.6 U	4.8 U	4.4 U	3.2 U	27 U	22 U	3.6 U		7.8 U	8.7 U	3.8 U
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg		2.5 U		3.4 U	3 U	3.1 U	2.9 U	2.1 U	18 U	15 U	2.4 U		5.1 U	5.7 U	2.5 U
4-Chloro-3-methylphenol	59-50-7	µg/kg		3.1 U		4.2 U	3.7 U	3.9 U	3.5 U	2.6 U	22 U	18 U	2.9 U		6.3 U	7.1 U	3 U
4-Methylphenol	106-44-5	µg/kg		4.2 U		5.8 U	13	22	4.9 U	3.6 U	52	31 J	4 U		8.7 U	59	4.2 U
4-Nitrophenol	100-02-7	µg/kg		44 U		60 U	53 U	55 U	0.45 U	0.36 U	310 U	260 U	41 U		0.43 U	0.41 UJ	0.44 U
Pentachlorophenol	87-86-5	µg/kg		0.67 U		0.92 U	0.8 U	2.9 J	0.78 NJ	0.57 U	2.1 J	0.95 J	0.63 U		0.69 U	0.76 UJ	0.66 U
Phenol	108-95-2	µg/kg		8.5 U		44	31 U	34	3.2 U	2.4 U	20 U	16 U	2.6 U		5.7 U	12 J	2.8 U
Phthalates																	
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg		2.5 U		67 U	29 U	33 U	76 J	4.9 U	160 U	35 U	5.9 U		51 U	33 U	7.8 U
Butylbenzyl phthalate	85-68-7	µg/kg		2.2 U		4.4 J	2.7 U	2.8 U	6 J	1.9 U	16 U	13 U	2.1 U		4.5 U	5.1 U	2.2 U
Dibutyl phthalate	84-74-2	µg/kg		5.2 U		11 U	4.6 U	7.4 U	5.4 J	4.2 J	27 U	22 U	5.6 J		7.8 U	8.7 U	3.8 U
Diethyl phthalate	84-66-2	µg/kg		5.1 U		7 U	6.1 U	6.6 U	5.9 U	4.3 U	37 U	30 U	4.8 U		11 U	12 U	5 U
Dimethyl phthalate	131-11-3	µg/kg		2.7 U		3.6 U	3.2 U	3.3 U	3 U	2.2 U	19 U	16 U	2.5 U		5.4 U	6.1 U	2.6 U
Di-n-octyl phthalate	117-84-0	µg/kg		1.8 U		2.4 U	2.1 U	2.2 U	2 U	1.5 U	13 U	11 U	7.5 U		3.6 U	4.1 U	1.8 U
Semivolatile Organic Compounds																	
1,2,4-Trichlorobenzene	120-82-1	µg/kg		2.2 U		3 U	2.7 U	2.8 U	2.5 U	1.9 U	16 U	13 U	2.1 U		4.5 U	5.1 U	2.2 U
1,2-Dichlorobenzene	95-50-1	µg/kg		1.9 U		2.6 U	2.3 U	2.4 U	2.2 U	1.6 U	14 U	11 U	1.8 U		3.9 U	4.4 U	1.9 U
1,3-Dichlorobenzene	541-73-1	µg/kg		2.4 U		3.2 U	2.8 U	3 U	2.7 U	2 U	17 U	14 U	2.2 U		4.8 U	5.4 U	2.3 U
1,4-Dichlorobenzene	106-46-7	µg/kg		0.18 U		3.8 U	3.4 U	3.5 U	3.2 U	2.4 U	0.25 U	0.21 U	0.17 U	0.17 U	0.38 J	0.21 U	0.18 U
2,4-Dinitrotoluene	121-14-2	µg/kg		4.1 U		5.6 U	4.9 U	5.2 U	4.7 U	3.5 U	29 U	24 U	3.9 U		8.4 U	9.4 U	4 U
2,6-Dinitrotoluene	606-20-2	µg/kg		4.1 U		5.6 U	4.9 U	5.2 U	4.7 U	3.5 U	29 U	24 U	3.9 U		8.4 U	9.4 U	4 U
2-Chloronaphthalene	91-58-7	µg/kg		5.3 U		7.2 U	6.3 U	6.6 U	6 U	4.4 U	38 U	31 U	5 U		11 U	13 U	5.2 U
2-Nitroaniline	88-74-4	µg/kg		4 U		5.4 U	4.7 U	5 U	4.5 U	3.3 U	28 U	23 U	3.7 U		8.1 U	9.1 U	3.9 U

BZTO104(e)004862 ANC04862

Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

		Location Name	C381	C449	C449	C449	C449	C492	C492	C522	C522	C522	C522	C523	C523	C523
		X_Easting	7629325	7633640	7633640	7633640	7633640	7637597	7637597	7617035	7617035	7617035	7617035	7625590	7625590	7625590
		Y_Northing	701102	696962	696962	696962	696962	694315	694315	715190	715190	715190	715190	704876	704876	704876
		Sample ID	LW2-C381-E	LW2-C449-A	LW2-C449-B	LW2-C449-C	LW2-C449-E	LW2-C492-B	LW2-C492-C	LW2-C522-A	LW2-C522-B	LW2-C522-C	LW2-C522-E	LW2-C523-A	LW2-C523-B	LW2-C523-C
		Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
		Parent Sample														
		Sample Date	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/26/2005	10/26/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
		Depth Interval	339 - 390 cm	0 - 30 cm	30 - 94 cm	94 - 145 cm	267 - 321 cm	30 - 154 cm	154 - 274 cm	0 - 30 cm	30 - 86 cm	86 - 130 cm	163 - 292 cm	0 - 30 cm	30 - 118 cm	118 - 268 cm
Chemical Name	**CAS No**	**Unit**														
3,3'-Dichlorobenzidine	91-94-1	µg/kg	5.4 U		7.4 U	6.5 U	6.8 U	6.2 U	4.6 U	39 U	32 U	5.1 U		12 U	13 U	5.3 U
3-Nitroaniline	99-09-2	µg/kg	3.8 U		5.2 U	4.6 U	4.8 U	4.4 U	3.2 U	27 U	22 U	3.6 U		7.8 U	8.7 U	3.8 U
4-Bromophenyl phenyl ether	101-55-3	µg/kg	2.1 U		2.8 U	2.5 U	2.6 U	2.4 U	1.8 U	15 U	12 U	2 U		4.2 U	4.7 U	2 U
4-Chloroaniline	106-47-8	µg/kg	3.1 U		4.2 U	3.7 U	3.9 U	3.5 U	2.6 U	22 U	18 U	2.9 U		6.3 U	7.1 U	3 U
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg	2.9 U		4 U	3.5 U	3.7 U	3.4 U	2.5 U	21 U	17 U	2.8 U		6 U	6.7 U	2.9 U
4-Nitroaniline	100-01-6	µg/kg	5 U		6.8 U	6 U	6.2 U	5.7 U	4.2 U	35 U	29 U	4.7 U		11 U	12 U	4.9 U
Aniline	62-53-3	µg/kg	2.2 U		3 U	2.7 U	2.8 U	2.5 U	1.9 U	16 U	13 U	2.1 U		4.5 U	5.1 U	2.2 U
Azobenzene	103-33-3	µg/kg	3.5 U		4.8 U	4.2 U	4.4 U	4 U	3 U	25 U	21 U	3.3 U		7.2 U	8.1 U	3.5 U
Benzoic acid	65-85-0	µg/kg	140 U		200 U	170 U	180 U	160 U	120 U	990 U	810 U	140 U		290 U	330 U	140 U
Benzyl alcohol	100-51-6	µg/kg	5.4 U		7.4 U	6.5 U	6.8 U	6.2 U	4.6 U	39 U	32 U	5.1 U		12 U	13 U	5.3 U
Bis(2-chloroethoxy) methane	111-91-1	µg/kg	1.9 U		2.6 U	2.3 U	2.4 U	2.2 U	1.6 U	14 U	11 U	1.8 U		3.9 U	4.4 U	1.9 U
Bis(2-chloroethyl) ether	111-44-4	µg/kg	3.5 U		4.8 U	4.2 U	4.4 U	4 U	3 U	25 U	21 U	3.3 U		7.2 U	8.1 U	3.5 U
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg	1.8 U		2.4 U	2.1 U	2.2 U	2 U	1.5 U	13 U	11 U	1.7 U		3.6 UJ	4.1 UJ	1.8 U
Carbazole	86-74-8	µg/kg	1.9 U		2.6 U	2.3 U	2.4 U	3.4 J	1.6 U	14 U	16 J	1.8 U		95	39	6.1 J
Dibenzofuran	132-64-9	µg/kg	0.25 U		0.84 J	1.1 J	1.4 J	1.4 U	0.21 U	38	22	0.45 J		750	210	36
Hexachlorobenzene	118-74-1	µg/kg	0.07 U	0.12 U	0.096 U	0.084 U	0.2 U	0.4 U	0.14 U	0.12 NJ	0.2 U	0.11 U		0.2 UJ	0.41 UJ	0.35 UJ
Hexachlorobutadiene	87-68-3	µg/kg	0.28 UJ	0.48 UJ	0.55 UJ	0.34 UJ	0.64 UJ	1.6 U	0.24 U	0.46 UJ	0.36 NJ	0.26 UJ		0.29 UJ	1.6 UJ	1.4 UJ
Hexachlorocyclopentadiene	77-47-4	µg/kg	22 U		30 U	27 U	28 U	25 U	19 U	160 U	130 U	21 U		45 U	51 U	22 U
Hexachloroethane	67-72-1	µg/kg	0.076 U	0.47	0.92 U	0.94	0.71 NJ	0.44 UJ	0.24 UJ	0.14 U	0.52	0.7 NJ		0.18 UJ	0.44 UJ	0.38 UJ
Isophorone	78-59-1	µg/kg	2.4 U		3.2 U	2.8 U	3 U	2.7 U	2 U	17 U	14 U	2.2 U		4.8 U	5.4 U	2.3 U
Nitrobenzene	98-95-3	µg/kg	2.9 U		4 U	3.5 U	3.7 U	3.4 U	2.5 U	21 U	17 U	2.8 U		6 U	6.7 U	2.9 U
N-Nitrosodimethylamine	62-75-9	µg/kg	8.9 U		13 UJ	11 UJ	12 UJ	11 U	7.5 U	63 U	52 U	8.4 U		19 U	21 U	8.8 U
N-Nitrosodiphenylamine	86-30-6	µg/kg	3.2 U		4.4 U	3.9 U	4.1 U	3.7 U	2.7 U	23 U	19 U	3 U		6.6 U	7.4 U	3.2 U
N-Nitrosodipropylamine	621-64-7	µg/kg	4.7 U		6.4 U	5.6 U	5.9 U	5.4 U	4 U	33 U	27 U	4.4 U		9.6 U	11 U	4.6 U
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	0.045 U							0.064 U	0.053 U	0.043 U	0.043 U	0.047 U	0.052 U	0.045 U
1,1,1-Trichloroethane	71-55-6	µg/kg	0.086 U							0.13 U	0.1 U	0.081 U	0.081 U	0.089 U	0.099 U	0.085 U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	0.14 U							0.2 U	0.17 U	0.14 U	0.14 U	0.15 U	0.17 U	0.14 U
1,1,2-Trichloroethane	79-00-5	µg/kg	0.086 U							0.13 U	0.1 U	0.081 U	0.081 U	0.089 U	0.099 U	0.085 U
1,1-Dichloroethane	75-34-3	µg/kg	0.083 U							0.12 U	0.096 U	0.078 U	0.078 U	0.086 U	0.096 U	0.082 U
1,2,3-Trichloropropane	96-18-4	µg/kg	0.16 U							0.23 U	0.19 U	0.15 U	0.15 U	0.17 U	0.19 U	0.16 U
1,2-Dichloroethane	107-06-2	µg/kg	0.045 U							0.064 U	0.053 U	0.043 U	0.043 U	0.047 U	0.052 U	0.045 U
1,2-Dichloropropane	78-87-5	µg/kg	0.051 U							0.073 U	0.059 U	0.048 U	0.048 U	0.053 U	0.059 U	0.05 U
1,4-Dichloro-trans-2-burene	110-57-6	µg/kg	0.74 U							1.1 U	0.86 U	0.7 U	0.7 U	0.77 U	0.86 U	0.73 U
2-Chloroethyl vinyl ether	110-75-8	µg/kg	0.22 U							0.31 U	0.26 U	0.21 U	0.21 U	0.23 U	0.26 U	0.22 U
Acetone	67-64-1	µg/kg	18 U							22 UJ	14 UJ	5.5 UJ	6.2 UJ	7.4 UJ	12 J	22 J
Acrolein	107-02-8	µg/kg	R							R	R	R	R	R	R	R
Acrylonitrile	107-13-1	µg/kg	0.34 U							0.48 U	0.39 U	0.32 U	0.32 U	0.35 U	0.39 U	0.33 U
Benzene	71-43-2	µg/kg	0.057 U							0.081 U	0.066 U	0.08 J	0.053 U	0.099 J	0.066 U	0.1 J
Toluene	108-88-3	µg/kg	0.22 U							0.31 U	0.26 U	0.21 U	0.21 U	0.23 U	0.26 U	0.22 U
Ethylbenzene	100-41-4	µg/kg	0.11 U							0.15 U	0.12 U	0.097 U	0.097 U	0.28 J	0.12 U	0.11 U
m,p-Xylene	179601-23-1	µg/kg	0.19 U							0.27 U	0.22 U	0.18 U	0.18 U	0.2 U	0.22 U	0.19 U
o-Xylene	95-47-6	µg/kg	0.11 U							0.16 U	0.13 U	0.11 U	0.11 U	0.14 J	0.13 U	0.11 U
Xylene	1330-20-7	µg/kg	0.19 UT							0.27 UT	0.22 UT	0.18 UT	0.18 UT	0.14 JT	0.22 UT	0.19 UT
BTEX	BTEX	µg/kg	0.22 UT							0.31 UT	0.26 UT	0.08 JT	0.21 UT	0.519 JT	0.26 UT	0.1 JT
Bromochloromethane	74-97-5	µg/kg	0.087 U							0.13 U	0.11 U	0.082 U	0.082 U	0.09 U	0.11 U	0.086 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C381	C449	C449	C449	C449	C492	C492	C522	C522	C522	C522	C523	C523	C523
	X_Easting		7629325	7633640	7633640	7633640	7633640	7637597	7637597	7617035	7617035	7617035	7617035	7625590	7625590	7625590
	Y_Northing		701102	696962	696962	696962	696962	694315	694315	715190	715190	715190	715190	704876	704876	704876
	Sample ID		LW2-C381-E	LW2-C449-A	LW2-C449-B	LW2-C449-C	LW2-C449-E	LW2-C492-B	LW2-C492-C	LW2-C522-A	LW2-C522-B	LW2-C522-C	LW2-C522-E	LW2-C523-A	LW2-C523-B	LW2-C523-C
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/26/2005	10/26/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
	Depth Interval		339 - 390 cm	0 - 30 cm	30 - 94 cm	94 - 145 cm	267 - 321 cm	30 - 154 cm	154 - 274 cm	0 - 30 cm	30 - 86 cm	86 - 130 cm	163 - 292 cm	0 - 30 cm	30 - 118 cm	118 - 268 cm
Chemical Name	**CAS No**	**Unit**														
Bromodichloromethane	75-27-4	µg/kg	0.099 U							0.14 U	0.12 U	0.093 U	0.093 U	0.11 U	0.12 U	0.098 U
Bromoform	75-25-2	µg/kg	0.067 U							0.095 U	0.078 U	0.063 U	0.063 U	0.069 U	0.077 U	0.066 U
Bromomethane	74-83-9	µg/kg	0.54 U							0.77 U	0.63 U	0.51 U	0.51 U	0.56 U	0.62 U	0.53 U
Carbon disulfide	75-15-0	µg/kg	0.19 U							0.27 U	0.22 U	0.18 U	0.18 U	0.2 U	0.22 U	0.19 U
Carbon tetrachloride	56-23-5	µg/kg	0.15 U							0.21 U	0.17 U	0.14 U	0.14 U	0.15 U	0.17 U	0.15 U
Chlorobenzene	108-90-7	µg/kg	0.11 U							0.15 U	0.12 U	0.096 U	0.095 U	0.47 J	0.12 U	0.1 U
Chlorodibromomethane	124-48-1	µg/kg	0.099 U							0.14 U	0.12 U	0.093 U	0.093 U	0.11 U	0.12 U	0.098 U
Chloroethane	75-00-3	µg/kg	0.41 U							0.58 U	0.48 U	0.39 U	0.38 U	0.42 U	0.47 U	0.4 U
Chloroform	67-66-3	µg/kg	0.082 U							0.12 U	0.095 U	0.077 U	0.076 U	0.084 U	0.094 U	0.08 U
Chloromethane	74-87-3	µg/kg	0.28 U							0.4 U	0.32 U	0.26 U	0.26 U	0.29 U	0.32 U	0.28 U
cis-1,3-Dichloropropene	10061-01-5	µg/kg	0.045 U							0.064 U	0.053 U	0.043 U	0.043 U	0.047 U	0.052 U	0.045 U
Dichlorodifluoromethane	75-71-8	µg/kg	0.16 U							0.23 U	0.19 U	0.15 U	0.15 U	0.17 U	0.19 U	0.16 U
Ethylene dibromide	106-93-4	µg/kg	0.074 U							0.11 U	0.086 U	0.07 U	0.07 U	0.077 U	0.086 U	0.073 U
Isopropylbenzene	98-82-8	µg/kg	0.064 U							0.091 U	0.075 U	0.06 U	0.06 U	0.3 J	0.27 J	0.063 U
Methyl iodide	74-88-4	µg/kg	0.97 U							1.4 U	1.2 U	0.92 U	0.91 U	1.1 U	1.2 U	0.96 U
Methyl isobutyl ketone	108-10-1	µg/kg	0.35 U							0.5 U	0.41 U	0.47 J	0.33 U	0.36 U	1 J	0.35 U
Methyl N-butyl ketone	591-78-6	µg/kg	0.93 U							1.4 U	1.1 U	0.88 U	0.87 U	0.96 U	1.1 U	0.92 U
Methyl tert-butyl ether	1634-04-4	µg/kg	0.057 U							0.081 U	0.066 U	0.054 U	0.053 U	0.059 U	0.066 U	0.056 U
Methylene bromide	74-95-3	µg/kg	0.12 U							0.17 U	0.14 U	0.12 U	0.12 U	0.13 U	0.14 U	0.12 U
Methylene chloride	75-09-2	µg/kg	4.6 U							0.95 U	2 U	1.4 U	0.98 U	2.2 U	1.2 U	5.8 U
Methylethyl ketone	78-93-3	µg/kg	R							R	R	R	R	R	R	R
Styrene	100-42-5	µg/kg	0.11 U							0.16 U	0.13 U	0.11 U	0.11 U	0.18 U	0.13 U	0.13 U
Tetrachloroethene	127-18-4	µg/kg	0.14 U							0.2 U	0.17 U	0.14 U	0.14 U	0.15 U	0.17 U	0.34 J
trans-1,2-Dichloroethene	156-60-5	µg/kg	0.28 U							0.4 U	0.32 U	0.26 U	0.26 U	0.29 U	0.32 U	0.28 U
trans-1,3-Dichloropropene	10061-02-6	µg/kg	0.064 U							0.091 U	0.075 U	0.06 U	0.06 U	0.066 U	0.074 U	0.063 U
Trichloroethene	79-01-6	µg/kg	0.09 U							0.13 U	0.11 U	0.085 U	0.085 U	0.093 U	0.11 U	0.089 U
Trichlorofluoromethane	75-69-4	µg/kg	0.12 U							0.17 U	0.14 U	0.12 U	0.11 U	0.13 U	0.14 U	0.12 U
Vinyl acetate	108-05-4	µg/kg	R							R	R	R	R	R	R	R
Vinyl chloride	75-01-4	µg/kg	0.13 U							0.18 U	0.15 U	0.12 U	0.12 U	0.13 U	0.15 U	0.13 U
Vinylidene chloride	75-35-4	µg/kg	0.12 U							0.17 U	0.14 U	0.12 U	0.12 U	0.13 U	0.14 U	0.12 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

			Location Name	C523	C524	C524	C525	C525	C525	C525	C525	C527	C527	C527	C527	C528	C528
			X_Easting	7625590	7627408	7627408	7623306	7623306	7623306	7623306	7623306	7623022	7623022	7623022	7623022	7622856	7622856
			Y_Northing	704876	705645	705645	706147	706147	706147	706147	706147	706136	706136	706136	706136	706193	706193
			Sample ID	LW2-C523-D	LW2-C524-A	LW2-C524-B	LW2-C525-A	LW2-C525-B	LW2-C525-C	LW2-C525-D	LW2-C525-E	LW2-C527-A	LW2-C527-B	LW2-C527-C	LW2-C527-E	LW2-C528-A	LW2-C528-B
			Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
			Parent Sample														
			Sample Date	10/19/2005	10/19/2005	10/19/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005
			Depth Interval	268 - 369 cm	0 - 30 cm	30 - 109 cm	0 - 30 cm	30 - 127 cm	127 - 236 cm	236 - 341 cm	341 - 427 cm	0 - 30 cm	30 - 152 cm	152 - 250 cm	352 - 482 cm	0 - 30 cm	30 - 152 cm
Chemical Name	**CAS No**	**Unit**															
PCB Aroclors																	
Aroclor 1016	12674-11-2	µg/kg		5.5 U	1.9 U	34 U	2.1 U	9.3 U	43 U	1.5 U	9.4 U	3.8 U	14 U	29 U	2.7 U	2.2 U	
Aroclor 1221	11104-28-2	µg/kg		5.5 U	1.9 U	160 U	2.1 U	40 U	28 U	1.5 U	140 U	38 U	120 U	10 U	2.7 U	2.2 U	
Aroclor 1232	11141-16-5	µg/kg		5.5 U	1.9 U	76 U	2.1 U	14 U	250 U	1.5 U	38 U	21 U	29 U	57 U	2.7 U	2.2 U	
Aroclor 1242	53469-21-9	µg/kg		5.5 U	1.9 U	73 U	2.1 U	16 U	74 U	1.5 U	19 U	6.6 U	19 U	36 U	2.7 U	2.2 U	
Aroclor 1248	12672-29-6	µg/kg		5.5 U	1.9 U	46 U	38	8.9 U	41 U	1.5 U	6 U	6.9 U	13 U	21 U	6.7	9.7	
Aroclor 1254	11097-69-1	µg/kg		32 U	2.3 U	31 U	110 J	120 U	41 U	1.5 U	25 U	14 U	46 U	230 U	23	28	
Aroclor 1260	11096-82-5	µg/kg		22	3.7 J	34 J	54	71	43 U	1.5 U	13 U	20 J	32	160	11	19 J	
Aroclor 1262	37324-23-5	µg/kg		5.5 U	1.9 U	5.5 U	2.1 U	43 U	54 U	1.5 U	6.2 U	8 U	13 U	10 U	2.7 U	2.2 U	
Aroclor 1268	11100-14-4	µg/kg		5.5 U	1.9 U	5.5 U	17	18 U	28 U	1.5 U	2.8 U	2.4 U	6.5 U	10 U	2.7 U	2.2 U	
Total PCB Aroclors	12767-79-2	µg/kg		22 T	3.7 JT	34 JT	219 JT	71 T	250 UT	1.5 UT	140 UT	20 JT	32 T	160 T	40.7 T	56.7 JT	
Butyltins																	
Butyltin ion	78763-54-9	µg/kg				0.23 J	0.13 U	1.8 U	0.054 U	0.041 U	0.69 J	0.48 J	4.9	0.15 U	0.48 J	1.7 J	
Dibutyltin ion	14488-53-0	µg/kg				6.5	0.52 J	0.26 J	0.11 J	0.098 J	4.9	5.3	71	2.2	4.3	18	
Tributyltin ion	36643-28-4	µg/kg				33	0.54 U	0.41 U	0.43 U	0.28 U	12	32	330	0.69 U	8.8	49	
Tetrabutyltin	1461-25-2	µg/kg				0.14 U	0.13 U	0.13 U	0.13 U	0.47 J	0.17 U	0.85 J	2.8	0.13 U	0.17 U	0.14 U	
Conventionals																	
Total solids	TSO	percent	68.6	38.6	59.8	50.8	54.3 T	58	56.1	74.1	42.6	51	54	55.3	42.3	50.6	
Total organic carbon	TOC	percent		19.3	4.92	5.08	2.9	2.87	9.2	0.23	3.27	2.35	2.74	4.12	2.6 T	2.26	
Specific gravity	SPEC_GRAV	NA		1.24	1.51	1.48	1.51	1.55	1.48	1.94	1.38 T	1.47	1.47	1.48	1.36 T	1.44	
PCDD/F Homologs																	
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g															
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g															
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g															
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g															
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g															
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g															
Pentachlorodibenzofuran homologs	30402-15-4	pg/g															
Hexachlorodibenzofuran homologs	55684-94-1	pg/g															
Heptachlorodibenzofuran homologs	38998-75-3	pg/g															
Octachlorodibenzofuran	39001-02-0	pg/g															
PCDD/Fs																	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g															
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g															
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g															
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g															
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g															
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g															
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g															
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g															
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g															
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g															
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g															
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g															

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

			Location Name	C523	C524	C524	C525	C525	C525	C525	C525	C527	C527	C527	C527	C528	C528
			X_Easting	7625590	7627408	7627408	7623306	7623306	7623306	7623306	7623306	7623022	7623022	7623022	7623022	7622856	7622856
			Y_Northing	704876	705645	705645	706147	706147	706147	706147	706147	706136	706136	706136	706136	706193	706193
			Sample ID	LW2-C523-D	LW2-C524-A	LW2-C524-B	LW2-C525-A	LW2-C525-B	LW2-C525-C	LW2-C525-D	LW2-C525-E	LW2-C527-A	LW2-C527-B	LW2-C527-C	LW2-C527-E	LW2-C528-A	LW2-C528-B
			Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
			Parent Sample														
			Sample Date	10/19/2005	10/19/2005	10/19/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005
			Depth Interval	268 - 369 cm	0 - 30 cm	30 - 109 cm	0 - 30 cm	30 - 127 cm	127 - 236 cm	236 - 341 cm	341 - 427 cm	0 - 30 cm	30 - 152 cm	152 - 250 cm	352 - 482 cm	0 - 30 cm	30 - 152 cm
Chemical Name	**CAS No**	**Unit**															
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g															
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g															
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g															
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g															
Octachlorodibenzofuran	39001-02-0	pg/g															
Grain Size																	
Medium gravel	GS_MG	percent			16.8	0.34	0	0	0	0.43	0.05 T	0	0	4.38	0.47	0.83	0
Fine gravel	GS_FG	percent			11.4	0.78	0.4	0.04	0.14	2.34	0.0667 T	0	0.1	0.12	2.38	0.08	0.03
Very coarse sand	GS_VCS	percent			10.6	1.38	1.69	0.2	0.57	4.22	0.09 T	0.79	0.39	0.43	3.62	0.77	0.19
Coarse sand	GS_CS	percent			12.6	4.3	1.69	0.73	0.68	4.14	2.2 T	0.61	0.5	0.76	3.24	0.27	0.3
Medium sand	GS_MS	percent			20.6	10.4	7.04	1.52	1.63	9.09	58.8 T	1.46	0.63	1.01	3.39	0.94	0.66
Fine sand	GS_FS	percent			12.6	7.12	12.9	5.2	8.72	20.3	23 T	5.37	2.78	2.29	6.48	1.79	1.71
Very fine sand	GS_VFS	percent			4.63	7.01	15.3	9.64	11.9	17.4	3.22 T	9.47	10	5.44	11.7	5.7	6.54
Coarse silt	GS_CSILT	percent			3.16	7.17	12.6	8.06	13.2	10.7	2.03 T	17.5	15.7	11.2	12	17.9	15.6
Medium silt	GS_MSILT	percent			3.61	14.6	17	19.2	18.1	8.35	2.43 T	29	28.5	25.5	19.7	33.1	32.3
Fine silt	GS_FSILT	percent			3.19	15.8	10.6	14.3	15.1	6.95	1.53 T	14.8	15.7	16.5	13.5	15.7	15.2
Very fine silt	GS_VFSILT	percent			2.31	11	6.99	13.4	13.8	7.3	1.55 T	8.15	9.88	13.2	10.7	9.12	11.7
8-9 Phi clay	GS_CCLAY	percent			1.32	5.87	4.55	6.88	8.85	4.96	0.85 T	4.79	5.57	6.28	4.88	5.14	6.78
>9 Phi clay	GS_MFCLAY	percent			1.95	9.17	8.55	11	8.6	4.08	1.8 T	8.19	10.3	12.3	6.15	8.09	10.4
Chlorinated Herbicides																	
2,4,5-T	93-76-5	µg/kg					0.66 U	0.68 U	0.57 U	0.68 U	0.49 U	0.76 U	0.7 U	0.67 U	0.64 U	0.75 U	0.71 U
2,4-D	94-75-7	µg/kg					0.45 U	0.46 U	0.39 U	0.47 U	0.34 U	0.52 U	0.48 U	0.46 U	0.44 U	0.51 U	0.48 U
2,4-DB	94-82-6	µg/kg					0.67 U	0.68 U	0.57 U	0.69 U	0.5 U	0.77 U	0.71 U	0.68 U	0.65 U	0.75 U	0.71 U
Dalapon	75-99-0	µg/kg					0.4 U	0.41 U	0.34 U	0.41 U	0.3 U	0.46 U	6.9	0.41 U	0.39 U	0.45 U	0.43 U
Dicamba	1918-00-9	µg/kg					1.4 U	1.5 U	1.2 U	1.5 U	1.1 U	1.6 U	3 J	1.5 U	1.4 U	1.6 U	1.5 U
Dichloroprop	120-36-5	µg/kg					0.72 U	0.74 U	0.62 U	0.74 U	0.54 U	0.84 U	0.77 U	0.74 U	0.7 U	0.82 U	0.77 U
Dinoseb	88-85-7	µg/kg					0.91 U	0.94 U	0.79 U	0.94 U	0.68 U	1.1 U	0.97 U	0.93 U	0.89 U	1 U	0.98 U
MCPA	94-74-6	µg/kg					0.96 U	0.99 U	0.83 U	0.99 U	0.71 U	1.1 U	1 U	0.98 U	0.94 U	1.1 U	1 U
MCPP	93-65-2	µg/kg					0.88 U	0.9 U	0.76 U	0.9 U	0.65 U	1 U	0.93 U	0.89 U	0.86 U	0.99 U	0.94 U
Silvex	93-72-1	µg/kg					0.66 U	0.68 U	0.57 U	0.68 U	0.49 U	0.76 U	0.7 U	0.67 U	0.64 U	0.75 U	0.71 U
Metals																	
Aluminum	7429-90-5	mg/kg			19800	18600	30900	29800	40400	19800	11100	26200	21100	19600	22500	26600	24800 T
Antimony	7440-36-0	mg/kg			3.36 J	0.29 J	0.36 J	0.18 J	0.14 J	0.24 J	0.09 J	0.27 J	0.2 J	0.33 J	0.57 J	0.22 J	0.41 JT
Arsenic	7440-38-2	mg/kg			4.6	4.05	6.96	3.72	3.55	3.49	1.92	3.97	3.47	4.24	3.58	3.11	3.35 T
Cadmium	7440-43-9	mg/kg			0.472	0.165	0.378	0.395	0.406	0.481	0.028 J	0.231	0.216	0.352	0.343	0.286	0.247 T
Chromium	7440-47-3	mg/kg			27.3	26.1	39.1	34.2	40.1	28.6	15.8	40	29.2	60.8	32.2	32.7	35.1 T
Chromium hexavalent	18540-29-9	mg/kg															
Copper	7440-50-8	mg/kg			51.9 J	41.5	71	49	76.9	50.4	17	61.7	50	70.2	72.7	59.3	54 T
Lead	7439-92-1	mg/kg			60.2	33.7	42.2	31.5	32.6	50.2	5.26	39.8	23.6	64.3	43.9	22.3	27.9 T
Mercury	7439-97-6	mg/kg			0.489	0.334	0.128	0.402	0.368	0.562	0.02 JT	0.087	0.07	0.092	0.508	0.081	0.083
Nickel	7440-02-0	mg/kg			21.3 J	22.9 J	41.8	29.1	26.2	26.2	19	25.2	23.9	43	39.4	23.5	26.9 T
Selenium	7782-49-2	mg/kg			0.15 U	0.15 U	0.16 U	0.14 U	0.11 U	0.1 U	0.05 U	0.12 U	0.15 U	0.15 U	0.14 U	0.28 U	0.18 UT
Silver	7440-22-4	mg/kg			0.342 J	0.499	0.715	0.842	0.924	0.703	0.218	0.564	0.487	0.695	0.811	0.55	0.635 T
Zinc	7440-66-6	mg/kg			171	100	172	159	139	195	50.2	120	107	213	135	111	128 T

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

			Location Name	C523	C524	C524	C525	C525	C525	C525	C525	C527	C527	C527	C527	C528	C528
			X_Easting	7625590	7627408	7627408	7623306	7623306	7623306	7623306	7623306	7623022	7623022	7623022	7623022	7622856	7622856
			Y_Northing	704876	705645	705645	706147	706147	706147	706147	706147	706136	706136	706136	706136	706193	706193
			Sample ID	LW2-C523-D	LW2-C524-A	LW2-C524-B	LW2-C525-A	LW2-C525-B	LW2-C525-C	LW2-C525-D	LW2-C525-E	LW2-C527-A	LW2-C527-B	LW2-C527-C	LW2-C527-E	LW2-C528-A	LW2-C528-B
			Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
			Parent Sample														
			Sample Date	10/19/2005	10/19/2005	10/19/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005
			Depth Interval	268 - 369 cm	0 - 30 cm	30 - 109 cm	0 - 30 cm	30 - 127 cm	127 - 236 cm	236 - 341 cm	341 - 427 cm	0 - 30 cm	30 - 152 cm	152 - 250 cm	352 - 482 cm	0 - 30 cm	30 - 152 cm
Chemical Name	**CAS No**	**Unit**															
Polycyclic Aromatic Hydrocarbons																	
2-Methylnaphthalene	91-57-6	µg/kg			160	39	1500	2000	930	31000	37	170	36	77	4100	47	27
Acenaphthene	83-32-9	µg/kg			68	29	16000	4000	2300	19000	350	400	130	360	3200	81	150
Acenaphthylene	208-96-8	µg/kg			57	49	1600	640	270	3600	40	260	60	150	400	64	80
Anthracene	120-12-7	µg/kg			70	25	20000	3600	3500	26000	370	710	170	390	2500	210	140
Fluorene	86-73-7	µg/kg			96	35	6100	2700	1600	20000	250	350	110	270	2700	77	110
Naphthalene	91-20-3	µg/kg		0.52 U	350	180	3200	1600	3100	510000	340	490	98	180	40000	110	75
Phenanthrene	85-01-8	µg/kg			440	170	76000	19000	12000	160000	2600	3100	910	2100	16000	550	760
Dibenz(a,h)anthracene	53-70-3	µg/kg			30	5.4	7300	550	440	3700	63	390	130	230	370	88	140
Benz(a)anthracene	56-55-3	µg/kg			120	48	62000	4200	3200	32000	550	2800	760	1500	3000	630	860
Benzo(a)pyrene	50-32-8	µg/kg			120	53	85000	5900	4400	44000	800	3900	1000	2000	3700	830	1100
Benzo(b)fluoranthene	205-99-2	µg/kg			110	41	55000	3800	2600	28000	470	2900	800	1700	2900	630	940
Benzo(g,h,i)perylene	191-24-2	µg/kg			110	61	53000	4700	3400	32000	660	3400	880	1900	4100	730	1100
Benzo(k)fluoranthene	207-08-9	µg/kg			81	35	51000	3200	2300	23000	420	2300	670	1300	2600	490	680
Chrysene	218-01-9	µg/kg			210	72	67000	5300	4100	41000	700	3500	960	2000	4300	850	1200
Fluoranthene	206-44-0	µg/kg			480	180	140000	13000	8400	120000	2300	5800	1700	3800	11000	1300	1900
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg			98	48	59000	4600	3200	32000	630	3300	910	1900	3900	710	1100
Pyrene	129-00-0	µg/kg			510	220	160000	16000	11000	130000	2900	6900	2000	4000	13000	1600	2200
Low Molecular Weight PAH	LPAH	µg/kg			1240 T	527 T	124000 T	33500 T	23700 T	770000 T	3990 T	5480 T	1510 T	3530 T	68900 T	1140 T	1340 T
High Molecular Weight PAH	HPAH	µg/kg			1870 T	763 T	739000 T	61300 T	43000 T	486000 T	9490 T	35200 T	9810 T	20300 T	48900 T	7860 T	11200 T
Total PAHs	130498-29-2	µg/kg			3110 T	1290 T	864000 T	94800 T	66700 T	1260000 T	13500 T	40700 T	11300 T	23900 T	118000 T	9000 T	12600 T
Chlorinated Pesticides																	
2,4'-DDD	53-19-0	µg/kg			10 J	1.3 J	30 U	37	32	10 U	1 U	14 U	11 U	9.7 U	200	3.1	4.2 NJ
2,4'-DDE	3424-82-6	µg/kg			1.1 U	0.094 U	5 U	2 U	24 NJ	28 U	1.1	4.3 U	1.9 U	1.1 U	50	0.74 J	0.95 U
2,4'-DDT	789-02-6	µg/kg			1.7 U	0.1 U	9.7 U	16 U	15 U	20 U	1.1 U	53 J	2.8 U	3.4 U	47 U	0.75 U	0.26 U
4,4'-DDD	72-54-8	µg/kg			18 J	1.9 J	40 NJ	84	68	14 U	0.57 U	20 J	18	22	630	6.1	8.9
4,4'-DDE	72-55-9	µg/kg			2.7 J	0.41 J	5	20 NJ	27 NJ	2.2 U	0.3 U	9 NJ	7.8 U	8.4	57 NJ	2.4	5.4
4,4'-DDT	50-29-3	µg/kg			3.5 J	0.37 J	21	170	5.1 U	7 U	0.95 U	140	6.9 J	9	160	6.6	13
Total of 4,4'-DDD, -DDE, -DDT	PP_DDT3ISO	µg/kg			24.2 JT	2.68 JT	66 JT	274 JT	95 JT	14 UT	0.95 UT	169 JT	24.9 JT	39.4 T	847 JT	15.1 T	27.3 T
Aldrin	309-00-2	µg/kg			0.47 UJ	0.16 UJ	7.9 NJ	5.4	3.8 U	35 U	1.5 U	3.6	1.9 U	1.8 U	11 U	0.59	0.19 U
alpha-Hexachlorocyclohexane	319-84-6	µg/kg			0.39 UJ	0.13 UJ	5.1 U	1.8 U	1.4 U	25 U	0.53 U	2 U	1.6 U	1.6 U	6.3 U	0.19 U	0.16 U
beta-Hexachlorocyclohexane	319-85-7	µg/kg			1.6 U	0.21 U	3 U	2.3 U	2.1 U	6 U	0.81 U	2.9 U	2.4 U	9.1	4.4 U	0.47 U	1.4 NJ
delta-Hexachlorocyclohexane	319-86-8	µg/kg			0.29 UJ	0.097 UJ	5.7 U	2.7 U	2.3 U	15 U	0.4 U	2 U	1.2 U	1.1 U	6.7 U	0.2 U	0.2 U
gamma-Hexachlorocyclohexane	58-89-9	µg/kg			0.46 U	0.16 U	12 U	3.8 U	3.5 U	25 U	1.6 U	3.8 U	1.9 U	2 U	11 U	0.44 U	0.43 U
cis-Chlordane	5103-71-9	µg/kg			0.25 UJ	0.23 UJ	5 U	2 U	3.4 U	37 U	1.7 U	2.9 U	2 U	2.1 U	32 NJ	0.2 U	0.37 U
trans-Chlordane	5103-74-2	µg/kg			0.69 U	0.084 U	16 UJ	5.6 UJ	6.2 UJ	25 UJ	0.34 UJ	3.2 UJ	0.99 UJ	2.7 UJ	12 NJ	0.47 UJ	0.54 J
Oxychlordane	27304-13-8	µg/kg			0.37 J	0.12 U	8.2 NJ	4.2	4.2 U	56 U	0.46 U	6.7 U	1.4 U	2 U	8.8	0.54 U	0.41 U
cis-Nonachlor	5103-73-1	µg/kg			1.9 NJ	0.38 U	31 NJ	4 U	10 U	19 U	0.76 U	7.4 U	0.95 U	5.2 U	33 U	1.2 U	0.73 U
trans-Nonachlor	39765-80-5	µg/kg			0.31 UJ	0.052 UJ	7.9 U	6.9 U	7.7 U	19 U	1 U	2.9 U	2 J	1.8 U	4 U	0.28 U	0.2 U
Total Chlordanes	TOTCHLDANE	µg/kg			2.27 JT	0.38 UT	39.2 JT	4.2 T	10 UT	56 UT	1.7 UT	7.4 UT	2 JT	5.2 UT	52.8 JT	1.2 UT	0.54 JT
Dieldrin	60-57-1	µg/kg			0.4 UJ	0.14 UJ	5.4 UJ	1.5 UJ	1.4 UJ	7.1 J	0.54 UJ	1.9 UJ	1.6 UJ	1.5 UJ	2.9 UJ	0.23 UJ	0.16 UJ
alpha-Endosulfan	959-98-8	µg/kg			0.19 U	0.064 U	5 U	4.1 U	3.6 U	1.9 U	0.26 U	0.9 U	0.75 U	0.71 U	1.4 U	0.09 U	0.076 U
beta-Endosulfan	33213-65-9	µg/kg			1.2 U	0.32 U	8.2	1.7 J	1.5 U	10 U	0.54 U	2.1 U	1.2 U	1.8 J	4 U	0.44 U	0.12 U
Endosulfan sulfate	1031-07-8	µg/kg			0.3 UJ	0.11 UJ	1.5 U	1.2 U	1.1 U	24 U	0.41 U	3.2 U	3.5 U	2.8 U	2.2 U	0.85 U	0.3 U
Endrin	72-20-8	µg/kg			0.33 UJ	0.11 UJ	19 U	3.9 U	5.5 U	26 U	0.85 U	25 U	1.3 U	2 U	8.3 U	0.17 U	0.24 U
Endrin aldehyde	7421-93-4	µg/kg			1.9 U	0.29	5 U	5.6 U	6.3 U	65 U	0.48 U	5.5 U	1.4 U	2.4	8.1 J	0.59 NJ	0.59

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C523	C524	C524	C525	C525	C525	C525	C525	C527	C527	C527	C527	C528	C528
	X_Easting		7625590	7627408	7627408	7623306	7623306	7623306	7623306	7623306	7623022	7623022	7623022	7623022	7622856	7622856
	Y_Northing		704876	705645	705645	706147	706147	706147	706147	706147	706136	706136	706136	706136	706193	706193
	Sample ID		LW2-C523-D	LW2-C524-A	LW2-C524-B	LW2-C525-A	LW2-C525-B	LW2-C525-C	LW2-C525-D	LW2-C525-E	LW2-C527-A	LW2-C527-B	LW2-C527-C	LW2-C527-E	LW2-C528-A	LW2-C528-B
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/19/2005	10/19/2005	10/19/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005
	Depth Interval		268 - 369 cm	0 - 30 cm	30 - 109 cm	0 - 30 cm	30 - 127 cm	127 - 236 cm	236 - 341 cm	341 - 427 cm	0 - 30 cm	30 - 152 cm	152 - 250 cm	352 - 482 cm	0 - 30 cm	30 - 152 cm
Chemical Name	**CAS No**	**Unit**														
Endrin ketone	53494-70-5	µg/kg		1 UJ	0.094 UJ	28	6.2 J	5.6	6.6 J	1.4 U	1.4 U	1.3 J	1.7 J	4 U	0.6 NJ	0.52 J
Heptachlor	76-44-8	µg/kg		0.29 U	0.097 U	5 U	1.1 U	1 U	5.8 J	0.4 U	1.4 U	1.2 U	1.1 U	2.1 U	0.14 U	0.19 U
Heptachlor epoxide	1024-57-3	µg/kg		1 UJ	0.12 UJ	8.9	2.2	4.5 NJ	11 U	0.45 U	4.4	1.3 U	2.1	2.4 U	0.49 NJ	0.39 NJ
Methoxychlor	72-43-5	µg/kg		2 NJ	0.55 J	52 U	8.8 U	6.2 J	48	2.4 U	23 NJ	8.3 U	7.4 U	2.2 U	0.52 U	0.45 U
Mirex	2385-85-5	µg/kg		1 U	0.18 J	50 NJ	3.6 U	3.7 U	17 U	0.31 U	5.7	0.89 U	2 U	5.6	0.92 U	0.22
Toxaphene	8001-35-2	µg/kg		150 U	15 U	1700 U	300 U	300 U	2600 U	84 U	340 U	230 U	420 U	780 U	95 U	35 U
Petroleum Hydrocarbons																
Gasoline range hydrocarbons	GRH	mg/kg	1.5 U			4.8 J	29 J	41 J	720 J	1.4 UT	2.4 U	2.1 U	1.9 U	61 J	2.4 UJ	2 U
Diesel range hydrocarbons	DRH	mg/kg		1900 J	410 J	1800 J	1200 J	990 J	4400 J	74 J	270 J	160 J	520 J	1600 J	140 J	220 J
Residual range hydrocarbons	RRH	mg/kg		4500 J	910 J	4400 J	1800 J	1500 J	5400 J	130 J	1000 J	540 J	1300 J	2600 J	660 J	690 J
Total petroleum hydrocarbons	TPH	mg/kg		6400 JT	1320 JT	6200 JT	3030 JT	2530 JT	10500 JT	204 JT	1270 JT	700 JT	1820 JT	4260 JT	800 JT	910 JT
Phenols																
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg		1.2 NJ	0.72 U	8.5 U	80 U	75 U	77 U	5.9 U	11 U	8.5 U	8 U	78 U	12 U	9.8 U
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg		1.1 U	0.71 U	20 U	78 U	73 U	170 U	5.7 U	9.9 U	8.3 U	7.8 U	86 U	1 U	0.84 U
2,4,5-Trichlorophenol	95-95-4	µg/kg		13 U	8.3 U	6.5 U	61 U	57 U	340 U	4.5 U	7.8 U	6.5 U	6.2 U	60 U	2 U	2.4 U
2,4,6-Trichlorophenol	88-06-2	µg/kg		2.6 J	0.42 U	9.3 U	46 U	200 U	45 U	3.4 U	8.4 U	5 U	4.7 U	120 U	2.1 NJ	1.9 NJ
2,4-Dichlorophenol	120-83-2	µg/kg		47 U	16 U	90 U	17 U	16 U	360 U	2.5 U	22 U	3.6 U	3.4 U	17 U	8.6 U	7.2 U
2,4-Dimethylphenol	105-67-9	µg/kg		150 U	46 U	280 U	51 U	48 U	1100 U	7.5 U	65 U	11 U	11 U	50 U	27 U	22 U
2,4-Dinitrophenol	51-28-5	µg/kg		940 U	310 U	1800 U	340 U	320 U	7200 U	49 U	430 U	71 U	67 U	330 U	180 U	150 U
2-Chlorophenol	95-57-8	µg/kg		45 U	15 U	85 U	16 U	15 U	340 U	2.3 U	20 U	3.4 U	3.2 U	16 U	8.1 U	6.8 U
2-Methylphenol	95-48-7	µg/kg		89 U	29 U	170 U	32 U	30 U	680 U	4.6 U	40 U	6.7 U	6.3 U	31 U	17 U	14 U
2-Nitrophenol	88-75-5	µg/kg		68 U	22 U	130 U	24 U	23 U	520 U	3.6 U	31 U	5.1 U	4.9 U	24 U	13 U	11 U
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg		45 U	15 U	85 U	16 U	15 U	340 U	2.3 U	20 U	3.4 U	3.2 U	16 U	8.1 U	6.8 U
4-Chloro-3-methylphenol	59-50-7	µg/kg		55 U	18 U	110 U	20 U	19 U	420 U	2.9 U	25 U	4.2 U	3.9 U	19 U	10 U	8.4 U
4-Methylphenol	106-44-5	µg/kg		400	99	150 U	52	54	580 U	4 U	35 U	7.7 J	18	55	14 U	12 U
4-Nitrophenol	100-02-7	µg/kg		780 U	260 U	0.54 U	0.55 U	0.46 U	0.55 U	0.4 U	0.62 U	5.2	0.55 U	0.52 U	0.61 U	0.57 U
Pentachlorophenol	87-86-5	µg/kg		8.7 J	1.2 U	1 U	1 U	0.86 U	1 U	0.74 U	1.2 U	1.1 U	1 U	0.98 U	1.1 U	14
Phenol	108-95-2	µg/kg		52 J	16 U	95 U	18 U	17 U	380 U	2.6 U	23 U	3.8 U	8.2 J	18 U	9 U	7.6 U
Phthalates																
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg		45 U	15 U	170 J	25 U	17 U	340 U	2.3 U	96 U	52 J	210 J	26 U	90 U	220 J
Butylbenzyl phthalate	85-68-7	µg/kg		39 U	13 U	75 U	14 U	13 U	300 U	2.1 U	18 U	3 U	2.8 U	14 U	7.2 J	8.1 J
Dibutyl phthalate	84-74-2	µg/kg		68 U	22 U	130 U	24 U	23 U	520 U	5.2 J	31 U	5.4 J	4.9 U	24 U	20 J	11 U
Diethyl phthalate	84-66-2	µg/kg		91 U	30 U	180 U	33 U	31 U	700 U	4.8 U	42 U	6.9 U	6.5 U	32 U	17 U	14 U
Dimethyl phthalate	131-11-3	µg/kg		47 U	16 U	90 U	17 U	16 U	360 U	2.5 U	22 U	3.6 U	3.4 U	17 U	8.6 U	7.2 U
Di-n-octyl phthalate	117-84-0	µg/kg		32 U	11 U	60 U	12 U	11 U	240 U	1.7 U	15 U	2.4 U	2.3 U	11 U	5.7 U	4.8 U
Semivolatile Organic Compounds																
1,2,4-Trichlorobenzene	120-82-1	µg/kg		39 U	13 U	75 U	14 U	13 U	300 U	2.1 U	18 U	3 U	2.8 U	14 U	7.1 U	6 U
1,2-Dichlorobenzene	95-50-1	µg/kg		34 U	11 U	65 U	12 U	12 U	260 U	1.8 U	16 U	2.6 U	2.5 U	12 U	6.2 U	5.2 U
1,3-Dichlorobenzene	541-73-1	µg/kg		42 U	14 U	80 U	15 U	14 U	320 U	2.2 U	19 U	3.2 U	3 U	15 U	7.6 U	6.4 U
1,4-Dichlorobenzene	106-46-7	µg/kg	0.18 U	50 U	16 U	0.24 U	0.23 U	0.21 U	0.83 U	0.17 U	0.29 U	0.24 U	0.23 U	0.22 U	0.29 U	0.24 U
2,4-Dinitrotoluene	121-14-2	µg/kg		73 U	24 U	140 U	26 U	25 U	560 U	3.8 U	33 U	5.5 U	5.2 U	26 U	14 U	12 U
2,6-Dinitrotoluene	606-20-2	µg/kg		73 U	24 U	140 U	26 U	25 U	560 U	3.8 U	33 U	5.5 U	5.2 U	26 U	14 U	12 U
2-Chloronaphthalene	91-58-7	µg/kg		94 U	31 U	180 U	34 U	32 U	720 U	4.9 U	43 U	7.1 U	6.7 U	33 U	18 U	15 U
2-Nitroaniline	88-74-4	µg/kg		70 U	23 U	140 U	25 U	24 U	540 U	3.7 U	32 U	5.3 U	5 U	25 U	13 U	11 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C523	C524	C524	C525	C525	C525	C525	C525	C527	C527	C527	C527	C528	C528
	X_Easting		7625590	7627408	7627408	7623306	7623306	7623306	7623306	7623306	7623022	7623022	7623022	7623022	7622856	7622856
	Y_Northing		704876	705645	705645	706147	706147	706147	706147	706147	706136	706136	706136	706136	706193	706193
	Sample ID		LW2-C523-D	LW2-C524-A	LW2-C524-B	LW2-C525-A	LW2-C525-B	LW2-C525-C	LW2-C525-D	LW2-C525-E	LW2-C527-A	LW2-C527-B	LW2-C527-C	LW2-C527-E	LW2-C528-A	LW2-C528-B
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/19/2005	10/19/2005	10/19/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005
	Depth Interval		268 - 369 cm	0 - 30 cm	30 - 109 cm	0 - 30 cm	30 - 127 cm	127 - 236 cm	236 - 341 cm	341 - 427 cm	0 - 30 cm	30 - 152 cm	152 - 250 cm	352 - 482 cm	0 - 30 cm	30 - 152 cm
Chemical Name	**CAS No**	**Unit**														
3,3'-Dichlorobenzidine	91-94-1	µg/kg		96 U	31 U	190 U	35 U	32 U	740 U	5 U	44 U	7.3 U	6.9 U	34 U	18 U	15 U
3-Nitroaniline	99-09-2	µg/kg		68 U	22 U	130 U	24 U	23 U	520 U	3.6 U	31 U	5.1 U	4.9 U	24 U	13 U	11 U
4-Bromophenyl phenyl ether	101-55-3	µg/kg		37 U	12 U	70 U	13 U	13 U	280 U	1.9 U	17 U	2.8 U	2.6 U	13 U	6.7 U	5.6 U
4-Chloroaniline	106-47-8	µg/kg		55 U	18 U	110 U	20 U	19 U	420 U	2.9 U	25 U	4.2 U	3.9 U	19 U	10 U	8.4 U
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg		52 U	17 U	100 U	19 U	18 U	400 U	2.7 U	24 U	4 U	3.8 U	19 U	9.5 U	8 U
4-Nitroaniline	100-01-6	µg/kg		89 U	29 U	170 U	32 U	30 U	680 U	4.6 U	40 U	6.7 U	6.3 U	31 U	17 U	14 U
Aniline	62-53-3	µg/kg		39 U	18 J	75 U	14 U	13 U	300 U	2.1 U	18 U	3 U	2.8 U	14 U	7.1 U	6 U
Azobenzene	103-33-3	µg/kg		63 U	21 U	120 U	23 U	21 U	480 U	3.3 U	29 U	4.8 U	4.5 U	22 U	12 U	9.5 U
Benzoic acid	65-85-0	µg/kg		2500 U	810 U	4800 U	890 U	830 U	20000 U	130 U	1200 U	190 U	180 U	870 U	460 U	380 U
Benzyl alcohol	100-51-6	µg/kg		96 U	31 U	190 U	35 U	32 U	740 U	5 U	44 U	7.3 U	6.9 U	34 U	18 U	15 U
Bis(2-chloroethoxy) methane	111-91-1	µg/kg		34 U	11 U	65 U	12 U	12 U	260 U	1.8 U	16 U	2.6 U	2.5 U	12 U	6.2 U	5.2 U
Bis(2-chloroethyl) ether	111-44-4	µg/kg		63 U	21 U	120 U	23 U	21 U	480 U	3.3 U	29 U	4.8 U	4.5 U	22 U	12 U	9.5 U
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg		32 U	11 U	60 U	12 U	11 U	240 U	1.7 U	15 U	2.4 U	2.3 U	11 U	5.7 U	4.8 U
Carbazole	86-74-8	µg/kg		34 U	11 U	14000	590	810	4700	22	240	64	170	640	37	62
Dibenzofuran	132-64-9	µg/kg		46	20	1600	320	150	3100	24	76	24	78	350	20	27
Hexachlorobenzene	118-74-1	µg/kg		1.1 J	0.081 U	5 U	2.4 U	1.5 U	24 U	0.33 U	1.2 U	0.95 U	1.2 U	3.2 U	0.19 U	0.15 U
Hexachlorobutadiene	87-68-3	µg/kg		0.95 UJ	0.32 UJ	4.8 U	3.5 U	3.3 U	9.5 U	1.3 U	4.5 U	2.8 U	2.6 U	6.9 U	0.45 U	0.59 U
Hexachlorocyclopentadiene	77-47-4	µg/kg		390 U	130 U	750 U	140 U	130 U	3000 U	21 U	180 U	30 U	28 U	140 U	71 U	60 U
Hexachloroethane	67-72-1	µg/kg		0.26 U	0.22	1.3 UJ	0.96 UJ	0.9 UJ	2.6 UJ	0.36 UJ	1.3 UJ	1.1 UJ	0.97 UJ	1.9 UJ	0.29 J	0.69 NJ
Isophorone	78-59-1	µg/kg		42 U	14 U	80 U	15 U	14 U	320 U	2.2 U	19 U	3.2 U	3 U	15 U	7.6 U	6.4 U
Nitrobenzene	98-95-3	µg/kg		52 U	17 U	100 U	19 U	18 U	400 U	2.7 U	24 U	4 U	3.8 U	19 U	9.5 U	8 U
N-Nitrosodimethylamine	62-75-9	µg/kg		160 U	52 U	310 U	57 U	53 U	1300 U	8.3 U	72 U	12 U	12 U	56 U	29 U	25 U
N-Nitrosodiphenylamine	86-30-6	µg/kg		57 U	19 U	110 U	21 U	19 U	440 U	3 U	26 U	4.4 U	4.1 U	380	11 U	8.7 U
N-Nitrosodipropylamine	621-64-7	µg/kg		83 U	27 U	160 U	30 U	28 U	640 U	4.4 U	38 U	6.3 U	6 U	29 U	16 U	13 U
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	0.046 U			0.062 U	0.057 U	0.054 U	0.22 U	0.042 U	0.073 U	0.061 U	0.058 U	0.057 U	0.074 U	0.062 U
1,1,1-Trichloroethane	71-55-6	µg/kg	0.087 U			0.12 U	0.11 U	0.11 U	0.41 U	0.08 U	0.14 U	0.12 U	0.11 U	0.11 U	0.14 U	0.12 U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	0.14 U			0.19 U	0.18 U	0.17 U	0.67 U	0.13 U	0.23 U	0.19 U	0.18 U	5.8 U	0.23 U	0.19 U
1,1,2-Trichloroethane	79-00-5	µg/kg	0.087 U			0.12 U	0.11 U	0.11 U	0.41 U	0.08 U	0.14 U	0.12 U	0.11 U	0.11 U	0.14 U	0.12 U
1,1-Dichloroethane	75-34-3	µg/kg	0.084 U			0.12 U	0.11 U	0.099 U	0.4 U	0.077 U	0.14 U	0.12 U	0.11 U	0.11 U	0.14 U	0.12 U
1,2,3-Trichloropropane	96-18-4	µg/kg	0.17 U			0.22 U	0.21 U	0.19 U	0.76 U	0.15 U	0.26 U	0.22 U	0.21 U	0.2 U	0.27 U	0.22 U
1,2-Dichloroethane	107-06-2	µg/kg	0.046 U			0.062 U	0.057 U	0.054 U	0.22 U	0.042 U	0.073 U	0.061 U	0.058 U	0.057 U	0.074 U	0.062 U
1,2-Dichloropropane	78-87-5	µg/kg	0.052 U			0.069 U	0.065 U	0.061 U	0.25 U	0.048 U	0.083 U	0.069 U	0.065 U	0.064 U	0.083 U	0.07 U
1,4-Dichloro-trans-2-burene	110-57-6	µg/kg	0.75 U			1.1 U	0.94 U	0.88 U	3.6 U	0.69 U	1.2 U	1 U	0.95 U	0.93 U	1.3 U	1.1 U
2-Chloroethyl vinyl ether	110-75-8	µg/kg	0.22 U			0.3 U	0.28 U	0.26 U	1.1 U	0.21 U	0.36 U	0.3 U	0.28 U	0.28 U	0.36 U	0.3 U
Acetone	67-64-1	µg/kg	37 J			15 U	23	19	220	68 U	15 U	33 U	59 U	24	23	33 J
Acrolein	107-02-8	µg/kg	R			R	R	R	R	R	R	R	R	R	R	R
Acrylonitrile	107-13-1	µg/kg	0.34 U			0.46 U	0.43 U	0.4 U	1.6 U	0.32 U	0.54 U	0.46 U	0.43 U	0.42 U	0.55 U	R
Benzene	71-43-2	µg/kg	0.096 J			0.077 U	0.096 U	8.6	190	0.053 U	0.092 U	0.077 U	0.073 U	6	0.093 U	0.078 U
Toluene	108-88-3	µg/kg	0.22 U			0.3 U	0.31 U	1 U	150	0.21 U	0.36 U	0.3 U	0.28 U	3.2	0.36 U	0.3 U
Ethylbenzene	100-41-4	µg/kg	0.11 U			0.14 U	0.21 J	42	2200	0.096 U	0.17 U	0.14 U	0.14 U	100	0.17 U	0.15 U
m,p-Xylene	179601-23-1	µg/kg	0.19 U			0.26 U	0.64 J	2.7	390	0.18 U	0.31 U	0.26 U	0.25 U	0.24 U	0.31 U	0.26 U
o-Xylene	95-47-6	µg/kg	0.11 U			0.15 U	1.6	7.5	300	0.11 U	0.18 U	0.39 J	0.53 J	1.7	0.18 U	0.15 U
Xylene	1330-20-7	µg/kg	0.19 UT			0.26 UT	2.24 JT	10.2 T	690 T	0.18 UT	0.31 UT	0.39 JT	0.53 JT	1.7 T	0.31 UT	0.26 UT
BTEX	BTEX	µg/kg	0.096 JT			0.3 UT	2.45 JT	60.8 T	3230 T	0.21 UT	0.36 UT	0.39 JT	0.53 JT	110.9 T	0.36 UT	0.3 UT
Bromochloromethane	74-97-5	µg/kg	0.088 U			0.12 U	0.12 U	0.11 U	0.42 U	0.081 U	0.15 U	0.12 U	0.12 U	0.11 U	0.15 U	0.12 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C523	C524	C524	C525	C525	C525	C525	C525	C527	C527	C527	C527	C528	C528
	X_Easting		7625590	7627408	7627408	7623306	7623306	7623306	7623306	7623306	7623022	7623022	7623022	7623022	7622856	7622856
	Y_Northing		704876	705645	705645	706147	706147	706147	706147	706147	706136	706136	706136	706136	706193	706193
	Sample ID		LW2-C523-D	LW2-C524-A	LW2-C524-B	LW2-C525-A	LW2-C525-B	LW2-C525-C	LW2-C525-D	LW2-C525-E	LW2-C527-A	LW2-C527-B	LW2-C527-C	LW2-C527-E	LW2-C528-A	LW2-C528-B
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/19/2005	10/19/2005	10/19/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005	10/26/2005
	Depth Interval		268 - 369 cm	0 - 30 cm	30 - 109 cm	0 - 30 cm	30 - 127 cm	127 - 236 cm	236 - 341 cm	341 - 427 cm	0 - 30 cm	30 - 152 cm	152 - 250 cm	352 - 482 cm	0 - 30 cm	30 - 152 cm
Chemical Name	**CAS No**	**Unit**														
Bromodichloromethane	75-27-4	µg/kg	0.1 U			0.14 U	0.13 U	0.12 U	0.47 U	0.092 U	0.16 U	0.14 U	0.13 U	0.13 U	0.17 U	0.14 U
Bromoform	75-25-2	µg/kg	0.068 U			0.091 U	0.085 U	0.08 U	0.32 U	0.063 U	0.11 U	0.091 U	0.086 U	0.084 U	0.11 U	0.091 U
Bromomethane	74-83-9	µg/kg	0.54 U			0.73 U	0.69 U	0.64 U	2.6 U	0.5 U	0.87 U	0.73 U	0.69 U	0.67 U	0.88 U	0.74 U
Carbon disulfide	75-15-0	µg/kg	0.19 U			0.26 U	0.29 J	0.26 J	38	0.28 J	0.31 U	0.43 J	0.56 J	2.2	0.31 U	0.26 U
Carbon tetrachloride	56-23-5	µg/kg	0.15 U			0.2 U	0.19 U	0.18 U	0.69 U	0.14 U	0.24 U	0.2 U	0.19 U	0.18 U	0.24 U	0.2 U
Chlorobenzene	108-90-7	µg/kg	0.11 U			0.14 U	0.19 J	0.13 U	0.49 U	0.095 U	0.17 U	0.2 J	0.13 U	0.85 J	0.17 U	0.14 U
Chlorodibromomethane	124-48-1	µg/kg	0.1 U			0.14 U	0.13 U	0.12 U	0.47 U	0.092 U	0.16 U	0.14 U	0.13 U	0.13 U	0.17 U	0.14 U
Chloroethane	75-00-3	µg/kg	0.41 U			0.56 U	0.52 U	0.49 U	2 U	0.38 U	0.66 U	0.55 U	0.52 U	0.51 U	0.67 U	0.56 U
Chloroform	67-66-3	µg/kg	0.082 U			0.12 U	0.11 U	0.097 U	0.39 U	0.076 U	0.14 U	0.11 U	0.11 U	0.11 U	0.14 U	0.12 U
Chloromethane	74-87-3	µg/kg	0.28 U			0.38 U	0.35 U	0.33 U	1.4 U	0.26 U	0.45 U	0.38 U	0.36 U	0.35 U	0.45 U	0.38 U
cis-1,3-Dichloropropene	10061-01-5	µg/kg	0.046 U			0.062 U	0.057 U	0.054 U	0.22 U	0.042 U	0.073 U	0.061 U	0.058 U	0.057 U	0.074 U	0.062 U
Dichlorodifluoromethane	75-71-8	µg/kg	0.17 U			0.22 U	0.21 U	0.19 U	0.76 U	0.15 U	0.26 U	0.22 U	0.21 U	0.2 U	0.27 U	0.22 U
Ethylene dibromide	106-93-4	µg/kg	0.075 U			0.11 U	0.094 U	0.088 U	0.36 U	0.069 U	0.12 U	0.1 U	0.095 U	0.093 U	0.13 U	0.11 U
Isopropylbenzene	98-82-8	µg/kg	0.065 U			0.13 J	4.9	5	170	0.06 U	0.11 U	0.65 J	1	5.6	0.11 U	0.087 U
Methyl iodide	74-88-4	µg/kg	0.98 U			1.4 U	1.3 U	1.2 U	4.7 U	0.91 U	1.6 U	1.4 U	1.3 U	1.3 U	1.6 U	1.4 U
Methyl isobutyl ketone	108-10-1	µg/kg	0.35 U			0.48 U	0.45 U	0.42 U	1.7 U	0.33 U	0.57 U	0.48 U	0.45 U	0.44 U	0.57 U	R
Methyl N-butyl ketone	591-78-6	µg/kg	0.94 U			1.3 U	1.2 U	1.2 U	4.5 U	0.87 U	1.6 U	1.3 U	1.2 U	1.2 U	1.6 U	R
Methyl tert-butyl ether	1634-04-4	µg/kg	0.057 U			0.077 U	0.072 U	0.068 U	0.27 U	0.053 U	0.092 U	0.077 U	0.073 U	0.071 U	0.093 U	0.078 U
Methylene bromide	74-95-3	µg/kg	0.12 U			0.17 U	0.16 U	0.15 U	0.57 U	0.12 U	0.2 U	0.17 U	0.16 U	0.15 U	0.2 U	0.17 U
Methylene chloride	75-09-2	µg/kg	1.8 U			0.81 U	11 U	8.9 U	89 U	3.9 U	0.69 U	0.64 U	0.84 U	3.1 U	4.4 U	3.9 U
Methylethyl ketone	78-93-3	µg/kg	6.7 J			R	3.7 J	R	49 J	11 J	R	5.9 J	12 J	4.4 J	4 J	6 J
Styrene	100-42-5	µg/kg	0.11 U			0.15 U	0.14 U	0.13 U	0.52 U	0.1 U	0.18 U	0.15 U	0.15 U	1 U	0.18 U	0.15 U
Tetrachloroethene	127-18-4	µg/kg	0.14 U			0.19 U	0.18 U	0.17 U	0.67 U	0.13 U	0.23 U	0.19 U	0.18 U	0.18 U	0.23 U	0.19 U
trans-1,2-Dichloroethene	156-60-5	µg/kg	0.28 U			0.38 U	0.35 U	0.33 U	1.4 U	0.26 U	0.45 U	0.38 U	0.36 U	0.35 U	0.45 U	0.38 U
trans-1,3-Dichloropropene	10061-02-6	µg/kg	0.065 U			0.087 U	0.081 U	0.076 U	0.31 U	0.06 U	0.11 U	0.087 U	0.082 U	0.08 U	0.11 U	0.087 U
Trichloroethene	79-01-6	µg/kg	0.091 U			0.13 U	0.12 U	0.11 U	0.43 U	0.084 U	0.15 U	0.13 U	0.12 U	0.12 U	0.15 U	0.13 U
Trichlorofluoromethane	75-69-4	µg/kg	0.12 U			0.16 U	0.15 U	0.14 U	0.56 U	0.11 U	0.2 U	0.16 U	0.15 U	0.15 U	0.2 U	0.17 U
Vinyl acetate	108-05-4	µg/kg	R			R	R	R	R	R	R	R	R	R	R	R
Vinyl chloride	75-01-4	µg/kg	0.13 U			0.17 U	0.16 U	0.15 U	0.59 U	0.12 U	0.2 U	0.17 U	0.16 U	0.16 U	0.21 U	0.17 U
Vinylidene chloride	75-35-4	µg/kg	0.12 U			0.17 U	0.16 U	0.15 U	0.57 U	0.12 U	0.2 U	0.17 U	0.16 U	0.15 U	0.2 U	0.17 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

			Location Name	C528	C528	C529	C529	C529	C529	C530	C530	C530	C530	C531	C531	C531	C531
			X_Easting	7622856	7622856	7622740	7622740	7622740	7622740	7622683	7622683	7622683	7622683	7622585	7622585	7622585	7622585
			Y_Northing	706193	706193	706341	706341	706341	706341	706499	706499	706499	706499	706621	706621	706621	706621
			Sample ID	LW2-C528-C	LW2-C528-F	LW2-C529-A	LW2-C529-B	LW2-C529-C	LW2-C529-E	LW2-C530-A	LW2-C530-B	LW2-C530-C	LW2-C530-E	LW2-C531-A	LW2-C531-B	LW2-C531-C	LW2-C531-E
			Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
			Parent Sample														
			Sample Date	10/26/2005	10/26/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005
			Depth Interval	152 - 274 cm	451 - 491 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	431 - 541 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	410 - 544 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	371 - 516 cm
Chemical Name	**CAS No**	**Unit**															
PCB Aroclors																	
Aroclor 1016	12674-11-2	µg/kg		11 U	1.5 U	2.4 U	2.2 U	2 U	1.9 U	2.2 U	2 U	1.9 U	9.9 U	2 U	9.5 U	20 U	1.7 U
Aroclor 1221	11104-28-2	µg/kg		11 U	4 U	2.4 U	2.2 U	2 U	1.9 U	2.2 U	2 U	1.9 U	1.9 U	2 U	9.5 U	34 U	1.7 U
Aroclor 1232	11141-16-5	µg/kg		11 U	2.9 U	2.4 U	2.2 U	2 U	1.9 U	2.2 U	2 U	1.9 U	19 U	2 U	9.5 U	26 U	1.7 U
Aroclor 1242	53469-21-9	µg/kg		11 U	1.7 U	2.4 U	2.2 U	2 U	1.9 U	2.2 U	2 U	1.9 U	14 U	2 U	9.5 U	22 U	1.7 U
Aroclor 1248	12672-29-6	µg/kg		66	1.5 U	4 U	20	92 J	27 J	6.3 U	62 J	91 J	11 U	18	78	24 U	1.7 U
Aroclor 1254	11097-69-1	µg/kg		120	1.5 U	11 U	2.2 U	130	1.9 U	17 U	89	83 U	46 U	23 J	170 J	120 U	1.7 U
Aroclor 1260	11096-82-5	µg/kg		79	2.3 U	6.5 U	18	75	54 J	11 U	55	76	45 U	25	110 J	210 J	1.7 U
Aroclor 1262	37324-23-5	µg/kg		11 U	1.5 U	3.4 U	2.2 U	2 U	1.9 U	4.3 U	2 U	1.9 U	22 U	2 U	9.5 U	20 U	1.7 U
Aroclor 1268	11100-14-4	µg/kg		11 U	1.5 U	2.4 U	2.2 U	2 U	1.9 U	2.2 U	2 U	1.9 U	9.4 U	2 U	9.5 U	20 U	1.7 U
Total PCB Aroclors	12767-79-2	µg/kg		265 T	4 UT	11 UT	38 T	297 JT	81 JT	17 UT	206 JT	167 JT	46 UT	66 JT	358 JT	210 JT	1.7 UT
Butyltins																	
Butyltin ion	78763-54-9	µg/kg		0.4 J	0.041 U	0.28 J	0.56 J	0.3 J	0.24 J	0.48 J	0.66 J	0.19 J	0.14 J	1.3 J	0.28 J	0.082 U	0.046 U
Dibutyltin ion	14488-53-0	µg/kg		4.6	0.059 J	2.2 J	4.4	1.4 U	0.63 U	6.9	8	0.49 U	1.7 J	18	1.8 J	0.62 U	0.27 U
Tributyltin ion	36643-28-4	µg/kg		13	0.38 U	6.9	11	2.4 U	0.71 U	23	18	0.72 U	0.75 U	43	5.7	0.7 U	0.6 U
Tetrabutyltin	1461-25-2	µg/kg		0.14 U	0.094 U	1.5 J	0.57 U	0.13 U	0.12 U	0.85 J	0.13 U	0.13 U	0.12 U	0.61 J	0.13 U	0.13 U	0.25 U
Conventionals																	
Total solids	TSO	percent		52.5	74.7	46.1	52	55.4	60	51.8	55.8	57.9	60.3	56.4	57.9	57.8	65.8
Total organic carbon	TOC	percent		2.56	0.16	2.26 T	2.26	2.14	2.71	1.93	1.95	2.39	2.28	1.74 T	1.92	2.33	1.11
Specific gravity	SPEC_GRAV	NA		1.47	1.92	1.37 T	1.44	1.55	1.56	1.49	1.52	1.59	1.58	1.54 T	1.53	1.57	1.72
PCDD/F Homologs																	
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g															
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g															
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g															
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g															
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g															
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g															
Pentachlorodibenzofuran homologs	30402-15-4	pg/g															
Hexachlorodibenzofuran homologs	55684-94-1	pg/g															
Heptachlorodibenzofuran homologs	38998-75-3	pg/g															
Octachlorodibenzofuran	39001-02-0	pg/g															
PCDD/Fs																	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g															
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g															
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g															
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g															
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g															
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g															
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g															
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g															
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g															
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g															
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g															
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g															

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

		Location Name	C528	C528	C529	C529	C529	C529	C530	C530	C530	C530	C531	C531	C531	C531
		X_Easting	7622856	7622856	7622740	7622740	7622740	7622740	7622683	7622683	7622683	7622683	7622585	7622585	7622585	7622585
		Y_Northing	706193	706193	706341	706341	706341	706341	706499	706499	706499	706499	706621	706621	706621	706621
		Sample ID	LW2-C528-C	LW2-C528-F	LW2-C529-A	LW2-C529-B	LW2-C529-C	LW2-C529-E	LW2-C530-A	LW2-C530-B	LW2-C530-C	LW2-C530-E	LW2-C531-A	LW2-C531-B	LW2-C531-C	LW2-C531-E
		Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
		Parent Sample														
		Sample Date	10/26/2005	10/26/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005
		Depth Interval	152 - 274 cm	451 - 491 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	431 - 541 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	410 - 544 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	371 - 516 cm
Chemical Name	**CAS No**	**Unit**														
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g														
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g														
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g														
Octachlorodibenzofuran	39001-02-0	pg/g														
Grain Size																
Medium gravel	GS_MG	percent	0	0	0 T	0	0	0	0.06	0	0	0	0	0	0	0 T
Fine gravel	GS_FG	percent	0.04	0.03	0.173 T	0.21	0.19	0.26	0.4	0.24	0.49	0.36	0.01	0	0.08	0.167 T
Very coarse sand	GS_VCS	percent	0.49	0.04	0.783 T	0.5	0.73	0.66	0.81	0.26	0.55	0.49	0.3	0.16	0.19	0.147 T
Coarse sand	GS_CS	percent	0.27	0.2	0.493 T	0.39	0.42	0.38	0.53	0.42	0.41	0.55	0.65	0.68	0.43	0.243 T
Medium sand	GS_MS	percent	0.94	38.8	0.543 T	0.36	0.35	0.43	1.31	0.63	0.83	0.75	1.59	1.38	1.93	4.21 T
Fine sand	GS_FS	percent	1.99	43.8	1.32 T	1.44	1.14	1.75	7.62	4.3	7.97	5.94	8.16	8.33	13.1	30.7 T
Very fine sand	GS_VFS	percent	5.39	5.97	8.62 T	7.41	6.69	6.83	18.9	15.2	10.2	9.92	19.4	14.7	10.7	11.7 T
Coarse silt	GS_CSILT	percent	9.38	2.71	16.2 JT	13.7	11.3	11.7	19.4	13.5	28.8	13.2	26.9	13.6	16.3	10.3 T
Medium silt	GS_MSILT	percent	24.9	2.2	26.9 T	26.7	24.1	18.3	16.8	21.7	13.7	16.6	19.9	20.4	17.1	15.9 T
Fine silt	GS_FSILT	percent	19.2	1.55	18.2 T	19.5	22.5	19.6	14.3	15.8	12.4	19.9	10.7	15.4	14.2	10.1 T
Very fine silt	GS_VFSILT	percent	17.5	1.31	9.44 T	11.2	13	12.6	6.91	9.85	9.98	11.7	6.02	9.45	11.4	6.39 T
8-9 Phi clay	GS_CCLAY	percent	10.7	0.97	5.56 T	6.04	7	7.96	4.83	4.18	5.77	7.31	3.16	6.28	8.2	4.19 T
>9 Phi clay	GS_MFCLAY	percent	9.98	1.5	10.5 T	13.7	14.6	16.8	9.14	11.6	8.79	15	8.35	11.9	10.3	7.07 T
Chlorinated Herbicides																
2,4,5-T	93-76-5	µg/kg	0.7 U	0.46 U	0.73 U	0.72 U	0.64 U	0.62 U	0.7 U	0.67 U	0.61 U	0.61 U	0.62 U	0.6 UJ	0.67 U	0.55 U
2,4-D	94-75-7	µg/kg	0.48 U	0.32 U	0.5 U	0.49 U	0.44 U	0.43 U	0.48 U	0.46 U	0.42 U	0.42 U	0.42 U	0.41 UJ	0.46 U	0.38 U
2,4-DB	94-82-6	µg/kg	0.71 U	0.47 U	0.74 U	0.72 U	0.64 U	0.63 U	0.71 U	0.68 U	0.62 U	0.62 U	0.63 U	0.61 UJ	0.68 U	0.55 U
Dalapon	75-99-0	µg/kg	0.42 U	0.28 U	0.44 U	0.43 U	0.38 U	0.38 U	0.42 U	0.4 U	0.37 U	0.37 U	0.37 U	0.36 UJ	0.41 U	0.33 U
Dicamba	1918-00-9	µg/kg	1.5 U	1 U	1.6 U	1.5 U	1.4 U	1.3 U	1.5 U	1.4 U	1.3 U	1.3 U	1.3 U	1.3 UJ	1.5 U	1.2 U
Dichloroprop	120-36-5	µg/kg	0.77 U	0.51 U	0.8 U	0.78 U	0.7 U	0.68 U	0.77 U	0.73 U	0.67 U	0.67 U	0.68 U	0.66 UJ	0.74 U	0.6 U
Dinoseb	88-85-7	µg/kg	0.97 U	0.64 U	1 U	0.99 U	0.88 U	0.86 U	0.97 U	0.92 U	0.84 U	0.85 U	0.86 U	0.83 UJ	0.93 U	0.76 U
MCPA	94-74-6	µg/kg	1 U	0.67 U	1.1 U	1 U	0.93 U	0.91 U	1 U	0.97 U	0.89 U	0.89 U	0.9 U	0.88 UJ	0.98 U	0.8 U
MCPP	93-65-2	µg/kg	0.93 U	0.61 U	0.97 U	0.95 U	0.85 U	0.83 U	0.93 U	0.89 U	0.81 U	0.81 U	0.82 U	0.8 UJ	0.9 U	0.73 U
Silvex	93-72-1	µg/kg	0.7 U	0.46 U	0.73 U	0.72 U	0.64 U	0.62 U	0.7 U	0.67 U	0.61 U	0.61 U	0.62 U	0.6 UJ	0.67 U	0.55 U
Metals																
Aluminum	7429-90-5	mg/kg	31800	11300	27800	28800 T	33600	29200	31300	29900	34100	28800	22900 T	21600	21400	21300
Antimony	7440-36-0	mg/kg	0.22 J	0.08 J	0.14 J	0.155 JT	0.24 J	0.23 J	0.37 J	0.19 J	0.21 J	0.25 J	0.325 JT	0.21 J	0.1 J	0.09 J
Arsenic	7440-38-2	mg/kg	4.05	1.39	2.82	3.26 T	4.12	4.33	2.95	2.49	3.37	5	3.16 T	3.3	3.18	2.41
Cadmium	7440-43-9	mg/kg	0.381	0.011 J	0.194	0.265 T	0.471	0.355	0.242	0.339	0.371	0.507	0.284 T	0.424	0.155	0.1 J
Chromium	7440-47-3	mg/kg	40.8	17	33.1	33.8 T	38.2	34.2	38.8	35.7	38.2	36	31.8 T	31.3	29.4	28.4
Chromium hexavalent	18540-29-9	mg/kg														
Copper	7440-50-8	mg/kg	83.7	18.2	52.4	48.2 T	54	59.3	58.8	44.9	51.7	53.3	53.9 JT	46.8 J	33.9 J	28 J
Lead	7439-92-1	mg/kg	72.1	6.67	13.6	22.3 T	46.2	28.7	17.1	32.2	32.9	37.2	32.9 JT	46.9 J	7.79 J	6.27 J
Mercury	7439-97-6	mg/kg	0.204	0.017 J	0.066	0.193	0.137	0.468	0.074	0.105	0.17	0.646	0.093	0.154	0.055	0.053
Nickel	7440-02-0	mg/kg	38.2	20.7	24.6	26 T	29.3	28.7	25.4	27.6	29.3	33.1	26.6 JT	27.8 J	27.7 J	24.8 J
Selenium	7782-49-2	mg/kg	0.18 U	0.05 U	0.09 U	0.08 UT	0.09 U	0.07 U	0.05 U	0.05 U	0.08 U	0.07 U	0.06 UT	0.04 U	0.03 U	0.03 U
Silver	7440-22-4	mg/kg	0.891	0.246	0.517	0.624 T	0.824	0.918	0.571	0.746	0.768	0.928	0.557 T	0.708	0.415	0.361
Zinc	7440-66-6	mg/kg	181	46.9	92.2	107 T	208	157	103	175	197	144	147 T	219	68.2	63.8

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

			Location Name	C528	C528	C529	C529	C529	C529	C530	C530	C530	C530	C531	C531	C531	C531
			X_Easting	7622856	7622856	7622740	7622740	7622740	7622740	7622683	7622683	7622683	7622683	7622585	7622585	7622585	7622585
			Y_Northing	706193	706193	706341	706341	706341	706341	706499	706499	706499	706499	706621	706621	706621	706621
			Sample ID	LW2-C528-C	LW2-C528-F	LW2-C529-A	LW2-C529-B	LW2-C529-C	LW2-C529-E	LW2-C530-A	LW2-C530-B	LW2-C530-C	LW2-C530-E	LW2-C531-A	LW2-C531-B	LW2-C531-C	LW2-C531-E
			Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
			Parent Sample														
			Sample Date	10/26/2005	10/26/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005
			Depth Interval	152 - 274 cm	451 - 491 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	431 - 541 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	410 - 544 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	371 - 516 cm
Chemical Name	**CAS No**	**Unit**															
Polycyclic Aromatic Hydrocarbons																	
2-Methylnaphthalene	91-57-6	µg/kg		120	6.6	17	27	99	1600	75	190	150	1000	150	270	1200	4
Acenaphthene	83-32-9	µg/kg		690	52	33	100	910	1900	240	2300	340	1500	620	1600	2000	41
Acenaphthylene	208-96-8	µg/kg		180	3.1	21	29	94	210	130	790	97	170	140	180	210	3
Anthracene	120-12-7	µg/kg		700	31	110	81	600	1800	330	1500	290	1100	730	1600	5900	21
Fluorene	86-73-7	µg/kg		570	24	23	65	550	1400	160	1200	210	860	410	1200	1700	7.5
Naphthalene	91-20-3	µg/kg		190	12	42	65	170	430	180	390	190	820	300	500	620	8.8
Phenanthrene	85-01-8	µg/kg		4100	53	190	420	2800	9100	1000	7500	1500	5500	3200	9400	10000	56
Dibenz(a,h)anthracene	53-70-3	µg/kg		220	3.1 U	37	49	140	160	120	660	51	140	310	360	270	5.3
Benz(a)anthracene	56-55-3	µg/kg		1800	38	220	310	1200	1600	1000	5900	430	1400	2100	3000	2100	56
Benzo(a)pyrene	50-32-8	µg/kg		2200	44	330	430	1600	1900	1500	7900	580	1800	3100	3800	2900	60
Benzo(b)fluoranthene	205-99-2	µg/kg		1800	31	250	320	1400	1300	1200	6000	420	1100	2200	2700	1700	40
Benzo(g,h,i)perylene	191-24-2	µg/kg		2200	39	300	390	1200	1600	1200	5900	530	1400	2400	2700	2400	33
Benzo(k)fluoranthene	207-08-9	µg/kg		1500	27	180	250	1000	1100	940	5100	370	950	1900	2100	1600	43
Chrysene	218-01-9	µg/kg		2300	52	330	410	1600	2200	1600	7000	590	1800	2500	3500	2700	52
Fluoranthene	206-44-0	µg/kg		4900	150	410	620	3400	5500	1700	13000	1200	3800	4700	7300	6400	93
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg		2200	35	280	370	1200	1300	1100	5600	430	1200	2400	2800	2300	36
Pyrene	129-00-0	µg/kg		5300	180	570	840	4100	8300	2400	17000	1900	6000	4900	9100	7800	93
Low Molecular Weight PAH	LPAH	µg/kg		6550 T	182 T	436 T	787 T	5220 T	16400 T	2120 T	13900 T	2780 T	11000 T	5550 T	14800 T	21600 T	141 T
High Molecular Weight PAH	HPAH	µg/kg		24400 T	596 T	2910 T	3990 T	16800 T	25000 T	12800 T	74100 T	6500 T	19600 T	26500 T	37400 T	30200 T	511 T
Total PAHs	130498-29-2	µg/kg		31000 T	778 T	3340 T	4780 T	22100 T	41400 T	14900 T	87900 T	9280 T	30500 T	32100 T	52100 T	51800 T	653 T
Chlorinated Pesticides																	
2,4'-DDD	53-19-0	µg/kg		65 J	4.1 NJ	2.6	3.8	19	38	4.1	14 J	22	53	14 J	18	160	0.18 U
2,4'-DDE	3424-82-6	µg/kg		9.2 U	0.075 U	0.6 U	1.1	0.99 U	16 J	0.2 U	0.85 U	6.3 J	16 NJ	0.5 U	1.2 U	11 U	0.086 U
2,4'-DDT	789-02-6	µg/kg		7.5 U	0.55 U	1.2 J	0.43 U	2.1 NJ	5.3 U	1.3 U	1.9 U	1.5 U	4.1	2.3 U	5.4 U	8.3 J	0.31 U
4,4'-DDD	72-54-8	µg/kg		62 J	4.6	5.1 J	7.2 J	26 J	280 J	7.9 J	16 J	44 J	160 J	1.9 U	32 J	520	0.13 U
4,4'-DDE	72-55-9	µg/kg		11 U	0.62	2.3 J	4.9 J	8.6 J	14 UJ	3.6 J	5.7 J	9.6 NJ	39 NJ	5.6	16 NJ	25 U	0.066 U
4,4'-DDT	50-29-3	µg/kg		5.4 U	0.19 U	2.1 J	4.4 J	2.4 UJ	7 J	9.1 J	2.7 UJ	16 J	31 J	7.4	12 J	92	0.22 U
Total of 4,4'-DDD, -DDE, -DDT	PP_DDT3ISO	µg/kg		62 JT	5.22 T	9.5 JT	16.5 JT	34.6 JT	287 JT	20.6 JT	21.7 JT	69.6 JT	230 JT	13 T	60 JT	612 T	0.22 UT
Aldrin	309-00-2	µg/kg		9.1 J	0.13 U	0.37 UJ	0.18 UJ	2.9 NJ	2.9 UJ	0.18 UJ	2.1 UJ	3 J	2.4 UJ	1.9	3.7 U	3	0.27 U
alpha-Hexachlorocyclohexane	319-84-6	µg/kg		3 U	0.11 U	0.17 UJ	0.15 UJ	0.7 UJ	0.87 UJ	0.15 UJ	0.69 UJ	0.74 UJ	1.3 UJ	0.69 U	0.67 U	0.67 U	0.12 U
beta-Hexachlorocyclohexane	319-85-7	µg/kg		4.6 U	0.17 U	0.28 UJ	0.36 UJ	2.7 NJ	1.9 J	0.61 UJ	1.1 UJ	1.6 J	2.3 J	1.2 J	1.1 U	1.7	0.19 U
delta-Hexachlorocyclohexane	319-86-8	µg/kg		5.8	0.2 U	0.13 UJ	0.12 UJ	1.1 J	1.5 UJ	0.2 UJ	0.72 UJ	1.1 J	3.5 NJ	0.54 U	0.97 J	1 U	0.089 U
gamma-Hexachlorocyclohexane	58-89-9	µg/kg		4.5 U	0.13 U	0.2 UJ	0.27 UJ	5.8 J	1.5 UJ	0.33 UJ	1.5 UJ	1.4 UJ	1.4 UJ	2.5 NJ	1.6 U	1.6 U	0.14 U
cis-Chlordane	5103-71-9	µg/kg		5.9	0.69 NJ	0.21 UJ	0.22 UJ	0.71 UJ	2.6 UJ	0.66 UJ	0.44 UJ	0.43 UJ	1.4 UJ	0.79 UJ	0.43 UJ	0.43 UJ	0.075 UJ
trans-Chlordane	5103-74-2	µg/kg		4 UJ	0.067 UJ	0.36 UJ	0.68 UJ	2.6 UJ	1.8 UJ	0.52 UJ	1.4 NJ	2.2 J	4.5 UJ	1.2 UJ	2.1 J	6.8 UJ	0.18 UJ
Oxychlordane	27304-13-8	µg/kg		3.3 U	0.21 J	0.15 U	0.13 U	0.61 U	5.7 NJ	0.43 U	0.61 U	1.3 U	3.3 NJ	0.6 U	1.6 NJ	5.1 J	0.11 U
cis-Nonachlor	5103-73-1	µg/kg		7.2 U	0.065 U	0.65 U	0.56 U	3.4 U	3.7 U	0.72 U	11 NJ	1.4 U	3 U	1.5 J	3.3 U	330 NJ	0.18 U
trans-Nonachlor	39765-80-5	µg/kg		1.2 U	0.26 UJ	0.16 NJ	0.43 U	1.4 U	0.26 U	0.2 U	0.85 U	4.3 NJ	1.1 U	0.79 U	1.7 U	1.8 U	0.18 U
Total Chlordanes	TOTCHLDANE	µg/kg		5.9 T	0.9 JT	0.16 JT	0.68 UJT	3.4 UT	5.7 JT	0.72 UT	12.4 JT	6.5 JT	3.3 JT	1.5 JT	3.7 JT	335 JT	0.18 UT
Dieldrin	60-57-1	µg/kg		3.1 UJ	0.33 NJ	1 J	0.23 UJ	1.1 UJ	0.67 UJ	0.2 UJ	1 UJ	1.4 UJ	1 UJ	1 UJ	0.7 UJ	0.7 UJ	0.13 UJ
alpha-Endosulfan	959-98-8	µg/kg		1.5 U	0.11 U	0.16 U	0.23 U	0.35 U	0.32 U	0.2 U	0.35 U	1.6 U	0.32 U	0.34 U	0.33 U	0.33 U	0.68 U
beta-Endosulfan	33213-65-9	µg/kg		2.3 U	0.078 U	0.22 U	0.12 U	1.7 U	1.3 U	0.3 U	0.52 U	1.4 NJ	2.3 J	0.83 U	1.5 U	0.51 U	0.089 U
Endosulfan sulfate	1031-07-8	µg/kg		3.2 U	0.081 U	0.21 UJ	0.23 UJ	0.55 UJ	0.5 UJ	0.52 UJ	0.54 UJ	0.52 UJ	0.5 UJ	1.5 U	0.52 U	0.52 U	0.21 U
Endrin	72-20-8	µg/kg		14 U	0.26 J	0.15 UJ	0.13 UJ	0.59 UJ	0.55 UJ	0.38 J	0.87 J	1.9 NJ	3.4 NJ	0.91 UJ	1.4 UJ	1.7 UJ	0.19 J
Endrin aldehyde	7421-93-4	µg/kg		5.6 U	0.14 NJ	0.41 U	0.51 U	4.1 U	3.5 U	0.55 U	1.4 U	3 U	2.2 U	1.1 J	1.3 U	0.61 U	0.18 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

			Location Name	C528	C528	C529	C529	C529	C529	C530	C530	C530	C530	C531	C531	C531	C531
			X_Easting	7622856	7622856	7622740	7622740	7622740	7622740	7622683	7622683	7622683	7622683	7622585	7622585	7622585	7622585
			Y_Northing	706193	706193	706341	706341	706341	706341	706499	706499	706499	706499	706621	706621	706621	706621
			Sample ID	LW2-C528-C	LW2-C528-F	LW2-C529-A	LW2-C529-B	LW2-C529-C	LW2-C529-E	LW2-C530-A	LW2-C530-B	LW2-C530-C	LW2-C530-E	LW2-C531-A	LW2-C531-B	LW2-C531-C	LW2-C531-E
			Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
			Parent Sample														
			Sample Date	10/26/2005	10/26/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005
			Depth Interval	152 - 274 cm	451 - 491 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	431 - 541 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	410 - 544 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	371 - 516 cm
Chemical Name	**CAS No**	**Unit**															
Endrin ketone	53494-70-5	µg/kg		6.2 U	0.075 U	0.13 UJ	0.11 UJ	4.4 J	2.1 UJ	0.2 UJ	3.5 UJ	3 J	3.2 J	1 U	3.9 J	5.8 U	0.086 U
Heptachlor	76-44-8	µg/kg		2.3 U	0.078 U	0.13 UJ	0.12 UJ	0.53 UJ	0.49 UJ	0.12 UJ	0.52 UJ	0.51 UJ	0.49 UJ	0.52 U	0.51 U	0.51 U	0.18 U
Heptachlor epoxide	1024-57-3	µg/kg		3.7 J	0.16 J	0.21 UJ	0.57 J	1.6 J	0.55 UJ	0.67 J	1.1 J	1.6 J	0.55 UJ	0.59 UJ	1.4 UJ	0.58 UJ	0.11 UJ
Methoxychlor	72-43-5	µg/kg		2.3 U	0.48 U	0.41 U	1.1 U	6.7 U	3.8 U	1.7 U	5.6 U	0.52 U	3.2 J	4.4 U	2.8 U	3.4	0.092 U
Mirex	2385-85-5	µg/kg		1.8 U	0.07 U	0.33 U	0.087 U	1.3 U	1.4 U	0.5 NJ	1.4 U	0.39 U	0.38 U	1 U	1 U	0.39 U	0.069 U
Toxaphene	8001-35-2	µg/kg		510 U	11 U	13 U	26 U	280 U	170 U	26 U	270 U	240 U	110 U	170 U	250 U	1900 NJ	18 U
Petroleum Hydrocarbons																	
Gasoline range hydrocarbons	GRH	mg/kg		33 J	1.4 U	2.2 UT	2 U	7.5 J	29 J	2 UJ	4.2 J	11 J	1.7 UT	1.8 UT	7.7 J	53	1.6 U
Diesel range hydrocarbons	DRH	mg/kg		670 J	9.1 JT	58 J	130 J	370 J	600 J	120 J	340 J	510 J	400 J	210 J	540 J	13 JT	9.3 J
Residual range hydrocarbons	RRH	mg/kg		1300 J	23 UT	280 J	380 J	750 J	860 J	420 J	700 J	780 J	710 J	640 J	1100 J	83 JT	70 J
Total petroleum hydrocarbons	TPH	mg/kg		2000 JT	9.1 JT	338 JT	510 JT	1130 JT	1490 JT	540 JT	1040 JT	1300 JT	1110 JT	850 JT	1650 JT	149 JT	79.3 JT
Phenols																	
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg		82 U	6.6 U	9.4 U	8.3 U	9.1 U	7.2 U	9.5 U	8.3 U	3.8 U	41 U	7.7 U	7.5 U	75 U	0.66 U
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg		80 U	0.57 U	9.2 U	8.1 U	2.6 U	13 U	0.82 U	5.7 U	5.6 U	7.9 U	7.5 U	13 U	73 U	0.64 U
2,4,5-Trichlorophenol	95-95-4	µg/kg		63 U	0.89 U	7.2 U	6.4 U	2.9 U	5.5 U	0.64 U	3 U	2.9 U	2.8 U	5.9 U	5.7 U	58 U	0.51 U
2,4,6-Trichlorophenol	88-06-2	µg/kg		48 U	0.93 U	5.5 U	4.9 U	6.4 U	4.2 U	4.3 U	2.3 U	2.2 U	2.1 U	4.5 U	4.4 U	44 U	0.38 U
2,4-Dichlorophenol	120-83-2	µg/kg		6.9 U	2.5 U	4 U	3.5 U	17 U	30 U	3.5 U	65 U	16 U	15 U	32 U	32 U	32 U	2.8 U
2,4-Dimethylphenol	105-67-9	µg/kg		21 U	7.4 U	12 U	11 U	50 U	92 U	11 U	200 U	48 U	46 U	98 U	95 U	96 U	8.4 U
2,4-Dinitrophenol	51-28-5	µg/kg		140 U	49 U	79 U	70 U	330 U	600 U	70 U	1300 U	320 U	300 U	R	R	R	R
2-Chlorophenol	95-57-8	µg/kg		6.5 U	2.3 U	3.7 U	3.3 U	16 U	29 U	3.3 U	61 U	15 U	15 U	31 U	30 U	30 U	2.6 U
2-Methylphenol	95-48-7	µg/kg		13 U	4.6 U	7.4 U	6.6 U	31 U	57 U	6.6 U	130 U	30 U	29 U	61 U	59 U	59 U	5.2 U
2-Nitrophenol	88-75-5	µg/kg		10 U	3.5 U	5.7 U	5 U	24 U	44 U	5.1 U	94 U	23 U	22 U	47 U	45 U	45 U	4 U
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg		6.5 U	2.3 U	3.7 U	3.3 U	16 U	29 U	3.3 U	61 U	15 U	15 U	31 UJ	30 UJ	30 UJ	2.6 UJ
4-Chloro-3-methylphenol	59-50-7	µg/kg		8 U	2.9 U	4.6 U	4.1 U	19 U	35 U	4.1 U	76 U	19 U	18 U	38 U	37 U	37 U	3.2 U
4-Methylphenol	106-44-5	µg/kg		14 J	3.9 U	12	8.8 J	27 U	49 U	12	110 U	26 U	55	52 U	51 U	51 U	4.5 U
4-Nitrophenol	100-02-7	µg/kg		0.57 U	0.37 U	0.59 U	0.58 U	0.52 U	0.51 U	0.57 U	0.54 U	0.5 U	0.5 U	0.5 U	0.49 UJ	0.55 U	0.45 U
Pentachlorophenol	87-86-5	µg/kg		1.1 U	0.62 U	1.1 U	1.1 U	0.84 U	0.95 U	0.89 U	1 U	0.93 U	0.93 U	0.94 U	0.92 UJ	1 U	0.7 U
Phenol	108-95-2	µg/kg		7.3 U	2.6 U	12 J	5.2 J	18 U	32 U	6.8 J	69 U	17 U	16 U	34 U	33 U	33 U	2.9 U
Phthalates																	
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg		130 J	43 U	72	34 U	66 U	29 U	83	180 U	33 U	15 U	100 U	49 U	30 U	11 U
Butylbenzyl phthalate	85-68-7	µg/kg		11 J	2.1 U	6.9 J	2.9 U	14 U	25 U	2.9 U	54 U	13 U	13 U	27 U	26 U	26 U	2.3 U
Dibutyl phthalate	84-74-2	µg/kg		10 U	5.9 J	15 U	5 U	24 U	44 U	12 U	94 U	23 U	22 U	47 U	45 U	45 U	5.8 U
Diethyl phthalate	84-66-2	µg/kg		14 U	4.7 U	7.6 U	6.8 U	32 U	59 U	6.8 U	130 U	31 U	30 U	63 U	61 U	61 U	5.4 U
Dimethyl phthalate	131-11-3	µg/kg		6.9 U	2.5 U	4 U	3.5 U	17 U	30 U	4.7 J	65 U	16 U	15 U	32 U	32 U	32 U	2.8 U
Di-n-octyl phthalate	117-84-0	µg/kg		4.6 U	1.7 U	2.7 U	2.4 U	11 U	20 U	2.4 U	44 U	11 U	10 U	22 U	21 U	21 U	1.9 U
Semivolatile Organic Compounds																	
1,2,4-Trichlorobenzene	120-82-1	µg/kg		5.8 U	2.1 U	3.3 U	2.9 U	14 U	25 U	2.9 U	54 U	13 U	13 U	27 U	26 U	26 U	2.3 U
1,2-Dichlorobenzene	95-50-1	µg/kg		5 U	1.8 U	2.9 U	2.5 U	12 U	22 U	2.6 U	47 U	12 U	11 U	24 U	23 U	23 U	2 U
1,3-Dichlorobenzene	541-73-1	µg/kg		6.1 U	2.2 U	3.5 U	3.1 U	15 U	27 U	3.1 U	58 U	14 U	14 U	29 U	28 U	28 U	2.5 U
1,4-Dichlorobenzene	106-46-7	µg/kg		0.23 U	0.17 U	0.27 U	0.24 U	0.22 U	0.2 U	0.24 U	0.22 U	0.21 U	0.2 U	0.22 U	0.21 U	0.21 U	0.19 U
2,4-Dinitrotoluene	121-14-2	µg/kg		11 U	3.8 U	6.1 U	5.4 U	26 U	47 U	5.5 U	110 U	25 U	24 U	50 U	49 U	49 U	4.3 U
2,6-Dinitrotoluene	606-20-2	µg/kg		11 U	3.8 U	6.1 U	5.4 U	26 U	47 U	5.5 U	110 U	25 U	24 U	50 U	49 U	49 U	4.3 U
2-Chloronaphthalene	91-58-7	µg/kg		14 U	4.9 U	7.9 U	7 U	33 U	60 U	7 U	130 U	32 U	30 U	64 U	63 U	63 U	5.5 U
2-Nitroaniline	88-74-4	µg/kg		11 U	3.7 U	5.9 U	5.2 U	25 U	45 U	5.3 U	97 U	24 U	23 U	48 U	47 U	47 U	4.2 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C528	C528	C529	C529	C529	C529	C530	C530	C530	C530	C531	C531	C531	C531
	X_Easting		7622856	7622856	7622740	7622740	7622740	7622740	7622683	7622683	7622683	7622683	7622585	7622585	7622585	7622585
	Y_Northing		706193	706193	706341	706341	706341	706341	706499	706499	706499	706499	706621	706621	706621	706621
	Sample ID		LW2-C528-C	LW2-C528-F	LW2-C529-A	LW2-C529-B	LW2-C529-C	LW2-C529-E	LW2-C530-A	LW2-C530-B	LW2-C530-C	LW2-C530-E	LW2-C531-A	LW2-C531-B	LW2-C531-C	LW2-C531-E
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/26/2005	10/26/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005
	Depth Interval		152 - 274 cm	451 - 491 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	431 - 541 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	410 - 544 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	371 - 516 cm
Chemical Name	**CAS No**	**Unit**														
3,3'-Dichlorobenzidine	91-94-1	µg/kg	15 U	5 U	8.1 U	7.2 U	34 U	62 U	7.2 U	140 U	32 U	31 U	66 U	64 U	65 U	5.7 U
3-Nitroaniline	99-09-2	µg/kg	10 U	3.5 U	5.7 U	5 U	24 U	44 U	5.1 U	94 U	23 U	22 U	47 U	45 U	45 U	4 U
4-Bromophenyl phenyl ether	101-55-3	µg/kg	5.4 U	1.9 U	3.1 U	2.7 U	13 U	24 U	2.8 U	51 U	13 U	12 U	25 U	25 U	25 U	2.2 U
4-Chloroaniline	106-47-8	µg/kg	8 U	2.9 U	4.6 U	4.1 U	19 U	35 U	4.1 U	76 U	19 U	18 U	38 U	37 U	37 U	3.2 U
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg	7.7 U	2.7 U	4.4 U	3.9 U	19 U	34 U	3.9 U	72 U	18 U	17 U	36 U	35 U	35 U	3.1 U
4-Nitroaniline	100-01-6	µg/kg	13 U	4.6 U	7.4 U	6.6 U	31 U	57 U	6.6 U	130 U	30 U	29 U	61 U	59 U	59 U	5.2 U
Aniline	62-53-3	µg/kg	5.8 U	2.1 U	3.3 U	2.9 U	14 U	25 U	2.9 U	54 U	13 U	13 U	27 U	26 U	26 U	2.3 U
Azobenzene	103-33-3	µg/kg	9.2 U	3.3 U	5.3 U	4.7 U	22 U	40 U	4.7 U	87 U	21 U	20 U	43 U	42 U	42 U	3.7 U
Benzoic acid	65-85-0	µg/kg	370 U	130 U	R	R	R	R	R	R	R	R	R	R	R	R
Benzyl alcohol	100-51-6	µg/kg	15 U	5 U	8.1 U	7.2 U	34 U	62 U	7.2 U	140 U	32 U	31 U	66 U	64 U	65 U	5.7 U
Bis(2-chloroethoxy) methane	111-91-1	µg/kg	5 U	1.8 U	2.9 U	2.5 U	12 U	22 U	2.6 U	47 U	12 U	11 U	24 U	23 U	23 U	2 U
Bis(2-chloroethyl) ether	111-44-4	µg/kg	9.2 U	3.3 U	5.3 U	4.7 U	22 U	40 U	4.7 U	87 U	21 U	20 U	43 U	42 U	42 U	3.7 U
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg	4.6 U	1.7 U	2.7 U	2.4 U	11 U	20 U	2.4 U	44 U	11 U	10 U	22 U	21 U	21 U	1.9 U
Carbazole	86-74-8	µg/kg	210	4.3 J	18	28	170	240	94	840	35 J	160	370	550	900	2.4 J
Dibenzofuran	132-64-9	µg/kg	170	2.6 U	6.8	24	300	170	52	460	29	100	160	260	200	2.9
Hexachlorobenzene	118-74-1	µg/kg	2.8 U	0.065 U	0.17 U	0.2 U	3.1 J	1.2 U	0.48 NJ	1 U	0.99 U	1.4 U	0.43 U	0.42 UJ	0.42 U	0.17 NJ
Hexachlorobutadiene	87-68-3	µg/kg	5.4 U	0.45 UJ	0.42 U	0.37 U	1.8 U	1.6 U	0.37 U	1.8 U	1.7 U	1.6 U	1.7 UJ	1.7 UJ	1.7 UJ	0.46 UJ
Hexachlorocyclopentadiene	77-47-4	µg/kg	58 U	21 U	33 U	29 U	140 U	250 U	29 U	540 U	130 U	130 U	270 U	260 U	260 U	23 U
Hexachloroethane	67-72-1	µg/kg	2 UJ	0.24 UJ	0.29 UJ	0.2 UJ	2.1 J	0.44 UJ	0.2 UJ	1.5 J	1.2 J	0.44 UJ	0.47 UJ	1.2 J	0.45 UJ	0.22 UJ
Isophorone	78-59-1	µg/kg	6.1 U	2.2 U	3.5 U	3.1 U	15 U	27 U	3.1 U	58 U	14 U	14 U	29 U	28 U	28 U	2.5 U
Nitrobenzene	98-95-3	µg/kg	7.7 U	2.7 U	4.4 U	3.9 U	19 U	34 U	3.9 U	72 U	18 U	17 U	36 U	35 U	35 U	3.1 U
N-Nitrosodimethylamine	62-75-9	µg/kg	24 U	8.2 U	14 U	12 U	56 U	110 U	12 U	220 U	53 U	51 U	110 U	110 U	110 U	9.3 U
N-Nitrosodiphenylamine	86-30-6	µg/kg	8.4 U	3 U	4.8 U	4.3 U	20 U	37 U	4.3 U	79 U	19 U	19 U	40 U	38 U	39 U	3.4 U
N-Nitrosodipropylamine	621-64-7	µg/kg	13 U	4.3 U	7 U	6.2 U	29 U	54 U	6.2 U	120 U	28 U	27 U	57 U	56 U	56 U	4.9 U
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	0.06 U	0.042 U	0.068 U	0.06 U	0.056 U	0.052 U	0.06 U	0.056 U	0.054 U	0.052 U	0.055 U	0.054 U	0.054 U	0.048 U
1,1,1-Trichloroethane	71-55-6	µg/kg	0.12 U	0.079 U	0.13 U	0.12 U	0.11 U	0.099 U	0.12 U	0.11 U	0.11 U	0.098 U	0.11 U	0.11 U	0.11 U	0.09 U
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	0.19 U	0.13 U	0.21 U	0.19 U	0.37 U	0.16 U	0.19 U	0.18 U	0.17 U	0.16 U	0.18 U	0.17 U	3.8 U	0.15 U
1,1,2-Trichloroethane	79-00-5	µg/kg	0.12 U	0.079 U	0.13 U	0.12 U	0.11 U	0.099 U	0.12 U	0.11 U	0.11 U	0.098 U	0.11 U	0.11 U	0.11 U	0.09 U
1,1-Dichloroethane	75-34-3	µg/kg	0.11 U	0.077 U	0.13 U	0.11 U	0.11 U	0.095 U	0.12 U	0.11 U	0.099 U	0.095 U	0.11 U	0.099 U	0.099 U	0.087 U
1,2,3-Trichloropropane	96-18-4	µg/kg	0.21 U	0.15 U	0.24 U	0.22 U	0.2 U	0.19 U	0.22 U	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U	0.2 U	0.17 U
1,2-Dichloroethane	107-06-2	µg/kg	0.06 U	0.042 U	0.068 U	0.06 U	0.056 U	0.052 U	0.06 U	0.056 U	0.054 U	0.052 U	0.055 U	0.054 U	0.054 U	0.048 U
1,2-Dichloropropane	78-87-5	µg/kg	0.067 U	0.047 U	0.076 U	0.068 U	0.064 U	0.059 U	0.068 U	0.063 U	0.061 U	0.059 U	0.063 U	0.061 U	0.061 U	0.054 U
1,4-Dichloro-trans-2-burene	110-57-6	µg/kg	0.98 U	0.69 U	1.2 U	0.99 U	0.93 U	0.85 U	0.99 U	0.92 U	0.89 U	0.85 UJ	0.91 U	0.89 U	0.89 U	0.78 U
2-Chloroethyl vinyl ether	110-75-8	µg/kg	0.29 U	0.21 U	0.33 U	0.29 U	0.28 U	0.25 U	0.29 U	0.27 U	0.26 U	0.25 UJ	0.27 U	0.26 U	0.26 U	0.23 U
Acetone	67-64-1	µg/kg	30	26 U	13 U	23 U	22 U	20 U	17	30	14 U	22 U	31	17	22	15
Acrolein	107-02-8	µg/kg	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Acrylonitrile	107-13-1	µg/kg	0.44 U	0.31 U	0.5 U	0.45 U	0.42 U	0.39 U	0.45 U	0.42 U	0.4 U	0.39 UJ	0.41 U	0.4 U	0.4 U	0.35 U
Benzene	71-43-2	µg/kg	0.084 U	0.053 U	0.085 U	0.075 U	0.077 J	0.065 U	0.076 U	0.07 U	0.068 U	0.065 U	0.07 U	0.068 U	0.14 J	0.06 U
Toluene	108-88-3	µg/kg	0.29 U	0.21 U	0.33 U	0.29 U	0.28 U	0.25 U	0.29 U	0.27 U	0.26 U	0.25 U	0.27 U	0.26 U	0.36 J	0.23 U
Ethylbenzene	100-41-4	µg/kg	0.14 U	0.096 U	0.16 U	0.14 U	0.13 U	0.12 U	0.14 U	0.13 U	0.13 U	0.12 U	0.13 U	0.13 U	0.32 J	0.11 U
m,p-Xylene	179601-23-1	µg/kg	0.25 J	0.18 U	0.29 U	0.25 U	0.49 J	0.28 J	0.26 U	0.24 U	0.23 U	0.22 U	0.24 U	0.23 U	0.39 J	0.2 U
o-Xylene	95-47-6	µg/kg	0.8 J	0.11 U	0.17 U	0.15 U	0.73 J	1.7	0.15 U	0.31 J	0.55 J	0.13 U	0.14 U	0.16 J	2.3	0.12 U
Xylene	1330-20-7	µg/kg	1.05 JT	0.18 UT	0.29 UT	0.25 UT	1.22 JT	1.98 JT	0.26 UT	0.31 JT	0.55 JT	0.22 UT	0.24 UT	0.16 JT	2.69 JT	0.2 UT
BTEX	BTEX	µg/kg	1.05 JT	0.21 UT	0.33 UT	0.29 UT	1.297 JT	1.98 JT	0.29 UT	0.31 JT	0.55 JT	0.25 UT	0.27 UT	0.16 JT	3.51 JT	0.23 UT
Bromochloromethane	74-97-5	µg/kg	0.12 U	0.081 U	0.14 U	0.12 U	0.11 U	0.1 U	0.12 U	0.11 U	0.11 U	0.1 U	0.11 U	0.11 U	0.11 U	0.092 U

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ANC04875

Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C528	C528	C529	C529	C529	C529	C530	C530	C530	C530	C531	C531	C531	C531
	X_Easting		7622856	7622856	7622740	7622740	7622740	7622740	7622683	7622683	7622683	7622683	7622585	7622585	7622585	7622585
	Y_Northing		706193	706193	706341	706341	706341	706341	706499	706499	706499	706499	706621	706621	706621	706621
	Sample ID		LW2-C528-C	LW2-C528-F	LW2-C529-A	LW2-C529-B	LW2-C529-C	LW2-C529-E	LW2-C530-A	LW2-C530-B	LW2-C530-C	LW2-C530-E	LW2-C531-A	LW2-C531-B	LW2-C531-C	LW2-C531-E
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample															
	Sample Date		10/26/2005	10/26/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/27/2005	10/28/2005	10/28/2005	10/28/2005	10/28/2005
	Depth Interval		152 - 274 cm	451 - 491 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	431 - 541 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	410 - 544 cm	0 - 30 cm	30 - 152 cm	152 - 274 cm	371 - 516 cm
Chemical Name	**CAS No**	**Unit**														
Bromodichloromethane	75-27-4	µg/kg	0.13 U	0.092 U	0.15 U	0.14 U	0.13 U	0.12 U	0.14 U	0.13 U	0.12 U	0.12 U	0.13 U	0.12 U	0.12 U	0.11 U
Bromoform	75-25-2	µg/kg	0.088 U	0.062 U	0.1 U	0.089 U	0.084 U	0.077 U	0.089 U	0.083 U	0.08 U	0.077 U	0.082 U	0.08 U	0.08 U	0.07 U
Bromomethane	74-83-9	µg/kg	0.71 U	0.5 U	0.81 U	0.72 U	0.67 U	0.62 U	0.72 U	0.67 U	0.64 U	0.62 U	0.66 U	0.64 U	0.65 U	0.57 U
Carbon disulfide	75-15-0	µg/kg	0.42 J	0.18 U	0.29 U	0.25 U	0.24 U	0.22 U	0.26 U	0.28 U	0.23 U	0.22 U	0.24 U	0.23 U	0.27 J	0.2 U
Carbon tetrachloride	56-23-5	µg/kg	0.19 U	0.14 U	0.22 U	0.2 U	0.18 U	0.17 U	0.2 U	0.18 U	0.18 U	0.17 U	0.18 U	0.18 U	0.18 U	0.16 U
Chlorobenzene	108-90-7	µg/kg	0.14 U	0.094 U	0.16 U	0.14 U	0.17 J	0.14 J	0.14 U	0.13 U	0.22 J	0.12 U	0.13 U	0.13 U	0.31 J	0.11 U
Chlorodibromomethane	124-48-1	µg/kg	0.13 U	0.092 U	0.15 U	0.14 U	0.13 U	0.12 U	0.14 U	0.13 U	0.12 U	0.12 U	0.13 U	0.12 U	0.12 U	0.11 U
Chloroethane	75-00-3	µg/kg	0.54 U	0.38 U	0.61 U	0.54 U	0.51 U	0.47 U	0.55 U	0.51 U	0.49 U	0.47 U	0.5 U	0.49 U	0.49 U	0.43 U
Chloroform	67-66-3	µg/kg	0.11 U	0.075 U	0.13 U	0.11 U	0.11 U	0.094 U	0.11 U	0.11 U	0.097 U	0.093 U	0.1 U	0.097 U	0.097 U	0.086 U
Chloromethane	74-87-3	µg/kg	0.37 U	0.26 U	0.42 U	0.37 U	0.35 U	0.32 U	0.37 U	0.35 U	0.33 U	0.32 U	0.34 U	0.33 U	0.33 U	0.29 U
cis-1,3-Dichloropropene	10061-01-5	µg/kg	0.06 U	0.042 U	0.068 U	0.06 U	0.056 U	0.052 U	0.06 U	0.056 U	0.054 U	0.052 U	0.055 U	0.054 U	0.054 U	0.048 U
Dichlorodifluoromethane	75-71-8	µg/kg	0.21 U	0.15 U	0.24 U	0.22 U	0.2 U	0.19 U	0.22 U	0.2 U	0.19 U	0.19 U	0.2 U	0.19 U	0.2 U	0.17 U
Ethylene dibromide	106-93-4	µg/kg	0.098 U	0.069 U	0.12 U	0.099 U	0.093 U	0.085 U	0.099 U	0.092 U	0.089 U	0.085 U	0.091 U	0.089 U	0.089 U	0.078 U
Isopropylbenzene	98-82-8	µg/kg	3.2	0.059 U	0.096 U	0.085 U	2.9	1.5	0.085 U	0.55 J	0.48 J	0.43 J	0.079 U	0.96	6	0.067 U
Methyl iodide	74-88-4	µg/kg	1.3 U	0.9 U	1.5 U	1.3 U	1.3 U	1.2 U	1.3 U	1.3 U	1.2 U	1.2 UJ	1.2 U	1.2 U	1.2 U	1.1 U
Methyl isobutyl ketone	108-10-1	µg/kg	0.46 U	0.33 U	0.53 U	0.47 U	0.44 U	0.4 U	0.47 U	0.44 U	0.42 U	0.4 U	0.43 U	0.42 U	0.42 U	0.37 U
Methyl N-butyl ketone	591-78-6	µg/kg	1.3 U	0.86 U	1.4 U	1.3 U	1.2 U	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	0.98 U
Methyl tert-butyl ether	1634-04-4	µg/kg	0.075 U	0.053 U	0.085 U	0.075 U	0.071 U	0.065 U	0.076 U	0.07 U	0.068 U	0.065 U	0.07 U	0.068 U	0.068 U	0.06 U
Methylene bromide	74-95-3	µg/kg	0.16 U	0.11 U	0.18 U	0.16 U	0.15 U	0.14 U	0.16 U	0.15 U	0.15 U	0.14 U	0.15 U	0.15 U	0.15 U	0.13 U
Methylene chloride	75-09-2	µg/kg	3.8 U	3.3 U	0.79 U	0.56 U	0.57 U	0.53 U	7.8 U	6.7 U	0.51 U	1.2 U	3.2 U	2.3 U	2 U	2.2 U
Methylethyl ketone	78-93-3	µg/kg	6.3 J	R	R	3.7 J	3.8 J	3.4 J	R	5.9 J	R	4.5 J	4.8 J	3.6 J	4.6 J	R
Styrene	100-42-5	µg/kg	0.26 U	0.1 U	0.17 U	0.15 U	0.14 U	0.13 U	0.15 U	0.14 U	0.13 U	0.13 U	0.14 U	0.13 U	0.13 U	0.12 U
Tetrachloroethene	127-18-4	µg/kg	0.19 U	0.13 U	0.21 U	0.19 U	0.18 U	0.16 U	0.19 U	0.18 U	0.17 U	0.16 U	0.18 U	0.17 U	0.17 U	0.15 U
trans-1,2-Dichloroethene	156-60-5	µg/kg	0.37 U	0.26 U	0.42 U	0.37 U	0.35 U	0.32 U	0.37 U	0.35 U	0.33 U	0.32 U	0.34 U	0.33 U	0.33 U	0.29 U
trans-1,3-Dichloropropene	10061-02-6	µg/kg	0.084 U	0.059 U	0.096 U	0.085 U	0.08 U	0.074 U	0.085 U	0.079 U	0.076 U	0.073 U	0.079 U	0.076 U	0.077 U	0.067 U
Trichloroethene	79-01-6	µg/kg	0.12 U	0.083 U	0.14 U	0.12 U	0.12 U	0.11 U	0.12 U	0.12 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.095 U
Trichlorofluoromethane	75-69-4	µg/kg	0.16 U	0.11 U	0.18 U	0.16 U	0.15 U	0.14 U	0.16 U	0.15 U	0.14 U	0.14 U	0.15 U	0.14 U	0.15 U	0.13 U
Vinyl acetate	108-05-4	µg/kg	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Vinyl chloride	75-01-4	µg/kg	0.17 U	0.12 U	0.19 U	0.17 U	0.16 U	0.15 U	0.17 U	0.16 U	0.15 U	0.15 U	0.16 U	0.15 U	0.15 U	0.13 U
Vinylidene chloride	75-35-4	µg/kg	0.16 U	0.11 U	0.18 U	0.16 U	0.15 U	0.14 U	0.16 U	0.15 U	0.15 U	0.14 U	0.15 U	0.15 U	0.15 U	0.13 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

		Location Name	C532	C532	C532	C532	C532	C533	C533	C533	C533
		X_Easting	7629257	7629257	7629257	7629257	7629257	7627332	7627332	7627332	7627332
		Y_Northing	700289	700289	700289	700289	700289	705710	705710	705710	705710
		Sample ID	LW2-C532-A	LW2-C532-B	LW2-C532-C	LW2-C532-E	LW2-C532-F	LW2-C533-A	LW2-C533-B	LW2-C533-C	LW2-C533-D
		Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal
		Parent Sample									
		Sample Date	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
		Depth Interval	0 - 30 cm	30 - 99 cm	99 - 198 cm	293 - 338 cm	338 - 372 cm	0 - 30 cm	30 - 112 cm	112 - 234 cm	234 - 336 cm
Chemical Name	**CAS No**	**Unit**									
PCB Aroclors											
Aroclor 1016	12674-11-2	µg/kg	2.2 U	2 U	2 U	1.9 U	1.5 U	5.5 U	2.1 U	1.8 U	1.5 UJ
Aroclor 1221	11104-28-2	µg/kg	2.2 U	2 U	2 U	1.9 U	1.5 U	5.5 U	2.1 U	1.8 U	1.5 UJ
Aroclor 1232	11141-16-5	µg/kg	2.2 U	2 U	2 U	1.9 U	1.5 U	5.5 U	2.1 U	1.8 U	1.5 UJ
Aroclor 1242	53469-21-9	µg/kg	2.2 U	2 U	2 U	1.9 U	1.5 U	5.5 U	2.1 U	1.8 U	1.5 UJ
Aroclor 1248	12672-29-6	µg/kg	41	34	41	1.9 U	1.5 U	5.5 U	2.1 U	1.8 U	1.5 UJ
Aroclor 1254	11097-69-1	µg/kg	55	41 J	34 J	22 U	1.5 U	5.5 U	2.1 U	1.8 U	1.5 UJ
Aroclor 1260	11096-82-5	µg/kg	45	95 J	42 J	27	1.5 U	110 J	2.1 U	1.8 U	1.5 UJ
Aroclor 1262	37324-23-5	µg/kg	2.2 U	2 U	2 U	1.9 U	1.5 U	5.5 U	2.1 U	1.8 U	1.5 UJ
Aroclor 1268	11100-14-4	µg/kg	2.2 U	2 U	2 U	4.8 J	1.5 U	5.5 U	2.1 U	1.8 U	1.5 UJ
Total PCB Aroclors	12767-79-2	µg/kg	141 T	170 JT	117 JT	31.8 JT	1.5 UT	110 JT	2.1 UT	1.8 UT	1.5 UJT
Butyltins											
Butyltin ion	78763-54-9	µg/kg									
Dibutyltin ion	14488-53-0	µg/kg									
Tributyltin ion	36643-28-4	µg/kg									
Tetrabutyltin	1461-25-2	µg/kg									
Conventionals											
Total solids	TSO	percent	50.8	55.2	55.6	59.7	75.3 T	33.6 T	52.9	62.2	75.3 T
Total organic carbon	TOC	percent	2.56	2.27	2.96	2.28	0.08 U	16.1	2.48	1.7	0.25
Specific gravity	SPEC_GRAV	NA	1.5	1.54	1.54	1.6	1.96	1.24	1.54	1.57	1.94 T
PCDD/F Homologs											
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g									
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g									
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g									
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g									
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g									
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g									
Pentachlorodibenzofuran homologs	30402-15-4	pg/g									
Hexachlorodibenzofuran homologs	55684-94-1	pg/g									
Heptachlorodibenzofuran homologs	38998-75-3	pg/g									
Octachlorodibenzofuran	39001-02-0	pg/g									
PCDD/Fs											
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g									
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g									
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g									
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g									
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g									
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g									
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g									
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g									
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g									
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g									
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g									
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g									

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

		Location Name	C532	C532	C532	C532	C532	C533	C533	C533	C533
		X_Easting	7629257	7629257	7629257	7629257	7629257	7627332	7627332	7627332	7627332
		Y_Northing	700289	700289	700289	700289	700289	705710	705710	705710	705710
		Sample ID	LW2-C532-A	LW2-C532-B	LW2-C532-C	LW2-C532-E	LW2-C532-F	LW2-C533-A	LW2-C533-B	LW2-C533-C	LW2-C533-D
		Sample Type Code	normal	normal	normal	normal	normal	normal	normal	normal	normal
		Parent Sample									
		Sample Date	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
		Depth Interval	0 - 30 cm	30 - 99 cm	99 - 198 cm	293 - 338 cm	338 - 372 cm	0 - 30 cm	30 - 112 cm	112 - 234 cm	234 - 336 cm
Chemical Name	**CAS No**	**Unit**									
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g									
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g									
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g									
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g									
Octachlorodibenzofuran	39001-02-0	pg/g									
Grain Size											
Medium gravel	GS_MG	percent	0	0	0	0	0	10.8			
Fine gravel	GS_FG	percent	0.06	0.09	0.1	0.06	0	8.34	0.44	0.34	0.06
Very coarse sand	GS_VCS	percent	0.53	0.4	0.25	0.32	0.07	6.86	0.52	0.53	0.22
Coarse sand	GS_CS	percent	0.5	0.46	0.41	0.37	0.25	7.19	0.59	1.07	5.75
Medium sand	GS_MS	percent	0.5	0.48	0.4	3.17	0.31	8.4	1.41	3.19	36
Fine sand	GS_FS	percent	1.38	1.68	0.86	5.23	10.7	5.58	2.94	3.12	19.1
Very fine sand	GS_VFS	percent	12.3	16.8	5.74	11.2	44.9	3.18	3.47	5.82	13.4
Coarse silt	GS_CSILT	percent	21.6	24.9	14.8	13.1	20.8	3.67	8.13	11.4	8.43
Medium silt	GS_MSILT	percent	28.9	27.2	31.2	19	8.44	10.8	26.3	22.3	6.21
Fine silt	GS_FSILT	percent	14.6	11.4	21.5	17.6	2.95	12.7	26.4	17.6	3.82
Very fine silt	GS_VFSILT	percent	7.14	6.02	10.3	10.2	1.22	8.1	13.4	11.7	2.03
8-9 Phi clay	GS_CCLAY	percent	4.14	3.23	5.47	6.34	0.35	4.58	6.42	7.21	1.55
>9 Phi clay	GS_MFCLAY	percent	6.95	6.35	9.07	12.7	0.66	8.46	11	12.6	3.2
Chlorinated Herbicides											
2,4,5-T	93-76-5	µg/kg									
2,4-D	94-75-7	µg/kg									
2,4-DB	94-82-6	µg/kg									
Dalapon	75-99-0	µg/kg									
Dicamba	1918-00-9	µg/kg									
Dichloroprop	120-36-5	µg/kg									
Dinoseb	88-85-7	µg/kg									
MCPA	94-74-6	µg/kg									
MCPP	93-65-2	µg/kg									
Silvex	93-72-1	µg/kg									
Metals											
Aluminum	7429-90-5	mg/kg	30500	23700	36300	33900	11400	19500	23400	30300	19600
Antimony	7440-36-0	mg/kg	0.26 J	0.23 J	0.24 J	0.27 J	0.16 J	1.18 J	0.24 J	0.18 J	0.12 J
Arsenic	7440-38-2	mg/kg	5.01	3.85	4.74	5.08	4.18	5.23	4.21	3.71	3.05
Cadmium	7440-43-9	mg/kg	0.413	0.362	0.535	0.642	0.208	0.555	0.26	0.221	0.116
Chromium	7440-47-3	mg/kg	36.6	31.2	42.3	40.9	13.3	25.9	31.8	34.8	24.5
Chromium hexavalent	18540-29-9	mg/kg									
Copper	7440-50-8	mg/kg	53.6	40.2	53.3	53.2	19.5	56	51.6	56.7	27.4
Lead	7439-92-1	mg/kg	25.7	22.1	32.9	38.4	7.42	59.7	30.2	13.9	11
Mercury	7439-97-6	mg/kg	0.276	0.261	0.298	0.299	0.019 JT	0.645	0.311	0.092	0.027
Nickel	7440-02-0	mg/kg	28.6	24.8	31.9	33.6	16.1	20.7 J	26.1 J	25.8 J	20.6 J
Selenium	7782-49-2	mg/kg	0.08 U	0.07 U	0.07 U	0.06 U	0.02 U	0.23 U	0.2 U	0.17 U	0.09 U
Silver	7440-22-4	mg/kg	0.722	0.577	0.838	0.945	0.334	0.584	0.516	0.367	0.215
Zinc	7440-66-6	mg/kg	170	150	208	191	100	176	106	77.8	54.8

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C532	C532	C532	C532	C532	C533	C533	C533	C533
	X_Easting		7629257	7629257	7629257	7629257	7629257	7627332	7627332	7627332	7627332
	Y_Northing		700289	700289	700289	700289	700289	705710	705710	705710	705710
	Sample ID		LW2-C532-A	LW2-C532-B	LW2-C532-C	LW2-C532-E	LW2-C532-F	LW2-C533-A	LW2-C533-B	LW2-C533-C	LW2-C533-D
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample										
	Sample Date		10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
	Depth Interval		0 - 30 cm	30 - 99 cm	99 - 198 cm	293 - 338 cm	338 - 372 cm	0 - 30 cm	30 - 112 cm	112 - 234 cm	234 - 336 cm
Chemical Name	**CAS No**	**Unit**									
Polycyclic Aromatic Hydrocarbons											
2-Methylnaphthalene	91-57-6	µg/kg	17	16	12	35	0.46 U	95	24	8.4	1.8 J
Acenaphthene	83-32-9	µg/kg	19	16	12	51	0.23 J	44	28	10	1.4 J
Acenaphthylene	208-96-8	µg/kg	19	16	17	35	0.3 U	68	58	14	2.4 J
Anthracene	120-12-7	µg/kg	21	16	16	65	0.35 U	62	34	66	3.4
Fluorene	86-73-7	µg/kg	18	15	14	61	0.3 J	73	34	19	1.9 J
Naphthalene	91-20-3	µg/kg	62	49	50	70	0.47 U	290	190	39	6.4
Phenanthrene	85-01-8	µg/kg	100	77	75	360	2.3 U	360	180	270	12
Dibenz(a,h)anthracene	53-70-3	µg/kg	3.9	3	3.4	13	0.35 U	30	8.6	50	0.98 J
Benz(a)anthracene	56-55-3	µg/kg	36	27	31	110	0.43 U	140	54	390	8.3
Benzo(a)pyrene	50-32-8	µg/kg	49	38	43	160	0.43 U	140	76	340	9.2
Benzo(b)fluoranthene	205-99-2	µg/kg	33	27	28	110	0.64 U	130	51	260	6
Benzo(g,h,i)perylene	191-24-2	µg/kg	49	39	46	180	0.58 U	160	87	180	6.7
Benzo(k)fluoranthene	207-08-9	µg/kg	34	24	30	91	0.44 U	97	48	240	6
Chrysene	218-01-9	µg/kg	51	38	43	170	0.6 U	220	74	400	8.7
Fluoranthene	206-44-0	µg/kg	110	90	94	330	1.7 U	480	220	620	16
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	40	31	35	150	0.48 U	130	70	200	6
Pyrene	129-00-0	µg/kg	140	110	120	460	2.4 U	490	250	590	22
Low Molecular Weight PAH	LPAH	µg/kg	256 T	205 T	196 T	677 T	0.53 JT	992 T	548 T	426 T	29.3 JT
High Molecular Weight PAH	HPAH	µg/kg	546 T	427 T	473 T	1770 T	2.4 UT	2020 T	939 T	3270 T	89.9 JT
Total PAHs	130498-29-2	µg/kg	802 T	632 T	669 T	2450 T	0.53 JT	3010 T	1490 T	3700 T	119 JT
Chlorinated Pesticides											
2,4'-DDD	53-19-0	µg/kg	1.3 NJ	3.1 J	3.5 NJ	8.9 J	0.12 J	3.3 U	0.2 U	0.2 U	0.22 UJ
2,4'-DDE	3424-82-6	µg/kg	0.12 U	0.32 U	0.2 U	3.1 U	0.075 U	0.76 U	0.11 U	0.19 U	0.075 UJ
2,4'-DDT	789-02-6	µg/kg	1.7 U	3.5 J	1.4	0.81 U	0.06 U	3.6 NJ	0.086 U	0.28 U	0.06 UJ
4,4'-DDD	72-54-8	µg/kg	3.3 J	3.8 J	4.8 J	12 J	0.12 UJ	1.5 J	0.16 U	0.14 U	0.66 UJ
4,4'-DDE	72-55-9	µg/kg	8 J	5.6 J	5.8 J	11 NJ	0.095 J	0.34 J	0.082 UJ	0.07 UJ	0.42 UJ
4,4'-DDT	50-29-3	µg/kg	1.4 UJ	1.1 UJ	1.7 J	1.1 J	0.19 UJ	4.1 J	0.27 UJ	0.23 UJ	0.19 UJ
Total of 4,4'-DDD, -DDE, -DDT	PP_DDT3ISO	µg/kg	11.3 JT	9.4 JT	12.3 JT	24.1 JT	0.095 JT	5.94 JT	0.27 UJT	0.23 UJT	0.66 UJT
Aldrin	309-00-2	µg/kg	0.64 NJ	0.2 UJ	0.17 UJ	0.16 UJ	0.13 UJ	0.47 UJ	0.18 U	0.15 U	0.2 UJ
alpha-Hexachlorocyclohexane	319-84-6	µg/kg	0.16 U	0.14 U	0.14 U	0.13 U	0.11 U	0.39 UJ	0.15 U	0.13 U	0.11 UJ
beta-Hexachlorocyclohexane	319-85-7	µg/kg	0.26 U	0.22 U	0.24 U	0.21 U	0.16 U	0.6 U	0.23 U	0.2 U	0.16 UJ
delta-Hexachlorocyclohexane	319-86-8	µg/kg	0.12 UJ	0.11 UJ	0.11 UJ	0.098 UJ	0.078 UJ	1 UJ	0.11 U	0.094 U	0.077 UJ
gamma-Hexachlorocyclohexane	58-89-9	µg/kg	0.28 U	0.92 NJ	0.49 U	0.38 U	0.13 U	0.46 U	0.44 U	0.15 U	0.13 UJ
cis-Chlordane	5103-71-9	µg/kg	0.34 UJ	0.33 UJ	0.27 UJ	0.083 UJ	0.066 UJ	0.29 UJ	0.093 UJ	0.13 UJ	0.065 UJ
trans-Chlordane	5103-74-2	µg/kg	0.7 UJ	0.64 UJ	0.78 UJ	0.63 UJ	0.067 UJ	0.81 J	0.095 UJ	0.18 UJ	0.067 UJ
Oxychlordane	27304-13-8	µg/kg	0.37 J	0.21 J	0.19 J	0.39 J	0.09 U	0.34 U	0.13 U	0.11 U	1.9 UJ
cis-Nonachlor	5103-73-1	µg/kg	1.2 U	0.58 U	0.6 U	0.71 UJ	0.064 U	3.1 NJ	0.2 J	0.086 U	0.064 UJ
trans-Nonachlor	39765-80-5	µg/kg	0.2 U	0.2 U	0.18 U	0.2 UJ	0.042 U	0.53 UJ	0.059 U	0.13 U	0.042 UJ
Total Chlordanes	TOTCHLDANE	µg/kg	0.37 JT	0.21 JT	0.19 JT	0.39 JT	0.09 UT	3.91 JT	0.2 JT	0.18 UJT	1.9 UJT
Dieldrin	60-57-1	µg/kg	0.38 UJ	0.85 UJ	0.41 UJ	0.38 UJ	0.11 UJ	3.9 UJ	0.16 UJ	0.13 UJ	0.11 UJ
alpha-Endosulfan	959-98-8	µg/kg	0.075 U	0.069 U	0.071 U	0.065 J	0.051 U	0.19 U	0.072 U	0.2 U	0.051 UJ
beta-Endosulfan	33213-65-9	µg/kg	0.38 J	0.33 UJ	0.28 J	0.2 UJ	0.078 UJ	0.29 U	0.11 U	0.36 NJ	0.077 UJ
Endosulfan sulfate	1031-07-8	µg/kg	0.69 UJ	0.97 UJ	0.6 UJ	0.41 UJ	0.08 UJ	1.8 UJ	0.13 UJ	0.19 UJ	0.08 UJ
Endrin	72-20-8	µg/kg	0.13 UJ	0.12 UJ	0.12 UJ	0.11 UJ	0.087 UJ	0.33 UJ	0.13 U	0.11 U	0.087 UJ
Endrin aldehyde	7421-93-4	µg/kg	0.37 U	0.48 U	0.28 U	0.54 U	0.094 U	2.7 U	0.14 U	0.33 U	0.093 UJ

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C532	C532	C532	C532	C532	C533	C533	C533	C533
	X_Easting		7629257	7629257	7629257	7629257	7629257	7627332	7627332	7627332	7627332
	Y_Northing		700289	700289	700289	700289	700289	705710	705710	705710	705710
	Sample ID		LW2-C532-A	LW2-C532-B	LW2-C532-C	LW2-C532-E	LW2-C532-F	LW2-C533-A	LW2-C533-B	LW2-C533-C	LW2-C533-D
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample										
	Sample Date		10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
	Depth Interval		0 - 30 cm	30 - 99 cm	99 - 198 cm	293 - 338 cm	338 - 372 cm	0 - 30 cm	30 - 112 cm	112 - 234 cm	234 - 336 cm
Chemical Name	**CAS No**	**Unit**									
Endrin ketone	53494-70-5	µg/kg	1.4 NJ	1.3 J	1.2 NJ	0.94 UJ	0.075 UJ	1.1 UJ	0.11 UJ	0.39 J	0.075 UJ
Heptachlor	76-44-8	µg/kg	0.12 U	0.11 U	0.11 U	0.2 U	0.078 U	0.29 U	0.11 U	0.094 U	0.077 UJ
Heptachlor epoxide	1024-57-3	µg/kg	0.72 UJ	0.66 UJ	0.68 UJ	0.16 UJ	0.088 UJ	0.33 UJ	0.13 U	0.16 U	0.22 UJ
Methoxychlor	72-43-5	µg/kg	0.12 UJ	0.27 UJ	0.11 UJ	0.2 UJ	0.08 UJ	0.5 UJ	0.2 U	0.097 U	0.08 UJ
Mirex	2385-85-5	µg/kg	0.2 U	0.2 U	0.2 U	0.16 UJ	0.06 U	0.48 U	0.086 U	0.073 U	0.06 UJ
Toxaphene	8001-35-2	µg/kg	36 U	43 U	34 U	25 U	5 U	110 U	7 U	13 U	14 UJ
Petroleum Hydrocarbons											
Gasoline range hydrocarbons	GRH	mg/kg	14 U	11 U	29 J	57 J	1.4 UT	3.3 J	1.9 U	1.7 U	1.4 UT
Diesel range hydrocarbons	DRH	mg/kg	260 J	290 J	740 J	1500 J	4.6 UT	2400 J	200 J	50 J	6.5 J
Residual range hydrocarbons	RRH	mg/kg	690 J	680 J	1300 J	1900 J	4.9 UT	6000 J	440 J	140 J	26 J
Total petroleum hydrocarbons	TPH	mg/kg	950 JT	970 JT	2070 JT	3460 JT	4.9 UT	8400 JT	640 JT	190 JT	32.5 JT
Phenols											
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg	3.9 U	0.78 U	11 U	11 U	0.58 U	1.3 U	0.82 U	1.9 U	0.58 U
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg	0.83 U	0.77 U	0.76 U	0.71 U	0.56 U	1.3 U	0.8 U	0.68 U	0.56 U
2,4,5-Trichlorophenol	95-95-4	µg/kg	8 J	4.8 U	0.6 U	6 U	2.1 J	15 U	0.63 U	0.54 U	0.44 U
2,4,6-Trichlorophenol	88-06-2	µg/kg	1.6 NJ	1.4 NJ	1.9 U	0.42 U	0.34 U	0.98 NJ	0.48 U	0.41 U	0.34 U
2,4-Dichlorophenol	120-83-2	µg/kg	18 U	3.3 U	17 U	16 U	2.4 U	53 U	18 U	2.9 U	2.4 U
2,4-Dimethylphenol	105-67-9	µg/kg	R	R	R	R	R	170 U	52 U	8.9 U	7.3 U
2,4-Dinitrophenol	51-28-5	µg/kg	360 U	66 U	330 U	310 U	48 U	1100 U	350 U	58 U	48 U
2-Chlorophenol	95-57-8	µg/kg	17 U	3.1 U	16 U	15 U	2.3 U	50 U	17 U	2.8 U	2.3 U
2-Methylphenol	95-48-7	µg/kg	34 U	6.2 U	31 U	29 U	4.6 U	100 U	33 U	5.5 U	4.6 U
2-Nitrophenol	88-75-5	µg/kg	26 U	4.8 U	24 U	22 U	3.5 U	77 U	25 U	4.2 U	3.5 U
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	17 U	3.1 U	16 U	15 U	2.3 U	50 U	17 U	2.8 U	2.3 U
4-Chloro-3-methylphenol	59-50-7	µg/kg	21 U	3.9 U	19 U	18 U	2.8 U	62 U	20 U	3.4 U	2.8 U
4-Methylphenol	106-44-5	µg/kg	110	110	92	100	3.9 U	410	38 J	10	3.9 U
4-Nitrophenol	100-02-7	µg/kg	300 U	55 U	270 U	260 U	40 U	880 U	290 U	49 U	40 U
Pentachlorophenol	87-86-5	µg/kg	2.3 NJ	4.6 U	0.83 U	0.78 U	0.62 U	5.7 J	0.87 U	0.74 U	0.62 U
Phenol	108-95-2	µg/kg	42 U	28 U	32 U	27 U	5 U	56 U	18 U	3.1 U	2.6 U
Phthalates											
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	24 U	15 U	17 U	15 U	4.1 U	50 U	17 U	12 U	38 U
Butylbenzyl phthalate	85-68-7	µg/kg	15 U	2.8 U	14 U	13 U	2 U	44 U	15 U	2.5 U	2 U
Dibutyl phthalate	84-74-2	µg/kg	26 U	6.4 U	24 U	22 U	7.1 U	77 U	25 U	5.9 J	5.4 J
Diethyl phthalate	84-66-2	µg/kg	35 U	6.4 U	32 U	30 U	4.7 U	110 U	34 U	5.7 U	4.7 U
Dimethyl phthalate	131-11-3	µg/kg	18 U	3.3 U	17 U	16 U	2.4 U	53 U	18 U	2.9 U	2.4 U
Di-n-octyl phthalate	117-84-0	µg/kg	12 U	2.2 U	11 U	11 U	1.6 U	36 U	12 U	2 U	1.6 U
Semivolatile Organic Compounds											
1,2,4-Trichlorobenzene	120-82-1	µg/kg	15 U	2.8 U	14 U	13 U	2 U	44 U	15 U	2.5 U	2 U
1,2-Dichlorobenzene	95-50-1	µg/kg	13 U	2.4 U	12 U	11 U	1.8 U	39 U	13 U	2.1 U	1.8 U
1,3-Dichlorobenzene	541-73-1	µg/kg	16 U	2.9 U	15 U	14 U	2.2 U	47 U	16 U	2.6 U	2.2 U
1,4-Dichlorobenzene	106-46-7	µg/kg	0.24 U	0.22 U	0.22 U	0.21 U	0.16 U	56 U	18 U	3.1 U	2.6 U
2,4-Dinitrotoluene	121-14-2	µg/kg	28 U	5.1 U	26 U	24 U	3.8 U	82 U	27 U	4.6 U	3.8 U
2,6-Dinitrotoluene	606-20-2	µg/kg	28 U	5.1 U	26 U	24 U	3.8 U	82 U	27 U	4.6 U	3.8 U
2-Chloronaphthalene	91-58-7	µg/kg	36 U	6.6 U	33 U	31 U	4.8 U	110 U	35 U	5.8 U	4.8 U
2-Nitroaniline	88-74-4	µg/kg	27 U	4.9 U	25 U	23 U	3.6 U	79 U	26 U	4.4 U	3.6 U

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Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C532	C532	C532	C532	C532	C533	C533	C533	C533
	X_Easting		7629257	7629257	7629257	7629257	7629257	7627332	7627332	7627332	7627332
	Y_Northing		700289	700289	700289	700289	700289	705710	705710	705710	705710
	Sample ID		LW2-C532-A	LW2-C532-B	LW2-C532-C	LW2-C532-E	LW2-C532-F	LW2-C533-A	LW2-C533-B	LW2-C533-C	LW2-C533-D
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample										
	Sample Date		10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
	Depth Interval		0 - 30 cm	30 - 99 cm	99 - 198 cm	293 - 338 cm	338 - 372 cm	0 - 30 cm	30 - 112 cm	112 - 234 cm	234 - 336 cm
Chemical Name	**CAS No**	**Unit**									
3,3'-Dichlorobenzidine	91-94-1	µg/kg	37 U	6.8 U	34 U	31 U	5 U	110 U	35 U	6 U	5 U
3-Nitroaniline	99-09-2	µg/kg	26 U	4.8 U	24 U	22 U	3.5 U	77 U	25 U	4.2 U	3.5 U
4-Bromophenyl phenyl ether	101-55-3	µg/kg	14 U	2.6 U	13 U	12 U	1.9 U	41 U	14 U	2.3 U	1.9 U
4-Chloroaniline	106-47-8	µg/kg	21 U	3.9 U	19 U	18 U	2.8 U	62 U	20 U	3.4 U	2.8 U
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg	20 U	3.7 U	18 U	17 U	2.7 U	59 U	19 U	3.3 U	2.7 U
4-Nitroaniline	100-01-6	µg/kg	34 U	6.2 U	31 U	29 U	4.6 U	100 U	33 U	5.5 U	4.6 U
Aniline	62-53-3	µg/kg	15 U	2.8 U	14 U	13 U	2 U	44 U	25 J	2.5 U	2 U
Azobenzene	103-33-3	µg/kg	24 U	4.4 U	22 U	21 U	3.2 U	71 U	23 U	3.9 U	3.2 U
Benzoic acid	65-85-0	µg/kg	950 U	180 U	870 U	810 U	130 U	2900 U	910 U	160 U	130 U
Benzyl alcohol	100-51-6	µg/kg	37 U	6.8 U	34 U	31 U	5 U	110 U	35 U	6 U	5 U
Bis(2-chloroethoxy) methane	111-91-1	µg/kg	13 U	2.4 U	12 U	11 U	1.8 U	39 U	13 U	2.1 U	1.8 U
Bis(2-chloroethyl) ether	111-44-4	µg/kg	24 U	4.4 U	22 U	21 U	3.2 U	71 U	23 U	3.9 U	3.2 U
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg	12 U	2.2 U	11 U	11 U	1.6 U	36 U	12 U	2 U	1.6 U
Carbazole	86-74-8	µg/kg	13 U	2.4 U	12 U	11 U	1.8 U	39 U	13 U	8.5 J	1.8 U
Dibenzofuran	132-64-9	µg/kg	8.5	6.2	5.7	13	0.23 U	31	19	9.9	0.88 J
Hexachlorobenzene	118-74-1	µg/kg	0.095 U	0.087 U	0.087 U	0.081 U	0.066 UJ	0.24 U	0.091 U	0.085 U	0.064 UJ
Hexachlorobutadiene	87-68-3	µg/kg	0.38 UJ	0.35 UJ	0.63 UJ	0.32 UJ	0.26 UJ	0.95 UJ	0.36 U	1.1 U	0.29 UJ
Hexachlorocyclopentadiene	77-47-4	µg/kg	150 U	28 U	140 U	130 U	20 U	440 U	150 U	25 U	20 U
Hexachloroethane	67-72-1	µg/kg	0.36	0.24 U	0.21 U	0.2 UJ	0.44 NJ	0.26 U	0.12 U	0.38 U	0.9 UJ
Isophorone	78-59-1	µg/kg	16 U	2.9 U	15 U	14 U	2.2 U	47 U	16 U	2.6 U	2.2 U
Nitrobenzene	98-95-3	µg/kg	20 U	3.7 U	18 U	17 U	2.7 U	59 U	19 U	3.3 U	2.7 U
N-Nitrosodimethylamine	62-75-9	µg/kg	61 UJ	12 UJ	55 UJ	52 UJ	8.2 UJ	180 U	58 U	9.9 UJ	8.1 UJ
N-Nitrosodiphenylamine	86-30-6	µg/kg	22 U	4 U	20 U	19 U	3 U	65 U	21 U	3.6 U	3 U
N-Nitrosodipropylamine	621-64-7	µg/kg	32 U	5.8 U	29 U	27 U	4.3 U	94 U	31 U	5.2 U	4.3 U
Volatile Organic Compounds											
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	0.062 U	0.057 U	0.056 U	0.052 U	0.042 U				
1,1,1-Trichloroethane	71-55-6	µg/kg	0.12 U	0.11 U	0.11 U	0.099 U	0.079 U				
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	0.19 U	0.18 U	0.18 U	0.17 U	0.13 U				
1,1,2-Trichloroethane	79-00-5	µg/kg	0.12 U	0.11 U	0.11 U	0.099 U	0.079 U				
1,1-Dichloroethane	75-34-3	µg/kg	0.12 U	0.11 U	0.11 U	0.096 U	0.076 U				
1,2,3-Trichloropropane	96-18-4	µg/kg	0.22 U	0.2 U	0.2 U	0.19 U	0.15 U				
1,2-Dichloroethane	107-06-2	µg/kg	0.062 U	0.057 U	0.056 U	0.052 U	0.042 U				
1,2-Dichloropropane	78-87-5	µg/kg	0.069 U	0.064 U	0.063 U	0.059 U	0.047 U				
1,4-Dichloro-trans-2-burene	110-57-6	µg/kg	1.1 U	0.93 U	0.92 U	0.86 U	0.68 U				
2-Chloroethyl vinyl ether	110-75-8	µg/kg	0.3 U	0.28 U	0.27 U	0.26 U	0.2 U				
Acetone	67-64-1	µg/kg	26 U	20 U	37 U	25 U	8.9 U				
Acrolein	107-02-8	µg/kg	R	R	R	R	R				
Acrylonitrile	107-13-1	µg/kg	0.46 U	0.42 U	0.42 U	0.39 U	0.31 U				
Benzene	71-43-2	µg/kg	0.077 U	0.079 J	0.071 U	0.087 J	0.1 J				
Toluene	108-88-3	µg/kg	0.3 U	0.28 U	0.27 U	0.26 U	0.21 U				
Ethylbenzene	100-41-4	µg/kg	0.14 U	0.13 U	0.13 U	0.12 U	0.095 U				
m,p-Xylene	179601-23-1	µg/kg	0.26 U	0.24 U	0.24 U	0.22 U	0.18 U				
o-Xylene	95-47-6	µg/kg	0.15 U	0.14 U	0.14 U	0.13 U	0.1 U				
Xylene	1330-20-7	µg/kg	0.26 UT	0.24 UT	0.24 UT	0.22 UT	0.18 UT				
BTEX	BTEX	µg/kg	0.3 UT	0.079 JT	0.27 UT	0.087 JT	0.1 JT				
Bromochloromethane	74-97-5	µg/kg	0.12 U	0.11 U	0.11 U	0.11 U	0.08 U				

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ANC04881

Table 4-1b. Analytical Results for Round 2B Subsurface Sediment Samples.

	Location Name		C532	C532	C532	C532	C532	C533	C533	C533	C533
	X_Easting		7629257	7629257	7629257	7629257	7629257	7627332	7627332	7627332	7627332
	Y_Northing		700289	700289	700289	700289	700289	705710	705710	705710	705710
	Sample ID		LW2-C532-A	LW2-C532-B	LW2-C532-C	LW2-C532-E	LW2-C532-F	LW2-C533-A	LW2-C533-B	LW2-C533-C	LW2-C533-D
	Sample Type Code		normal	normal	normal	normal	normal	normal	normal	normal	normal
	Parent Sample										
	Sample Date		10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/18/2005	10/19/2005	10/19/2005	10/19/2005	10/19/2005
	Depth Interval		0 - 30 cm	30 - 99 cm	99 - 198 cm	293 - 338 cm	338 - 372 cm	0 - 30 cm	30 - 112 cm	112 - 234 cm	234 - 336 cm
Chemical Name	**CAS No**	**Unit**									
Bromodichloromethane	75-27-4	µg/kg	0.14 U	0.13 U	0.13 U	0.12 U	0.091 U				
Bromoform	75-25-2	µg/kg	0.091 U	0.084 U	0.083 U	0.078 U	0.062 U				
Bromomethane	74-83-9	µg/kg	0.73 U	0.68 U	0.67 U	0.62 U	0.5 U				
Carbon disulfide	75-15-0	µg/kg	0.26 U	0.24 U	0.24 U	0.22 U	0.18 U				
Carbon tetrachloride	56-23-5	µg/kg	0.2 U	0.18 U	0.18 U	0.17 U	0.14 U				
Chlorobenzene	108-90-7	µg/kg	0.14 U	0.13 U	0.13 U	0.12 U	0.094 U				
Chlorodibromomethane	124-48-1	µg/kg	0.14 U	0.13 U	0.13 U	0.12 U	0.091 U				
Chloroethane	75-00-3	µg/kg	0.56 U	0.51 U	0.51 U	0.47 U	0.38 U				
Chloroform	67-66-3	µg/kg	0.12 U	0.11 U	0.11 U	0.094 U	0.075 U				
Chloromethane	74-87-3	µg/kg	0.38 U	0.35 U	0.35 U	0.32 U	0.26 U				
cis-1,3-Dichloropropene	10061-01-5	µg/kg	0.062 U	0.057 U	0.056 U	0.052 U	0.042 U				
Dichlorodifluoromethane	75-71-8	µg/kg	0.22 U	0.2 U	0.2 U	0.19 U	0.15 U				
Ethylene dibromide	106-93-4	µg/kg	0.11 U	0.093 U	0.092 U	0.086 U	0.068 U				
Isopropylbenzene	98-82-8	µg/kg	0.087 U	0.08 U	0.08 U	0.074 U	0.059 U				
Methyl iodide	74-88-4	µg/kg	1.4 U	1.3 U	1.3 U	1.2 U	0.9 U				
Methyl isobutyl ketone	108-10-1	µg/kg	0.48 U	0.44 U	0.44 U	0.41 U	0.32 U				
Methyl N-butyl ketone	591-78-6	µg/kg	1.3 U	1.2 U	1.2 U	1.1 U	0.86 U				
Methyl tert-butyl ether	1634-04-4	µg/kg	0.077 U	0.071 U	0.071 U	0.066 U	0.052 U				
Methylene bromide	74-95-3	µg/kg	0.17 U	0.15 U	0.15 U	0.14 U	0.11 U				
Methylene chloride	75-09-2	µg/kg	2.8 U	2.6 U	3.1 U	3.2 U	3.4 U				
Methylethyl ketone	78-93-3	µg/kg	R	2.7 J	6.4 J	R	R				
Styrene	100-42-5	µg/kg	0.15 U	0.14 U	0.14 U	0.13 U	0.13 U				
Tetrachloroethene	127-18-4	µg/kg	0.19 U	0.18 U	0.18 U	0.17 U	0.13 U				
trans-1,2-Dichloroethene	156-60-5	µg/kg	0.38 U	0.35 U	0.35 U	0.32 U	0.26 U				
trans-1,3-Dichloropropene	10061-02-6	µg/kg	0.087 U	0.08 U	0.08 U	0.074 U	0.059 U				
Trichloroethene	79-01-6	µg/kg	0.13 U	0.12 U	0.12 U	0.11 U	0.083 U				
Trichlorofluoromethane	75-69-4	µg/kg	0.16 U	0.15 U	0.15 U	0.14 U	0.11 U				
Vinyl acetate	108-05-4	µg/kg	R	R	R	R	R				
Vinyl chloride	75-01-4	µg/kg	0.17 U	0.16 U	0.16 U	0.15 U	0.12 U				
Vinylidene chloride	75-35-4	µg/kg	0.17 U	0.15 U	0.15 U	0.14 U	0.11 U				

Notes:
See Table 3-2 for data qualifier definitions.

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PORTLAND HARBOR RI/FS

ROUND 2B SUBSURFACE SEDIMENT DATA REPORT

APPENDIX A

ROUND 2B CORE LOGS

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May 22, 2006

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PORTLAND HARBOR RI/FS

ROUND 2B SUBSURFACE SEDIMENT DATA REPORT

APPENDIX B

DATA QUALITY SUMMARY

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May 22, 2006

Prepared for

The Lower Willamette Group

Prepared by

Integral Consulting Inc.

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LIST OF ACRONYMS

CAS	Columbia Analytical Services
DQOs	data quality objectives
EPA	U.S. Environmental Protection Agency
FSR	field sampling report
LCS/LCSD	laboratory control sample / laboratory control sample duplicate
MDL	method detection limit
MRL	method reporting limit
MS/MSD	matrix spike / matrix spike duplicate
OPR	ongoing precision and recovery
PAHs	polycyclic aromatic hydrocarbons
PARCC	precision, accuracy, representativeness, completeness, comparability
PCB	polychlorinated biphenyl
PCDD/Fs	polychlorinated dibenzo-p-dioxins/furans
PSEP	Puget Sound Estuary Program
QC	quality control
QAPP	quality assurance project plan
RDL	reported detection limit
RI/FS	remedial investigation / feasibility study
RPD	relative percent difference
STL	Severn Trent Laboratories
SVOCs	semivolatile organic compounds
VOCs	volatile organic compounds

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1. INTRODUCTION

This report summarizes the data quality of analyses performed on subsurface (core) sediment samples collected during Round 2B of the Portland Harbor remedial investigation and feasibility study (RI/FS). Samples were collected October 18–28, 2005 (hereafter referred to as Round 2B). A detailed description of the Round 2B subsurface sediment sampling is included in the Round 2B Subsurface Sediment Field Sampling Report (FSR; Integral 2005b).

Round 2B subsurface sediment samples were analyzed for conventionals; metals; butyltins; organochlorine pesticides; chlorinated herbicides; semivolatile organic compounds (SVOCs), including polycyclic aromatic hydrocarbons (PAHs), phenols, and phthalates; petroleum hydrocarbons; polychlorinated biphenyl (PCB) Aroclors; volatile organic compounds (VOCs); and polychlorinated dibenzo-p-dioxins/furans (PCDD/Fs). The Round 2B subsurface sediment samples were analyzed according to the sample preparation and analytical procedures in the Round 2 Quality Assurance Project Plan (QAPP; Integral and Windward, 2004). Deviations from the QAPP are noted in Section 3.6 of the main body of this report.

Columbia Analytical Services (CAS; Kelso, WA, Redding, CA, and Houston, TX) completed analyses for conventionals, metals, butyltins, organochlorine pesticides, SVOCs, petroleum hydrocarbons, PCB Aroclors, and PCDD/Fs. Severn Trent Laboratories (STL; Tacoma, WA) completed analyses for chlorinated herbicides and pentachlorophenol. Round 2B subsurface sediment core samples were prepared and analyzed by methods detailed in Table B-1.

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2. DATA QUALITY AND USABILITY

Data generated in the field and at the laboratories were verified and validated according to the criteria and procedures described in the Round 2 QAPP (Integral and Windward 2004). Data quality and usability were evaluated based on the results of the data validation and the data quality objectives (DQOs) for the Round 2 data. The performance criteria in the QAPP included project analytical goals for precision, accuracy, representativeness, completeness, and comparability (PARCC) of the Round 2 data.

The precision, accuracy, representativeness, and comparability of the data were assessed during data validation, as described in the *Data Validation* section below and in the Round 2 QAPP. Completeness is calculated by comparing the total number of acceptable data (non-rejected data) to the total number of data points generated. Completeness for the Round 2B subsurface sediment data is summarized by parameter group in Table B-2. Completeness was >98% overall, which exceeds the QAPP completeness objective of 95%.

2.1. DATA VALIDATION

Data validation was conducted as required by the Round 2 QAPP (Integral and Windward 2004) and is summarized in Section 3.2 of the main body of this report. The data validation subcontractor for the Round 2B subsurface sediment data was EcoChem, Inc. located in Seattle, WA. Data verification and validation was conducted in accordance with *Guidance on Environmental Data Verification and Validation* (EPA 2002a). Data verification and validation for organic compounds and metals/inorganics was completed according to methods described in the U.S. Environmental Protection Agency's (EPA) guidance for data review (EPA 1996, 1999b, 2002b). As required by the Round 2 QAPP (Integral and Windward 2004), approximately 10 percent of the Round 2B subsurface sediment data were fully validated, and the remaining data were subjected to Level 3 data validation, which includes the evaluation and assessment of the sample results and applicable quality control results reported by the laboratories. The following deliverables were reviewed during Level 3 and full data validation:

- The case narrative discussing analytical problems (if any) and procedures
- Chain-of-custody documentation and laboratory sample receipt logs
- Instrument calibration results
- Method blank results
- Results for laboratory quality control samples required by the referenced method including laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses, matrix spike/matrix spike duplicate (MS/MSD) analyses, and surrogate recoveries

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- Results for field quality control samples (i.e., field duplicates, and field split samples)
- Analytical results for the Round 2B subsurface sediment samples.

In addition to review and assessment of the documentation identified above, full validation included verification of reported concentrations of the results for field samples and quality control (QC) samples, verification of intermediate transcriptions, and review of instrument data, such as mass spectra, to verify analyte identification procedures. The EcoChem data validation reports are provided in Appendix C.

Data qualifiers were assigned during data validation if applicable control limits were not met, in accordance with the U.S. EPA data validation guidelines (EPA 1996, 1999b, 2002b) and the quality control requirements included in the referenced methods (ASTM 2003, EPA 2006, Krone et al. 1989, Plumb 1981, PSEP 1986). The quality control limits for surrogate spikes, matrix spike/matrix spike duplicate samples, laboratory control samples, and ongoing precision and recovery (OPR) for the laboratories are summarized in Tables B-3 and B-4. The data validation qualifiers and definitions are summarized in Table B-5. Data quality reports and a tabular summary of qualified data generated by EcoChem are included respectively, in Appendix C and Table 4-1a–b of the main body of this report.

2.2. DATA QUALITY

The EcoChem data validation reports (Appendix C) provide detailed information on the data quality issues and data validation qualifiers for each parameter group for each laboratory data package. A summary of the qualified data by parameter group, with the reasons for qualification, is included in Table B-6.

The discussion below includes a comparison of the reported detection limits to the detection limits specified in the Round 2 QAPP (Integral and Windward 2004), followed by a summary of the qualified data for each parameter group and any limitations to the usability of the data.

2.2.1. Reported Detection Limits

Sediment data for Round 2B of the Portland Harbor RI/FS were reported to the method detection limit (MDL) in most cases. Sample-specific detection limits were reported for PCDD/Fs, as specified in the method protocol (EPA method 1613B; EPA 1994). These detection limits are based on the signal-to-noise ratio of the analytical system for each analyte and sample. In several cases, the MDL and method reporting limit (MRL) were elevated at the laboratory or during data validation because matrix interference or the presence of another analyte interfered with the quantification of a given analyte. MDLs and MRLs were also elevated when results were restated as undetected during data validation because of possible sample contamination, as indicated by the presence of target analytes in an associated method blank or equipment blank.

The reported detection limit (RDL) is the collective term for the detection limit or reporting limit used to quantify non-detects, as applicable to each sample and analyte. Table B-7 provides the MDLs included in the Round 2 QAPP (Integral and Windward 2004) and the minimum and maximum RDL attained by the laboratories for Round 2B for each analyte and sample type.

2.2.2. Field Quality Control Samples

Field replicates were collected to assess the variability of the results. Field replicate samples were generated by collecting an additional sediment sample at a designated station, processing this sample separately in the same manner as the original sample, and submitting the replicate as a separate sample for analysis at the laboratory. The field replicate sample results are summarized in Table B-8.

The comparability of the replicate results was assessed by calculating the relative percent difference (RPD) of the results. A control limit of 50 RPD is recommended by the Puget Sound Estuary Program (PSEP) and the Puget Sound Ambient Monitoring Program (PSEP 1997) for analytical precision for organic analyses. Because there is no standard control limit for comparison of field replicate results, an RPD of 50 was established as a conservative target control limit for detected results greater than 5 times the reporting limit. Greater variability is expected for results within 5-10 times the reporting limit because the background signal variations (i.e., "noise") are greater relative to the lower analyte levels. The precision of the results is acceptable. Sediment data were not qualified based solely on the field replicate results.

2.2.2.1. Summary of Qualified Data

Selected data not meeting the data quality criteria were qualified as undetected or estimated during validation, in accordance with the QAPP. A summary of the qualified data by parameter group, including the reasons for qualification, is included in Table B-6. Data qualified as undetected are usable for all intended purposes. Data qualified as estimated are usable for all intended purposes, with the knowledge that these data may be less precise or less accurate than unqualified data.

The precision and accuracy of the Round 2B subsurface sediment data was acceptable. The overall completeness of the Round 2B subsurface sediment data was >98% (Table B-2). Overall, the data quality was good and will meet program objectives and goals for the RI/FS.

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Table B-1. Laboratory Methods for Round 2B Subsurface Sediment Samples.

Analytes	Laboratory	Sample Preparation		Quantitative Analysis	
		Protocol	Procedure	Protocol	Procedure
Conventional Analyses	CAS				
Specific gravity		--	--	ASTM D-854	Gravimetric
Total solids		--	--	EPA 160.3	Gravimetric
Grain size		--	--	PSEP 1986	Sieves and pipette method
Total organic carbon		PSEP 1986	Acid pretreatment	PSEP 1986	Combustion; coulometric titration
Metals/Inorganics	CAS				
Aluminum, chromium, copper, nickel, zinc		EPA 3050	Strong acid digestion	EPA 6010B	ICP/AES
Antimony, arsenic, cadmium, lead, silver		EPA 3050	Strong acid digestion	EPA 6020	ICP/MS
Selenium		EPA 3050 EPA 7742	Strong acid digestion Hydride generation	EPA 7742	AAS
Mercury		EPA 7471A	Acid digestion/oxidation	EPA 7471A	CVAAS
Hexavalent chromium		EPA 3060A	Alkaline digestion	EPA 7196A	Colorimetry
Butyltins	CAS	Krone et al. 1989	Solvent extraction Derivatization	Krone et. al 1989	GC/FPD
Petroleum Hydrocarbons	CAS				
Gasoline-range hydrocarbons		NWTPH-Gx	Methanol extraction Purge and trap	NWTPH-Gx	GC/FID
Diesel- and oil-range hydrocarbons		NWTPH-Dx	Sovent extraction Silica gel cleanup (as needed)	NWTPH-Dx	GC/FID
Chlorinated Herbicides and Pentachlorophenol	STL	EPA 8151A	Solvent extraction Esterification	EPA 8151A	GC/MS
Organochlorine Pesticides and Selected SVOCs	CAS	EPA 3540 EPA 3620B EPA 3660B	Soxhlet extraction Florisil® cleanup Sulfur cleanup	EPA 8081A	GC/ECD
PCB Aroclors	CAS	EPA 3545 EPA 3665A EPA 3620B EPA 3660B	Pressurized fluid extraction Sulfuric acid cleanup Florisil® cleanup Sulfur cleanup	EPA 8082	GC/ECD
Volatile Organic Compounds	CAS	EPA 5035	Purge and trap	EPA 8260B	GC/MS
Semivolatile Organic Compounds[a]	CAS	EPA 3545 EPA 3640A	Pressurized fluid extraction Gel permeation chromatography	EPA 8270C	GC/MS

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Table B-1. Laboratory Methods for Round 2B Subsurface Sediment Samples.

Analytes	Laboratory	Sample Preparation		Quantitative Analysis	
		Protocol	Procedure	Protocol	Procedure
Polycyclic Aromatic Hydrocarbons	CAS	EPA 3541 EPA 3640A EPA 3630C	Automated Soxhlet extraction Gel permeation chromatography Silica gel cleanup	EPA 8270-SIM	GC/MS - SIM
PCDD/Fs	CAS	EPA 1613B	Soxhlet/Dean Stark extraction Sulfuric acid cleanup Silica/carbon column cleanup	EPA 1613B	HRGC/HRMS

Notes:

[a] Includes phenols and phthalate esters.

AAS - atomic absorption spectrometry
ASTM - American Society for Testing and Materials
CAS - Columbia Analytical Services
CVAAS - cold vapor atomic absorption spectrometry
EPA - U.S. Environmental Protection Agency
GC/ECD - gas chromatography/electron capture detection
GC/FID - gas chromatography/flame ionization detection
GC/FPD - gas chromatography/flame photometric detection
GC/MS - gas chromatography/mass spectrometry
HRGC/HRMS - high resolution gas chromatography/high resolution mass spectrometry
ICP/AES - inductively coupled plasma/atomic emission spectrometry
ICP/MS - inductively coupled plasma/mass spectrometry
NWTPH - Northwest total petroleum hydrocarbon
PSEP - Puget Sound Estuary Program
SIM - selected ion monitoring
STL - Severn Trent Laboratories
SVOCs - semivolatile organic compounds
PCDD/Fs - polychlorinated dibenzo-p-dioxins

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Table B-2. Percent Completeness by Parameter Group

Analysis	Total # of Data Points[1]	Number of Data Points		Completeness (%)
		Accepted	Rejected	
Butyltins	356	354	2	99
Conventionals[2]	453	453	0	100
PCDD/F Homologs	230	230	0	100
PCDD/Fs	345	345	0	100
Grain Sze	1768	1768	0	100
Herbicides	390	390	0	100
Metals	1642	1642	0	100
Organochlorine Pesticides	3920	3920	0	100
PAHs	2468	2468	0	100
PCB Aroclors	1224	1224	0	100
Petroleum Hydrocarbons	446	446	0	100
Phenols	2259	2239	20	99
Phthalates	816	816	0	100
SVOCs	4912	4885	27	99
VOCs	6811	6419	392	94
Round 2B Subsurface Sediment Sampling Project Total	**28040**	**27599**	**441**	**>98**

Notes:

[1] Totals include field replicates and split samples and exclude field blanks.

[2] Includes specific gravity, total solids, and total organic carbon.

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Table B-3. Laboratory Control Limits for Round 2B Subsurface Sediment Samples.

Analysis	Percent Recovery
Semivolatile Organic Compounds	
2-Fluoro-1,1'-biphenyl	10 - 104
Nitrobenzene-d5	10 - 99
p-Terphenyl-d14	39 - 124
Volatile Organic Compounds	
1,2-Dichloroethane-d4	80 - 118
1-Bromo-4-fluorobenzene	74 - 116
Dibromofluoromethane	81 - 120
Toluene-d8	77 - 131
Phenols	
2,4,6-Tribromophenol	23 - 113
2-Fluorophenol	11 - 87
4-Bromo-2,6-dichlorophenol	38 - 155
Phenol-d6	20 - 99
Butyltins	
Tripropyltin hydride	10 - 127
PCB Aroclors	
Decachlorobiphenyl	20 - 166
Organochlorine Pesticides	
2,4,5,6-Tetrachloro-m-xylene	38 - 125
PCDD/Fs	
^{13}C-1,2,3,4,6,7,8-Heptachlorodibenzofuran	40 - 135
^{13}C-1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	40 - 135
^{13}C-1,2,3,4,7,8,9-Heptachlorodibenzofuran	40 - 135
^{13}C-1,2,3,4,7,8-Hexachlorodibenzofuran	40 - 135
^{13}C-1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	40 - 135
^{13}C-1,2,3,6,7,8-Hexachlorodibenzofuran	40 - 135
^{13}C-1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	40 - 135
^{13}C-1,2,3,7,8,9-Hexachlorodibenzofuran	40 - 135
^{13}C-1,2,3,7,8-Pentachlorodibenzofuran	40 - 135
^{13}C-1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40 - 135
^{13}C-2,3,4,6,7,8-Hexachlorodibenzofuran	40 - 135
^{13}C-2,3,4,7,8-Pentachlorodibenzofuran	40 - 135
^{13}C-2,3,7,8-Tetrachlorodibenzofuran	40 - 135
^{13}C-2,3,7,8-Tetrachlorodibenzo-p-dioxin	40 - 135
^{13}C-Octachlorodibenzo-p-dioxin	40 - 135

Table B-3. Laboratory Control Limits for Round 2B Subsurface Sediment Samples.

Analysis	Percent Recovery
Polycyclic Aromatic Hydrocarbons	
Fluoranthene-d10	10 - 129
Fluorene-d10	10 - 122
p-Terphenyl-d14	32 - 134
Chlorinated Herbicides	
2,4-Dichlorophenylacetic acid	51 - 129
Petroleum Hydrocarbons	
1-Bromo-4-fluorobenzene	50 - 150
o-Terphenyl	50 - 150
Triacontane	50 - 150

Notes:
PAHs - polycyclic aromatic hydrocarbons
PCB - polychlorinated biphenyl

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Table B-4. Laboratory Control Limits for Round 2B Subsurface Sediment Matrix Spike, Laboratory Control Samples, and Ongoing Precision and Recovery.

Analysis	Matrix Spike Recovery (percent)	Laboratory Control Sample Recovery	Type of Duplicate	Control Limit Relative Percent Difference
Metals				
Aluminum	70 - 130	53 - 10100	LD	30
Antimony	70 - 130	0.05 - 192	LD	30
Arsenic	70 - 125	86 - 180	LD	30
Cadmium	77 - 122	73.9 - 112	LD	30
Chromium	57 - 145	88 - 214	LD	30
Chromium hexavalent	85 - 115	85 - 115	LD	20
Copper	59 - 144	57.5 - 112	LD	30
Lead	59 - 127	53.1 - 109	LD	30
Mercury	61 - 129	55 - 142	LD	30
Nickel	73 - 124	68.5 - 110	LD	30
Selenium	64 - 125	55.1 - 116	LD	30
Silver	70 - 130	57 - 129	LD	30
Zinc	51 - 148	84 - 485	LD	30
Butyltins				
Butyltin ion	10 - 64	10 - 143	MSD	50
Dibutyltin ion	10 - 141	14 - 145	MSD	50
Tributyltin ion	10 - 140	13 - 129	MSD	50
Tetrabutyltin	10 - 132	10 - 127	MSD	50
Conventionals				
Specific gravity	--	--	LD	20
Total organic carbon	75 - 125	85 - 115	LD	40
Total solids	--	--	LD	40
Grain Size				
>9 Phi clay	--	--	--	--
8-9 Phi clay	--	--	--	--
Coarse sand	--	--	--	--
Coarse silt	--	--	--	--
Fine gravel	--	--	--	--
Fine sand	--	--	--	--
Fine silt	--	--	--	--
Medium gravel	--	--	--	--
Medium sand	--	--	--	--
Medium silt	--	--	--	--
Very coarse sand	--	--	--	--
Very fine sand	--	--	--	--
Very fine silt	--	--	--	--
Organochlorine Pesticides				
2,4'-DDD	39 - 139	35 - 157	MSD	50
2,4'-DDE	45 - 135	49 - 134	MSD	50
2,4'-DDT	40 - 136	39 - 153	MSD	50
4,4'-DDD	32 - 156	59 - 130	MSD	50
4,4'-DDE	35 - 146	61 - 126	MSD	50
4,4'-DDT	31 - 161	56 - 132	MSD	50
Aldrin	39 - 143	31 - 129	MSD	50
alpha-Endosulfan	10 - 141	28 - 121	MSD	50
alpha-Hexachlorocyclohexane	41 - 148	48 - 137	MSD	50
beta-Endosulfan	21 - 135	35 - 125	MSD	50
beta-Hexachlorocyclohexane	37 - 152	45 - 138	MSD	50
cis-Chlordane	40 - 140	48 - 124	MSD	50
cis-Nonachlor	70 - 130	46 - 132	MSD	50
delta-Hexachlorocyclohexane	35 - 162	68 - 139	MSD	50
Dieldrin	48 - 142	45 - 136	MSD	50
Endosulfan sulfate	39 - 148	44 - 134	MSD	50

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Table B-4. Laboratory Control Limits for Round 2B Subsurface Sediment Matrix Spike, Laboratory Control Samples, and Ongoing Precsion and Recovery.

Analysis	Matrix Spike Recovery (percent)	Laboratory Control Sample Recovery	Type of Duplicate	Control Limit Relative Percent Difference
Endrin	44 - 146	46 - 141	MSD	50
Endrin aldehyde	18 - 137	29 - 138	MSD	50
Endrin ketone	37 - 149	49 - 128	MSD	50
gamma-Hexachlorocyclohexane	45 - 153	47 - 135	MSD	50
Heptachlor	35 - 151	40 - 126	MSD	50
Heptachlor epoxide	37 - 148	41 - 134	MSD	50
Methoxychlor	35 - 158	47 - 139	MSD	50
Mirex	68 - 119	43 - 136	MSD	50
Oxychlordane	70 - 130	50 - 119	MSD	50
Toxaphene	52 - 156	42 - 177	MSD	50
trans-Chlordane	33 - 161	23 - 155	MSD	50
trans-Nonachlor	70 - 130	48 - 121	MSD	50
Chlorinated Herbicides				
2,4,5-T	--	--		--
2,4-D	46 - 136	42 - 136	MSD	30
2,4-DB	--	--	--	--
Dalapon	16 - 74	16 - 103	MSD	30
Dicamba	48 - 123	48 - 125	MSD	30
Dichloroprop	--	--	--	--
Dinoseb	18 - 157	17 - 157	MSD	30
MCPA	50 - 150	50 - 150	MSD	30
MCPP	--	--	--	--
Silvex	52 - 137	52 - 137	MSD	30
Semivolatile Organic Compounds				
1,2,4-Trichlorobenzene	10 - 89	25 - 135	MSD	40
1,2-Dichlorobenzene	10 - 82	26 - 113	MSD	40
1,3-Dichlorobenzene	10 - 78	20 - 116	MSD	40
1,4-Dichlorobenzene	10 - 129	21 - 127	MSD	40
2,4-Dinitrotoluene	28 - 126	50 - 149	MSD	40
2,6-Dinitrotoluene	28 - 122	48 - 140	MSD	40
2-Chloronaphthalene	23 - 102	37 - 117	MSD	40
2-Nitroaniline	29 - 117	44 - 136	MSD	40
3,3'-Dichlorobenzidine	10 - 80	10 - 123	MSD	40
3-Nitroaniline	10 - 97	40 - 134	MSD	40
4-Bromophenyl phenyl ether	26 - 116	47 - 126	MSD	40
4-Chloroaniline	10 - 75	10 - 126	MSD	40
4-Chlorophenyl phenyl ether	22 - 113	42 - 126	MSD	40
4-Nitroaniline	10 - 105	41 - 132	MSD	40
Aniline	10 - 55	10 - 121	MSD	40
Azobenzene	28 - 101	42 - 133	MSD	40
Benzoic acid	10 - 113	10 - 92	MSD	40
Benzyl alcohol	26 - 106	32 - 133	MSD	40
Bis(2-chloroethoxy) methane	24 - 101	37 - 124	MSD	40
Bis(2-chloroethyl) ether	13 - 107	35 - 129	MSD	40
Bis(2-chloroisopropyl) ether	10 - 92	30 - 124	MSD	40
Carbazole	27 - 125	37 - 148	MSD	40
Dibenzofuran	27 - 121	21 - 145	MSD	40
Hexachlorobenzene	32 - 130	30 - 129	MSD	50
Hexachlorobutadiene	10 - 130	10 - 132	MSD	50
Hexachlorocyclopentadiene	10 - 64	10 - 96	MSD	40
Hexachloroethane	10 - 130	10 - 130	MSD	50
Isophorone	22 - 119	42 - 140	MSD	40
Nitrobenzene	16 - 102	35 - 130	MSD	40
N-Nitrosodimethylamine	19 - 94	29 - 134	MSD	40
N-Nitrosodiphenylamine	18 - 135	27 - 145	MSD	40
N-Nitrosodipropylamine	22 - 115	35 - 139	MSD	40

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Table B-4. Laboratory Control Limits for Round 2B Subsurface Sediment Matrix Spike, Laboratory Control Samples, and Ongoing Precsion and Recovery.

Analysis	Matrix Spike Recovery (percent)	Laboratory Control Sample Recovery	Type of Duplicate	Control Limit Relative Percent Difference
Volatile Organic Compounds				
1,1,1,2-Tetrachloroethane	17 - 138	72 - 133	MSD	40
1,1,1-Trichloroethane	41 - 127	68 - 135	MSD	40
1,1,2,2-Tetrachloroethane	15 - 132	58 - 122	MSD	40
1,1,2-Trichloroethane	31 - 135	74 - 120	MSD	40
1,1-Dichloroethane	45 - 122	66 - 123	MSD	40
1,1-Dichloropropene	--	74 - 124	--	--
1,2,3-Trichlorobenzene	--	60 - 132	--	--
1,2,3-Trichloropropane	20 - 144	68 - 128	MSD	40
1,2-Dibromo-3-chloropropane	--	60 - 114	--	--
1,2-Dichloroethane	34 - 134	63 - 129	MSD	40
1,2-Dichloropropane	36 - 129	69 - 123	MSD	40
1,3,5-Trimethylbenzene	--	81 - 129	--	--
1,3-Dichloropropane	--	74 - 118	--	--
1,4-Dichloro-trans-2-butene	70 - 130	69 - 145	MSD	40
1,4-Difluorobenzene	--	38 - 92	BSD	40
2,2-Dichloropropane	--	64 - 136	--	--
2-Chloroethyl vinyl ether	70 - 130	10 - 160	MSD	40
2-Chlorotoluene	--	79 - 125	--	--
4-Chlorotoluene	--	78 - 123	--	--
Acetone	20 - 127	43 - 130	MSD	40
Acrolein	70 - 130	16 - 154	MSD	40
Acrylonitrile	70 - 130	10 - 197	MSD	40
Benzene	45 - 129	78 - 124	MSD	40
Bromobenzene	--	77 - 120	--	--
Bromochloromethane	41 - 134	75 - 126	MSD	40
Bromodichloromethane	19 - 138	67 - 130	MSD	40
Bromoform	10 - 136	63 - 149	MSD	40
Bromomethane	15 - 140	10 - 158	MSD	40
Carbon disulfide	19 - 139	56 - 140	MSD	40
Carbon tetrachloride	25 - 131	66 - 146	MSD	40
Chlorobenzene	17 - 130	76 - 119	MSD	40
Chlorodibromomethane	10 - 137	69 - 133	MSD	40
Chloroethane	28 - 149	10 - 179	MSD	40
Chloroform	37 - 132	70 - 125	MSD	40
Chloromethane	36 - 148	35 - 147	MSD	40
cis-1,2-Dichloroethene	--	79 - 120	BSD	30
cis-1,3-Dichloropropene	11 - 135	73 - 127	MSD	40
Dichlorodifluoromethane	34 - 154	19 - 171	MSD	40
Ethylbenzene	15 - 138	75 - 126	MSD	40
Ethylene dibromide	22 - 132	72 - 120	MSD	40
Isopropylbenzene	10 - 129	62 - 125	MSD	40
m,p-Xylene	15 - 138	76 - 131	MSD	40
Methyl iodide	70 - 130	27 - 192	MSD	40
Methyl isobutyl ketone	29 - 137	55 - 136	MSD	40
Methyl N-butyl ketone	22 - 126	59 - 130	MSD	40
Methyl tert-butyl ether	37 - 132	59 - 132	MSD	40
Methylene bromide	34 - 137	74 - 124	MSD	40
Methylene chloride	41 - 131	65 - 127	MSD	40
Methylethyl ketone	10 - 143	37 - 137	MSD	40
n-Butylbenzene	--	63 - 134	--	--
n-Propylbenzene	--	79 - 128	--	--
o-Xylene	12 - 143	76 - 128	MSD	40
p-Cymene	--	70 - 132	--	--
Pseudocumene	--	78 - 137	--	--
Sec-butylbenzene	--	77 - 135	--	--
Styrene	10 - 138	75 - 127	MSD	40

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Table B-4. Laboratory Control Limits for Round 2B Subsurface Sediment Matrix Spike, Laboratory Control Samples, and Ongoing Precision and Recovery.

Analysis	Matrix Spike Recovery (percent)	Laboratory Control Sample Recovery	Type of Duplicate	Control Limit Relative Percent Difference
tert-Butylbenzene	--	79 - 129	--	--
Tetrachloroethene	10 - 139	70 - 124	MSD	40
Toluene	31 - 136	75 - 128	MSD	40
trans-1,2-Dichloroethene	33 - 128	68 - 123	MSD	40
trans-1,3-Dichloropropene	10 - 131	63 - 117	MSD	40
Trichloroethene	18 - 153	69 - 131	MSD	40
Trichlorofluoromethane	37 - 135	27 - 153	MSD	40
Vinyl acetate	70 - 130	10 - 217	MSD	40
Vinyl chloride	34 - 165	55 - 155	MSD	40
Vinylidene chloride	46 - 128	71 - 132	MSD	40
Phenols				
2,3,4,5-Tetrachlorophenol	38 - 163	40 - 116	MSD	40
2,3,5,6-Tetrachlorophenol	45 - 160	41 - 123	MSD	40
2,4,5-Trichlorophenol	60 - 135	23 - 115	MSD	40
2,4,6-Trichlorophenol	38 - 140	28 - 108	MSD	40
2,4-Dichlorophenol	21 - 109	38 - 133	MSD	40
2,4-Dimethylphenol	10 - 93	10 - 105	MSD	40
2,4-Dinitrophenol	10 - 140	10 - 137	MSD	40
2-Chlorophenol	23 - 94	34 - 125	MSD	40
2-Methylphenol	10 - 100	17 - 121	MSD	40
2-Nitrophenol	20 - 105	35 - 131	MSD	40
4,6-Dinitro-2-methylphenol	10 - 118	34 - 139	MSD	40
4-Chloro-3-methylphenol	21 - 112	35 - 140	MSD	40
4-Methylphenol	10 - 116	14 - 123	MSD	40
4-Nitrophenol	24 - 120	43 - 141	MSD	40
Pentachlorophenol	48 - 157	44 - 150	MSD	40
Phenol	21 - 106	30 - 139	MSD	40
Phthalate Esters				
Bis(2-ethylhexyl) phthalate	10 - 158	48 - 151	MSD	40
Butylbenzyl phthalate	23 - 136	49 - 144	MSD	40
Dibutyl phthalate	20 - 131	49 - 141	MSD	40
Diethyl phthalate	28 - 116	39 - 148	MSD	40
Dimethyl phthalate	32 - 111	44 - 133	MSD	40
Di-n-octyl phthalate	27 - 143	54 - 143	MSD	40
Polycyclic Aromatic Hydrocarbons				
2-Methylnaphthalene	23 - 116	10 - 143	MSD	40
Acenaphthene	25 - 122	12 - 153	MSD	40
Acenaphthylene	30 - 117	20 - 159	MSD	40
Anthracene	33 - 129	22 - 148	MSD	40
Benz(a)anthracene	17 - 144	10 - 182	MSD	40
Benzo(a)pyrene	19 - 147	10 - 182	MSD	40
Benzo(b)fluoranthene	19 - 145	11 - 175	MSD	40
Benzo(g,h,i)perylene	15 - 147	21 - 168	MSD	40
Benzo(k)fluoranthene	20 - 144	10 - 183	MSD	40
Chrysene	26 - 139	15 - 177	MSD	40
Dibenz(a,h)anthracene	21 - 143	10 - 186	MSD	40
Fluoranthene	22 - 145	28 - 154	MSD	40
Fluorene	28 - 125	24 - 150	MSD	40
Indeno(1,2,3-cd)pyrene	15 - 150	16 - 176	MSD	40
Naphthalene	10 - 131	10 - 157	MSD	40
Phenanthrene	20 - 136	23 - 144	MSD	40
Pyrene	18 - 146	20 - 150	MSD	40

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Table B-4. Laboratory Control Limits for Round 2B Subsurface Sediment Matrix Spike, Laboratory Control Samples, and Ongoing Precsion and Recovery.

Analysis	Matrix Spike Recovery (percent)	Laboratory Control Sample Recovery	Type of Duplicate	Control Limit Relative Percent Difference
Petroleum Hydrocarbons				
Diesel fuels	--	62 - 159	LD	40
Diesel range hydrocarbons	--	56 - 162	LD	40
Gasoline range hydrocarbons	--	71 - 128	LD	40
Residual range hydrocarbons	--	53 - 143	LD	40
PCDD/Fs				
Heptachlorodibenzofuran homologs	--	--	--	--
Heptachlorodibenzo-p-dioxin homologs	--	--	--	--
Hexachlorodibenzofuran homologs	--	--	--	--
Hexachlorodibenzo-p-dioxin homologs	--	--	--	--
Octachlorodibenzofuran	--	50 - 150	LCSD	40
Octachlorodibenzo-p-dioxin	--	50 - 150	LCSD	40
Pentachlorodibenzofuran homologs	--	--	--	--
Pentachlorodibenzo-p-dioxin homologs	--	--	--	--
Tetrachlorodibenzofuran homologs	--	--	--	--
Tetrachlorodibenzo-p-dioxin homologs	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran	--	50 - 150	LCSD	40
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	--	50 - 150	LCSD	40
1,2,3,4,7,8,9-Heptachlorodibenzofuran	--	50 - 150	LCSD	40
1,2,3,4,7,8-Hexachlorodibenzofuran	--	50 - 150	LCSD	40
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	--	50 - 150	LCSD	40
1,2,3,6,7,8-Hexachlorodibenzofuran	--	50 - 150	LCSD	40
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	--	50 - 150	LCSD	40
1,2,3,7,8,9-Hexachlorodibenzofuran	--	50 - 150	LCSD	40
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	--	50 - 150	LCSD	40
1,2,3,7,8-Pentachlorodibenzofuran	--	50 - 150	LCSD	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	--	50 - 150	LCSD	40
2,3,4,6,7,8-Hexachlorodibenzofuran	--	50 - 150	LCSD	40
2,3,4,7,8-Pentachlorodibenzofuran	--	50 - 150	LCSD	40
2,3,7,8-Tetrachlorodibenzofuran	--	50 - 150	LCSD	40
2,3,7,8-Tetrachlorodibenzo-p-dioxin	--	50 - 150	LCSD	40
PCB Aroclors				
Aroclor 1016	33 - 155	43 - 141	MSD	50
Aroclor 1221	--	--	--	--
Aroclor 1232	--	--	--	--
Aroclor 1242	--	--	--	--
Aroclor 1248	--	--	--	--
Aroclor 1254	--	--	--	--
Aroclor 1260	36 - 161	45 - 145	MSD	50
Aroclor 1262	--	--	--	--
Aroclor 1268	--	--	--	--

Notes:
LCS - laboratory control sample duplicate
LD - laboratory duplicate
MSD - matrix spike duplicate

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Table B-6. Summary of Qualified Data by Parameter Group for Round 2B Subsurface Sediment Samples

Analyte Group	Number of Samples[a]	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
Conventionals	179	450	3	453	99	detected	
					1	undetected	
					< 1	U	LB
Grain Size	136	1768	0	1768	100	detected	
					0	undetected	
					< 1	J	Precision
Metals	138	1495	147	1642	91	detected	
					9	undetected	
					16	J	HT/SP, LB, MS/MSD, Precision, ICP %D, Other
					6	U	LB
					1	UJ	LB, MS/MSD, Other
Butyltins	89	173	181	354	49	detected	
					51	undetected	
					5	J	CC
					16	U	LB
PCB Aroclors	136	180	1044	1224	15	detected	
					85	undetected	
					5	J	HT/SP, CC, Surrogate recovery
					5	UJ	HT/SP
Chlorinated Herbicides	39	2	388	390	1	detected	
					99	undetected	
					6	UJ	ISP
Organochlorine Pesticides	140	766	3154	3920	20	detected	
					80	undetected	
					9	J	HT/SP, CC, MS/MSD, Precision, LCS
					5	NJ	HT/SP, CC, MS/MSD, LCS
					23	UJ	HT/SP, MS/MSD, LCS
Semivolatile Organic Compounds[b]	162	277	4608	4885	6	detected	
					94	undetected	
					1	J	CC, MS/MSD, LCS
					< 1	NJ	CC, LCS
					< 1	U	LB
					3	UJ	HT/SP, Cal. C., MS/MSD, LCS
Volatile Organic Compounds	139	399	6021	6420	6	detected	
					94	undetected	
					1	J	Cal. I., Cal. C.
					4	U	FB, LB
					1	UJ	Cal. I., Cal. C., FB, LB, MS/MSD

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Table B-6. Summary of Qualified Data by Parameter Group for Round 2B Subsurface Sediment Samples

Analyte Group	Number of Samples[a]	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
		Detected	Undetected				
Phenols[b]	137	712	2072	2784	26	detected	
					74	undetected	
					1	J	CC
					< 1	NJ	CC
					1	U	LB
					1	UJ	Cal. C., LCS, ISP
Phthalate Esters[b]	136	77	739	816	9	detected	
					91	undetected	
					1	J	Precision, LCS
					16	U	FB, LB
Polycyclic Aromatic Hydrocarbons[b]	158	2029	439	2468	82	detected	
					18	undetected	
					1	J	HT/SP, MS/MSD, Precision
					4	U	FB, LB
Petroleum Hydrocarbons	162	317	129	446	71	detected	
					29	undetected	
					53	J	CP, 9
					4	U	LB
					1	UJ	HT/SP, LB, Surrogate recovery
PCDD/F Homologs	23	196	34	230	85	detected	
					15	undetected	
					6	J	HT/SP, Precision, LRE
					< 1	U	PFP
PCDD/Fs	23	218	127	345	63	detected	
					37	undetected	
					8	J	HT/SP, Precision, Surrogate recovery
					6	U	PFP
					1	UJ	HT/SP, PFP

Notes:

[a] Includes replicates and splits, excludes field blanks.

[b] The analyte groupings for SVOCs, phenols, PAHs, and phthalates are as defined in the Round 2 QAPP, Table A6-2 (see Integral and Windward 2004).

Cal. C. - calibration (continuing)
Cal. I. - calibration (initial)
CC - compound confirmation
CP - chromatographic pattern in sample does not match pattern of calibration standard
FB - field blank contamination
HT/SP - holding time/sample preservation
ICP %D - ICP serial dilution % difference
ISP - internal standard performance (e.g., area, retention time, recovery)
LB - lab blank contamination (e.g., method blank, instrument, etc.)
LCS - laboratory control sample recoveries
MS/MSD - matrix spike (MS & MSD) recoveries
Other - defined in EcoChem validation report
PFP - potential false positives

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Table B-7. Reported Detection Limits - Round 2B Subsurface Sediment Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL	Reported Detection Limits	
				Minimum	Maximum
Metals					
Aluminum	7429-90-5	mg/kg	2.0	5.5	9.6
Antimony	7440-36-0	mg/kg	0.02	0.03	0.04
Arsenic	7440-38-2	mg/kg	0.05	0.07	0.1
Cadmium	7440-43-9	mg/kg	0.006	0.004	0.083
Chromium	7440-47-3	mg/kg	0.04	0.4	1
Chromium hexavalent	18540-29-9	mg/kg	0.2	0.2	0.2
Copper	7440-50-8	mg/kg	0.07	0.6	2.4
Lead	7439-92-1	mg/kg	0.02	0.02	0.02
Mercury	7439-97-6	mg/kg	0.01	0.007	0.009
Nickel	7440-02-0	mg/kg	0.03	0.4	0.7
Selenium	7782-49-2	mg/kg	0.05	0.02	0.28
Silver	7440-22-4	mg/kg	0.02	0.002	0.023
Zinc	7440-66-6	mg/kg	0.1	0.4	1.2
Butyltins					
Butyltin ion	78763-54-9	µg/kg	0.071	0.034	1.8
Dibutyltin ion	14488-53-0	µg/kg	0.041	0.036	1.4
Tributyltin ion	36643-28-4	µg/kg	0.16	0.067	2.4
Tetrabutyltin	1461-25-2	µg/kg	0.12	0.079	1.2
Conventionals					
Specific gravity	SPEC_GRAV	g/cc	--	0.01	0.01
Total organic carbon	TOC	percent	0.02	0.02	0.08
Total solids	TSO	percent	0.01	--	--
Grain Size					
>9 Phi clay	GS_MFCLAY	percent	0.1	--	--
8-9 Phi clay	GS_CCLAY	percent	0.1	--	--
Coarse sand	GS_CS	percent	0.1	--	--
Coarse silt	GS_CSILT	percent	0.1	--	--
Fine gravel	GS_FG	percent	0.1	--	--
Fine sand	GS_FS	percent	0.1	--	--
Fine silt	GS_FSILT	percent	0.1	--	--
Medium gravel	GS_MG	percent	0.1	--	--
Medium sand	GS_MS	percent	0.1	--	--
Medium silt	GS_MSILT	percent	0.1	--	--
Very coarse sand	GS_VCS	percent	0.1	--	--
Very fine sand	GS_VFS	percent	0.1	--	--
Very fine silt	GS_VFSILT	percent	0.1	--	--
Organochlorine Pesticides					
2,4'-DDD	53-19-0	µg/kg	--	0.062	400
2,4'-DDE	3424-82-6	µg/kg	--	0.067	28
2,4'-DDT	789-02-6	µg/kg	--	0.051	47
4,4'-DDD	72-54-8	µg/kg	--	0.099	31
4,4'-DDE	72-55-9	µg/kg	--	0.049	25
4,4'-DDT	50-29-3	µg/kg	--	0.16	130
Aldrin	309-00-2	µg/kg	--	0.12	35
alpha-Endosulfan	959-98-8	µg/kg	--	0.043	34
alpha-Hexachlorocyclohexane	319-84-6	µg/kg	--	0.088	25
beta-Endosulfan	33213-65-9	µg/kg	--	0.066	26
beta-Hexachlorocyclohexane	319-85-7	µg/kg	--	0.14	6.2

Table B-7. Reported Detection Limits - Round 2B Subsurface Sediment Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL	Reported Detection Limits	
				Minimum	Maximum
cis-Chlordane	5103-71-9	µg/kg	--	0.056	37
cis-Nonachlor	5103-73-1	µg/kg	--	0.055	650
delta-Hexachlorocyclohexane	319-86-8	µg/kg	--	0.066	15
Dieldrin	60-57-1	µg/kg	--	0.091	12
Endosulfan sulfate	1031-07-8	µg/kg	--	0.068	24
Endrin	72-20-8	µg/kg	--	0.074	26
Endrin aldehyde	7421-93-4	µg/kg	--	0.08	65
Endrin ketone	53494-70-5	µg/kg	--	0.064	19
gamma-Hexachlorocyclohexane	58-89-9	µg/kg	--	0.11	25
Heptachlor	76-44-8	µg/kg	--	0.07	26
Heptachlor epoxide	1024-57-3	µg/kg	--	0.075	17
Methoxychlor	72-43-5	µg/kg	--	0.068	52
Mirex	2385-85-5	µg/kg	--	0.051	17
Oxychlordane	27304-13-8	µg/kg	--	0.08	56
Toxaphene	8001-35-2	µg/kg	--	4.6	17000
trans-Chlordane	5103-74-2	µg/kg	--	0.057	25
trans-Nonachlor	39765-80-5	µg/kg	--	0.036	150
Chlorinated Herbicides					
2,4,5-T	93-76-5	µg/kg	--	0.45	0.76
2,4-D	94-75-7	µg/kg	--	0.31	0.52
2,4-DB	94-82-6	µg/kg	--	0.45	0.77
Dalapon	75-99-0	µg/kg	--	0.27	0.46
Dicamba	1918-00-9	µg/kg	--	0.97	1.6
Dichloroprop	120-36-5	µg/kg	--	0.49	0.84
Dinoseb	88-85-7	µg/kg	--	0.62	1.1
MCPA	94-74-6	µg/kg	--	0.65	1.1
MCPP	93-65-2	µg/kg	--	0.6	1
Silvex	93-72-1	µg/kg	--	0.45	0.76
Semivolatile Organic Compounds					
1,2,4-Trichlorobenzene	120-82-1	µg/kg	--	1.7	300
1,2-Dichlorobenzene	95-50-1	µg/kg	--	1.5	260
1,3-Dichlorobenzene	541-73-1	µg/kg	--	1.9	320
1,4-Dichlorobenzene	106-46-7	µg/kg	--	0.14	380
2,4-Dinitrotoluene	121-14-2	µg/kg	--	3.2	560
2,6-Dinitrotoluene	606-20-2	µg/kg	--	3.2	560
2-Chloronaphthalene	91-58-7	µg/kg	--	4.1	720
2-Nitroaniline	88-74-4	µg/kg	--	3.1	540
3,3'-Dichlorobenzidine	91-94-1	µg/kg	--	4.2	740
3-Nitroaniline	99-09-2	µg/kg	--	3	520
4-Bromophenyl phenyl ether	101-55-3	µg/kg	--	1.6	280
4-Chloroaniline	106-47-8	µg/kg	--	2.4	420
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg	--	2.3	400
4-Nitroaniline	100-01-6	µg/kg	--	3.9	680
Aniline	62-53-3	µg/kg	--	1.7	300
Azobenzene	103-33-3	µg/kg	--	2.8	480
Benzoic acid	65-85-0	µg/kg	--	110	20000
Benzyl alcohol	100-51-6	µg/kg	--	4.2	740
Bis(2-chloroethoxy) methane	111-91-1	µg/kg	--	1.5	260
Bis(2-chloroethyl) ether	111-44-4	µg/kg	--	2.8	480
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg	--	1.4	240

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Table B-7. Reported Detection Limits - Round 2B Subsurface Sediment Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL	Reported Detection Limits	
				Minimum	Maximum
Carbazole	86-74-8	µg/kg	--	1.5	260
Dibenzofuran	132-64-9	µg/kg	--	0.2	34
Hexachlorobenzene	118-74-1	µg/kg	--	0.055	420
Hexachlorobutadiene	87-68-3	µg/kg	--	0.23	280
Hexachlorocyclopentadiene	77-47-4	µg/kg	--	17	3000
Hexachloroethane	67-72-1	µg/kg	--	0.064	440
Isophorone	78-59-1	µg/kg	--	1.9	320
Nitrobenzene	98-95-3	µg/kg	--	2.3	400
N-Nitrosodimethylamine	62-75-9	µg/kg	--	7	1300
N-Nitrosodiphenylamine	86-30-6	µg/kg	--	2.5	440
N-Nitrosodipropylamine	621-64-7	µg/kg	--	3.7	640
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	--	0.035	0.22
1,1,1-Trichloroethane	71-55-6	µg/kg	--	0.067	0.41
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	--	0.11	13
1,1,2-Trichloroethane	79-00-5	µg/kg	--	0.067	0.41
1,1-Dichloroethane	75-34-3	µg/kg	--	0.064	0.4
1,2,3-Trichloropropane	96-18-4	µg/kg	--	0.13	0.76
1,2-Dichloroethane	107-06-2	µg/kg	--	0.035	0.22
1,2-Dichloropropane	78-87-5	µg/kg	--	0.04	0.25
1,4-Dichloro-trans-2-butene	110-57-6	µg/kg	--	0.58	3.6
2-Chloroethyl vinyl ether	110-75-8	µg/kg	--	0.17	1.1
Acetone	67-64-1	µg/kg	--	1.9	68
Acrolein	107-02-8	µg/kg	--	0.58	3.6
Acrylonitrile	107-13-1	µg/kg	--	0.26	1.6
Benzene	71-43-2	µg/kg	--	0.044	0.28
Bromochloromethane	74-97-5	µg/kg	--	0.068	0.42
Bromodichloromethane	75-27-4	µg/kg	--	0.077	0.47
Bromoform	75-25-2	µg/kg	--	0.052	0.32
Bromomethane	74-83-9	µg/kg	--	0.42	2.6
Carbon disulfide	75-15-0	µg/kg	--	0.15	0.9
Carbon tetrachloride	56-23-5	µg/kg	--	0.12	0.69
Chlorobenzene	108-90-7	µg/kg	--	0.079	0.49
Chlorodibromomethane	124-48-1	µg/kg	--	0.077	0.47
Chloroethane	75-00-3	µg/kg	--	0.32	2
Chloroform	67-66-3	µg/kg	--	0.063	0.39
Chloromethane	74-87-3	µg/kg	--	0.22	1.4
cis-1,3-Dichloropropene	10061-01-5	µg/kg	--	0.035	0.22
Dichlorodifluoromethane	75-71-8	µg/kg	--	0.13	0.76
Ethylbenzene	100-41-4	µg/kg	--	0.08	0.17
Ethylene dibromide	106-93-4	µg/kg	--	0.058	0.36
Isopropylbenzene	98-82-8	µg/kg	--	0.05	0.31
m,p-Xylene	179601-23-1	µg/kg	--	0.15	44
Methyl iodide	74-88-4	µg/kg	--	0.76	4.7
Methyl isobutyl ketone	108-10-1	µg/kg	--	0.27	1.7
Methyl N-butyl ketone	591-78-6	µg/kg	--	0.72	4.5
Methyl tert-butyl ether	1634-04-4	µg/kg	--	0.044	0.27
Methylene bromide	74-95-3	µg/kg	--	0.092	0.57
Methylene chloride	75-09-2	µg/kg	--	0.51	89
Methylethyl ketone	78-93-3	µg/kg	--	1.3	7.6
o-Xylene	95-47-6	µg/kg	--	0.084	0.75

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Table B-7. Reported Detection Limits - Round 2B Subsurface Sediment Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL	Reported Detection Limits	
				Minimum	Maximum
Styrene	100-42-5	µg/kg	--	0.083	1
Tetrachloroethene	127-18-4	µg/kg	--	0.11	0.67
Toluene	108-88-3	µg/kg	--	0.17	1.6
trans-1,2-Dichloroethene	156-60-5	µg/kg	--	0.22	1.4
trans-1,3-Dichloropropene	10061-02-6	µg/kg	--	0.05	0.31
Trichloroethene	79-01-6	µg/kg	--	0.07	0.43
Trichlorofluoromethane	75-69-4	µg/kg	--	0.091	0.56
Vinyl acetate	108-05-4	µg/kg	--	0.41	2.5
Vinyl chloride	75-01-4	µg/kg	--	0.096	0.59
Vinylidene chloride	75-35-4	µg/kg	--	0.092	0.57
Phenols					
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg	--	0.49	94
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg	--	0.48	170
2,4,5-Trichlorophenol	95-95-4	µg/kg	--	0.4	340
2,4,6-Trichlorophenol	88-06-2	µg/kg	--	0.29	200
2,4-Dichlorophenol	120-83-2	µg/kg	--	2.1	360
2,4-Dimethylphenol	105-67-9	µg/kg	--	6.3	1100
2,4-Dinitrophenol	51-28-5	µg/kg	--	41	7200
2-Chlorophenol	95-57-8	µg/kg	--	2	340
2-Methylphenol	95-48-7	µg/kg	--	3.9	680
2-Nitrophenol	88-75-5	µg/kg	--	3	520
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	--	2	340
4-Chloro-3-methylphenol	59-50-7	µg/kg	--	2.4	420
4-Methylphenol	106-44-5	µg/kg	--	3.3	580
4-Nitrophenol	100-02-7	µg/kg	--	0.36	6000
Pentachlorophenol	87-86-5	µg/kg	--	0.53	88
Phenol	108-95-2	µg/kg	--	2.2	380
Phthalate Esters					
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	--	2	340
Butylbenzyl phthalate	85-68-7	µg/kg	--	1.7	300
Dibutyl phthalate	84-74-2	µg/kg	--	3	520
Diethyl phthalate	84-66-2	µg/kg	--	4	700
Dimethyl phthalate	131-11-3	µg/kg	--	2.1	360
Di-n-octyl phthalate	117-84-0	µg/kg	--	1.4	240
Polycyclic Aromatic Hydrocarbons					
2-Methylnaphthalene	91-57-6	µg/kg	--	0.39	67
Acenaphthene	83-32-9	µg/kg	--	0.19	32
Acenaphthylene	208-96-8	µg/kg	--	0.25	44
Anthracene	120-12-7	µg/kg	--	0.25	44
Benz(a)anthracene	56-55-3	µg/kg	--	0.19	32
Benzo(a)pyrene	50-32-8	µg/kg	--	0.25	44
Benzo(b)fluoranthene	205-99-2	µg/kg	--	0.55	95
Benzo(g,h,i)perylene	191-24-2	µg/kg	--	0.27	46
Benzo(k)fluoranthene	207-08-9	µg/kg	--	0.38	65
Chrysene	218-01-9	µg/kg	--	0.47	81
Dibenz(a,h)anthracene	53-70-3	µg/kg	--	0.3	52
Fluoranthene	206-44-0	µg/kg	--	0.39	610
Fluorene	86-73-7	µg/kg	--	0.22	38
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	--	0.28	48
Naphthalene	91-20-3	µg/kg	--	0.4	610

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Table B-7. Reported Detection Limits - Round 2B Subsurface Sediment Sampling Event.

Analyte	CAS Number	Units	Round 2 QAPP MDL	Reported Detection Limits	
				Minimum	Maximum
Phenanthrene	85-01-8	µg/kg	--	0.38	590
Pyrene	129-00-0	µg/kg	--	0.41	650
Petroleum Hydrocarbons					
Diesel fuels	68334-30-5	mg/kg	--	4.6	6.7
Diesel range hydrocarbons	DRH	mg/kg	7.1	3.9	68
Gasoline range hydrocarbons	GRH	mg/kg	3.2	1.2	18
Residual range hydrocarbons	RRH	mg/kg	4.6	3.9	64
PCDD/Fs					
Heptachlorodibenzofuran homologs	38998-75-3	pg/g	--	0.006	0.136
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g	--	0.008	1.757
Hexachlorodibenzofuran homologs	55684-94-1	pg/g	--	0.004	0.165
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g	--	0.007	0.1
Octachlorodibenzofuran	39001-02-0	pg/g	--	0.013	0.483
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g	--	0.011	0.503
Pentachlorodibenzofuran homologs	30402-15-4	pg/g	--	0.004	0.066
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g	--	0.008	0.065
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g	--	0.004	0.149
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g	--	0.004	0.05
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g	0.033	0.006	0.136
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g	0.035	0.008	1.757
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g	0.052	0.007	0.176
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g	0.013	0.004	0.69
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g	0.03	0.007	0.601
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g	0.013	0.004	0.188
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g	0.034	0.008	0.112
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g	0.017	0.005	0.223
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g	0.032	0.007	0.38
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g	0.017	0.004	0.117
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g	0.029	0.008	0.147
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g	0.013	0.004	0.21
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g	0.017	0.004	0.313
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g	0.02	0.004	0.853
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g	0.026	0.004	0.302
PCB Aroclors					
Aroclor 1016	12674-11-2	µg/kg	--	1.3	430
Aroclor 1221	11104-28-2	µg/kg	--	1.3	160
Aroclor 1232	11141-16-5	µg/kg	--	1.3	410
Aroclor 1242	53469-21-9	µg/kg	--	1.3	330
Aroclor 1248	12672-29-6	µg/kg	--	1.3	460
Aroclor 1254	11097-69-1	µg/kg	--	1.3	230
Aroclor 1260	11096-82-5	µg/kg	--	1.3	270
Aroclor 1262	37324-23-5	µg/kg	--	1.3	110
Aroclor 1268	11100-14-4	µg/kg	--	1.3	110

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Table B-8. Results for Round 2B Subsurface Sediment Field Replicate Samples.

Analyte Group/Chemical Name	CAS #	Units	Field Replicates					
			Number Collected	Number Detected	RPD Above 50	Minimum	Maximum	Average
Metals								
Aluminum	7429-90-5	mg/kg	9	9	--	8970	32000	19352
Antimony	7440-36-0	mg/kg	9	9	--	0.09	0.27	0
Arsenic	7440-38-2	mg/kg	9	9	--	1.28	5.19	3
Cadmium	7440-43-9	mg/kg	9	9	--	0.078	0.495	0
Chromium	7440-47-3	mg/kg	9	9	--	12.2	59.5	30
Chromium hexavalent	18540-29-9	mg/kg	3	0	--	--	--	--
Copper	7440-50-8	mg/kg	9	9	--	16	78.5	39
Lead	7439-92-1	mg/kg	9	9	--	2.4	40	20
Mercury	7439-97-6	mg/kg	9	9	--	0.013	0.135	0
Nickel	7440-02-0	mg/kg	9	9	--	14.7	32.4	23
Selenium	7782-49-2	mg/kg	9	0	--	--	--	--
Silver	7440-22-4	mg/kg	9	9	--	0.192	0.892	0
Zinc	7440-66-6	mg/kg	9	9	--	51	184	105
Butyltins								
Butyltin ion	78763-54-9	µg/kg	4	2	--	0.35	1.3	1
Dibutyltin ion	14488-53-0	µg/kg	4	2	--	3.7	7.5	6
Tributyltin ion	36643-28-4	µg/kg	4	2	--	39	110	75
Tetrabutyltin	1461-25-2	µg/kg	4	2	--	1.6	3.2	2
Conventionals								
Specific gravity	SPEC_GRAV	g/cc	9	9	--	1.42	2.07	2
Total organic carbon	TOC	percent	9	8	--	0.02	2.27	1
Total solids	TSO	percent	11	11	--	46.1	81.4	67
Grain Size								
>9 Phi clay	GS_MFCLAY	percent	9	9	--	0.15	18.1	7
8-9 Phi clay	GS_CCLAY	percent	9	9	--	0.3	5.62	3
Coarse sand	GS_CS	percent	9	9	--	0.37	13.1	4
Coarse silt	GS_CSILT	percent	9	9	--	0.28	26.4	12
Fine gravel	GS_FG	percent	9	9	--	0	1.96	1
Fine sand	GS_FS	percent	9	9	--	2.21	27.4	11
Fine silt	GS_FSILT	percent	9	9	--	0.13	17.3	9
Medium gravel	GS_MG	percent	9	9	--	0	4.43	1
Medium sand	GS_MS	percent	9	9	--	0.68	65.5	24
Medium silt	GS_MSILT	percent	9	9	--	0.13	31.8	15
Very coarse sand	GS_VCS	percent	9	9	--	0.23	1.79	1
Very fine sand	GS_VFS	percent	9	9	--	1.02	37.1	9
Very fine silt	GS_VFSILT	percent	9	9	--	0.03	10.9	5
Organochlorine Pesticides								
2,4'-DDD	53-19-0	µg/kg	9	6	--	0.37	130	54
2,4'-DDE	3424-82-6	µg/kg	9	4	--	0.93	27	14
2,4'-DDT	789-02-6	µg/kg	9	4	--	0.21	230	102
4,4'-DDD	72-54-8	µg/kg	9	7	--	0.34	330	114
4,4'-DDE	72-55-9	µg/kg	9	7	--	0.24	130	41
4,4'-DDT	50-29-3	µg/kg	9	5	--	2	2000	737
Aldrin	309-00-2	µg/kg	9	0	--	--	--	--
alpha-Endosulfan	959-98-8	µg/kg	9	2	--	0.79	2.5	2
alpha-Hexachlorocyclohexane	319-84-6	µg/kg	9	0	--	--	--	--
beta-Endosulfan	33213-65-9	µg/kg	9	0	--	--	--	--
beta-Hexachlorocyclohexane	319-85-7	µg/kg	9	0	--	--	--	--
cis-Chlordane	5103-71-9	µg/kg	9	2	--	0.41	1.6	1
cis-Nonachlor	5103-73-1	µg/kg	9	3	--	0.87	260	88
delta-Hexachlorocyclohexane	319-86-8	µg/kg	9	1	--	0.21	0.21	0
Dieldrin	60-57-1	µg/kg	9	2	--	0.74	4.3	3
Endosulfan sulfate	1031-07-8	µg/kg	9	0	--	--	--	--
Endrin	72-20-8	µg/kg	9	1	--	180	180	180
Endrin aldehyde	7421-93-4	µg/kg	9	1	--	0.86	0.86	1
Endrin ketone	53494-70-5	µg/kg	9	2	--	1.1	1.4	1
gamma-Hexachlorocyclohexane	58-89-9	µg/kg	9	0	--	--	--	--

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Table B-8. Results for Round 2B Subsurface Sediment Field Replicate Samples.

Analyte Group/Chemical Name	CAS #	Units	Field Replicates					
			Number Collected	Number Detected	RPD Above 50	Minimum	Maximum	Average
Heptachlor	76-44-8	µg/kg	9	1	--	0.088	0.088	0
Heptachlor epoxide	1024-57-3	µg/kg	9	1	--	0.16	0.16	0
Methoxychlor	72-43-5	µg/kg	9	0	--	--	--	--
Mirex	2385-85-5	µg/kg	9	0	--	--	--	--
Oxychlordane	27304-13-8	µg/kg	9	1	--	1.6	1.6	2
Toxaphene	8001-35-2	µg/kg	9	0	--	--	--	--
trans-Chlordane	5103-74-2	µg/kg	9	3	--	0.13	9.8	6
trans-Nonachlor	39765-80-5	µg/kg	9	1	--	0.31	0.31	0
Chlorinated Herbicides								
2,4,5-T	93-76-5	µg/kg	3	0	--	--	--	--
2,4-D	94-75-7	µg/kg	3	0	--	--	--	--
2,4-DB	94-82-6	µg/kg	3	0	--	--	--	--
Dalapon	75-99-0	µg/kg	3	0	--	--	--	--
Dicamba	1918-00-9	µg/kg	3	0	--	--	--	--
Dichloroprop	120-36-5	µg/kg	3	0	--	--	--	--
Dinoseb	88-85-7	µg/kg	3	0	--	--	--	--
MCPA	94-74-6	µg/kg	3	0	--	--	--	--
MCPP	93-65-2	µg/kg	3	0	--	--	--	--
Silvex	93-72-1	µg/kg	3	0	--	--	--	--
Semivolatile Organic Compounds								
1,2,4-Trichlorobenzene	120-82-1	µg/kg	9	0	--	--	--	--
1,2-Dichlorobenzene	95-50-1	µg/kg	9	1	--	5.6	5.6	6
1,3-Dichlorobenzene	541-73-1	µg/kg	9	0	--	--	--	--
1,4-Dichlorobenzene	106-46-7	µg/kg	17	5	--	1.2	24	8
2,4-Dinitrotoluene	121-14-2	µg/kg	9	0	--	--	--	--
2,6-Dinitrotoluene	606-20-2	µg/kg	9	0	--	--	--	--
2-Chloronaphthalene	91-58-7	µg/kg	9	0	--	--	--	--
2-Nitroaniline	88-74-4	µg/kg	9	0	--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	µg/kg	9	0	--	--	--	--
3-Nitroaniline	99-09-2	µg/kg	9	0	--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	µg/kg	9	0	--	--	--	--
4-Chloroaniline	106-47-8	µg/kg	9	0	--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	µg/kg	9	0	--	--	--	--
4-Nitroaniline	100-01-6	µg/kg	9	0	--	--	--	--
Aniline	62-53-3	µg/kg	9	0	--	--	--	--
Azobenzene	103-33-3	µg/kg	9	0	--	--	--	--
Benzoic acid	65-85-0	µg/kg	9	0	--	--	--	--
Benzyl alcohol	100-51-6	µg/kg	9	0	--	--	--	--
Bis(2-chloroethoxy) methane	111-91-1	µg/kg	9	0	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	µg/kg	9	0	--	--	--	--
Bis(2-chloroisopropyl) ether	39638-32-9	µg/kg	9	0	--	--	--	--
Carbazole	86-74-8	µg/kg	9	4	--	3.5	55	19
Dibenzofuran	132-64-9	µg/kg	9	7	--	1.1	180	32
Hexachlorobenzene	118-74-1	µg/kg	18	2	--	0.36	8.4	4
Hexachlorobutadiene	87-68-3	µg/kg	18	1	--	4.9	4.9	5
Hexachlorocyclopentadiene	77-47-4	µg/kg	9	0	--	--	--	--
Hexachloroethane	67-72-1	µg/kg	18	3	--	4.2	12	7
Isophorone	78-59-1	µg/kg	9	0	--	--	--	--
Nitrobenzene	98-95-3	µg/kg	9	0	--	--	--	--
N-Nitrosodimethylamine	62-75-9	µg/kg	9	0	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	µg/kg	9	0	--	--	--	--
N-Nitrosodipropylamine	621-64-7	µg/kg	9	0	--	--	--	--
Volatile Organic Compounds								
1,1,1,2-Tetrachloroethane	630-20-6	µg/kg	8	0	--	--	--	--
1,1,1-Trichloroethane	71-55-6	µg/kg	8	0	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	8	0	--	--	--	--
1,1,2-Trichloroethane	79-00-5	µg/kg	8	0	--	--	--	--
1,1-Dichloroethane	75-34-3	µg/kg	8	2	--	0.27	0.59	0
1,2,3-Trichloropropane	96-18-4	µg/kg	8	0	--	--	--	--

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Table B-8. Results for Round 2B Subsurface Sediment Field Replicate Samples.

Analyte Group/Chemical Name	CAS #	Units	Field Replicates					
			Number Collected	Number Detected	RPD Above 50	Minimum	Maximum	Average
1,2-Dichloroethane	107-06-2	µg/kg	8	0	--	--	--	--
1,2-Dichloropropane	78-87-5	µg/kg	8	0	--	--	--	--
1,4-Dichloro-trans-2-butene	110-57-6	µg/kg	8	0	--	--	--	--
2-Chloroethyl vinyl ether	110-75-8	µg/kg	8	0	--	--	--	--
Acetone	67-64-1	µg/kg	8	5	--	19	80	46
Acrolein	107-02-8	µg/kg	8	0	--	--	--	--
Acrylonitrile	107-13-1	µg/kg	8	0	--	--	--	--
Benzene	71-43-2	µg/kg	8	4	--	0.097	0.42	0
Bromochloromethane	74-97-5	µg/kg	8	0	--	--	--	--
Bromodichloromethane	75-27-4	µg/kg	8	0	--	--	--	--
Bromoform	75-25-2	µg/kg	8	0	--	--	--	--
Bromomethane	74-83-9	µg/kg	8	0	--	--	--	--
Carbon disulfide	75-15-0	µg/kg	8	2	--	0.35	1.5	1
Carbon tetrachloride	56-23-5	µg/kg	8	0	--	--	--	--
Chlorobenzene	108-90-7	µg/kg	8	4	--	0.28	2	1
Chlorodibromomethane	124-48-1	µg/kg	8	0	--	--	--	--
Chloroethane	75-00-3	µg/kg	8	0	--	--	--	--
Chloroform	67-66-3	µg/kg	8	3	--	2.1	140	62
Chloromethane	74-87-3	µg/kg	8	2	--	0.38	0.47	0
cis-1,3-Dichloropropene	10061-01-5	µg/kg	8	0	--	--	--	--
Dichlorodifluoromethane	75-71-8	µg/kg	8	0	--	--	--	--
Ethylbenzene	100-41-4	µg/kg	8	0	--	--	--	--
Ethylene dibromide	106-93-4	µg/kg	8	0	--	--	--	--
Isopropylbenzene	98-82-8	µg/kg	8	2	--	0.092	0.21	0
m,p-Xylene	179601-23-1	µg/kg	8	2	--	0.34	0.47	0
Methyl iodide	74-88-4	µg/kg	8	0	--	--	--	--
Methyl isobutyl ketone	108-10-1	µg/kg	8	2	--	0.98	2.1	2
Methyl N-butyl ketone	591-78-6	µg/kg	8	0	--	--	--	--
Methyl tert-butyl ether	1634-04-4	µg/kg	8	0	--	--	--	--
Methylene bromide	74-95-3	µg/kg	8	0	--	--	--	--
Methylene chloride	75-09-2	µg/kg	8	0	--	--	--	--
Methylethyl ketone	78-93-3	µg/kg	8	3	--	8.4	15	11
o-Xylene	95-47-6	µg/kg	8	3	--	0.17	0.26	0
Styrene	100-42-5	µg/kg	8	0	--	--	--	--
Tetrachloroethene	127-18-4	µg/kg	8	3	--	0.25	4.1	2
Toluene	108-88-3	µg/kg	8	3	--	0.35	5.1	3
trans-1,2-Dichloroethene	156-60-5	µg/kg	8	0	--	--	--	--
trans-1,3-Dichloropropene	10061-02-6	µg/kg	8	0	--	--	--	--
Trichloroethene	79-01-6	µg/kg	8	0	--	--	--	--
Trichlorofluoromethane	75-69-4	µg/kg	8	0	--	--	--	--
Vinyl acetate	108-05-4	µg/kg	8	0	--	--	--	--
Vinyl chloride	75-01-4	µg/kg	8	0	--	--	--	--
Vinylidene chloride	75-35-4	µg/kg	8	0	--	--	--	--
Phenols								
2,3,4,5-Tetrachlorophenol	4901-51-3	µg/kg	9	0	--	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	µg/kg	9	1	--	33	33	33
2,4,5-Trichlorophenol	95-95-4	µg/kg	9	0	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	µg/kg	9	1	--	1400	1400	1400
2,4-Dichlorophenol	120-83-2	µg/kg	9	2	--	4.5	4.9	5
2,4-Dimethylphenol	105-67-9	µg/kg	9	0	--	--	--	--
2,4-Dinitrophenol	51-28-5	µg/kg	9	0	--	--	--	--
2-Chlorophenol	95-57-8	µg/kg	9	1	--	20	20	20
2-Methylphenol	95-48-7	µg/kg	9	0	--	--	--	--
2-Nitrophenol	88-75-5	µg/kg	9	0	--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	9	0	--	--	--	--
4-Chloro-3-methylphenol	59-50-7	µg/kg	9	0	--	--	--	--
4-Methylphenol	106-44-5	µg/kg	9	4	--	7.2	37	23

ANC04913
BZTO104(e)004913

Table B-8. Results for Round 2B Subsurface Sediment Field Replicate Samples.

Analyte Group/Chemical Name	CAS #	Units	Field Replicates					
			Number Collected	Number Detected	RPD Above 50	Minimum	Maximum	Average
4-Nitrophenol	100-02-7	µg/kg	12	0	--	--	--	--
Pentachlorophenol	87-86-5	µg/kg	12	1	--	1.5	1.5	2
Phenol	108-95-2	µg/kg	9	3	--	4.5	16	12
Phthalate Esters								
Bis(2-ethylhexyl) phthalate	117-81-7	µg/kg	9	2	--	590	890	740
Butylbenzyl phthalate	85-68-7	µg/kg	9	1	--	10	10	10
Dibutyl phthalate	84-74-2	µg/kg	9	5	--	5.2	250	101
Diethyl phthalate	84-66-2	µg/kg	9	0	--	--	--	--
Dimethyl phthalate	131-11-3	µg/kg	9	0	--	--	--	--
Di-n-octyl phthalate	117-84-0	µg/kg	9	0	--	--	--	--
Polycyclic Aromatic Hydrocarbons								
2-Methylnaphthalene	91-57-6	µg/kg	9	8	--	0.54	55	13
Acenaphthene	83-32-9	µg/kg	9	7	--	0.54	820	166
Acenaphthylene	208-96-8	µg/kg	9	7	--	1.9	15	7
Anthracene	120-12-7	µg/kg	9	7	--	4.5	420	78
Benz(a)anthracene	56-55-3	µg/kg	9	8	--	0.54	330	97
Benzo(a)pyrene	50-32-8	µg/kg	9	7	--	33	140	86
Benzo(b)fluoranthene	205-99-2	µg/kg	9	7	--	22	150	80
Benzo(g,h,i)perylene	191-24-2	µg/kg	9	8	--	0.53	110	47
Benzo(k)fluoranthene	207-08-9	µg/kg	9	7	--	19	140	64
Chrysene	218-01-9	µg/kg	9	7	--	30	370	133
Dibenz(a,h)anthracene	53-70-3	µg/kg	9	7	--	3.2	15	9
Fluoranthene	206-44-0	µg/kg	9	8	--	0.73	1400	268
Fluorene	86-73-7	µg/kg	9	7	--	1.8	450	112
Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	9	7	--	23	110	52
Naphthalene	91-20-3	µg/kg	17	5	--	12	72	28
Phenanthrene	85-01-8	µg/kg	9	8	--	0.72	1800	321
Pyrene	129-00-0	µg/kg	9	8	--	0.7	1500	309
Petroleum Hydrocarbons								
Diesel range hydrocarbons	DRH	mg/kg	7	5	--	24	160	83
Gasoline range hydrocarbons	GRH	mg/kg	7	3	--	3	250	85
Residual range hydrocarbons	RRH	mg/kg	7	5	--	45	330	147
Dioxin/furans								
Heptachlorodibenzofuran homologs	38998-75-3	pg/g	2	2	--	0.241	51.83	26
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g	2	2	--	0.875	59.05	30
Hexachlorodibenzofuran homologs	55684-94-1	pg/g	2	2	--	0.097	27.198	14
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g	2	2	--	0.288	8.147	4
Octachlorodibenzofuran	39001-02-0	pg/g	2	2	--	0.386	43.963	22
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g	2	2	--	3.407	349.915	177
Pentachlorodibenzofuran homologs	30402-15-4	pg/g	2	1	--	7.286	7.286	7
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g	2	1	--	0.678	0.678	1
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g	2	1	--	1.482	1.482	1
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g	2	2	--	0.04	0.584	0
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g	2	2	--	0.077	12.73	6
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g	2	2	--	0.392	31.427	16
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g	2	1	--	1.202	1.202	1
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g	2	2	--	0.021	2.109	1
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g	2	1	--	0.108	0.108	0
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g	2	1	--	0.851	0.851	1
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g	2	1	--	1.287	1.287	1
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g	2	1	--	0.038	0.038	0
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g	2	2	--	0.058	0.365	0
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g	2	1	--	0.255	0.255	0
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g	2	0	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g	2	1	--	0.783	0.783	1
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g	2	1	--	0.219	0.219	0
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g	2	0	--	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g	2	1	--	0.207	0.207	0

ANC04914
BZTO104(e)004914

Table B-8. Results for Round 2B Subsurface Sediment Field Replicate Samples.

Analyte Group/Chemical Name	CAS #	Units	Field Replicates					
			Number Collected	Number Detected	RPD Above 50	Minimum	Maximum	Average
PCB Aroclors								
Aroclor 1016	12674-11-2	µg/kg	9	0	--	--	--	--
Aroclor 1221	11104-28-2	µg/kg	9	0	--	--	--	--
Aroclor 1232	11141-16-5	µg/kg	9	0	--	--	--	--
Aroclor 1242	53469-21-9	µg/kg	9	0	--	--	--	--
Aroclor 1248	12672-29-6	µg/kg	9	2	--	8.6	21	15
Aroclor 1254	11097-69-1	µg/kg	9	3	--	4.1	44	26
Aroclor 1260	11096-82-5	µg/kg	9	3	--	2.5	38	20
Aroclor 1262	37324-23-5	µg/kg	9	0	--	--	--	--
Aroclor 1268	11100-14-4	µg/kg	9	0	--	--	--	--

Notes:
RPD - relative percent difference

ANC04915
BZTO104(e)004915

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PORTLAND HARBOR RI/FS

ROUND 2B SUBSURFACE SEDIMENT DATA REPORT

APPENDIX C

DATA VALIDATION REPORTS

(PROVIDED ON ACCOMPANYING CD)

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May 22, 2006

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PORTLAND HARBOR RI/FS

ROUND 2B SUBSURFACE SEDIMENT DATA REPORT

APPENDIX D

SCRA DATABASE, EXCEL FLAT FILE FORMAT

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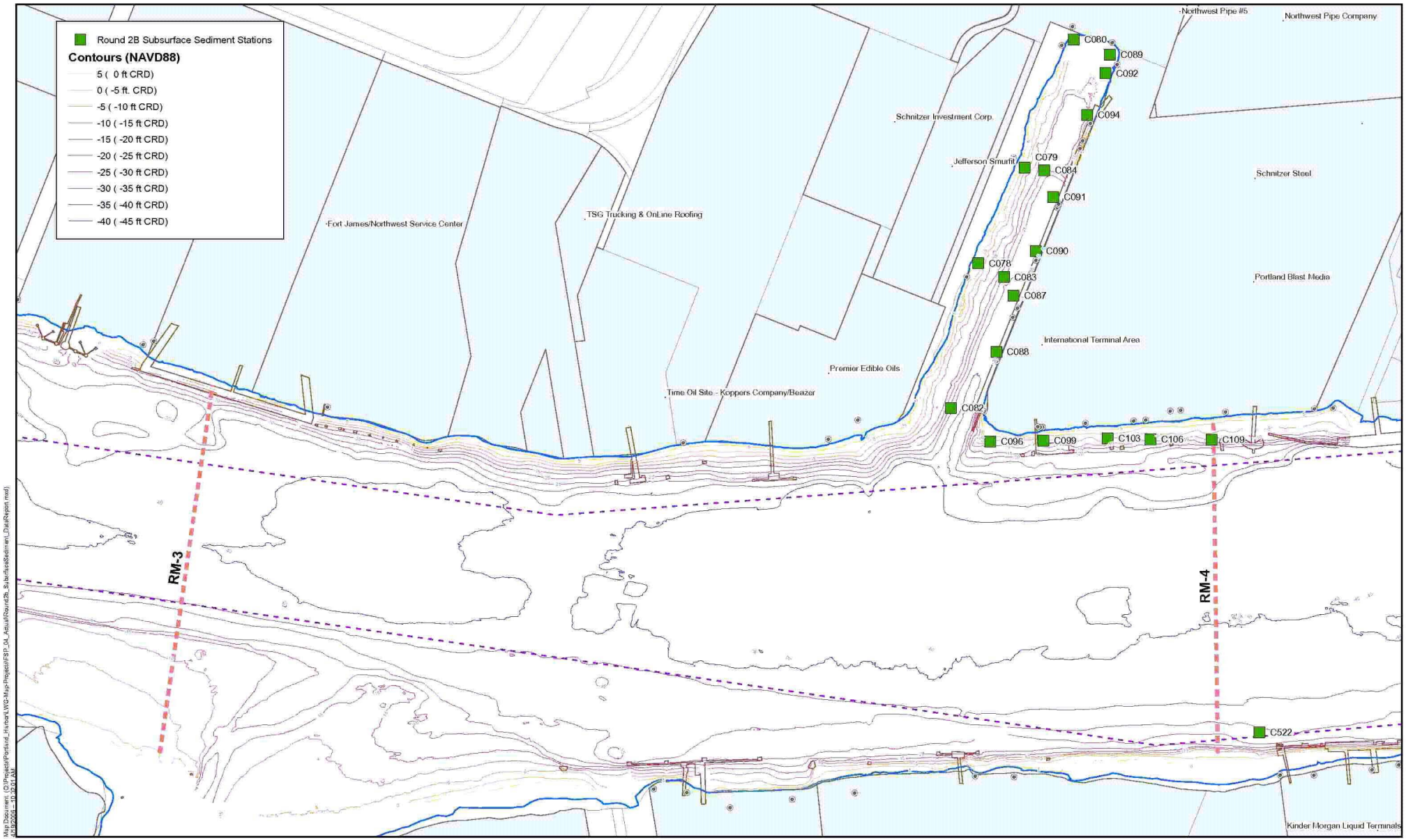
May 22, 2006



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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers
Bathymetric Information: David Evans and Associates, Inc.

0 100 200 400
Feet

Outfalls
River Miles
Docks & Structures
Nearshore Zone
Navigation Channel
River Edge
Upland Sites

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Figure 2-1a
Portland Harbor RI/FS
Round 2B Subsurface
Sediment Sample Locations

Map Document: (O:\Projects\Portland_Harbor\LWG-Maps-Projects\FSP_04_Arcs\Round2b_SubsurfaceSediment_DataReport.mxd)
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ANC04918
BZT0104(e)004918

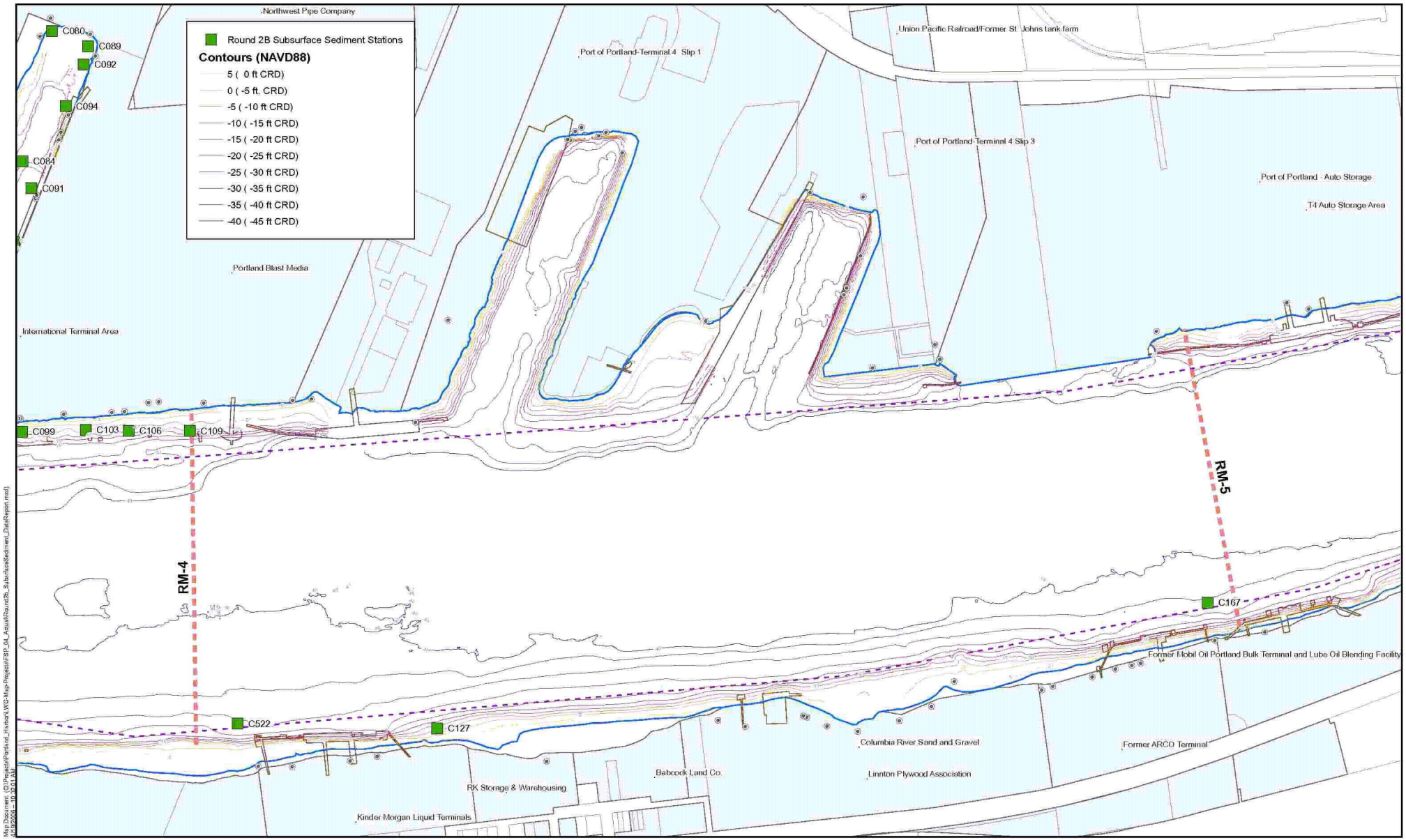

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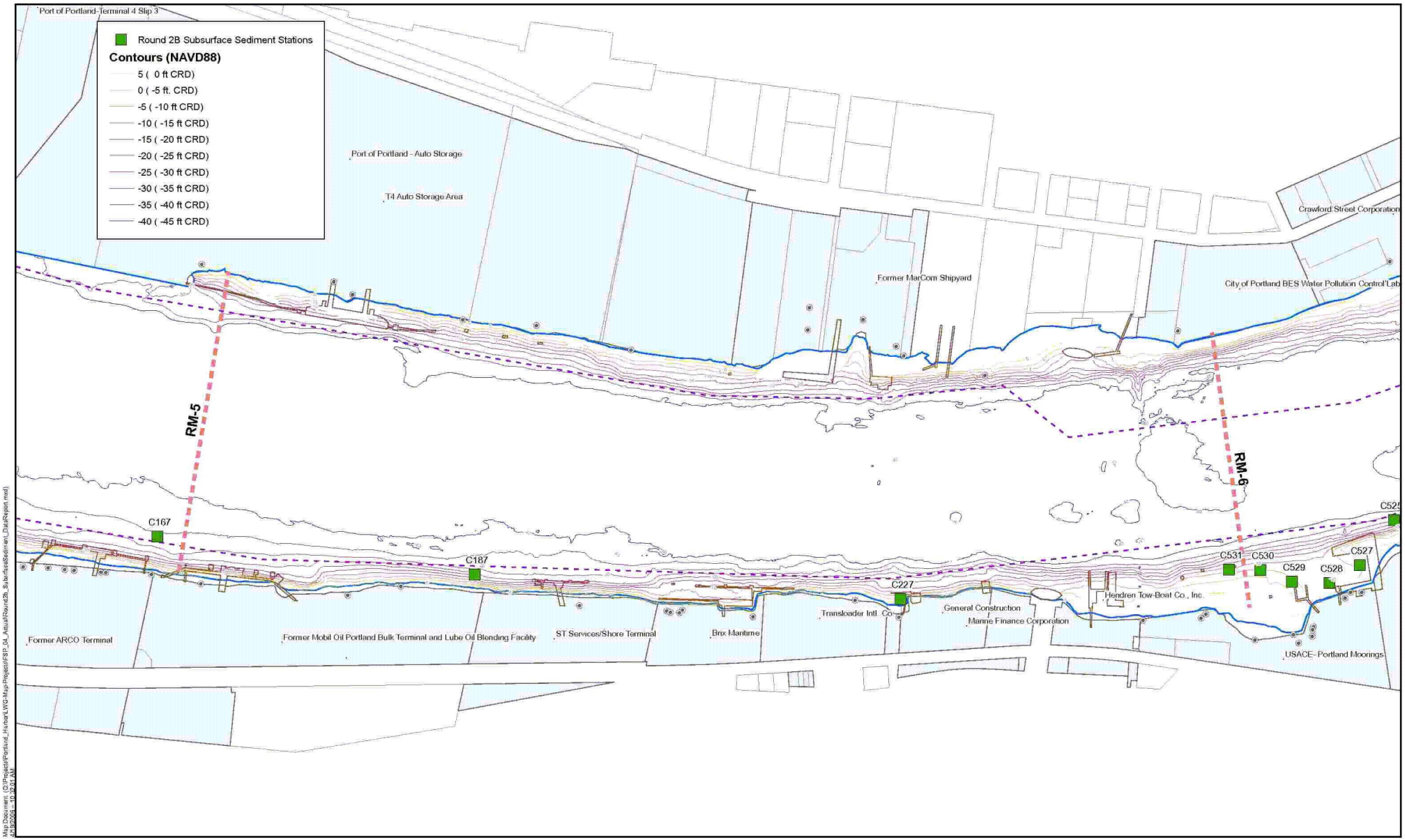
Figure 2-1b
Portland Harbor RI/FS
Round 2B Subsurface
Sediment Sample Locations

ANC04919
BZTO104(e)004919



Map Document: (O:\Projects\Portland_Harbor\LWG-Map-Projects\FSP_04_Aerial\Round2b_SubsurfaceSediment_DataReport.mxd)
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Channel & River miles: US Army Corps of Engineers
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Figure 2-1c
Portland Harbor RI/FS
Round 2B Subsurface
Sediment Sample Locations

ANC04920
BZTO104(e)004920

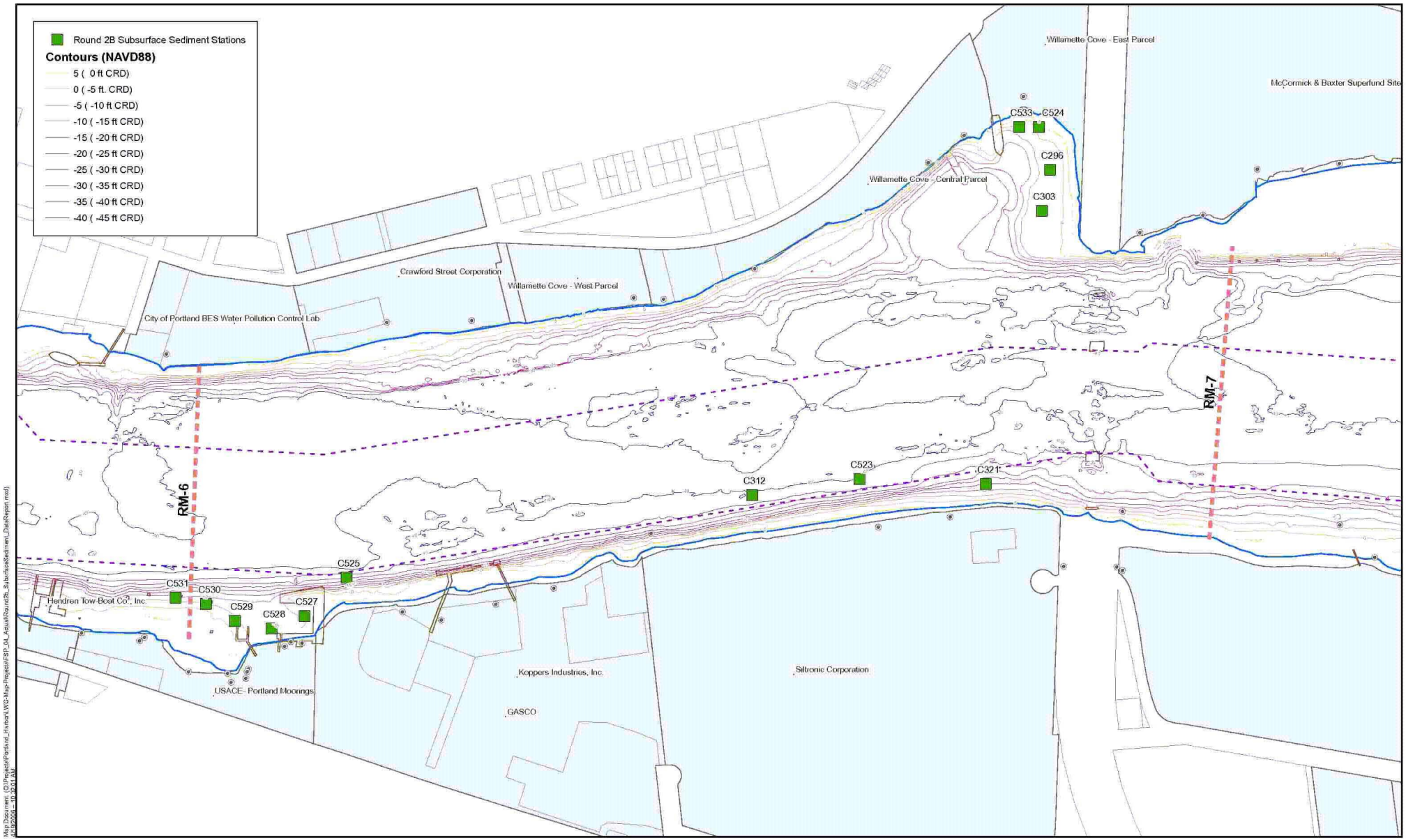
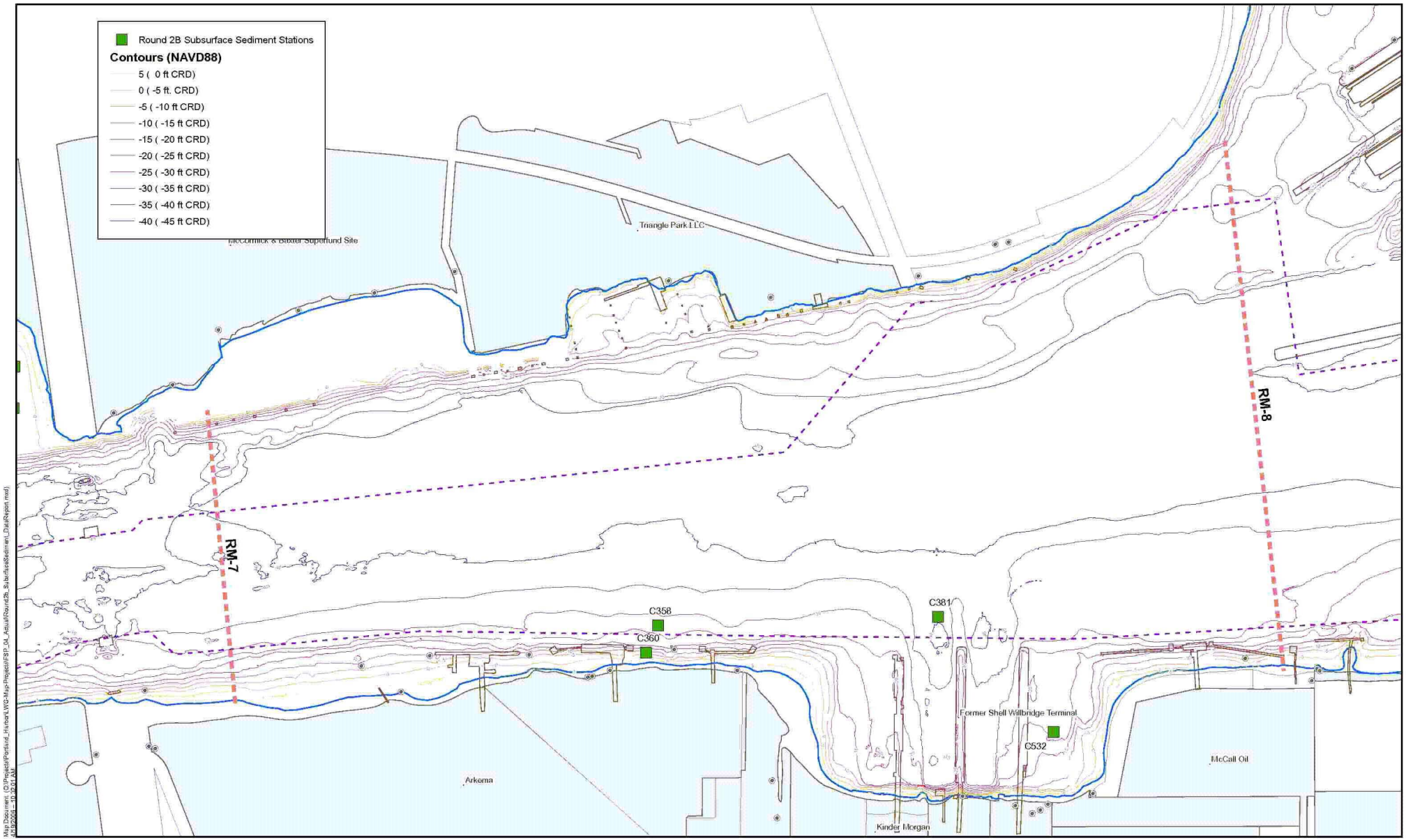


Figure 2-1d
Portland Harbor RI/FS
Round 2B Subsurface
Sediment Sample Locations

ANC04921
BZTO104(e)004921



Map Document: (O:\Projects\Portland_Harbor\LWG-Maps-Projects\FSP_04_Aerial\Round2b_SubsurfaceSediment_DataReport.mxd)
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Channel & River miles: US Army Corps of Engineers
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Figure 2-1e
Portland Harbor RI/FS
Round 2B Subsurface
Sediment Sample Locations

ANC04922
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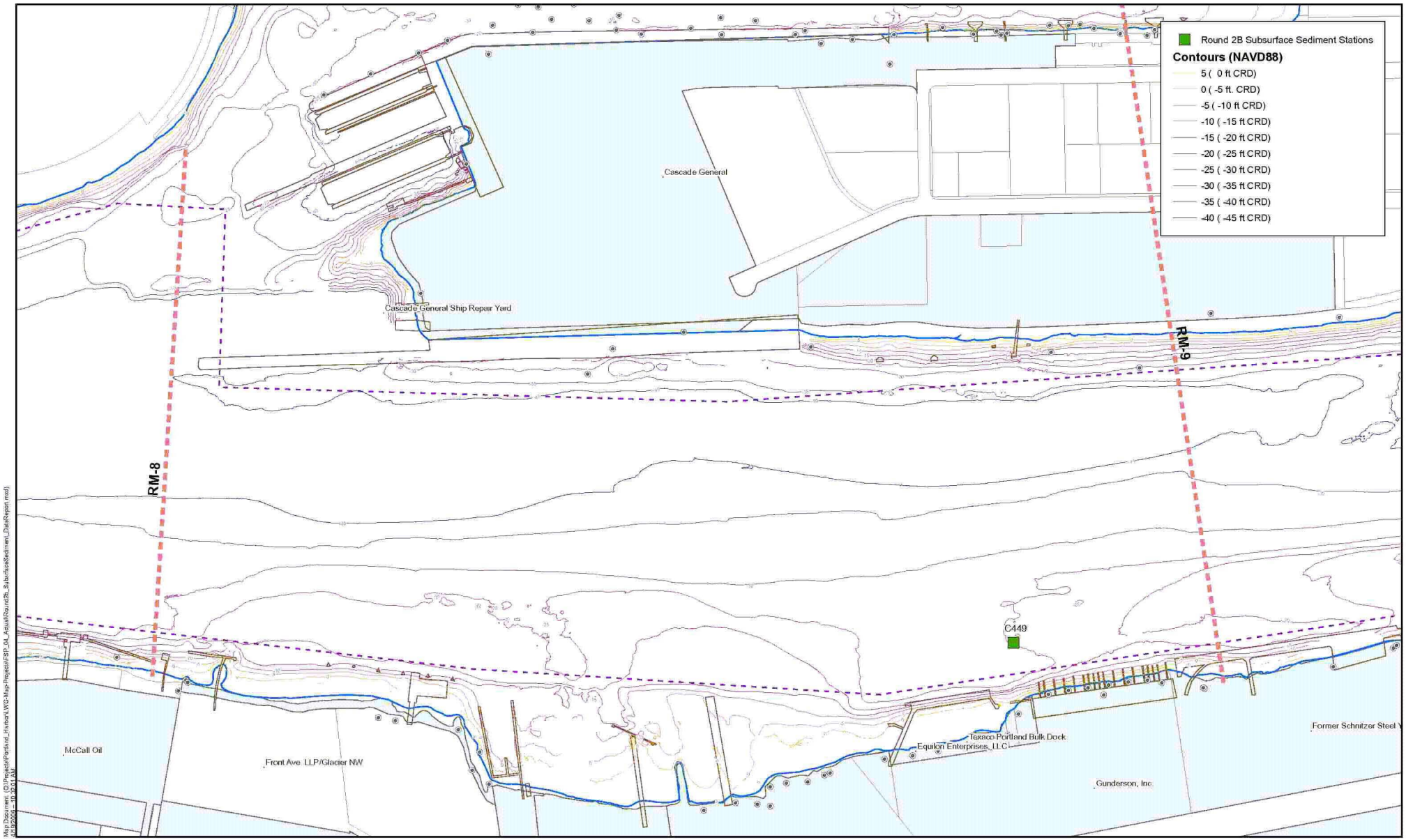

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Transportation, Property, or Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers
Bathymetric Information: David Evans and Associates, Inc.

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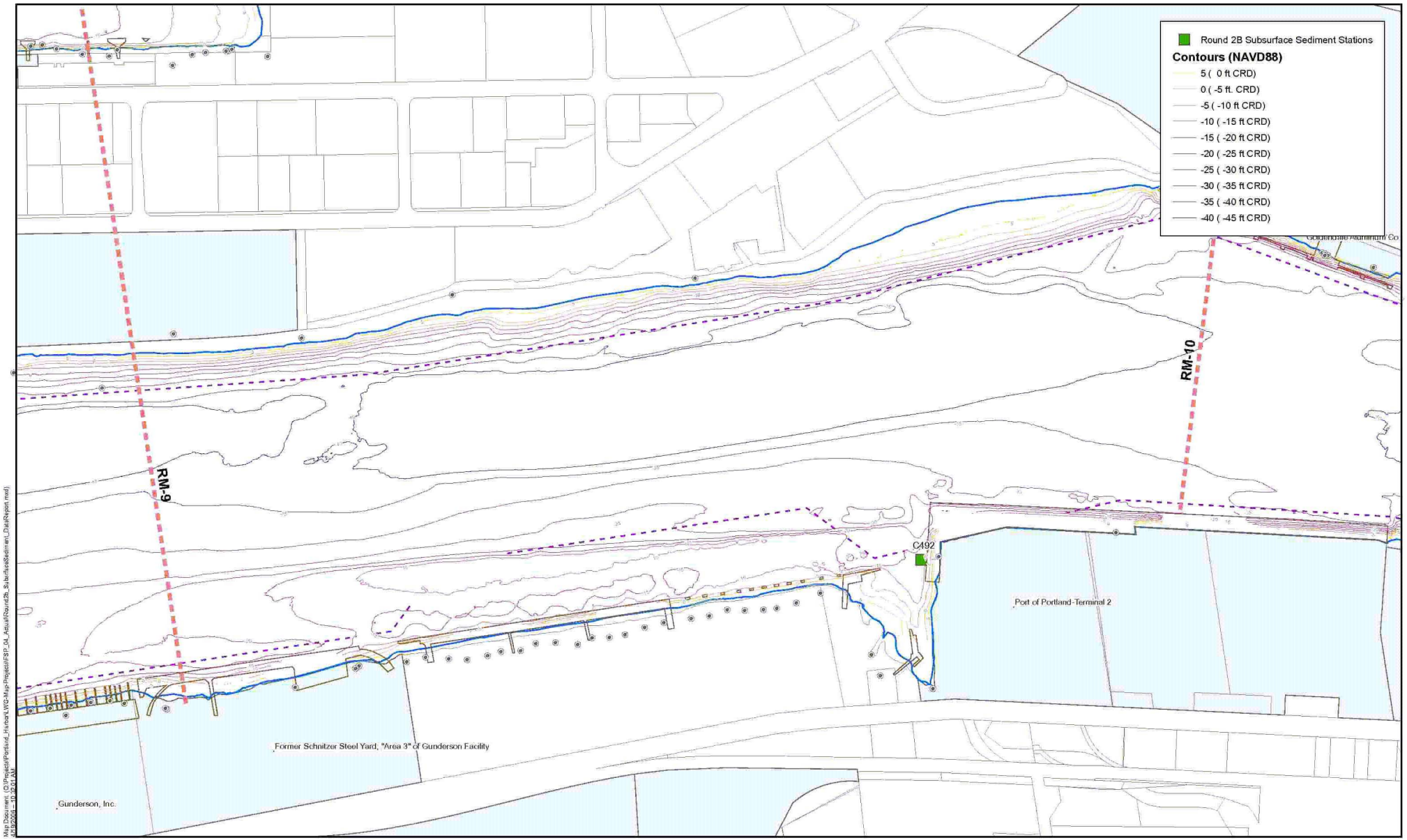
Figure 2-1f
Portland Harbor RI/FS
Round 2B Subsurface
Sediment Sample Locations

ANC04923
BZTO104(e)004923



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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers
Bathymetric Information: David Evans and Associates, Inc.

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Figure 2-1g
Portland Harbor RI/FS
Round 2B Subsurface
Sediment Sample Locations

ANC04924
BZTO104(e)004924

EcoChem, Inc.

rec'd A-11-06

Environmental Science and Chemistry

TRANSMITTAL

DATE: April 7, 2006

PROJECT NO.: 22109-1

TO: Maja Tritt
Integral Consulting
7900 SE 28th Street, Suite 300
Mercer Island, Washington

FROM: Eric Strout
EcoChem, Inc.
710 Second Avenue, Suite 660
Seattle, Washington 98104

VIA: **US Mail**

WE ARE SENDING THE FOLLOWING MATERIALS:

Hardcopy version of Phase 2B Sediment Sampling, Fall 2005, Data Quality Evaluation for Portland Harbor project.
(Integral Task #B01-01-48C)

We will also email electronic version of these reports.

Copies: Project files
Chron

CJW 4/7/2006 11:23:13 AM
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ANC04925
BZTO104(e)004925

EcoChem, Inc.

Environmental Data Quality

DATA QUALITY EVALUATION

PORTLAND HARBOR

PHASE 2B SEDIMENT SAMPLING, FALL 2005

Volatile Organic Compounds (VOC) - Method SW8260B
Semivolatile Organic Compounds (SVOC) - Method SW8270C
Polycyclic Aromatic Hydrocarbons (PAH) - Method SW8270-SIM
Chlorinated Phenols - Method SW8151A
Chlorinated Pesticides - Method SW8081A
Polychlorinated Biphenyls (PCB) – Method SW8082
Organotins - Krone Method
Fuels – NWTPH-Gx and NWTPH-Dx Methods
Dioxin/Furan Compounds – Method E1613B
Herbicides – Method SW8151
Metals - Methods SW6010/6020, SW7470/7471A, & SW7742
Hexavalent Chromium – SW7196A
Total Organic Carbon – PSEP Method
Grain Size, Specific Gravity, and Percent Solids

Prepared for:

Integral Consulting
7900 SE 28th Street, Suite 300
Mercer Island, Washington 98040

Integral Project: B01-01-48C

Prepared by:

EcoChem, Inc.
710 Second Avenue, Suite 660
Seattle, Washington 98104

EcoChem Project: C22109-1

April 5, 2006

Approved for Release:

Eric Strout
Project Manager/Technical Director
EcoChem, Inc.

DATA QUALITY EVALUATION

BASIS OF DATA EVALUATION

The data were validated using guidance and quality control (QC) criteria documented in the analytical methods; *Guidance on Environmental Data Verification and Validation* (EPA 2002c); *Portland Harbor RI/FS, Round 2, Quality Assurance Project Plan* (QAPP) (Integral 2004); and *National Functional Guidelines for Organic and/or Inorganic Data Review* (USEPA 1994, 1999 & 2002). Additional guidance for the dioxin/furan data was from *EPA Region 10 SOP for the Validation of Polychlorinated Dibenzodioxin (PCDD) and Polychlorinated Dibenzofuran (PCDF) Data* (EPA 1996).

Data qualifier definitions, reason codes, and validation criteria are included as **Appendix A**. Data validation reports, which discuss individual findings for each quality control element [by sample delivery group (SDG)], are provided in **Appendix B**. Data validation worksheets and communication records are organized by SDG and will be kept on file at EcoChem.

PROCESS FOR DATA VALIDATION

All electronic data deliverable files (EDD) were verified by comparing 100% of the field sample results and 10% of the QC sample results to the hardcopy data package.

Ninety percent (90%) of the data received a Level III validation, which included evaluation (as appropriate for each method) of:

- Package completeness
- Sample chain-of-custody and sample preservation
- Analytical holding times
- Blank contamination
- Precision (replicate analyses)
- Accuracy (compound recovery)
- Chromatogram review (pesticide, PCB, and fuel fractions)
- Detection limits
- Instrument performance (initial calibration, continuing calibration, tuning, sensitivity and degradation)

All other data packages received full (Level IV) data validation, which includes evaluation of compound identification and quantitation (transcription and calculation checks).

A dual-tier system of primary and secondary reviewers is utilized to ensure technical correctness and QC of the validation process; and all data validation is documented using standardized and controlled validation worksheets and spreadsheets. These worksheets are completed for each SDG, documenting all deficiencies, outliers and subsequent qualifiers.

After qualifiers are entered into the EcoChem database, a second party verifies 100% of the qualifier entry. Interpretive qualifiers are then applied to the field samples and qualified data is exported to the project database (Integral).

ANC04927
BZTO104(e)004927

SUMMARY OF DATA VALIDATION: VOLATILE ORGANIC COMPOUNDS

A total of 140 sediment samples were analyzed for volatile organic compounds (VOC) for the Portland Harbor Phase 2 RI/FS Round B Sampling event. The sediment samples included eight (8) field replicates and four (4) field split samples. Eight (8) rinsate blanks and five (5) trip blanks were collected to monitor the field collection process. Columbia Analytical Services, Kelso, Washington completed the VOC analyses.

The VOC data for the sediment samples were generally acceptable. A total of 395 data points (5.5% of all sediment VOC results) were of unacceptable quality and were rejected. A total of 122 data points were estimated because control limits were exceeded in one or more laboratory QC samples or procedures. Qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose. Note that many of the data points were estimated for more than one reason, so the numbers cited below add up to more than 122 data points.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during the analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were greater than 94% complete for the sediment VOC analyses.

The table below summarizes the sediment results that were rejected during data validation and the associated QC item. Note that most data points were rejected for more than one QC violation.

Number of Rejected Results	Reason for Rejection
395	Initial Calibration
242	Continuing Calibration
3	MS/MSD %Recovery

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 7.7°C. These temperature outliers did not impact data quality and no action was taken.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. The initial calibrations met the linearity (percent relative standard deviation or correlation coefficient) control limits.

The relative response factor (RRF) values were less than the 0.05 minimum acceptance limit for several compounds (methylethyl ketone, acrolein, acrylonitrile, vinyl acetate, methyl n-butyl ketone, and methyl isobutyl ketone) in most of the initial and continuing calibration analyses. Due to the potential significant low bias, the validation guidelines require that the associated positive results are estimated (J) and the reporting limits are rejected (R). Methylethyl ketone was detected in several

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samples; these results are estimated (J). The reporting limits for the remaining methylethyl ketone and other analytes associated with RRF value outliers were rejected (R). This constitutes the majority of rejected data points (395) for the sediment VOC analyses.

Overall the continuing calibration percent difference (%D) values indicate acceptable instrument stability. When %D outliers were present, the potential bias was determined. If the %D outlier indicated a low bias, associated positive results and detection limits were estimated (J or UJ). If the %D outlier indicated a high bias, only associated positive results were estimated (J). Sixty-seven (67) positive results and a total of 58 reporting limits were estimated (J or UJ). Overall, 1.8% of the sediment VOC results were estimated based on calibration outliers.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration detected in the blank for most compounds and ten times (10x) for phthalates. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Various target analytes were detected in the method blanks. A total of 260 results (3.6% of all sediment VOC results) were qualified as not detected (U) based on method blank contamination. The qualifiers were issued to methylene chloride (136 results), acetone (68 results), benzene (9 results), naphthalene (35 results), styrene (12 results), carbon disulfide (10 results), methyl isobutyl ketone (2 results), and methylethyl ketone (1 result).

Accuracy

Surrogate Compound Recoveries

Surrogate compounds were added to all samples. The surrogate recoveries reported by the laboratory typically met the criteria for acceptable performance; however, a surrogate recovery outlier was present in one sample. As there was only one %R value outlier out of four surrogates, the associated field data were not significantly affected, and no further action was taken.

Matrix Spike Recoveries

Matrix and duplicate matrix spike analyses (MS/MSD) met the criteria for frequency of analysis. Several of the recoveries reported by the laboratory for MS/MSD analyses did not meet the criteria for acceptable performance, with most outliers indicating a potential low bias. Ten sediment results (0.14% overall) were estimated (J or UJ) during the quality assurance review because the control limits for MS/MSD recovery were not met. Four sediment results (0.06% overall) were rejected (R). Results were rejected when the %R value was less than 10%, indicating an extremely low bias.

Laboratory Control Sample Recoveries

Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses were performed at the proper frequency. Several of the recoveries reported by the laboratory did not meet the criteria for acceptable performance. As the outliers indicate a potential high bias and the affected compounds were not detected, no action was taken based on LCS/LCSD outliers.

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Precision

MS/MSD and LCS/LCSD analyses were evaluated for laboratory precision. Several of the relative percent difference (RPD) values for the MS/MSD analyses did not meet the criteria for acceptable performance. For laboratory precision outliers, qualifiers were issued only if the affected compound was detected in the parent sample or was also qualified due to recovery outliers. One data point was estimated (J) during the quality assurance review because control limits for RPD values were not met.

Method Detection Limits and Method Reporting Limits

To try to meet the project analytical concentration goals (ACG), the laboratory reported non-detects at the method detection limits (MDLs), adjusted for sample size, percent moisture, and any dilution factor. Only two target analytes (1,4-dichlorobenzene and naphthalene) have established ACG and the laboratory met these goals.

The method reporting limits (MRLs) ranged from 0.035 µg/Kg to 13 µg/Kg for the non-detected results. With the exception of the 1,1,2,2-tetrachloroethene reporting limit in Sample LW2-C092-C, all method reporting limits (MRLs) were less than 6 µg/Kg, and were acceptable.

Field Quality Control Samples

Field QC samples collected for the Round 2B sampling event included field blank, trip blank, and field replicate samples. The results for the field QC samples are discussed in the following sections.

Field Blanks

After qualifiers based on method blank contamination were applied, very few of the analytes present in the field and trip blanks were also present in the field samples. The contaminants present in each blank are documented in the data validation worksheets. When a field or trip blank contaminant was present in the associated samples, action levels were established and used to assess the field samples.

In most cases, these analytes were either not detected or were present at concentrations greater than the action levels in the associated samples. Twenty-three (23) results (nine acetone results and 14 toluene results) were qualified as not detected based on rinsate blank contamination.

Field Replicate Samples

Four of the RPD values for field replicate analyses did not meet the criteria for acceptable precision. The field replicate precision outliers are discussed in greater detail in the data validation reports. No data were qualified based on field precision; however, users of the data should consider the potential impact of precision outliers on the reported results.

SUMMARY OF DATA VALIDATION: SEMIVOLATILE ORGANIC COMPOUNDS

A total of 137 sediment samples were analyzed for semivolatile organic compounds (SVOC) for the Portland Harbor Phase 2 RI/FS Round B Sampling event. The sediment samples included seven (7) field replicates and four (4) field split samples. Seven (7) rinsate blanks were collected to monitor the field collection process. Columbia Analytical Services, Kelso, Washington completed the SVOC analyses.

The SVOC data for the sediment samples were generally acceptable. A total of 49 data points (0.75% of all sediment SVOC results) were of unacceptable quality and were rejected. Fifty-two (52) data points were estimated because control limits were exceeded in one or more laboratory QC samples or procedures. Qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during the analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were greater than 99% complete for the sediment SVOC analyses.

The table below summarizes the sediment results that were rejected during data validation and the associated QC item. One data point was rejected for two reasons.

Number of Rejected Results	Reason for Rejection
47	LCS/LCSD % Recovery
3	MS/MSD % Recovery

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 7.7°C. These temperature outliers did not impact data quality and no action was taken.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All initial calibration analyses met all acceptance criteria.

The continuing calibration percent difference (%D) values were reviewed to evaluate instrument stability. When %D outliers were present, the potential bias was determined. If the %D outlier indicated a low bias, associated positive results and detection limits were estimated (J or UJ). If the %D outlier indicated a high bias, only associated positive results were estimated (J). A total of 33 detection limits were estimated (UJ). Overall, 0.5% of the sediment SVOC results were estimated based on calibration outliers.

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Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration detected in the blank for most compounds and ten times (10x) for phthalates. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Various target analytes were detected in the method blanks. A total of 166 results (2.5% of all sediment SVOC results) were qualified as not detected (U) based on method blank contamination. The qualifiers were issued to bis(2-ethylhexyl)phthalate (87 results), di-n-butyl phthalate (44 results), phenol (29 results), naphthalene and 4-chloro-3-methylphenol (3 results each).

Accuracy

Surrogate Compound Recoveries

Surrogate compounds were added to all samples. The surrogate recoveries reported by the laboratory typically met the criteria for acceptable performance; however, surrogate recovery outliers were present in several samples. As the outliers were due to required extract dilution, or if there was only one percent recover (%R) value outlier per fraction (acid or base-neutral), the associated field data were not impacted, and no further action was taken.

Matrix Spike Recoveries

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the proper frequency. Several of the recoveries reported by the laboratory for MS/MSD analyses did not meet the criteria for acceptable performance. Three (3) results (0.05% overall) were rejected (R). Results were rejected when the %R value was less than 10%, indicating an extremely low bias.

Laboratory Control Sample Recoveries

Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses were performed at the proper frequency. Several of the recoveries reported by the laboratory did not meet the criteria for acceptable performance. A total of 19 sediment SVOC results (0.29% overall) were estimated (J or UJ) because the control limits for LCS/LCSD recovery were not met. A total of 47 results (0.72% overall) were rejected (R). Results were rejected when the %R value was less than 10%, indicating an extremely low bias.

Precision

MS/MSD and LCS/LCSD analyses were evaluated for laboratory precision. Several of the relative percent difference (RPD) values for the MS/MSD and LCS/LCSD analyses did not meet the criteria for acceptable performance. For laboratory precision outliers, qualifiers were issued only if the affected compound was detected in the parent sample or was also qualified due to recovery outliers. Nine data points were estimated (J) during the quality assurance review because control limits for RPD values were not met.

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Method Detection Limits and Method Reporting Limits

To try to meet the project analytical concentration goals (ACG), the laboratory reported non-detects at the method detection limits (MDLs), adjusted for sample size, percent moisture, and any dilution factor. These method reporting limits (MRLs) ranged from 1.4 µg/Kg to 20,000 µg/Kg for the non-detected results, with roughly 44% of the results greater than 10 µg/Kg. The ACG were not met for several of the SVOC compounds.

Field Quality Control Samples

Field QC samples collected for the Round 2B sampling event included field blank and field replicate samples. The results for the field QC samples are discussed in the following sections.

Field Blanks

Seven field blanks were associated with the sediment samples. Various target analytes were detected in the field blanks. The contaminants present in each field blank are documented in the data validation worksheets.

In most cases, these analytes were either not detected or were present at concentrations greater than the action levels in the associated samples. Seven di-n-butyl phthalate results were qualified as not detected based on rinsate blank contamination.

Field Replicate Samples

One of the RPD values for field replicate analyses did not meet the criteria for acceptable precision. The field replicate precision outliers are discussed in greater detail in the data validation reports. No data were qualified based on field precision; however, users of the data should consider the potential impact of precision outliers on the reported results.

SUMMARY OF DATA VALIDATION: POLYCYCLIC AROMATIC HYDROCARBONS

A total of 138 sediment samples were analyzed for polycyclic aromatic hydrocarbon compounds (PAH) for the Portland Harbor Phase 2 RI/FS Round B Sampling event. The sediment samples included seven (7) field replicates and five (5) field split samples. Columbia Analytical Services, Kelso, Washington completed the PAH analyses.

The PAH data for the sediment samples were generally acceptable. No data were rejected for any reason. Fifteen (15) data points were estimated, and 100 data points (4.0% of all sediment PAH results) were qualified based on blank contamination. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during the analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the sediment PAH analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 7.7°C. These temperature outliers did not impact data quality and no action was taken.

Several samples were re-extracted due to contamination in the associated method blank. The re-extractions occurred 5 to 7 days outside of the holding time limits. The associated results were estimated (J) to indicate a potential low bias. Fifteen (15) results (0.6% of all sediment PAH results) were estimated.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All initial calibrations met all acceptance criteria.

The continuing calibration percent difference (%D) values were reviewed to evaluate instrument stability. Several %D outliers were noted; however, the associated results were from dilution analyses that were not reported. No data were affected.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration detected in the blank. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U). If the result is also less than the reporting limit, then the result is elevated to the

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reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Various target analytes were detected in the method blanks. A total of ninety (90) results (3.6% of all sediment PAH results) were qualified as not detected (U) based on method blank contamination. The qualifiers were issued to acenaphthene (2 results), anthracene (8 results), benz(a)anthracene (5 results), benzo(a)pyrene (4 results), benzo(b)fluoranthene (2 results), benzo(g,h,i)perylene (3 results), benzo(k)fluoranthene (2 results), chrysene (4 results), dibenz(a,h)anthracene (5 results), dibenzofuran (5 result), fluoranthene (4 results), fluorene (2 results), indeno(1,2,3-cd)pyrene (3 results), naphthalene (33 results), phenanthrene (4 results), and pyrene (4 results).

Accuracy

Surrogate Compound Recoveries

Surrogate compounds were added to all samples. The surrogate recoveries reported by the laboratory met the criteria for acceptable performance.

Matrix Spike Recoveries

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the proper frequency. One of the recoveries reported by the laboratory for MS/MSD analyses did not meet the criteria for acceptable performance. No action was taken, as the outlier was part of a batched QC set.

Laboratory Control Sample Recoveries

Laboratory control sample (LCS) analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory met the criteria for acceptable performance.

Precision

MS/MSD and LCS/LCSD analyses were evaluated for laboratory precision. The relative percent difference (RPD) values for the MS/MSD and LCS/LCSD analyses met the acceptance criteria.

Method Detection Limits and Method Reporting Limits

The laboratory reported non-detects at the method detection limits (MDLs), adjusted for sample size and any dilution factor. These method reporting limits (MRLs) ranged from 0.16 to 1.9 µg/Kg for the non-detected results, with one dibenzofuran reporting limit result at 7.6 µg/Kg.

Field Quality Control Samples

Field QC samples collected for the Round 2B sampling event included field blank and field replicate samples. The results for the field QC samples are discussed in the following sections.

Field Blanks

The field blanks were analyzed with the standard SVOC analyses, and are summarized in the SVOC validation report. Several PAH compounds were detected in the field blanks. With the exception of 2-methylnaphthalene, the PAH compounds were either not detected or were present in the associated samples at concentrations greater than the action levels. The 2-methylnaphthalene results in 10 samples were qualified as not detected (U).

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Field Replicate Samples

Many of the RPD values for field replicate analyses did not meet the criteria for acceptable precision. The field replicate precision outliers are discussed in greater detail in the data validation reports. No data were qualified based on field precision; however, users of the data should consider the potential impact of precision outliers on the reported results.

SUMMARY OF DATA VALIDATION: CHLORINATED PHENOLS

A total of 138 sediment samples were analyzed for chlorinated phenolic compounds for the Portland Harbor Phase 2 RI/FS Round B Sampling event. The sediment samples included seven (7) field replicates and five (5) field split samples. Seven (7) rinsate blanks were collected to monitor the field collection process. Columbia Analytical Services, Kelso, Washington completed the phenols analyses.

The phenols data for the sediment samples were generally acceptable. No data were rejected for any reason. A total of 28 data points (4.1% of all sediment phenols results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the sediment phenols analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 7.7°C. These temperature outliers did not impact data quality and no action was taken.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All initial and continuing calibration analyses met acceptance criteria.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration detected in the blank for most compounds and ten times (10x) for phthalates. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Various target analytes were detected in the method blanks. A total of two (2) results (0.3% of all sediment phenol results) were qualified as not detected (U) based on method blank contamination. The qualifiers were issued to 2,4,5-trichlorophenol (2 results).

Accuracy

Surrogate Compound Recoveries

Surrogate compounds were added to all samples. The surrogate recoveries reported by the laboratory typically met the criteria for acceptable performance; however, surrogate recovery outliers were present in several samples. As the outliers were due to required extract dilution, the associated field data were not impacted, and no further action was taken.

Matrix Spike Recoveries

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the appropriate frequency. All MS/MSD recovery values were acceptable.

Laboratory Control Sample Recoveries

Laboratory control sample (LCS) analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory met the criteria for acceptable performance.

Precision

MS/MSD and LCS/LCSD analyses were evaluated for laboratory precision. All of the relative percent difference (RPD) values were acceptable.

Method Detection Limits and Method Reporting Limits

The laboratory reported non-detects at the method detection limits (MDL), adjusted for sample size and any dilution factor. These method reporting limits (MRL) ranged from 0.096 to 340 µg/Kg for the non-detected results, with the majority (91%) less than 10 µg/Kg. These generally met the MRL values from the QAPP.

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40% the reported result was "P" flagged by the laboratory. As the elevated RPD value may indicate the presence of an interferent that may result in a high bias, when the RPD was between 40% and 60% the results were estimated (J). Where the RPD value was greater than 60% the results were tentatively identified (NJ). Seventeen (17) data points (2.5% of all sediment phenols results) were estimated (J) and eleven (11) results (1.6%) were tentatively identified.

Field Quality Control Samples

Field QC samples collected for the Round 2B sampling event included field blank and field replicate samples. The results for the field QC samples are discussed in the following sections.

Field Blanks

Seven field blanks were analyzed with the phenols analyses. No target compounds were detected in any field blank. No action was necessary.

Field Replicate Samples

All of the RPD values for field replicate analyses were acceptable.

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SUMMARY OF DATA VALIDATION: PESTICIDE COMPOUNDS

A total of 141 sediment samples were analyzed for pesticide compounds for the Portland Harbor Phase 2 RI/FS Round B Sampling event. The sediment samples included seven (7) field replicates and four (4) field split samples. Seven (7) rinsate blanks were collected to monitor the field collection process. Columbia Analytical Services, Kelso, Washington performed the pesticides analyses.

The pesticide data for the sediment samples were generally acceptable. One result was were rejected. A total of 1,629 data points (37.3% of all sediment pesticide results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below. Note that many of the data points were estimated for more than one reason, so the numbers cited below add up to more than 1,629 data points.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. One reporting limit was rejected based on a recovery value less than 10% in the associated laboratory control sample. The results reported by the laboratory were greater than 99% complete for the sediment pesticide analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers did not impact data quality and no action was taken.

Samples LW2-C533-D, LW2-C293-B, LW2-C296-C, LW2-C303-C, LW2-C523-A, LW2-C523-B, and LW2-C523-C were extracted 19 days after collection, after the original extracts were lost during clean-up. The positive results and reporting limits for these samples were estimated (J/UJ) due to holding time violation. Overall, 217 results (5.0% of the sediment pesticide results) were estimated based on holding time outliers.

Instrument Performance

Calibrations

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All initial calibrations met all acceptance criteria.

The continuing calibration (CCAL) percent difference (%D) values were used to evaluate instrument stability. The %D value for toxaphene was outside the control limits in one of the CCAL. As the %D outlier indicated a high bias and toxaphene was not detected in the associated samples, no action was necessary.

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Endrin/DDT Breakdown

Performance evaluation mixtures (PEM) were analyzed at the proper frequency to measure percent breakdown of 4,4'-DDT and endrin. All breakdown values were acceptable.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration detected in the blank for most compounds and ten times (10x) for phthalates. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Various target analytes were detected in the method blanks. A total of six (6) results (0.14% of all sediment pesticides results) were qualified as not detected (U) based on method blank contamination. The qualifiers were issued to hexachlorobenzene (6 results).

Accuracy

Surrogate Compound Recoveries

Surrogate compounds were added to all samples. The surrogate recoveries reported by the laboratory typically met the criteria for acceptable performance; however, surrogate recovery outliers were present in several samples. Since only one surrogate outlier was present, or since the outliers were due to required dilution factors, the data were not affected and no action was taken.

Matrix Spike Recoveries

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the proper frequency. Several of the recoveries reported by the laboratory for MS/MSD analyses did not meet the criteria for acceptable performance. Sixty-four (64) sediment pesticides results (1.5% overall) were estimated (J or UJ) because the control limits for MS/MSD recovery were not met.

Laboratory Control Sample Recoveries

Laboratory control sample (LCS) analyses met the criteria for frequency of analysis. Several of the recoveries reported by the laboratory for LCS analyses did not meet the criteria for acceptable performance. Since the majority of the LCS outliers indicated a potential low bias, associated positive results and reporting limits were affected. A total of 1,134 results were estimated (J or UJ) based on LCS recovery outliers. This represents 25.9% of all sediment pesticide results. One reporting limit was rejected as the associated LCS %R value was less than 10%.

Precision

MS/MSD and LCS/LCSD analyses were evaluated for laboratory precision. Several relative percent difference (RPD) values were outside the acceptance limits in the MS/MSD analyses. The affected compounds were estimated (J or UJ) in the parent samples. The two (2) qualifiers represent 0.05% of the pesticide results.

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Method Detection Limits and Method Reporting Limits

To try to meet the project analytical concentration goals (ACG), the laboratory reported non-detects at the method detection limits (MDLs), adjusted for sample size and any dilution factor. The reporting limits for non-detected results ranged from 0.036 µg/Kg to 650 µg/Kg (with toxaphene non-detects extending up to 17,000 µg/Kg) for the non-detected results. The ACG were not met for several of the pesticides. No action was taken.

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40% the reported result was "P" flagged by the laboratory. As the elevated RPD value may indicate the presence of an interferent that may result in a high bias, the associated results were estimated (J). If the RPD value was greater than 60%, the result was qualified as a tentative identification (NJ). A total of 247 data points (5.7% of all sediment pesticide data points, and 29.2% of all positive results for pesticides) were estimated (J) and 192 data points (4.4% of all pesticide results, and 22.7% of all detected pesticide results) were qualified as tentative identifications (NJ). Overall, 52% of the detected pesticide results are affected by interference.

Field Quality Control Samples

Field QC samples collected for the Round 2B sampling event included field blank and field replicate samples. The results for the field QC samples are discussed in the following sections.

Field Blanks

Seven field blanks were analyzed with the pesticides analyses. Oxychlordane was detected in one field blank. Oxychlordane was either not detected or was present in the associated samples at concentrations greater than the action levels. No action was taken.

Field Replicate Samples

Several of the RPD values for field replicate analyses did not meet the criteria for acceptable precision. The field replicate precision outliers are discussed in greater detail in the data validation reports. No data were qualified based on field precision; however, users of the data should consider the potential impact of precision outliers on the reported results.

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SUMMARY OF DATA VALIDATION: POLYCHLORINATED BIPHENYL (PCB) COMPOUNDS

A total of 137 sediment samples were analyzed for PCB compounds for the Portland Harbor Phase 2 RI/FS Round B Sampling event. The sediment samples included seven (7) field replicates and four (4) field split samples. Seven (7) rinsate blanks were collected to monitor the field collection process. Columbia Analytical Services, Kelso, Washington completed the pesticides analyses.

The PCB data for the sediment samples were generally acceptable. No data were rejected for any reason. A total of 123 data points (10% of all sediment PCB results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the sediment PCB analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers did not impact data quality and no action was taken.

Samples LW2-C533-D, LW2-C293-B, LW2-C296-C, LW2-C303-C, LW2-C523-A, LW2-C523-B, and LW2-C523-C were extracted 19 days after collection, after the original extracts were lost during clean-up. The positive results and reporting limits for these samples were estimated (J/UJ) due to holding time violation. Overall, 63 results (5.1% of the sediment PCB results) were estimated based on holding time outliers.

Instrument Performance

Calibrations

Initial and continuing calibrations were completed for all reported analytes at the proper frequency. All initial and continuing calibrations met all acceptance criteria.

Method Blank Analyses

Method blanks were analyzed at the appropriate frequency. No target analytes were detected in any method blank.

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Accuracy

Surrogate Compound Recoveries

Surrogate compounds were added to all samples. The surrogate recoveries reported by the laboratory typically met the criteria for acceptable performance; however, surrogate recovery outliers were present in two samples. As the outliers indicated a potential high bias, only the associated positive result was qualified. One data point was estimated (J) based on surrogate outliers.

Matrix Spike Recoveries

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the proper frequency. Two of the recoveries reported by the laboratory for one batched MS/MSD set did not meet the criteria for acceptable performance. As the parent sample was not part of this sampling event, no action was taken.

Laboratory Control Sample Recoveries

Laboratory control sample (LCS) analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory met the criteria for acceptable performance.

Precision

MS/MSD and LCS/LCSD analyses were evaluated for laboratory precision. The relative percent difference (RPD) values reported by the laboratory met the criteria for acceptable performance.

Method Detection Limits and Method Reporting Limits

To meet the project analytical concentration goals (ACG), the laboratory reported non-detects at the method detection limits (MDLs), adjusted for sample size, percent moisture, and any dilution factor. These method reporting limits (MRLs) ranged from 1.3 µg/Kg to 460 µg/Kg for the non-detected results.

The analytical concentration goal (ACG) of 0.004 µg/Kg was not met, and the QAPP MRL of 4 µg/Kg was not met for 259 of the reported PCB non-detects. In some cases, the laboratory elevated the detection limit and flagged the result ("Ui") due to background interference. No action was taken.

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40% the reported result was "P" flagged by the laboratory. As the elevated RPD value may indicate the presence of an interferent that may result in a high bias, the associated results were estimated (J). If the RPD value was greater than 60%, the result was qualified as a tentative identification (NJ). A total of 61 data points (4.9% of all sediment PCB data points, and 33.5% of all positive results for PCB compounds) were estimated (J).

Field Quality Control Samples

Field QC samples collected for the Round 2B sampling event included field blank and field replicate samples. The results for the field QC samples are discussed in the following sections.

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Field Blanks

Seven field blanks were analyzed with the PCB analyses. No target analytes were detected in any field blank.

Field Replicate Samples

Two of the RPD values for field replicate analyses did not meet the criteria for acceptable precision. The field replicate precision outliers are discussed in greater detail in the data validation reports. No data were qualified based on field precision; however, users of the data should consider the potential impact of precision outliers on the reported results.

SUMMARY OF DATA VALIDATION: ORGANOTINS

Ninety (90) sediment samples were analyzed for organotin compounds for the Portland Harbor Phase 2 RI/FS Round B Sampling event. The sediment samples included four (4) field replicates and three (3) field split samples. Four (4) rinsate blanks were collected to monitor the field collection process. Columbia Analytical Services, Kelso, Washington completed the organotin analyses.

The organotin data for the sediment samples were generally acceptable. Two reporting limits were rejected. Sixteen (16) data points (4.4% of all sediment organotin results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. Two reporting limits were rejected because the recovery value in the associated MS/MSD analyses were less than 10%. The results reported by the laboratory were greater than 99% complete for the sediment organotin analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 7.7°C. These temperature outliers did not impact data quality and no action was taken.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All initial calibration analyses met acceptance criteria.

The continuing calibration (CCAL) percent difference (%D) values were used to evaluate instrument stability. Several %D values were outside the control limits for the RTX-1 column. As the affected compounds were reported from the RTX-35 column, no action was necessary.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration detected in the blank. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Various target analytes were detected in the method blanks. Fifty-five (55) results (15.3% of all sediment organotin results) were qualified as not detected (U) based on method blank contamination. The qualifiers were issued to dibutyltin (22 results) and tributyltin (33 results).

Accuracy

Surrogate Compound Recoveries

A surrogate compound was added to all field and QC samples. All surrogate recovery values met the criteria for acceptable performance.

Matrix Spike Recoveries

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the proper frequency. Several of the recoveries reported by the laboratory for MS/MSD analyses did not meet the criteria for acceptable performance. Two (2) results (0.55% overall) were rejected (R). Results were rejected when the %R value was less than 10%, indicating an extremely low bias.

Laboratory Control Sample Recoveries

Laboratory control sample (LCS) analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory met the criteria for acceptable performance.

Precision

MS/MSD and LCS/LCSD analyses were evaluated for laboratory precision. Several of the relative percent difference (RPD) values in the MS/MSD were outside the control limits. As the associated field sample results were previously rejected based on low MS/MSD %R values, no additional action was taken.

Method Detection Limits and Method Reporting Limits

The laboratory reported non-detects at the method detection limits (MDL), adjusted for sample size and any dilution factor. These method reporting limits (MRL) ranged from 0.03 to 1.8 µg/Kg for the non-detected results. These met the MRL values from the QAPP, except when dilutions were required to bring results within the calibration range.

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40% the reported result was "P" flagged by the laboratory. As the elevated RPD value may indicate the presence of an interferent that may result in a high bias, the associated results were estimated (J). Sixteen (16) data points (4.4% of all sediment organotin data points) were estimated (J).

Field Quality Control Samples

Field QC samples collected for the Round 2B sampling event included field blank and field replicate samples. The results for the field QC samples are discussed in the following sections.

Field Blanks

Four field blanks were analyzed with the organotin analyses. No target analytes were detected in any field blank.

Field Replicate Samples

Four of the RPD values for field replicate analyses did not meet the criteria for acceptable precision. The field replicate precision outliers are discussed in greater detail in the data validation reports. No data were qualified based on field precision; however, users of the data should consider the potential impact of precision outliers on the reported results.

SUMMARY OF DATA VALIDATION: FUELS

A total of 161 sediment samples were analyzed for gasoline range organics (GRO), while 143 sediment samples were analyzed for diesel range organics (DRO) and residual range organics (RRO) as part of the Portland Harbor Phase 2 RI/FS Round B sampling event. The samples included six (seven for the GRO analyses) field replicates and five field splits. Eight (8) field rinsate blanks were analyzed for GRO, while seven (7) field rinsate blanks were analyzed for DRO and RRO to monitor the field collection. Five (5) trip blanks were analyzed for GRO to monitor the shipping process. Columbia Analytical Services, Kelso, Washington completed the fuels analyses.

The fuels data for the sediment samples were generally acceptable. No data were rejected for any reason. A total of 251 data points (56.2% of all sediment fuels results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the sediment fuels analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 7.7°C. These temperature outliers did not impact data quality and no action was taken.

The GRO fraction for Sample LW2-C527-B was extracted 42 days after collection, outside the holding time of 14 days. The GRO reporting limit for this sample was estimated (UJ) due to the holding time violation. Overall, 0.2% of the sediment fuels results were estimated based on holding time outliers.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All initial and continuing calibration analyses met acceptance criteria.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration detected in the blank. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as

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not detected (U). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks are used to evaluate all associated samples, including field blanks. Any remaining positive results in the field blanks are used to evaluate all associated samples. GRO and RRO were reported in several of the method blanks. Twenty-three (23) data points (5.1% of all sediment fuels results) were qualified as not detected (U) based on method blank contamination. The qualifiers were issued to four (4) GRO results and nineteen (19) RRO results.

Accuracy

Surrogate Compound Recoveries

Surrogate compounds were added to all samples. The surrogate recoveries reported by the laboratory typically met the criteria for acceptable performance; however, surrogate recovery outliers were present in three of the GRO analyses. As the outliers indicated a potential low bias, the reporting limits were qualified. Three data points were estimated (UJ) based on surrogate outliers.

Matrix Spike Recoveries

Matrix spike/matrix spike duplicate (MS/MSD) analyses are not performed with fuels analyses.

Laboratory Control Sample Recoveries

Laboratory control sample (LCS) analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory met the criteria for acceptable performance.

Precision

Laboratory duplicate analyses were evaluated for laboratory precision. Two relative percent difference (RPD) values were outside the acceptance limits. The affected compounds were estimated (UJ) in the parent samples. The two (2) qualifiers represent 0.45% of the fuels results.

Method Detection Limits and Method Reporting Limits

To meet the project method reporting limit (MRL) goals of 10 mg/Kg for GRO, 25 mg/Kg for DRO, and 100 mg/Kg for RRO, the laboratory reported non-detects at the method detection limits (MDLs), adjusted for sample size, percent moisture, and any dilution factor. The MRLs ranged from 1.2 mg/Kg to 2.4 mg/Kg for the GRO, 3.9 mg/Kg to 5.3 mg/Kg for the DRO, and 3.7 mg/Kg to 4.8 mg/Kg for the RRO non-detected results.

Compound Identification

Several different flags were used by the laboratory to provide information about the reported results. These flags indicated that the pattern in the sample did not match the calibration standard. During validation, the data were estimated (J) to indicate that the reported result may not accurately reflect the concentration of fuels present in the sample. A total of 246 data points (55.0% of all sediment fuels data points) were estimated.

Field Quality Control Samples

Field QC samples collected for the Round 2B sampling event included field blank and field replicate samples. Trip blanks were also analyzed with the GRO samples. The results for the field QC samples are discussed in the following sections.

Field Blanks

Eight field blanks and five trip blanks were analyzed with the GRO analyses. GRO was not detected in any field blank. Seven field blanks were associated with the DRO and RRO analyses. DRO and RRO were detected in several of the field blanks. The DRO and RRO results in the associated samples were greater than the action levels. No further action was necessary.

Field Replicate Samples

Three of the RPD values for GRO and one DRO RPD value in the field replicate analyses did not meet the criteria for acceptable precision. The field replicate precision outliers are discussed in greater detail in the data validation reports. No data were qualified based on field precision; however, users of the data should consider the potential impact of precision outliers on the reported results.

SUMMARY OF DATA VALIDATION: DIOXIN/FURAN COMPOUNDS

Twenty-three (23) sediment samples were analyzed for dioxin and furan compounds for the Portland Harbor Phase 2 RI/FS. The sediment samples included one (1) field replicate and one (1) field split samples. Two (2) rinsate blanks were collected to monitor the field collection process. Columbia Analytical Services, Houston, Texas completed the analyses.

The dioxin/furan data for the sediment samples were generally acceptable. No data were rejected for any reason. A total of forty-four (44) data points (7.7% of all sediment dioxin/furan results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the sediment dioxin/furan analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 7.7°C. These temperature outliers did not impact data quality and no action was taken.

Sample LW2-C092-A was extracted 55 days after collection, outside the holding time of 45 days. All positive results and reporting limits for this sample were estimated (J or UJ) due to the holding time violation. Overall, 25 dioxin/furan results (4.3% of the sediment dioxin/furan results) were estimated based on holding time outliers.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All initial calibration analyses met all acceptance criteria.

The continuing calibration concentration values were reviewed to evaluate instrument stability. The concentrations for several labeled compounds in one CCAL were less than the lower control limit specified in the analytical method. As the concentrations for all native analytes were acceptable, no action was necessary.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration detected in the blank. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. OCDD was detected in one of the method blanks associated with the sediments. The OCDD result in the associated sample was greater than the action level, no data were qualified.

Accuracy

Labeled Compound Recoveries

Labeled compounds were added to all field and QC samples. The labeled compound recoveries reported by the laboratory typically met the criteria for acceptable performance; however, recovery outliers were present in several samples. All of the labeled compound percent recovery (%R) outliers indicated a potential high bias, positive results for associated target analytes were estimated (J). A total of twelve (12) dioxin/furan results (2.1% of all sediment results) were estimated based on labeled compound recovery outliers.

Matrix Spike Recoveries

Matrix and duplicate matrix spike (MS/MSD) analyses were not performed. Accuracy was assessed using the labeled compound and ongoing precision and recovery (OPR) analyses.

Ongoing Precision and Recovery Sample Recoveries

OPR analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory met the criteria for acceptable performance.

Precision

Laboratory duplicate analyses were evaluated for laboratory precision. Several of the relative percent difference (RPD) values for the duplicate analyses did not meet the criteria for acceptable performance. For laboratory duplicate precision outliers, qualifiers were issued only if the affected compound was detected in the parent sample. Six (6) data points (1.0% of all sediment dioxin/furan results) were estimated (J) during the quality assurance review because control limits for RPD values were not met.

Method Detection Limits and Method Reporting Limits

To try to meet the project analytical concentration goals (ACG), the laboratory reported non-detects at the method detection limits (MDLs), adjusted for sample size, percent moisture, and any dilution factor. These method reporting limits (MRLs) ranged from 0.003 pg/g to 0.254 pg/g for the non-detected results. However, the ACG were not met for many of the dioxin/furan congeners. No action was taken.

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Compound Identification and Quantitation

Flags were used by the laboratory to provide information about the reported results. A "K" flag indicates that a peak was detected at the correct retention time for the target analyte; however, the ion abundance ratio criteria were not met. The reported result is an EMPC (estimated maximum possible concentration) value, which is essentially an elevated detection limit. Data flagged "K" by the laboratory were qualified as not detected (U) to make this relationship clear to the data user. Twenty-seven (27) data points (4.7% of all sediment dioxin/furan data points) were qualified as not detected because the ion abundance ratio criteria were not met.

A laboratory "E" flag indicates that the reported result is greater than the upper calibration range established by the initial calibration. If no dilution analysis was performed, the "E" flagged data were estimated (J). One (1) data point (0.17% of all sediment dioxin/furan data points) was estimated based on calibration range exceedance.

Field Quality Control Samples

Field QC samples collected for the Round 2B sampling event included field blank and field replicate samples. The results for the field QC samples are discussed in the following sections.

Field Blanks

Two field blanks were analyzed with the dioxin/furan analyses. After qualifiers based on method blank contamination were issued, no target analytes were detected in any field blank.

Field Replicate Samples

All of the RPD values for field replicate analyses were acceptable.

SUMMARY OF DATA VALIDATION: HERBICIDES

A total of 40 sediment samples were analyzed for herbicides for the Portland Harbor Phase 2 RI/FS Round B sampling event. The sediment samples included two (2) field replicates and one (1) field split sample. Two (2) rinsate blanks were collected to monitor the field collection process. Severn Trent Laboratories in Fife, Washington completed all herbicides analyses.

The herbicides data for the sediment samples were generally acceptable. No data were rejected for any reason. A total of 27 data points (5.6% of all sediment herbicides results) were estimated because control limits were exceeded in one or more laboratory QC samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the sediment herbicides analyses.

Holding Times and Sample Preservation

All analytical holding time requirements were met for the herbicides analyses of the sediment samples and associated field QC samples. The cooler temperatures were not recorded upon receipt at the laboratory. This had no significant impact on the reported results, and no action was taken.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. The initial calibrations (ICAL) met the linearity (percent relative standard deviation or correlation coefficient) control limits.

The laboratory used a modified method, incorporating gas chromatography with mass spectrometry detection (GC/MS). GC/MS continuing calibrations (CCAL) are required at the beginning of each 12-hour sequence and have a percent difference (%D) limit of ±25%. These criteria were more applicable to this data than the default Method 8151A criteria. All CCAL %D values were within the control limit of ±25%, and all CCAL were acceptable

Method Blank Analyses

Method blanks were analyzed at the required frequency. No herbicides were detected in any blank.

Accuracy

The accuracy of the analytical results is evaluated in the following sections in terms of analytical bias (surrogate compound, matrix spike [MS], and laboratory control sample [LCS] recoveries) and precision (duplicate MS and duplicate LCS analyses).

Surrogate Compound Recoveries

Surrogate compounds were added to all field and QC samples. The surrogate recoveries reported by the laboratory met the criteria for acceptable performance.

Matrix Spike Recoveries

Matrix and duplicate matrix spike analyses (MS/MSD) met the criteria for frequency of analysis. All MS/MSD recovery values were acceptable.

Laboratory Control Sample Recoveries

LCS and LCS duplicate (LCSD) analyses met the criteria for frequency of analysis. All LCS/LCSD recovery values were acceptable.

GCMS Internal Standards

The areas of the internal standards were outside the control limits in several samples. If the internal standard area was greater than the upper control limit, no action was taken unless there were positive results associated with the internal standard. For internal standard areas less than the lower control limits, all target analytes associated with the internal standard were estimated (J or UJ) with potential low bias. Twenty-seven (27) herbicide reporting limits (5.6% of all sediment herbicide results) were estimated (UJ) based on internal standard area outliers.

Precision

MS/MSD and LCS/LCSD analyses were evaluated for laboratory precision. All relative percent difference (RPD) values were acceptable.

Method Detection Limits and Method Reporting Limits

To meet the project analytical concentration goals (ACG), the laboratory reported non-detects down to the method detection limits (MDLs), adjusted for sample size, percent moisture, and any dilution factor. These method reporting limits (MRLs) ranged from 0.27 µg/Kg to 1.6 µg/Kg for the non-detected results. The ACG were not met for the pentachlorophenol results.

Field Quality Control Samples

Field QC samples collected for the Phase 2 RI/FS Round 2B sampling event included field blank and field replicate samples. The results for the field QC samples are discussed in the following sections.

Field Blanks

Samples LW2-G933 and LW2-G934 were submitted as field blanks. No herbicides were detected.

Field Replicate Samples

All of the RPD values for field replicate analyses were acceptable.

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SUMMARY OF DATA VALIDATION: METALS

A total of 137 sediment samples were analyzed for total metals for the Portland Harbor Phase 2 RI/FS Round B sampling event. The sediment samples included seven (7) field replicates and four (4) field split samples. Seven (7) rinsate blanks were collected to monitor the field collection process. Columbia Analytical Services, Kelso, Washington completed all analyses. The following analytical methods were used:

Parameter	Method
ICP Metals	SW6010B
ICP-MS Metals	SW6020
Mercury	SW7471A
Selenium	SW7740

The metals data for the sediment samples were generally acceptable. No data were rejected for any reason. A total of 271 data points (16.3% of all sediment metals results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during the analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the sediment metals analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 7.7°C. These temperature outliers did not impact data quality and no action was taken.

The mercury analysis of Sample LW2-C525-E was performed 29 days beyond the recommended 28 day holding time. The result was estimated (J).

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. The calibrations met all acceptance criteria.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration detected in the blank. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as

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not detected (U). No action is taken if the sample result is greater than the action level, or for non-detected results.

Method and instrument blanks were analyzed at the appropriate frequency. Various target analytes were detected in the method and/or instrument blanks. A summary of contaminant levels, associated samples, and action levels is provided in the data validation worksheets. A total of 105 metals results (6.3% of all sediment metals results) were qualified as not detected (U) based on blank contamination. The qualifiers issued were to cadmium (4 results), selenium (99 results), and silver (2 results).

In addition, some analytes were found at levels less than the negative MDL in some instrument blanks. For negative blanks, action levels of five times the absolute value of the blank concentrations were established. Results less than the action levels in the associated samples were estimated (J/UJ) to indicate a potential low bias. Seven (7) metals results (0.4% of all sediment metals results) were estimated (J/UJ) based on negative blank results. The qualifiers issued were to cadmium (6 results) and nickel (1 result).

Accuracy

The accuracy of the analytical results is evaluated in the following sections in terms of analytical bias (matrix spike [MS], laboratory control sample [LCS], contract required detection limit [CRDL] standard recovery values, interference check samples [ICS], and serial dilution percent difference [%D] values).

Matrix Spike Recoveries

MS analyses met the criteria for frequency of analysis. All of the recoveries reported by the laboratory for the antimony analyses did not meet the criteria for acceptable performance, with all outliers indicating a potential low bias. A total of 137 metals results (8.2% overall) were estimated (J) during the quality assurance review because the control limits for MS recovery were not met.

Laboratory Control Sample Recoveries

LCS analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory met the criteria for acceptable performance.

Contract Required Detection Limit Standard Analyses

CRDL standards were analyzed at the beginning of each analytical sequence. For recoveries greater than the 130% upper control limit, the associated positive results less than two times the CRDL are estimated (J) to indicate a potential high bias. For recoveries less than the 70% lower control limit, positive results less than twice the CRDL and non-detects are estimated (J/UJ) to indicate a potential low bias. Ten (10) metals results (0.6% of all sediment metals results) were estimated (J/UJ) based on CRDL standard outliers. The qualifiers issued were to cadmium (8 results), mercury (2 results), and selenium (2 results).

Interference Check Samples

ICP interference check samples were analyzed at the beginning of each analytical sequence. All ICP interference check sample results were within the acceptance criteria.

Serial Dilution Analyses

Serial dilution analyses were performed at the proper frequency. Serial dilution %D values greater than 10% for sample results greater than 50 times the MDL may indicate the presence of matrix interference, resulting in potential bias. For serial dilution outliers, all associated sample results were qualified. A total of 90 metals results (5.4% of all sediment metals results) were estimated (J/UJ) based on serial dilution outliers.

Precision

Laboratory duplicate analyses were evaluated for laboratory precision. Two relative percent difference (RPD) values were outside the acceptance limits. Sixty-seven (67) results (4.0% of all sediment metals results) were estimated (J) based on laboratory precision outliers.

Method Detection Limits and Method Reporting Limits

The laboratory reported non-detects at the MDLs, adjusted for sample size and any dilution factor. With the exception of one mercury result (MDL 0.009 mg/Kg) and 32 selenium results (MDL 0.02 to 0.07 mg/Kg), all metals were detected in all samples.

Field Quality Control Samples

Field QC samples collected for the Round 2B sampling event included field blank and field replicate samples. The results for the field QC samples are discussed in the following sections.

Field Blanks

Seven field blanks were associated with the metals analyses. Various target analytes were detected in several of the field blanks. The results in the associated samples were greater than the action levels. No further action was necessary.

Field Replicate Samples

Four of the RPD values in the field replicate analyses did not meet the criteria for acceptable precision. The field replicate precision outliers are discussed in greater detail in the data validation reports. No data were qualified based on field precision; however, users of the data should consider the potential impact of precision outliers on the reported results.

SUMMARY OF DATA VALIDATION: CONVENTIONAL PARAMETERS

A total of 182 sediment samples were analyzed for some or all of the following parameters for the Portland Harbor Phase 2 RI/FS. Columbia Analytical Services, Kelso, Washington, completed all analyses. The following analytical methods were used:

Parameter	Method Number
Total Solids (TS)	EPA 160.3
Grain Size (GS)	PSEP 1986
Specific Gravity (SG)	ASTM D-854
Total Organic Carbon (TOC)	PSEP 1986
Hexavalent Chromium	SW7196A

Overall, the conventional parameters data for the sediment samples were acceptable. No data were rejected for any reason. Seven (7) data points of 2,233 total data points were estimated because control limits were exceeded in one or more laboratory QC samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the sediment conventional parameters analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 7.7°C. These temperature outliers did not impact data quality and no action was taken.

Instrument Performance

Initial and continuing calibrations were completed for the TOC and hexavalent chromium analyses and met the criteria for frequency of analysis. The initial calibrations met the linearity (percent relative standard deviation or correlation coefficient) control limits.

Method Blank Analyses

Two types of laboratory blanks were evaluated for possible contamination effects. These blanks were: initial and continuing calibration blanks (ICB and CCB) and method blanks (MB). The required frequency of one at the beginning and one every ten samples for calibration blank analysis was met. The laboratory analyzed one MB for every 20 samples digested or one per batch, for each digestion procedure, as required.

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BZTO104(e)004959

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration detected in the blank. TOC were detected at values greater than the MDL in several laboratory blanks. Two field sample TOC results were less than the action level and were qualified as not detected (U).

Accuracy

The accuracy of the analytical results is evaluated in the following sections in terms of analytical bias (matrix spike [MS] and laboratory control sample [LCS] recoveries) and precision (sample or matrix spike duplicate [MSD] analyses).

Matrix Spike Recoveries

MS analyses were completed for the TOC and hexavalent chromium analyses and met the criteria for frequency of analysis. All TOC MS recovery values were acceptable. The hexavalent chromium recovery value was less than the control limit in one of the MS analyses. Hexavalent chromium was not detected in the four associated samples. The reporting limits were estimated (UJ).

Laboratory Control Sample Recoveries

An LCS was analyzed for the TOC and hexavalent chromium analyses. All LCS recovery values were acceptable.

Precision

Laboratory duplicate and triplicate analyses (for grain size) were evaluated for laboratory precision. One of the percent relative standard deviation (%RSD) values for grain size did not meet the criteria for acceptable performance. One grain size result was estimated (J) during the quality assurance review because control limits for relative percent difference (RPD) and %RSD were not met.

Method Reporting Limits

The project method reporting limit goals were met for all conventional parameters.

Field Quality Control Samples

Field QC samples collected for the Phase 2 RI/FS included field replicate samples and one field blank (for hexavalent chromium only). The results for the field QC samples are discussed in the following sections.

Field Blanks

One field blank was associated with the hexavalent chromium analyses. Hexavalent chromium was not detected in the field blank.

Field Replicate Samples

Five of the RPD values in the field replicate analyses did not meet the criteria for acceptable precision. The field replicate precision outliers are discussed in greater detail in the data validation reports. No data were qualified based on field precision; however, users of the data should consider the potential impact of precision outliers on the reported results.

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APPENDIX A

DATA QUALIFIER DEFINITIONS, REASON CODES, AND CRITERIA TABLES

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DATA VALIDATION QUALIFIER CODES
National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

1	Holding Time/Sample Preservation
2	Chromatographic pattern in sample does not match pattern of calibration standard.
3	Compound Confirmation
4	Tentatively Identified Compound (TIC) (associated with NJ only)
5A	Calibration (initial)
5B	Calibration (continuing)
6	Field Blank Contamination
7	Lab Blank Contamination (e.g., method blank, instrument, etc.)
8	Matrix Spike(MS & MSD) Recoveries
9	Precision (all replicates)
10	Laboratory Control Sample Recoveries
11	A more appropriate result is reported (associated with "R" and "DNR" only)
12	Reference Material
13	Surrogate Spike Recoveries (a.k.a., labeled compounds & recovery standards)
14	Other (define in validation report)
15	GFAA Post Digestion Spike Recoveries
16	ICP Serial Dilution % Difference
17	ICP Interference Check Standard Recovery
18	Trip Blank Contamination
19	Internal Standard Performance (e.g., area, retention time, recovery)
20	Linear Range Exceeded
21	Potential False Positives

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Volatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C±2°C Water: HCl to pH < 2	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Hold Time	Waters: 14 days preserved 7 Days: unpreserved (for aromatics) Solids: 14 Days	J(+)/UJ(-) if hold times exceeded If exceeded by > 3X HT: J(+)/R(-) (EcoChem PJ)	1
Tuning	BFB Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	J(+)/R(-) if RRF < 0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample (+) result is less than CRQL and less than appropriate 5X or 10X rule (raise sample value to CRQL)	7
		U(+) if sample (+) result is greater than or equal to CRQL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Storage Blank	One per SDG <CRQL	U(+) the specific analyte(s) results in all assoc.samples using the 5x or 10x rule	7
Trip Blank	Frequency as per project QAPP	Same as method blank for positive results remaining in trip blank after method blank qualifiers are assigned	18
Field Blanks	No results > QL	Apply 5X/10X rule; U(+) < action level	6
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% PJ if only one %R outlier	8

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Integral - Portland Harbor Site
Volatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) if RPD > CL	9
LCS *low conc. H2O VOA*	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS *regular VOA (H2O & solid)*	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% **(EcoChem PJ)**	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+) assoc. cmpd. in all samples	9
Surrogates	Added to all samples Within method control limits	J(+) if %R >UCL J(+)/UJ(-) if %R <LCL but >10% **(see PJ1)** J(+)/R(-) if <10%	13
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% R T>30 seconds, **narrate and Notify PM**	19
Field Duplicates	QAPP specified RPD < 50% (sediment & water)	Narrate; do not qualify.	na
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	R(+) common laboratory contaminants R(+) target compouds from other fractions **See Technical Director for ID issues**	14
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	**See Technical Director if outliers**	14 21 (false +)

PJ1 No action if there are 4+ surrogates and only 1 outlier.

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Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	Water: J(+)/UJ(-) if ext. > 7 and < 21 days J(+)/R(-) if ext > 21 days (EcoChem PJ) Solids/Wastes: J(+)/UJ(-) if ext. > 14 and < 42 days J(+)/R(-) if ext. > 42 days (EcoChem PJ) J(+)/UJ(-) if analysis >40 days	1
Tuning	DFTPP Beginning of each 12 hour period Method acceptance criteria	R(+/-) all analytes in all samples associated with the tune	5A
Initial Calibration (Minimum 5 stds.)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5A
	%RSD < 30%	(EcoChem PJ, see TM-06) J(+) if %RSD > 30%	5A
Continuing Calibration (Prior to each 12 hr. shift)	RRF > 0.05	(EcoChem PJ, see TM-06) If MDL= reporting limit: J(+)/R(-) if RRF < 0.05 If reporting limit > MDL: note in worksheet if RRF <0.05	5B
	%D <25%	(EcoChem PJ, see TM-06) If > +/-90%: J+/R- If -90% to -26%: J+ (high bias) If 26% to 90%: J+/UJ- (low bias)	5B
Method Blank	One per matrix per batch No results > QL	U(+) if sample (+) result is less than QL and less than appropriate 5X or 10X rule (raise sample value to QL)	7
		U(+) if sample (+) result is greater than or equal to QL and less than appropriate 5X and 10X rule (at reported sample value)	7
	No TICs present	R(+) TICs using 10X rule	7
Field Blanks	No results > QL	Apply 5X/10X rule; U(+) < action level	6

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Semivolatile Analysis by GC/MS (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One per matrix per batch Use method acceptance criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% **PJ if only one %R outlier**	8
MS/MSD (RPD)	One per matrix per batch Use method acceptance criteria	J(+) if RPD > CL	9
LCS **low conc. H2O SVOA**	One per lab batch Within method control limits	J(+) assoc. cmpd if > UCL J(+)/R(-) assoc. cmpd if < LCL J(+)/R(-) all cmpds if half are < LCL	10
LCS **regular SVOA (H2O & solid)**	One per lab batch Lab or method control limits	J(+) if %R > UCL J(+)/UJ(-) if %R <LCL J(+)/R(-) if %R < 10% **(EcoChem PJ)**	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+) assoc. cmpd. in all samples	9
Surrogates	Minimum of 3 acid and 3 base/neutral compounds Use method acceptance criteria	Do not qualify if only 1 acid and/or 1 B/N surrogate is out unless <10% J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) if %R < 10%	13
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	J(+) if > 200% J(+)/UJ(-) if < 50% J(+)/R(-) if < 25% R T>30 seconds, **narrate and Notify PM**	19
Field Duplicates	QAPP specified RPD < 50% (sediment & water)	Narrate; do not qualify.	na
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	R(+) common laboratory contaminants R(+) target compouds from other fractions **See Technical Director for ID issues**	4
Quantitation/ Identification	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	**See Technical Director if outliers**	14 21 (false +)

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Pesticides/PCBs/Herbicides/Phenols by GC/ECD (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	J(+)/UJ(-) if ext/analyzed > HT J(+)/R(-) if ext/analyzed > 3X HT (EcoChem PJ)	1
Resolution Check	Beginning of ICAL Sequence Within RTW Resolution >90%	Narrate (Use Professional Judgement to qualify)	14
Instrument Performance (Breakdown)	DDT Breakdown: < 20% Endrin Breakdown: <20% Combined Breakdown: <30% Compounds within RTW	J(+) DDT NJ(+) DDD and/or DDE R(-) DDT - If (+) for either DDE or DDD J(+) Endrin NJ(+) EK and/or EA R(-) Endrin - If (+) for either EK or EA	5A
Retention Times	Surrogates: TCX (+/- 0.05); DCB (+/- 0.10) Target compounds: elute before heptachlor epoxide (+/- 0.05) elute after heptachlor epoxide (+/- 0.07)	NJ(+)/R(-) results for analytes with RT shifts For full DV, use PJ based on examination of raw data	5B
Initial Calibration	Pesticides: Low=CRQL, Mid=4X, High=16X Multiresponse - one point Calibration %RSD<20% %RSD<30% for surr; two comp. may exceed if <30% Resolution in Mix A and Mix B >90%	J(+)/UJ(-)	5A
Continuing Calibration	Alternating PEM standard and INDA/INDB standards every 12 hours (each preceeded by an inst. Blank) %D < 25% Resolution >90% in IND mixes; 100% for PEM	J(+)/UJ(-) J(+)R(-) if %D > 90% PJ for resolution	5B
Method Blank	One per matrix per batch No results > CRQL	U(+) if sample result is < CRQL and < 5X rule (raise sample value to CRQL)	7
		U(+) if sample result is > or equal to CRQL and < 5X rule (at reported sample value)	7
Instrument Blanks	Analyzed at the beginning of every 12 hour sequence No analyte > 1/2 CRQL	Same as Method Blank	7
Field Blanks	No results > QL	Apply 5X rule; U(+) < action level	6

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Pesticides/PCBs/Herbicides/Phenols by GC/ECD (Based on Organic NFG 1999)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (recovery)	One set per matrix per batch Method Acceptance Criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% **PJ if only one %R outlier**	8
MS/MSD (RPD)	One set per matrix per batch Method Acceptance Criteria	J(+) if RPD > CL	9
LCS	One per SDG Method Acceptance Criteria	J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) using PJ if %R <<LCL (< 10%)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+) assoc. cmpd. in all samples	9
Surrogates	TCX and DCB added to every sample %R = 30-150%	J(+)/UJ(-) if both %R = 10 - 60% J(+) if both >150% J(+)/R(-) if any %R <10%	13
Quantitation/ Identification	Analyte within RTW on both columns Quantitated using CCV or ICAL CF Lowest value from either column reported %D between columns (25%)	J(+) if RPD = 25-60% (Pest/Aroclor); 40-60% (Herb/Phenol) NJ(+) using PJ if RPD > 60% R(+) using PJ if RPD >90%	3
Two analyses for one sample	Report only one result per analyte	"DNR" results that should not be used to avoid reporting two results for one sample	11
Sample Clean-up	GPC required for soil samples Florisil required for all samples Sulfur is optional Clean-up standard check %R within CLP limits	J(+)/UJ(-) if %R < LCL J(+) if %R > UCL	14
Field Duplicates	QAPP specified RPD < 50% (sediment & water)	Narrate; do not qualify.	na

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Butyltins by GC/FPD

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	4°C ±2°	J(+)/UJ(-) if greater than 6 deg. C (EcoChem PJ)	1
Holding Time	Water: 7 days from collection Soil: 14 days from collection Analysis: 40 days from extraction	J(+)/UJ(-) if ext/analyzed > HT J(+)/R(-) if ext/analyzed > 3X HT (EcoChem PJ)	1
Initial Calibration	%RSD<30% or correlation co-efficient >0.99	J(high bias), J/UJ(low bias)	5A
Continuing Calibration	%D < 25%	J(high bias), J/UJ(low bias)	5B
Method Blank	One per matrix per batch	U(+) if sample result is < CRQL and < 5X rule (raise sample value to CRQL)	7
		U(+) if sample result is > or equal to CRQL and < 5X rule (at reported sample value)	7
Instrument Blanks	Analyzed at the beginning of every 12 hour sequence No analyte > MRL	Same as Method Blank	7
Field Blanks	No results > QL	Apply 5X rule; U(+) < action level	6
MS/MSD (recovery)	One set per matrix per batch Method Acceptance Criteria	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% **PJ if only one %R outlier**	8
MS/MSD (RPD)	One set per matrix per batch Method Acceptance Criteria	J(+) if RPD > CL	9
LCS	One per SDG Method Acceptance Criteria	J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) using PJ if %R <<LCL (< 10%)	10
LCS/LCSD *(if required)*	One set per matrix and batch of 20 samples RPD < 35%	J(+) assoc. cmpd. in all samples	9
Surrogates	tri-n-propyltin added to every sample %R = Laboratory control limits	J(+)/UJ(-) if both %R = 10 - 60% J(+) if both >150% J(+)/R(-) if any %R <10%	13
Quantitation/ Identification	Analyte within RTW on both columns Quantitated using ICAL CF Higher value from either column reported %D between columns (40%)	J(+) if RPD = 40 - 60% NJ(+) if RPD >60% **EcoChem PJ - See TM-08**	3

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Butyltins by GC/FPD

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Two analyses for one sample	Report only one result per analyte	"DNR" results that should not be used to avoid reporting two results for one sample	11
Field Duplicates	QAPP specified RPD < 50% (sediment & water)	Narrate; do not qualify.	na

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Integral - Portland Harbor Site
Compounds Analyzed By HRMS (Methods 1613B or SW846 - 8290)
Phthalates, Polycyclic Aromatic Hydrocarbons (PAH), PCB Congeners and Dioxins/Furans

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature	Waters/Solids <4°C Tissues <10°C	EcoChem PJ, see TM-05	1
Holding Time	Water: 30 days from collection Soil: 30 days from collection Analysis: 40 days from extraction Note: Under CWA, SDWA, and RCRA the HT for H2O is 7 days	J(+)/UJ(-) if ext > 30days J(+)/UJ(-) if analysis > 40 Days EcoChem PJ, see TM-05	1
Mass Resolution	>=10,000 resolving power at m/z 304.9824 Exact mass of m/z 380.9760 w/in 5 ppm of theoretical value (380.97410 to 380.97790) . Analyzed prior to ICAL and at the start and end of each 12 hr. shift	R(+/-) if not met	14
Window Defining Mix and Column Performance Mix	Window defining mixture/Isomer specificity std run before ICAL and CCAL Valley < 25% (valley = (x/y)*100%) x = ht. of TCDD y = baseline to bottom of valley For all isomers eluting near 2378-TCDD/TCDF isomers (TCDD only for 8290)	J(+) if valley > 25%	5A (ICAL) 5B (CCAL
Initial Calibration	ICAL: Minimum of five standards %RSD < 20% for native compounds %RSD <30% for labeled compounds (%RSD <35% for labeled compounds under 1613b)	J(+) natives if %RSD > 20%	5A
	Abs. RT of $^{13}C_{12}$-1234-TCDD >25 min on DB5 >15 min on DB-225	EcoChem PJ, see TM-05	
	Ion Abundance ratios within QC limits (Table 8 of method 8290) (Table 9 of method 1613B)	EcoChem PJ, see TM-05	
	S/N ratio > 10 for all native and labeled compounds in CS1 std.	If <10, elevate Det. Limit or R(-)	

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Integral - Portland Harbor Site
Compounds Analyzed By HRMS (Methods 1613B or SW846 - 8290)
Phthalates, Polycyclic Aromatic Hydrocarbons (PAH), PCB Congeners and Dioxins/Furans

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Continuing Calibration	Analyzed at the start and end of each 12 hour shift. %D+/-20% for native compounds %D +/-30% for labeled compounds (Must meet limits in Table 6 for 1613B) (If %Ds in the closing CCAL are w/in 25%/35% the avg RF from the 2 CCAL may be used to calculate sam	J(+)/UJ(-) natives if %D = 30% - 75% R(+/-) if %D > 75%	5B
	Abs. RT of $^{13}C_{12}$-1234-TCDD and $^{13}C12$-123789-HxCDD +/- 15 sec of ICAL.	**EcoChem PJ, see ICAL section of TM-05**	
	RRT of all other compounds must meet table 2 of 1613B.	**EcoChem PJ, see TM-05**	
	Ion Abundance ratios within QC limits (Table 8 of method 8290) (Table 9 of method 1613B)	**EcoChem PJ, see TM-05**	
	S/N ratio > 10	**EcoChem PJ, see ICAL section of TM-05**	
Method Blank	One per matrix per batch No positive results	If sample result <5X action level, qualify U at reported value. (<10X for phthalates)	7
Field Blanks	No results > QL	Apply 5X rule; U(+) < action level	6
LCS / OPR	Concentrations must meet limits in Table 6 of method 1613B or lab limits.	J(+) if %R > UCL J(+)/UJ(-) if %R < LCL J(+)/R(-) using PJ if %R <<LCL (< 10%)	10
MS/MSD (recovery)	May not analyze MS/MSD %R should meet lab limits.	Qualify parent only unless other QC indicates systematic problems: J(+) if both %R > UCL J(+)/UJ(-) if both %R < LCL J(+)/R(-) if both %R < 10% **PJ if only one %R outlier**	8

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Integral - Portland Harbor Site
Compounds Analyzed By HRMS (Methods 1613B or SW846 - 8290)
Phthalates, Polycyclic Aromatic Hydrocarbons (PAH), PCB Congeners and Dioxins/Furans

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
MS/MSD (RPD)	May not analyze MS/MSD RPD < 20%	J(+) if RPD > CL	9
Lab Duplicate	RPD <25% if present.	J(+) if outside limts	9
Labeled Compounds / Internal Standards	*Method 8290:* %R = 40% - 135% in all samples *Method 1613B:* %R must meet limits specified inTable 7	J(+)/UJ(-) if %R = 10% - LCL J(+) if %R > UCL J(+)/R(-) if %R < 10%	13
Quantitation/ Identification	SIM ions for analyte, lstd, rec. std. Max w/in 2 sec. S/N >2.5 IA ratios meet limits in Table 9 of 1613B or Table 8 of 8290 RRTs w/in limits in table 2 of 1613B	If RT criteria not met, use PJ (see TM-05) If S/N criteria not met, J(+). if unlabelled ion abundance not met, change to EMPC If labelled ion abundance not met, J(+).	21
EMPC (estimated maximum possible concentration)	If quantitation identification criteria are not met, laboratory should report an EMPC value.	If laboratory correctly reported an EMPC value, qualify with U to indicate that the value is a detection limit.	14
Interferences	PCDF interferences from PCDPE	If both detected, change PCDF result to EMPC	14
Second Column Confirmation	All 2378-TCDF hits must be confirmed on a DB-225 (or equiv) column. All QC specs in this table must be met for the confirmation analysis.	Report lower of the two values. If not performed use PJ (see TM-05).	3
Field Duplicates	QAPP specified RPD < 50% (sediment & water)	Narrate; do not qualify.	na
Two analyses for one sample	Report only one result per analyte	"DNR" results that should not be used	11

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Metals by ICP (Based on Inorganic NFG 1994 & 2002)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	4°C ±2° Water Only: Nitric Acid to pH < 2 For Dissolved metals, 0.45 um filter preserve after filtration	Professional Judgment J(+)/UJ(-) if preservation requirements are not met	1
Holding Time	180 days	Professional Judgment J(+)/UJ(-)	1
Initial Calibration	Blank + minimum 1 standard once every 24 hours if more than 1 standard r>0.995	Professional Judgment J(+)/UJ(-) if r<0.995 (multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source analyzed immed. after cal. %R within +/- 10% of true value	Professional Judgment J(+)/UJ(-) if %R 75%-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Cal Verification (CCV)	Every ten samples, immed. Before samples+ and end of run %R within +/- 10% of true value	Professional Judgment J(+)/UJ(-) if %R = 75%-89% J(+) if %R 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B
CRI Standard (to check CRDL)	2X CRDL (or 2X IDL if greater) analyzed beginning and end of run (at least 8 hrs) Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Sb, Pb, Tl)	Professional Judgment R(-),(+)<2XCRDL if %R <50% (< 30% Sb, Pb, Tl) J(+)<2XCRDL, UJ(-) if %R 50-69% (30%-49% Sb, Pb,Tl) J(+) <2X CRDL if %R 130%-180% (150%-200%Sb, Pb, Tl) R(+)<2X CRDL if %R>180%(200% Sb, Pb, Tl)	14

Initial and Continuing Cal Blanks (ICB/CCB)	after each ICV and CCV
	every ten samples and end of run
	blank < +/- IDL
		Action level is 5x abs. value of blk conc.
		For (+) blk value, U(+) values < action level
		For (-) blk value, J(+)/UJ(-) values < action level
			7

Prep Blank	One per matrix per batch
	(not to exceed 20 samples)
		Action level is 5x abs. value of blk conc.
		For (+) blk value, U(+) values < action level
		For (-) blk value, J(+)/UJ(-) values < action level
			7

Interference Check Samples ICSA/ICSAB	Beginning and end of each run or every eight hours ICSAB +/- 20% ICSA < +/- IDL	For samp with Al,Ca,Fe,Mg > ICS levels R(+/-) if %R<50% J(+) if %R >120% J(+)/UJ(-) if %R= 50% to 79% Professional Judgment ICSA	17
Post Digestion Spike	If ICP Matrix Spike is outside 75-125%, spike at twice the sample conc.	No Quals assigned based on this element	

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Metals by ICP (Based on Inorganic NFG 1994 & 2002)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Matrix Spike	One per matrix per batch 75-125% for samples less than 4 x spike level	J(+) if %R>125% J(+)/UJ(-) if %R <75% J(+)/R(-) if %R<30%	8
Laboratory Duplicate	One per matrix per batch RPD <20% for samples > 5x CRDL Diff <CRDL for samples >CRDL and <5 x CRDL (may use RPD < 35%, Diff < 2X CRDL for solids)	J(+)/UJ(-) if RPD > 20% or diff > CRDL	9
Serial Dilution	5x dilution one per matrix %D <10% for values > 50x IDL	J(+)/UJ(-) if %D >10%	16
Laboratory Control Sample	Waters: One per matrix per batch %R (80-120%)	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	Soils: One per matrix per batch Result within manufacturer's certified acceptance range	J(+)/UJ(-) if < LCL, J(+) if > UCL	10
Field Blanks	No results > QL	Apply 5X rule; U(+) < action level	6
Field Duplicates	QAPP specified RPD < 50% (sediment & water)	Narrate; do not qualify.	na
Instrument Detection Limit	determined every 3 months	Professional Judgment	14
Linear Range	determined yearly samples diluted to fall within range	J(+) values over range	20

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Metals by ICP-MS (Based on Inorganic NFG 1994 & 2002)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	4°C ±2° Water Only: Nitric Acid to pH < 2 For Dissolved metals, 0.45 um filter preserve after filtration	Professional Judgment J(+)/UJ(-) if preservation requirements are not met	1
Holding Time	180 days	Professional Judgment J(+)/UJ(-) if holding time exceeded J(+)/R(-) if HT exceeded by 3x	1
Tune	Prior to ICAL Analyzed 5 times wih Std Dev. ≤ 5% mass calibration <0.1 amu from True Value Resolution < 0.9 AMU @ 10% peak height or <0.75 amu @ 5% peak height	Professional Judgment No Tune - R all results criteria not met - J(+)/UJ(-)	5A
Initial Calibration	Mininum Blank+1 Standard every 24 hours	Professional Judgment J(+)/UJ(-) >24 hours J(+)/UJ(-) if r<0.995 (for multi point cal)	5A
Initial Calibration Verification (ICV)	Independent source; analyzed post ICAL and prior to samples +/-10% of the True value	Professional Judgment J(+)/UJ(-) if %R 75%-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5A
Continuing Cal Verification (CCV)	Every 10 samples,post ICV/ICB and end of run +/- 10% of True value	professional judgment J(+)/UJ(-) if %R 75%-89% J(+) if %R = 111-125% R(+) if %R > 125% R(+/-) if %R < 75%	5B
CRDL Standard (CRI)	2X CRDL (or 2X IDL if greater) analyzed beginning and end of run (at least 8 hrs) Not required for Al, Ba, Ca, Fe, Mg, Na, K %R = 70%-130% (50%-150% Co,Mn, Zn)	Professional judgment R(-),(+)<2XCRDL if %R <50% (< 30% Co,Mn, Zn) J(+)<2XCRDL, UJ(-) if %R 50-69% (30%-49% Co,Mn, Zn) J(+) <2X CRDL if %R 130%-180% (150%-200% Co,Mn, Zn) R(+)<2X CRDL if %R>180%(200% Co,Mn, Zn)	14

Initial and Continuing Cal Blanks (ICB/CCB)	after each ICV and CCV every ten samples and end of run blank < +/- IDL	Action level is 5x abs. value of blk conc.
		For (+) blk value, U(+) values < AL
		For (-) blk value, J(+)/UJ(-) values < AL
			7

Prep Blank	One per matrix per batch (not to exceed 20 samples)	Action level is 5x abs. value of blk conc.
		For (+) blk value, U(+) values < AL
		For (-) blk value, J(+)/UJ(-) values < AL
			7

Field Blanks	No results > QL	Apply 5X rule; U(+) < action level	6

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Integral - Portland Harbor Site
Metals by ICP-MS (Based on Inorganic NFG 1994 & 2002)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Interference Check Samples ICSA/ICSAB	ICSAB +/- 20% of true value ICSA < +/- IDL	Where Al,Ca,Fe,Mg = ICS levels J(+) if %R >120% J(+)/UJ(-) if %R = 50% to 79% R(+/-) if %R<50% Professional Judgment for ICSA > +/- IDL	17
Post Digestion Spike	If ICP Matrix Spike is outside 75-125% Spike parent sample at 2X the sample conc.	Use Professional Judgment - usually no action	14
Matrix Spike	One per matrix, batch and SDG 75-125% for samples where results do not exceed 4x spike level	J (+) if %R > 125% J(+)/UJ(-) if %R < 75% J(+)/R(-) if %R < 30% UJ(-) if %R = 30-74%	8
Laboratory Duplicate	One per matrix per batch RPD <20% for samples > 5x CRDL Diff<CRDL for samples >CRDL and <5 x CRDL (may use RPD < 35%, Diff < 2X CRDL for solids)	J(+)/UJ(-) associated samples if RPD > 20% or diff > CRDL	9
Laboratory Control Sample	Waters: One per matrix per batch %R (80-120%)	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	Soils: One per matrix per batch result within manufaturer's certified acceptance range	J(+)/UJ(-) if < LCL, J(+) if > UCL	10
Serial Dilution	5x dilution one per matrix (or SDG) %D <10% of the undiluted value for values > 50x IDL	J(+)/UJ(-) if %D >10%	16
Field Duplicates	QAPP specified RPD < 50% (sediment & water)	Narrate; do not qualify.	na
Internal Standards	Every Sample 60%-125% of ICAL IS	J (+)/UJ (-) analytes associated with IS outlier	19
Instrument Detection Limit	Determined every 3 months	Professional Judgment	14
Linear Range	determined yearly samples diluted to fall within range	J(+) values over range	20

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Integral - Portland Harbor Site
Mercury by CVAA (Based on Inorganic NFG 1994 & 2002)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	4°C ±2° Water Only: Nitric Acid to pH < 2 For Dissolved metals, 0.45 um filter preserve after filtration	Professional Judgment J(+)/UJ(-) if preservation requirements are not met	1
Holding Time	28 days from date sampled	Professional Judgment J(+)/UJ(-) if holding time exceeded	1
Initial Calibration	Blank + 4 standards r > 0.995 once every 24 hours	Professional Judgment J(+)/UJ(-) if r<0.995	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after cal. %R within +/- 20% of true value	Professional Judgment R(+/-) if %R < 65% R(+) if %R > 135% J(+)/UJ(-) if %R = 65%-79% J(+) if %R = 121-135%	5A
Continuing Cal Verification (CCV)	Every ten samples, immed. following ICV/ICB and end of run %R within +/- 20% of true value	R(+/-) if %R < 65% R(+) if %R > 135% J(+)/UJ(-) if %R = 65%-79% J(+) if %R = 121-135%	5B
CRDL Standard (CRA)	Beginning of run after ICV/ICB CCV/CCB Conc = CRDL 70% - 130%	Professional Judgment R(-),(+)<2XCRDL if %R <50% J(+)<2XCRDL, UJ(-) if %R 50-69% J(+) <2X CRDL if %R 130%-180% R(+)<2X CRDL if %R>180%	14

Initial and Continuing Cal Blanks (ICB/CCB)	After each ICV and CCV
	every ten samples and end of run
	blank < +/- IDL
		Action level is 5x abs. value of blk conc.
		For (+) blk value, U(+) sample values < AL
		For (-) blk value, J(+)/UJ(-) sample values < AL
			7

Prep Blank	One per matrix per batch
	(not to exceed 20 samples)
		Action level is 5x abs. value of blk conc.
		For (+) blk value, U(+) sample values < AL
		For (-) blk value, J(+)/UJ(-) sample values < AL
			7

Matrix Spike	One per matrix per batch 5% frequency 75-125% for samples less than 4x spike level	J(+) if %R > 125% J(+)/UJ(-) if %R < 75% J(+)/R(-) if %R < 30%	8
Laboratory Duplicate	One per matrix per batch RPD <20% for samples > 5x CRDL (+/-)CRDL for samples >CRDL and <5 x CRDL (may use RPD < 35%, Diff < 2X CRDL for solids)	J(+)/UJ(-) if RPD > 20% or diff > CRDL	9

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Mercury by CVAA (Based on Inorganic NFG 1994 & 2002)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Laboratory Control Sample	Waters: One per matrix per batch %R (80-120%)	R(+/-) if %R < 50%; J(+) if %R >120% J(+)/UJ(-) if %R = 50-79%	10
	Soils: One per matrix per batch Result within manufacturer's certified acceptance range	J(+)/UJ(-) if < LCL, J(+) if > UCL	10
Field Duplicates	No specific QAPP limits Use RPD < 35% (water) or < 50% (soil)	Narrate; do not qualify.	na
Field Duplicates	QAPP specified RPD < 50% (sediment & water)	J(+)/UJ(-) in parent samples only	9

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Integral - Portland Harbor Site
Metals by AA-Hydride (Based on Inorganic NFG 1994 & 2002)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	4°C ±2° Water Only: Nitric Acid to pH < 2 For Dissolved metals, 0.45 um filter preserve after filtration	J(+)/UJ(-) if preservation requirements are not met	1
Holding Time	180 Days from collection	J(+)/UJ(-) >180 Days	1
Initial Calibration	Blank + 3 standards (1 at CRDL) every 24 hours; r>0.995	R(+/-) if <5 standards or >24 hours J(+)/UJ(-) if r<0.995	5A
Initial Calibration Verification (ICV)	Independent source > CRA std. conc. Post ICAL & prior to samples +/-10% of the True value	J(+) if %R < 75% J(+)/UJ(-) if %R = 75%-89% J(+) if %R = 111-125% R(-) if %R<75% R(+) if %R>125%	5A
Continuing Cal Verification (CCV)	Every 10 samples,post ICV/ICB and end of run +/- 10% of True value	J(+) if %R < 75% J(+)/UJ(-) if %R 75%-89% J(+) if %R 111-125% R(-) if %R<75% R(+) if %R>125%	5B
CRDL Standard (CRA)	@ CRDL; analyzed beginning of run %R = 70%-130%	professional judgment %R <50% - R(-),(+) <2X CRDL %R 50-69% - J(+) <2X CRDL, UJ(-) %R 130%-180% - J(+) <2X CRDL %R>180% - R(+)< 2X CRDL	14
Initial and Continuing Cal Blanks (ICB/CCB)	After each ICV and CCV - every ten samples (or 2 hours) and end of run blank < IDL and > -CRDL	Action level 5x(+)/5x(-) For positive blank hit, U(+) values < AL For negative blank hit, J(+)/UJ(-) < AL	7
Prep Blank	One per matrix per batch (Max 20 samples)	Action level 5x(+)/5x(-) For positive blank hit, U(+) values < AL For negative blank hit, J(+)/UJ(-) < AL	7
Field Blanks	No results > QL	Apply 5X rule; U(+) < action level	6
Matrix Spike	One per matrix, batch and SDG 75-125% for samples where results do not exceed 4x spike level	J (+) if %R > 125% J(+)/UJ(-), %R < 75% J(+)/R(-), %R < 30% UJ(-), %R 30-74%	8
Laboratory Duplicate	One per matrix per batch RPD <20% for samples > 5x CRDL (+/-)CRDL for samples >CRDL and <5 x CRDL (may use RPD < 35%, Diff < 2X CRDL for solids)	J(+)/UJ(-) associated samples if RPD > 20% or diff > CRDL	9

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Metals by AA-Hydride (Based on Inorganic NFG 1994 & 2002)

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Laboratory Control Sample	Waters: One per matrix per batch %R (80-120%)	R(+/-) if %R < 50% J(+)/UJ(-) if %R = 50-79% J(+) if %R >120%	10
	Soils: One per matrix per batch Result within manufacturer's certified acceptance range	J(+)/UJ(-) if < LCL, J(+) if > UCL	10
Field Duplicates	QAPP specified RPD < 50% (sediment & water)	Narrate; do not qualify.	na
Linear Range	Sample results must be less than 110% of high standard	J(+) values over range	20

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EcoChem Validation Guidelines (Based on Methods)
Conventionals Analyses

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Cooler Temperature and Preservation	4°C ±2° Water: NaOH to pH > 12 (for CN)	J(+)/UJ(-) if preservation requirements not met EcoChem PJ	1
Holding Time	Method Specific	Professional Judgment J(+)/UJ(-) if holding time exceeded J(+)/R(-) if HT exceeded by > 3X	1
Initial Calibration	Method specific once every 24 hours One at CRDL r>0.995	Professional judgment J(+)/UJ(-) for r < 0.995	5A
Initial Calibration Verification (ICV)	Independent source analyzed immediately after cal. %R method specific	R(+/-) if %R sig < LCL J(+)/UJ(-) if %R < LCL J(+) if %R > UCL R(+) if %R sig > UCL	5A
Continuing Cal Verification (CCV)	Every ten samples, immed. following ICV/ICB and end of run %R method specific	R(+/-) if %R sig < LCL J(+)/UJ(-) if %R < LCL J(+) if %R > UCL R(+) if %R sig > UCL	5B
Initial and Continuing Cal Blanks (ICB/CCB)	After each ICV and CCV every ten samples and end of run blank < +/- IDL	For positive blk results: UJ(+) < 5X blk contamination For negative blk results: J(+)/UJ(-) < abs. value of 5X blk contamination	7
Prep Blank	One per matrix per batch (not to exceed 20 samples)	For positive blk results: UJ(+) < 5X blk contamination For negative blk results: J(+)/UJ(-) < abs. value of 5X blk contamination	7
Matrix Spike	One per matrix per batch; 5% frequency 75-125% for samples less than 4 x spike level	J(+) if %R > 125% or < 75% UJ(-) if %R = 30-74% R(+/-) results < IDL if %R < 30%	8
Laboratory Duplicate	One per matrix per batch RPD <20% for samples > 5x CRDL Diff < CRDL for samples >CRDL and <5 x CRDL (may use RPD < 35%, Diff < 2X CRDL for solids)	J(+)/UJ(-) in assoc samples if RPD > 20% or diff > CRDL	9
Laboratory Control Sample	Waters: One per matrix per batch %R (80-120%)	R(+/-) if MS/MSD & LCS %R outside limits J(+)/UJ(-) if %R = 50-79% J(+) if %R > 120% R(+/-) if %R < 50%	10
	Soils: One per matrix per batch Result within manufacturer's certified acceptance range	J(+)/UJ(-) if < LCL, J(+) if > UCL	10

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EcoChem Validation Guidelines (Based on Methods)
Conventionals Analyses

VALIDATION QC ELEMENT	ACCEPTANCE CRITERIA	ACTION	REASON CODE
Field Blanks	taken on same day as samples	Action level is 5x blk conc. U(+) sample values < AL	6
Field Duplicates	Waters RPD < 35% Soils RPD < 50% for values > 5 x CRDL Diff < CRDL for samples >CRDL and <5 x CRDL (may use Diff < 2X CRDL for solids)	J(+)/UJ(-) in parent samples only	9

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Environmental Science and Chemistry

APPENDIX B
DATA VALIDATION REPORTS

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DATA VALIDATION REPORT
Portland Harbor RI/FS
Phase 2B Sediment Sampling, Fall 2005
Volatile Organic Compounds by Method SW8260B
Columbia Analytical Services - Kelso

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Columbia Analytical Services, Inc., Kelso, Washington, analyzed the samples.

SDG	No. Samples	Validation Level
K0505050	8 Sediments, 1 Trip Blank, 1 Field Blank	Full
K0505093	15 Sediments	Summary
K0505097	14 Sediments, 1 Trip Blank, 1 Field Blank	Summary
K0505099	4 Sediments & 1 Field Blank	Summary
K0505100	12 Sediments	Summary
K0505119	10 Sediments, 1 Trip Blank, 1 Field Blank	Summary
K0505183	14 Sediments, 1 Trip Blank, 1 Field Blank	Summary
K0505187	17 Sediments & 1 Field Blank	Summary
K0505247	17 Sediments, 1 Trip Blank, 2 Field Blanks	Full
K0505308	20 Sediments	Summary
K0505339	9 Sediments	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1 Holding Times
GC/MS Instrument Performance Check
2 Initial Calibration (ICAL)
2 Continuing Calibration (CCAL)
2 Blanks (Method)
2 Blanks (Field)
1 Surrogate Compounds
2 Matrix Spike/Matrix Spike Duplicates (MS/MSD)
2 Laboratory Control Samples (LCS/LCSD)
1 Field Replicates
Internal Standards
Target Analyte List
1 Reporting Limits (MDL and MRL)
Compound Identification (Full validation only)
1 Calculation Verification (Full validation only)

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

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Holding Times and Sample Receipt

The QAPP-required holding time criterion for sediment samples is 14 days from the date of sampling to date of extraction. The QAPP-required holding time criterion for sediment and water extracts is 40 days from extraction to analysis. All samples were extracted and analyzed within the holding time criterion.

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. All sample coolers were received within the control limits of 4°C ±2°, with the exceptions noted below. These temperature outliers did not impact data quality and no action was taken.

The laboratory received the majority of the sample coolers with temperatures outside the advisory control limits of 2° to 6°C, ranging from -5.6°C to 1.7°C.

SDG K0505119: Two of three sample coolers were received at the laboratory at temperatures greater than the control limits, at 7.0° and 7.7°C.

Initial Calibration

All percent relative standard deviation (%RSD) values were within the ±30% control limit. All relative response factor (RRF) values were greater than the 0.05 minimum control limit with the exceptions noted below. Positive results associated with RRF value outliers were estimated (J-5A). Due to the loss of instrument sensitivity, reporting limits associated with low RRF values were rejected (R-5A).

Most data packages: The RRF values for acetone, acrolein, 2-butanone, and vinyl acetate were less than the 0.05 minimum control limit in many of the ICAL. Acrolein and vinyl acetate were not detected in any field sample. All reporting limits associated with RRF value outliers were rejected (R-5A). Positive results for acetone and 2-butanone were estimated and the reporting limits rejected (J/R-5A). Other RRF value outliers are noted below as appropriate.

SDGs K0505050, K0505097, K0505099, K0505119, K0505183, K0505187, and K0505247: The RRF values for acrylonitrile, 2-hexanone, and 4-methyl-2-pentanone from the ICAL analyzed on 10/17/05 (Instrument MS18) and 8/4/05 (Instrument MS13) were less than the minimum control limit. Results and reporting limits for these compounds were qualified (J/R-5A) in the associated samples.

Continuing Calibration (CCAL)

All percent difference (%D) values for CCALs were within the ±25% control limit, and all RRF values were greater than the 0.05 minimum control limit with the exceptions noted below. Positive results in samples associated with %D outliers were estimated (J-5B). Reporting limits in samples associated with low-bias %D outliers were estimated (UJ-5B). Positive results and reporting limits in samples associated with RRF outliers were qualified (J/R-5B). A complete list of RRF and %D outliers is provided in the data validation worksheets.

Most data packages: The RRF values for acrolein, 2-butanone, and vinyl acetate were less than the 0.05 minimum control limit in most of the CCAL. Acrolein and vinyl acetate were typically not detected in field samples. All reporting limits associated with RRF value outliers were rejected (R-5B). Positive results for 2-butanone were estimated and the reporting limits rejected (J/R-5B).

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Percent difference outliers (indicated by bias) and other RRF value outliers were as follows:

SDG K0505050: iodomethane (low bias); RRF value outliers for acetone, 2-hexanone, acrylonitrile, and 4-methyl-2-pentanone in the CCAL analyzed 10/31/05 (Instrument MS 18).

SDG K0505093: vinyl acetate (high bias) in the CCAL analyzed 10/26/05 (Instrument MS 04).

SDG K0505097: dichlorodifluoromethane and vinyl acetate (high bias) in the CCAL analyzed 10/27/05 (Instrument MS 04).

- Carbon disulfide and vinyl acetate (high bias) in the CCAL analyzed 10/28/05 (Instrument MS 04).
- Dichlorodifluoromethane (high bias) and iodomethane (low bias); RRF value outliers for acrylonitrile, acetone, 2-hexanone, and 4-methyl-2-pentanone in the CCAL analyzed 11/1/05 (Instrument MS 18).

SDG K0505099: acetone (low bias) in the CCAL analyzed 10/25/05 (Instrument MS 04).

- Dichlorodifluoromethane (high bias) and iodomethane (low bias); RRF value outliers for acrylonitrile, acetone, 2-hexanone, and 4-methyl-2-pentanone in the CCAL analyzed 11/1/05 (Instrument MS 18).

SDG K0505100: Vinyl acetate (high bias) in the CCAL analyzed 10/26/05 (Instrument MS 04).

- Acetone (low bias) and vinyl acetate (high bias) in the CCAL analyzed 10/25/05 (Instrument MS 04).

SDG K0505119: carbon disulfide and vinyl acetate (high bias) in the CCAL analyzed 10/28/05 (Instrument MS 04).

- Dichlorodifluoromethane, trans-1,4-dichloro-2-butene, and trichlorofluoromethane (high bias); RRF value outlier for 2-hexanone in the CCAL analyzed 11/3/05 (Instrument MS 18).

SDG K0505183: vinyl acetate (high bias) in the CCAL analyzed 10/31/05 (Instrument MS 04).

- Dichlorodifluoromethane and vinyl acetate (high bias) in the CCAL analyzed 11/1/05 (Instrument MS 04).
- Vinyl acetate (high bias); RRF value outliers for acetone, acrylonitrile, 4-methyl-2-pentanone, and 2-hexanone in the CCAL analyzed 11/4/05 (Instrument MS 18).
- Carbon disulfide and dichlorodifluoromethane (high bias), iodomethane (low bias); RRF value outliers for acetone, acrylonitrile, 2-hexanone, and 4-methyl-2-pentanone in the CCAL analyzed 11/7/05 (Instrument MS 18).
- Acrolein, bromomethane, carbon tetrachloride (high bias); RRF value outliers for 2-hexanone, acetone, and 4-methyl-2-pentanone in the CCAL analyzed 11/8/05 (Instrument MS 13).

SDG K0505187: vinyl acetate (high bias) in the CCALs analyzed 10/31/05 and 11/1/05 (Instrument MS 04).

- Vinyl acetate (high bias); RRF value outliers for acetone, acrylonitrile, 4-methyl-2-pentanone, and 2-hexanone in the CCAL analyzed 11/4/05 (Instrument MS 18).

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SDG K0505247: vinyl acetate (high bias) in the CCAL analyzed 11/4/05 (Instrument MS 04).

- Vinyl acetate (high bias); RRF value outliers for acetone, 4-methyl-2-pentanone, acrylonitrile, and 2-hexanone in the CCAL analyzed 11/4/05 (Instrument MS 18).
- Bromomethane and carbon tetrachloride (high bias); RRF value outliers for 2-hexanone, acetone, and 4-methyl-2-pentanone in the CCAL analyzed 11/8/05 (Instrument MS 13).

SDG K0505308: vinyl acetate (high bias) in the CCAL analyzed 11/4/05 (Instrument MS 04).

SDG K0505339: vinyl acetate (high bias) in the CCAL analyzed 11/8/05 (Instrument MS 04).

Blanks (Method)

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration detected in the blank (ten times for methylene chloride, acetone, and 2-butanone). If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. A summary of contaminant levels, associated samples, and action levels is provided in the data validation worksheets. Various target analytes were detected in the method blanks. However, only the following analytes were qualified as not detected in one or more samples in the associated laboratory data sets:

SDG K0505050: Acetone (8 results), methylene chloride (8 results), 4-methyl-2-pentanone (1 result), and styrene (1 result)

SDG K0505093: Acetone (9 results) and methylene chloride (15 results)

SDG K0505097: Acetone (14 results), methylene chloride (14 results), benzene (2 results), and styrene (3 results)

SDG K0505099: Methylene chloride (4 results)

SDG K0505100: Acetone (7 results), methylene chloride (12 results), styrene (3 results), and naphthalene (1 result)

SDG K0505119: Acetone (7 results), benzene (5 results), methylene chloride (10 results), styrene and 4-methyl-2-pentanone (1 result each)

SDG K0505183: Acetone (5 results), methylene chloride (13 results), naphthalene (4 results), and 2-butanone (1 result)

SDG K0505187: Acetone (4 results), methylene chloride (17 results), naphthalene and styrene (1 result each)

SDG K0505247: Acetone (8 results), methylene chloride (15 results), naphthalene (8 results), benzene (2 results), and styrene (3 results)

SDG K0505308: Acetone (6 results), methylene chloride (19 results), carbon disulfide (10 results), and naphthalene (7 results)

SDG K0505339: Methylene chloride (9 results) and naphthalene (2 results)

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Blanks (Field)

After method blanks are used to evaluate all associated samples, including trip blanks and field blanks, any remaining positive results in the trip blanks are used to evaluate all associated samples, including field blanks. Finally, any remaining positive results in the field blanks are used to evaluate all associated samples. Any results designated as not detected because of field blank contamination were qualified (U-18 for trip blank contamination; U-6 for field blank contamination).

Various target analytes were detected in the field blanks:

SDG K0505050: A positive result for chloromethane was detected in Trip 1. The positive result for chloromethane was qualified as not detected (U-18) in the field blank LW2-C927. A positive result for toluene was detected in LW2-C927. The result for toluene was qualified as not detected (U-6) in Sample LW2-C532-F.

SDG K0505097: Positive results for acetone and toluene were detected in field blank LW2-C929. Results for acetone and toluene were qualified as not detected (U-6) in several associated samples.

SDG K0505099, K0505100: Positive results for acetone, chloroform, and toluene were detected in field blank LW2-C928. Results for acetone in five samples and toluene in two samples were qualified as not detected (U-6).

SDG K0505119: Positive results for acetone, chloroform, toluene, and trichlorofluoromethane were detected in field blank LW2-C930. Results for acetone and toluene were qualified as not detected (U-6) in one or more samples.

SDG K0505183: Positive results for toluene and trichlorofluoromethane were detected in field blank LW2-C932. Results for toluene were qualified as not detected (U-6) in two samples.

SDG K0505187: Positive results for acetone, isopropylbenzene, naphthalene, trichlorofluoromethane, and toluene were detected in field blank LW2-C931. A result for toluene was qualified as not detected (U-6) in Sample LW2-C096-B.

SDG K0505247: Positive results for toluene and trichlorofluoromethane were detected in field blank LW2-C933. Positive results for chlorobenzene, toluene, and trichlorofluoromethane were detected in field blank LW2-C934. No target analytes were detected in trip blank TB144.

Surrogates

SDG K0505183: The dibromofluoromethane %R value at 73% was less than the lower control limit in Sample LW2-C092-B. No action was taken for a single outlier; all other %R values were in control.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the required frequency. All MS/MSD recovery values were within the specified control limits, with the exceptions noted below. If the %R outlier was due to the presence of high levels of the target analyte present in the parent sample, no action was taken. If the concentration in the parent sample was less than four times the spike concentration, the results associated with the outlier were estimated (J-8) in the parent sample. If the recovery value was less than 10%, the reporting limits were rejected (R-8). A summary of outliers is provided in the data validation worksheets.

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All MS/MSD relative percent difference (RPD) values were within the specified control limits, with the exceptions noted below. For RPD outliers, positive results for the affected compounds were estimated (J-9) in the parent sample.

SDG K0505050: The percent recover (%R) values were less than 10% for 2-chloroethyl vinyl ether in the low-level MS/MSD. The parent sample was not from this SDG, so no qualifiers were applied. The %R values for acrolein and vinyl acetate in the MS/MSD using LW2-C381-E were less than the lower control limits; however, reporting limits for both analytes were previously rejected (R-5A) based on ICAL outliers, and no further qualifiers were assigned.

SDG K0505093: The %R values for acrolein and vinyl acetate in the MS/MSD using LW2-C082-D3 were less than the lower control limits; however, these analytes were previously rejected (R-5A) based on ICAL outliers, and no further qualifiers were assigned. The trans-1,4-dichloro-2-butene %R value in the MS was less than the lower control limit. No qualifiers were applied as the %R values for the MSD, laboratory control sample (LCS), and laboratory control sample duplicate (LCSD) were acceptable.

SDG K0505097: The %R values for 2-chloroethyl vinyl ether in the low-level MS/MSD were less than 10%. The parent sample was not from this SDG, so no qualifiers were applied. The %R values for acrolein and vinyl acetate in the MS/MSD using LW2-C080-B were less than the lower control limits; however, reporting limits for both analytes were previously rejected (R-5A) based on ICAL outliers, and no further qualifiers were assigned.

SDG K0505099: Two MS/MSD sets were performed with this SDG, both using batch QC samples. The %R values were less than 10% for 2-chloroethyl vinyl ether in the low-level MS/MSD. The second MS/MSD had multiple %R value and RPD outliers, a complete listing is provided in the validation worksheets. The parent samples were not from this SDG, so no qualifiers were applied.

SDG K0505100: The %R values for 2-chloroethyl vinyl ether, trans-1,4-dichloro-2-butene, and acrylonitrile in Sample LW2-C312-A MS/MSD were less than lower control limits. Positive results and reporting limits were estimated (J/UJ-8). The %R values were also less than lower control limits and the RPD values outside control limits for acrolein and vinyl acetate. These analytes were previously rejected (R-5A) based on ICAL outliers, so no further qualifiers were assigned.

SDG K0505119: MS/MSD analyses were performed using Sample LW2-C087-D. The %R values for MS and MSD were less than lower control limits for acrolein and vinyl acetate. These analytes were previously rejected (R-5A) based on ICAL outliers, and no further qualifiers were assigned. The MS %R values were less than lower control limits for iodomethane and trans-1,4-dichloro-2-butene. No action was taken, based on acceptable recoveries in the MSD and LCS analyses.

SDG K0505183: Two MS/MSD sets were performed with this SDG, using Sample LW2-C089-C and a batch QC sample. For Sample LW2-C089-C the %R values for MS and MSD were less than lower control limits for acrolein and vinyl acetate. These analytes were previously rejected (R-5A) based on ICAL outliers, and no further qualifiers were assigned. The %R values were less than lower control limits for trans-1,4-dichloro-2-butene. Reporting limits were qualified as estimated (UJ-8) in the parent sample. The Batch QC MS/MSD had multiple %R value outliers, a complete listing is provided in the validation worksheets. The parent sample was not from this SDG, so no qualifiers were applied.

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SDG K0505187: Two MS/MSD sets were performed with this SDG, using Sample LW2-C127-D and a batch QC sample. For Sample LW2-C127-D the %R values for MS and MSD were less than lower control limits for trans-1,4-dichloro-2-butene. The reporting limit was estimated (UJ-8) in the parent sample. The %R values were zero for 2-chloroethyl vinyl ether in the low-level MS/MSD. The parent sample was not from this SDG, so no qualifiers were applied.

SDG K0505247: Two MS/MSD sets were performed with this SDG, using Sample LW2-C525-E and a Batch QC. The %R values were zero for 2-chloroethyl vinyl ether in the Batch QC MS/MSD. The parent sample was not from this SDG, so no qualifiers were applied. For Sample LW2-C525-E the %R values for MS and MSD were less than lower control limits for vinyl acetate, the reporting limit was estimated (UJ-8) in the parent sample. The %R values for naphthalene were greater than the upper control limits and the RPD was outside control limits, the positive result was estimated (J-8,9). The MSD %R values for 2-chloroethyl vinyl ether and trans-1,4-dichloro-2-butene were less than lower control limits. No qualifiers were applied as the %R values for the MS, LCS, and LCSD were acceptable.

SDG K0505308: Two MS/MSD sets were performed with this SDG, using Samples LW2-C321-E2 and LW2-C530-E. For Sample LW2-C530-E MS/MSD, the %R values were less than lower control limits for acrylonitrile, 2-chloroethyl vinyl ether, iodomethane, and trans-1,4-dichloro-2-butene. The reporting limits were estimated (UJ-8) in the parent sample. The %R values from the MS and/or MSD were below ten percent for vinyl acetate and acrolein, and the RPD value for acrolein was outside control limits. Reporting limits for both analytes were rejected (R-8) in the parent sample.

Laboratory Spike/Laboratory Spike Duplicates

All %R values were within the specified control limits and all RPD values were less than the control limit of 40% in the LCS/LCSD analyses, with the exceptions noted below.

SDG K0505119: The %R value for 1,2-dichloroethane was greater than the upper control limit in an LCSD. No action was taken, as no positive results were associated.

SDG K0505183: The %R value for acrolein was greater than the upper control limit in one LCS from 11/1/05. No action was taken, based on acceptable recoveries in the LCSD analysis. The %R values for acrylonitrile and trans-1,4-dichloro-2-butene were less than the lower control limits and the %R value for acrolein was less than 10% in the aqueous LCS from 11/7/05. Reporting limits for acrylonitrile and trans-1,4-dichloro-2-butene were estimated (UJ-10) and the reporting limit for acrolein was rejected (R-10) in the associated sample.

SDG K0505187: The %R value for acrolein was greater than the upper control limit in one LCS from 11/1/05. No action was taken, based on acceptable recoveries in the LCSD analysis.

Field Replicates

Replicate sample pairs were listed below. The following acceptance criteria were applied: the RPD control limit is 50% for results greater than five times the reporting limit (RL). For results less than five times the RL, the absolute difference between the sample and duplicate must be less than two times the RL. No data were qualified based on field duplicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results.

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SDG K0505093: Three pairs of samples, LW2-C083-B1 & LW2-C083-B2, LW2-C083-C1 & LW2-C083-C2, and LW2-C083-D1 & LW2-C083-D2 were submitted as field replicates.

For Samples LW2-C083-D1 & LW2-C083-D2, the RPD value for acetone exceeded 50% and the absolute difference was greater than twice the RL. All other RPD and absolute difference values were within limits.

SDG K0505308: Five pairs of samples, LW2-C321-B1 & LW2-C321-B2, LW2-C321-E1 & LW2-C321-E2, LW2-C360-B1 & LW2-C360-B2, LW2-C360-C1 & LW2-C360-C2, and LW2-C360-F1 & LW2-C360-F2, were submitted as field duplicates.

For Samples LW2-C321-B1 & LW2-C321-B2 the RPD value for acetone exceeded 50% and the absolute difference was greater than twice the RL. For Samples LW2-C321-E1 & LW2-C321-E2 the RPD value for chlorobenzene exceeded 50% and the absolute difference was greater than twice the RL. For Samples LW2-C360-F1 & LW2-C360-F2, the RPD value for naphthalene exceeded 50% and the absolute difference was greater than twice the RL. All other RPD and absolute difference values were acceptable.

Reporting Limits (Method Detection Limit and Method Reporting Limit)

To meet the project analytical concentration goals (ACG), the laboratory reported non-detects at the method detection limits (MDLs), adjusted for sample size, percent moisture, and any dilution factor. The reported detection limits met all ACG and most method reporting limits (MRLs) specified in the QAPP.

Calculation Verification

SDGs K0505050 and K0505247: Calculation verifications were performed on these data sets only. All other data sets in this sampling event received Level III (summary) validation.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD %R values, with the exceptions noted above. Precision was also acceptable as demonstrated by the field replicate, LCS/LCSD, and MS/MSD RPD values, again with the exceptions noted above.

Data were estimated because of initial and continuing calibration %D and RRF outliers, MS/MSD and LCS %R outliers, and precision outliers. Data were also qualified as not detected based on contamination in the associated blanks.

Data were rejected because of calibration RRF and LCS %R outliers. Data that have been rejected should not be used for any reason.

All other data, as qualified, are acceptable for use.

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DATA VALIDATION REPORT
Portland Harbor RI/FS
Phase 2B Sediment Sampling, Fall 2005
Semivolatile Organic Compounds by Method SW8270C
Columbia Analytical Services - Kelso

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Columbia Analytical Services, Inc., Kelso, Washington.

SDG	No. Samples	Validation Level
K0505050	11 Sediments & 1 Field Blank	Full
K0505093	12 Sediments	Summary
K0505097	11 Sediments & 1 Field Blank	Summary
K0505099	11 Sediments & 1 Field Blank	Summary
K0505100	14 Sediments	Summary
K0505119	7 Sediments & 1 Field Blank	Summary
K0505183	12 Sediments	Summary
K0505187	14 Sediments & 1 Field Blank	Summary
K0505247	18 Sediments & 2 Field Blanks	Full
K0505308	18 Sediments	Summary
K0505339	8 Sediments	Summary
K0506857	1 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables, with the exception noted below. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

SDG K0505187: Some of the sample names were inconsistent between the chain-of-custody forms (COCs), the laboratory report forms, and the electronic data deliverable (EDD). Errors on the COCs and the laboratory forms were corrected by the client in an email communication. All sample IDs are now consistent. No further action is necessary.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the EDD results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

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III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Receipt	2	Laboratory Control Samples (LCS/LCSD)
	GC/MS Instrument Performance Check	1	Field Replicates
	Initial Calibration (ICAL)		Internal Standards
2	Continuing Calibration (CCAL)	1	Target Analyte List
2	Laboratory Blanks	1	Reporting Limits (MDL and MRL)
2	Field Blanks	1	Compound Identification
	Surrogate Compounds	1	Calculation Verification (Full validation only)
2	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)		

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

Holding Times and Sample Receipt

The QAPP-required holding time criterion for sediment samples is 14 days from the date of sampling to date of extraction. The QAPP-required holding time criterion for sediment and water extracts is 40 days from extraction to analysis. All samples were extracted and analyzed within the holding time criterion except as noted below.

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. All sample coolers were received within the control limits of 4°C ±2°, with the exceptions noted below. These temperature outliers did not impact data quality and no action was taken.

The laboratory received the majority of the sample coolers with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 1.7°C.

SDG K0505119: Two of three sample coolers were received at the laboratory at temperatures greater than the control limit, at 7.0° and 7.7°C.

Continuing Calibration

All relative response factor (RRF) values were greater than the 0.05 minimum control limit. All percent difference (%D) values were within the ±25% control limit for all continuing calibrations (CCAL), with the exceptions noted below. When the %D outlier indicates a potential high bias, and there were no positive results for these compounds, no qualifiers were required.

SDG K0505050:

- CCAL 11/1/05: N-nitrosodimethylamine (low bias)

SDG K0505097:

- CCAL 11/1/05: N-nitrosodimethylamine (low bias)
- CCAL 11/3/05: benzoic acid and 2,4-dinitrophenol (both high bias)

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SDG K0505099:

- CCAL 11/1/05: N-nitrosodimethylamine (low bias)
- CCAL 11/3/05: benzoic acid and 2,4-dinitrophenol (both high bias)

SDG K0505100:

- CCAL 11/11/05: bis(2-chloroisopropyl) ether and 2,4-dinitrophenol (both low bias)

SDG K0505119:

- CCAL 11/3/05: benzoic acid and 2,4-dinitrophenol (both high bias)

SDG K0505187:

- CCAL 11/10/05: bis(2-chloroisopropyl) ether (low bias)
- CCAL 11/11/05: bis(2-chloroisopropyl) ether and 2,4-dinitrophenol (both low bias)

SDG K0506857:

- CCAL 1/16/06: N-nitrosodimethylamine (low bias) and 4-nitrophenol (high bias)

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration reported in the blank (ten times for common laboratory contaminants). If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. For the analytical batches noted below, one or more target analytes were reported in the method blank. A summary of contaminant levels, associated samples, and action levels is provided in the data validation worksheets.

Method blanks were analyzed at the appropriate frequency. A summary of contaminant levels, associated samples, and action levels is provided in the data validation worksheets. Various target analytes were detected in the method blanks. However, only the following analytes were qualified as not detected in one or more samples in the associated laboratory data sets:

SDG K0505050 - aqueous: Di-n-butyl phthalate (1 result)

SDG K0505050 - sediment: Bis(2-ethylhexyl)phthalate (9 results), di-n-butyl phthalate (7 results), and phenol (9 results)

SDG K0505093 - sediment: Bis(2-ethylhexyl)phthalate (10 results), di-n-butyl phthalate (6 results), and phenol (6 results)

SDG K0505097 - aqueous: 4-Chloro-3-methylphenol (1 result)

SDG K0505097 - sediment: Bis(2-ethylhexyl)phthalate (8 results) and phenol (2 results)

SDG K0505099 - aqueous: 4-Chloro-3-methylphenol (1 result)

SDG K0505099 - sediment: Bis(2-ethylhexyl)phthalate (7 results)

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SDG K0505100 - sediment: Bis(2-ethylhexyl)phthalate (11 results)

SDG K0505119 - aqueous: 4-Chloro-3-methylphenol (1 result)

SDG K0505119 - sediment: Bis(2-ethylhexyl)phthalate (4 results) and di-n-butyl phthalate (7 results)

SDG K0505183 - sediment: Bis(2-ethylhexyl)phthalate (7 results) and di-n-butyl phthalate (6 results)

SDG K0505187 - aqueous: Di-n-butyl phthalate, phenol, and naphthalene (1 result each)

SDG K0505187 - sediment: Bis(2-ethylhexyl)phthalate (7 results), di-n-butyl phthalate (7 results), and phenol (9 results)

SDG K0505247 - aqueous: Di-n-butyl phthalate, phenol, and naphthalene (2 results each)

SDG K0505247 - sediment: Bis(2-ethylhexyl)phthalate (7 results)

SDG K0505308 - sediment: Bis(2-ethylhexyl)phthalate (11 results) and di-n-butyl phthalate (5 results)

SDG K0505339 - sediment: Bis(2-ethylhexyl)phthalate (6 results) and di-n-butyl phthalate (2 results)

SDG K0506857: One sediment method blank was reported with this SDG. Positive results for di-n-butyl phthalate and bis(2-ethylhexyl)phthalate were reported. These analytes were not detected in the associated sample. No qualifiers were required.

Field Blanks

Method blanks are used to evaluate all associated samples, including field blanks. Any remaining positive results in the field blanks are used to evaluate all associated samples.

SDG K0505050: One field blank (LW2-C927) was reported with this SDG. Positive results for butyl benzyl phthalate, diethyl phthalate, naphthalene, and phenol were detected. A diethyl phthalate result was qualified as not detected (U-6) in Sample LW2-C449-E.

SDG K0505097: One field blank (LW2-C929) was reported with this SDG. Positive results for di-n-butyl phthalate, diethyl phthalate, naphthalene, and phenol were detected. Di-n-butyl phthalate and phenol results were qualified as not detected (U-6) in several samples.

SDG K0505099: One field blank (LW2-C928) was reported with this SDG. Positive results for phenol, naphthalene, 2-methylnaphthalene, diethyl phthalate, di-n-butylphthalate, and butyl benzyl phthalate were detected. These compounds were not present in the associated samples, or the reported results were greater than the action levels. No qualifiers were required.

SDG K0505119: One field blank (LW2-C930) was reported with this SDG. Positive results for phenol, naphthalene, diethyl phthalate, and di-n-butylphthalate were detected. The concentrations of these analytes in the field samples were greater than the action levels. No qualifiers were required.

SDG K0505187: One field blank (LW2-C931) was reported with this SDG. After qualification for method blank contamination, positive results for diethyl phthalate, butyl benzyl phthalate and 2-methylnaphthalene remained. The concentrations of these analytes in the field samples were greater than the action levels. No qualifiers were required.

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SDG K0505247: Two field blanks (LW2-C933 & LW2-C934) were reported with this SDG. After qualification for method blank contamination, positive results for diethyl phthalate and butyl benzyl phthalate remained in LW2-C934 and diethyl phthalate in LW2-C933. The concentrations of these analytes in the associated sediment samples were greater than the action levels. No qualifiers were applied.

Surrogates

The percent recovery (%R) values for the surrogates were within the specified control limits of with the exceptions noted below. Qualifiers were only assigned when more than one %R value per fraction (acid or base-neutral) is outside the control limits. If the outliers indicated a potential high bias, only the associated positive results were estimated (J-13). If the outliers indicated a potential low bias, positive results and reporting limits were estimated (J/UJ-13).

SDG K0505119: The %R value for terphenyl-d14 at 36% was less than the lower control limit of 39% in Sample LW2-C078-B.

SDG K0505247: The %R value for terphenyl-d14 (at 141%) exceeded the upper control limit of 124% in Sample LW2-C525A. All surrogates were diluted out in Sample LW2-C525D due to required extract dilution (20x). No action was taken.

Matrix Spike/ Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the required frequency. All MS/MSD recovery values were within the specified control limits, with the exceptions noted below. If the %R outlier was due to the presence of high levels of the target analyte present in the parent sample, no action was taken. If the concentration in the parent sample was less than four times the spike concentration, the results associated with the outlier were estimated (J-8) in the parent sample. If the recovery value was less than 10%, the reporting limits were rejected (R-8). A summary of outliers is provided in the data validation worksheets.

All MS/MSD relative percent difference (RPD) values were within the specified control limits, with the exceptions noted below. For RPD outliers, positive results for the affected compounds were estimated (J-9) in the parent sample.

SDG K0505050: Two MS/MSD analyses were performed for this SDG, one using a batch QC sample, the other using Sample LW2-C532-F. For Sample LW2-C532-F, the aniline %R value was 7% in the MS. No qualifiers were applied because the %R values for the MSD, laboratory control sample (LCS), and laboratory control sample duplicate (LCSD) were acceptable. The RPD values for 1,3-dichlorobenzene, 1,4-dichlorobenzene, aniline and hexachloroethane were greater than control limits, no qualifiers were applied as there were no positive results for these analytes in the parent sample. The batch QC MS/MSD had numerous %R and RPD outliers. No qualifiers were applied as the parent sample was not from this SDG.

SDG K0505093: The %R values for benzoic acid were less than the lower control limit of 10% in the MS/MSD set performed on Sample LW2-C082-D2. The reporting limit for benzoic acid was rejected (R-8) in the parent sample.

SDG K0505097: The %R values for benzoic acid were less than the lower control limit of 10% in the MS/MSD set performed on Sample LW2-C088-C. The reporting limit for benzoic acid was

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rejected (R-8) in the parent sample. The MS %R and RPD values for aniline were outside control limits, and the batch QC RPD values for 1,3-dichlorobenzene, 1,4-dichlorobenzene, aniline and hexachloroethane were greater than control limits. No qualifiers were applied as the parent sample was not from this SDG.

SDG K0505099: The %R values for benzoic acid were less than the lower control limit of 10% in the batched MS/MSD set. No qualifiers were applied as the parent sample was not from this SDG.

SDG K0505100: The %R values for benzoic acid were less than the lower control limit of 10% in the batched MS/MSD set. No qualifiers were applied as the parent sample was not from this SDG.

SDG K0505119: The RPD values for hexachlorocyclopentadiene, N-nitrosodimethylamine, and 3,3'-dichlorobenzidine were greater than control limits in the sediment batched QC MS/MSD set. No action was taken as the parent sample was not from this SDG.

SDG K0505183: The RPD values for hexachlorocyclopentadiene and 3,3'-dichlorobenzidine were greater than control limits in the MS/MSD set associated with Sample LW2-C103-E. No qualifiers were applied as these target analytes were not detected in the parent sample.

SDG K0505187: MS/MSD analyses were performed for each matrix. For the water batch MS/MSD set, 18 %R values were between 0% and 10%, 11 %R values were greater than the upper control limits, and eight RPD values were outside of control limits. No qualifiers were applied as the parent sample was not from this SDG.

SDG K0505247: MS/MSD analyses were performed for each matrix. The RPD values for benzoic acid, 2,4-dinitrophenol, and 2-methyl-4,6-dinitrophenol were greater than the control limit of 40% in the sediment MS/MSD set performed on Sample LW2-C492C. These analytes were not detected in the parent sample. The reporting limits were not affected as the potential bias was high. For the water batch QC MS/MSD set, 18 %R values were between 0% and 10%, 11 exceeded the upper control limits, and eight RPD values were outside of control limits. No qualifiers were applied as the parent sample was not from this SDG.

SDG K0505308: The MS %R and RPD values for benzoic acid were outside of control limits in the MS/MSD set performed on Sample LW2-C321-E2. The %R outlier was less than 10%, thus the reporting limit for benzoic acid was rejected (R-8) in the parent sample. The %R values for hexachlorocyclopentadiene exceeded the upper control limit. This analyte was not detected in the parent sample. The reporting limits were not affected as the potential bias was high. The RPD values for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol were greater than the control limit. No qualifiers were applied since these analytes were not detected in the parent sample.

SDG K0505339: The RPD values for benzoic acid, hexachloroethane, N-nitrosodimethylamine, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, and hexachlorobutadiene were greater than the control limit in the MS/MSD set performed on Sample LW2-C187-D. No qualifiers were applied since these analytes were not detected in the parent sample.

SDG K0506857: There were numerous precision and accuracy outliers in the batched MS/MSD set prepared for this SDG. No qualifiers were applied as the parent sample was not from this SDG.

ANC04999
BZTO104(e)004999

Laboratory Control Sample/Laboratory Control Sample Duplicates

The %R values for aniline were less than the initial lower control limit. However, the narrative indicated that these initial control limits were default limits that were only used until more data points were collected to calculate statistical control limits. The %R values for aniline were within the revised control limits unless stated below.

SDG K0505050: The %R values for 2,4-dimethylphenol in the LCS and LCSD were less than 10%, positive results were estimated and reporting limits were rejected (J/R-10) in the associated samples. The RPD for benzoic acid was greater than the control limit; no qualifiers were applied as there were no positive results. The %R value for aniline was 9% in the LCS for water samples, the reporting limit was rejected (R-10) in the associated sample.

SDG K0505097: The %R values for 2,4-dimethylphenol in the LCS and LCSD were less than 10%, reporting limits were rejected (R-10) in the associated samples. The RPD for benzoic acid was greater than the control limit; no qualifiers were applied as there were no positive results. The %R value for aniline was 5% in the LCSD for water samples, and the RPD criterion was also exceeded. The reporting limit was rejected (R-10) in the associated sample.

SDGs K0505099, K0505119: The %R value for aniline was 5% in the LCSD for water samples, and the RPD criterion was also exceeded. The reporting limits were rejected (R-10) in the associated samples.

SDG K0505247: The %R value for bis(2-ethylhexyl)phthalate (144%) and the RPD value (66%) exceeded the control limits in the LCS/LCSD set prepared with the sediment samples. The outliers were indicative of a potential high bias. Positive results for bis(2-ethylhexyl)phthalate were qualified as estimated for accuracy and precision (J-9,10) in nine sediment samples.

SDG K0505308: The %R values for benzoic acid were less than the lower control limit and less than 10% in the LCS/LCSD set prepared with the sediment samples. The RPD value also exceeded control limits. Benzoic acid was not detected in the field samples. All reporting limits for this analyte were rejected (R-10) in this SDG.

SDG K0505339: The %R values for benzoic acid were less than the lower control limit and less than 10% in the LCS/LCSD set prepared with the sediment samples. The LCSD %R value for 2,4-dinitrophenol was less than 10% and the RPD was greater than the control limit. The reporting limits for benzoic acid and 2,4-dinitrophenol were rejected (R-10) in all samples. The LCSD %R value for 2-methyl-4,6-dinitrophenol was less than the lower control limit. The reporting limits for this analyte were estimated (UJ-10) in all samples. The RPD values for aniline, 2-methylphenol, 4-methylphenol, nitrobenzene, and 2,4-dimethylphenol exceeded the control limit. These analytes were not detected in the associated samples, thus no precision qualifiers were applied.

SDG K0506857: The %R values for 1,3-dichlorobenzene and 1,4-dichlorobenzene were less than the lower control limits in the LCS. The reporting limits for these analytes were estimated (UJ-10) in the associated sample. The RPD value for 2,4-dimethylphenol exceeded the control limit in the LCS/LCSD set. This analyte was not detected in the associated sample, thus no precision qualifier was applied.

ANC05000
BZTO104(e)005000

Field Replicates

Replicate sample pairs were listed below. The following acceptance criteria were applied: the RPD control limit is 50% for results greater than five times the reporting limit (RL). For results less than five times the RL, the absolute difference between the sample and replicate must be less than two times the RL. No data were qualified based on field replicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results.

SDG K0505093: Two pairs of samples, LW2-C083-B1 & LW2-C083-B2 and LW2-C083-C1 & LW2-C083-C2 were submitted as field replicates. For Samples LW2-C083-B1 & LW2-C083-B2, bis(2-ethylhexyl)phthalate had an RPD value exceeding 50% and the absolute difference was greater than twice the RL. All other RPD and/or absolute difference values were acceptable.

SDG K0505308: Four pairs of samples, LW2-C321-B1 & LW2-C321-B2, LW2-C321-C1 & LW2-C321-C2, LW2-C360-B1 & LW2-C360-B2, and LW2-C360-C1 & LW2-C360-C2, were submitted as field replicates. All RPD and/or absolute difference values were acceptable.

Internal Standards

SDG K0505119: The %R values for internal standards chrysene-d12 and perylene-d12 were greater than the upper control limits in Sample LW2-C084-C. None of the target compounds associated with these internal standards were detected. The %R values were indicative of a potential high bias, and reporting limits were not affected.

SDG K0505187: The %R values for chrysene-d12 were greater than the upper control limit in the batch QC MS/MSD set. No action was taken since these were QC samples.

Target Analyte List

Dibenzofuran was reported from a separate analysis (EPA 8270C-SIM) with the PAH compounds.

Compound Identification

It was noted by the laboratory that 3-methylphenol could not be separated from 4-methylphenol. Also, 1,2-diphenylhydrazine was reported as azobenzene.

Reporting Limits (Method Detection Limit and Method Reporting Limit)

SDGs K0505050, K0505093, K0505097, K0505308, K0505339: The method detection limits (MDL) for several compounds were greater than the QAPP MDL. No action was taken since the QAPP method reporting limits (MRL) were met.

Several samples were diluted due to matrix interference. Reporting limits were elevated accordingly.

Calculation Verification

SDGs K0505050 & K0505247: Calculation verifications were performed on these SDGs. No calculation errors were found.

ANC05001
BZTO104(e)005001

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD %R values. Precision was also acceptable as demonstrated by the field duplicate and LCS/LCSD RPD values, with the noted exceptions.

Data were estimated because of LCS/LCSD recovery and precision outliers and calibration %D outliers. Data were also qualified as not detected based on contamination in the associated method and field blanks.

Data were rejected because of LCS/LCSD and MS/MSD recovery outliers. Data that has been rejected should not be used for any purpose.

All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Phase 2B Sediment Sampling, Fall 2005
Polyaromatic Hydrocarbons (PAH) by Method SW8270-SIM
Columbia Analytical Services - Kelso

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Columbia Analytical Services, Inc., Kelso, Washington.

SDG	No. Samples	Validation Level
K0505050	11 Sediments	Full
K0505093	12 Sediments	Summary
K0505097	11 Sediments	Summary
K0505099	11 Sediments	Summary
K0505100	14 Sediments	Summary
K0505119	7 Sediments	Summary
K0505183	12 Sediments	Summary
K0505187	14 Sediments	Summary
K0505247	18 Sediments	Full
K0505308	19 Sediments	Summary
K0505339	8 Sediments	Summary
K0506857	1 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

2	Holding Times and Sample Receipt		Laboratory Control Samples (LCS/LCSD)
	GC/MS Instrument Performance Check		Field Duplicates
	Initial Calibration (ICAL)		Internal Standards
1	Continuing Calibration (CCAL)	1	Target Analyte List
2	Laboratory Blanks		Reporting Limits (MDL and MRL)
2	Field Blanks		Compound Identification (Full validation only)
	Surrogate Compounds	1	Calculation Verification (Full validation only)
1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)		

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

ANC05003
BZTO104(e)005003

Holding Times and Sample Receipt

The QAPP-required holding time criterion for sediment samples is 14 days from the date of sampling to date of extraction. The QAPP-required holding time criterion for sediment and water extracts is 40 days from extraction to analysis. All samples were extracted and analyzed within the holding time criterion except as noted below.

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. All sample coolers were received within the control limits of 4°C ±2°, with the exceptions noted below. These temperature outliers did not impact data quality and no action was taken. The following lists cooler temperature outliers and sample receipt anomalies:

The laboratory received the majority of the sample coolers with temperatures outside the advisory control limits of 2° to 6°C, ranging from –1.1° to 1.7°C.

SDG K0505050: Samples LW2-C449-B, LW2-C449-C, LW2-C449-E and LW2-C381-B were re-extracted due to contamination in the associated method blank. The re-extraction occurred 7 days past the holding time limit. Results and reporting limits for three affected analytes were estimated (J/UJ-1) in these samples; results and reporting limits for all other analytes were taken from the initial analysis.

SDG K0505097: Sample LW2-C079-B was re-extracted due to contamination in the method blank. The re-extraction occurred 5 days past the holding time limit. Results and reporting limits for three affected analytes were estimated (J/UJ-1) in these samples; results and reporting limits for all other analytes were taken from the initial analysis.

SDG K0505119: Two of three sample coolers were received at the laboratory at temperatures greater than the control limits, at 7.0° and 7.7°C.

Continuing Calibration

All relative response factor (RRF) values were greater than the 0.05 minimum control limit. All percent difference (%D) values were within the ±25% control limit for all continuing calibrations (CCAL), with the exceptions noted below. If the %D outlier indicated a low bias, positive results and reporting limits in samples associated with %D outliers were estimated (J/UJ-5B). If the %D outlier indicated a potential high bias, only positive results were estimated (J-5B).

SDG K0505183: The %D values for indeno(1,2,3-cd)pyrene and dibenz(a,h)anthracene were less than the control limit due to low response in the CCAL analyzed 11/21/05. The only associated sample was a dilution of Sample LW2-C092-D, and neither of the affected analytes were reported from this dilution, therefore no qualifiers were required.

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the

reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. A summary of contaminant levels, associated samples, and action levels is provided in the data validation worksheets. Various target analytes were detected in the method blanks. However, only the following analytes were qualified as not detected in one or more samples in the associated laboratory data sets:

SDG K0505050: Anthracene (1 result), benz(a)anthracene (3 results), benzo(a)pyrene (2 results), chrysene (2 results), fluoranthene (3 results), naphthalene (5 results), phenanthrene (3 results), pyrene (3 results), benzo(g,h,i)perylene and indeno(1,2,3-cd)pyrene (1 result each)

SDG K0505093: Naphthalene (6 results)

SDG K0505097: Anthracene, benz(a)anthracene, benzo(k)fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, chrysene, benzo(g,h,i)perylene, and indeno(1,2,3-cd)pyrene (1 result each)

SDG K0505099: Naphthalene (1 result)

SDG K0505119: Naphthalene (5 results)

SDG K0505183: Naphthalene (4 results)

SDG K0505187: Naphthalene (1 result)

SDG K0505247: Acenaphthene (2 results), dibenz(a,h)anthracene (5 results), fluorene (2 results), dibenzofuran (5 results), and anthracene, benz(a)anthracene, benzo(a)pyrene, fluoranthene, chrysene, benzo(k)fluoranthene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene naphthalene, phenanthrene, pyrene, and benzo(g,h,i)perylene (1 result each)

SDG K0505308: Naphthalene (3 results)

SDG K0506857: Naphthalene (1 result)

Field Blanks

Method blanks are used to evaluate all associated samples, including field blanks. Any remaining positive results in the field blanks are used to evaluate all associated samples.

The field blanks were analyzed with the standard SVOC analyses, and are summarized in the SVOC validation report. Several PAH compounds were detected in the field blanks. With the exception of 2-methylnaphthalene in several samples, the PAH compounds were either not detected or were present in the associated samples at concentrations greater than the action levels. The 2-methylnaphthalene results in 10 samples were qualified as not detected (U-6).

Matrix Spike/Matrix Spike Duplicate

SDG K0506857: The relative percent difference (RPD) value for fluoranthene was greater than the control limit in the batch QC matrix spike/matrix spike duplicate (MS/MSD) set prepared with the sample in this SDG. No action was taken since the parent sample was not from this SDG.

ANC05005
BZTO104(e)005005

Field Replicates

Replicate sample pairs are listed below. The following acceptance criteria were applied: the RPD control limit is 50% for results greater than five times the reporting limit (RL). For results less than five times the RL, the absolute difference between the sample and replicate must be less than two times the RL. No data were qualified based on field replicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results.

SDG K0505093: Two pairs of samples, LW2-C083-B1 & LW2-C083-B2 and LW2-C083-C1 & LW2-C083-C2, were submitted as field replicates. For LW2-C083-B1 & LW2-C083-B2, the RPD and absolute difference values were outside control limits for 13 of 18 analytes. For the pair LW2-C083-C1 & LW2-C083-C2, the RPD and absolute difference values were outside control limits for ten of 18 analytes. All outliers are listed in the validation worksheets.

Target Analyte List

Dibenzofuran was listed among the semivolatile analytes in the QAPP. However, it was analyzed and reported with the PAH analysis.

Calculation Verification

SDGs K0505050 & K0505247: Calculation verifications were performed on these SDGs only. No calculation errors were found.

Reporting Limits (Method Detection Limits and Method Reporting Limits)

The method detection limits (MDL) for benzo(g,h,i)perylene and dibenzofuran were greater than the QAPP MDL. No action was taken since the QAPP method reporting limits (MRL) were met. Several samples were diluted to bring target concentrations within range. Reporting limits were elevated accordingly.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, MS/MSD, laboratory control sample/laboratory control sample duplicate (LCS/LCSD) percent recovery values. Precision was also acceptable as demonstrated by the field duplicate, MS/MSD LCS/LCSD RPD values, with the exceptions noted previously.

Data were qualified as estimated because of holding time outliers. Data were qualified as not detected based on method and field blank contamination. Field duplicate precision outliers were also noted.

All data, as qualified, are acceptable for use.

ANC05006
BZTO104(e)005006

DATA VALIDATION REPORT
Portland Harbor RI/FS
Phase 2B Sediment Sampling, Fall 2005
Chlorophenols by Method SW8151
Columbia Analytical Services - Kelso

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Columbia Analytical Services, Inc., Kelso, Washington, analyzed the samples.

SDG	No. Samples	Validation Level
K0505050	11 Sediments & 1 Field Blank	Full
K0505093	12 Sediments	Summary
K0505097	11 Sediments & 1 Field Blank	Summary
K0505099	11 Sediments & 1 Field Blank	Summary
K0505100	14 Sediments	Summary
K0505119	7 Sediments & 1 Field Blank	Summary
K0505183	12 Sediments	Summary
K0505187	14 Sediments & 1 Field Blank	Summary
K0505247	18 Sediments & 2 Field Blanks	Full
K0505308	19 Sediments	Summary
K0505339	8 Sediments	Summary
K0506857	1 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Receipt		Matrix Spikes/Matrix Spike Duplicates
	Instrument Performance Check		Laboratory Control Samples
	Initial Calibration (ICAL)	1	Field Replicates
	Continuing Calibration (CCAL)	1	Reporting Limits (MDL and MRL)
2	Blanks (Method and Field)	2	Compound Identification
	Surrogate Compounds	1	Calculation Verification (full validation only)

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

ANC05007
BZTO104(e)005007

Holding Times and Sample Receipt

The QAPP-required holding time criterion for sediment samples is 14 days from the date of sampling to date of extraction. The QAPP-required holding time criterion for sediment and water extracts is 40 days from extraction to analysis. All samples were extracted and analyzed within the holding time criterion except as noted below.

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. All sample coolers were received within the control limits of $4^{\circ}C \pm 2^{\circ}$, with the exceptions noted below. These temperature outliers did not impact data quality and no action was taken. The following lists cooler temperature outliers and sample receipt anomalies:

The laboratory received the majority of the sample coolers with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 1.7 °C.

SDG K0505119: Two of three sample coolers were received at the laboratory at temperatures greater than the control limit, at 7.0°C and 7.7°C.

Blanks (Method)

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration detected in the blank. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks are used to evaluate all associated samples, including field blanks. Any remaining positive results in the field blanks are used to evaluate all associated samples.

Method blanks were analyzed at the appropriate frequency. For the analytical batches noted below, one or more target analytes were detected in the method blank. A summary of contaminant levels, associated samples, and action levels is provided in the data validation worksheets.

SDG K0505093: 2,4,5-trichlorophenol was detected in the method blank. Results less than the action level were qualified as not detected in two associated samples.

SDGs K0505097, K0505100, K0505119, K0505183: Various target analytes were detected in the method blanks; however, no qualifiers were required in the associated samples.

Blanks (Field)

After method blanks are used to evaluate all associated samples, including field blanks, any remaining positive results in the field blanks are used to evaluate all associated samples. Any results designated as not detected because of field blank contamination were qualified (U-6).

SDG K0505050: No positive results were detected in field blank LW2-C927.

SDG K0505097: No positive results were detected in field blank LW2-C929.

ANC05008
BZTO104(e)005008

SDG K0505099: No positive results were detected in field blank LW2-C928.

SDG K0505119: No positive results were detected in field blank LW2-C929.

SDG K0505187: No positive results were detected in field blank LW2-C931.

SDG K0505247: No positive results were detected in field blanks LW2-C933 or LW2-C934.

Surrogates

SDG K0505247: The surrogate 4-bromo-2,6-dichlorophenol was not recovered from the following samples: LW2-C525-B, LW2-C525-C, LW2-C525-D, and LW2-C528-C. These samples were analyzed at 100x dilution, no qualifiers were applied.

SDG K0505308: Recoveries of 4-bromo-2,6-dichlorophenol exceeded the upper control limit from the following samples: LW2-C360-C1 and LW2-C360-C2. These samples were analyzed at 10x dilution, no qualifiers were applied.

SDG K0505339: The surrogate 4-bromo-2,6-dichlorophenol was not recovered from Sample LW2-C531-C. This sample was analyzed at 100x dilution, no qualifiers were applied.

Field Replicates

The following acceptance criteria were applied: the relative percent difference (RPD) control limit is 50% for results greater than five times the reporting limit (RL). For results less than five times the RL, the absolute difference between the sample and replicate must be less than two times the RL. No qualifiers were applied based on field replicate precision outliers. However, any outliers were noted below. Data users should take field precision into account when interpreting sample data.

SDG K0505093: Two pairs of samples, LW2-C083-B1 & LW2-C083-B2 and LW2-C083-C1 & LW2-C083-C2, were submitted as field replicates. All RPD and absolute difference values were acceptable.

SDG K0505308: Four pairs of samples were submitted as field replicates:

LW2-C321-B1 & LW2-C321-B2	LW2-C360-B1 & LW2-C360-B2,
LW2-C321-C1 & LW2-C321-C2	LW2-C360-C1 & LW2-C360-C2

All RPD and absolute difference values were within the acceptance criteria.

Reporting Limits (Method Detection Limit and Method Reporting Limit)

The reporting limits were elevated for several analytes in many samples due to non-target background components or where dilution was required. The analytical concentration goals (ACG) from the QAPP were exceeded in some instances.

Compound Identification

It was noted by the laboratory that 2,3,5,6-tetrachlorophenol could not be separated from 2,3,4,6-tetrachlorophenol.

ANC05009
BZTO104(e)005009

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40%, the laboratory flagged the results with a "P". For data usability, when the RPD was between 40% and 60% the results were estimated (J-3). Where the RPD value was greater than 60% the results were tentatively identified (NJ-3).

SDG K0505050: In Sample LW2-C381-E, the result for 2,4,5-trichlorophenol was estimated (J-3). In Sample LW2-C532-A the result for 2,4,5-trichlorophenol was estimated (J-3), the result for 2,4,6-trichlorophenol was tentatively identified (NJ-3), and the result for pentachlorophenol was tentatively identified (NJ-3). In Sample LW2-C532-B the result for 2,4,6-trichlorophenol was tentatively identified (NJ-3).

SDG K0505097: In Sample LW2-C080-B the result for pentachlorophenol was estimated (J-3).

SDG K0505099: In Sample LW2-C524-A the result for 2,4,6-trichlorophenol was estimated (J-3) and the result for 2,3,4,5-tetrachlorophenol was tentatively identified (NJ-3). In Sample LW2-C533-A the result for 2,4,6-trichlorophenol was tentatively identified (NJ-3) and the result for pentachlorophenol was estimated (J-3).

SDG K0505100: In Samples LW2-C167-B, LW2-C167-C, and LW2-C523-B the result for 2,4,5-trichlorophenol was estimated (J-3). In Sample LW2-C312-C the result for 2,4,5-trichlorophenol was tentatively identified (NJ-3). In Sample LW2-C523-A the result for 2,3,4,5-tetrachlorophenol was estimated (J-3).

SDG K0505187: Three results for 2,4,5-trichlorophenol were estimated (J-3) and three results for pentachlorophenol were estimated (J-3).

SDG K0505247: One result each for 2,4,5-trichlorophenol and pentachlorophenol were tentatively identified (NJ-3) and two results for 2,4,6-trichlorophenol were tentatively identified (NJ-3).

SDG K0505308: One result each for 2,4,5-trichlorophenol and pentachlorophenol were estimated (J-3) and one result for 2,3,5,6-tetrachlorophenol was tentatively identified (NJ-3).

Calculation Verification

SDG K0505050 & K0505247: Calculation verification was performed on these SDGs. No calculation errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample/laboratory control sample duplicate (LCS/LCSD), and matrix spike/matrix spike duplicate (MS/MSD) percent recover values. Precision was acceptable as demonstrated by the RPD values for the LCS/LCSD and MS/MSD analyses.

Data were estimated based on differences between the results from the two analytical columns. Data were also qualified as not detected based on contamination in the associated method blanks.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Phase 2B Sediment Sampling, Fall 2005
Chlorinated Pesticides by Method SW8081A
Columbia Analytical Services - Kelso

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Columbia Analytical Services, Inc., Kelso, Washington, analyzed the samples.

SDG	No. Samples	Validation Level
K0505050	12 Sediments & 1 Field Blank	Full
K0505093	12 Sediments	Summary
K0505097	11 Sediments & 1 Field Blank	Summary
K0505099	11 Sediments & 1 Field Blank	Summary
K0505100	14 Sediments	Summary
K0505119	9 Sediments & 1 Field Blank	Summary
K0505183	12 Sediments	Summary
K0505187	14 Sediments & 1 Field Blank	Summary
K0505247	18 Sediments & 2 Field Blanks	Full
K0505308	18 Sediments	Summary
K0505339	8 Sediments	Summary
K0506857	1 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables, with the exceptions noted below. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

SDG K0505187: Some of the sample names were inconsistent between the chain-of-custody forms (COCs), the laboratory report forms, and the electronic data deliverable (EDD). Errors on the COCs and the laboratory forms were corrected by the client in an email communication. All sample ID are now consistent. No further action is necessary.

SDG K0505247: Pages 4410 through 4542 were missing from the data package. The laboratory was contacted and submitted the missing pages.

SDG K0505308: The MSD performed on Sample LW-C321-B1 was not reported on the summary form. The results were checked from the raw data.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the EDD results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No problems were noted.

ANC05011
BZTO104(e)005011

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

2	Holding Times and Sample Receipt	2	Laboratory Control Samples (LCS)
	Initial Calibration (ICAL)	1	Field Duplicates
	Continuing Calibration (CCAL)		DDT/Endrin Breakdown
1	Laboratory Blanks	2	Compound Identification
1	Field Blanks		Reporting Limits (MDL and MRL)
1	Surrogate Compounds	1	Calculation Verification (full validation only)
2	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)		

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

Holding Times and Sample Receipt

The QAPP-required holding time criterion for sediment samples is 14 days from the date of sampling to date of extraction. The QAPP-required holding time criterion for sediment and water extracts is 40 days from extraction to analysis. All samples were extracted and analyzed within the holding time criterion except as noted below.

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. All sample coolers were received within the control limits of 4°C ±2°, with the exceptions noted below. These temperature outliers did not impact data quality and no action was taken. The following lists cooler temperature outliers and sample receipt anomalies:

The laboratory received the majority of the sample coolers with temperatures outside the advisory control limits of 2° to 6°C, ranging from –1.1° to 1.7°C.

SDG K0505119: Two of three sample coolers were received at the laboratory at temperatures greater than the control limits, at 7.0° and 7.7°C.

SDG K0505099: Sample LW2-C533-D was extracted 19 days after collection. All reporting limits were estimated (UJ-1) due to the holding time violation.

SDG K0505100: Samples LW2-C293-B, LW2-C296-C, LW2-C303-C, LW2-C523-A, LW2-C523-B, and LW2-C523-C were extracted 19 days after collection, after the original extracts were lost during clean-up. The positive results and reporting limits for these samples were estimated (J/UJ-1) due to holding time violation.

SDG K0506857: Sample LW2-C082-D1 was originally archived at -20°C. This analysis was performed using an aliquot of the frozen sample, which extended the holding time to one year.

Continuing Calibration

All percent difference (%D) values were acceptable with the exception noted below.

SDG K0506857: The %D value for toxaphene (29%) on the DB-XLB column exceeded the 25%

control limit. Toxaphene was not detected in the associated sample and the %D value was within limits on the DB-35MS column. No action was taken.

Method Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. A summary of contaminant levels, associated samples, and action levels is provided in the data validation worksheets. Various target analytes were detected in the method blanks. However, only the following analytes were qualified as not detected in one or more samples in the associated laboratory data sets:

SDG K0505247: Positive values for hexachlorobenzene were qualified as not detected (U-7) in Samples LW2-C528A, LW2-C528B, LW2-C525D, LW2-C492C, LW2-C358C, and LW2-C358D.

Field Blanks

SDG K0505050: One equipment rinsate blank, LW2-C927, was submitted for analysis. No target pesticides were detected in the blank.

SDG K0505097: One equipment rinsate blank, sample LW2-C929, was submitted for analysis. No target pesticide compounds were detected in the blank.

SDG K0505099: One equipment rinsate blank, sample LW2-C928, was submitted for analysis. No target pesticide compounds were detected in the blank.

SDG K0505119: One equipment rinsate blank, LW2-C930, was submitted for analysis. No target pesticide compounds were detected in the blank.

SDG K0505187: One equipment rinsate blank, LW2-C931, was submitted for analysis. No target pesticide compounds were detected in the blank.

SDG K0505247: Two equipment rinsate blanks were submitted for analysis. A positive value for oxychlordane was reported in Sample LW2-C933. Oxychlordane was either not detected or was at concentrations greater than the action level in the associated samples. No action was taken. No target pesticide compounds were detected in Sample LW2-C934.

Surrogates

The percent recovery (%R) values for the surrogates tetrachloro-meta-xylene (TCMX) and decachlorobiphenyl (DCBP) were within the control limits of 30% to 150% with the exceptions noted below. Qualifiers were only assigned when more than one %R value is outside the control limits. If the outlier indicated a potential high bias, only the associated positive results were estimated (J-13). If the outlier indicated a potential low bias, positive results and reporting limits were estimated (J/UJ-13). A complete list of all %R outliers is present in the validation worksheets.

SDG K0505097: The %R values for TCMX and DCBP exceeded the upper control limits in the water method blank. No action was taken since this was a QC sample.

SDG K0505119: The %R value for TCMX was below the lower control limit in Sample LW2-C084-A. No action was taken as the DCBP %R value was in control and the outlier was greater than 10%. The %R values for both surrogates exceeded the upper control limit in the water method blank. No action was taken for a QC sample.

SDG K0505247: The %R values for TCMX and DCBP exceeded the upper control limits in the Sample LW2-C525D. This sample was analyzed at dilution (10x); no qualifiers were assigned.

Matrix Spikes/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at an acceptable frequency. All %R values were within the 60% to 140% control limits, with the exceptions noted below. When outliers were present, only the associated compounds in the parent sample were qualified. If the outliers indicated a potential high bias, only the associated positive results were estimated (J-8). If the outliers indicated a potential low bias, positive results and reporting limits were estimated (J/UJ-8).

All MS/MSD relative percent difference (RPD) values were within the specified control limits, with the exceptions noted below. For RPD outliers, positive results for the affected compounds were estimated (J-9) in the parent sample.

RPD and %R value outliers (with bias, when appropriate) are listed below. Data were qualified as discussed above.

SDG K0505050:

- LW2-C532-E MS/MSD - oxychlordane, cis-nonachlor, trans-nonachlor, hexachloroethane, mirex, and hexachlorobutadiene (low bias)
- LW2-C532-F MS/MSD - hexachlorobenzene (low bias)

SDG K0505093:

- LW2-C082-C1 MS/MSD - hexachloroethane (low bias)
- LW2-C082-C2 MS/MSD - hexachloroethane (low bias)
- LW2-C082-B3 MS/MSD - oxychlordane, cis-nonachlor, trans-nonachlor, hexachloroethane, mirex, and hexachlorobutadiene (low bias)
- Batch MS/MSD - oxychlordane, cis-nonachlor, trans-nonachlor, mirex, hexachloroethane, and hexachlorobutadiene (low bias)

SDG K0505097:

- LW2-C088-C MS/MSD - hexachlorobenzene (low bias)
- LW2-C080-C MS/MSD - oxychlordane, cis-nonachlor, trans-nonachlor, hexachloroethane, mirex, and hexachlorobutadiene (low bias)
- Batch MS/MSD - 2,4'-DDD (high bias) and 2,4'-DDT (no recovery)

SDG K0505099:

- K0505050-009 Batched MS/MSD - hexachlorobenzene (low bias)

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- K0505093-003 Batched MS/MSD - hexachlorobenzene (low bias)
- K0505050-008 Batched MS/MSD – all compounds (low bias) and hexachloroethane RPD value outlier
- K0505100-007 Batched MS/MSD - oxychlordane, cis-nonachlor, trans-nonachlor, mirex, hexachloroethane, and hexachlorobutadiene (low bias)
- K0505339-002 Batched MS/MSD – 13 compounds (low bias or not recovered) and two RPD value outliers
- K0505339-005 Batched MS/MSD - oxychlordane, hexachloroethane, and hexachlorobutadiene (low bias)

SDG K0505100:

- LW2-C303-C MS/MSD - hexachlorobenzene and hexachlorobutadiene (low bias)
- Batched MS/MSD sets – various %R and RPD value outliers

SDG K0505119:

- K0505093-007 Batched MS/MSD - hexachlorobenzene (low bias)
- K0505137-015 Batched MS/MSD - various %R and RPD value outliers
- K0505093-010 Batched MS/MSD - oxychlordane, cis-nonachlor, hexachlorobutadiene, and mirex (low bias)

SDG K0505183:

- LW2-C103-E MS/MSD - oxychlordane, cis-nonachlor, trans-nonachlor, hexachloroethane, mirex, and hexachlorobutadiene (low bias)
- LW2-C089-B MS/MSD – 18 %R value outliers (mixed bias); 4,4'-DDT and endrin aldehyde RPD value outliers

SDG K0505187:

- LW2-C096-B MS/MSD - 2,4′-DDT (low bias)
- 10/29/05 aqueous Batched MS/MSD - hexachlorobenzene (low bias)
- 10/29/05 sediment Batched MS/MSD – all %R values (low bias)
- 10/30/05 sediment Batched MS/MSD – all %R values (low bias)

SDG K0505247:

- LW2-C527-E MS/MSD – various %R and RPD value outliers. This MS/MSD set was analyzed at dilution (20X), therefore no qualifiers were applied.
- LW2-C525-E MS/MSD - toxaphene (high bias)
- LW2-C528-F MS/MSD - trans-nonachlor, hexachloroethane, hexachlorobutadiene, and oxychlordane (low bias)
- LW2-C525-C MS/MSD - 2,4′-DDE (low bias) and 2,4′-DDT (high bias)
- Aqueous Batched MS/MSD - various %R and RPD value outliers

SDG K0505308:

- LW2-C321-B1 MS/MSD - hexachlorobenzene (low bias)

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- LW2-C321-C2 MS/MSD - toxaphene (high bias)
- LW2-C321-C1 MS/MSD - oxychlordane, cis-nonachlor, trans-nonachlor, hexachloroethane, hexachlorobutadiene, and mirex (low bias)

SDG K0505339:

- LW2-C351-B MS/MSD – hexachlorobenzene, gamma-chlordane, 4,4′-DDE, 4,4′-DDD, and 4,4′-DDT (low bias). Alpha-BHC and endrin ketone (low bias in MS only). No action taken as the MSD and LCS %R values were acceptable. Delta-BHC RPD value outlier.
- LW2-C187-B MS/MSD - oxychlordane, hexachloroethane, and hexachlorobutadiene (low bias)

SDG K0506857:

- 12/30/05 Batched MS/MSD - hexachloroethane, hexachlorobutadiene, and hexachlorobenzene (low bias)

Laboratory Control Samples

All %R values were within the control limits of 70% to 130% and all RPD values were less than the control limit of 20% in the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses, with the exceptions noted below. If the outliers indicated a potential high bias, the associated positive results were estimated (J-10). If the outliers indicated a potential low bias, positive results and reporting limits were estimated (J/UJ-10). A complete list of all %R outliers is present in the validation worksheets.

SDG K0505050:

- 10/27/05 LCS/LCSD (sediments) - 4,4′-DDD, 4,4′-DDE, 4,4′-DDT, aldrin, endosulfan II, α-chlordane, γ-chlordane, δ-BHC, dieldrin, endosulfan sulfate, endrin, endrin ketone, heptachlor epoxide, hexachlorobutadiene, and methoxychlor (low bias)
- 10/21/05 LCS/LCSD (aqueous) – 10 target analytes were not included in the spike mixture. As all recoveries for spiked analytes were acceptable, no action was taken.

SDG K0505093:

- 10/26/05 LCS/LCSD - γ-chlordane, α-chlordane, dieldrin, 4,4′-DDE, endosulfan sulfate, 4,4′-DDT, and endrin ketone (low bias)
- 10/27/05 LCS/LCSD – aldrin and hexachloroethane (low bias)

SDG K0505097:

- 10/29/05 LCS/LCSD (sediments) - hexachloroethane and hexachlorobutadiene (low bias)
- 10/26/05 LCS/LCSD (aqueous) – 10 target analytes were not included in the spike mixture. As all recoveries for spiked analytes were acceptable, no action was taken.

SDG K0505099:

- 10/25/05 LCS/LCSD (sediments) - δ-BHC, heptachlor epoxide, γ-chlordane, α-chlordane, aldrin, dieldrin, 4,4′-DDD, 4,4′-DDE, 4,4′-DDT, endrin, endrin ketone, endosulfan II, endosulfan sulfate, methoxychlor and hexachlorobutadiene (low bias)

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- 10/26/05 LCS/LCSD (sediments) - α-chlordane, γ-chlordane, 4,4′-DDE, 4,4′-DDT, dieldrin, endrin ketone, and endosulfan sulfate (low bias)
- 11/7/05 LCS/LCSD (sediments) - heptachlor expoxide, α-chlordane, γ-chlordane, endrin, dieldrin, hexachloroethane, and hexachlorobutadiene (low bias), oxychlordane (high bias)
- 10/26/05 LCS/LCSD (aqueous) – 10 target analytes were not included in the spike mixture. As all recoveries for spiked analytes were acceptable, no action was taken.

SDG K0505100:

- 10/26/05 LCS/LCSD (sediments) - α-chlordane, γ-chlordane, 4,4′-DDE, 4,4′-DDT, dieldrin, endrin ketone, and endosulfan sulfate (low bias)
- 11/7/05 LCS/LCSD (sediments) - heptachlor expoxide, α-chlordane, γ-chlordane, endrin, dieldrin, hexachloroethane, and hexachlorobutadiene (low bias), oxychlordane (high bias)

SDG K0505119:

- 10/26/05 LCS/LCSD (sediments) - aldrin (low bias)
- 10/26/05 LCS/LCSD (aqueous) – 10 target analytes were not included in the spike mixture. As all recoveries for spiked analytes were acceptable, no action was taken.

SDG K0505183:

- 10/30/05 LCS/LCSD (sediments) - heptachlor, aldrin, γ-chlordane, α-chlordane, dieldrin, 4,4′-DDE, 4,4′-DDD, 4,4′-DDT, endrin, endrin ketone, and endosulfan II (low bias)

SDG K0505187:

- 10/29/05 LCS/LCSD (sediments) - hexachloroethane and hexachlorobutadiene (low bias)
- 10/30/05 LCS/LCSD (sediments) - heptachlor, aldrin, γ-chlordane, α-chlordane, dieldrin, 4,4′-DDE, 4,4′-DDD, 4,4′-DDT, endrin, endrin ketone, and endosulfan II (low bias)
- 10/27/05 LCS/LCSD (aqueous) – 10 target analytes were not included in the spike mixture. As all recoveries for spiked analytes were acceptable, no action was taken.

SDG K0505247:

- 11/04/05 LCS/LCSD (sediments) - γ-chlordane, dieldrin, and hexachloroethane (low bias)
- 10/31/05 LCS/LCSD (aqueous) – 10 target analytes were not included in the spike mixture. As all recoveries for spiked analytes were acceptable, no action was taken.

SDG K0505308:

- 11/09/05 LCS/LCSD (sediments) – 17 analytes (low bias)

SDG K0505339:

- 11/7/05 LCS/LCSD (sediments) - heptachlor expoxide, α-chlordane, γ-chlordane, endrin, dieldrin, hexachloroethane, and hexachlorobutadiene (low bias), oxychlordane (high bias)

SDG K0506857:

- 12/30/05 LCS/LCSD (sediments) - hexachloroethane and hexachlorobutadiene (low bias)

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Field Replicates

Replicate sample pairs are listed below. The following acceptance criteria were applied: the RPD control limit is 50% for results greater than five times the reporting limit. For results less than five times the reporting limit, the absolute difference between the sample and replicate must be less than two times the reporting limit. No data were qualified based on field replicate outliers; however, data users should take field precision into account when interpreting sample data.

SDG K0505093: The data for two field replicate sets (LW2-C082-B1/LW2-C082-B2 and LW2-C082-C1/LW2-C082-C2 were submitted. In the first set, the RPD values for endrin ketone, 2,4′-DDE, hexachlorobenzene, delta-BHC, and aldrin were greater than 50%. The endrin ketone, hexachlorobenzene, and delta-BHC results in LW2-C082-B2 were 'P' flagged by the laboratory, which may indicate that the concentrations of these compounds were high biased due to interference.

In the LW2-C082-C1/LW2-C082-C2 set, only one analyte (4,4′-DDT) was detected in LW2-C082-C1, and the RPD value was greater than 50%. For all other analytes, the difference values were greater than twice the reporting limit.

SDG K0505308: Four sets of field replicates were submitted. Precision outliers are as follows:

- Samples LW2-C321-B1 and LW2-C321-B2: cis-nonachlor
- Samples LW2-C321-C1 and LW2-C321-C2: dieldrin, endrin aldehyde, cis-nonachlor, and 4,4′-DDD
- Samples LW2-C360-B1 and LW2-C360-B2: γ-chlordane, 4,4′-DDD, 4,4′-DDE, 4,4′-DDT, 2,4′-DDD, 2,4′-DDE, 2,4′-DDT, and endrin
- Samples LW2-C360-C1 and LW2-C360-C2: γ-chlordane

SDG K0506857: Sample LW2-C082-D1 was reported in this data set. The replicate was reported in SDG K0505093. Precision was acceptable.

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40% the reported result was "P" flagged by the laboratory. As the elevated RPD value may indicate the presence of an interferent that may result in a high bias, when the RPD value was greater than 25% but less than 60% the reported value was estimated (J-3). If the RPD value was greater than 60%, the result was qualified as a tentative identification (NJ). Refer to the data validation worksheets for a detailed list of these outliers.

SDG K0505050: The reported values were qualified as estimated (J-3) for 31 sample results. The reported values were qualified as estimated and tentatively identified (NJ-3) for 17 sample results.

SDG K0505093: The reported values were qualified as estimated (J-3) for 20 sample results. Eight sample results were qualified as estimated and tentatively identified.

SDG K0505097: The reported values were qualified as estimated (J-3) for 23 sample results. Seventeen sample results were qualified as estimated and tentatively identified.

SDG K0505099: The reported values were qualified as estimated (J-3) for 20 sample results. The reported values were qualified as estimated and tentatively identified (NJ-3) for ten sample results.

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SDG K0505100: The reported values were qualified as estimated (J-3) for 25 sample results. The reported values were qualified as estimated and tentatively identified (NJ-3) for 26 sample results.

SDG K0505119: The reported values were qualified as estimated (J-3) for ten sample results. The reported values were qualified as estimated and tentatively identified (NJ-3) for nine sample results.

SDG K0505183: The reported values were qualified as estimated (J-3) for 21 sample results. The reported values were qualified as estimated and tentatively identified (NJ-3) for 19 sample results.

SDG K0505187: The reported values were qualified as estimated (J-3) for 27 sample results. The reported values were qualified as estimated and tentatively identified (NJ-3) for 16 sample results.

SDG K0505247: The reported values were qualified as estimated (J-3) for 29 sample results. The reported values were qualified as estimated and tentatively identified for 32 sample results.

SDG K0505308: The reported values were qualified as estimated (J-3) for 30 sample results. The reported values were qualified as estimated and tentatively identified 29 sample results.

SDG K0505339: The reported values were qualified as estimated (J-3) for five sample results. The reported values were qualified as estimated and tentatively identified (NJ) nine sample results.

SDG K0506857: The reported values were qualified as estimated (J-3) for both positive results.

Reporting Limits (Method Detection Limit and Method Reporting Limit)

SDGs K0505247, K0505308 & K0506857: The laboratory elevated the reporting limits for some analytes in most samples due to background interferences. Also, several samples were analyzed at dilution and reporting limits were elevated accordingly.

Calculation Verification

SDGs K0505050 & K0505247: A full (Level IV) validation was performed on these SDG. No anomalies were identified.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS, and MS/MSD %R values, with the exceptions noted above. Precision was acceptable where assessed, as demonstrated by the RPD values for the LCS/LCSD and MS/MSD analyses, with the exceptions noted above.

Data were qualified as estimated due to holding time outliers, LCS/LCSD and MS/MSD precision and accuracy outliers, and poor agreement between the analytical columns. Data were also qualified as not detected due to blank contamination.

All data, as qualified, are acceptable for use.

ANC05019
BZTO104(e)005019

DATA VALIDATION REPORT
Portland Harbor RI/FS
Phase 2B Sediment Sampling, Fall 2005
PCB – Aroclors by Method SW8082
Columbia Analytical Services - Kelso

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Columbia Analytical Services, Inc., Kelso, Washington, analyzed the samples.

SDG	No. Samples	Validation Level
K0505050	11 Sediments & 1 Field Blank	Full
K0505093	12 Sediments	Summary
K0505097	11 Sediments & 1 Field Blank	Summary
K0505099	11 Sediments & 1 Field Blank	Summary
K0505100	14 Sediments	Summary
K0505119	7 Sediments & 1 Field Blank	Summary
K0505183	12 Sediments	Summary
K0505187	14 Sediments & 1 Field Blank	Summary
K0505247	18 Sediments & 2 Field Blanks	Full
K0505308	18 Sediments	Summary
K0505339	8 Sediments	Summary
K0506857	1 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverables (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

- 2 Holding Times and Sample Receipt
- Initial Calibration (ICAL)
- Continuing Calibration (CCAL)
- 1 Blanks (Method and Field)
- 2 Surrogate Compounds
- Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
- Laboratory Control Samples
- Field Replicates
- 2 Compound Identification
- Reporting Limits (MDL and MRL)
- 1 Calculation Verification (full validation only)

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

ANC05020
BZTO104(e)005020

Holding Times and Sample Receipt

The QAPP-required holding time criterion for sediment samples is 14 days from the date of sampling to date of extraction. The QAPP-required holding time criterion for sediment and water extracts is 40 days from extraction to analysis. All samples were extracted and analyzed within the holding time criterion except as noted below.

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. All sample coolers were received within the control limits of 4°C ±2°, with the exceptions noted below. These temperature outliers did not impact data quality and no action was taken. The following lists cooler temperature outliers and sample receipt anomalies:

The laboratory received the majority of the sample coolers with temperatures outside the advisory control limits of 2° to 6°C, ranging from –1.1° to 1.7°C.

SDG K0505119: Two of three sample coolers were received at the laboratory at temperatures greater than the control limits, at 7.0° and 7.7°C.

SDG K0505099: Sample LW2-C533-D was extracted 19 days after collection. All reporting limits were estimated (UJ-1) due to the holding time violation.

SDG K0505100: Samples LW2-C293-B, LW2-C296-C, LW2-C303-C, LW2-C523-A, LW2-C523-B, and LW2-C523-C were extracted 19 days after collection, after the original extracts were lost during clean-up. The positive results and reporting limits for these samples were estimated (J/UJ-1) due to holding time violation.

SDG K0506857: Sample LW2-C082-D1 was originally archived at -20°C. This analysis was performed using an aliquot of the frozen sample, which extended the holding time to one year.

Blanks (Field)

SDG K0505050: One equipment rinsate blank, LW2-C927, was submitted for analysis. No positive values for Aroclors were in the field blank.

SDG K0505097: One equipment rinsate blank, LW2-C929, was submitted for analysis. No positive values for Aroclors were in the field blank.

SDG K0505099: One equipment rinse blank, LW2-C928, was submitted for analysis. No positive values for Aroclors were reported in the field blank.

SDG K0505119: One equipment rinse blank, LW2-C930, was submitted for analysis. No positive values for Aroclors were reported in the field blank.

SDG K0505187: One equipment rinse blank, LW2-C931, was submitted for analysis. No positive values for Aroclors were reported in the field blank.

SDG K0505247: Two equipment rinsate blanks were submitted for analysis, Samples LW2-C933 and LW2-C934. No positive values for Aroclors were reported either field blank.

ANC05021
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Surrogates

SDG K0505093: The percent recovery (%R) value for DCBP was greater than the upper control limit in Sample LW2-C082-D3. No positive results were reported in this sample. No qualifiers were required.

SDG K0505183: The %R value for DCBP was greater than the upper control limit in Sample LW2-C103D. The Aroclor 1268 result in this sample was qualified as estimated (J-13) with potential high bias.

Matrix Spike/Matrix Spike Duplicate

SDG K0506857: A batch QC matrix spike/matrix spike duplicate (MS/MSD) set was reported with this SDG. The %R values for Aroclors 1016 and 1260 exceeded the upper control limits. As the parent sample was not part of this SDG, no qualifiers were assigned.

Field Replicates

Field replicate sample pairs are discussed below. The following acceptance criteria were applied: the relative percent difference (RPD) control limit is 50% for results greater than five times the reporting limit. For results less than five times the reporting limit, the absolute difference between the sample and duplicate must be less than the reporting limit. No data were qualified based on field replicate outliers; however, data users should take field precision into account when interpreting sample data.

SDG K0505308: Four sets of field duplicates were submitted. No positive values were reported in field replicate pairs:

LW2-C321-C1 & LW2-C321-C2
LW2-C360-B1 & LW2-C360-B2
LW2-C360-C1 & LW2-C360-C2

Field precision was acceptable for these samples. The values reported for Aroclor 1260 in Samples LW2-C321-B1 & LW2-C321-B2 exceeded the acceptance criteria stated above.

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40% the reported result was "P" flagged by the laboratory. As the elevated RPD value may indicate the presence of an interferent that may result in a high bias, when the RPD value was greater than 25% but less than 60% the reported value was estimated (J-3). If the RPD value was greater than 60%, the result was qualified as a tentative identification (NJ). Refer to the data validation worksheets for a detailed list of these outliers.

SDG K0505050: The reported values were qualified as estimated (J-3) for nine sample results.

SDG K0505093: The RPD values between column results exceeded 25% for Aroclor 1254 in Samples LW2-C082-B1, LW2-C082-B2, LW2-C082-C2, LW2-C083-B, and LW2-C083-C. The RPD value for Aroclor 1260 exceeded 25% in Sample LW2-C090-C. These results were qualified as estimated (J-3).

ANC05022
BZTO104(e)005022

SDG K0505099: The RPD values between column results exceeded 25% for Aroclor 1254 in Samples LW2-C227-C, LW2-C522-A, LW2-C522-B, and LW2-C524-B. The RPD values between column results exceeded 25% for Aroclor 1260 in Samples LW2-C227-B and LW2-C533-A. The reported values were estimated (J-3).

SDG K0505100: The RPD values between column results exceeded 25% for Aroclor 1254 in Samples LW2-C296-B and LW2-C523-A and for Aroclor 1260 in Sample LW2-C312-A. These results were estimated (J-3).

SDG K0505119: The RPD values between column results exceeded 25% for Aroclor 1254 in Samples LW2-C084-C, LW2-C087-B, and LW2-C087-C. The reported values were estimated (J-3).

SDG K0505183: The RPD values between column results exceeded 25% for Aroclor 1254 in Samples LW2-C103-B and LW2-C106-A and for Aroclor 1242 in Sample LW2-C106-A. These results were qualified as estimated (J-3).

SDG K0505187: The RPD values between column results exceeded 25% for Aroclor 1242 in one sample, Aroclor 1254 in five samples, and Aroclor 1260 in three samples. These results were qualified as estimated (J-3).

SDG K0505247: The percent difference (%D) values between column results exceeded 25% for Aroclor 1254 in Samples LW2-C525-B and LW2-C358-C; and for Aroclor 1260 in Samples LW2-C525-A, LW2-C527-B and LW2-C528-B. These results were estimated (J-3).

SDG K0505308: The RPD values between column results exceeded 25% for Aroclor 1248 in Samples LW2-C321-B1, LW2-C529-C, LW2-C529-E, LW2-C530-B and LW2-C530-C; for Aroclor 1254 in Samples LW2-C321-B1 and LW2-C321-B2; and for Aroclor 1260 in Sample LW2-C529-E. These results were estimated (J-3).

SDG K0505339: The RPD values exceeded 25% for Aroclor 1254 in Samples LW2-C531-A and LW2-C531-B and for Aroclor 1260 in Samples LW2-C531-B, LW2-C531-C, LW2-C187-C, and LW2-CIDWD. These results were qualified as estimated (J-3).

Calculation Verification (Full validation only)

SDG K0505050 & K0505247: Calculation verifications were performed on these SDGs. No transcription or calculation errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample, and MS/MSD %R values, with the exceptions noted above. Precision was acceptable as demonstrated by the RPD values for the MS/MSD analyses, with the exception above.

Data were qualified as estimated due to holding time outliers, surrogate outliers, and poor agreement between the two analytical columns.

All data, as qualified, are acceptable for use.

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DATA VALIDATION REPORT
Portland Harbor RI/FS
Phase 2B Sediment Sampling, Fall 2005
Organotins by the Krone Method
Columbia Analytical Services - Kelso

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Columbia Analytical Services, Inc., Kelso, Washington.

SDG	No. Samples	Validation Level
K0505050	3 Sediment & 1 Field Blank	Full
K0505093	14 Sediment	Summary
K0505097	11 Sediment & 1 Field Blank	Summary
K0505099	2 Sediment & 1 Field Blank	Summary
K0505119	7 Sediment & 1 Field Blank	Summary
K0505183	12 Sediment & 1 Field Blank	Summary
K0505187	15 Sediment & 1 Field Blank	Summary
K0505247	13 Sediment	Full
K0505308	8 Sediment	Summary
K0505339	5 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1 Holding Times and Sample Receipt
Instrument Performance Check
Initial Calibration (ICAL)
1 Continuing Calibration (CCAL)
2 Laboratory Blanks
1 Field Blanks
Surrogate Compounds
2 Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
Laboratory Control Samples (LCS)
1 Field Duplicate Analyses
1 Reporting Limits (MDL and MRL)
2 Compound Identification
1 Calculation Verification (full validation only)

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

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Holding Times and Sample Receipt

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. All samples were received within these limits, with the exceptions noted below.

The laboratory received the majority of the sample coolers with temperatures outside the advisory control limits of 2° to 6°C, ranging from –1.1° to 1.7°C. These temperature outliers did not impact data quality and no action was taken.

Continuing Calibration (CCAL)

SDG K0505093, K0505119, and K0505187: The percent difference (%D) values for tri-n-butyltin exceeded the control limit of ±25% in the CCALs analyzed on 11/3/05 at 08:46 and 11:46 (Column RTX-1). All associated results were quantitated using the confirmation column (RTX-35). No action was taken.

SDG K0505183: The %D values for tri-n-butyltin exceeded the control limit of ±25% in the CCALs analyzed on 11/3/05 at 16:07, and 11/4/05 at 11/4/05 at 08:21 (Column RTX-1). All associated results were quantitated using the confirmation column (RTX-35). No action was taken.

SDG K0505247: The %D values for tri-n-butyltin exceeded the control limit of ±25% in the CCALs analyzed on 11/4/05 at 08:21, and 11/14/05 at 18:36 (Column RTX-1). All associated results were quantitated using the confirmation column (RTX-35). No action was taken.

SDG K0505308 and K0505339: The %D values for tri-n-butyltin exceeded the control limit of ±25% in the CCALs analyzed on 11/12/05 at 02:08, 11/12/05 at 04:36, and 11/14/05 at 18:36 (Column RTX-1). All associated results were quantitated using the confirmation column (RTX-35). No action was taken.

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration detected in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

SDG K0505050: One water method blank and one sediment method blank were reported with this SDG. Positive results for tri-n-butyltin and n-butyltin were detected in the water method blank and positive results for tri-n-butyltin and di-n-butyltin were detected in the sediment method blank. The tri-n-butyltin result in Sample LW2-C927 was below the action level and was qualified as not detected (U-7).

SDG K0505093: Positive results for tri-n-butyltin and di-n-butyltin were detected in the sediment method blank. The tri-n-butyltin results in Samples LW2-C082-C1 and LW2-C082-D3, and the di-n-butyltin results in Samples LW2-C082-C2 and LW2-C082-C3 were less than the action levels and were qualified as not detected (U-7).

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SDG K0505097: One water method blank and one sediment method blank were reported with this SDG. Positive results for tri-n-butyltin and di-n-butyltin were detected in both the water method blank and the sediment method blank. The tri-n-butyltin result in field blank LW2-C929 was qualified as not detected (U-7). The di-n-butyltin results in Samples LW2-C091-D, LW2-C088-C, LW2-C094-C, LW2-C080-B, LW2-C080-C, LW2-079-B and LW2-079-C were qualified as not detected (U-7).

SDG K0505099: One water method blank and one sediment method blank were reported with this SDG. Positive results for tri-n-butyltin and n-butyltin were detected in the water method blank and positive results for tri-n-butyltin and di-n-butyltin were detected in the sediment method blank. The tri-n-butyltin result in Sample LW2-C928 was below the action level and was qualified as not detected (U-7).

SDG K0505119: One water method blank and one sediment method blank were analyzed. Tri-n-butyltin was detected in the water method blank. The tri-n-butyltin result in Sample LW2-C930 was less than the action level and was qualified as not detected (U-7).

Positive results for tri-n-butyltin and di-n-butyltin were detected in the sediment method blank. The di-n-butyltin results in four associated samples were below the action level and were qualified as not detected (U-7).

SDG K0505183: One water method blank and two sediment method blanks were reported with this SDG. A result for tri-n-butyltin was detected in the water method blank. The tri-n-butyltin result in Sample LW2-C932 was less than the action level and was qualified as not detected (U-7).

Positive results for tri-n-butyltin and di-n-butyltin were detected in the sediment method blank extracted on 10/29/05. Tri-n-butyltin results in Samples LW2-C092-D and LW2-C092-E were less than the action level and were qualified as not detected (U-7). A di-n-butyltin result in Sample LW2-C092-E was less than the action level and was qualified as not detected (U-7).

A positive result for tri-n-butyltin was reported in the sediment method blank extracted on 10/31/05. Tri-n-butyltin results in four associated samples were below the action level and were qualified as not detected (U-7).

SDG K0505187: One water method blank and one sediment method blank were reported with this SDG. A result for tri-n-butyltin was detected in the water method blank. The tri-n-butyltin result in Sample LW2-C931 was below the action level and was qualified as not detected (U-7).

Positive results for tri-n-butyltin and di-n-butyltin were detected in the sediment method blank. The tri-n-butyltin results in nine sample were below the action level and were qualified as not detected (U-7). Di-n-butyltin results in Samples LW2-109-E, LW2-127-C, and LW2-127-D were less than the action level and were qualified as not detected (U-7).

SDG K0505247: Two sediment method blanks were reported with this SDG. A result for tri-n-butyltin was detected in the method blank extracted on 10/31/05. The tri-n-butyltin results in Samples LW2-C527E, LW2-C525B, LW2-C525C, LW2-C525D, and LW2-C525E were less than the action level and was qualified as not detected (U-7).

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Positive results for tri-n-butyltin and di-n-butyltin were reported in the method blank extracted on 11/7/05. There were no positive results for tri-n-butyltin or di-n-butyltin in the associated sample, therefore no qualifiers were applied.

SDG K0505308: Results for tri-n-butyltin and di-n-butyltin were detected in the method blank. The tri-n-butyltin results in Samples LW2-C529E, LW2-C529E, LW2-C530C, and LW2-C530E were less than the action level and were qualified as not detected (U-7). The di-n-butyltin results in Samples LW2-C529E, LW2-C529E and LW2-C530C were below the action level and were qualified as not detected (U-7).

SDG K0505339: Results for tri-n-butyltin and di-n-butyltin were detected in the method blank. The tri-n-butyltin and di-n-butyltin results in Samples LW2-C531-C and LW2-C531E were less than the action level and were qualified as not detected (U-7).

Field Blanks

Method blanks are used to evaluate all associated field blanks. Any remaining positive results in the field blanks are used to evaluate all associated samples.

SDG K0505050: One field blank (LW2-C927) was analyzed with the samples in this SDG. There were no positive results for any target analytes in this blank.

SDG K0505097: One field blank (LW2-C929) was analyzed with the samples in this SDG. After method blank assessment, there were no positive results remaining for any target analytes.

SDG K0505099: One field blank (LW2-C928) was analyzed with the samples in this SDG. After method blank assessment, a result for di-n-butyltin remained in this blank. Results for all associated samples exceeded the action level, so no qualifiers were required.

SDG K0505187: One field blank (LW2-C931) was analyzed with the samples in this SDG. After method blank assessment, a result for di-n-butyltin remained in this blank. Results for all associated samples exceeded the action level, so no qualifiers were required.

Matrix Spikes/Matrix Spike Duplicates

SDG K0505093: One set of matrix spike/matrix spike duplicate (MS/MSD) analyses was performed on Sample LW2-C082-C2. The MS/MSD percent recovery (%R) values for n-butyltin were both less than 10%. The reporting limit for n-butyltin was rejected (R-8) in the parent sample.

SDG K0505119: Two sets of MS/MSD analyses were performed on batched QC samples. In both sets, the MS/MSD %R values for n-butyltin were less than 10%. No qualifiers were applied for batch QC outliers.

SDG K0505183: Two sets of MS/MSD analyses were performed on batched QC samples. In one sample set, the MSD %R and MS/MSD relative percent difference (RPD) values for n-butyltin were outside the control limits. No qualifiers were applied for batch QC outliers.

SDG K0505187: One set of MS/MSD analyses was performed on Sample LW2-127D. In this sample set, the MSD %R value for n-butyltin was less than 10%. The RPD value for n-butyltin was

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also greater than the control limit of 50%. The reporting limit for n-butyltin was rejected (R-8) in the parent sample.

Field Replicates

Precision is assessed using the RPD values if both sample results are greater than five times the reporting limit for an analyte, otherwise the absolute difference between the two results is used to evaluate precision. All RPD values were less than the 50% control limit, or all absolute difference values were less than twice the reporting limit of the compound, with the exceptions noted below.

No qualifiers were applied based on field replicate precision outliers. However, any outliers were noted below. Data users should take field precision into account when interpreting sample data.

SDG K0505093: The data for three sets of field replicate samples (LW2-C083-A1/LW2-C083-A2, LW2-C083-B1/LW2-C083-B2, and LW2-C083-C1/LW2-C083-C2) were submitted. The RPD and/or difference values were outside the control limits for tetra-n-butyltin and tri-n-butyltin in the LW2-C083-A1 & LW2-C083-A2 set, and for tri-n-butyltin and di-n-butyltin in the LW2-C083-B1 & LW2-C083-B2 set.

Reporting Limits (Method Detection Limit and Method Reporting Limit)

The specified method reporting limits (MRL) were met for all analytes, except when dilutions were required to bring results within the calibration range.

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40% the reported result was "P" flagged by the laboratory. As the elevated RPD value may indicate the presence of an interferent that may result in a high bias, when the RPD value was greater than 40% but less than 60% the reported value was estimated (J-3). If the RPD value was greater than 60%, the result was qualified as a tentative identification (NJ-3). Refer to the data validation worksheets for a detailed list of these outliers.

SDG K0505050:

- Sample LW2-C449-E - tetra-n-butyltin (J-3).

SDG K0505093:

- Samples LW2-C082-A2, LW2-C082-B2, LW2-083-C, LW2-090-B, LW2-C082-D3 and LW2-C082-B3 - tetra-n-butyltin (J-3)
- Sample LW2-C083-B - n-butyltin (J-3).

SDG K0505097:

- Sample LW2-C094-B - tetra-n-butyltin (J-3).

SDG K0505119:

- Samples LW2-C084-B and LW2-087-B - tetra-n-butyltin (J-3).

SDG K0505187:

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- Sample LW2-109-B - tetra-n-butyltin (J-3).

SDG K0505247:

- Samples LW2-C525-E and LW2-527-B - tetra-n-butyltin (J-3).

SDG K0505308:

- Sample LW2-529-A – n-butyltin and tetra-n-butyltin (J-3).

Calculation Verification

SDGs K0505050 and K0505247: Calculation verifications were performed on these SDGs. No calculation or transcription errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample, and MS/MSD %R values, with the exceptions noted above. Precision was also acceptable as demonstrated by the RPD values for the MS/MSD.

Data were estimated based on column confirmation outliers. Data were qualified as not detected based on contamination in the associated laboratory blank. Field duplicate outliers were also noted, although data were not qualified for field duplicates.

Data were rejected because of very low MS/MSD %R values (below 10%). Data that have been rejected should not be used for any reason.

All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Phase 2B Sediment Sampling, Fall 2005
Gasoline Range Organics (GRO) by Method NWTPH-Gx
Columbia Analytical Services - Kelso

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Columbia Analytical Services, Inc., Kelso, Washington, analyzed the samples.

SDG	No. Samples	Validation Level
K0505050	8 Sediments, 1 Trip Blank, & 1 Field Blank	Full
K0505093	20 Sediments	Summary
K0505097	19 Sediments, 1 Trip Blank, & 1 Field Blank	Summary
K0505099	10 Sediments & 1 Field Blank	Summary
K0505100	18 Sediments	Summary
K0505119	13 Sediments, 1 Trip Blank, & 1 Field Blank	Summary
K0505183	17 Sediments, 1 Trip Blank, & 1 Field Blank	Summary
K0505187	19 Sediments & 1 Field Blank	Summary
K0505247	13 Sediments, 1 Trip Blank, & 1 Field Blank	Full
K0505308	15 Sediments	Summary
K0505339	9 Sediments & 1 Field Blank	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found, with the following exception:

SDG K0505050: For the gasoline range hydrocarbon (GRO) results, laboratory sample K0505050-011 was incorrectly listed as Sample LW2-C532-B in the EDD. The hardcopy data listed the correct sample ID of LW2-C381-B. The EDD was corrected to match the hardcopy. No further action was taken.

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III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

2	Holding Times and Sample Receipt	1	Laboratory Duplicates
	Instrument Performance Check		Laboratory Control Samples
	Initial Calibration (ICAL)	1	Field Duplicates
	Continuing Calibration (CCAL)		Reporting Limits (MDL and MRL)
2	Blanks (Method and Field)	2	Compound Identification
2	Surrogate Compounds	1	Calculation Verification (full validation only)

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

Holding Times and Sample Receipt

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. All samples were received within these limits, with the exceptions noted below.

The laboratory received the majority of the sample coolers with temperatures outside the advisory control limits of 2° to 6°C, ranging from –1.1° to 7.7°C. These temperature outliers did not impact data quality and no action was taken.

SDG K0505097: Field blank LW2-C929 was extracted 21 days after the holding time of 14 days. The reporting limit for this sample was estimated (UJ-1).

SDG K0505247: Sample LW2-C527-B was extracted 28 days after the holding time of 14 days. The reporting limit for this sample was estimated (UJ-1).

Method Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. For the analytical batches noted below, gasoline range organics were reported in the method blank. A summary of contaminant levels, associated samples, and action levels is provided in the data validation worksheets.

SDG K0505050: One water and one sediment method blank were reported with this SDG. Positive results for GRO were reported in both method blanks. The GRO results were qualified in Samples LW2-C532-A and LW2-C532-B.

SDG K0505247: Two water and three sediment method blanks were reported with this SDG. A positive result for GRO was reported in the water method blank extracted on 11/3/05 (extraction lot KWG0520873-3). All associated results were above the action level for GRO or not detected. No qualifiers were required. A positive result for GRO was reported in the sediment method blank

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extracted on 12/7/05. The GRO result was less than the action level in Sample LW2-C527B. All other associated results were above the action level for GRO or not detected.

SDG K0505339: One water method blank and one sediment method blank were reported with this SDG. A positive result for GRO was reported in the water method blank extracted on 11/3/05 (extraction lot KWG0519144-3). The associated sample result was above the action level. No qualifiers were required.

Field Blanks

Method blanks are used to evaluate all associated field blanks. Any remaining positive results in the field blanks are used to evaluate all associated samples.

Eight rinsate blanks and five trip blanks were analyzed. Gasoline range organics were not detected in any rinsate or trip blank.

Surrogate Compounds

SDG K0505247: The percent recovery (%R) value for 4-bromofluorobenzene was less than the control limit in Sample LW2-C528-A. The reporting limit for GRO was estimated (UJ-13) with potential low bias in this sample.

SDG K0505308: The %R value for 4-bromofluorobenzene was less than the control limit in Samples LW2-C530-A and LW2-C529-A DUP. The reporting limits for GRO were estimated (UJ-13) with potential low bias in these samples.

Laboratory Duplicates

To evaluate analytical precision, laboratory duplicate analyses were performed with each data set. A list of all duplicate samples analyzed is in the data validation worksheets.

Precision is assessed using the relative percent difference (RPD) values if both sample results are greater than five times the reporting limit for an analyte, otherwise the absolute difference between the two results is used to evaluate precision. All RPD values were less than the 40% control limit, or all absolute difference values were less than twice the reporting limit of the compound.

Field Replicates

Precision is assessed using the RPD values if both sample results are greater than five times the reporting limit for an analyte, otherwise the absolute difference between the two results is used to evaluate precision. All RPD values were less than the 50% control limit, or all absolute difference values were less than twice the reporting limit of the compound, with the exceptions noted below.

No qualifiers were applied based on field replicate precision outliers. However, any outliers were noted below. Data users should take field precision into account when interpreting sample data.

SDG K0505093: Four pairs of samples were submitted as field replicates

LW2-C083-A1 & LW2-C083-A2	LW2-C083-B1 & LW2-C083-B2
LW2-C083-C1 & LW2-C083-C2	LW2-C083-D1 & LW2-C083-D2

There were no positive results for any of these sample pairs. Field precision was acceptable.

SDG K0505308: Three pairs of samples, LW2-C321-B1 & LW2-C321-B2, LW2-C321-C1 & LW2-C321-C2, and LW2-C321-E1 & LW2-C321-E2 were submitted as field replicates. The absolute difference values for GRO exceeded criteria for all three sample pairs.

Compound Identification

SDG K0505050: The chromatographic patterns for Samples LW2-C532-A, LW2-C532-B, LW2-C532-C, and LW2-C532-E did not match that of the GRO standard used for calibration. The GRO results in these samples were flagged by the laboratory and qualified as estimated (J-2).

SDG K0505097: The chromatographic patterns for Sample LW2-C091-C did not match that of the GRO standard used for calibration. The GRO results in these samples were flagged by the laboratory and qualified as estimated (J-2).

SDG K0505119: The chromatographic pattern for Sample LW2-C084-B did not match that of the GRO standard used for calibration. The GRO result in this sample was flagged by the laboratory and qualified as estimated (J-2).

SDG K0505183: The chromatographic patterns for Samples LW2-C092B, LW2-C092C, LW2-C092D, LW2-C089A, LW2-C089B, and LW2-C103D did not match that of the GRO standard used for calibration. The GRO result in these samples were flagged by the laboratory and qualified as estimated (J-2).

SDG K0505187: The chromatographic patterns for Samples LW2C-C099C, LW2-106E, LW2-106F, LW2-127B, and LW2-127C did not match that of the GRO standard used for calibration. The GRO result in these samples were flagged by the laboratory and qualified as estimated (J-2).

SDG K0505247: The chromatographic patterns for Samples LW2-C528C, LW2-C527E, LW2-C525B, LW2-C525C, and LW2-C525D did not match that of the GRO standard used for calibration. The GRO result in these samples were flagged by the laboratory and qualified as estimated (J-2).

SDG K0505308: The chromatographic patterns for Samples LW2-C529-C, LW2-C529-E, LW2-C530-C, LW2-C321-C1, LW2-C321-E1, LW2-C321-B2, and LW2-C321-B3 did not match that of the GRO standard used for calibration. The GRO result in these samples were flagged by the laboratory and qualified as estimated (J-2).

SDG K0505339: The chromatographic patterns for Samples LW2-C531-B, LW2-C187-B, LW2-C187-C, and LW2-CIDW-D did not match that of the GRO standard used for calibration. The GRO result in these samples were flagged by the laboratory and qualified as estimated (J-2).

Calculation Verification

SDG K0505050: Calculation verifications were performed on this SDG. No calculation errors were found.

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IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate and laboratory control sample percent recovery values. Precision was acceptable as demonstrated by the RPD values for the field duplicate and laboratory duplicate analyses.

Data were estimated based on holding time outliers, surrogate outliers, and chromatographic pattern mismatches. Data were qualified as not detected based on method blank contamination.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Phase 2B Sediment Sampling, Fall 2005
Diesel and Residual Range Hydrocarbons by Method NWTPH-Dx
Columbia Analytical Services - Kelso

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Columbia Analytical Services, Inc., Kelso, Washington.

SDG	No. Samples	Validation Level
K0505050	8 Sediments & 1 Field Blank	Full
K0505093	17 Sediments	Summary
K0505097	16 Sediments & 1 Field Blank	Summary
K0505099	11 Sediments & 1 Field Blank	Summary
K0505100	14 Sediments	Summary
K0505119	10 Sediments & 1 Field Blank	Summary
K0505183	15 Sediments	Summary
K0505187	16 Sediments & 1 Field Blank	Summary
K0505247	13 Sediments & 2 Field Blanks	Full
K0505308	14 Sediments	Summary
K0505339	8 Sediments	Summary
K0506857	1 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times & Sample Receipt		Laboratory Control Samples (LCS/LCSD)
	GC/MS Instrument Performance Check	2	Laboratory Duplicates
	Initial Calibration (ICAL)	1	Field Replicates
	Continuing Calibration (CCAL)		Target Analyte List
2	Laboratory Blanks		Reporting Limits (MDL and MRL)
1	Field Blanks	2	Compound Identification
	Surrogate Compounds	1	Calculation Verification (Full validation only)

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

ANC05035
BZTO104(e)005035

Holding Times and Sample Receipt

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. All samples were received within these limits, with the exceptions noted below.

The laboratory received the majority of the sample coolers with temperatures outside the advisory control limits of 2° to 6°C, ranging from –0.7° to 7.7°C. These temperature outliers did not impact data quality and no action was taken.

SDG K0506857: Sample LW2-C082-D1 was extracted 64 days after collection. As this sample was stored frozen, at -20°C, until the extraction no qualifiers were assigned.

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. For the analytical batches noted below, diesel and/or residual range organics(DRO/RRO) were reported in the method blank. A summary of contaminant levels, associated samples, and action levels is provided in the data validation worksheets.

SDG K0505050: One water and one sediment method blank were reported with this SDG. A positive result for RRO was reported in the sediment method blank extracted on 10/30/05. Sample LW2-C532-F had results less than the action level for RRO, which were qualified as not detected (U-7).

SDG K0505093: One sediment method blank was reported with this SDG. A positive result for RRO was reported in this method blank. Samples LW2-C082-C1, LW2-C082-D2, LW2-C082-D3, and LW2-C090-C had results less than the action level for RRO, which were qualified as not detected (U-7).

SDG K0505100: Two sediment method blanks were reported with this SDG. A positive result for RRO was reported in the method blank extracted on 11/2/05. Sample LW2-C312-C had a result less than the action level for RRO, which was qualified as not detected (U-7).

SDG K0505183: One sediment method blank was reported with this SDG. A positive result for RRO was reported in the method blank extracted on 11/7/05. Samples LW2-C092E and LW2-C089D had results less than the action level for RRO, which were qualified as not detected (U-7).

SDG K0505247: One water and one sediment method blank were reported with this SDG. A positive result for RRO was reported in the sediment method blank extracted on 11/9/05. Sample

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LW2-C528-F had results less than the action level for RRO, which were qualified as not detected (U-7).

SDG K0505308: One sediment method blank was reported with this SDG. A positive result for RRO was reported in the sediment method blank extracted on 11/10/05. Samples LW2-C321-C1 and LW2-C321-E2 had results less than the action level for RRO, which were qualified as not detected (U-7).

SDG K0505339: Two sediment method blanks were reported with this SDG. Positive results for RRO were reported in both sediment method blanks extracted on 11/9/05 and 11/10/05. Samples LW2-C531-C, LW2-C531-E and LW2-C187-D had results less than the action level for RRO, which were qualified as not detected (U-7).

SDG K0506857: One sediment method blank was reported with this SDG. A positive result for RRO was reported in this method blank extracted on 12/23/05. Sample LW2-C082-D1 had a result below the action level for RRO, which was qualified as not detected (U-7).

Field Blanks

Method blanks are used to evaluate all associated samples and all field blanks. Any remaining positive results in the field blanks are used to evaluate all associated samples.

SDG K0505050: One field blank (LW2-C927) was reported with this SDG. There were positive results for DRO and RRO in this field blank. All associated sediment sample results were greater than the action levels for DRO and RRO. No qualifiers were required.

SDG K0505097: One field blank (LW2-C929) was reported with this SDG. There was a positive result for DRO in this field blank. All associated sediment sample results were greater than the action levels for DRO and RRO. No qualifiers were required.

SDG K0505099: One field blank (LW2-C928) was reported with this SDG. There were positive results for DRO and RRO in this field blank. All associated sediment sample results were greater than the action levels for DRO and RRO. No qualifiers were required.

SDG K0505119: One field blank (LW2-C930) was reported with this SDG. There was a positive result for DRO in this field blank. All associated sediment sample results were greater than the action levels for DRO. No qualifiers were required.

SDG K0505187: One field blank (LW2-C931) was reported with this SDG. There was a positive result for DRO in this field blank. All associated sediment sample results were greater than the action levels for DRO. No qualifiers were required.

SDG K0505247: Two field blanks (LW2-C933 and LW2-C934) were reported with this SDG. There was a positive result for DRO and RRO in field blank Sample LW2-C934. All associated sediment sample results were greater than the action levels for DRO and RRO. No qualifiers were required.

Laboratory Duplicates

To evaluate analytical precision, laboratory duplicate analyses were performed with each data set. A list of all duplicate samples analyzed is in the data validation worksheets.

Precision is assessed using the relative percent difference (RPD) values if both sample results are greater than five times the reporting limit for an analyte, otherwise the absolute difference between the two results is used to evaluate precision. All RPD values were less than the 40% control limit, or all absolute difference values were less than twice the reporting limit of the compound, with the exceptions noted below. For precision outliers, positive results for the affected compounds were estimated (J-9) in the parent sample.

SDG K0505093: Laboratory duplicate analyses were performed on Samples LW2-C082-B1 and LW2-C082-B3. For Sample LW2-C082-B3, the RPD values for the DRO and RRO exceeded the control limit of 40%. The DRO and RRO results were qualified as estimated (J-9) in the parent sample.

Field Replicates

Precision is assessed using the RPD values if both sample results are greater than five times the reporting limit for an analyte, otherwise the absolute difference between the two results is used to evaluate precision. All RPD values were less than the 50% control limit, or all absolute difference values were less than twice the reporting limit of the compound, with the exceptions noted below.

No qualifiers were applied based on field replicate precision outliers. However, any outliers were noted below. Data users should take field precision into account when interpreting sample data.

SDG K0505093: Three pairs of samples, LW2-C083-A1 & LW2-C083-A2, LW2-C083-B1 & LW2-C083-B2, and LW2-C083-C1 & LW2-C083-C2 were submitted as field duplicates. All field precision met the criteria.

SDG K0505308: Two pairs of samples, LW2-C321-B1 & LW2-C321-B2 and LW2-C321-C1 & LW2-C321-C2 were submitted as field duplicates. The absolute difference value for DRO exceeded the control limits mentioned above in sample pair LW2-C321-C1 & LW2-C321-C2. All other field precision met the criteria.

Compound Identification

SDG K0505050: The chromatographic patterns for Samples LW2-C532-A, LW2-C532-B, LW2-C532-C, and LW2-C532-E did not match that of the DRO standard used for calibration. The chromatographic patterns for Samples LW2-C532-B, LW2-C532-C, LW2-C532-E and LW2-C381-B did not match that of the RRO standard used for calibration. These results were flagged by the laboratory and qualified as estimated (J-2).

SDG K0505093: The chromatographic patterns for 11 samples did not match that of the DRO standard used for calibration. The chromatographic patterns for nine samples did not match that of the RRO standard used for calibration. These results were flagged by the laboratory and qualified as estimated (J-2).

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SDG K0505097: The chromatographic patterns for seven samples did not match that of the DRO standard used for calibration. The chromatographic patterns for nine samples did not match that of the RRO standard used for calibration. These results were flagged by the laboratory and qualified as estimated (J-2).

SDG K0505099: The chromatographic patterns for nine samples did not match that of the DRO or RRO standard used for calibration. These results were flagged by the laboratory and qualified as estimated (J-2).

SDG K0505100: The chromatographic patterns for 12 samples did not match that of the DRO standard used for calibration. The chromatographic patterns for 11 samples did not match that of the RRO standard used for calibration. These results were flagged by the laboratory and qualified as estimated (J-2).

SDG K0505119: The chromatographic patterns for five samples did not match that of the DRO standard used for calibration. The chromatographic patterns for four samples did not match that of the RRO standard used for calibration. These results were flagged by the laboratory and qualified as estimated (J-2).

SDG K0505183: The chromatographic patterns for 13 samples did not match that of the DRO or RRO standard used for calibration. These results were flagged by the laboratory and qualified as estimated (J-2).

SDG K0505247: The chromatographic patterns for 12 samples did not match that of the DRO or RRO standard used for calibration. These results were flagged by the laboratory and qualified as estimated (J-2).

SDG K0505308: The chromatographic patterns for 12 samples did not match that of the DRO standard used for calibration. The chromatographic patterns for 11 samples did not match that of the RRO standard used for calibration. These results were flagged by the laboratory and qualified as estimated (J-2).

SDG K0505339: The chromatographic patterns for five samples did not match that of the DRO or RRO standard used for calibration. These results were flagged by the laboratory and qualified as estimated (J-2).

Calculation Verification

SDGs K0505050 and K0505247: Calculation verifications were performed on these SDGs. No calculation errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) percent recovery values. Precision was also acceptable as demonstrated by the laboratory duplicate, field duplicate, and LCS/LCSD RPD values, with the exceptions noted above.

ANC05039
BZTO104(e)005039

Data were qualified because of chromatographic pattern mismatches and laboratory duplicate RPD outliers. Data were also qualified as not detected based on contamination in the associated method blanks.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Phase 2B Sediment Sampling, Fall 2005
Dioxin/Furan Compounds by EPA 1613 ver. B
Columbia Analytical Services - Houston

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Columbia Analytical Services, of Houston, Texas analyzed the samples.

SDG	No. Samples	Validation Level
K0505097	3 Sediments, 1 Field Blank	Full
K0505099	1 Field Blank	Summary
K0505100	3 Sediments	Summary
K0505119	4 Sediments	Summary
K0505183	4 Sediments	Summary
K0505187	3 Sediments	Summary
K0505308	5 Sediments	Summary
K0506540	1 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables, with the exceptions noted below. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

The majority of the closing calibration standards from the DB-5 column were not included in the data packages. A closing calibration is not required by EPA Method 1613 version B. As nearly all of the submitted calibration standards were acceptable no action was taken.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

2	Holding Times and Sample Receipt	1	Ongoing Precision and Recovery (OPR)
	Initial Calibration (ICAL)	1	Field Replicates
1	Continuing Calibration (CCAL)	2	Laboratory Duplicates
2	Laboratory Blanks	2	Compound Identification
2	Field Blanks	1	Reporting Limits (MDL and MRL)
2	Labeled Compounds	1	Calculation Verification (full validation only)
1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)		

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

Holding Times and Sample Receipt

SDG K0506540: Sample LW2-C092-A was extracted 10 days outside the recommended holding time of 45 days from the date of sampling to the date of extraction. Positive results and reporting limits were estimated (J/UJ-1) in this sample.

Continuing Calibration (CCAL)

SDG K0505187: The concentrations for several labeled compounds were less than the lower control limit specified in the analytical method in the CCAL analyzed 11/9/05 at 00:37 on Instrument Autospec 1. As the concentrations for all native analytes were acceptable it was determined that no qualification was necessary.

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

SDG K0505097: One aqueous and one sediment laboratory blank were reported with this SDG. Positive values for 1,2,3,4,6,7,8-HpCDD, OCDD, OCDF, and 1,2,3,4,6,7,8-HpCDF were reported in the aqueous laboratory blank. OCDD, OCDF, and 1,2,3,4,6,7,8-HpCDD were qualified as not detected (U) in Sample LW2-C929.

SDG K0505099: One aqueous laboratory blank was submitted. Positive values for OCDD, 1,2,3,4,6,7,8-HpCDD, OCDF and 1,2,3,4,6,7,8-HpCDF were reported in the laboratory blank. OCDD, OCDF, and 1,2,3,4,6,7,8-HpCDD were qualified as not detected (U) in Sample LW2-C928.

SDG K0506540: A positive value for OCDD was reported in the method blank. The OCDD value in the sample was significantly greater than the concentration in the blank, and no action was required.

ANC05042
BZTO104(e)005042

Field Blanks

After target compounds were restated as not-detected based on method blank contamination, no positive results remained in either of the rinsate blanks (LW2-C928 and LW2-C929).

Labeled Compounds

SDG K0505100: The percent recovery (%R) values for nine of the labeled compounds were greater than the upper control limits in Sample LW2-C523-B. Positive results for the associated analytes were estimated (J-13).

SDG K0505183: The %R values for $^{13}C_{12}$-1,2,3,4,7,8-HxCDD in Sample LW2-C092-B, and for $^{13}C_{12}$-1,2,3,4,7,8-HxCDD and $^{13}C_{12}$-1,2,3,6,7,8-HxCDD in Sample LW2-C092-C were greater than the upper control limits. Positive results for the associated analytes were estimated (J-13) in these samples.

Matrix Spikes/Matrix Spike Duplicates

No matrix spike/matrix spike duplicate (MS/MSD) sets were performed with these SDGs. Accuracy and precision were assessed using labeled compound recoveries, ongoing precision and recovery (OPR) samples, and laboratory duplicate samples.

Field Replicates

Replicate sample pairs were listed below. The following acceptance criteria were applied: the relative percent difference (RPD) control limit is 50% for results greater than five times the reporting limit (RL). For results less than five times the RL, the absolute difference between the sample and replicate must be less than two times the RL. No data were qualified based on field replicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results.

SDG K0505308: Samples LW2-C321-B1 and LW2-C321-B2 were identified as field replicates. All reported values met the acceptance criteria described above.

Laboratory Duplicates

Duplicate sample pairs are listed below. The following acceptance criteria were applied: the RPD control limit is 50% for results greater than five times the RL. For results less than five times the RL, the absolute difference between the sample and duplicate must be less than two times the RL.

SDGs K0505099, K0505119, K0505183, K0505187 & K0506540: No laboratory duplicates were performed with these SDGs.

SDG K0505097: Duplicate analysis was performed on Sample LW2-C094-C. No values greater than the reporting limits were reported and laboratory precision was determined to be acceptable.

SDG K0505100: Duplicate analysis was performed on Sample LW2-C523-C. The values reported for 1,2,3,4,6,7,8-HpCDD, OCDD, and total heptachlorodibenzodioxins did not meet the acceptance criteria and values for these analytes were estimated (J-9) in both the sample and duplicate.

ANC05043
BZTO104(e)005043

SDG K0505308: Duplicate analysis was performed on Sample LW2-321-E. All reported values met the acceptance criteria as described above.

Compound Identification

The laboratory assigned K-flags to numerous values when a peak was detected but did not meet quantitation criteria, therefore the reported values cannot be considered as positive identification for these analytes. These results were considered potential false positives or "estimated maximum possible concentrations" and were qualified as not detected (U-21) at the reported values. Laboratory blank values with K flags were considered as not detected.

All results for 2,3,7,8-TCDF were confirmed on a DB-225 column as required by the method. Although the 2,3,7,8-TCDF results from both columns were reported in the raw data, only the results from the DB-225 column were reported in the EDD. No action was necessary.

The laboratory used an "E" flag to indicate when reported results (usually OCDD or OCDF) were at concentrations greater than the linear range of the instrument calibration. These samples were usually not reanalyzed at dilutions. Since results greater than the linear range could have a potential low bias, all "E" flagged results were estimated (J-20), as noted below.

SDG K0505099: The laboratory reported a value for OCDF in the laboratory blank that did not meet the quantitation criteria as its ion abundance ratio did not meet the method specified limits. This value should have been assigned a K-flag to indicate the ion abundance ratio outlier. No action was taken other than to note this discrepancy.

SDG K0505183: The result for OCDD in Sample LW2-C092C was greater than the linear range of the instrument calibration and no dilution analysis was performed. The result for OCDD in this sample was estimated (J-20).

Calculation Verification

SDG K0505097: A full validation (Level IV) was performed this SDG. No anomalies were identified.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the labeled compound and OPR percent recovery values. Precision was acceptable as demonstrated by the RPD values for the OPR and OPR duplicates and the laboratory duplicate analyses, with the exceptions noted above.

Data were estimated due to a holding time outlier, laboratory duplicate precision outliers, labeled compound outliers, and a value greater than the linear range of the calibration. Data were qualified as not detected due to ion ratio criteria outliers and contamination in the associated blanks

All data, as qualified, are acceptable for use.

ANC05044
BZTO104(e)005044

DATA VALIDATION REPORT
Portland Harbor
Phase 2B Sediment Sampling, Fall 2005
Herbicides by Method SW8151
Severn Trent Laboratories - Seattle

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Severn Trent Laboratories of Seattle, Washington, analyzed the samples.

SDG	No. Samples	Validation Level
580-360-1	22 Sediments & 2 Field Blanks	Full
580-419-1	20 Sediments	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Receipt		Laboratory Control Samples
	Instrument Performance Check	1	Field Replicates
	Initial Calibration (ICAL)	2	Internal Standards
	Continuing Calibration (CCAL)		Reporting Limits (MDL and MRL)
1	Blanks (Method and Field)		Compound Identification (full validation only)
	Surrogate Compounds	1	Calculation Verification (full validation only)
1	Matrix Spikes/Matrix Spike Duplicates		

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

Holding Times and Sample Receipt

The cooler temperature was not recorded by the laboratory. No action was taken.

Field Blanks

Method blanks are used to evaluate all associated samples, including field blanks. Any remaining positive results in the field blanks are used to evaluate the associated samples.

ANC05045
BZTO104(e)005045

SDG 580-360-1: No target analytes were detected in the two field blanks (LW2-C933 & LW2-C934) submitted with this SDG.

Matrix Spikes/Matrix Spike Duplicates

SDG 580-360-1: No matrix spike/matrix spike duplicates (MS/MSD) were associated with the water samples. Accuracy and precision were assessed using the laboratory control sample/laboratory control sample duplicate (LCS/LCSD).

Field Replicates

SDG 580-419-1: Two pairs of samples, LW2-C321-B1 & LW2-C321-B2 and LW2-C321-C1 & LW2-C321-C2 were submitted as field replicates. No target analytes were detected in these samples. Precision was acceptable.

Internal Standards

SDG 580-360-1: The percent recover (%R) values for internal standard phenanthrene-d10 was greater than the upper control limit in Samples LW2-C525-B and LW2-C525-C. The %R values for internal standards acenaphthene-d10 and phenanthrene-d10 were greater than the upper control limit in Samples LW2-C492-B, LW2-C492-C, LW2-C529-A, and LW2-C529-B. Herbicides were not detected in these samples. The internal standard outliers were indicative of a potential high bias, so the reporting limits were not affected. No qualifiers were required.

SDG 580-419-1: The %R values for acenaphthene-d10 and phenanthrene-d10 were less than the lower control limits in Samples LW2-C523-B and LW2-C531-B. No positive results were reported in these samples. All reporting limits were estimated (UJ-19) to indicate a potential low bias.

The %R value for acenaphthene-d10 was less than the lower control limit in Sample LW2-C321-B2. The reporting limits for dalapon, 4-nitrophenol, and dicamba were estimated (UJ-19) in this sample.

Calculation Verification

SDG 580-360-1: Calculation verifications were performed on this SDG. No errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD %R values. Precision was acceptable as demonstrated by the relative percent difference values for the LCS/LCSD and MS/MSD analyses.

Data were estimated based on internal standard area outliers.

All data, as qualified, are acceptable for use.

ANC05046
BZTO104(e)005046

DATA VALIDATION REPORT
Portland Harbor RI/FS
Phase 2B Sediment Sampling, Fall 2005
Metals by Methods SW6010/6020, SW7470/7471A, & SW7742
Columbia Analytical Services - Kelso

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control samples. Columbia Analytical Services, Inc., Kelso, Washington, analyzed the samples.

SDG	No. Samples	Validation Level
K0505050	11 Sediment, 1 Field Blank	Full
K0505093	12 Sediment	Summary
K0505097	11 Sediment, 1 Field Blank	Summary
K0505099	11 Sediment, 1 Field Blank	Summary
K0505100	14 Sediment	Summary
K0505119	7 Sediment, 1 Field Blank	Summary
K0505183	12 Sediments, 1 Field Blank	Summary
K0505187	14 Sediments, 1 Field Blank	Summary
K0505247	18 Sediments, 1 Field Blank	Full
K0505308	18 Sediments	Summary
K0505339	8 Sediments	Summary
K0506857	1 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

2	Technical Holding Times and Sample Preservation	2	Laboratory Duplicates
	Initial Calibration (ICAL)	1	ICP Interference Check Samples
	Calibration Verification (CVER)	2	ICP Serial Dilution
2	CRDL Standard		ICPMS Internal Standards
2	Laboratory Blanks	1	Field Replicates
1	Field Blanks		Reporting Limits (MDL and MRL)
	Laboratory Control Samples		Calculation Verification (Full validation only)
2	Matrix Spike Samples		

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

ANC05047
BZTO104(e)005047

Technical Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The majority of the coolers were received at the laboratory at temperatures outside of these limits, with temperatures ranging from -1.1° to 7.7°C. These temperature outliers did not impact data quality and no action was taken.

SDG K0505247: The mercury analysis of Sample LW2-C525-E was performed 29 days beyond the recommended 28 day holding time. The result was estimated (J).

CRDL Standard

Contract required detection limit (CRDL) standards were analyzed at the beginning of each analytical sequence. For recoveries greater than upper control limit of 130%, positive results less than two times the CRDL were estimated (J-14) to indicate a potential high bias. For recoveries less than the lower control limit of 70%, positive results less than twice the CRDL and non-detects were estimated (J/UJ-14) to indicate a potential low bias. The following outliers were noted:

SDG K0505050 - sediment: cadmium (54%) and nickel (59%) – no qualifiers assigned (all positive results greater than twice the CRDL)

SDG K0505050 - aqueous: antimony (140%), silver (154%), and nickel (68%) – no qualifiers

SDG K0505093 - sediment: cadmium (54%) and nickel (59%) – no qualifiers assigned

SDG K0505097 - sediment: cadmium (54%) and nickel (59%) – three cadmium results estimated

SDG K0505097 - aqueous: antimony (140%) and silver (154%) – no qualifiers

SDG K0505099 - sediment: cadmium (54%) and nickel (59%) – no qualifiers assigned

SDG K0505099 - aqueous: antimony (140%), silver (154%), and nickel (68%) – nickel result for LW2-C928 estimated (J-14)

SDG K0505100 - sediment: cadmium (54%) and nickel (59%) – no qualifiers assigned

SDG K0505119 - sediment: cadmium (54%) and nickel (59%) – no qualifiers assigned

SDG K0505119 - aqueous: antimony (140%), silver (154%), and nickel (68%) – nickel result for LW2-C930 estimated (UJ-14)

SDG K0505183 - sediment: cadmium (54%) and nickel (59%) – no qualifiers assigned

SDG K0505183 - aqueous: antimony (140%), silver (154%), and nickel (68%) – nickel result for LW2-C932 estimated (UJ-14)

SDG K0505187 - sediment: lead (169% and 151%) – no qualifiers assigned

SDG K0505187 - aqueous: antimony (151%), cadmium (43%), and lead (29%) – cadmium and lead results for LW2-C931 estimated (UJ-14)

SDG K0505247 - sediment: cadmium (68%), chromium (68%), lead (165%), and silver (155%) – three cadmium results estimated

ANC05048
BZTO104(e)005048

SDG K0505247 - aqueous: antimony (151%), cadmium (43%), and lead (29%) – cadmium and lead results for LW2-C933 estimated

SDG K0505308 - sediment: chromium (68%), lead (185%), and silver (155%) – no qualifiers

SDG K0505339 - sediment: mercury (36%), lead (185%), and silver (155%) – mercury result for LW2-C187-D estimated (J-14)

SDG K0506857 - sediment: chromium (176%), copper (143%), lead (159%) and selenium (64%) – selenium result for LW2-C082-D1 estimated (UJ-14)

Laboratory Blanks

Various analytes were detected in the method and instrument blanks at levels greater than the method detection limits (MDL). To evaluate the effect on the sample data, action levels of five times the blank concentrations were established. Positive results less than the action levels in the associated samples were qualified as not detected (U) at the reported concentration. No action was taken for non-detects.

In addition, some analytes were found at levels less than the negative MDL in some instrument blanks. For negative blanks, action levels of five times the absolute value of the blank concentrations were established. Results less than the action levels in the associated samples were qualified as estimated (J/UJ) to indicate a potential low bias.

SDG K0505050: For the soils analyses, aluminum, chromium, selenium, silver, and zinc were detected in the method and/or instrument blanks at levels greater than the MDL. Some results for selenium and silver were less than the action levels and were qualified as not detected (U).

There were results for nickel in some instrument blanks that were less than the negative MDL. Associated results were positive and greater than the action level. No action was taken.

For the water analyses, antimony, silver and zinc were detected in the method and/or instrument blanks at levels greater than the MDL. The results for silver and zinc were qualified as not detected (U).

Some instrument blank results for cadmium, nickel, and selenium were less than the negative MDL. Cadmium and selenium were not detected in the associate sample and the reporting limits were estimated (UJ). The result for nickel was less than the action level and was estimated (J) to indicate a possible low bias.

SDG K0505093: Cadmium, selenium, silver, and zinc were detected in the method and/or instrument blanks at levels greater than the MDL. Some results for selenium were less than the action levels and were qualified as not detected (U).

Some chromium and nickel instrument blanks results were less than the negative MDL. Associated results were positive and greater than the action level. No action was taken.

SDG K0505097: For the soils analyses, cadmium, selenium, and silver were detected in the method and/or instrument blanks at levels greater than the MDL. Some results for cadmium and selenium were less than the action levels and were qualified as not detected (U).

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Some instrument blank results for cadmium, chromium, and nickel were less than the negative MDL. Associated results were positive and greater than the action level. No action was taken.

For the water analyses, aluminum, antimony, chromium, silver, and zinc were detected in the method and/or instrument blanks at levels greater than the MDL. The silver result for LW2-C929 was qualified as not detected (U).

The cadmium and selenium results for some instrument blanks were less than the negative MDL. Cadmium and selenium were not detected in the associate sample; reporting limits were estimated (UJ).

SDG K0505099: For the soils analyses, selenium and silver were detected in the method and/or instrument blanks at levels greater than the MDL. All selenium results were qualified as not detected (U).

Some instrument blank results for cadmium, chromium, and nickel were less than the negative MDL. Associated results were positive and greater than the action level. No action was taken.

For the water analyses, aluminum, antimony, chromium, silver, and zinc were detected in the method and/or instrument blanks at levels greater than the MDL. The nickel result for LW2-C928 was qualified as not detected (U).

The cadmium, nickel, and selenium results for some instrument blanks were less than the negative MDL. Cadmium, nickel, and selenium were not detected in the associated sample; reporting limits were estimated (UJ).

SDG K0505100: Selenium and silver were detected in the method and/or instrument blanks at levels greater than the MDL All selenium were less than the action levels and were qualified as not detected (U).

There were results for cadmium and nickel in some instrument blanks which were less than the negative MDL. The cadmium result for Sample LW2-C312-C was less than the action level and was estimated (J) to indicate a possible low bias.

SDG K0505119: For the soils analyses, selenium, and zinc were detected in the method and/or instrument blanks at levels greater than the MDL. All positive results for selenium were qualified as not detected (U).

Cadmium and nickel were less than the negative MDL in some instrument blanks. Associated results were positive and greater than the action level. No action was taken.

For the water analyses, aluminum, antimony, chromium, silver, and zinc were detected in the method and/or instrument blanks at levels greater than the MDL. The results for silver and zinc were less than the action levels and were qualified as not detected (U).

Cadmium, nickel and selenium were less than the negative MDL in some instrument blanks. These analytes were not detected in the associate sample; reporting limits were estimated (UJ) to indicate a possible low bias.

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SDG K0505183: For the soils analyses, selenium, silver, and zinc were detected in the method and/or instrument blanks at levels greater than the MDL. All positive results for selenium were qualified as not detected (U).

Cadmium and nickel were less than the negative MDL in some instrument blanks. Associated results were positive and greater than the action level. No action was taken.

For the water analyses, aluminum, antimony, chromium, silver, and zinc were detected in the method and/or instrument blanks at levels greater than the MDL. The results for chromium, silver, and zinc were qualified as not detected (U).

Cadmium, nickel and selenium were less than the negative MDL in some instrument blanks. These analytes were not detected in the associate sample; reporting limits were estimated (UJ) to indicate a possible low bias.

SDG K0505183: For the soils analyses, selenium, silver and zinc were detected in the method and/or instrument blanks at levels greater than the MDL. Some results for selenium were less than the action levels and were qualified as not detected (U).

Cadmium and nickel were detected in some instrument blanks at levels less than the negative MDL. Associated results were positive and greater than the action level. No action was taken.

For the water analyses, aluminum, antimony, chromium, silver and zinc were detected in the method and/or instrument blanks at levels greater than the MDL. The results for chromium, silver and zinc were less than the action levels and were qualified as not detected (U).

Cadmium, nickel and selenium were detected in some instrument blanks at levels less than the negative MDL. Cadmium, nickel and selenium were not detected in the associate sample and the reporting limits were estimated (UJ) to indicate a possible low bias.

SDG K0505187: For the soils analyses, selenium and silver were detected in the method and/or instrument blanks at levels greater than the MDL. Some results for selenium were less than the action levels and were qualified as not detected (U).

The cadmium results for the instrument blanks were less than the negative MDL. Several results were estimated (J/UJ).

For the water analyses, aluminum, chromium, copper, lead, nickel, selenium, silver and zinc were detected in the method and/or instrument blanks at levels greater than the MDL. The results for nickel and silver in Sample LW2-C933 were qualified as no detected (U).

The cadmium results for some instrument blanks were less than the negative MDL. The cadmium result for Sample LW2-C933 was qualified as estimated (J).

SDG K0505247: For the soils analyses, cadmium, selenium and silver were detected in the method and/or instrument blanks at levels greater than the MDL. Some results for selenium were less than the action levels and were qualified as not detected (U).

Nickel was detected in some instrument blanks at levels less than the negative MDL. The associated nickel results were positive and greater than the action levels; no action was taken.

For the water analyses, aluminum, chromium, copper, lead, nickel, selenium, silver and zinc were detected in the method and/or instrument blanks at levels greater than the MDL. The results for chromium, nickel and zinc were less than the action levels and were qualified as not detected (U).

Cadmium was detected in some instrument blanks at levels less than the negative MDL. Cadmium was not detected in the associated sample and the reporting limit was estimated (UJ) to indicate a possible low bias.

SDG K0505308: Lead, selenium and silver were detected in the method and/or instrument blanks at levels greater than the MDL. All positive results for selenium were qualified (U).

Cadmium was detected in some instrument blanks at levels less than the negative MDL. The associated cadmium results were positive and greater than the action levels; no action was taken.

SDG K0505339: Selenium and silver were detected in the method and/or instrument blanks at levels greater than the MDL. All positive results for selenium were qualified as not detected (U).

Cadmium and nickel were detected in some instrument blanks at levels less than the negative MDL. Some positive results for cadmium and nickel were less than the action levels; these results were estimated (J) to indicate a possible low bias.

SDG K0506857: Aluminum, cadmium, lead, selenium and silver were detected in the method and/or instrument blanks at levels greater than the MDL. The results for silver were less than the action level and were qualified as not detected (U).

Nickel and selenium were detected in some instrument blanks at levels less than the negative MDL. Selenium was not detected in the samples; the reporting limits were estimated (UJ) to indicate a possible low bias.

Field Blanks

SDG K0505050: One field blank, LW2-C927, was submitted with this SDG. After qualification for laboratory blank contamination, positive results remained for aluminum, chromium, copper, lead, and nickel. Results for these analytes in the associated samples were greater than the action level of five times the blank concentrations; no action was taken.

SDG K0505097: One field blank, LW2-C929, was submitted with this SDG. After qualification for laboratory blank contamination, positive results remained for aluminum, chromium, copper, and zinc. Results for these analytes in the associated samples were greater than the action level of five times the blank concentration; no action was taken.

SDG K0505099: One field blank, LW2-C928, was submitted with this SDG. After qualification for laboratory blank contamination, positive results remained for aluminum, chromium, copper, lead, and zinc. Results for these analytes in the associated samples were greater than the action level of five times the blank concentrations; no action was taken.

SDG K0505119: One field blank, LW2-C930, was submitted with this SDG. After qualification for laboratory blank contamination, positive results remained for aluminum, chromium, and copper. Results for these analytes in the associated samples were greater than the action level of five times the blank concentration; no action was taken.

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SDG K0505183: One field blank, LW2-C932, was submitted with this SDG. After qualification for laboratory blank contamination, a positive result remained for aluminum. Results for this analyte in the associated samples were greater than the action level of five times the blank concentration; no action was taken.

SDG K0505187: One field blank, LW2-C931, was submitted with this SDG. After qualification for laboratory blank contamination, aluminum was detected at a level greater than the MDL. Results for this analyte in the associated samples were greater than the action level of five times the blank concentration; no action was taken.

SDG K0505247: One field blank, LW2-C933, was submitted with this SDG. After qualification for laboratory blank contamination, positive results remained for aluminum, chromium, and zinc. Results for these analytes in the associated samples were greater than the action levels; no qualification of data was necessary.

Matrix Spike Samples

A matrix spike sample (MS) was analyzed at the proper frequency of one per 20 samples or one per batch; whichever was more frequent. The percent recovery (%R) values were within the control limits of 70%-130%, with the exceptions noted below. For %R values greater than 130%, the associated positive results were estimated (J) to indicate a possible high bias. No action was taken for non-detects. For %R values less than 70%, the associated positive results non-detects were qualified as estimated (J/UJ) to indicate a possible low bias.

SDG K0505050: LW2-C449-B MS - antimony – low bias

For the aqueous Batch QC – aluminum – low bias

SDG K0505097: LW2-C091-B MS - antimony – low bias

For the aqueous Batch QC – aluminum – low bias

SDG K0505093: Both preparation batch QC samples - antimony – low bias

SDG K0505099: LW2-C928 MS – aluminum – low bias

Both preparation batch QC samples - antimony – low bias

SDG K0505100: LW2-C296-B MS - antimony – low bias

SDG K0505119: LW2-C078-B MS - antimony – low bias

LW2-C930 MS – aluminum – low bias

SDG K0505183: For the soil Batch QC sample - antimony – low bias

For the aqueous Batch QC – aluminum – low bias

SDG K0505187: LW2-C097-C MS - antimony – low bias

SDG K0505247: LW2-C528-B MS - antimony – low bias

SDG K0505308: LW2-C529-B MS - antimony – low bias

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SDG K0505339: LW2-C531-A MS - antimony – low bias

SDG K0506857: LW2-C082-D1 MS - antimony – low bias.

Laboratory Replicates

Laboratory replicates were analyzed at the proper frequency of one per 20 samples or one per batch; whichever was more frequent. The relative percent difference (RPD) values were within the control limit of 30% for sample results greater than five times the reporting limit (for results less than five times the reporting limit, the absolute difference was less than twice the reporting limit) with the exceptions noted below. For RPD values exceeding the control limits, associated positive results and non-detects were qualified as estimated (J/UJ-9).

SDGs K0505093, K0505097, and K0505099 - sediments: copper (33%)

SDGs K0505187 and K0505247 - aqueous: aluminum (45%) and silver (64%)

SDG K0505247 - sediments: antimony (difference greater than twice the RL)

SDG K0505339 - sediments: antimony (difference greater than twice the RL), copper (42%), and lead (42%)

Field Replicates

The RPD control limit is 50% for sample results greater than five times the reporting limit (RL). For results less than five times the RL, the difference must be less than twice the RL. Although qualification of data is not required for field replicate outliers, data users should take field precision into account when interpreting the sample results.

SDG K0505093: Two sets of field replicates were submitted: LW2-C082-B1/LW2-C082-B2 and LW2-C082-C1/LW2-C082-C2. Replicate Sample LW2-C082-D2 was also submitted. The parent sample, LW2-C082-D1, was submitted in SDG K0506857. For Samples LW2-C082-C1 & LW2-C082-C2, the RPD value for lead was greater than the control limit of 50%. For Samples LW2-C082-D1 & LW2-C082-D2, the RPD value for silver was greater than 50% and the difference between the results was greater than twice the reporting limit.

SDG K0505308: Four sets of field replicates were submitted: LW2-C321-B1/LW2-C321-B2, LW2-C321-C1/LW2-C321-C2, LW2-C360-B1/LW2-C360-B2, and LW2-C360-C1/LW2-C360-C2.

For Samples LW2-C321-B1 & LW2-C321-B2, the lead RPD value was greater than the control limit. For Samples LW2-C360-B1 & LW2-C360-B2, the arsenic RPD value was greater than the control limit.

ICP Interference Check Samples

The concentration of the interfering element iron was greater than the level in the interference check samples (ICSA/ICSAB) in several samples. The ICSA results were carefully evaluated to determine if there was a potential high or low bias caused by iron interference. The ICSA values for chromium, copper, nickel, and zinc were greater than ± MDL. An action level of two times the absolute value of the ICSA result was established. All sample results for these analytes were greater than the action level; therefore no data were qualified.

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ICP Serial Dilution

Serial dilutions were analyzed at the proper frequency of one per 20 samples or one per batch; whichever was more frequent. The percent difference (%D) values were less than the control limit of 10% for results greater than 50 times the MDL, with the following exceptions. For %D outliers, all associated results were estimated (J/UJ-16). The sample used for the serial dilution analysis and the outliers were as follows:

SDG K0505050 - aqueous: Batch QC - zinc (12%)

SDG K0505093: LW2-C083-B - nickel (28%)

Batch QC - silver (11%)

SDG K0505097 - aqueous: Batch QC - zinc (12%)

SDG K0505097 - sediment: Batch QC - silver (11%)

SDG K0505099 - aqueous: Batch QC - zinc (12%)

SDG K0505099 - sediment: Batch QC – nickel (26%) and silver (11%)

SDGs K0505119 and K0505183 - aqueous: Batch QC - zinc (12%)

SDG K0505187: LW2-C096-C - lead (15%)

SDG K0505339: LW2-C531-B - nickel (34%)

SDG K0506857: Batch QC (SW6010 analyses) - nickel (13%)

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. The laboratory duplicate RPD values indicated acceptable precision, except as noted above. Accuracy was also acceptable, as demonstrated by the MS and laboratory control sample %R values, except as previously noted.

Data were estimated based on holding time outliers. Data were qualified as estimated and/or not detected based on laboratory blank contamination. Data were also estimated based on CRDL and MS %R, laboratory duplicate RPD, and serial dilution %D outliers.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Phase 2B Sediment Sampling, Fall 2005
Hexavalent Chromium by Method SW7196A
Columbia Analytical Services - Kelso

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Columbia Analytical Services, Inc., Kelso, Washington, analyzed the samples.

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). The following errors were found:

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

1	Technical Holding Times and Sample Receipt	2	Matrix Spikes (MS)
	Initial Calibration		Laboratory Duplicates
	Calibration Verification	1	Field Replicates
	Laboratory Blanks	1	Reporting Limits (MDL and MRL)
1	Field Blanks		Calculation Verification (Full validation only)
	Laboratory Control Samples		

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

Technical Holding Times and Sample Receipt

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. One of the coolers was received at the laboratory at a temperature of 0°C. This temperature outlier did not impact data quality and no action was taken.

Matrix Spikes

Matrix spike samples (MS) were analyzed at the proper frequency of one per 20 samples or one per batch; whichever was more frequent. The percent recovery (%R) values were within the laboratory control limits, with the exceptions noted below. For the cases where the spike recoveries were less than 1%, the laboratory performed follow up tests such as oxidation-reduction to potential to show that

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the sample matrix was highly reducing and would therefore be incapable of supporting chromium in the hexavalent oxidation state. Because the low recoveries were due to matrix effects and not the extraction procedure, associated results were estimated (J/UJ-8) instead of being rejected.

SDG K0505247: The %R values for hexavalent chromium (<1%) were less than the lower control limit of 85% for Sample LW2-C358-A MS/MSD. The %R of the post spike (63%) was also less than the lower control limit of 85%. Associated sample results were estimated (UJ-8).

Field Blanks

SDG K0505247: This SDG contained one field blank: LW2-G933. Hexavalent chromium was not detected in this sample.

Field Replicates

SDG K0505308: Two pair of field replicates, LW2-C360-B1 & LW2-C360-B2 and LW2-C360-C1 & LW2-C360-C2 were submitted with this SDG. There were no positive results for hexavalent chromium in these samples; field precision was acceptable.

Reporting Limits

The QAPP specifies a method reporting limit (MRL) for hexavalent chromium of 0.5 mg/kg. The laboratory reporting limit was 0.2 mg/kg.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. The laboratory and field replicate relative percent difference values indicated acceptable precision. Accuracy was also acceptable, as demonstrated by the MS and/or laboratory control sample %R values, with the exceptions noted above.

Data were qualified as estimated for MS recovery outliers.

All data, as qualified, are acceptable for use.

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DATA VALIDATION REPORT
Portland Harbor RI/FS
Phase 2B Sediment Sampling, Fall 2005
Conventional Parameter Analyses
Columbia Analytical Services – Kelso

This report documents the review of analytical data from the analyses of sediment samples and the associated laboratory and field quality control (QC) samples. Columbia Analytical Services, Inc., Kelso, Washington.

SDG	No. Samples	Validation Level
K0505050	11 Sediments – TOC/TS/GS/SG	Full
K0505093	12 Sediments – TOC/TS/GS/SG	Summary
K0505097	11 Sediments – TOC/TS/GS/SG	Summary
K0505099	11 Sediments – TOC/TS/GS/SG	Summary
K0505100	19 Sediments – TOC/TS/GS/SG	Summary
K0505119	13 Sediments – TOC/TS/GS/SG	Summary
K0505183	17 Sediments – TOC/TS/GS/SG	Summary
K0505187	20 Sediments – TOC/TS/GS/SG	Summary
K0505247	19 Sediments – TOC/TS/GS/SG	Full
K0505308	19 Sediments – TOC/TS/GS/SG	Summary
K0505339	9 Sediments – TOC/TS/GS/SG	Summary
K0506857	1 Sediment – TOC/TS/GS/SG	Summary

The analytical tests that were performed are summarized below:

Parameter	Method
Total Solids (TS)	160.3
Grain Size (GS)	PSEP 1986
Total Organic Carbon (TOC)	PSEP 1986
Specific Gravity (SG)	ASTM D-854

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found.

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III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

1	Technical Holding Times and Sample Receipt		Matrix Spike/Matrix Spike Duplicates (MS/MSD)
	Initial Calibration	2	Laboratory Duplicates and Triplicates
	Calibration Verification	1	Field Replicates
2	Laboratory Blanks	1	Reporting Limits (MDL and MRL)
	Field Blanks		Calculation Verification (Full validation only)
	Laboratory Control Samples		

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

Technical Holding Times and Sample Receipt

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C. The majority of the coolers were received at the laboratory at temperatures outside of these limits, with temperatures ranging from -1.1° to 7.7°C. These temperature outliers did not impact data quality and no action was taken.

Laboratory Blanks

SDG K0505050: TOC was detected in the method blank and one instrument blank at levels greater than the method detection limit (MDL). To evaluate the effect on the sample data, action levels of five times the blank concentrations were established. The result for sample LW2-C532-F was less than the action level and was qualified as not detected (U).

SDG K0505093: TOC was detected in one instrument blank at a level greater than the MDL. All associated results were greater than the action level and no action was taken.

SDG K0505099: TOC was detected in instrument blanks at levels greater than the method detection limit (MDL). The result for sample LW2-C522-C was less than the action level and was qualified as not detected (U).

SDG K0505183: TOC was detected in one instrument blank at a level greater than the MDL. All associated results were greater than the action level and no action was taken.

SDG K0506857: TOC was detected in one instrument blank at a level greater than the MDL. The associated result was equal to the action level and no action was taken.

Laboratory Duplicates

Laboratory duplicate samples were performed at the frequency of one per batch. The relative percent difference (RPD) values were within the control limit of 20%, with the following exceptions. (Note : for grain size, the laboratory performed triplicate analysis. A relative standard deviation [RSD] limit of 20% was used for all fractions with sieve size results of at least 5%). For RPD outliers, all associated samples are qualified (J/UJ-9). If the RSD value for a grain size fraction was greater than the control limit, only the result for the parent sample was qualified (J-9).

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SDG K0505308: Sample LW2-C529-A was used for the grain size replicate analyses. The RSD value for the coarse silt fraction (22%) was greater than the control limit.

Field Replicates

The RPD control limit is 50% for sample results greater than five times the reporting limit (RL). For results less than five times the RL, the difference must be less than twice the RL. Although qualification of data is not required for field replicate outliers, data users should take field precision into account when interpreting the sample results.

SDG K0505093: Three sets of field replicates were submitted: LW2-C082-A1/LW2-C082-A2, LW2-C082-B1/LW2-C082-B2, and LW2-C082-C1/LW2-C082-C2. Replicate Sample LW2-C082-D2 was also submitted. The parent sample, LW2-C082-D1, was submitted in SDG K0506857. For Samples LW2-C082-C1 & LW2-C082-C2, the RPD value for the coarse sand fraction was greater than 50%. In addition, one TOC result was less than five times the RL and the difference between the sample and duplicate was greater than twice the RL.

SDG K0505308: Data for six field replicate sets were submitted: LW2-C321-B1/LW2-C321-B2, LW2-C321-C1/LW2-C321-C2, LW2-C321-E1/LW2-C321-E2, LW2-C360-B1/LW2-C360-B2, LW2-C360-C1/LW2-C360-C2 and LW2-C360-F1/LW2-C360-F2. For Samples LW2-C360-C1 & LW2-C360-C2, the RPD value for TOC was greater than 50%. For Samples LW2-C321-B1 & LW2-C321-B2, the RPD value for coarse sand was greater than 50%. For Samples LW2-C321-C1 & LW2-C321-C2, the RPD value for medium sand was greater than 50%.

Reporting Limits (Method Detection Limit and Method Reporting Limit)

The QAPP calls for the grain size analysis to report clay sizes 8-9 Phi, 9-10 Phi, and >10 Phi. The laboratory only reported >9 Phi.

The QAPP specifies a reporting limit of 0.01 mg/kg for total solids. The laboratory reporting limit was 0.1 mg/kg. All sample results were greater than the reporting limit and no action was taken other than to note this discrepancy.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. The laboratory duplicate RPD and laboratory triplicate relative standard deviation (RSD) values indicated acceptable precision, with the exceptions noted above. Accuracy was also acceptable, as demonstrated by the matrix spike and laboratory control sample percent recovery values.

Data were qualified based on blank contamination and a laboratory triplicate %RSD outlier.

All data, as qualified, are acceptable for use.

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