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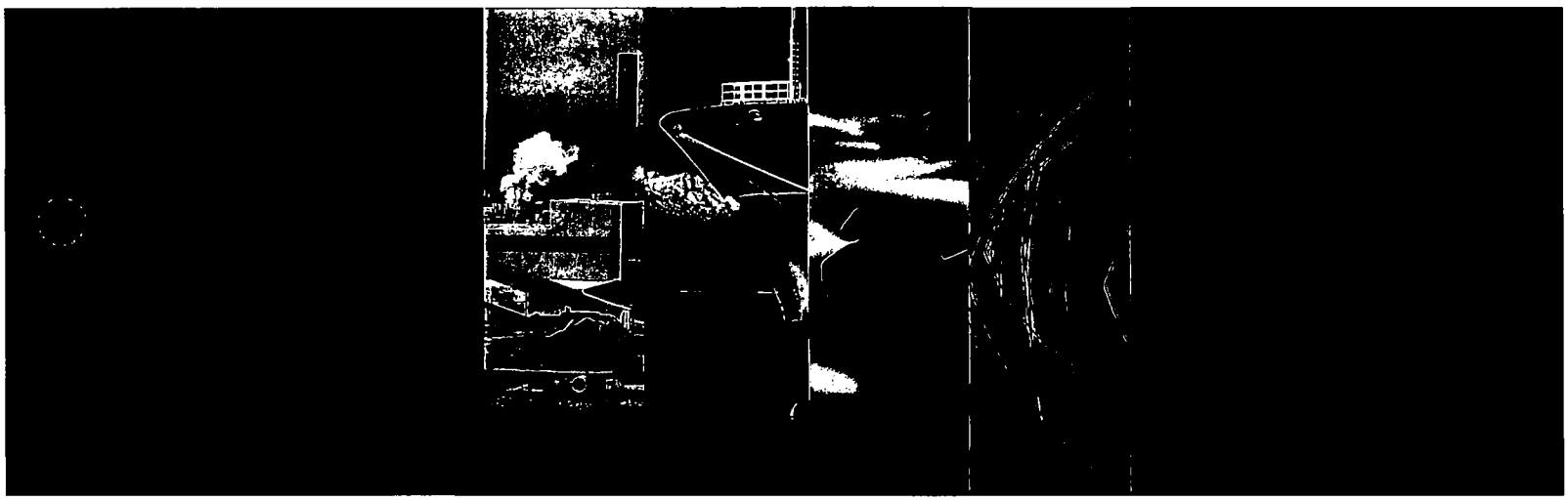
REVISED FINAL
ROUND 1A DATA REPORT
– VOLUME I –

for

Middle Waterway Problem Area

of the

Commencement Bay Nearshore/Tideflats
Superfund Site
Tacoma, Washington



prepared for the:

Middle Waterway Action Committee

MIDDLE WATERWAY
Protecting the Environment, Promoting the Economy

August 23,1999

FOSTER WHEELER ENVIRONMENTAL CORPORATION

ANCHOR ENVIRONMENTAL, L.L.C.

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REVISED FINAL
ROUND 1A DATA REPORT
VOLUME I (MAIN TEXT AND APPENDICES A TO D)

for

Middle Waterway Problem Area
Commencement Bay
Nearshore/Tideflats Superfund Site
Tacoma, Washington

MIDDLE WATERWAY

Protecting the Environment,
Promoting the Economy

prepared for the:

Middle Waterway Action Committee

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August 23, 1999

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APPENDIX E DATA VALIDATION
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ACRONYMS AND ABBREVIATIONS

AOC	Administrative Order on Consent
CB/NT	Commencement Bay Nearshore/Tideflats
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cm	centimeter
COE	U.S. Army Corps of Engineers
CST	Column Settling Test
Data Report	Round 1A Data Report
DGPS	Differential Global Positioning System
DRET	Dredging Elutriate Test
EPA	United States Environmental Protection Agency
Foss Maritime	Foss Maritime Company
Foster Wheeler Environmental	Foster Wheeler Environmental Corporation
GC/MS	gas chromatography/mass spectroscopy
g/L	grams per liter
HPAH	high polynuclear aromatic hydrocarbon
LPAH	low polynuclear aromatic hydrocarbon
MET	Modified Elutriate Test
mg/kg	milligram per kilogram
MINI	Marine Industries Northwest, Inc.
MLLW	mean lower low water
mm	millimeter
MW	Middle Waterway
MWAC	Middle Waterway Action Committee
NAD 83-91	North American Datum 1983 with 1991 Update
NPDES	National Pollutant Discharge Elimination System
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
Pioneer	Pioneer Industries, Inc.
PRD/RD	Pre-Remedial Design/Remedial Design
PSDDA	Puget Sound Dredge Disposal Analysis
PSEP	Puget Sound Estuary Program
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RPD	relative percent difference
SAP	Sampling and Analysis Plan
SDI	Swartz Dominance Index
Simpson	Simpson Tacoma Kraft Co.

ACRONYMS AND ABBREVIATIONS (CONTINUED)

SL	Screening Level
SOW	Statement of Work
SQO	Sediment Quality Objective
SQS	Sediment Quality Standard
TAL	Target Analyte List
TBT	tributyltin
TCLT	Thin Layer Column Leaching Test
TICs	tentatively identified compounds
TOC	total organic carbon
VOC	volatile organic compound
WES	Waterways Experiment Station
Z	Elevation
µg/kg	micrograms per kilogram
µg/L	micrograms per liter

EXECUTIVE SUMMARY

This Data Report presents the results of the Round 1A field and laboratory studies for the Pre-Remedial Design and Remedial Design (PRD/RD) Study of the Middle Waterway Problem Area, Commencement Bay. These studies were performed in accordance with the EPA-approved Work Plan, Sampling and Analysis Plan (SAP), and Quality Assurance Project Plan (QAPP) (Foster Wheeler Environmental 1998a, 1998b, and 1998c) and were designed to fulfill the data collection requirements set forth in the Administrative Order on Consent/Statement of Work (AOC/SOW) between the Middle Water Action Committee (MWAC) and the EPA.

Consistent with the EPA-approved Work Plan, this Data Report is designed to present the Round 1A data; whereas, the Round 1B Technical Memorandum uses these data to identify outstanding data gaps that will be filled during Round 1B field and laboratory studies. Round 1A and Round 1B data will be interpreted in the Data Evaluation Report.

Sediment Chemical Analysis

Data Quality

Based on review of the sediment quality data, the overall data quality objectives were met, as set forth in the QAPP. Therefore, the sediment quality data presented in this report are of adequate quality for the purposes of this PRD/RD study.

Sediment Chemistry

Round 1A surface sediment chemistry results are summarized in Figures 11 and 13. Subsurface sediment chemistry results are summarized in Figures 5, 6, 7, 8, 9, 10, and 12.

Sediment Biological Effects Testing

Biological testing was performed at ten stations within Middle Waterway. Two acute bioassays were conducted using sediments collected from Middle Waterway, including a 10-day amphipod mortality test using *Rhepoxynius abronius* and a 48-hour bivalve larval development test using *Mytilus* sp. Evaluation of potential chronic biological effects was conducted using either benthic community analyses or the 20-day juvenile polychaete growth test using *Neanthes arenaceodentata.*

Biological testing results were evaluated against interpretive criteria set forth in the EPA approved Work Plan. Stations MW025, MW039, and MW049 exceeded the minor adverse effects criteria. No stations exceeded the adverse effects criteria.

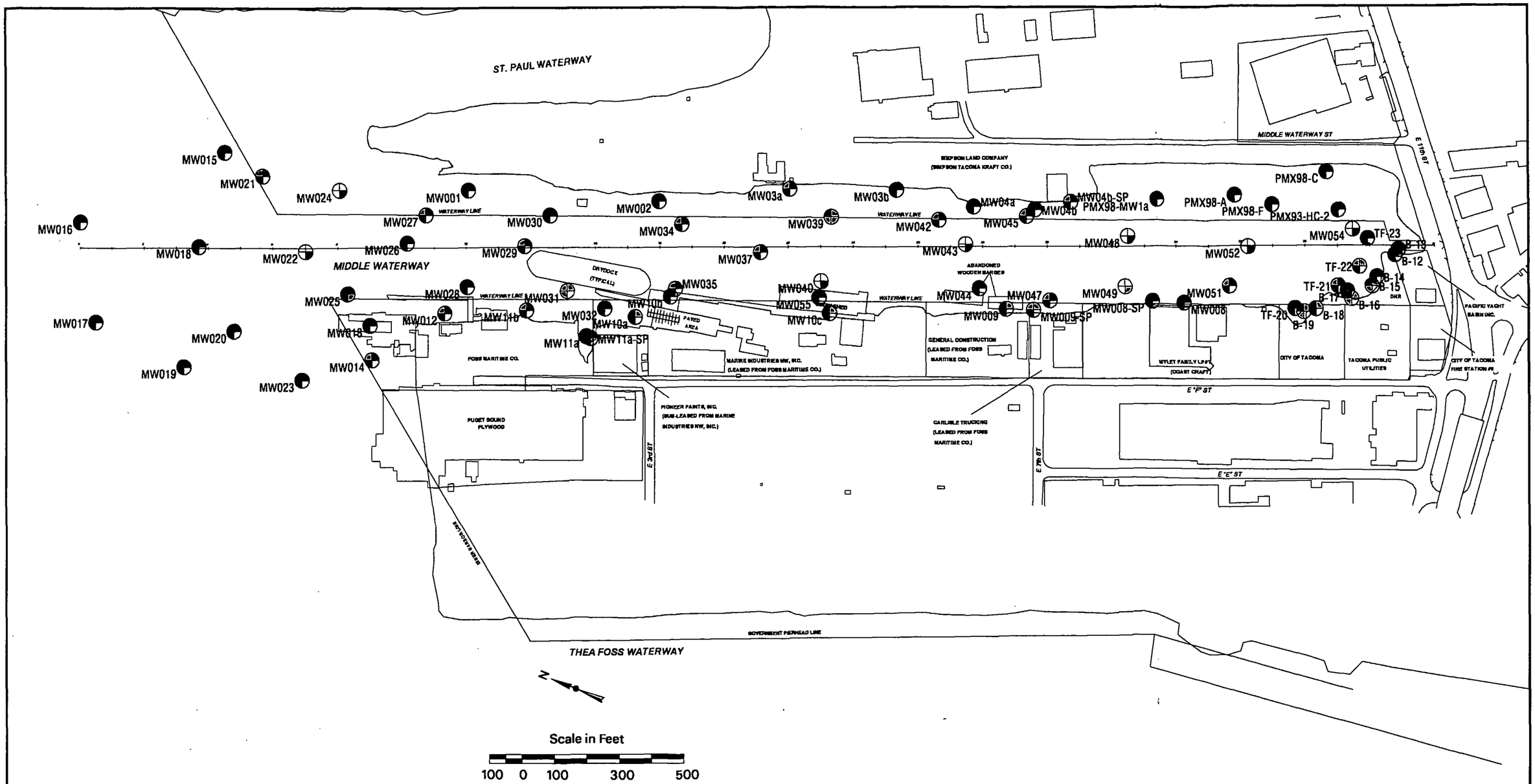
Evaluation of Surface Sediment Quality

Figure ES-1 presents a summary of chemical (Hg and PAHs only) and biological testing results for the Middle Waterway.

Sediment Contaminant Mobility Testing

Contaminant mobility and dredgeability tests were performed on a single sediment composite sample representative of the potential dredge prism in order to provide an assessment of contaminant mobility dredging and nearshore or aquatic confinement (disposal).

The composite sample was submitted for chemical analysis (i.e., the SQO list) and used to perform the Dredging Elutriate Test (DRET), Modified Elutriate Test (MET), Thin Layer Column Leaching Test (TCLT), and the Column Settling Test (CST).



LEGEND

Chemical Exceedence Factor	Biological Test Result
0 < x < = 1	Pass
1 < x < = 3	Minor Adverse
x > 3	Adverse
Chemical test overruled by confirmatory biological tests	No Biological Test

Hg / HPAH / LPAH / Biological

MIDDLE WATERWAY

Protecting the Environment, Preserving Our Waterway

NOTES:

1. Property line information has been compiled from multiple data sources, which have not been verified. This data is to be used for reference purposes only.
2. Horizontal Datum: WA state plane south zone (NAD83-91)
   Vertical Datum: COE mean lower low water

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Figure ES-1
Middle Waterway
Surface and Bank Sample Exceedence Factors for
Mercury, HPAH, LPAH and Biological Test Results

/cas3/bruce/ps-samples.aml - August 16, 1999

1. INTRODUCTION

1.1 BACKGROUND

The Middle Waterway is located in Commencement Bay and is bounded by the Thea Foss Waterway to the southwest and the St. Paul Waterway to the northeast (Figure 1). The waterway is approximately 3,500 feet long and 300 feet wide.

This Round 1A Data Report (Data Report) was prepared as required by Section II.B.2.g of the Statement of Work (SOW), Appendix I to the Administrative Order on Consent (AOC) (United States Environmental Protection Agency [EPA] Docket No. 10-97-0096/Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA]) for the Pre-Remedial Design and Remedial Design (PRD/RD) Study of the Middle Waterway Problem Area of the Commencement Bay Nearshore/Tideflats (CB/NT) Superfund Site. This Round 1A Data Report is a pre-design document identified in the EPA-approved Revised Final Pre-Remedial Design and Remedial Design Work Plan dated February 23, 1998 (Foster Wheeler Environmental Corporation [Foster Wheeler Environmental], 1998a).

This Data Report is submitted on behalf of the Middle Waterway Action Committee (MWAC), currently consisting of Foss Maritime Company (Foss Maritime), Marine Industries Northwest, Inc. (MINI), and Pioneer Industries, Inc. (Pioneer).

1.2 PURPOSE AND SCOPE OF DOCUMENT

The purpose of this Data Report is to present a summary of the Round 1A field sampling activities; tabulated chemical, physical, and biological data; a sample identification matrix which relates sample identification numbers to sample locations; and figures that show actual sample locations. The data validation reports conducted in accordance with the EPA-approved Quality Assurance Project Plan (QAPP) are attached as an appendix. Laboratory data sheets are available and will be submitted under separate cover.

This report presents the data collected during the Round 1A sampling effort as well as selected historical data, but does not attempt to interpret these data, because the evaluation of the data will be presented in the Data Evaluation Report that will be submitted after completion of Round 1B collection and analysis activities.

1.3 ORGANIZATION OF THIS DATA REPORT

The remainder of this Data Report is organized into the following sections:

Section 2.	Summary of Field Sampling Activities
Section 3.	Results of Geologic Investigations
Section 4.	Results of Chemical and Physical Analyses
Section 5.	Results of Contaminant Mobility Testing
Section 6.	Results of Biological Tests
Section 7.	Results of Physical Surveys
Section 8.	References
Appendices	Appendices A to H (Appendices A to D are located in this Volume I; E to H are located in Volume II under separate cover)

Recent data collected by the City of Tacoma and Simpson Tacoma Kraft Co. (Simpson) are discussed in Section 4 as part of the Round 1A data set and are included in the tables and appendices. The field activities associated with those sampling efforts are not discussed in Section 2. Refer to the following reports associated with these sampling efforts for more information: *Middle Waterway Estuarine Natural Resources Restoration Project Site Characterization Report* (Tacoma 1997) and *Middle Waterway Shore Restoration Project Monitoring and Adaptive Management Plan Data Report, Post Construction (Year 0-1 and Year 3)* (Parametrix 1996, 1998).

Tables and figures, which are numbered sequentially according to their appearance in the text, are grouped at the end of this Data Report.

2. SUMMARY OF FIELD SAMPLING ACTIVITIES

This section presents a discussion of field activities performed at the Middle Waterway project site during May and June of 1998. All activities were conducted in accordance with the EPA-approved Sampling and Analysis Plan (SAP) (Foster Wheeler Environmental 1998b). The discussion has been divided into subsections based on the types of sampling and activities performed, including location control, surface sampling, subsurface sampling, bank sampling, reference sediment sampling, water sampling, and quality assurance/quality control (QA/QC) sampling.

All regular sediment sampling locations used for this project (excluding QA/QC locations) are shown on Figure 2. These locations include historical stations, Round 1A sampling locations, and the most recent Simpson Restoration area monitoring stations (Parametrix 1998). Reference sediment sampling sites for benthic biological tests are shown on Figure 3. The coordinates and elevation for each sampling location are listed in Table 1. Table 2 contains a summary of the analyses conducted for each sampling site.

Modifications to, and deviations from, the EPA-approved SAP (Foster Wheeler Environmental 1998b) are summarized below:

- A hydraulically powered "Power Grab" was used to collect subtidal surface sediments. The SAP states that a vanVeen or similar piece of equipment would be used. The Power Grab is larger than a traditional vanVeen (0.32 m^2 versus 0.1 m^2) and has a similar configuration but is hydraulic assisted.

- Sea water was used in the field grain size analyses. Wakeman (1990) specifies that distilled water should be used; however, other published methods use seawater. Seawater was readily available on board the work vessel and at the Foss Maritime pier from which field efforts were staged.

- Buoys were not placed at each end of the tideflats channel as stated in the SAP. Visual observations of the channel location and preset Differential Global Positioning System (DGPS) coordinates allowed field personnel to collect samples outside of the channel bottom.

- Trip blanks were not used until the final three days of sampling. Volatile organic compounds (VOCs) are not chemicals of concern at the Middle Waterway and were not detected in any samples.

- Bank segment endpoints were located using a DGPS system. Discrete grab locations for bank sampling were identified by pacing rather than using a portable DGPS system as identified in the SAP. The backpack-mounted DGPS system was judged

to be too dangerous to carry under docks, along steep muddy slopes, and along ragged riprap-protected shoreline by the field personnel.

- A minimum of two subsurface cores were collected at each deep core location. The SAP stated that three would be collected to ensure sufficient volume of sediment for all analyses. After the first day of coring, it was determined that two cores would be sufficient.

2.1 LOCATION CONTROL

2.1.1 Horizontal Control Method

The objective of the sample location positioning control procedure was to accurately (within 1 meter) identify and record the location of all sampling stations. This was achieved by referencing each sampling site to state plane coordinates with the use of known survey control points and a DGPS. Exact locations of survey control points were determined by an experienced surveyor. The elevation (as referenced to mean lower low water [MLLW]) of sampling sites was determined using measured water depths, tide staff readings (corrections to predicted tides), and existing bathymetric data for Middle Waterway.

A DGPS was used to locate sample stations for subtidal, tideflat, and bank sampling. Station locations were determined using a Trimble AG132 DGPS receiver. This system uses differential corrections broadcast by the United States Coast Guard to provide submeter accuracies.

The positioning/navigation system included the AG132 DGPS receiver and a laptop computer running Hypack hydrographic surveying software. Hypack provides real time positioning and data logging capabilities to the system. The AG132 receiver is connected to the laptop via a serial port. Differentially corrected positions are sent from the AG132 to the laptop. The current position of the receiver is then plotted graphically on the screen. Positions are recorded within Hypack for items of interest.

The accuracy of the system was verified to a known control point at the beginning of each day. This was accomplished by positioning the receiver at the control point and comparing the coordinates determined by the DGPS to the known coordinates.

2.1.2 Vertical Control Methods

The vertical control parameters measured for subtidal sampling included depth-to-sediment and tidal elevation. The depth to sediment was measured before each sampling event using a hand-held weighted tape. The weighted tape was dropped to the bottom, pulled taut, and

read to determine water depth to the nearest 0.1 foot. Depth readings were cross-checked against the onboard depth sounder.

Tide staffs were installed for this project and the staff elevations determined by survey. Tide elevation readings on the tide staffs (to the nearest 0.1 foot) and time were recorded periodically during each day (before and after each sampling at each station, if possible). Where it was not possible to record the tide staff reading at the time of sampling, tidal elevations were determined using corrected tide chart elevations. The elevations on the tide charts were compared to the actual elevations recorded from the tide staffs to calculate a correction to the tide charts. The corrected tide elevations were then used to calculate the mudline elevation.

Vertical control for tideflat and bank sampling was determined using horizontal location and existing bathymetry for the Middle Waterway. The station location was plotted on the bathymetric map using the DGPS coordinates, then the mudline elevation read from the bathymetric map.

2.1.3 Location Control for Subtidal Sampling

Station locations were surveyed using the Trimble AG132 DPGS. The depth-to-sediment mudline (e.g., water depth) was measured at each replicate core location using a hand-held weighted tape. Mudline elevations were calculated using measured water depth and tide elevations.

2.1.4 Location Control for Tideflats Sampling

Station locations were surveyed using the Trimble AG132 DGPS. The system configuration was modified to allow placement in a portable case which could be carried to the sample stations on the tideflats. The mudline elevations were determined using horizontal location and existing bathymetry for the Middle Waterway.

2.1.5 Location Control for Bank Sampling

Bank segment endpoints were surveyed using a Trimble AG132 DGPS. Individual sampling locations within each segment were located by pacing or taping the distance from the known endpoints and graphically recording the location on a topographic map of the segment. As described in the EPA-approved SAP (Foster Wheeler Environmental 1998b), sediment from individual sampling locations was used to make one composite sample that represented each bank segment. Therefore, a single station location was selected to simplify use and discussion of sampling data. This single representative sampling location was set on the figures at the approximate center of each bank segment (Figure 2).

The elevation of each sampling location within an individual bank segment was established using existing bathymetry and topography for the Middle Waterway. The elevation reported for each station is not an average value of the individual locations, but rather is representative of the most common elevation within the segment.

2.2 SURFACE SEDIMENT SAMPLING ACTIVITIES

Surface sediment sampling occurred during May 1998 and was conducted using a variety of collection techniques adaptable to the various physical conditions found in the subtidal and tideflat areas. Surface sediment sampling in the subtidal and tideflat areas was conducted as described in Section 2 of the EPA-approved SAP (Foster Wheeler Environmental 1998b). The project-specific sampling interval for surface sediments was 0 to 10 centimeters (cm) for both subtidal and tideflat sampling, with appropriate equipment penetration depths determined based upon the type of sediment encountered and the size of the sampling equipment. Equipment decontamination procedures and sample handling procedures detailed in the EPA-approved SAP were followed closely to prevent cross-contamination of the samples, and QA/QC samples were collected to evaluate the effectiveness of these quality control measures.

As described in Section 5.2 of the Work Plan (Foster Wheeler Environmental 1998a), the objectives of surface sediment sampling were "to support spatial resolution of chemical contaminant distribution, assessment of sediment toxicity with respect to biological effects, and identification of potential natural recovery areas." Thirty-three surface sediment locations in the subtidal and intertidal areas were selected to define the horizontal extent of contaminant distribution.

Field sampling forms are provided in Appendix A.

2.2.1 Subtidal Surface Sediment Sampling

Surface sediments at locations within the subtidal area of the waterway were sampled from a shallow draft work vessel. Samples for chemical analysis were obtained with a modified, single vanVeen grab sampler (that has a sample area of 0.1 m^2), or a larger hydraulic clamshell sampler (Power Grab, that has a sample area of approximately 0.32 m^2). Samples for biological analysis were obtained with a Petite Ponar sampler (that has a sample area of 0.023 m^2). A Petite Ponar sampler was used to collect biological samples so that these samples would be consistent with biological samples collected manually (by hand) on the tideflats. The larger vanVeen which is typically used for biological sampling is too large and heavy to deploy by hand on the tideflats.

Samples were taken using the procedures in Section 2.4 of the SAP (Foster Wheeler Environmental 1998b). The sampler was lowered to the waterway bottom at a controlled rate of speed (typically 1 foot per second) and actuated by either using a hydraulic trigger mechanism (power grab) or slacking the support cable (vanVeen, Petite Ponar) to allow the jaws of the sampler to close. The sampler was retrieved at a controlled rate of speed and placed in a stable position in a frame, bucket, or other structure used for that purpose. The top covers were opened and the sample was checked for acceptability using Puget Sound Estuary Program (PSEP) criteria (i.e., relatively clear overlying water present, no significant winnowing or other disturbance, etc.) (PSEP 1997). The overlying water was siphoned off the top of vanVeen grabs (chemistry and bioassay) and a stainless-steel spoon was used to remove sediment.

Discrete portions were removed from the first vanVeen grab at each site for use in analysis of volatile components. Additional sediments were placed in a stainless-steel bucket for temporary storage until sufficient sample volume was obtained for all chemical analyses and bioassay tests. The sediments were then gently but thoroughly composited and portioned into clean, glass sampling jars provided by the laboratory. These samples were placed in a cooler with blue ice to maintain the temperature at 4°C during transport to MultiChem Analytical Service in Renton, Washington for chemical analysis or shipment to Northwest Aquatics in Newport, Oregon for bioassay testing.

Benthic community samples collected with the Petite Ponar were placed in buckets, transported back to the Foss Maritime pier, and screened using a 1.0 millimeter (mm) sieve. Samples were then placed in plastic bags, preserved with a buffered 10 percent formaldehyde solution, and packaged in plastic buckets for shipment to Marine Taxonomic Services in Corvallis, Oregon. These samples are preserved and do not require refrigeration.

Twenty-one stations in the subtidal area were sampled for surface sediments, including a site within the scow shed which was added at the request of EPA. Sediments from 20 locations were analyzed for the constituents on the Sediment Quality Objective (SQO) list shown in Table 3. At sampling site MW021, sediments were evaluated for the analytes shown on the Target Analyte List (TAL) shown in Table 4. This list is more extensive than the SQO list and includes the requirement for reporting tentatively identified compounds (TICs).

Sediments collected at three of the subtidal surface sampling locations were used to conduct biological testing. These sediments were field screened to determine the percent fines and then submitted to the laboratory for evaluation using two bioassay tests and benthic community analysis, where appropriate.

Finally, sediment from 9 of the sites was processed for extraction of pore water. The pore water obtained was analyzed to determine the concentration of tributyltin present.

The results of chemical, contaminant mobility, and biological testing are presented in Sections 4, 5, and 6 of this report.

2.2.2 Tideflats Surface Sediment Sampling

In the tideflat area, sediment was generally sampled at low tide when the sediment was above the water elevation. Tideflat areas of the waterway were generally sampled with stainless-steel spoons to collect chemistry samples and a Petite Ponar sampler to collect biological samples. Where necessary, plywood sheeting was used to gain access to sampling locations and provide a working platform for sampling operations. Areas sampled by foot were marked out prior to sampling to prevent contamination of the site resulting from field personnel walking in or through the area. The Petite Ponar was deployed by dropping the sampler from a height of approximately 5 feet above the surface of the sediments. Acceptability of the samples was determined visually based upon the fullness of the sampler and any visible disturbance to the surface. Sediments for both chemical and biological analysis were handled in the same manner as described above for subtidal surface samples.

Twelve tideflat locations were sampled for surface sediments. Sediments from 11 of the tideflat sampling sites were analyzed for the complete list of SQO constituents (Table 3). At sampling site MW054, sediments were evaluated for the analytes listed on the TAL (Table 4).

Sediments collected at 7 of the tideflat surface sampling sites were used to conduct biological testing. These sediments were field screened to determine the percent fines and then submitted to the laboratory for evaluation using two bioassay tests and benthic community analysis, where appropriate.

Finally, sediment from 7 of the sites was processed for extraction of pore water. The pore water obtained was analyzed to determine the concentration of tributyltin present.

The results of chemical, contaminant mobility, and biological testing are presented in Sections 4, 5, and 6 of this report.

2.3 SUBSURFACE SAMPLING ACTIVITIES

Subsurface sediment sampling occurred during May 1998 and was conducted using a variety of collection techniques adaptable to the various physical conditions found in the subtidal and tideflat areas. Subsurface sampling in the subtidal and tideflat areas was conducted in

accordance with Section 3 of the EPA-approved SAP (Foster Wheeler Environmental 1998b). Equipment decontamination procedures and sample handling procedures detailed in the SAP were followed closely to prevent cross-contamination of the samples and QA/QC samples were collected to evaluate the effectiveness of these quality control measures.

The objectives of the subsurface sampling are given in Section 5.2 of the Work Plan (Foster Wheeler Environmental 1998a). The primary objective is "to determine the vertical extent of sediments requiring remediation." Twelve locations (MW024 through MW031, MW034, MW035, MW036, and MW040) were selected to coincide with subsurface or tideflat coring locations in order to provide consistency in the data. Sediment from cores was also used for contaminant mobility testing. The sampling locations for subsurface sediments were selected based on a review of historical data for the Middle Waterway and professional judgment regarding the potential for specific areas to have sediments impacted at depths greater than 10 cm.

Field sampling forms are provided in Appendix A. Core logs are provided in Appendix B.

2.3.1 Subtidal Subsurface Sediment Sampling

In the subtidal area, subsurface sediment sampling was conducted using a Vibracore system provided and operated by Marine Sampling Systems. The system was deployed from the R/V Nancy Anne, a shallow draft, aluminum work vessel with a customized A-frame on the deck specifically designed to accommodate marine sampling/test equipment. Sediment cores were collected in 4-inch diameter aluminum tubes equipped with sediment catchers, which were driven into the bottom sediments by a vibrating, hydraulically driven head assembly.

An 18-foot-long core tube was attached to the vibracore, which allows recovery of up to 16 feet of sediment. This system works well in water depths over 10 to 15 feet, but sample recovery is limited in shallow water. With less water depth, the vibratory hammer and much of the frame are above the water when the core tube hits the bottom. This makes it difficult to control the vibracore. In shallow waters 14-foot core tubes were used.

Sample recovery in the subtidal area varied from 9 to 16 feet depending on maximum water depth at each site and the type of substrate encountered. Cores were processed in the field by cutting them into 4-foot sections and capping each end with aluminum foil and plastic end caps. The caps were sealed using duct tape to prevent oxidation of samples and control leakage during transport. Cores were stored in a large insulated box with blue ice pending transport to the laboratory.

A minimum of 2 cores were collected at each of 12 subtidal sampling sites to provide adequate sediment for chemistry and contaminant mobility testing. Twelve of the cores (one

from each station) were extruded and logged at the analytical laboratory. The core logs and local site geology are discussed in Section 3 of this report. Up to 3 intervals from each of these cores were ultimately selected for chemical analysis based upon the stratigraphy observed, the potential for various types of substrate to bind contaminants, and the potential for subsurface contamination at depth in each sampling area. Each selected interval was composited separately and portioned into clean containers provided by the laboratory. The composite samples were then analyzed for the constituents present on the SQO list (Table 3). Split samples were prepared from 4 of the regular samples for QA/QC purposes.

Twelve additional cores (one from each station) were transferred to Soil Technology, Inc. for contaminant mobility testing. Based upon the results of the surface and subsurface chemistry, these cores were used to create a single composite sample representative of the material that would likely be generated by dredging contaminated sediments at the project site. This sample was then used to conduct contaminant mobility tests, including column settling, elutriate chemistry, and thin-layer column leaching. The compositing methodology and results of contaminant mobility testing are discussed further in Section 5 of this report. The results of chemical analysis are presented in Section 4 of this report.

2.3.2 Tideflat Subsurface Sediment Sampling

Subsurface cores in the tideflat area were obtained using a hand-held gravity core equipped with a 3-inch-long, 3-inch-diameter Lexon core tube, which was driven into bottom sediments using a manually operated drop hammer. Core recovery in the tideflat areas varied from 21 to 24 inches. The samples were processed in the field by removing overlying water (with a siphon), removing the sample from the core tube, compositing the sample in a clean stainless-steel bowl, and placing appropriate portions in clean sample containers provided by the analytical laboratory.

Three of the four shallow cores collected in the tideflat areas (MW041, MW046, and MW050) were processed in the field as described above and analyzed for constituents on the SQO list (Table 3). The fourth sample (MW053) was analyzed for the constituents on the TAL (Table 4).

The results of chemical analysis are presented in Section 4 of this report.

2.4 BANK SAMPLING ACTIVITIES

The primary objectives of the bank sampling were to evaluate the potential quality of nearshore sediments based upon bank conditions and to identify conditions along the bank (above MLLW) which may lead to recontamination of waterway sediments following

remedial action at the project site. The bank sampling locations used for the project were selected to provide comprehensive coverage of bank areas and to allow evaluation of the potential impacts to sediment quality due to various types of substrate and different land uses along the waterway.

Field sampling forms including bank sample forms are provided in Appendix A.

Bank sampling occurred in May 1998 and was conducted in accordance with Section 4 of the EPA-approved SAP (Foster Wheeler Environmental 1998b) using hand collection techniques. The project specific sampling interval was 0 to 10 cm. PSEP protocols are not applicable to the bank sampling activities; however, the intent of the protocols was observed and sampling was performed in accordance with accepted industry practice for soil sampling. Equipment decontamination procedures and sample handling procedures detailed in the EPA-approved SAP were followed closely to prevent cross-contamination of the samples and QA/QC samples were collected to evaluate the effectiveness of these quality control measures.

As described in Section 5.2.2.4 of the EPA-approved Work Plan (Foster Wheeler Environmental 1998a), the bank area was divided into 19 sampling segments based upon historical land use and observed physical conditions along the bank (presence of soil variations, riprap, etc.). Individual bank segments were generally sampled by compositing small grabs taken at approximately 50-foot intervals along the base of slope within the segment. The base of slope was selected as a typical sampling elevation since this is the area where leaching from the bank materials is most likely to take place during low tide, particularly in areas where Eco-Block walls or riprap have been used to stabilize bank sediments. Individual grabs were collected by hand using a stainless-steel spoon. A single discrete grab sample was collected near the center of each segment for volatile and sulfide analyses.

This general sampling scheme worked well for most bank segments; however, it could not be applied consistently along segments where debris, riprap, or other obstructions limited access to sampling areas. In addition, the configuration of several sections called for a more random sampling scheme to provide representative coverage of the area.

Three bank segments (B-5, B-6, and B-7) were not sampled because adequate data already exist to characterize these areas. All exceptions to the sampling scheme were discussed during a site walk with EPA personnel prior to actual sampling.

During the site walk, EPA requested that 3 supplemental discrete bank samples be collected in accordance with Section 5.2.2.4 of the Work Plan (Foster Wheeler Environmental 1998a). These sites (Figure 2) include:

- An area near the south side of a former boat ramp (MW11a SP).
- An area near the south end of two abandoned wooden barges (MW009 SP).
- An area near the north end of the Mylet property (MW008 SP) where white aggregate typical of roofing material was observed during the site walk.

A fourth supplemental sampling site was added during the field work when a drain along the east side of the waterway was observed to be active (MW04b SP). This drain is believed to be a National Pollution Discharge Elimination System (NPDES) permitted drain (#843) which originates at an oil/water separator on the Simpson property.

Twenty-six bank samples were collected, including the four special samples discussed previously and two split samples for QA/QC purposes. All samples were analyzed for the constituents on the SQO list (Table 3). The results of chemical analysis of the bank sediments are presented in Section 4 of this report.

2.5 REFERENCE SEDIMENT SAMPLING ACTIVITIES

The objective of the reference sediment sampling was to obtain sediments from uncontaminated areas, which had similar characteristics to those used for biological sampling [i.e., percent fines, total organic carbon (TOC), and depth of sediments]. These reference sediments would then be used as control samples in bioassay testing (Carr Inlet samples) and to provide a basis for comparison of the benthic communities within the Middle Waterway sediments to those in areas which have not been adversely affected by historical activities (Sitcum/Milwaukee and Hylebos Waterway samples). Sampling locations for this portion of the field work were selected based on the stated objectives. The reference areas proposed for use as potential benthic reference sites for the Middle Waterway study were approved by EPA. Bioassay reference samples were obtained from Carr Inlet, which has been extensively used for this purpose.

Reference sediment sampling was conducted May 22, 1998 (Sitcum/Milwaukee Waterways and Carr Inlet) and May 26, 1998 (Hylebos Waterway) using the same techniques applied to obtain regular biological samples in the Middle Waterway. Subtidal benthic reference samples were collected using a Petite Ponar deployed from a shallow draft work vessel. Intertidal benthic reference samples were obtained using a Petite Ponar deployed by hand (and on foot).

Prior to conducting reference sampling, a number of potential sampling sites were screened using a field grain size analysis to determine the percent fines present. The general visual characteristics of the sediment were also compared to those of samples collected in the

Middle Waterway to ensure the closest match possible. Those locations having sediments most similar to the biological samples collected at the project site were selected for sampling.

A total of 8 reference samples were collected, including 2 subtidal references for benthic community analysis, 3 intertidal reference samples for benthic community analysis, and 3 reference samples for bioassay testing. All samples were submitted for rapid analysis of TOC to ensure that the sediments collected would provide a valid reference for the biological tests. Benthic references which proved to be a close match to the Middle Waterway benthic samples were also submitted for chemical analysis based upon the SQO list (Table 3). These samples were all from the Hylebos Waterway. The samples collected from the Sitcum/Milwaukee Waterways did not match the Middle Waterway sediments in grain size and TOC.

2.6 WATER SAMPLING ACTIVITIES

The objective of the water sampling was to provide uncontaminated water, similar in character to that in the sampling areas, for use in the contaminant mobility testing (elutriate testing and column settling). The water sampling location used was located just outside the Middle Waterway in Commencement Bay. This site was selected to help ensure that the water would be uncontaminated and have salinity similar to water within the Middle Waterway.

Water sampling occurred during June 1998, just prior to initiation of the contaminant mobility testing. Sampling was conducted using a peristaltic pump equipped with new Teflon tubing. Water was collected from a depth of approximately 3 feet to avoid surface debris and/or contaminants. The sampling pump was allowed to run for 5 minutes prior to sampling. Water for the elutriate tests was placed in two 5-gallon polycarbonate glass carboys to prevent chemical changes in the water which might affect analytical results. The water for column settling was collected in five 5-gallon plastic buckets. Samples used for elutriate testing were placed in a cooler on ice to preserve the samples at a temperature of approximately 4°C pending delivery to the geotechnical/engineering laboratory. Water samples for the column settling test do not require preservation (cooling) because no chemical analyses are involved in this test. Good sampling practices, including the use of clean, non-powdered latex gloves, were observed to prevent contamination of the water samples.

Prior to use in elutriate testing, the background water was subsampled by Soil Technology and sent for chemical analysis of constituents listed in Table 6 of the EPA-approved SAP. Results of the chemical water analysis are presented in Section 4 of this report.

2.7 QA/QC SAMPLING ACTIVITIES

The objective for the quality assurance/quality control sampling was to ensure that good sampling practices were observed during field activities. Trip blanks were provided by the analytical laboratory to assess the potential for contamination of volatile samples during handling and transport. Split samples were taken to determine the variability in chemical concentrations between samples of the same sediment. Equipment rinsate blanks were taken to document the effectiveness of decontamination procedures.

Split samples were derived from regular samples by filling a second, separate set of sample containers using the same composite material collected for the regular sample. Equipment rinsate blanks were collected by first decontaminating sampling equipment per the protocol in the SAP and then rinsing the equipment with deionized water provided by the laboratory. The rinse water was collected in a clean (decontaminated) container and poured into clean containers provided by the laboratory. QA/QC samples were handled and transported with, and in the same manner as, the regular samples.

Eight split samples were collected during the field program. All 8 samples were analyzed for the complete SQO list of constituents (Table 3). Three field equipment rinsate blanks were collected: one for each type of equipment used (vanVeen type sampler, hand sampling tools, and Petite Ponar sampler). Field equipment rinsate blanks were analyzed for non-volatile analytes only because volatile constituents would be lost during collection. In addition, laboratory equipment rinsate blanks were taken at the time the subsurface cores were extruded in the laboratory. Trip blanks are specifically intended to assess contamination with volatile compounds and are thus analyzed for these compounds only. The results of chemical analysis of the QA/QC samples are presented in Section 4 of this report.

3. RESULTS OF GEOLOGIC INVESTIGATIONS

This section presents the results of the geologic investigations for the project and discusses the regional and site-specific geology. The discussion is based on the current investigations and on previous investigations by others. Additionally, an assessment of the geotechnical engineering implications is included.

3.1 REGIONAL GEOLOGY

The Middle Waterway site is located in Pierce County, Washington within the Puyallup River delta in Commencement Bay. This regional geology description is based on the *Geology of the Port of Tacoma* (Hart Crowser 1980), the Remedial Investigation for upland property adjacent to the Thea Foss Waterway (B&V 1994), from upland borings for the Simpson wastewater clarifiers (Dames and Moore 1973) and from upland Dutch Cone probes for a proposed MINI warehouse (CEO 1996 and Appendix C). The U.S. Geological Survey has divided Pierce County into nine geomorphic regions. The site is located in the Lower Puyallup Region.

The Lower Puyallup Region includes the area of the Puyallup River delta in Commencement Bay. The *Geology of Port of Tacoma* shows charts of Commencement Bay at various times from the 1880s to the 1970s. On the 1886 chart, the area north of East 11th Street (which includes the entire length of Middle Waterway) is shown as "mud flats, bare at low tide." By 1923, the mud flats had been extensively filled and several of the current waterways are present, including the Middle Waterway.

The geologic units in the Lower Puyallup Region generally consist of alluvial and marine sediments over older glacially deposited soil. Native sediments over the glacial soils were deposited by the Puyallup River. These sediments are typically loose sand, loose sandy silt, soft sandy silt, or soft silt. The grain size varies due to fluctuations in river flow, river channel locations, and sediment load in the river.

Based on the borings near the St. Paul Waterway (shown in Hart Crowser 1980 and Dames and Moore 1973), the native sediments in the vicinity are Upper Silt over Middle Sand. The Upper Silt is divided into two types: the soft, compressible recent deposits near the surface, and older subsurface layers that are intermixed with layers of Middle Sand. The Middle Sand varies from fine to medium sand with uniform grain size to silt and clay with fine sand. The Middle Sand overlies deeper layers of alternating silt and sand, which overlies very dense or hard glacial soils. Dense glacial soils appear to be over 200 feet below the ground surface elevation. The thickness of glacial soils has been observed to be over 500 feet thick

in deep water wells in the vicinity. The depth to bedrock is unknown, but is believed to be 1,000 feet or deeper throughout the Puget Sound.

Dames and Moore drilled deep borings along the St. Paul Waterway for design of the Simpson wastewater treatment clarifiers. Based on the standard penetration tests and laboratory tests in the Dames and Moore borings, the upper native sand/silt is generally stiff (blow counts 6 to 17 blows per foot). The deeper silty sand is generally medium-dense to dense (e.g., blow counts typically 15 to 30 with a low of 8 and high of 51). The effective angle of internal friction for silt was 26 to 31 degrees in direct shear tests and about 31 degrees in a triaxial shear test.

3.2 SITE GEOLOGY

This section gives an overview of the type of sediment observed in samples from the 12 core logs in the northern portion of the Middle Waterway (Appendix B). The sediment type was observed at the time the cores were extruded in the laboratory. The sediment descriptions are based on visual classifications and laboratory testing for grain size and Atterberg limits. Cross sections through the core are shown in Figures 4 through 10.

The subsurface core tubes would hold 16 feet of sediment sample if the core penetrated full depth and had 100 percent sediment recovery. It is not possible to achieve full depth penetration and 100 percent recovery in most core locations. The actual depth the sample tubes could be driven is recorded on the log of each core (labeled "drive length" on the logs). The length of sediment recovered is also recorded on the core logs.

For the 12 subsurface cores, the drive length ranged from 16 to 17 feet in 10 of the 12 cores, was 14 feet in one core, and 10.5 feet in one core. The length of sediment recovered ranged from 11 to 16 feet in 11 of the 12 cores and was 8.5 feet in the core driven 10.5 feet.

The thickness of each layer of sediment observed in an extruded core is generally less than the actual thickness of undisturbed sediment (i.e., in situ thickness). The sample thickness is less because (a) the sediment could have been compressed as it was pushed into the core tube, (b) sediment could have been displaced downward or laterally as the tube was pushed rather than entering the tube, and (c) sediment could have fallen out the bottom of the tube as it was pulled to the surface. The cores had "catchers" on the ends, so that there would have been little loss from sediment falling out the bottom. The center portion of the core logs gives the sediment descriptions and thickness based on the lengths measured in the laboratory after the sediment was extracted from the tubes. The maximum thickness of the material would be equal to the driven length. To assist in evaluating the data, the right side

of the core logs shows the maximum thickness of each layer. The maximum thickness is calculated based on the ratio of the length recovered to the driven length.

In the Middle Waterway cores, the sediment ranges from fine to medium sand with little silt and clay (i.e., fine-grained material) to organic silt. There was only one sample (from Station MW026) that is classified as clay. The most common grain size was a mixture of fine sand and non-plastic silt, with the percentage of sand ranging from 35 to 65 percent in most of these samples.

The following paragraphs describe the sediment observed in the top samples in the core logs. The top sample generally represents the top 4 feet of sediment below the existing bottom elevations.

Core locations MW034, MW030, MW027, and MW024 were located along the east side of the Waterway, from south to north. The top sample in core MW034 is black silty sand. In cores MW030 and MW027, the top samples are black silt with wood debris. In core MW024 the top samples is black fine to medium sand.

Cores MW035, MW031, MW028, and MW025 were located along the west side of the Waterway from south to north. The top sample in core MW035 is black silty sand with wood debris. The sediment in the upper samples changes to gray sandy silt in core MW031, to black silty sand in core MW028, to black organic silt in core MW025.

Cores MW037, MW029, and MW026 were located in the center of the Waterway from south to north. The top sample in core MW037 is black fine to medium sand. The sediment in the upper samples is organic silt in core MW029 and gray silt with wood debris in core MW026. Based on the observed conditions, there are no discrete, continuous layers of sediment with uniform grain size in the top 4 feet. This situation is common in river deltas because the type of sediment changes rapidly as the water flow meanders through a delta. The practical implication of these conditions is that the grain size of dredged sediment would be a heterogeneous mixture of the various sediment types. The mixture of dredged sediment would have a grain size distribution that approximates a composite of sediment from the various core locations. The mixture would be expected to contain 40 to 50 percent fine sand and 40 to 50 percent non-plastic silt with minor amounts of wood debris and clay.

The same pattern of alternating layers of black fine to medium sand, gray silty fine sand, and gray sandy silt were observed at the full depth of all cores. As in the top 4 feet, there does not appear to be continuous layers of sediment with uniform grain size.

In 1996, Creative Engineering Options, Inc. advanced two upland Dutch Cone probes on the MINI lease property (Appendix C). The probes were located northwest of the scow shed,

about 100 feet west of the existing timber wharf. The two probes were about 140 feet apart, in the north-south direction. The probes were advanced to depths of 32 and 46 feet below the upland ground surface.

In probe P-1, the upper 22 feet was interpreted to be interlayered loose to medium dense silty sands and soft to medium stiff sandy silt. Similar soils were encountered in probe P-2 to a depth of about 29 feet. The deeper soils in P-1 (22 to 32 feet) were interpreted to be medium dense silty sand to clean sand. The deeper soils in P-2 were different. In P-2, the sediment encountered from 29 to 42 feet was interpreted to be soft to medium stiff clayey silt. From 42 to 46 feet, the silt was stiffer and was interpreted to be very stiff.

The difference in sediment between borings 140 feet apart shows how conditions change relatively rapidly in marine delta environments. It is likely that the soft silt encountered at 29 feet in probe P-2 exists at the location of P-1 at a depth greater than the bottom of the probe (which was 32 feet).

4. RESULTS OF CHEMICAL AND PHYSICAL ANALYSES

This section discusses the chemical and physical analysis results of the surface, subsurface, and bank samples collected during the Round 1A field sampling event. Additionally, results of selected historical samples from the head of the Waterway are included in this section. These historical samples were collected recently, using methods similar to the methods used during the Round 1A and the results are therefore comparable. A complete list of all analytical data results are included in Appendix D.

4.1 DATA QUALITY

Twenty-two data validation reports corresponding to individual sample delivery groups and one corresponding to 35 sample delivery groups were provided to Foster Wheeler Environmental by Quality by Design, an independent data validator. Based on review of sediment and water quality data, the overall data quality objectives were met as set forth in the QAPP. Therefore, the sediment and water quality data presented in this report are of adequate quality for the purposes of this PRD/RD study. The results of their assessment of the data are summarized below and are included in Appendix E.

4.1.1 Validation Criteria

The data review and validations were performed using the reporting format and criteria for recommending data qualifying flags for the data sets as described in EPA's *Functional Guidelines for Evaluating Inorganics Analyses*, December, 1994; *Functional Guidelines for Evaluating Organics Analysis*, December 1994; the *Recommended Quality Assurance and Quality Control Guidelines for the Collection of Environmental Data in Puget Sound*, April 1997; or using criteria listed in the method referenced. Validated data may have been qualified for any of several reasons including: laboratory deviation from the designated method; the data may not meet the criteria in the references above; or the professional judgment of the reviewer.

4.1.2 Observations

No significant problems arose in the data validation review of the results from Columbia Analytical Services, MultiChem Analytical Services, and Rosa Environmental and Geotechnology Laboratory. The test results were generally within the requirements of the referenced method and with Puget Sound Estuary Program guidance. The laboratory data, as qualified, are acceptable for use. No discrepancies were observed between raw data and reported data results.

4.1.3 Issues

4.1.3.1 Qualified Data

Table 5 summarizes the nature and extent of qualified data points. A relatively low 6 percent (418 analytes out of 6,878 total analytes, or 6.1 percent) of the sediment data were flagged with data qualifiers or were revised due to errors. Of these qualified analytes, 266 were flagged due to repeated matrix spike/blank spike failures for a small number of compounds. Eighty-four analytes were flagged when a single sample was analyzed after its holding time had expired, and 85 analytes were flagged due to a combination of internal standard and/or continuing calibration exceedences. Twenty-five analytes were noted that had calculation and/or transcription errors, or did not confirm by gas chromatography/mass spectroscopy (GC/MS) or on second column gas chromatography. A relatively high portion of the leachate data (82 analytes out of 425 total analytes, or 20.5 percent) were flagged with data qualifiers. Of these qualified analytes, 55 were flagged due to holding time exceedances in the analysis of chlorinated pesticides. An additional 19 analytes were flagged due to matrix spike and/or blank spike exceedances, and 8 were flagged due to continuing calibration exceedances. These corrections were noted on copies of the laboratory reports and revised reports were requested from the laboratory. The laboratory also noted method blank contamination on several analytical batches, but in all cases the blank results were less than the reporting or the detection limit. Given the matrix (harbor sediment and leachate) and the analytes which had QC exceedences, the reviews are not seriously concerned that these issues affect the usability of the data.

4.1.3.2 Other Comments

Although no data were sufficiently deficient enough to warrant rejection, data flags of "R", for unusable, were assigned to those test results that the laboratory performed re-extractions and/or re-analysis. For each re-extracted sample, the laboratory reported two sets of results – the original and the re-run. For one of several reasons (e.g., dilution, better quality control), one of these results is better than the other. Since data qualifier flags are used to indicate that there was a QC, regulatory, documentation, or other problem with a sample result, the results that should not be used are flagged "R" for unusable.

The results that are acceptable for use are not flagged. In essence, the "R" flag indicates that these results are not to be used, rather, use the other set.

The independent reviewers noted four issues on which they provided comment:

- The completeness of documentation could be improved, as several records contained missing entries. In addition, some chain-of-custody forms were missing signatures

and/or had contradictory times noted. Foster Wheeler Environmental has provided additional information to the validator regarding this issue. Given this input, the validator does not believe there are sufficient concerns to either reject or flag any associated data sets.

- In the analysis of semivolatile organics by EPA Method 8270C, the laboratory was unable to differentiate between benzo(b)fluoranthene and benzo(k)fluoranthene. The laboratory should perform maintenance on the instrument (e.g., new column or clipping the existing column) and method development (e.g., adjusting the oven ramping temperatures) to differentiate between these two analytes.

- In the analysis of pesticides and polychlorinated biphenyls by EPA Methods 8081 and 8082, the laboratory had difficulty distinguishing between aroclors and was not consistent in their use of second column confirmation. The different aroclors may be resolved by improved instrument maintenance and/or choosing different, non-overlapping (or secondary) peaks for identification and quantitation. Regarding consistency of second column confirmation, when the second, confirmatory column quantitated to a significantly different result, the laboratory sometimes reported the higher value and sometimes the lower value.

- The laboratory consistently reported data that were generated with continuing calibration verification checks that were out of criteria. For the most part, these did not result in data qualifier flags because the sample results were non-detect and the calibration checks were high.

4.1.4 Field Duplicates

Field duplicates were reviewed and, where appropriate, the relative percent difference was calculated.

Because the laboratory's detection limit is actually a measure of variability and statistical confidence limits, test results near the laboratory's detection limit often result in a higher relative percent difference (RPD). For this reason, when evaluating field duplicates absolute criteria should not be applied.

When the data result is near the detection limit, the validator recommends the "5X" rule in evaluating the RPD. The "5X" rule is defined in *Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses.*

The high variability of some field duplicates appears to be associated with the nearness to the detection limit. It therefore appears that the field duplicates were generally acceptable.

4.1.5 Conclusion

The independent data validator has concluded that laboratory data, as qualified, are acceptable for use. No discrepancies were observed between raw data and reported data results. A review of the 21 validation reports by a Foster Wheeler Environmental chemist resulted in concurrence with these findings. The data are therefore recommended as suitable for use in the investigation.

4.2 CHEMICAL ANALYSIS OF SURFACE SAMPLES

Surface sediments were sampled at 42 locations in the subtidal and intertidal portions of the Middle Waterway (Figure 2). Thirty of the 55 SQO chemicals tested for exceeded their SQO in at least one surface sample collected during the Round 1A sampling effort. Each of the 55 chemicals and the chemicals that are on the TAL are discussed below. Figure 11 and Table 6 summarize the results of the SQO exceedences.

4.2.1 Conventionals

The results of the conventional analyses are presented in Table 7. Total sulfide concentrations in the surface sediments ranged widely across the site. Concentrations ranged from 0.5 mg/kg in MW040 to 1,180 mg/kg in MW032 but averaged 283 mg/kg. Ammonia as nitrogen was measured for all surface samples. Concentrations ranged from 1.30 mg/kg at MW022 to 23.4 mg/kg at MW034, averaging 10.31 mg/kg. Of the 10 stations where samples were collected for biological tests, ammonia and total sulfide concentrations were greater than the surface sediment average at MW024 (14.0 mg/kg and 723 mg/kg, respectively). Ammonia concentrations were also greater than average at MW025 (12.0 mg/kg).

The surface sediments of the Middle Waterway are generally silty sands. Average percentages of gravel, sand, silt, and clay for all of the surface samples are presented below.

- 8.61 percent gravel
- 42.53 percent sand
- 38.21 percent silt
- 10.66 percent clay

The percent fines in the surface sediment samples of the Middle Waterway ranged from 18.7 percent at MW022 to 69.9 percent in MW055. The average percent fines was 50.06 percent. Most samples had between 40 and 65 percent fines.

The TOC content in the surface sediment samples ranged from 0.95 in MW020 to 13.0 percent in MW054. The average TOC content in the surface sediments was 3.83 percent, with most samples between 1 and 5 percent. This average is very similar to the average TOC concentration of 3.5 percent based on the historical data (Foster Wheeler Environmental 1998a).

4.2.2 Metals

Metals were detected throughout the Waterway in the surface sediments. No significant pattern of the distribution of SQO exceedences is readily identifiable. Mercury was detected above the SQO in over half of the surface sediment samples. Arsenic and zinc were exceeded their SQO in 2 samples each and copper exceeded the SQO in 4 surface samples. Chromium was tested for in 6 samples. There is no SQO for chromium. No sample exceeded the SMS sediment quality standard (SQS). All metals had detection limits less than their SQOs.

4.2.2.1 Antimony

Antimony concentrations in surface sediment samples ranged from non-detect to 15.6 milligrams per kilogram (mg/kg). No samples exceeded the SQO of 150 mg/kg.

4.2.2.2 Arsenic

Arsenic concentrations in surface samples ranged from 5.1 mg/kg to 97.2 mg/kg. Arsenic exceeded the SQO (57 mg/kg) in 2 samples (MW026 and MW032) by exceedence factors of 1.23 and 1.71, respectively.

4.2.2.3 Cadmium

Cadmium concentrations in surface sediment samples ranged from non-detect to 3.69 mg/kg. No samples exceeded the SQO of 5.1 mg/kg.

4.2.2.4 Chromium

Chromium was tested for in MW021, MW054, TF-20, TF-21, TF-22, and TF-23 with a maximum concentration of 39 mg/kg in the surface sediment of TF-23. There is no SQO for chromium. The SQS of the Washington State Sediment Management Standards for chromium is 260 mg/kg.

4.2.2.5 Copper

Copper concentrations in surface samples ranged from 51.3 mg/kg to 1,100 mg/kg. Copper exceeded the SQO (390 mg/kg) in 4 samples (TF-23, MW055, MW022, and MW032) by exceedence factors of 1.02, 1.03, 1.63, and 2.82, respectively.

4.2.2.6 Lead

Lead concentrations in surface sediment samples ranged from 11.5 mg/kg to 368 mg/kg. No samples exceeded the SQO of 450 mg/kg.

4.2.2.7 Mercury

Mercury concentrations in surface samples ranged from non-detect to 5.9 mg/kg. Mercury exceeded the SQO (0.59 mg/kg) in 21 of the 42 surface sediment samples. Station MW025 had the highest exceedence factor of 10.0.

4.2.2.8 Nickel

Nickel concentrations in surface sediment samples ranged from 6.5 to 29 mg/kg. No samples exceeded the SQO of 140 mg/kg.

4.2.2.9 Silver

Silver concentrations in surface sediment samples ranged from non-detect to 1.4 mg/kg. No samples exceeded the SQO of 6.1 mg/kg.

4.2.2.10 Zinc

Zinc concentrations in surface samples ranged from 40.3 mg/kg to 515 mg/kg. Zinc exceeded the SQO (410 mg/kg) in 2 samples (MW026 and MW032) by exceedence factors of 1.03 and 1.26, respectively.

4.2.3 Low Molecular Weight PAHs

Low polynuclear aromatic hydrocarbons (LPAHs) were generally found in three separate areas within the surface sediments of the Middle Waterway: (1) at MW031, (2) along the eastern side of the tideflats (near MW039, MW048, MW054), and (3) near MW051 and TF-22. The highest concentrations were generally found in this third area. All LPAHs had detection limits less than the respective SQOs.

4.2.3.1 2-Methylnaphthalene

2-Methylnaphthalene concentrations in surface samples ranged from non-detect (19 micrograms per kilogram [µg/kg] U) to 1,400 µg/kg. 2-Methylnaphthalene exceeded the SQO (670 µg/kg) in 2 samples (MW051 and MW054) by exceedence factors up to 2.09 and 1.36, respectively.

4.2.3.2 Acenaphthene

Acenaphthene concentrations in surface samples ranged from non-detect (19 µg/kg U) to 4,600 µg/kg. Acenaphthene exceeded the SQO (500 µg/kg) in 5 samples by an exceedence factor up to 9.2 at station MW051. The other locations where acenaphthene exceeded the SQO were MW031, MW039, MW048, and MW054.

4.2.3.3 Acenaphthylene

Acenaphthylene concentrations in surface samples ranged from non-detect (19 µg/kg U) to 1,600 µg/kg. Acenaphthylene exceeded the SQO (1,300 µg/kg) in sample MW051 by an exceedence factor of 1.23.

4.2.3.4 Anthracene

Anthracene concentrations in surface samples ranged from non-detect (19 µg/kg U) to 2,600 µg/kg. Anthracene exceeded the SQO (960 µg/kg) in 5 samples by an exceedence factor up to 2.71 at station MW051. The other locations where anthracene exceeded the SQO were MW024, MW031, MW039, and MW054.

4.2.3.5 Fluorene

Fluorene concentrations in surface samples ranged from 16 µg/kg to 3,800 µg/kg. Fluorene exceeded the SQO (540 µg/kg) in 6 samples by an exceedence factor up to 7.04 at station MW051. The other locations where fluorene exceeded the SQO were MW028, MW031, MW039, MW048, and MW054.

4.2.3.6 Naphthalene

Naphthalene concentrations in surface samples ranged from non-detect (19 µg/kg U) to 5,300 µg/kg. Naphthalene exceeded the SQO (2,100 µg/kg) in 3 samples by an exceedence factor up to 2.52 at station MW051. The other locations where naphthalene exceeded the SQO were MW048 and MW054.

4.2.3.7 Phenanthrene

Phenanthrene concentrations in surface samples ranged from 46 µg/kg to 13,000 µg/kg. Phenanthrene exceeded the SQO (1,500 µg/kg) in 6 samples by an exceedence factor up to 8.67 at station MW051. The other locations where phenanthrene exceeded the SQO were MW031, MW039, MW048, MW054, and TF-22.

4.2.3.8 Total LPAH

Total LPAH concentrations in surface samples ranged from 46 µg/kg to 32,300 µg/kg. Total LPAH exceeded the SQO (5,200 µg/kg) in 5 samples by an exceedence factor up to 6.21 at station MW051. The other locations where total LPAH exceeded the SQO were MW031, MW039, MW048, and MW054.

4.2.4 High Molecular Weight PAHs

High polynuclear aromatic hydrocarbons (HPAHs) were generally found in the same three separate areas within the surface sediments of the Middle Waterway as were the LPAHs: (1) at MW031, (2) along the eastern side of the tideflats (near MW039, MW048, MW054), and (3) near MW051 and TF-22. The greatest concentrations were generally found in this third area. All HPAHs had detection limits less than the respective SQOs.

4.2.4.1 Benzo(a)anthracene

Benzo(a)anthracene concentrations in surface samples ranged from 46 µg/kg to 6,300 µg/kg. Benzo(a)anthracene exceeded the SQO (1,600 µg/kg) in 5 samples by an exceedence factor up to 3.94 in MW051. The other locations where benzo(a)anthracene exceeded the SQO were MW031, MW039, MW054, and TF-22.

4.2.4.2 Benzo(a)pyrene

Benzo(a)pyrene concentrations in surface samples ranged from 47 µg/kg to 6,400 µg/kg. It exceeded the SQO (1,600 µg/kg) in 3 samples by an exceedence factor up to 4.0 in MW051. The other locations where benzo(a)pyrene exceeded the SQO were MW048 and TF-22.

4.2.4.3 Benzo(g,h,i)perylene

Benzo(g,h,i)perylene concentrations in surface samples ranged from 32 µg/kg to 3,800 µg/kg. It exceeded the SQO (720 µg/kg) in 5 samples by an exceedence factor up to 5.28 in MW051. The other locations where benzo(g,h,i)perylene exceeded the SQO were MW039, MW048, TF-22, and TF-23.

4.2.4.4 Benzofluoranthenes

Benzofluoranthenes concentrations in surface samples ranged from 48 µg/kg to 24,000 µg/kg. It exceeded the SQO (3,600 µg/kg) in 6 samples by an exceedence factor up to 6.67 in MW051. The other locations where benzofluoranthenes exceeded the SQO were MW031, MW039, MW048, MW054, and TF-22.

4.2.4.5 Chrysene

Chrysene concentrations in surface samples ranged from 61 µg/kg to 6,400 µg/kg. It exceeded the SQO (2,800 µg/kg) in 3 samples by an exceedence factor up to 2.29 in MW051. The other locations where chrysene exceeded the SQO were MW031 and TF-22.

4.2.4.6 Dibenzo(a,h)anthracene

Dibenzo(a,h)anthracene concentrations in surface samples ranged from 14 µg/kg to 650 µg/kg. It exceeded the SQO (230 µg/kg) in 1 sample (TF-22) by an exceedence factor of 2.83.

4.2.4.7 Fluoranthene

Fluoranthene concentrations in surface samples ranged from 100 µg/kg to 13,000 µg/kg. It exceeded the SQO (2,500 µg/kg) in 7 samples by an exceedence factor up to 5.20 in MW051. The other locations where fluoranthene exceeded the SQO were MW024, MW031, MW039, MW048, MW054, and TF-22.

4.2.4.8 Indeno(1,2,3-cd)pyrene

Indeno(1,2,3-cd)pyrene concentrations in surface samples ranged from 14 µg/kg to 3,400 µg/kg. It exceeded the SQO (690 µg/kg) in 4 samples by an exceedence factor up to 4.93 in MW051. The other locations where indeno(1,2,3-cd)pyrene exceeded the SQO were MW039, MW054, and TF-22.

4.2.4.9 Pyrene

Pyrene concentrations in surface samples ranged from 100 µg/kg to 15,000 µg/kg. It exceeded the SQO (3,300 µg/kg) in 7 samples by an exceedence factor up to 4.55 in MW051. The other locations where pyrene exceeded the SQO were MW024, MW031, MW039, MW048, MW054, and TF-22.

4.2.4.10 Total HPAH

Total HPAH concentrations in surface samples ranged from 581 µg/kg to 78,300 µg/kg. It exceeded the SQO (17,000 µg/kg) in 6 samples by an exceedence factor up to 4.61 in MW051. The other locations where total HPAH exceeded the SQO were MW031, MW039, MW048, MW054, and TF-22.

4.2.5 Chlorinated Organic Compounds

No chlorinated organic compounds were detected in the surface sediment samples. One compound had a detection limit greater than its SQO, but was not detected there (TF-20).

4.2.5.1 1,2-Dichlorobenzene

1,2-Dichlorobenzene was not detected in any of the surface sediment samples of the Middle Waterway. The SQO for 1,2-dichlorobenzene is 50 µg/kg. The detection limit for the sample collected at TF-20 was 99 µg/kg; however, 1,2-dichlorobenzene was not detected in this sample.

4.2.5.2 1,3-Dichlorobenzene

1,3-Dichlorobenzene was not detected in any of the surface sediment samples of the Middle Waterway. The SQO for 1,3-dichlorobenzene is 170 µg/kg.

4.2.5.3 1,4-Dichlorobenzene

1,4-Dichlorobenzene was not detected in any of the surface sediment samples of the Middle Waterway. The SQO for 1,4-dichlorobenzene is 110 µg/kg.

4.2.5.4 1,2,4-Trichlorobenzene

1,2,4-Trichlorobenzene was not detected in any of the surface sediment samples of the Middle Waterway. The SQO for 1,2,4-trichlorobenzene is 51 µg/kg.

4.2.5.5 Hexachlorobenzene

Hexachlorobenzene was not detected in any of the surface sediment samples of the Middle Waterway. The SQO for hexachlorobenzene is 22 µg/kg.

4.2.6 Total PCBs

Total polychlorinated biphenyls (PCBs) exceeded the SQO (300 µg/kg) in two surface sediment samples (MW031 and TF-23) of the Middle Waterway by exceedence factors of 4.33 and 1.60, respectively.

4.2.7 Phthalates

Only one phthalate (bis(2-ethylhexyl)phthalate) exceeded the SQO in two surface sediment samples of the Middle Waterway. These were both located at the head of the Waterway.

4.2.7.1 Bis(2-ethylhexyl)phthalate

Bis(2-ethylhexyl)phthalate concentrations detected in the surface sediments ranged from 61 µg/kg to 3,500 µg/kg. It exceeded the SQO (1,300 µg/kg) in two surface sediment samples (TF-21 and TF-22) by exceedence factors of 1.23 and 2.69, respectively.

4.2.7.2 Butylbenzylphthalate

Butylbenzylphthalate concentrations detected in the surface sediments ranged from 5.5 µg/kg to 390 µg/kg. It did not exceed the SQO (900 µg/kg) in any surface sediment samples of the Middle Waterway. The detection limit of the sample collected from MW031 (1,000 µg/kg) was greater than the SQO; however, butylbenzylphthalate was not detected in this sample.

4.2.7.3 Di-n-butylphthalate

Di-n-butylphthalate concentrations in the surface sediments ranged from 12 µg/kg to 140 µg/kg. It did not exceed the SQO (1,400 µg/kg) in any surface sediment samples of the Middle Waterway.

4.2.7.4 Di-n-octylphthalate

Di-n-octylphthalate was not detected in any of the surface sediments of the Middle Waterway.

4.2.7.5 Diethylphthalate

Diethylphthalate concentrations detected in the surface sediments ranged from 30 µg/kg to 87 µg/kg. It did not exceed the SQO (200 µg/kg) in any surface sediment samples of the Middle Waterway.

4.2.7.6 Dimethylphthalate

Dimethylphthalate concentrations detected in the surface sediments ranged from 7.2 µg/kg to 24 µg/kg. It did not exceed the SQO (160 µg/kg) in any surface sediment samples of the Middle Waterway.

4.2.8 Phenols

The phenols that were detected in the surface sediment samples of the Middle Waterway at concentrations greater than the SQO did not form a readily apparent pattern. Three phenolic compounds were only detected once at levels greater than the SQO and one compound was detected in two samples at concentrations greater than the SQO. No phenols had detection limits greater than the respective SQOs.

4.2.8.1 2,4-Dimethylphenol

2,4-Dimethylphenol concentrations in the surface sediments ranged from 1.2 µg/kg to 100 µg/kg. It exceeded the SQO (29 µg/kg) in two surface sediment locations (MW051 and MW054) with an exceedence factor of 3.45 and 1.86, respectively.

4.2.8.2 2-Methylphenol

2-Methylphenol concentrations in the surface sediments ranged from 1.2 µg/kg to 77 µg/kg. It exceeded the SQO (63 µg/kg) in one surface sediment location (MW051) with an exceedence factor of 1.22.

4.2.8.3 4-Methylphenol

4-Methylphenol concentrations in the surface sediments ranged from 24 µg/kg to 690 µg/kg. It exceeded the SQO (670 µg/kg) in one surface sediment location (MW047) with an exceedence factor of 1.03.

4.2.8.4 Pentachlorophenol

Pentachlorophenol concentrations in the surface sediments ranged from 1.5 µg/kg to 190 µg/kg. It did not exceed the SQO (360 µg/kg) in any surface sediment samples of the Middle Waterway.

4.2.8.5 Phenol

Phenol concentrations in the surface sediments ranged from 22 µg/kg to 620 µg/kg. It exceeded the SQO (420 µg/kg) in one surface sediment location (MW034) with an exceedence factor of 1.48.

4.2.9 Miscellaneous Extractable Compounds

There is no readily apparent pattern to the exceedences of the SQO of the various miscellaneous extractable compounds in the surface sediments of the Middle Waterway.

4.2.9.1 Benzyl Alcohol

Benzyl alcohol concentrations in the surface sediments ranged from 1.1 µg/kg to 30 µg/kg. It did not exceed the SQO (73 µg/kg) in any of the surface sediment samples of the Middle Waterway.

4.2.9.2 Benzoic Acid

Benzoic acid concentrations in the surface sediments ranged from 36 µg/kg to 1,300 µg/kg. It exceeded the SQO (650 µg/kg) in one location (MW032) with an exceedence factor of 2.0.

4.2.9.3 Dibenzofuran

Dibenzofuran concentrations in the surface sediments ranged from 14 µg/kg to 2,900 µg/kg. It exceeded the SQO (540 µg/kg) in three locations (MW039, MW051, and MW054) with exceedence factors of 2.22, 5.37, and 1.07, respectively.

4.2.9.4 Hexachlorobutadiene

Hexachlorobutadiene was not detected in any of the surface sediment samples of the Middle Waterway. The SQO for hexachlorobutadiene is 11 µg/kg.

4.2.9.5 N-nitrosodiphenylamine

N-nitrosodiphenylamine concentrations detected in the surface sediments ranged from 29 µg/kg to 190 µg/kg. It was detected above the SQO (28 µg/kg) in 5 locations by exceedence factors up to 6.79 at MW051. The detection limit for the surface samples collected at MW031 and MW035 were greater than the SQO. N-nitrosodiphenylamine was not detected in either of these samples. Because of analytical problems obtaining detection limits below the SQO, spatial variability and the absence of an identified source (N-nitrosodiphenylamine

is used as a vulcanization retarder in the manufacture of rubber), the environmental significance of this chemical should be considered during the remedial design phase.

4.2.10 Volatile Organics

No volatile organic compounds were detected in the surface sediment samples of the Middle Waterway.

4.2.10.1 Tetrachloroethene

Tetrachloroethene was not detected in any of the surface sediment samples of the Middle Waterway. The SQO for tetrachloroethene is 57 µg/kg.

4.2.10.2 Ethylbenzene

Ethylbenzene was not detected in any of the surface sediment samples of the Middle Waterway. The SQO for ethylbenzene is 10 µg/kg.

4.2.10.3 Total Xylenes

Total xylenes were not detected in any of the surface sediment samples of the Middle Waterway. The SQO for total xylenes is 40 µg/kg.

4.2.10.4 Trichloroethene

Trichloroethene was tested for in MW021, MW054, TF-20, TF-21, TF-22, and TF-23. It was not detected in any of these samples. There is no SQO for trichloroethene. The Puget Sound Dredge Disposal Analysis (PSDDA) screening level for trichloroethene is 160 µg/kg. The detection limit for each of these samples was less than the screening level (SL).

4.2.11 Pesticides

There is no readily apparent pattern to the exceedences of the SQO of the various pesticides in the surface sediments of the Middle Waterway.

4.2.11.1 4,4-DDD

The pesticide 4,4-DDD was detected in two surface sediment samples. It did not exceed the SQO (16 µg/kg) in any sample.

4.2.11.2 4,4-DDE

The pesticide 4,4-DDE was detected in one surface sediment sample. It exceeded the SQO (9 µg/kg) in this sample (MW031) with an exceedence factor of 10.33.

4.2.11.3 4,4-DDT

The pesticide 4,4-DDT was detected in two surface sediment samples. It did not exceed the SQO (34 µg/kg) in any surface sediment samples. The detection limit for the sample collected at TF-23 was 40 µg/kg; however, 4,4-DDT was not detected in this sample.

4.2.11.4 Aldrin

Aldrin was tested for in MW021, MW054, TF-20, TF-21, TF-22, and TF-23. It was not detected in any sample. There is no SQO for this compound. The PSDDA screening level for aldrin is 10 µg/kg. The detection limit for each of these samples was less than the SL.

4.2.11.5 Chlordane

Chlordane was tested for in MW021, MW054, TF-20, TF-21, TF-22, and TF-23. It was not detected in any sample. There is no SQO for this compound. The PSDDA screening level for chlordane is 10 µg/kg. The detection limit for each of these samples was less than the SL.

4.2.11.6 Dieldrin

Dieldrin was tested for in MW021, MW054, TF-20, TF-21, TF-22, and TF-23. It was not detected in any sample. There is no SQO for this compound. The PSDDA screening level for dieldrin is 10 µg/kg. The detection limit for each of these samples was less than the SL.

4.2.11.7 Heptachlor

Heptachlor was tested for in MW021, MW054, TF-20, TF-21, TF-22, and TF-23. It was not detected in any sample. There is no SQO for this compound. The PSDDA screening level for heptachlor is 10 µg/kg. The detection limit for each of these samples was less than the SL.

4.2.11.8 Lindane

Lindane was tested for in MW021, MW054, TF-20, TF-21, TF-22, and TF-23. It was not detected in any sample. There is no SQO for this compound. The PSDDA screening level for lindane is 10 µg/kg. The detection limit for each of these samples was less than the SL.

4.2.12 Tributyltin

Tributyltin (TBT) (as the ion) was tested for in the pore water samples from 16 locations. No SQO exists for TBT. TBT concentrations ranged from non-detect (0.05 micrograms per liter [µg/L]) in 8 of the 16 samples to 0.40 µg/L at MW032. All TBT results are presented in Table 8.

4.3 CHEMICAL ANALYSIS OF SUBSURFACE SAMPLES

Subsurface sediments were sampled at 16 locations in the subtidal and intertidal portions of the Middle Waterway (Figure 12). Thirty-three of the 55 SQO chemicals tested for exceeded the SQO in subsurface samples collected during the Round 1A sampling effort. Each of the 55 SQO chemicals and the chemicals on the TAL are discussed below. All samples that exceeded the SQO are presented in Figure 12 and Table 9.

4.3.1 Conventionals

The results of the conventional analyses are presented in Table 7. Total sulfide concentrations in the subsurface sediments ranged widely across the site. Concentrations ranged from 1.8 mg/kg in MW040 (top interval) to 826 mg/kg in MW050, but averaged 156.4 mg/kg. Concentrations of ammonia ranged from 0.30 mg/kg at MW028 (top interval) to 121 mg/kg at MW027 (top interval), averaging 23.8 mg/kg.

The subsurface sediments of the Middle Waterway are generally silty sand. Average percentages of gravel, sand, silt, and clay for all of the surface samples are presented below.

- 1.81 percent gravel
- 53.30 percent sand
- 37.07 percent silt
- 7.05 percent clay

The percent fines in the subsurface sediment samples of the Middle Waterway ranged from 10.3 percent at MW037 (top interval) to 86.9 percent in MW026 (top interval). The average percent fines was 44.91 percent. Most samples had between 30 and 60 percent fines. The subsurface geology is discussed in Section 2.4.

The TOC content in the subsurface sediment samples ranged from 0.29 percent in MW040 (bottom interval) to 6.03 percent in MW030 (middle interval). The average TOC content in the subsurface sediments was 1.94 percent, with most samples between 0.3 and 4.0 percent.

Eight samples (all subsurface sediment samples) were submitted for Atterberg limits testing. Three samples had grain sizes fine enough to provide a result. The samples were all at the top interval from their respective cores (MW026, MW027, and MW030). Results are presented below:

Station	Liquid Limit	Plastic Limit	Plasticity Index	Oven-Dried Liquid Limit
MW026	36.8	26.6	10.2	31.1
MW027	54.7	37.1	17.6	39.3
MW030	44.3	30.9	13.4	37.5

4.3.2 Metals

4.3.2.1 Antimony

Antimony concentrations in subsurface sediment samples ranged from non-detect to 467 mg/kg in the top interval from station MW027. Antimony was detected in one other sample, MW025 (top interval) at 6 mg/kg. Antimony exceeded the SQO (150 mg/kg) by an exceedence factor of 3.11 in MW027, top interval.

4.3.2.2 Arsenic

Arsenic concentrations in subsurface samples ranged from 0.76 mg/kg to 130 mg/kg. Arsenic exceeded the SQO (57 mg/kg) in the top interval at station MW027 with an exceedence factor of 2.28.

4.3.2.3 Cadmium

Cadmium concentrations in subsurface sediment samples ranged from non-detect to 4.7 mg/kg in the top interval at station MW027. No samples exceeded the SQO of 5.1 mg/kg.

4.3.2.4 Chromium

Chromium was tested for in MW053 and TF-22, top and bottom intervals with concentrations of 15.3 mg/kg, 62 mg/kg, and 38 mg/kg, respectively. The SQS of the Washington State Sediment Management Standards for chromium is 260 mg/kg.

4.3.2.5 Copper

Copper concentrations in subsurface samples ranged from 9.3 mg/kg to 2,900 mg/kg. Copper exceeded the SQO (390 mg/kg) in 2 samples (MW031, top interval and MW027, top interval) by exceedence factors of 2.72 and 7.44, respectively.

4.3.2.6 Lead

Lead concentrations in subsurface sediment samples ranged from non-detect to 2,750 mg/kg. Two samples (MW031 top interval and TF-22 bottom interval) exceeded the SQO (450 mg/kg) by exceedence factors of 2.27 and 6.11, respectively.

4.3.2.7 Mercury

Mercury concentrations in subsurface samples ranged from non-detect to 9 mg/kg. Mercury exceeded the SQO (0.59 mg/kg) in 12 of the 46 subsurface sediment samples by an exceedence factor up to 15.25 in the top interval at station MW031.

4.3.2.8 Nickel

Nickel concentrations in subsurface sediment samples ranged from 5.4 mg/kg to 31 mg/kg. No samples exceeded the SQO of 140 mg/kg.

4.3.2.9 Silver

Silver concentrations in subsurface sediment samples ranged from non-detect to 39.7 mg/kg. Silver was only detected in the top interval at station MW027 and it exceeded the SQO (6.1 mg/kg) by an exceedence factor of 6.51.

4.3.2.10 Zinc

Zinc concentrations in subsurface samples ranged from 12.8 mg/kg to 580 mg/kg. Zinc exceeded the SQO (410 mg/kg) in 3 samples (TF-22, top interval; MW027, top interval, and TF-22 bottom interval) by exceedence factors of 1.36, 1.37, and 1.41, respectively.

4.3.3 Low Molecular Weight PAHs

The LPAHs were generally found in two separate areas within the subsurface sediments of the Middle Waterway: (1) near MW027, MW030 and MW031, and (2) near MW050 and TF-22. The greatest concentrations were generally found in this second area. Two LPAHs (acenaphthene and acenaphthylene) were undetected in the top and bottom intervals from HC-2, but had detection limits greater than the respective SQO.

4.3.3.1 2-Methylnaphthalene

2-Methylnaphthalene concentrations in subsurface samples ranged from 3.6 µg/kg to 3,100 µg/kg at MW050 top interval. 2-Methylnaphthalene exceeded the SQO (630 µg/kg) in 3 samples by an exceedence factor up to 4.63 at MW050. The other samples where the SQO was exceeded were MW030, top interval and TF-22 bottom interval.

4.3.3.2 Acenaphthene

Acenaphthene concentrations in subsurface samples ranged from 15 µg/kg to 45,000 µg/kg. Acenaphthene was detected above the SQO (500 µg/kg) in 6 samples by an exceedence factor up to 90 at station TF-22 bottom interval. The other samples where acenaphthene exceeded the SQO were MW024, top interval; MW0027, top and middle intervals; MW030, top interval; and MW050. The detection limit in the samples from HC-2 top and bottom intervals were 1,300 and 820 µg/kg, respectively; however, acenaphthene was not detected in either sample.

4.3.3.3 Acenaphthylene

Acenaphthylene concentrations in subsurface samples ranged from non-detect to 6,300 µg/kg. Acenaphthylene was detected above the SQO (1,300 µg/kg) in 2 samples by an exceedence factor of up to 4.85 in TF-22, bottom interval. The other sample where acenaphthylene exceeded the SQO was MW050. The detection limit in the samples from HC-2 top and bottom intervals were 4,500 and 2,900 µg/kg, respectively; however, acenaphthylene was not detected in either sample.

4.3.3.4 Anthracene

Anthracene concentrations in subsurface samples ranged from 3.6 µg/kg to 27,000 µg/kg. Anthracene exceeded the SQO (960 µg/kg) in 6 samples by an exceedence factor up to 28.1 at station TF-22, bottom interval. The other locations where anthracene exceeded the SQO were MW024, top interval; MW027, top interval; MW030, top interval; MW031, top interval; and MW050.

4.3.3.5 Fluorene

Fluorene concentrations in subsurface samples ranged from 14 µg/kg to 26,000 µg/kg. Fluorene exceeded the SQO (540 µg/kg) in 7 samples by an exceedence factor up to 48.15 at TF-22, bottom interval. The other locations where fluorene exceeded the SQO were MW024, top interval; MW027, top and middle intervals; MW030, top interval; MW031, top interval; and MW050.

4.3.3.6 Naphthalene

Naphthalene concentrations in subsurface samples ranged from 3.8 µg/kg to 11,000 µg/kg. Naphthalene exceeded the SQO (2,100 µg/kg) in 3 samples by an exceedence factor up to 5.24 at station MW050. The other locations where naphthalene exceeded the SQO were MW030, top interval; and TF-22, bottom interval.

4.3.3.7 Phenanthrene

Phenanthrene concentrations in subsurface samples ranged from 8.6 µg/kg to 130,000 µg/kg. Phenanthrene exceeded the SQO (1,500 µg/kg) in 10 samples by an exceedence factor up to 86.7 at TF-22, bottom interval. The other locations where phenanthrene exceeded the SQO were MW027, top and middle interval; MW030, top interval; MW031, top interval; MW050; HC-2, top and bottom intervals; MW-1, top interval; and TF-22, top interval.

4.3.3.8 Total LPAH

Total LPAH concentrations in subsurface samples ranged from 8.6 µg/kg to 242,900 µg/kg. Total LPAH exceeded the SQO (5,200 µg/kg) in 6 samples by an exceedence factor up to 46.7 at TF-22, bottom interval. The other locations where total LPAH exceeded the SQO were MW027, top and middle intervals; MW030, top interval; MW031, top interval; and MW050.

4.3.4 High Molecular Weight PAHs

The HPAHs were generally found in two separate areas within the subsurface sediments of the Middle Waterway: (1) near MW027, MW030 and MW031; and (2) near MW050 and TF-22. The greatest concentrations were generally found in this second area. No analysis had a detection limit greater than its respective SQO.

4.3.4.1 Benzo(a)anthracene

Benzo(a)anthracene concentrations in subsurface samples ranged from 5.5 µg/kg to 32,000 µg/kg. It exceeded the SQO (1,600 µg/kg) in 8 samples by an exceedence factor up to 20 in TF-22, bottom interval. The other samples where benzo(a)anthracene exceeded the SQO were MW030, top interval; MW031, top interval; MW050; HC-2, top and bottom interval; MW-1, bottom interval; and TF-22, top interval.

4.3.4.2 Benzo(a)pyrene

Benzo(a)pyrene concentrations in subsurface samples ranged from 4.4 µg/kg to 35,000 µg/kg. It exceeded the SQO (1,600 µg/kg) in 6 samples by an exceedence factor up to 21.9 in TF-22, bottom interval. The other samples where benzo(a)pyrene exceeded the SQO were MW030, top interval; MW031, top interval; MW050; MW-1, top interval; and TF-22, top interval.

4.3.4.3 Benzo(g,h,i)perylene

Benzo(g,h,i)perylene concentrations in subsurface samples ranged from 7.2 µg/kg to 20,000 µg/kg. It exceeded the SQO (720 µg/kg) in 9 samples by an exceedence factor up to 27.8 in TF-22, bottom interval. The other samples where benzo(g,h,i)perylene exceeded the SQO were MW030, top interval; MW031, top interval; MW050; HC-2, top and bottom intervals; MW-1, top and bottom intervals; and TF-22, top interval.

4.3.4.4 Benzofluoranthenes

Benzofluoranthenes concentrations in subsurface samples ranged from 7.2 µg/kg to 38,000 µg/kg. It exceeded the SQO (3,600 µg/kg) in 5 samples by an exceedence factor up to 10.56 in TF-22, bottom interval. The other samples where benzofluoranthenes exceeded the SQO were MW030, top interval; MW031, top interval; MW050; and MW-1, bottom interval.

4.3.4.5 Chrysene

Chrysene concentrations in subsurface samples ranged from 3.4 µg/kg to 31,000 µg/kg. It exceeded the SQO (2,800 µg/kg) in 4 samples by an exceedence factor up to 11.1 in TF-22, bottom interval. The other samples where chrysene exceeded the SQO were MW030, top interval; MW031, top interval; and MW050.

4.3.4.6 Dibenzo(a,h)anthracene

Dibenzo(a,h)anthracene concentrations in subsurface samples ranged from non-detect to 4,500 µg/kg. It exceeded the SQO (230 µg/kg) in 8 samples by exceedence factors up to 19.6 at TF-22, bottom interval. The other samples where dibenzo(a,h)anthracene exceeded the SQO were MW030, top interval; MW031, top interval; MW050; HC-2, top and bottom intervals; and MW-1, top and bottom intervals.

4.3.4.7 Fluoranthene

Fluoranthene concentrations in subsurface samples ranged from 3.9 µg/kg to 71,000 µg/kg. It exceeded the SQO (2,500 µg/kg) in 10 samples by an exceedence factor up to 28.4 in TF-22, bottom interval. The other samples where fluoranthene exceeded the SQO were MW024, top interval; MW027, top and bottom intervals; MW030, top interval; MW031, top interval; MW050; HC-2, top interval; MW-1, bottom interval; and TF-22, top interval.

4.3.4.8 Indeno(1,2,3-cd)pyrene

Indeno(1,2,3-cd)pyrene concentrations in subsurface samples ranged from 5.3 µg/kg to 15,000 µg/kg. It exceeded the SQO (690 µg/kg) in 9 samples by an exceedence factor up to 21.7 in TF-22, bottom interval. The other samples where indeno(1,2,3-cd)pyrene exceeded the SQO were MW030, top interval; MW031, top interval; MW050; HC-2, top and bottom intervals; MW-1, top and bottom intervals; and TF-22, top interval.

4.3.4.9 Pyrene

Pyrene concentrations in subsurface samples ranged from 4.6 µg/kg to 82,000 µg/kg. It exceeded the SQO (3,300 µg/kg) in 9 samples by an exceedence factor up to 24.85 in TF-22, bottom interval. The other samples where pyrene exceeded the SQO were MW024, top interval; MW030, top interval; MW031, top interval; MW050; HC-2, top and bottom intervals; MW-1, bottom interval; and TF-22, top interval.

4.3.4.10 Total HPAH

Total HPAH concentrations in subsurface samples ranged from 9.5 µg/kg to 328,500 µg/kg. It exceeded the SQO (17,000 µg/kg) in 9 samples by an exceedence factor up to 19.3 in TF-22, bottom interval. The other samples where total HPAH exceeded the SQO were MW024, top interval; MW030, top interval; MW031, top interval; MW050; HC-2, top and bottom intervals; MW-1, bottom interval; and TF-22, top interval.

4.3.5 Chlorinated Organic Compounds

No chlorinated organic compounds were detected in any of the subsurface sediment samples of the Middle Waterway. Three chlorinated organic compounds (1,2-dichlorobenzene, 1,2,4 trichlorobenzene, and hexachlorobenzene) were undetected in the top and bottom samples of MW-1, but had detection limits greater than the respective SQO.

4.3.5.1 1,2-Dichlorobenzene

1,2-Dichlorobenzene was not detected in any of the subsurface sediment samples of the Middle Waterway. The SQO for 1,2-dichlorobenzene is 50 µg/kg. The detection limit for the samples collected in MW-1, top and bottom intervals, were 97 and 100 µg/kg, respectively; however, 1,2-dichlorobenzene was not detected in either sample.

4.3.5.2 1,3-Dichlorobenzene

1,3-Dichlorobenzene was not detected in any of the subsurface sediment samples of the Middle Waterway. The SQO for 1,3-dichlorobenzene is 170 µg/kg.

4.3.5.3 1,4-Dichlorobenzene

1,4-Dichlorobenzene was not detected in any of the subsurface sediment samples of the Middle Waterway. The SQO for 1,4-dichlorobenzene is 110 µg/kg.

4.3.5.4 1,2,4-Trichlorobenzene

1,2,4-Trichlorobenzene was not detected in any of the subsurface sediment samples of the Middle Waterway. The SQO for 1,2,4-trichlorobenzene is 51 µg/kg. The detection limit for the samples collected in MW-1, top and bottom intervals, were 97 and 100 µg/kg, respectively; however, 1,2,4-trichlorobenzene was not detected in either sample.

4.3.5.5 Hexachlorobenzene

Hexachlorobenzene was not detected in any of the subsurface sediment samples of the Middle Waterway. The SQO for hexachlorobenzene is 22 µg/kg. The detection limit for the samples collected in MW-1, top and bottom intervals, were 97 and 100 µg/kg, respectively; however, hexachlorobenzene was not detected in either sample.

4.3.6 Total PCBs

Total PCBs did not exceeded the SQO (300 µg/kg) in any subsurface sediment samples of the Middle Waterway. The top interval of MW031 had a total PCB concentration equal to the SQO of 300 µg/kg.) No sample was undetected with a detection limit greater than the SQO.

4.3.7 Phthalates

Phthalates were only detected at concentrations greater than their respective SQOs in one subsurface sediment sample (diethylphthalate in MW035, middle interval; EF=5.5). No analysis had a detection limit greater than the respective SQO.

4.3.7.1 Bis(2-ethylhexyl)phthalate

Bis(2-ethylhexyl)phthalate concentrations in subsurface samples ranged from 16 µg/kg to 550 µg/kg. It did not exceed the SQO (1,300 µg/kg) in any subsurface sediment samples.

4.3.7.2 Butylbenzylphthalate

Butylbenzylphthalate concentrations in subsurface samples ranged from 3.4 µg/kg to 370 µg/kg. It did not exceed the SQO (900 µg/kg) in any subsurface sediment samples of the Middle Waterway.

4.3.7.3 Di-n-butylphthalate

Di-n-butylphthalate was detected in subsurface samples with concentrations ranging from 5.5 µg/kg to 21 µg/kg. It did not exceed the SQO (1,400 µg/kg) in any subsurface sediment samples of the Middle Waterway.

4.3.7.4 Di-n-octylphthalate

Di-n-octylphthalate was not detected in any subsurface samples of the Middle Waterway. The SQO for di-n-octylphthalate is 6,200 µg/kg.

4.3.7.5 Diethylphthalate

Diethylphthalate concentrations in subsurface samples ranged from 25 µg/kg to 1,100 µg/kg. It exceeded the SQO (200 µg/kg) in only one subsurface sediment sample (MW035, middle interval) by an exceedence factor of 5.5.

4.3.7.6 Dimethylphthalate

Dimethylphthalate was detected in only one subsurface sample (MW046 at 47 µg/kg). It did not exceed the SQO (160 µg/kg) in any subsurface sediment samples of the Middle Waterway.

4.3.8 Phenols

Three phenols (2,4-dimethylphenol, 2-methylphenol, and pentachloropenol) were undetected in the top and bottom samples of MW-1, but had detection limits greater than the SQO.

4.3.8.1 2,4-Dimethylphenol

2,4-Dimethylphenol was detected in the subsurface sediment at concentrations ranging from 1 µg/kg to 98 µg/kg. It exceeded the SQO (29 µg/kg) in 7 subsurface sediment samples with exceedence factors up to 3.38 in MW031, top interval. The other samples that had detections that exceeded the SQO were MW027, top and bottom intervals; MW030, top and middle intervals; MW031, middle interval; and MW050. The detection limit for the samples collected in MW-1, top and bottom intervals were 190 and 200 µg/kg, respectively; however, 2,4-dimethylphenol was not detected in either sample.

4.3.8.2 2-Methylphenol

2-Methylphenol was detected in the subsurface sediment at concentrations ranging from 0.97 µg/kg to 48 µg/kg. It was not detected above the SQO (63 µg/kg) in any subsurface sample. The detection limit for the samples collected in MW-1, top and bottom intervals, were 97 and 100 µg/kg, respectively; however, 2-methylphenol was not detected in either sample.

4.3.8.3 4-Methylphenol

4-Methylphenol concentrations in subsurface samples ranged from 1.1 µg/kg to 270 µg/kg. It did not exceed the SQO (670 µg/kg) in any subsurface sediment sample.

4.3.8.4 Pentachlorophenol

Pentachlorophenol was detected at concentrations in the subsurface sediments ranging from 2.5 µg/kg to 47 µg/kg. It was not detected above the SQO (360 µg/kg) in any subsurface sediment sample of the Middle Waterway. The detection limit for the samples collected in MW-1, top and bottom intervals, were 480 and 510 µg/kg, respectively; however, pentachlorophenol was not detected in either sample.

4.3.8.5 Phenol

Phenol concentrations in the subsurface sediments ranged from 2.3 µg/kg to 570 µg/kg. It exceeded the SQO (420 µg/kg) in one subsurface sediment sample (MW031, top interval) with an exceedence factor of 1.36.

4.3.9 Miscellaneous Extractable Compounds

4.3.9.1 Benzyl Alcohol

Benzyl alcohol was detected in the subsurface sediments at concentrations ranging from 0.91 µg/kg to 24 µg/kg. It was not detected above the SQO (73 µg/kg) in any of the subsurface sediment samples of the Middle Waterway. The detection limit for the samples collected in MW-1, top and bottom intervals, were 480 and 510 µg/kg, respectively; however, benzyl alcohol was not detected in either sample.

4.3.9.2 Benzoic Acid

Benzoic acid was detected in the subsurface sediments at concentrations ranging from 6.8 µg/kg to 320 µg/kg. It was not detected above the SQO (650 µg/kg) in any of the subsurface sediment samples of the Middle Waterway. The detection limit for the samples collected in MW-1, top and bottom intervals, were 970 and 1,000 µg/kg, respectively; however, benzyl alcohol was not detected in either sample.

4.3.9.3 Dibenzofuran

Dibenzofuran concentrations in the subsurface samples ranged from 4.7 µg/kg to 4,800 µg/kg. It exceeded the SQO (540 µg/kg) in four locations with exceedence factors up to 8.89 in MW030, top interval. The other samples where the SQO was exceeded are MW027, middle interval; MW050, and TF-22, bottom interval.

4.3.9.4 Hexachlorobutadiene

Hexachlorobutadiene was not detected in any of the subsurface sediment samples of the Middle Waterway. The SQO for hexachlorobutadiene is 11 µg/kg. The detection limit for the samples collected in MW-1, top and bottom intervals, were 190 and 200 µg/kg, respectively; however, hexachlorobutadiene was not detected in either sample.

4.3.9.5 N-nitrosodiphenylamine

N-nitrosodiphenylamine was detected in the subsurface sediments at concentrations ranging from 4.3 µg/kg to 60 µg/kg. It was detected above the SQO (28 µg/kg) in only one sample (MW041) with an exceedence factor of 2.14. The detection limit for the samples collected in MW024, top interval; MW027, middle interval; MW030, top interval; MW031, top interval; MW050; and MW-1, top and bottom intervals were greater than the SQO. N-nitrosodiphenylamine was not detected in any of these samples. Because of analytical problems obtaining detection limits below the SQO, spatial variability and the absence of an identified source (N-nitrosodiphenylamine is

used as a vulcanization retarder in the manufacture of rubber), the environmental significance of this chemical should be considered during the remedial design phase.

4.3.10 Volatile Organics

4.3.10.1 Tetrachloroethene

Tetrachloroethene was not detected in any of the subsurface sediment samples of the Middle Waterway. The SQO for tetrachloroethene is 57 µg/kg.

4.3.10.2 Ethylbenzene

Ethylbenzene was not detected in any of the subsurface sediment samples of the Middle Waterway. The SQO for ethylbenzene is 10 µg/kg.

4.3.10.3 Total Xylenes

Xylenes were not detected in any of the surface sediment samples of the Middle Waterway. The SQO for total xylenes is 40 µg/kg.

4.3.10.4 Trichloroethene

Trichloroethene was tested for in MW053 and TF-22, top and bottom intervals. It was only detected in the sample from TF-22, bottom interval, at 25 µg/kg. There is no SQO for this compound. The PSDDA screening level for trichloroethene is 160 µg/kg.

4.3.11 Pesticides

4.3.11.1 4,4-DDD

The pesticide 4,4-DDD was detected in two subsurface sediment samples (MW027, top interval and MW031, top interval). These samples exceeded the SQO (16 µg/kg) by exceedence factors of 1.13 and 2.25, respectively.

4.3.11.2 4,4-DDE

The pesticide 4,4-DDE exceeded the SQO (9 µg/kg) in two subsurface sediment samples (MW027, top interval and MW024, top interval) with exceedence factors of 1.09 and 1.22, respectively.

4.3.11.3 4,4-DDT

The pesticide 4,4-DDT exceeded the SQO (34 µg/kg) in one subsurface sediment sample (MW031, top interval) with an exceedence factor of 2.09. The detection limit for the sample collected in TF-22, bottom interval, was 40 µg/kg; however, 4,4-DDT was not detected in this sample.

4.3.11.4 Aldrin

Aldrin was tested for in MW053, and TF-22, top and bottom intervals. It was not detected in any sample. There is no SQO for this compound. The PSDDA screening level for aldrin is 10 µg/kg. The detection limit for each of these samples was less than the SL.

4.3.11.5 Chlordane

Chlordane was tested for in TF-22, top and bottom intervals. It was not detected in any sample. There is no SQO for this compound. The PSDDA screening level for chlordane is 10 µg/kg. The detection limit for each of these samples was less than the SL.

4.3.11.6 Dieldrin

Dieldrin was tested for in MW053, and TF-22, top and bottom intervals. It was not detected in any sample. There is no SQO for this compound. The PSDDA screening level for dieldrin is 10 µg/kg. The detection limit for each of these samples was less than the SL.

4.3.11.7 Heptachlor

Heptachlor was tested for in MW053, and TF-22, top and bottom intervals. It was not detected in any sample. There is no SQO for this compound. The PSDDA screening level for heptachlor is 10 µg/kg. The detection limit for each of these samples was less than the SL.

4.3.11.8 Lindane

Lindane was tested for in MW053, and TF-22, top and bottom intervals. It was not detected in any sample. The PSDDA screening level for lindane is 10 µg/kg. There is no SQO for this compound. The detection limit for each of these samples was less than the SL.

4.4 CHEMICAL ANALYSIS OF BANK SAMPLES

Bank sediments were sampled at 21 locations along Middle Waterway (Figure 13). Thirty of the 55 SQO chemicals tested for exceeded their SQO in bank and supplemental samples

collected during the Round 1A sampling effort. Each of the SQO chemicals are discussed below. All samples that exceeded the SQO are presented in Figure 13 and Table 10.

4.4.1 Conventionals

The results of the conventionals analyses are presented in Table 7. Total sulfide concentrations in the bank sediments ranged widely across the site. Concentrations ranged from 2.0 mg/kg in MW012 to 982 mg/kg in MW008, but averaged 238.8 mg/kg. Concentrations of ammonia ranged from 1.7 mg/kg at MW013 to 14.0 mg/kg at MW009 SP, averaging 8.21 mg/kg.

The bank sediments of the Middle Waterway are generally gravel with fines. Average percentages of gravel, sand, silt, and clay for all of the surface samples are presented below.

- 62.75 percent gravel
- 12.21 percent sand
- 4.08 percent silt
- 20.96 percent clay.

The percent fines in the bank sediment samples of the Middle Waterway ranged from 3.8 percent at MW014 to 64.2 percent in MW009 SP. The average percent fines was 16.28 percent. Most samples had between 10 and 20 percent fines.

The TOC content in the surface sediment samples ranged from 0.52 percent in MW013 to 4.86 percent in MW012. The average TOC content in the surface sediments was 2.25 percent, with most samples between 1 and 3 percent.

4.4.2 Metals

4.4.2.1 Antimony

Antimony concentrations in bank samples ranged from non-detect to 62.5 mg/kg. Antimony did not exceed the SQO (150 mg/kg) in any sample.

4.4.2.2 Arsenic

Arsenic concentrations in bank samples ranged from 3.8 mg/kg to 166 mg/kg. Arsenic exceeded the SQO (57 mg/kg) in 5 samples by exceedence factors up to 2.91 in MW10a. The other locations where arsenic exceeded the SQO were MW10b, MW10c, MW11a SP, and B-12.

4.4.2.3 Cadmium

Cadmium concentrations in bank samples ranged from 0.20 mg/kg to 3.9 mg/kg. No samples exceeded the SQO of 5.1 mg/kg.

4.4.2.4 Chromium

Chromium was tested for in bank composite samples B-12 through B-19 with concentrations ranging from 18 mg/kg to 1,020 mg/kg. There is no SQO for chromium. The SQS of the Washington State Sediment Management Standards for chromium is 260 mg/kg. Only one sample (B-15) exceeded the SQS by an exceedence factor of 3.92.

4.4.2.5 Copper

Copper concentrations in bank samples ranged from 28.2 mg/kg to 2,150 mg/kg. Copper exceeded the SQO (390 mg/kg) in 9 samples by exceedence factors up to 5.51 in MW10a. the other locations where copper exceeded the SQO were B-12, B-14, B-15, MW009 SP, MW10b, MW10c, MW11a SP, and MW013.

4.4.2.6 Lead

Lead concentrations in bank samples ranged from 16.7 mg/kg to 3,220 mg/kg. Three samples (MW10a, MW10b, and MW10c) exceeded the SQO (450 mg/kg) by exceedence factors of 1.73, 7.16, and 3.98, respectively.

4.4.2.7 Mercury

Mercury concentrations in bank samples ranged from 0.07 mg/kg to 29.2 mg/kg. Mercury exceeded the SQO (0.59 mg/kg) in 14 samples by an exceedence factor up to 49.49 in station MW10c.

4.4.2.8 Nickel

Nickel concentrations in bank samples ranged from 6.5 mg/kg to 1,780 mg/kg. Two samples (B-14 and B-15) exceeded the SQO (140 mg/kg) by exceedence factors of 2.78 and 12.71, respectively.

4.4.2.9 Silver

Silver concentrations in bank samples ranged from non-detect to 6.2 mg/kg. Silver exceeded the SQO (6.1 mg/kg) in only one sample (MW10b) by an exceedence factor of 1.02.

4.4.2.10 Zinc

Zinc concentrations in bank samples ranged from 44.2 mg/kg to 1,590 mg/kg. Zinc exceeded the SQO (410 mg/kg) in 9 samples by exceedence factors of up to 3.88 at B-12. The other locations where zinc exceeded the SQO were B-14, B-15, B-16, MW009 SP, MW10a, MW10b, MW10c, and MW11a SP.

4.4.3 Low Molecular Weight PAHs

4.4.3.1 2-Methylnaphthalene

2-Methylnaphthalene concentrations in bank samples ranged from 14 µg/kg to 390 µg/kg. 2-Methylnaphthalene did not exceed the SQO (670 µg/kg) in any bank samples of the Middle Waterway.

4.4.3.2 Acenaphthene

Acenaphthene concentrations in bank samples ranged from 26 µg/kg to 940 µg/kg. Acenaphthene exceeded the SQO (500 µg/kg) in 2 samples (MW03a and B-14) by exceedence factors of 1.34 and 1.88, respectively.

4.4.3.3 Acenaphthylene

Acenaphthylene concentrations in bank samples ranged from 26 µg/kg to 1,100 µg/kg. Acenaphthylene did not exceed the SQO (1,300 µg/kg) in any bank samples of the Middle Waterway.

4.4.3.4 Anthracene

Anthracene concentrations in bank samples ranged from 39 µg/kg to 3,700 µg/kg. Anthracene exceeded the SQO (960 µg/kg) in 2 samples (B-19 and B-14) by exceedence factors of 1.46 and 3.85, respectively.

4.4.3.5 Fluorene

Fluorene concentrations in bank samples ranged from 19 µg/kg to 1,200 µg/kg. Fluorene exceeded the SQO (540 µg/kg) in 2 samples (B-19 and B-14) by exceedence factors of 1.09 and 2.22, respectively.

4.4.3.6 Naphthalene

Naphthalene concentrations in bank samples ranged from 34 µg/kg to 850 µg/kg. Naphthalene did not exceed the SQO (2,100 µg/kg) in any bank samples of the Middle Waterway.

4.4.3.7 Phenanthrene

Phenanthrene concentrations in bank samples ranged from 160 µg/kg to 20,000 µg/kg. Phenanthrene exceeded the SQO (1,500 µg/kg) in 10 samples by an exceedence factor up to 13.33 at station B-14. The other locations where phenanthrene exceeded the SQO were B-15, B-16, B-17, B-18, B-19, MW009, MW009 SP, MW10a, and MW10c.

4.4.3.8 Total LPAH

Total LPAH concentrations in bank samples ranged from 322 µg/kg to 27,170 µg/kg. Total LPAH exceeded the SQO (5,200 µg/kg) in 4 samples by an exceedence factor up to 5.23 at B-14. The other locations where total LPAH exceeded the SQO were B-15, B-16, and B-19.

4.4.4 High Molecular Weight PAHs

4.4.4.1 Benzo(a)anthracene

Benzo(a)anthracene concentrations in bank samples ranged from 79 µg/kg to 15,000 µg/kg. It exceeded the SQO (1,600 µg/kg) in 8 samples by an exceedence factor up to 9.38 in B-14. The other locations where benzo(a)anthracene exceeded the SQO were B-15, B-16, B-18, B-19, MW009, MW10a, and MW10b.

4.4.4.2 Benzo(a)pyrene

Benzo(a)pyrene concentrations in bank samples ranged from 100 µg/kg to 16,000 µg/kg. It exceeded the SQO (1,600 µg/kg) in 7 samples by an exceedence factor up to 10.0 in B-14. The other locations where benzo(a)pyrene exceeded the SQO were B-15, B-16, B-18, B-19, MW009, and MW10c.

4.4.4.3 Benzo(g,h,i)perylene

Benzo(g,h,i)perylene concentrations in bank samples ranged from 12 µg/kg to 5,000 µg/kg. It exceeded the SQO (720 µg/kg) in 9 samples by an exceedence factor up to 6.94 in B-14. The other locations where benzo(g,h,i)perylene exceeded the SQO were B-12, B-15, B-16, B-17, B-18, B-19, MW10a, and MW10c.

4.4.4.4 Benzofluoranthenes

Benzofluoranthenes concentrations in bank samples ranged from 260 µg/kg to 19,000 µg/kg. It exceeded the SQO (3,600 µg/kg) in 11 samples by an exceedence factor up to 5.28 in B-14. The other locations where benzofluoranthenes exceeded the SQO were B-15, B-16, B-18, B-19, MW009, MW009 SP, MW10a, MW10b, MW10c, and MW11a SP.

4.4.4.5 Chrysene

Chrysene concentrations in bank samples ranged from 130 µg/kg to 16,000 µg/kg. It exceeded the SQO (2,800 µg/kg) in 6 samples by an exceedence factor up to 5.71 in B-14. The other locations where chrysene exceeded the SQO were B-15, B-16, B-18, B-19, and MW009.

4.4.4.6 Dibenzo(a,h)anthracene

Dibenzo(a,h)anthracene concentrations in bank samples ranged from 5.3 µg/kg to 1,800 µg/kg. It exceeded the SQO (230 µg/kg) in 8 samples by an exceedence factor up to 7.83 in B-14. The other locations where dibenzo(a.h)anthracene exceeded the SQO were B-12, B-15, B-16, B-17, B-18, B-19, and MW10a.

4.4.4.7 Fluoranthene

Fluoranthene concentrations in bank samples ranged from 44 µg/kg to 22,000 µg/kg. It exceeded the SQO (2,500 µg/kg) in 10 samples by an exceedence factor up to 8.80 in B-14. The other locations where fluoranthene exceeded the SQO were B-15, B-16, B-18, B-19, MW009, MW009 SP, MW10a, MW10c, and MW11a SP.

4.4.4.8 Indeno(1,2,3-cd)pyrene

Indeno(1,2,3-cd)pyrene concentrations in bank samples ranged from non-detect to 4,400 µg/kg. It exceeded the SQO (690 µg/kg) in 10 samples by an exceedence factor up to 6.38 in B-14. The other locations where indeno(1,2,3-cd)pyrene exceeded the SQO were B-12, B-15, B-16, B-17, B-18, B-19, MW009 SP, MW10a, and MW10c.

4.4.4.9 Pyrene

Pyrene concentrations in bank samples ranged from 240 µg/kg to 270,000 µg/kg. It exceeded the SQO (3,300 µg/kg) in 6 samples by an exceedence factor up to 81.82 in B-14. The other locations where pyrene exceeded the SQO were B-15, B-16, B-18, B-19, and MW009.

4.4.4.10 Total HPAH

Total HPAH concentrations in bank samples ranged from 1,294 µg/kg to 369,200 µg/kg. It exceeded the SQO (17,000 µg/kg) in 10 samples by an exceedence factor up to 21.72 in B-14. The other locations where total HPAH exceeded the SQO were B-15, B-16, B-18, B-19, MW009, MW009 SP, MW10a, MW10b, and MW10c.

4.4.5 Chlorinated Organic Compounds

4.4.5.1 1,2-Dichlorobenzene

1,2-Dichlorobenzene was not detected in any of the bank samples of the Middle Waterway. The SQO for 1,2-dichlorobenzene is 50 µg/kg.

4.4.5.2 1,3-Dichlorobenzene

1,3-Dichlorobenzene was not detected in any of the bank samples of the Middle Waterway. The SQO for 1,3-dichlorobenzene is 170 µg/kg.

4.4.5.3 1,4-Dichlorobenzene

1,4-Dichlorobenzene was not detected in any of the bank samples of the Middle Waterway. The SQO for 1,4-dichlorobenzene is 110 µg/kg.

4.4.5.4 1,2,4-Trichlorobenzene

1,2,4-Trichlorobenzene was not detected in any of the bank samples of the Middle Waterway. The SQO for 1,2,4-trichlorobenzene is 51 µg/kg.

4.4.5.5 Hexachlorobenzene

Hexachlorobenzene was not detected in any of the bank samples of the Middle Waterway. The SQO for hexachlorobenzene is 22 µg/kg.

4.4.6 Total PCBs

Total PCBs concentrations in bank samples ranged from 29 µg/kg to 2,800 µg/kg. Total PCBs exceeded the SQO (300 µg/kg) in 5 bank samples by exceedence factors up to 9.33 at B-15. The other locations where the SQO was exceeded were B-14, MW03a, MW008 SP, and MW10c.

4.4.7 Phthalates

4.4.7.1 Bis(2-ethylhexyl)phthalate

Bis(2-ethylhexyl)phthalate concentrations in bank samples ranged from 72 µg/kg to 1,400 µg/kg. It exceeded the SQO (1,300 µg/kg) in one bank sediment sample (B-19) by an exceedence factor of 1.08.

4.4.7.2 Butylbenzylphthalate

Butylbenzylphthalate concentrations in bank samples ranged from 12 µg/kg to 120 µg/kg. It did not exceed the SQO (900 µg/kg) in any bank samples of the Middle Waterway.

4.4.7.3 Di-n-butylphthalate

Di-n-butylphthalate concentrations in bank samples ranged from 13 µg/kg to 260 µg/kg. It did not exceed the SQO (1,400 µg/kg) in any bank samples of the Middle Waterway.

4.4.7.4 Di-n-octylphthalate

Di-n-octylphthalate was not detected in any bank samples. The detection limits did not exceed the SQO (6,200 µg/kg) in any bank samples of the Middle Waterway.

4.4.7.5 Diethylphthalate

Diethylphthalate concentrations in bank samples ranged from 27 µg/kg to 42 µg/kg. It did not exceed the SQO (200 µg/kg) in any bank samples of the Middle Waterway.

4.4.7.6 Dimethylphthalate

Dimethylphthalate concentrations in bank samples ranged from 10 µg/kg to 320 µg/kg. It exceeded the SQO (160 µg/kg) in only one bank sample (B-15) by an exceedence factor of 2.0.

4.4.8 Phenols

4.4.8.1 2,4-Dimethylphenol

2,4-Dimethylphenol concentrations in the bank samples ranged from 0.92 µg/kg to 80 µg/kg. It exceeded the SQO (29 µg/kg) in two bank samples (MW10c and MW03b) with exceedence factors of 2.17 and 2.76, respectively. The detection limit for the bank sample

collected at MW001 (43 µg/kg) was greater than the SQO. However, 2,4-Dimethylphenol was not detected in this sample.

4.4.8.2 2-Methylphenol

2-Methylphenol concentrations in the bank samples ranged from 1.1 µg/kg to 260 µg/kg. It exceeded the SQO (63 µg/kg) in one bank sample (MW04b SP) with an exceedence factor of 4.13. The detection limit for the bank samples collected at MW001 and MW015 (77 µg/kg and 89 µg/kg, respectively) were greater than the SQO. However, 2-Methylphenol was not detected in either of these samples.

4.4.8.3 4-Methylphenol

4-Methylphenol concentrations in the bank sample ranged from 11 µg/kg to 330 µg/kg. It did not exceed the SQO (670 µg/kg) in any bank sample of the Middle Waterway.

4.4.8.4 Pentachlorophenol

Pentachlorophenol concentrations in the bank samples ranged from 6 µg/kg to 800 µg/kg. It exceeded the SQO (360 µg/kg) in two bank samples (MW03b and MW10b) with exceedence factors of 2.22 and 1.89, respectively.

4.4.8.5 Phenol

Phenol concentrations in the bank samples ranged from 16 µg/kg to 510 µg/kg. It exceeded the SQO (420 µg/kg) in one bank sample (MW10c) with an exceedence factor of 1.21.

4.4.9 Miscellaneous Extractable Compounds

4.4.9.1 Benzyl Alcohol

Benzyl alcohol concentrations in the bank samples ranged from 2 µg/kg to 99 µg/kg. It exceeded the SQO (73 µg/kg) in two bank sediment samples (MW04b SP and MW008) by exceedence factors of 1.16 and 1.36, respectively.

4.4.9.2 Benzoic Acid

Benzoic acid concentrations in the bank samples ranged from 19 µg/kg to 990 µg/kg. It exceeded the SQO (650 µg/kg) in two samples (MW04b SP and MW10a) with exceedence factors of 1.52 and 1.12, respectively.

4.4.9.3 Dibenzofuran

Dibenzofuran concentrations in the bank samples ranged from 15 µg/kg to 450 µg/kg. It did not exceed the SQO (540 µg/kg) in any bank sample of the Middle Waterway.

4.4.9.4 Hexachlorobutadiene

Hexachlorobutadiene was not detected in any of the bank samples of the Middle Waterway. The SQO for hexachlorobutadiene is 11 µg/kg.

4.4.9.5 N-nitrosodiphenylamine

N-nitrosodiphenylamine concentrations detected in the bank samples ranged from 14 µg/kg to 61 µg/kg. It was detected above the SQO (28 µg/kg) in two samples (MW11a and MW11a SP) by exceedence factors of 1.25 and 2.18, respectively.

4.4.10 Volatile Organics

4.4.10.1 Tetrachloroethene

Tetrachloroethene was not detected in any of the bank samples of the Middle Waterway. The SQO for tetrachloroethene is 57 µg/kg.

4.4.10.2 Ethylbenzene

Ethylbenzene was not detected in any of the bank samples of the Middle Waterway. The SQO for ethylbenzene is 10 µg/kg.

4.4.10.3 Total Xylenes

Total xylenes were not detected in any of the bank samples of the Middle Waterway. The SQO for total xylenes is 40 µg/kg.

4.4.10.4 Trichloroethene

Trichloroethene was tested for in bank composite samples B-12 through B-19. It was not detected in any of these samples. There is no SQO for this compound. The PSDDA screening level for trichloroethene is 160 µg/kg. The detection limit for each of these samples was less than the SL.

4.4.11 Pesticides

4.4.11.1 4,4-DDD

The pesticide 4,4-DDD was detected in two bank samples with concentrations of 16 µg/kg and 23 µg/kg. It exceeded the SQO (16 µg/kg) in only one sample (MW03a) with an exceedence factor of 1.44. The other location where 4,4-DDD was detected was MW03b.

4.4.11.2 4,4-DDE

The pesticide 4,4-DDE was detected in only one bank sample. It exceeded the SQO (9 µg/kg) in this bank sample from MW008 SP with an exceedence factor of 2.44.

4.4.11.3 4,4-DDT

The pesticide 4,4-DDT was detected in three bank samples with concentrations ranging from 10 to 38 µg/kg. It exceeded the SQO (34 µg/kg) in one bank sample (MW008 SP) with an exceedence factor of 1.12.

4.4.11.4 Aldrin

Aldrin was tested for in bank composite samples B-12 through B-19. It was not detected in any sample. There is no SQO for this compound. The PSDDA screening level for aldrin is 10 µg/kg. The detection limit for each of these samples was less than the SL.

4.4.11.5 Chlordane

Chlordane was tested for in bank composite samples B-12 through B-19. It was not detected in any sample. There is no SQO for this compound. The PSDDA screening level for chlordane is 10 µg/kg. The detection limit for each of these samples was less than the SL.

4.4.11.6 Dieldrin

Dieldrin was tested for in bank composite samples B-12 through B-19. It was not detected in any sample. There is no SQO for this compound. The PSDDA screening level for dieldrin is 10 µg/kg. The detection limit for each of these samples was less than the SL.

4.4.11.7 Heptachlor

Heptachlor was tested for in bank composite samples B-12 through B-19. It was not detected in any sample. There is no SQO for this compound. The PSDDA screening level for heptachlor is 10 µg/kg. The detection limit for each of these samples was less than the SL.

4.4.11.8 Lindane

Lindane was tested for in bank composite samples B-12 through B-19. It was not detected in any sample. The PSDDA screening level for lindane is 10 µg/kg. There is no SQO for this compound. The detection limit for each of these samples was less than the SL.

5. RESULTS OF CONTAMINANT MOBILITY TESTING

Contaminant mobility and dredgeability tests were performed on a single sediment composite sample representative of the potential dredge prism in order to provide an assessment of contaminant mobility during dredging and nearshore or aquatic confinement (disposal). Figure 14 and Table 11 show the method used to create the composite sample. The composite sample was submitted for chemical analysis (i.e., the SQO list) and used to perform the Dredging Elutriate Test (DRET), Modified Elutriate Test (MET), Thin Layer Column Leaching Test (TCLT), and the Column Settling Test (CST).

The conceptual procedure for forming the composite sample was described in Section 3.2.2 and Section 9.1 of the EPA-approved SAP (Foster Wheeler Environmental 1998b). The sediment composite sample was created based on a review of sediment stratigraphy and the preliminary results of the chemical analyses from the subsurface cores. The information used to create the contaminant mobility composite is summarized in Table 11 and Table 12. Analytical results of the sediment composite sample are reported in Table 13.

One of the replicate cores from each station was taken to the Soil Technology, Inc. laboratory and stored in a walk-in refrigerator. The initial results of chemical testing on surface and subsurface core samples from the sub-tidal region were evaluated and summarized as shown on Table 11. This information was used to select the depth of sediment from each station for the composite.

Table 12 lists the stations where either the surface sample or core samples had chemical concentrations above the SQOs. For each station, the depth represented by each sample with SQO exceedances is also listed. In accordance with Section 3.2.2 of the EPA-approved SAP, the composite sample was weighted according to the depth of sediment with concentrations above the SQO at each station. The quantity of sediment from each station was calculated based on the ratio of the depth of impacted sediment at a given station to the sum of depths from all stations. For example, at Station MW024, the depth is 4.0 feet, which represents 11.2 percent of the depth sum of 35.7 feet.

The composite sample was formed without exposing any sediment to oxygen in the atmosphere. Soil Technology, Inc. has an anerobic chamber made from clear rigid plastic that is about 4 feet long, 3 feet wide, and 3 feet high. There is a door at one end and three armhole openings on each side. The process used to extrude the sample was as follows:

- One end of a 4-foot-long core was inserted into one of the openings and sealed at the connection.

- A 20-liter stainless steel mixing bowl and several 4-liter glass jars were placed inside the chamber.
- Nitrogen was pumped into the chamber until the oxygen meter showed less than one percent oxygen in the atmosphere inside the chamber.
- A push rod was inserted into the outside end of the tube and then the end was immediately resealed with plastic and tape.
- The sediment was pushed out of the tube and into the mixing bowl.
- Sediment was mixed and then placed into 4-liter or 1-liter glass jars and the lids sealed.
- After the jars were sealed, they were removed from the chamber, labeled, and stored in the refrigerator.

The total amount of sediment placed in the glass jars was more than was needed for the contaminant mobility testing. The right-hand column of Table 12 shows the amount of sediment taken from each station to make the composite sample used for the MET, DRET, TCLT, and CST.

5.1 DREDGING ELUTRIATE TEST AND MODIFIED ELUTRIATE TEST

The DRET and MET tests were conducted in accordance with Waterways Experiment Station (WES)-recommended procedures (DiGiano et al. 1995; Palermo 1986). The settling time for the MET was 24 hours and a solids concentration of 150 grams per liter (g/L) was used. The DRET was conducted using a solids concentration of 10 g/L and a settling time of 1 hour.

The seawater used in the elutriate tests was an unfiltered sample obtained during sediment sample collection activities. The seawater sample was collected from the water column approximately 3 feet below the surface using a peristaltic pump. The seawater sample (both total and dissolved fractions) was analyzed for constituents as specified in Table 6 of the SAP (Foster Wheeler Environmental 1998b).

Analytical results for these analyses are presented in Table 14.

5.2 THIN-LAYER COLUMN LEACHING TEST

The anoxic TCLT was performed in accordance with WES-recommended procedures (U.S. Army Corps of Engineers [COE] 1994). The leachate from the test was analyzed for marine

acute and chronic water quality criteria as listed in Table 6 of the SAP (Foster Wheeler Environmental 1998b). The duration of this test can range from three to six months, depending on the number of pore volumes needed to achieve consistent results. Analytical results for 33 pore volumes are presented in Table 15 and Figure 15.

5.3 COLUMN SETTLING TEST

The test was conducted in accordance with WES-recommended procedures (COE 1993) using a solids concentration of 150 g/L. Results are available in Appendix F.

5.4 DREDGEABILITY

As described in Section 3, there are no discrete, continuous layers of sediment with uniform grain size. This situation is common in river deltas because the type of sediment changes rapidly as the water flow meanders through a delta. The practical implication of these conditions is that the grain size of dredged sediment would be a heterogeneous mixture of the various sediment types. The mixture of dredged sediment would have a grain size distribution that approximates a composite of sediment from the various core locations. The mixture would be expected to contain 40 to 50 percent fine sand and 40 to 50 percent non-plastic silt with minor amounts of wood debris and clay.

The method of dredging has not been determined for the Middle Waterway. The most appropriate equipment will be determined during development of the Remediation Plan or will be left up to the individual contractors. With clearly defined performance specifications, the individual contractor will select the most appropriate equipment, based on cost, availability, and other construction considerations.

6. RESULTS OF BIOLOGICAL TESTS

This section summarizes the investigation of biological effects within Middle Waterway. Two acute bioassays were conducted using sediments collected from selected Middle Waterway sample locations (Figure 11), including a 10-day amphipod mortality test using *Rhepoxynius abronius* and a 48-hour bivalve larval development test using *Mytilus* sp. Potential chronic biological effects were also evaluated using either benthic community analyses or the 20-day juvenile polychaete growth test using *Neanthes arenaceodentata*, as agreed to by MWAC and EPA at a meeting on June 30, 1998. This section summarizes the testing methods and the results of the QA/QC review, presents test results and evaluates test results, against the biological testing decision criteria as specified in the SOW and the EPA-approved Work Plan (Foster Wheeler Environmental 1998a).

6.1 METHODS

Samples from ten stations within Middle Waterway (Figure 11), three stations in Carr Inlet, and three stations from the Hylebos Waterway were collected and submitted for biological testing. Carr Inlet sediments were used as reference sediments for both the acute and chronic bioassays. Hylebos sediments were used as reference sediments for the benthic infaunal abundance analyses (Figure 3).

6.1.1 Bioassays

Sediments for bioassay testing were received by the laboratory from May 18 to 28, 1998, and stored at 4°C in the dark until testing was initiated. The amphipod bioassays were initiated on May 29, 1998; the bivalve larval development bioassays on June 4, 1998; and the juvenile polychaete bioassays on July 3, 1998. All three Carr Inlet reference sediments were included in the amphipod and larval test series, as were the required controls. Two Carr Inlet reference sediments (i.e., those sediments with the best grain size match) were included in the polychaete bioassays. Bioassays were conducted in accordance with the protocols outlined in the QAPP (Foster Wheeler Environmental 1998c). Testing followed protocols recommended by PSEP (1995).

The presence of minor adverse or adverse effects were determined statistically for each location using pairwise comparisons with data from appropriate reference sites using ToxCalc v5.0.15N. An arcsine square root transformation was performed on proportional data before analysis. Following transformation and determination of normality and homogeneity of variance for each endpoint, one-tailed homoscedastic or heteroscedastic t-tests, or Wilcoxon Two-Sample tests, were conducted at the appropriate level of

significance (i.e., 0.05 or 0.1). Sample means were then compared with interpretive criteria for biological effects to yield pass/fail evaluations for each sample.

6.1.2 Benthic Community

Sediments for benthic analyses were collected concurrently with sediments used for bioassays testing from May 15-25, 1998. Seven replicate grab samples were collected at each station, five of the replicates were analyzed, the other two samples have been archived. All benthic samples that were analyzed were collected from intertidal areas at low tide using a Petite Ponar grab sampler. In the field, samples were washed on a sieve with 1.0-mm mesh openings and fixed with a 10 percent solution of buffered formalin. Field sampling and processing methods followed the methods described in the EPA-approved SAP (Foster Wheeler Environmental 1998b) and the PSEP protocols (PSEP 1987). In the laboratory, benthic macroinvertebrate samples were washed on a 0.5-mm sieve and transferred to a 70 percent solution of alcohol. All organisms in each sample were sorted and identified to the lowest possible taxonomic level. Planktonic organisms that occurred in the samples were not enumerated. Specimens of each species that occurred in the study were placed in a reference collection prepared by the taxonomists.

The presence or absence of adverse effects were determined statistically at each location for each of three major taxonomic groups (i.e., polychaetes, molluscs, and crustaceans) using pairwise comparisons with data from appropriate reference sites. Following determination of normality and homogeneity of variance for each endpoint and logarithmic transformation, if necessary, one-tailed homoscedastic or heteroscedastic t-tests, or Wilcoxon Two-Sample tests, were conducted at the 0.05 level of significance. Sample means were then compared with interpretive criteria for biological effects (i.e., less than 50 percent of reference mean abundance) to yield pass/fail evaluations for each sample (Table 23).

6.2 DATA QUALITY REVIEW

The bioassays were deemed acceptable for use as outlined in the QAPP (Foster Wheeler Environmental 1998c) and the Quality Assurance Memoranda (Appendix E) and met the applicable performance criteria for all tests, except for the mean individual growth rate for the juvenile polychaete test at reference station MW209 (Table 16). For this test comparison, Carr Inlet reference station MW208 was used for all comparisons.

Review of the sampling, analysis (e.g., taxonomic identifications), and QA/QC procedures resulted in an acceptable benthic data set without qualification (Appendix E). However, the three benthic reference sediments from the Hylebos Waterway that were used for comparison with the benthic test stations are dominated by opportunistic and pollution-tolerant taxa. The

reference stations do not meet the performance criteria as defined in Tables 24 and 25 of the EPA-approved Work Plan (Foster Wheeler Environmental 1998a), which states that pollution-tolerant taxa should not be numerically dominant. As Table 17 shows, these taxa represent 74 to 76 percent of the total abundance at the reference stations. The Swartz Dominance Index (SDI; i.e., the number of taxa that represent 75 percent of the total abundance) only ranged from 4 to 6 taxa, numbers reflecting a benthic community dominated by a few taxa (SEA and Weston 1999). In addition, physical parameters (e.g., TOC) at two of these reference stations did not meet the original acceptance criteria specified in the Work Plan. MWAC concerns about the use of high percent TOC sediments as acceptable reference areas were discussed with EPA (see June 24, 1998 memorandum on chronic biological testing; Johannessen, personal communication).

Specifically, MWAC's concerns focused on the high percent of TOC at stations MW205 and MW207 (8.7 and 8.1 percent, respectively). Although the high percent of TOC may have resulted from the presence of wood debris in the samples, it was also recognized that the TOC percentages may have represented a different sedimentary habitat that could support a different benthic assemblage as compared to the test stations. The results presented in Table 17 (as indicated by the bold designations), show that several taxa clearly respond with higher abundances to the high TOC at these two stations. In particular, *Monocorophium* spp., a corophid amphipod, exhibited high abundances to these locations. This amphipod builds tubes in fine-grained sediments and can be found in large aggregations on the bottom. These activities may trap detritus and other organic debris, resulting in increased concentrations of organic carbon. However, these increases could not account for the substantially increased TOC percentages found at stations MW205 and MW207. These TOC concentrations likely reflect natural sediment conditions that attracted these amphipods and other taxa. These results, as discussed above, show that the performance criteria for the reference stations were not met and at stations MW205 and MW207 the high percent of TOC clearly influenced the benthic communities at these sites making them unacceptable as reference sites for the Middle Waterway stations. Therefore, these two stations are considered by MWAC to be inappropriate reference locations for comparison to Middle Waterway sediments. Evaluation of the benthic infaunal testing results utilizes reference station MW206 and the reference area acceptance criteria outlined in the EPA-approved Work Plan (Foster Wheeler Environmental 1998a).

6.3 COMPARISON OF BIOLOGICAL RESULTS WITH BIOLOGICAL TESTING CRITERIA

The comparative grain size data, biological effects data, and evaluations against biological effects interpretive criteria are summarized in Tables 16 through 22. Laboratory reports and raw data are provided in Appendices D and G.

Reference sites for comparison with test sediments were selected based primarily on the percentage of fine-grained sediments in the samples (Table 18). Tables 19, 20, 21, and 22 summarize the results of the toxicity tests and benthic analyses using *R. abronius, Mytilus* sp., *N. arenaceodentata*, and benthic major taxa, respectively. These tables list the locations tested, the corresponding reference site (based on similar grain size), the test endpoint with standard deviation, results of the one-tailed t-test comparison with the reference sediment, and whether the results passed or failed the biological effects interpretive criteria.

Test statistics and comparisons were interpreted according to the biological effects interpretive criteria set forth in Tables 24 and 25 of the EPA-approved Work Plan (Foster Wheeler Environmental 1998a). Table 23 summarizes the biological effects interpretive criteria. *A sediment sample fails the overall minor adverse effects biological criteria if:*

- Two of the biological tests exceed the no adverse effects biological criteria presented in Table 23; or
- One of the biological tests exceeds the minor adverse biological criteria presented in Table 23.

Sediments that pass these biological criteria do not require active remediation (see Table 22 of the Work Plan, Foster Wheeler Environmental 1998a).

6.3.1 Bioassays

The mean mortality of the 10-day amphipod test with *R. abronius* ranged from 5 to 20 percent. The ten test sediments passed both the no adverse and minor adverse effects criteria (Table 19).

The percent normal survival for the 48-hour bivalve larval development test with *Mytilus* sp. ranged from 66.4 to 78.2 percent. The ten test sediments passed both the no adverse and minor adverse effects criteria (Table 20).

Four test sediments were submitted for testing using the 20-day juvenile polychaete test with *N. arenaceodentata*. The mean individual growth rates for the test stations ranged from 0.32

to 0.62 mg/organism-day, dry weight basis. Although reference station MW209 was the appropriate reference station for three of the test sediments, the mean individual growth rate did not meet the reference station performance criteria; therefore, all statistical comparisons were conducted using reference station MW208. Station MW025 failed the no adverse effects criteria. This same station passed the minor adverse effects criteria. The other three stations passed both criteria (Table 21).

6.3.2 Benthic Community

As discussed above in Section 6.2, the benthic reference stations did not meet the reference area performance criteria as defined in Tables 24 and 25 of the EPA-approved Work Plan (Foster Wheeler Environmental 1998a). Therefore, no benthic comparisons should be made to determine if differences exist in major taxa abundances between Middle Waterway and an acceptable reference. However, it is recognized that the performance criteria, as defined in Tables 24 and 25 of the EPA-approved Work Plan, are typically applied to subtidal benthic communities. The presence or numerical dominance of opportunistic and pollution-tolerant taxa in intertidal areas may not be the same as in subtidal areas. As discussed above, the high percent of TOC at stations MW205 and MW207 make them unacceptable reference stations for comparisons to Middle Waterway stations. Station MW206 did not exhibit these same high TOC concentrations. Therefore, the only reference station that had physical parameters (i.e., grain size and TOC) that were generally within the original acceptance range (as specified in the EPA-approved Work Plan) for all stations (except MW049) was MW206. This station is used for all benthic comparisons, except at MW049. At EPA's direction, although no acceptable reference location was available that met the reference area acceptance criteria as defined in the EPA-approved Work Plan (Foster Wheeler Environmental 1998a), station MW205 was used to evaluate station MW049.

Six intertidal test stations were tested using benthic infaunal abundances of three major taxonomic groups (i.e., polychaetes, molluscs, and crustaceans). The following discussion of the benthic comparisons does not consider the failure of reference area performance criteria due to dominance by opportunistic and pollution-tolerant taxa. Biological testing of mean polychaete abundances ranged from 82.6 to 200.6 individuals/0.025 square meter (m^2). All stations pass the no adverse effects criteria for polychaete abundance. Mean mollusc abundances ranged from 0.8 to 6.0 individuals/0.025 m^2. Station MW054 failed the no adverse effects criteria. Mean crustacean abundance ranged from 12.8 to 274.8 individuals/0.025 m^2. Stations MW039 and MW049 failed the no adverse effects criteria for crustaceans. Of the six stations tested, stations MW039 and MW054 exceeded the no adverse effects criteria when compared to reference station MW206 (Table 22). Station MW049 exceeded the no adverse effects criteria when compared to reference station MW205.

6.4 INTERPRETATION OF BIOLOGICAL TESTING RESULTS

Table 24 summarizes the pass/fail comparisons between sediment bioassay/benthic tests and biological effects interpretive criteria. Final determination of the pass/fail status of a sediment sample must take into account the results of chemical analyses in addition to the results of the toxicity tests. Interpretation of biological data at station MW049 should consider the chemistry data, where no exceedences were found and no SQO analytes were detected at EFs ≥0.5. The minor adverse designation at station MW054 based on mollusc abundances was set aside (according to discussions at a November 11, 1998 meeting and EPA comments [EPA 1998]) due to the low abundances of molluscs represented by the small area sampled (0.023 m^2) and the reliability of the statistical comparisons (see EPA comment letter dated November 19, 1998). Three stations (MW025, MW039, and MW049) exceeded the no adverse effects criteria. No sample locations demonstrated biological effects in multiple tests. Therefore, none of the test sediments in this study failed the "two hit rule" (multiple no adverse effect exceedences) for determining an adverse effect. No station failed the "one hit rule" for determining adverse effects. Thus, according to Table 22 of the EPA-approved Work Plan, only stations MW025, MW039, and MW049 are of potential concern and no biological stations require active remediation.

7. RESULTS OF PHYSICAL SURVEYS

7.1 BATHYMETRY AND STRUCTURAL DATA

The MWAC performed the bathymetry and survey work in the Middle Waterway during the last two weeks of June 1997. The objective of performing this work was to support the development of design quality base maps of the Middle Waterway problem areas and support the design of a focused, practical, and cost-effective PRD/RD Study. The bathymetry and survey work provide coverage from approximately the mid-point of each peninsula to just beyond the mouth, extending seaward to about -60 feet MLLW.

Bathymetry and survey work included the following elements:

- Photogrammetric mapping and land surveying services
- Open water and under dock bathymetry
- Open water video survey
- Open water sub-bottom profiling
- Open water side scan sonar

These elements are discussed below. Open water and under dock bathymetry is presented in the Site Map (Figure 1). A report of the field activities associated with the surveys is included in Appendix H.

7.1.1 Photogrammetric Mapping and Land Surveying Services

The following specifications are for the photogrammetric and land surveying services.

- Site was mapped at a scale of 1 inch = 50 feet with a 1 foot contour interval from the perimeter of the project boundary down to an elevation of ± 0.0 feet COE MLLW (standard vertical datum in Commencement Bay).
- Survey control, from an experienced land surveyor, sufficient for a horizontal data resolution of ± 3 feet and a vertical resolution of ± 0.5 foot was obtained. The surveyor established two recoverable control points—one on a fixed monument for tidal reference and the second at the head of the waterway for the purposes of establishing a project baseline.
- The project horizontal and vertical datum is state plane south zone coordinates using North American Datum 1983 with 1991 update (NAD 83-91) and COE 0.0 foot (MLLW), respectively.

- Spot-elevation points were placed on structures, paved areas, and areas of significant topographic change that cannot be defined by contours (i.e., steep slopes, the center of depressions or mounds).

- In addition to all roads, existing structures, large vegetation, and hydrography, the following features were placed on individual layers:

- Haul-out ramps
- Spot elevation points
- Pilings and dolphins
- Top-of-bank around waterway perimeter (that point at which the upland intersects the bank of waterway)
- Floating surfaces (outline of ships/barges)
- Areas of identified debris within the waterway

7.1.2 Open Water and Under Pier Bathymetry

7.1.2.1 Open Water Bathymetry

An experienced hydrographic surveyor (Blue Water Engineering) ran transects perpendicular to the shoreline at 50-foot intervals extending from bank to bank with maximum coverage possible. Also, four to five transects were run from the head of the waterway to the mouth of the waterway.

The surveyor measured the bathymetric depths to a resolution of ± 0.1 foot, and station locations coordinated to a resolution of ± 3.0 feet. In order to provide a reference elevation for the survey, a tidal elevation monument (tidal gauge) was established. The surveyor reported the depth measurements in the COE MLLW datum in Commencement Bay.

The echo sounder and the positioning system were calibrated at regular intervals during the survey. Both systems were calibrated at the start and end of the survey, as well as at approximately 2-hour intervals during the course of the survey. The echo sounder calibration met COE specifications.

The positioning system was calibrated by locating a fixed monument (a permanent structure or piling), in state plane coordinates North American Datum 1993 with 1991 Update (NAD 83-91). The survey vessel then occupied a position near the fixed reference point and confirmed that the position was within the project specifications of ± 1 meter.

The surveyor submitted the survey data in hard copy format and electronically. The X and Y coordinates were reported in feet using the state plane coordinate system NAD 83-91. The

elevation (Z) was recorded in feet using the COE MLLW datum for Commencement Bay. The file data set included corrected X, Y, Elevation (Z), and all ancillary information associated with each data point.

7.1.2.2 Under Pier Bathymetry

Under pier bathymetry was performed by leadline, tagline, and diver methods from as close to the top of bank or bulkhead line to a point in the waterway which joins with the open water bathymetric survey.

Cross sections were laid out on approximately 50-foot centers and extended to open water cross sections to the maximum extent possible while avoiding under pier pilings. Additional data were gathered in areas of significant topographical change and on the face of docks or immovable features where the automated survey equipment could not reach.

The horizontal and corrected depth data were integrated into the open water bathymetric data set. These data are presented in Figure 1.

7.1.3 Open Water Video Survey

A video record was obtained at the time of the survey to document site conditions (above water) and problematic areas at the time of the survey. This video was made from the same survey vessel used for the open water bathymetric survey. A copy of this video was provided to EPA under separate cover.

7.1.4 Open Water Sub-Bottom Profiling

The MWAC surveyor attempted to detect and map the top of native sediment by utilizing sub-bottom profiling equipment designed to electronically penetrate non-native material. The objective was to identify the likely maximum depth of SQO exceedances (none are expected in the native material) and focus the subsurface sampling activities in the subtidal area. After a few passes it was ascertained that the contact layer between native and non-native sediment could not be definitely discerned. Therefore, sub-bottom profiling was discontinued.

7.1.5 Open Water Side Scan Sonar

The surveyor identified debris (e.g., logs, scrap metal) that may interfere with sampling and dredging operations using side-scan sonar. Side-scan sonar was effective up to a depth of -40 feet MLLW with a horizontal accuracy of ± 5 feet. The side-scan sonar data were

printed out in real-time (no electronic record was collected). The results of the side-scan sonar printout were interpreted and digitized onto the base map.

7.1.6 Photographic Services and Other Existing Data Collection

The following data sets were acquired to provide field reference and wide area coverage of the site and its surrounding environs.

7.1.6.1 Aerial Photographs

An aerial flight was performed by NIES Mapping Group, Inc. and two overlapping 16-inch by 20-inch cropped, color enlargements of the project site were produced. The aerial photograph will be labeled with the date, scale, tidal elevation, and frame number. This enlargement was provided to EPA under separate cover.

7.1.6.2 Custom Digital Ortho-Photo CD-ROM

A single CD containing digital ortho-rectified photography from June/July 1996 was purchased. The CD is PC-compatible and contains scanned geo-referenced photography with a one meter resolution. MWAC will loan EPA the CD; however, compliance with copyright laws is EPA's responsibility.

7.1.7 Pierce County GIS Data on CD-ROM

A single CD containing county property data in an Autocad-compatible format was purchased. MWAC will loan EPA the CD; however, compliance with copyright laws is EPA's responsibility.

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TABLES

Table 1. Coordinates and Elevations of Station Locations

Station	Northing	Easting	Mudline Elevation
A	707379.00	1161838.00	8.6
B-12	706850.00	1161861.00	
B-13	706847.00	1161880.00	
B-14	706875.00	1161776.00	
B-15	706878.00	1161744.00	
B-16	706921.00	1161683.00	
B-17	706943.00	1161700.00	
B-18	707010.00	1161612.00	
B-19	707041.00	1161589.00	
C	707145.00	1162015.00	10
F	707261.00	1161856.00	10.1
GS-1	707037.00	1162077.00	14.9
GS-10	707364.00	1161865.00	11.1
GS-12	707507.00	1161799.00	9.8
GS-13	707614.00	1161779.00	12.2
GS-14	707714.00	1161766.00	10.3
GS-2	707072.00	1162033.00	11.6
GS-5	707187.00	1161934.00	11.1
GS-6	707225.00	1161962.00	12.4
GS-7	707276.00	1161974.00	14.2
GS-8	707292.00	1161930.00	12.3
HC-2	707066.00	1161920.00	7.1
MW-1	707512.00	1161698.00	
MW-1(a)	707598.00	1161732.00	9.4
MW001	709572.28	1160928.84	1
MW002	709016.30	1161126.94	1
MW008	707393.64	1161469.80	9
MW008-SP	707488.00	1161436.00	9
MW009	707894.74	1161238.46	6
MW009-SP	707816.00	1161268.00	7.4
MW012	709492.59	1160550.31	1
MW013	709693.42	1160424.35	6
MW014	709646.09	1160327.60	6
MW015	710313.75	1160743.05	2
MW016	710645.00	1160367.00	-39
MW017	710480.00	1160101.00	-51.8
MW018	710275.00	1160442.00	-32.5

Table 1. Coordinates and Elevations of Station Locations (Continued)

Station	Northing	Easting	Mudline Elevation
MW019	710174.00	1160081.00	-24
MW020	710073.00	1160244.00	-8
MW021	710177.00	1160721.00	-2.4
MW022	709965.00	1160558.00	-24.2
MW023	709821.00	1160187.00	-2.5
MW024	709942.00	1160773.00	-3
MW025	709795.00	1160487.00	-14.2
MW026	709685.00	1160704.00	-25.5
MW027	709665.00	1160807.00	-21.2
MW028	709460.00	1160652.00	-22.7
MW029	709344.00	1160838.00	-23.5
MW030	709309.00	1160956.00	-18
MW031	709170.00	1160761.00	-16.9
MW032	709042.00	1160756.00	-11.4
MW034	708923.00	1161089.00	-11.4
MW035	708864.00	1160897.00	-15.8
MW037	708663.00	1161105.00	-1.7
MW039	708503.80	1161290.00	4.8
MW03a	708654.36	1161321.31	7
MW03b	708350.24	1161446.23	8
MW040	708455.00	1161094.00	6.5
MW041	708305.00	1161279.00	0.95
MW042	708195.00	1161411.00	7
MW043	708090.00	1161374.00	4
MW044	707997.00	1161264.00	2.9
MW045	707949.00	1161527.00	8.1
MW046	707836.00	1161471.00	4
MW047	707781.00	1161315.00	4.4
MW048	707638.00	1161592.00	4
MW049	707584.00	1161445.00	6.8
MW04a	708111.64	1161489.64	12
MW04b	707933.19	1161556.01	10
MW04b-SP	707840.92	1161621.18	11
MW050	707436.00	1161658.00	4.2
MW051	707284.00	1161573.00	7.2
MW052	707279.15	1161706.92	3.9
MW053	707097.25	1161794.91	6.1

Table 1. Coordinates and Elevations of Station Locations (Continued)

Station	Northing	Easting	Mudline Elevation
MW054	707001.90	1161881.58	7.2
MW055	708441.56	1161044.79	-0.4
MW10a	708944.61	1160769.16	1
MW10b	708869.23	1160868.85	0
MW10c	708393.49	1161012.62	0
MW11a	709061.06	1160654.74	8.5
MW11a-SP	709046.43	1160654.66	8.8
MW11b	709262.37	1160657.08	4
MW205	715548.00	1169700.00	
MW206	715548.00	1169887.00	
MW207	715464.00	1169901.00	
MW208	736703.36	1100904.61	
MW209	736775.24	1101495.75	
MW210	736682.00	1100796.94	
TF-20	707070.00	1161588.00	
TF-21	706975.00	1161704.00	
TF-22	706937.00	1161785.00	
TF-23	706948.00	1161874.00	

Northing and Eastings in NAD83-91
Elevation in feet COE MLLW

Table 2 Sediment Sample Analysis Summary

Sample ID	Testing Parameters									
	Sediment Conventionals (TOC, Total Sulfide, Ammonia, Total Solids, Grain Size)	SQO Analytes	TAL Analytes	Bioassay	Benthic	Field Grain Size (Wet Sieve)	Atterberg Limits	Porewater Tributyltin	Contaminant Mobility	QA/QC
SURFACE										
Subtidal										
MWSS016R1	x	x								
MWSS017R1	x	x								
MWSS018R1	x	x								
MWSS019R1	x	x								
MWSS020R1	x	x								
MWSS021R1	x	x	x							
MWSS022R1	x	x				x		x		
MWAS022R1				x						
MWBS022R1A					x					
MWBS022R1B					x					
MWBS022R1C					x					
MWBS022R1D					x					
MWBS022R1E					x					
MWBS022R1F					x					
MWBS022R1G					x					
MWSS023R1	x	x								
MWSS024R1	x	x				x		x		
MWAS024R1				x						
MWBS024R1A					x					
MWBS024R1B					x					
MWBS024R1C					x					
MWBS024R1D					x					
MWBS024R1E					x					
MWBS024R1F					x					
MSBS024R1G					x					
MWSS025R1	x	x				x		x		
MWAS025R1				x						
MWBS025R1A					x					
MWBS025R1B					x					
MWBS025R1C					x					
MWBS025R1D					x					
MWBS025R1E					x					
MWBS025R1F					x					
MWBS025R1G					x					
MWSS026R1	x	x								
MWSS027R1	x	x								
MWSS028R1	x	x						x		
MWSS029R1	x	x								
MWSS030R1	x	x						x		

Sample ID	Testing Parameters									
	Sediment Conventionals (TOC, Total Sulfide, Ammonia, Total Solids, Grain Size)	SQO Analytes	TAL Analytes	Bioassay	Benthic	Field Grain Size (Wet Sieve)	Atterberg Limits	Porewater Tributyltin	Contaminant Mobility	QA/QC
MWSS031R1	x	x						x		
MWSS032R1	x	x						x		
MWSS034R1	x	x						x		
MWSS035R1	x	x						x		
MWSS037R1	x	x								
MWSS026S1	x	x								x
MWSS037E1	x	x								x
MWSS026T1		x[1/]								x
Tideflat										
MWST039R1	x	x				x		x		
MWAT039R1				x						
MWBT039R1A					x					
MWBT039R1B					x					
MWBT039R1C					x					
MWBT039R1D					x					
MWBT039R1E					x					
MWBT039R1F					x					
MWBT039R1G					x					
MWST040R1	x	x				x		x		
MWAT040R1				x						
MWBT040R1A					x					
MWBT040R1B					x					
MWBT040R1C					x					
MWBT040R1D					x					
MWBT040R1E					x					
MWBT040R1F					x					
MWBT040R1G					x					
MWST042R1	x	x								
MWST043R1	x	x				x		x		
MWAT043R1				x						
MWBT043R1A					x					
MWBT043R1B					x					
MWBT043R1C					x					
MWBT043R1D					x					
MWBT043R1E					x					
MWBT043R1F					x					
MWBT043R1G					x					
MWST044R1	x	x								
MWST045R1	x	x								
MWST047R1	x	x						x		
MWST048R1	x	x				x		x		
MWAT048R1				x						

Table 2 Sediment Sample Analysis Summary

Sample ID	Testing Parameters									
	Sediment Conventionals (TOC, Total Sulfide, Ammonia, Total Solids, Grain Size)	SQO Analytes	TAL Analytes	Bioassay	Benthic	Field Grain Size (Wet Sieve)	Atterberg Limits	Porewater Tributyltin	Contaminant Mobility	QA/QC
MWBT048R1A					x					
MWBT048R1B					x					
MWBT048R1C					x					
MWBT048R1D					x					
MWBT048R1E					x					
MWBT048R1F					x					
MWBT048R1G					x					
MWST049R1	x	x				x				
MWAT049R1				x						
MWBT049R1A					x					
MWBT049R1B					x					
MWBT049R1C					x					
MWBT049R1D					x					
MWBT049R1E					x					
MWBT049R1F					x					
MWBT049R1G					x					
MWST051R1	x	x						x		
MWST052R1	x	x				x				
MWAT052R1				x						
MWBT052R1A					x					
MWBT052R1B					x					
MWBT052R1C					x					
MWBT052R1D					x					
MWBT052R1E					x					
MWBT052R1F					x					
MWBT052R1G					x					
MWST054R1	x	x	x			x		x		
MWAT054R1				x						
MWBT054R1A					x					
MWBT054R1B					x					
MWBT054R1C					x					
MWBT054R1D					x					
MWBT054R1E					x					
MWBT054R1F					x					
MWBT054R1G					x					
MWST040S1		x								x
MWST040E1		x								x
Bank (shoreline)										
MWSB001R1	x	x					x			
MWSB002R1	x	x					x			
MWSB03aR1	x	x					x			
MWSB03bR1	x	x					x			

Sample ID	Testing Parameters									
	Sediment Conventionals (TOC, Total Sulfide, Ammonia, Total Solids, Grain Size)	SQO Analytes	TAL Analytes	Bioassay	Benthic	Field Grain Size (Wet Sieve)	Atterberg Limits	Porewater Tributyltin	Contaminant Mobility	QA/QC
MWSB004R1	x	x					x			
MWSB008R1	x	x					x			
MWSB009R1	x	x					x			
MWSB10aR1	x	x					x			
MWSB10bR1	x	x					x			
MWSB10cR1	x	x					x			
MWSB11aR1	x	x					x			
MWSB11bR1	x	x					x			
MWSB012R1	x	x					x			
MWSB013R1	x	x					x			
MWSB014R1	x	x					x			
MWSB015R1	x	x					x			
MWSB008S1	x	x					x			x
MWSB03aE1	x	x					x			x
MWSB015S1	x	x					x			x
MWSB04aT1		x[1/]					x			x
MWSB10aT1		x[1/]					x			x
MWSB014T1		x[1/]					x			x
MWSB015T1		x[1/]					x			x
SUBSURFACE										
Subtidal										
MWCS024R2 A,B	x	x					x[2/]		x	
MWCS024R3 A,B	x	x								
MWCS025R2 A,B	x	x					x[2/]		x	
MWCS025R3 A,B	x	x								
MWCS025R4 A,B	x	x								
MWCS026R2 A,B	x	x					x			
MWCS026R3 A,B	x	x								
MWCS026R4 A,B	x	x								
MWCS027R2 A,B	x	x					x		x	
MWCS027R3 A,B	x	x					x[2/]		x	
MWCS027R4 A,B	x	x					x[2/]			
MWCS028R2 A,B	x	x								
MWCS028R3 A,B	x	x								
MWCS028R4 A,B	x	x								
MWCS029R2 A,B	x	x							x	
MWCS029R3 A,B	x	x								
MWCS029R4 A,B	x	x								
MWCS030R2 A,B	x	x					x		x	
MWCS030R3 A,B	x	x								
MWCS030R4 A,B	x	x								

Table 2 Sediment Sample Analysis Summary

Sample ID	Testing Parameters									
	Sediment Conventionals (TOC, Total Sulfide, Ammonia, Total Solids, Grain Size)	SQO Analytes	TAL Analytes	Bioassay	Benthic	Field Grain Size (Wet Sieve)	Atterberg Limits	Porewater Tributyltin	Contaminant Mobility	QA/QC
MWCS031R2 A,B	x	x							x	
MWCS031R3 A,B	x	x								
MWCS031R4 A,B	x	x								
MWCS034R2 A,B	x	x								
MWCS034R3 A,B	x	x								
MWCS034R4 A,B	x	x								
MWCS035R2 A,B	x	x								
MWCS035R3 A,B	x	x								
MWCS035R4 A,B	x	x								
MWCS037R2 A,B	x	x							x	
MWCS037R3 A,B	x	x					x[2]			
MWCS037R4 A,B	x	x								
MWCS029S2A	x	x								x
MWCS001E	x	x								x
MWCS002E	x	x								x
MWCS003E	x	x								x
MWCS004E	x	x								x
MWCS030S2A	x	x								x
MWCS035S4A	x	x								x
Tideflat										
MWCT040R2 A,B,C	x	x							x	
MWCT040R3 A,B,C	x	x								
MWCT040R4 A,B,C	x	x								
Runoff Channel										

Sample ID	Testing Parameters									
	Sediment Conventionals (TOC, Total Sulfide, Ammonia, Total Solids, Grain Size)	SQO Analytes	TAL Analytes	Bioassay	Benthic	Field Grain Size (Wet Sieve)	Atterberg Limits	Porewater Tributyltin	Contaminant Mobility	QA/QC
MWCT041R2	x	x								
MWCT046R2	x	x								
MWCT050R2	x	x								
MWCT053R2	x	x	x							
REFERENCE [2/]										
Subtidal										
MWRM201R1	x	x				x				
MWRM201R1A					x					
MWRM201R1B					x					
MWRM201R1C					x					
MWRM201R1D					x					
MWRM201R1E					x					
MWRM201R1F					x					
MWRM201R1G					x					
MWRM202R1	x	x				x				
MWRM202R1A					x					
MWRM202R1B					x					
MWRM202R1C					x					
MWRM202R1D					x					
MWRM202R1E					x					
MWRM202R1F					x					
MWRM202R1G					x					
MWRC203R1	x[3/]			x		x				
MWRC204R1	x[3/]			x		x				
MWRM201T1		x[1/]					x			x
Tideflat										
MWRH205R1	x	x				x				
MWRH205R1A					x					
MWRH205R1B					x					
MWRH205R1C					x					
MWRH205R1D					x					
MWRH205R1E					x					
MWRH205R1F					x					
MWRH205R1G					x					
MWRH206R1	x	x				x				
MWRH206R1A					x					
MWRH206R1B					x					
MWRH206R1C					x					
MWRH206R1D					x					
MWRH206R1E					x					
MWRH206R1F					x					

Table 2 Sediment Sample Analysis Summary

Sample ID	Testing Parameters									
	Sediment Conventionals (TOC, Total Sulfide, Ammonia, Total Solids, Grain Size)	SQO Analytes	TAL Analytes	Bioassay	Benthic	Field Grain Size (Wet Sieve)	Atterberg Limits	Porewater Tributyltin	Contaminant Mobility	QA/QC
MWRH206R1G					x					
MWRH207R1	x	x				x				
MWRH207R1A					x					
MWRH207R1B					x					
MWRH207R1C					x					
MWRH207R1D					x					
MWRH207R1E					x					
MWRH207R1F					x					
MWRH207R1G					x					
MWRC208R1	x[3/]			x		x				
MWRC209R1	x[3/]			x		x				
MWRC210R1	x[3/]			x		x				

1/ Trip blanks will be analyzed for VOCs from the SQO list only
2/ Submitted for test but samples were too coarse for a result.
3/ Grain size only

Table 3. Sediment Quality Objective Standards

Compound	Value	Units
Metals		
Antimony	150	mg/kg
Arsenic	57	mg/kg
Cadmium	5.1	mg/kg
Copper	390	mg/kg
Lead	450	mg/kg
Mercury	0.59	mg/kg
Nickel	140	mg/kg
Silver	6.1	mg/kg
Zinc	410	mg/kg
Phenols		
2,4-Dimethylphenol	29	ug/kg
2-Methylphenol	63	ug/kg
4-Methylphenol	670	ug/kg
Pentachlorophenol	360	ug/kg
Phenol	420	ug/kg
Low Molecular Weight Polycyclic Hydrocarbons		
2-Methylnaphthalene	670	ug/kg
Acenaphthene	500	ug/kg
Acenaphthylene	1300	ug/kg
Anthracene	960	ug/kg
Fluorene	540	ug/kg
Naphthalene	2100	ug/kg
Phenanthrene	1500	ug/kg
Total LPAH	5200	ug/kg
High Molecular Weight Polycyclic Hydrocarbons		
Benzo(a)anthracene	1600	ug/kg
Benzo(a)pyrene	1600	ug/kg
Benzo(g,h,i)perylene	720	ug/kg
Benzofluoranthenes	3600	ug/kg
Chrysene	2800	ug/kg
Dibenzo(a,h)anthracene	230	ug/kg

Table 3. Sediment Quality Objective Standards (Continued)

Compound	Value	Units
Fluoranthene	2500	ug/kg
Indeno(1,2,3-cd)pyrene	690	ug/kg
Pyrene	3300	ug/kg
Total HPAH	17000	ug/kg
Chlorinated Aromatic Compounds		
1,2,4-Trichlorobenzene	51	ug/kg
1,2-Dichlorobenzene	50	ug/kg
1,3-Dichlorobenzene	170	ug/kg
1,4-Dichlorobenzene	110	ug/kg
Hexachlorobenzene	22	ug/kg
Volatile Organic Compounds		
Ethylbenzene	10	ug/kg
Tetrachloroethene	57	ug/kg
Xylenes (total)	40	ug/kg
Chlorinated Aliphatic Compound		
Hexachlorobutadiene	11	ug/kg
Phthalates		
bis(2-Ethylhexyl)phthalate	1300	ug/kg
Butylbenzylphthalate	900	ug/kg
Di-n-butylphthalate	1400	ug/kg
Di-n-octylphthalate	6200	ug/kg
Diethylphthalate	200	ug/kg
Dimethylphthalate	160	ug/kg
Miscellaneous Extractable Compounds		
Benzoic acid	650	ug/kg
Benzyl alcohol	73	ug/kg
Dibenzofuran	540	ug/kg
N-Nitrosodiphenylamine	28	ug/kg
Pesticides		
4,4-DDD	16	ug/kg
4,4-DDE	9	ug/kg
4,4-DDT	34	ug/kg

Table 3. Sediment Quality Objective Standards (Continued)

Compound	Value	Units
Polychlorinated Biphenyls (PCBs)		
PCB (Total)	300	ug/kg

Table 4. Target Analyte List Standards

Compound	Value	Units
Metals		
Antimony	150	mg/kg
Arsenic	57	mg/kg
Cadmium	5.1	mg/kg
Chromium	260	mg/kg
Copper	390	mg/kg
Lead	450	mg/kg
Mercury	0.59	mg/kg
Nickel	140	mg/kg
Silver	6.1	mg/kg
Zinc	410	mg/kg
Phenols		
2,4-Dimethylphenol	29	ug/kg
2-Methylphenol	63	ug/kg
4-Methylphenol	670	ug/kg
Pentachlorophenol	360	ug/kg
Phenol	420	ug/kg
Low Molecular Weight Polycyclic Hydrocarbons		
2-Methylnaphthalene	670	ug/kg
Acenaphthene	500	ug/kg
Acenaphthylene	1300	ug/kg
Anthracene	960	ug/kg
Fluorene	540	ug/kg
Naphthalene	2100	ug/kg
Phenanthrene	1500	ug/kg
Total LPAH	5200	ug/kg
High Molecular Weight Polycyclic Hydrocarbons		
Benzo(a)anthracene	1600	ug/kg
Benzo(a)pyrene	1600	ug/kg
Benzo(g,h,i)perylene	720	ug/kg
Benzofluoranthenes	3600	ug/kg

Table 4. Target Analyte List Standards (Continued)

Compound	Value	Units
Chrysene	2800	ug/kg
Dibenzo(a,h)anthracene	230	ug/kg
Fluoranthene	2500	ug/kg
Indeno(1,2,3-cd)pyrene	690	ug/kg
Pyrene	3300	ug/kg
Total HPAH	17000	ug/kg
Chlorinated Aromatic Compounds		
1,2,4-Trichlorobenzene	51	ug/kg
1,2-Dichlorobenzene	50	ug/kg
1,3-Dichlorobenzene	170	ug/kg
1,4-Dichlorobenzene	110	ug/kg
Hexachlorobenzene	22	ug/kg
Volatile Organic Compounds		
Ethylbenzene	10	ug/kg
Tetrachloroethene	57	ug/kg
Trichloroethene	160	ug/kg
Xylenes (total)	40	ug/kg
Chlorinated Aliphatic Compound		
Hexachlorobutadiene	11	ug/kg
Phthalates		
bis(2-Ethylhexyl)phthalate	1300	ug/kg
Butylbenzylphthalate	900	ug/kg
Di-n-butylphthalate	1400	ug/kg
Di-n-octylphthalate	6200	ug/kg
Diethylphthalate	200	ug/kg
Dimethylphthalate	160	ug/kg
Miscellaneous Extractable Compounds		
Benzoic acid	650	ug/kg
Benzyl alcohol	73	ug/kg
Dibenzofuran	540	ug/kg
Hexachloroethane	1400	ug/kg

Table 4. Target Analyte List Standards (Continued)

Compound	Value	Units
N-Nitrosodiphenylamine	28	ug/kg
Pesticides		
4,4-DDD	16	ug/kg
4,4-DDE	9	ug/kg
4,4-DDT	34	ug/kg
Aldrin	10	ug/kg
Dieldrin	10	ug/kg
gamma-BHC (Lindane)	10	ug/kg
Heptachlor	10	ug/kg
Polychlorinated Biphenyls (PCBs)		
PCB (Total)	300	ug/kg

All chemical criteria shown are SQOs from CBNT ROD except those listed below
Chromium from SMS SQS
Trichloroethene, Hexachloroethane, Aldrin, alpha-Chlordane, Dieldrin, Heptachlor, and Lindane from PSSDA SL

Table 5. Data Evaluation Summary (Summary of All Sample Delivery Groups)

Date: October 14, 1998

Site Name: Middle Waterway

Lab Name: MultiChem Analytical

Type of Review: PSEP

Number of Samples: 147

Analytes Estimated Due to Exceeding Review Criteria For:

	Surrogates	Holding Time	Calibration	Contamination	MS/MSD	Internal Standard	Other	Total # of Analytes	Total # Estimated/Total # in all Samples
VOA		8			19	42		69	26/1030 = 6.7 %
SVOA		68	43		154		1	266	266/1082 = 24.6 %
PEST					1		10**	11	11/555 = 1.9 %
PCB		8			1		2+2**	13	13/777 = 1.7 %
METALS					78		3**	81	81/2553 = 3.2 %
INORG					12		8**	20	20/777 = 2.6 %
TBT					1			1	1/104 = 1.0

Note: Asterisk (*) indicates additional exceedances of review criteria ** Indicates calculation errors

Analytes Rejected Due to Exceeding Review Criteria For:

	Surrogates	Holding Time	Calibration	Contamination	MS/MSD	Internal Standard	Other 1/	Total # of Analytes	Total # Estimated/Total # in all Samples
VOA							134	134	134/1030 = 13 %
SVOA								0	0/1082 = 0 %
PEST								0	0/555 = 0 %
PCB								0	0/777 = 0 %
METALS								0	0/2553 = 0 %
INORG								0	0/777 = 0 %
TBT								0	0/104 = 0 %

1/ Samples were rejected because there was a corresponding analytical run/value of better quality due to several reasons, including re-extraction/re-analysis or dilution of sample extract.

Table 5. Data Evaluation Summary (Summary of All Sample Delivery Groups) (Continued)

Date: April 26, 1999

Site Name: Middle Waterway

Lab Name: MultiChem Analytical

Type of Review: PSEP

Number of Samples: 20

Analytes Estimated Due to Exceeding Review Criteria For:

	Surrogates	Holding Time	Calibration	Contamination	MS/MSD BS/BSD	Internal Standard	Other	Total # of Analytes	Total # Estimated/Total # in all Samples
VOA								0	0/8 = 0 %
SVOA			7		8			8	8/120 = 6.7 %
PEST		55	1		2			58	58/100 = 58 %
PCB								0	0/7 = 0 %
METALS				4	9		3	16	16/180 = 9.7 %
INORG								0	0/10 = 0 %

Analytes Rejected Due to Exceeding Review Criteria For:

	Surrogates	Holding Time	Calibration	Contamination	MS/MSD BS/BSD	Internal Standard	Other	Total # of Analytes	Total # Estimated/Total # in all Samples
VOA								0	0/8 = 0 %
SVOA			1		1			1	1/120 = 0.8 %
PEST								0	0/100 = 0 %
PCB								0	0/7 = 0 %
METALS								0	0/180 = 0 %
INORG								0	0/10 = 0 %

Table 6. Round 1A Surface Sediment Exceedences

Chemical	Concentration	Flag	Units	SQO	EF
MW018 (MWSS018R1, Foster Wheeler, 1998)					
Miscellaneous Extractable Compounds					
N-Nitrosodiphenylamine	29.00		ug/kg	28	1.04
MW021 (MWSS021R1, Foster Wheeler, 1998)					
Metals					
Mercury	0.76		mg/kg	0.59	1.29
MW022 (MWSS022R1, Foster Wheeler, 1998)					
Miscellaneous Extractable Compounds					
N-Nitrosodiphenylamine	46.00		ug/kg	28	1.64
Metals					
Copper	637.00		mg/kg	390	1.63
Mercury	2.20	E	mg/kg	0.59	3.73
MW024 (MWSS024R1, Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Fluoranthene	4300.00		ug/kg	2500	1.72
Pyrene	3500.00		ug/kg	3300	1.06
Low Molecular Weight Polycyclic Hydrocarbons					
Anthracene	1000.00		ug/kg	960	1.04
MW025 (MWSS025R1, Foster Wheeler, 1998)					
Metals					
Mercury	5.90	E	mg/kg	0.59	10.00
MW026 (MWSS026R1, Foster Wheeler, 1998)					
Metals					
Arsenic	70.00		mg/kg	57	1.23
Zinc	423.00		mg/kg	410	1.03
MW027 (MWSS027R1, Foster Wheeler, 1998)					
Metals					
Mercury	0.89		mg/kg	0.59	1.51
MW028 (MWSS028R1, Foster Wheeler, 1998)					
Low Molecular Weight Polycyclic Hydrocarbons					
Fluorene	550.00		ug/kg	540	1.02
MW029 (MWSS029R1, Foster Wheeler, 1998)					
Metals					
Mercury	1.20		mg/kg	0.59	2.03
MW030 (MWSS030R1, Foster Wheeler, 1998)					
Metals					
Mercury	2.00		mg/kg	0.59	3.39

Table 6. Round 1A Surface Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
MW031 (MWSS031R1, Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	2000.00		ug/kg	1600	1.25
Benzofluoranthenes	7800.00		ug/kg	3600	2.17
Chrysene	2900.00		ug/kg	2800	1.04
Fluoranthene	6900.00		ug/kg	2500	2.76
Pyrene	5900.00		ug/kg	3300	1.79
Total HPAH	28430.00		ug/kg	17000	1.67
Low Molecular Weight Polycyclic Hydrocarbons					
Acenaphthene	660.00		ug/kg	500	1.32
Anthracene	1000.00		ug/kg	960	1.04
Fluorene	710.00		ug/kg	540	1.31
Phenanthrene	3700.00		ug/kg	1500	2.47
Total LPAH	7280.00		ug/kg	5200	1.40
Miscellaneous Extractable Compounds					
N-Nitrosodiphenylamine	43.00	U	ug/kg	28	1.54
Metals					
Mercury	0.92		mg/kg	0.59	1.56
Polychlorinated Biphenyls (PCBs)					
PCB (total)	1300.00		ug/kg	300	4.33
Pesticides					
4,4-DDE	93.00		ug/kg	9	10.33
Phthalates					
Butylbenzylphthalate	1000.00	U	ug/kg	900	1.11
MW032 (MWSS032R1, Foster Wheeler, 1998)					
Miscellaneous Extractable Compounds					
Benzoic acid	1300.00	J	ug/kg	650	2.00
Metals					
Arsenic	97.20		mg/kg	57	1.71
Copper	1100.00	E	mg/kg	390	2.82
Mercury	4.70		mg/kg	0.59	7.97
Zinc	515.00		mg/kg	410	1.26
MW034 (MWSS034R1, Foster Wheeler, 1998)					
Metals					
Mercury	0.74		mg/kg	0.59	1.25
Phenols					
Phenol	620.00	E	ug/kg	420	1.48

Table 6. Round 1A Surface Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
MW035 (MWSS035R1, Foster Wheeler, 1998)					
Miscellaneous Extractable Compounds					
N-Nitrosodiphenylamine	32.00	U	ug/kg	28	1.14
Metals					
Mercury	1.10		mg/kg	0.59	1.86
MW037 (MWSS037R1, Foster Wheeler, 1998)					
Miscellaneous Extractable Compounds					
N-Nitrosodiphenylamine	66.00		ug/kg	28	2.36
Metals					
Mercury	1.40	E	mg/kg	0.59	2.37
MW039 (MWST039R1, Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	1800.00		ug/kg	1600	1.13
Benzo(g,h,i)perylene	990.00		ug/kg	720	1.38
Benzofluoranthenes	4800.00		ug/kg	3600	1.33
Fluoranthene	7800.00		ug/kg	2500	3.12
Indeno(1,2,3-cd)pyrene	740.00		ug/kg	690	1.07
Pyrene	4900.00		ug/kg	3300	1.48
Total HPAH	24470.00		ug/kg	17000	1.44
Low Molecular Weight Polycyclic Hydrocarbons					
Acenaphthene	1200.00		ug/kg	500	2.40
Anthracene	1700.00		ug/kg	960	1.77
Fluorene	1500.00		ug/kg	540	2.78
Phenanthrene	3200.00		ug/kg	1500	2.13
Total LPAH	10220.00		ug/kg	5200	1.97
Miscellaneous Extractable Compounds					
Dibenzofuran	1200.00		ug/kg	540	2.22
MW042 (MWST042R1, Foster Wheeler, 1998)					
Metals					
Mercury	1.00	E	mg/kg	0.59	1.69
MW044 (MWST044R1, Foster Wheeler, 1998)					
Metals					
Mercury	2.60	E	mg/kg	0.59	4.41
MW045 (MWST045R1, Foster Wheeler, 1998)					
Metals					
Mercury	0.85		mg/kg	0.59	1.44

Table 6. Round 1A Surface Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
MW047 (MWST047R1, Foster Wheeler, 1998)					
Metals					
Mercury	1.70	*N	mg/kg	0.59	2.88
Phenols					
4-Methylphenol	690.00		ug/kg	670	1.03
MW048 (MWST048R1, Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)pyrene	1700.00	E	ug/kg	1600	1.06
Benzo(g,h,i)perylene	750.00		ug/kg	720	1.04
Benzofluoranthenes	4800.00		ug/kg	3600	1.33
Fluoranthene	3200.00		ug/kg	2500	1.28
Pyrene	3600.00		ug/kg	3300	1.09
Total HPAH	18120.00		ug/kg	17000	1.07
Low Molecular Weight Polycyclic Hydrocarbons					
Acenaphthene	1100.00		ug/kg	500	2.20
Fluorene	840.00		ug/kg	540	1.56
Naphthalene	2800.00		ug/kg	2100	1.33
Phenanthrene	2500.00		ug/kg	1500	1.67
Total LPAH	8970.00		ug/kg	5200	1.73
MW051 (MWST051R1, Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	6300.00		ug/kg	1600	3.94
Benzo(a)pyrene	6400.00		ug/kg	1600	4.00
Benzo(g,h,i)perylene	3800.00		ug/kg	720	5.28
Benzofluoranthenes	24000.00		ug/kg	3600	6.67
Chrysene	6400.00		ug/kg	2800	2.29
Fluoranthene	13000.00		ug/kg	2500	5.20
Indeno(1,2,3-cd)pyrene	3400.00		ug/kg	690	4.93
Pyrene	15000.00	E	ug/kg	3300	4.55
Total HPAH	78300.00		ug/kg	17000	4.61
Low Molecular Weight Polycyclic Hydrocarbons					
2-Methylnaphthalene	1400.00		ug/kg	670	2.09
Acenaphthene	4600.00		ug/kg	500	9.20
Acenaphthylene	1600.00		ug/kg	1300	1.23
Anthracene	2600.00		ug/kg	960	2.71
Fluorene	3800.00		ug/kg	540	7.04
Naphthalene	5300.00		ug/kg	2100	2.52

Table 6. Round 1A Surface Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
Phenanthrene	13000.00		ug/kg	1500	8.67
Total LPAH	32300.00		ug/kg	5200	6.21
Miscellaneous Extractable Compounds					
Dibenzofuran	2900.00		ug/kg	540	5.37
N-Nitrosodiphenylamine	190.00	J	ug/kg	28	6.79
Metals					
Mercury	0.92	E	mg/kg	0.59	1.56
Phenols					
2,4-Dimethylphenol	100.00		ug/kg	29	3.45
2-Methylphenol	77.00		ug/kg	63	1.22
MW052 (MWST052R1, Foster Wheeler, 1998)					
Miscellaneous Extractable Compounds					
N-Nitrosodiphenylamine	83.00		ug/kg	28	2.96
MW054 (MWST054R1, Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	1800.00		ug/kg	1600	1.13
Benzofluoranthenes	5600.00		ug/kg	3600	1.56
Fluoranthene	4400.00		ug/kg	2500	1.76
Indeno(1,2,3-cd)pyrene	1200.00		ug/kg	690	1.74
Pyrene	5000.00		ug/kg	3300	1.52
Total HPAH	20620.00		ug/kg	17000	1.21
Low Molecular Weight Polycyclic Hydrocarbons					
2-Methylnaphthalene	910.00		ug/kg	670	1.36
Acenaphthene	580.00		ug/kg	500	1.16
Anthracene	1500.00		ug/kg	960	1.56
Fluorene	1100.00		ug/kg	540	2.04
Naphthalene	4200.00		ug/kg	2100	2.00
Phenanthrene	4100.00		ug/kg	1500	2.73
Total LPAH	13080.00		ug/kg	5200	2.52
Miscellaneous Extractable Compounds					
Dibenzofuran	580.00		ug/kg	540	1.07
Metals					
Mercury	0.83	E	mg/kg	0.59	1.41
Phenols					
2,4-Dimethylphenol	54.00		ug/kg	29	1.86

Table 6. Round 1A Surface Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
MW055 (MWSS055R1, Foster Wheeler, 1998)					
Metals					
Copper	402.00		mg/kg	390	1.03
Mercury	2.90	E	mg/kg	0.59	4.92
TF-20 (TF-20, City of Tacoma, 1997)					
Chlorinated Aromatic Compounds					
1,2-Dichlorobenzene	99.00	U	ug/kg	50	1.98
TF-21 (TF-21A, City of Tacoma, 1997)					
Metals					
Mercury	0.82	J	mg/kg	0.59	1.39
Phthalates					
bis(2-Ethylhexyl)phthalate	1600.00		ug/kg	1300	1.23
TF-22 (TF-22A, City of Tacoma, 1997)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	3100.00		ug/kg	1600	1.94
Benzo(a)pyrene	3500.00		ug/kg	1600	2.19
Benzo(g,h,i)perylene	1900.00		ug/kg	720	2.64
Benzofluoranthenes	7100.00		ug/kg	3600	1.97
Chrysene	4700.00		ug/kg	2800	1.68
Dibenzo(a,h)anthracene	650.00		ug/kg	230	2.83
Fluoranthene	4100.00		ug/kg	2500	1.64
Indeno(1,2,3-cd)pyrene	1600.00		ug/kg	690	2.32
Pyrene	3400.00		ug/kg	3300	1.03
Total HPAH	30050.00		ug/kg	17000	1.77
Low Molecular Weight Polycyclic Hydrocarbons					
Phenanthrene	2200.00		ug/kg	1500	1.47
Metals					
Mercury	0.69	J	mg/kg	0.59	1.17
Phthalates					
bis(2-Ethylhexyl)phthalate	3500.00		ug/kg	1300	2.69
TF-23 (TF-23, City of Tacoma, 1997)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(g,h,i)perylene	750.00		ug/kg	720	1.04
Metals					
Copper	398.00	J	mg/kg	390	1.02
Mercury	2.26	J	mg/kg	0.59	3.83

Table 6. Round 1A Surface Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
Polychlorinated Biphenyls (PCBs)					
PCB (total)	480.00		ug/kg	300	1.60
Pesticides					
4,4-DDT	40.00	U	ug/kg	34	1.18

SQO - Sediment Quality Objective
EF - Exceednace Factor = Concentration divided by SQO
* - Duplicate analysis not within control limits
E - Estimated
J - Estimated Value
N - Spiked sample recovery not within control limits
U - Value not detected

Table 7. Conventional and Physical Test Results

Sample Name	Ammonia as Nitrogen mg/kg	Total Sulfides mg/kg	Percent Gravel[1] %	Percent Sand %	Percent Silt %	Percent Clay %	Percent Fines %	Percent Solids %	Percent TOC %
Surface Samples									
MWSS016R1	13.8	32	25.3	24.2	38.6	11.9	50.5	55	3.34
MWSS017R1	7.9	7	3	27.9	56.5	12.7	69.2	42	2.7
MWSS018R1	7.7	180	18.2	41.7	29.7	10.4	40.1	53	5.89
MWSS019R1	9.9	230	8.6	52.7	30.9	7.9	38.7	47	3.42
MWSS020R1	6.7	73	2.6	53.2	36.4	7.8	44.2	69	0.949
MWSS021R1	13.8	53	1.1	39.1	46.6	13.2	59.8	48	2.66
MWSS022R1	1.3	167	59.8	21.5	14	4.7	18.7	60	4.35
MWSS023R1	7.8	14	0	68	27.2	4.8	32	66	1.66
MWSS024R1	14	723	9	38.1	38.2	14.7	53	42	4.42
MWSS025R1	12	49.5	1.7	38.3	41.6	18.4	60	50	3.03
MWSS026S1	11.8	80.1						64	3.08
MWSS026R1	6.1	148	19.7	33.6	35.3	11.4	46.7	62	2.44
MWSS027R1	8.8	517	1.5	40.2	41.4	16.9	58.3	48	3.32
MWSS028R1	2	162	45.3	27.5	22.1	5.1	27.2	70	1.26
MWSS029R1	14.5	962	1.8	33.5	47.6	17.2	64.7	48	3.02
MWSS030R1	13.4	1080	3	30	50.1	16.9	67	46	3.61

Table 7. Conventional and Physical Test Results (Continued)

Sample Name	Ammonia as Nitrogen mg/kg	Total Sulfides mg/kg	Percent Gravel[1] %	Percent Sand %	Percent Silt %	Percent Clay %	Percent Fines %	Percent Solids %	Percent TOC %
MWSS031R1	20.2	302	3.1	53.9	29.9	13.2	43	40	6.34
MWSS032R1	12.6	1180	3.5	66.8	21.8	7.9	29.7	64	2.4
MWSS034R1	23.4	667	0.5	30.8	52.2	16.4	68.7	55	2.95
MWSS035R1	20.8	279	4.4	56.5	30.9	8.2	39.1	54	2.71
MWSS037R1	15.1	178	2	36.3	51.7	10.1	61.7	49	4.98
MWST039R1	10.1	13	2.6	57.1	32.2	8.1	40.3	66	2.98
MWST040S1	4.5	4						56	1.71
MWST040R1	4.2	5	0	58.1	37.1	4.8	41.9	65	1.44
MWSS040R1	6.2	0.5 UND	0.1	61.8	34	4.1	38.1	66	
MWST042R1	6.6	224	1.5	56.7	32.6	9.1	41.7	55	6.17
MWST043R1	8.4	6	0.2	48	44	7.8	51.8	62	2.26
MWST044R1	9	39	4.5	33.6	48.3	13.6	61.9	41	5.5
MWST045R1	12.3	211	1.6	46.3	42.5	9.6	52.1	51	5.27
MWST047R1	8	620	5.3	31.3	51.1	12.3	63.4	38	5.23
MWST048R1	9.5	37	0.3	36	55	8.8	63.8	55	2.79
MWST049R1	3.5	252	0.9	70.1	23.3	5.6	29	63	1.65
MWST051R1	14	56	5.3	30.3	51.2	13.2	64.4	50	7.82

Table 7. Conventional and Physical Test Results (Continued)

Sample Name	Ammonia as Nitrogen mg/kg	Total Sulfides mg/kg	Percent Gravel[1] %	Percent Sand %	Percent Silt %	Percent Clay %	Percent Fines %	Percent Solids %	Percent TOC %
MWST052R1	10.3	190	0.4	46.2	44.3	9.1	53.4	55	3.32
MWST054R1	6.5	275	11.2	30.7	41.9	16.2	58	40	13
MWSS055R1	10.8	694	0.1	30	51.6	18.2	69.9	47	3.39

Table 7. Conventional and Physical Test Results (Continued)

Sample Name	Ammonia as Nitrogen mg/kg	Total Sulfides mg/kg	Percent Gravel[1] %	Percent Sand %	Percent Silt %	Percent Clay %	Percent Fines %	Percent Solids %	Percent TOC %
Subsurface Samples									
MWCS024R2A	20.2	12.2	1.5	43.7	46.2	8.6	54.8	68	5.08
MWCS024R3A	12.2	5.2	0.1	55.2	40.6	4	44.7	74	0.833
MWCS025R2A	13.9	792	5.5	45.4	39.1	10	49	63	3.79
MWCS025R3A	19.9	54.3	0.2	87.1	10	2.7	12.7	80	0.325
MWCS025R4A	21.1	51.7	0.9	78.1	17	4	21	80	0.512
MWCS026R2A	15.9	174	0.1	13.1	70.8	16.1	86.9	67	0.977
MWCS026R3A	9.8	260	0	43.8	50.1	6.1	56.2	74	0.425
MWCS026R4A	19.1	186	0.3	39.1	50.2	10.4	60.6	75	0.395
MWCS027R2A	121	181	21	34.8	30.1	14.1	44.2	54	5.95
MWCS027R3A	74.6	257	0.1	17	69.1	13.8	82.9	70	1.43
MWCS027R4A	65.1	120	0	37.6	55.1	7.4	62.4	72	0.65
MWCS028R4A	13.1	93.5	0.1	30.1	58.7	11.2	69.8	73	1.41
MWCS028R2A	0.3	49.6	0.8	77.6	18.7	2.9	21.6	76	1.47
MWCS028R3A	1.2	38.1	1.3	88.2	8.5	2	10.5	78	0.753
MWCS029R2A	35.7	32.1	0	73.9	23.4	2.7	26.1	74	0.361
MWCS029R3A	28.7	67.1	0	49	44.5	6.5	51	77	0.376

Table 7. Conventional and Physical Test Results (Continued)

Sample Name	Ammonia as Nitrogen mg/kg	Total Sulfides mg/kg	Percent Gravel[1] %	Percent Sand %	Percent Silt %	Percent Clay %	Percent Fines %	Percent Solids %	Percent TOC %
MWCS029R4A	30.2	36.3	0	67.1	28.5	4.4	32.9	75	0.453
MWCS030R2A	109	657	3.6	16.1	59.7	20.6	80.3	57	3.26
MWCS030R3A	8.1	54.4	0.3	76.4	20.1	3.3	23.4	81	6.03
MWCS030S2A	99.2	620	9.4	16.4	56	18.3	74.3	63	2.96
MWCS031R2A	31.1	727	14.6	54.1	23.6	7.8	31.3	64	5.86
MWCS031R3A	51.7	113	1.5	46.2	40.9	11.4	52.3	66	3.39
MWCS031R4A	24.7	2.6	0.6	85.6	11.6	2.2	13.8	82	0.492
MWCS034R3A	1.3	33	0.1	50.3	44.2	5.4	49.6	77	0.449
MWCS034R4A	7.6	57.2	0.1	67.1	29.2	3.7	32.8	72	0.911
MWCS034R2A	1.5	30.2	2.7	52.9	36.9	7.4	44.4	73	1.69
MWCS035R3A	5.6	54.3	0	34.4	58	7.6	65.6	73	0.666
MWCS035R4A	24.2	46.2	0	47.1	48.1	4.8	52.9	73	0.575
MWCS035S4A	23.5	69.4	0	39.2	55.4	5.4	60.8	75	0.575
MWCS035R2A	0.8	70.7	2	67	25.4	5.5	31	76	1.5
MWCS037R2A	5.7	69	3	86.7	8.2	2.2	10.3	77	2.92
MWCS037R3A	45.6	6.4	0.1	68.1	26.1	5.7	31.8	79	0.321
MWCS037R4A	47.6	4.1	0	65.8	29.4	4.8	34.2	72	0.421

Table 7. Conventional and Physical Test Results (Continued)

Sample Name	Ammonia as Nitrogen mg/kg	Total Sulfides mg/kg	Percent Gravel[1] %	Percent Sand %	Percent Silt %	Percent Clay %	Percent Fines %	Percent Solids %	Percent TOC %
MWCS040R2A	2.8	1.8	1.8	56.6	36.4	5.3	41.6	75	3.92
MWCS040R3A	0.4	17.4	0.1	39.7	53.2	7	60.2	79	0.667
MWCS040R4A	1.5	19.9	0.7	88.1	9.1	2.2	11.3	86	0.285
MWCT041R2	10.1	626	1.3	47.1	42.5	9.1	51.6	55	4.24
MWCT046R2	4.5	34	0.5	47.5	37.9	14.1	52	52	3.67
MWCT050R2	13.2	826	1	34	52.3	12.6	64.9	61	4.53
MWCT053R2	5.3	83	1.8	15.7	72.1	10.5	82.6	58	2.66

Table 7. Conventional and Physical Test Results (Continued)

Sample Name	Ammonia as Nitrogen mg/kg	Total Sulfides mg/kg	Percent Gravel[1] %	Percent Sand %	Percent Silt %	Percent Clay %	Percent Fines %	Percent Solids %	Percent TOC %
Bank Samples									
MWSB001R1	12.5	719	13.5	74.8	8.4	3.4	11.8	60	2
MWSB002R1	9.1	183	22.4	65.7	6.9	5	11.9	63	0.998
MWSB008R1	12.2	982	36.1	48.8	10.7	4.4	15.1	63	2.59
MWSB008S1	5.4	1230						50	1.57
MWSB008R1 SP	9.6	7.8	27.9	60.9	8.4	2.7	11.1	72	3.16
MWSB009R1	10	770	11	46	34.2	8.8	43	47	3.29
MWSB009R1 SP	14	663	3.7	32.1	52.7	11.4	64.1	44	3.6
MWSB012R1	2	2	14.6	65.8	15.1	4.5	19.6	62	4.86
MWSB013R1	1.7	70	46	48.6	3.3	2.1	5.4	76	0.519
MWSB014R1	6.7	3	54.7	41.5	3.1	0.6	3.7	71	1.7
MWSB015R1	9.3	41.6	5.9	78.4	12.2	3.5	15.7	52	1.49
MWSB015S1	17	114						70	1.8
MWSB03aR1	11.1	3.9	14.8	74.6	7	3.7	10.7	51	2.85
MWSB03bR1	11.8	135	5.2	76.1	14.6	4.2	18.8	57	3.12
MWSB04aR1	10.5	527	8.8	78.9	9.9	2.4	12.3	61	1.22
MWSB04bR1	13.2	344	5.9	73.2	16.1	4.8	20.9	64	3.5

Table 7. Conventional and Physical Test Results (Continued)

Sample Name	Ammonia as Nitrogen mg/kg	Total Sulfides mg/kg	Percent Gravel[1] %	Percent Sand %	Percent Silt %	Percent Clay %	Percent Fines %	Percent Solids %	Percent TOC %
MWSB04bR1 SP	4	223	6.1	87.7	4.2	2	6.2	76	2.69
MWSB10aR1	6.8	5	11	71.5	12.7	4.7	17.4	73	1.37
MWSB10bR1	6.7	6	38.7	43.9	11.9	5.5	17.4	68	1.72
MWSB10cR1	4.7	7	34.1	52.3	9.1	4.5	13.6	49	2.15
MWSB11aR1	6.6	4	24.5	69.8	4.1	1.6	5.7	51	0.847
MWSB11aR1 SP	3.6	119	23.7	71.6	3	1.7	4.7	57	1.72
MWSB11bR1	6.4	199	31.6	55.6	8.8	4.1	12.9	70	1.79

1 - "Percent Gravel" is a percent gravel-size material in the sample and may include wood or other debris.
D - Value was from an anlysis at a secondary dilution factor
N - Spiked sample recovery not within control limits
U - Value not detected

Table 8. Tributyltin[1] Results (ug/L)

Sample Name	Unfiltered Concentration		Filtered[2] Concentration	
MWSS022R1	0.1			
MWSS024R1	0.05	U	0.05	U
MWSS025R1	0.05	U	0.05	U
MWSS028R1	0.05			
MWSS030R1	0.086			
MWSS031R1	0.089			
MWSS032R1	0.401			
MWSS034R1	0.043			
MWSS035R1	0.23			
MWST039R1	0.05	U		
MWST040R1	0.06		0.05	U
MWST043R1	0.05	U	0.05	U
MWST047R1	0.05	U	0.05	U
MWST048R1	0.05	U	0.05	U
MWST051R1	0.05	U	0.05	U
MWST054R1	0.05	U	0.05	U

1 - Reported as the ion
2 - 0.45 um silver metal filter
U - Not detected

Table 9. Round 1A Subsurface Sediment Exceedences

Chemical	Concentration	Flag	Units	SQO	EF
MW024 (MWCS024R2A, 1.5 - 4 ft , Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Fluoranthene	6600.00		ug/kg	2500	2.64
Pyrene	4400.00		ug/kg	3300	1.33
Total HPAH	17700.00		ug/kg	17000	1.04
Low Molecular Weight Polycyclic Hydrocarbons					
Acenaphthene	730.00		ug/kg	500	1.46
Anthracene	1200.00		ug/kg	960	1.25
Fluorene	730.00		ug/kg	540	1.35
Miscellaneous Extractable Compounds					
N-Nitrosodiphenylamine	34.00	U	ug/kg	28	1.21
Pesticides					
4,4-DDE	11.00	E	ug/kg	9	1.22
MW025 (MWCS025R2A, 0.4 - 5 ft , Foster Wheeler, 1998)					
Metals					
Mercury	1.20		mg/kg	0.59	2.03
MW027 (MWCS027R2A, 1 - 3.8 ft , Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Fluoranthene	3200.00		ug/kg	2500	1.28
Low Molecular Weight Polycyclic Hydrocarbons					
Acenaphthene	660.00		ug/kg	500	1.32
Fluorene	860.00		ug/kg	540	1.59
Phenanthrene	1700.00		ug/kg	1500	1.13
Total LPAH	5580.00		ug/kg	5200	1.07
Metals					
Antimony	467.00	E	mg/kg	150	3.11
Arsenic	130.00		mg/kg	57	2.28
Copper	2900.00		mg/kg	390	7.44
Mercury	6.00		mg/kg	0.59	10.17
Silver	39.70		mg/kg	6.1	6.51
Zinc	560.00		mg/kg	410	1.37
Pesticides					
4,4-DDD	18.00	P	ug/kg	16	1.13
4,4-DDE	9.80	P	ug/kg	9	1.09
Phenols					
2,4-Dimethylphenol	62.00		ug/kg	29	2.14

Table 9. Round 1A Subsurface Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
MW027 (MWCS027R3A, 3.8 - 7 ft , Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Fluoranthene	4300.00		ug/kg	2500	1.72
Low Molecular Weight Polycyclic Hydrocarbons					
Acenaphthene	1500.00		ug/kg	500	3.00
Anthracene	2200.00		ug/kg	960	2.29
Fluorene	3000.00		ug/kg	540	5.56
Phenanthrene	6600.00		ug/kg	1500	4.40
Total LPAH	14356.00		ug/kg	5200	2.76
Miscellaneous Extractable Compounds					
Dibenzofuran	1000.00		ug/kg	540	1.85
N-Nitrosodiphenylamine	33.00	U	ug/kg	28	1.18
MW027 (MWCS027R4A, 7 - 11.5 ft , Foster Wheeler, 1998)					
Phenols					
2,4-Dimethylphenol	36.00		ug/kg	29	1.24
MW030 (MWCS030R2A, 0.5 - 5.5 ft , Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	4500.00		ug/kg	1600	2.81
Benzo(a)pyrene	2400.00		ug/kg	1600	1.50
Benzo(g,h,i)perylene	1600.00		ug/kg	720	2.22
Benzofluoranthenes	8200.00		ug/kg	3600	2.28
Chrysene	4900.00		ug/kg	2800	1.75
Dibenzo(a,h)anthracene	590.00		ug/kg	230	2.57
Fluoranthene	18000.00		ug/kg	2500	7.20
Indeno(1,2,3-cd)pyrene	1300.00		ug/kg	690	1.88
Pyrene	12000.00		ug/kg	3300	3.64
Total HPAH	53490.00		ug/kg	17000	3.15
Low Molecular Weight Polycyclic Hydrocarbons					
2-Methylnaphthalene	1200.00		ug/kg	670	1.79
Acenaphthene	7200.00		ug/kg	500	14.40
Anthracene	4300.00		ug/kg	960	4.48
Fluorene	12000.00		ug/kg	540	22.22
Naphthalene	4000.00		ug/kg	2100	1.90
Phenanthrene	25000.00		ug/kg	1500	16.67
Total LPAH	54380.00		ug/kg	5200	10.46
Miscellaneous Extractable Compounds					
Dibenzofuran	4800.00		ug/kg	540	8.89

Table 9. Round 1A Subsurface Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
N-Nitrosodiphenylamine	160.00	U	ug/kg	28	5.71
Metals					
Mercury	0.64		mg/kg	0.59	1.08
Phenols					
2,4-Dimethylphenol	50.00		ug/kg	29	1.72
MW030 (MWCS030R3A, 7 - 9 ft , Foster Wheeler, 1998)					
Phenols					
2,4-Dimethylphenol	37.00		ug/kg	29	1.28
MW031 (MWCS031R2A, 1.7 - 4 ft , Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	3000.00		ug/kg	1600	1.88
Benzo(a)pyrene	2300.00		ug/kg	1600	1.44
Benzo(g,h,i)perylene	1500.00		ug/kg	720	2.08
Benzofluoranthenes	10000.00		ug/kg	3600	2.78
Chrysene	3300.00		ug/kg	2800	1.18
Dibenzo(a,h)anthracene	690.00		ug/kg	230	3.00
Fluoranthene	3200.00		ug/kg	2500	1.28
Indeno(1,2,3-cd)pyrene	1400.00		ug/kg	690	2.03
Pyrene	4900.00	E	ug/kg	3300	1.48
Total HPAH	30290.00		ug/kg	17000	1.78
Low Molecular Weight Polycyclic Hydrocarbons					
Anthracene	3600.00		ug/kg	960	3.75
Fluorene	900.00		ug/kg	540	1.67
Phenanthrene	2800.00		ug/kg	1500	1.87
Total LPAH	9210.00		ug/kg	5200	1.77
Miscellaneous Extractable Compounds					
N-Nitrosodiphenylamine	54.00	U	ug/kg	28	1.93
Metals					
Copper	1060.00		mg/kg	390	2.72
Lead	1020.00	E	mg/kg	450	2.27
Mercury	9.00		mg/kg	0.59	15.25
Pesticides					
4,4-DDD	36.00	P	ug/kg	16	2.25
4,4-DDT	71.00	E	ug/kg	34	2.09
Phenols					
2,4-Dimethylphenol	98.00		ug/kg	29	3.38
Phenol	570.00	B	ug/kg	420	1.36

Table 9. Round 1A Subsurface Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
MW031 (MWCS031R3A, 4 - 5.6 ft , Foster Wheeler, 1998)					
Phenols					
2,4-Dimethylphenol	34.00		ug/kg	29	1.17
MW035 (MWCS035R3A, 1.5 - 8 ft , Foster Wheeler, 1998)					
Phthalates					
Diethylphthalate	1100.00		ug/kg	200	5.50
MW037 (MWCS037R2A, 1 - 4.7 ft , Foster Wheeler, 1998)					
Metals					
Mercury	1.30		mg/kg	0.59	2.20
TF-22 (TF-22B, 0.2952 - 1.5088 ft , City of Tacoma, 1997)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	1900.00		ug/kg	1600	1.19
Benzo(a)pyrene	2000.00		ug/kg	1600	1.25
Benzo(g,h,i)perylene	960.00		ug/kg	720	1.33
Fluoranthene	3900.00		ug/kg	2500	1.56
Indeno(1,2,3-cd)pyrene	730.00		ug/kg	690	1.06
Pyrene	3900.00		ug/kg	3300	1.18
Total HPAH	18090.00		ug/kg	17000	1.06
Low Molecular Weight Polycyclic Hydrocarbons					
Phenanthrene	2700.00		ug/kg	1500	1.80
Metals					
Mercury	1.26	J	mg/kg	0.59	2.14
Zinc	558.00	J	mg/kg	410	1.36
TF-22 (TF-22C, 1.5088 - 2.6896 ft , City of Tacoma, 1997)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	32000.00		ug/kg	1600	20.00
Benzo(a)pyrene	35000.00		ug/kg	1600	21.88
Benzo(g,h,i)perylene	20000.00		ug/kg	720	27.78
Benzofluoranthenes	38000.00		ug/kg	3600	10.56
Chrysene	31000.00		ug/kg	2800	11.07
Dibenzo(a,h)anthracene	4500.00		ug/kg	230	19.57
Fluoranthene	71000.00		ug/kg	2500	28.40
Indeno(1,2,3-cd)pyrene	15000.00		ug/kg	690	21.74
Pyrene	82000.00		ug/kg	3300	24.85
Total HPAH	328500.00		ug/kg	17000	19.32
Low Molecular Weight Polycyclic Hydrocarbons					
2-Methylnaphthalene	2700.00		ug/kg	670	4.03

Table 9. Round 1A Subsurface Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
Acenaphthene	45000.00		ug/kg	500	90.00
Acenaphthylene	6300.00		ug/kg	1300	4.85
Anthracene	27000.00		ug/kg	960	28.13
Fluorene	26000.00		ug/kg	540	48.15
Naphthalene	8600.00		ug/kg	2100	4.10
Phenanthrene	130000.00		ug/kg	1500	86.67
Total LPAH	242900.00		ug/kg	5200	46.71
Miscellaneous Extractable Compounds					
Dibenzofuran	4600.00		ug/kg	540	8.52
Metals					
Lead	2750.00		mg/kg	450	6.11
Zinc	580.00	J	mg/kg	410	1.41
Pesticides					
4,4-DDT	40.00	U	ug/kg	34	1.18
HC-2 (S-1, 0 - 0.8856 ft , Hart Crowser, 1992b)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	2700.00	D	ug/kg	1600	1.69
Benzo(g,h,i)perylene	820.00	D	ug/kg	720	1.14
Dibenzo(a,h)anthracene	580.00	D	ug/kg	230	2.52
Fluoranthene	2800.00	D	ug/kg	2500	1.12
Indeno(1,2,3-cd)pyrene	970.00	D	ug/kg	690	1.41
Pyrene	8300.00	D	ug/kg	3300	2.52
Total HPAH	22680.00		ug/kg	17000	1.33
Low Molecular Weight Polycyclic Hydrocarbons					
Acenaphthene	1300.00	UD	ug/kg	500	2.60
Acenaphthylene	4500.00	UD	ug/kg	1300	3.46
Phenanthrene	2400.00	D	ug/kg	1500	1.60
Metals					
Mercury	1.20		mg/kg	0.59	2.03
HC-2 (S-2, 0.8856 - 1.9024 ft , Hart Crowser, 1992b)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	2400.00	D	ug/kg	1600	1.50
Benzo(g,h,i)perylene	730.00	D	ug/kg	720	1.01
Dibenzo(a,h)anthracene	360.00	D	ug/kg	230	1.57
Indeno(1,2,3-cd)pyrene	740.00	D	ug/kg	690	1.07
Pyrene	7800.00	D	ug/kg	3300	2.36
Total HPAH	19350.00		ug/kg	17000	1.14

Table 9. Round 1A Subsurface Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
Low Molecular Weight Polycyclic Hydrocarbons					
Acenaphthene	820.00	UD	ug/kg	500	1.64
Acenaphthylene	2900.00	UD	ug/kg	1300	2.23
Phenanthrene	1700.00	D	ug/kg	1500	1.13
MW-1 (1, 0 - 1 ft , Hart Crowser, 1992a)					
Chlorinated Aromatic Compounds					
1,2,4-Trichlorobenzene	97.00	U	ug/kg	51	1.90
1,2-Dichlorobenzene	97.00	U	ug/kg	50	1.94
Hexachlorobenzene	97.00	U	ug/kg	22	4.41
Chlorinated Aliphatic Compound					
Hexachlorobutadiene	190.00	U	ug/kg	11	17.27
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(g,h,i)perylene	1100.00		ug/kg	720	1.53
Dibenzo(a,h)anthracene	370.00		ug/kg	230	1.61
Indeno(1,2,3-cd)pyrene	1100.00		ug/kg	690	1.59
Miscellaneous Extractable Compounds					
Benzoic acid	970.00	U	ug/kg	650	1.49
Benzyl alcohol	480.00	U	ug/kg	73	6.58
N-Nitrosodiphenylamine	97.00	U	ug/kg	28	3.46
Metals					
Mercury	2.42		mg/kg	0.59	4.10
Phenols					
2,4-Dimethylphenol	190.00	U	ug/kg	29	6.55
2-Methylphenol	97.00	U	ug/kg	63	1.54
Pentachlorophenol	480.00	U	ug/kg	360	1.33
MW-1 (2, 1.0168 - 2.0008 ft , Hart Crowser, 1992a)					
Chlorinated Aromatic Compounds					
1,2,4-Trichlorobenzene	100.00	U	ug/kg	51	1.96
1,2-Dichlorobenzene	100.00	U	ug/kg	50	2.00
Hexachlorobenzene	100.00	U	ug/kg	22	4.55
Chlorinated Aliphatic Compound					
Hexachlorobutadiene	200.00	U	ug/kg	11	18.18
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	2400.00		ug/kg	1600	1.50
Benzo(a)pyrene	4100.00		ug/kg	1600	2.56
Benzo(g,h,i)perylene	3400.00		ug/kg	720	4.72
Benzofluoranthenes	4700.00		ug/kg	3600	1.31

Table 9. Round 1A Subsurface Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
Dibenzo(a,h)anthracene	780.00		ug/kg	230	3.39
Fluoranthene	3800.00		ug/kg	2500	1.52
Indeno(1,2,3-cd)pyrene	2900.00		ug/kg	690	4.20
Pyrene	6000.00		ug/kg	3300	1.82
Total HPAH	30680.00		ug/kg	17000	1.80
Low Molecular Weight Polycyclic Hydrocarbons					
Phenanthrene	2000.00		ug/kg	1500	1.33
Miscellaneous Extractable Compounds					
Benzoic acid	1000.00	U	ug/kg	650	1.54
Benzyl alcohol	510.00	U	ug/kg	73	6.99
N-Nitrosodiphenylamine	100.00	U	ug/kg	28	3.57
Metals					
Mercury	0.61		mg/kg	0.59	1.03
Phenols					
2,4-Dimethylphenol	200.00	U	ug/kg	29	6.90
2-Methylphenol	100.00	U	ug/kg	63	1.59
Pentachlorophenol	510.00	U	ug/kg	360	1.42
MW040 (MWCS040R2A, 1.2 - 3.5 ft , Foster Wheeler, 1998)					
Metals					
Mercury	1.20		mg/kg	0.59	2.03
MW041 (MWCT041R2, 0 - 2 ft , Foster Wheeler, 1998)					
Miscellaneous Extractable Compounds					
N-Nitrosodiphenylamine	60.00		ug/kg	28	2.14
Metals					
Mercury	0.92	E	mg/kg	0.59	1.56
MW046 (MWCT046R2, 0 - 2 ft , Foster Wheeler, 1998)					
Metals					
Mercury	0.98	E	mg/kg	0.59	1.66
MW050 (MWCT050R2, 0 - 2 ft , Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	5300.00		ug/kg	1600	3.31
Benzo(a)pyrene	5100.00		ug/kg	1600	3.19
Benzo(g,h,i)perylene	1200.00		ug/kg	720	1.67
Benzofluoranthenes	13400.00		ug/kg	3600	3.72
Chrysene	5500.00		ug/kg	2800	1.96
Dibenzo(a,h)anthracene	610.00		ug/kg	230	2.65
Fluoranthene	12000.00		ug/kg	2500	4.80

Table 9. Round 1A Subsurface Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
Indeno(1,2,3-cd)pyrene	1300.00		ug/kg	690	1.88
Pyrene	10000.00	E	ug/kg	3300	3.03
Total HPAH	54410.00		ug/kg	17000	3.20
Low Molecular Weight Polycyclic Hydrocarbons					
2-Methylnaphthalene	3100.00		ug/kg	670	4.63
Acenaphthene	4000.00		ug/kg	500	8.00
Acenaphthylene	1700.00		ug/kg	1300	1.31
Anthracene	6300.00		ug/kg	960	6.56
Fluorene	5800.00		ug/kg	540	10.74
Naphthalene	11000.00		ug/kg	2100	5.24
Phenanthrene	12000.00		ug/kg	1500	8.00
Total LPAH	43900.00		ug/kg	5200	8.44
Miscellaneous Extractable Compounds					
Dibenzofuran	2200.00		ug/kg	540	4.07
N-Nitrosodiphenylamine	38.00	U	ug/kg	28	1.36
Phenols					
2,4-Dimethylphenol	37.00		ug/kg	29	1.28

SQO - Sediment Quality Objective
EF - Exceednace Factor = Concentration divided by SQO
B - Analyte detected in samples and in method blank
D - Value was from an anlysis at a secondary dilution factor
E - Estimated
J - Estimated Value
P - The percent difference in sample concentration between the two GC columns is > 25%
U - Value not detected

Table 10. Round 1A Bank Sediment Exceedences

Chemical	Concentration	Flag	Units	SQO	EF
B-12 (B-12, City of Tacoma, 1997)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(g,h,i)perylene	980.00		ug/kg	720	1.36
Dibenzo(a,h)anthracene	280.00		ug/kg	230	1.22
Indeno(1,2,3-cd)pyrene	870.00		ug/kg	690	1.26
Metals					
Arsenic	76.00		mg/kg	57	1.33
Copper	977.00	J	mg/kg	390	2.51
Zinc	1590.00	J	mg/kg	410	3.88
B-14 (B-14, City of Tacoma, 1997)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	15000.00		ug/kg	1600	9.38
Benzo(a)pyrene	16000.00		ug/kg	1600	10.00
Benzo(g,h,i)perylene	5000.00		ug/kg	720	6.94
Benzofluoranthenes	19000.00		ug/kg	3600	5.28
Chrysene	16000.00		ug/kg	2800	5.71
Dibenzo(a,h)anthracene	1800.00		ug/kg	230	7.83
Fluoranthene	22000.00		ug/kg	2500	8.80
Indeno(1,2,3-cd)pyrene	4400.00		ug/kg	690	6.38
Pyrene	270000.00		ug/kg	3300	81.82
Total HPAH	369200.00		ug/kg	17000	21.72
Low Molecular Weight Polycyclic Hydrocarbons					
Acenaphthene	940.00		ug/kg	500	1.88
Anthracene	3700.00		ug/kg	960	3.85
Fluorene	1200.00		ug/kg	540	2.22
Phenanthrene	20000.00		ug/kg	1500	13.33
Total LPAH	27170.00		ug/kg	5200	5.22
Metals					
Copper	1430.00	J	mg/kg	390	3.67
Nickel	389.00		mg/kg	140	2.78
Zinc	535.00	J	mg/kg	410	1.30
Polychlorinated Biphenyls (PCBs)					
PCB (total)	690.00		ug/kg	300	2.30
B-15 (B-15, City of Tacoma, 1997)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	3500.00		ug/kg	1600	2.19
Benzo(a)pyrene	4600.00		ug/kg	1600	2.88

Table 10. Round 1A Bank Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
Benzo(g,h,i)perylene	2900.00		ug/kg	720	4.03
Benzofluoranthenes	7000.00		ug/kg	3600	1.94
Chrysene	3700.00		ug/kg	2800	1.32
Dibenzo(a,h)anthracene	830.00		ug/kg	230	3.61
Fluoranthene	4300.00		ug/kg	2500	1.72
Indeno(1,2,3-cd)pyrene	2500.00		ug/kg	690	3.62
Pyrene	6100.00	J	ug/kg	3300	1.85
Total HPAH	35430.00		ug/kg	17000	2.08
Low Molecular Weight Polycyclic Hydrocarbons					
Phenanthrene	4100.00		ug/kg	1500	2.73
Total LPAH	5990.00		ug/kg	5200	1.15
Metals					
Copper	1730.00	J	mg/kg	390	4.44
Mercury	10.90	J	mg/kg	0.59	18.47
Nickel	1780.00		mg/kg	140	12.71
Zinc	1180.00	J	mg/kg	410	2.88
Polychlorinated Biphenyls (PCBs)					
PCB (total)	2800.00		ug/kg	300	9.33
Phthalates					
Dimethylphthalate	320.00		ug/kg	160	2.00
B-16 (B-16, City of Tacoma, 1997)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	2600.00		ug/kg	1600	1.63
Benzo(a)pyrene	2900.00		ug/kg	1600	1.81
Benzo(g,h,i)perylene	1700.00		ug/kg	720	2.36
Benzofluoranthenes	4400.00		ug/kg	3600	1.22
Chrysene	3100.00		ug/kg	2800	1.11
Dibenzo(a,h)anthracene	470.00		ug/kg	230	2.04
Fluoranthene	3600.00		ug/kg	2500	1.44
Indeno(1,2,3-cd)pyrene	1400.00		ug/kg	690	2.03
Pyrene	5200.00	J	ug/kg	3300	1.58
Total HPAH	25370.00		ug/kg	17000	1.49
Low Molecular Weight Polycyclic Hydrocarbons					
Phenanthrene	4400.00		ug/kg	1500	2.93
Total LPAH	6020.00		ug/kg	5200	1.16
Metals					
Zinc	468.00	J	mg/kg	410	1.14

Table 10. Round 1A Bank Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
B-17 (B-17, City of Tacoma, 1997)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(g,h,i)perylene	870.00		ug/kg	720	1.21
Dibenzo(a,h)anthracene	280.00		ug/kg	230	1.22
Indeno(1,2,3-cd)pyrene	710.00		ug/kg	690	1.03
Low Molecular Weight Polycyclic Hydrocarbons					
Phenanthrene	1800.00		ug/kg	1500	1.20
B-18 (B-18, City of Tacoma, 1997)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	4000.00		ug/kg	1600	2.50
Benzo(a)pyrene	5800.00		ug/kg	1600	3.63
Benzo(g,h,i)perylene	4200.00		ug/kg	720	5.83
Benzofluoranthenes	8200.00		ug/kg	3600	2.28
Chrysene	4500.00		ug/kg	2800	1.61
Dibenzo(a,h)anthracene	1300.00		ug/kg	230	5.65
Fluoranthene	3600.00		ug/kg	2500	1.44
Indeno(1,2,3-cd)pyrene	3800.00		ug/kg	690	5.51
Pyrene	5000.00	J	ug/kg	3300	1.52
Total HPAH	40400.00		ug/kg	17000	2.38
Low Molecular Weight Polycyclic Hydrocarbons					
Phenanthrene	2000.00		ug/kg	1500	1.33
B-19 (B-19, City of Tacoma, 1997)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	4700.00		ug/kg	1600	2.94
Benzo(a)pyrene	5000.00		ug/kg	1600	3.13
Benzo(g,h,i)perylene	2800.00		ug/kg	720	3.89
Benzofluoranthenes	6800.00		ug/kg	3600	1.89
Chrysene	5400.00		ug/kg	2800	1.93
Dibenzo(a,h)anthracene	890.00		ug/kg	230	3.87
Fluoranthene	6400.00		ug/kg	2500	2.56
Indeno(1,2,3-cd)pyrene	2200.00		ug/kg	690	3.19
Pyrene	8500.00		ug/kg	3300	2.58
Total HPAH	42690.00		ug/kg	17000	2.51
Low Molecular Weight Polycyclic Hydrocarbons					
Anthracene	1400.00		ug/kg	960	1.46
Fluorene	590.00		ug/kg	540	1.09
Phenanthrene	5000.00		ug/kg	1500	3.33

Table 10. Round 1A Bank Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
Total LPAH	8750.00		ug/kg	5200	1.68
Phthalates					
bis(2-Ethylhexyl)phthalate	1400.00		ug/kg	1300	1.08
MW001 (MWSB001R1, Foster Wheeler, 1998)					
Phenols					
2,4-Dimethylphenol	43.00	UE	ug/kg	29	1.48
2-Methylphenol	77.00	U	ug/kg	63	1.22
MW008 (MWSB008R1, Foster Wheeler, 1998)					
Miscellaneous Extractable Compounds					
Benzyl alcohol	99.00	E	ug/kg	73	1.36
MW008-SP (MWSB008R1 SP, Foster Wheeler, 1998)					
Polychlorinated Biphenyls (PCBs)					
PCB (total)	750.00		ug/kg	300	2.50
Pesticides					
4,4-DDE	22.00	P	ug/kg	9	2.44
4,4-DDT	38.00	P	ug/kg	34	1.12
MW009 (MWSB009R1, Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	3400.00		ug/kg	1600	2.13
Benzo(a)pyrene	2400.00		ug/kg	1600	1.50
Benzofluoranthenes	10000.00		ug/kg	3600	2.78
Chrysene	3200.00		ug/kg	2800	1.14
Fluoranthene	7800.00		ug/kg	2500	3.12
Pyrene	5500.00		ug/kg	3300	1.67
Total HPAH	33560.00		ug/kg	17000	1.97
Low Molecular Weight Polycyclic Hydrocarbons					
Phenanthrene	2300.00		ug/kg	1500	1.53
Metals					
Mercury	2.00		mg/kg	0.59	3.39
MW009-SP (MWSB009R1 SP, Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzofluoranthenes	6000.00		ug/kg	3600	1.67
Fluoranthene	2900.00		ug/kg	2500	1.16
Indeno(1,2,3-cd)pyrene	740.00		ug/kg	690	1.07
Total HPAH	17779.00		ug/kg	17000	1.05
Low Molecular Weight Polycyclic Hydrocarbons					
Phenanthrene	1700.00		ug/kg	1500	1.13

Table 10. Round 1A Bank Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
Metals					
Copper	408.00		mg/kg	390	1.05
Mercury	1.60		mg/kg	0.59	2.71
Zinc	480.00		mg/kg	410	1.17
MW012 (MWSB012R1, Foster Wheeler, 1998)					
Metals					
Mercury	1.30	*	mg/kg	0.59	2.20
MW013 (MWSB013R1, Foster Wheeler, 1998)					
Metals					
Copper	1090.00	N	mg/kg	390	2.79
Mercury	2.30	*	mg/kg	0.59	3.90
MW014 (MWSB014R1, Foster Wheeler, 1998)					
Metals					
Mercury	0.76	*	mg/kg	0.59	1.29
MW015 (MWSB015R1, Foster Wheeler, 1998)					
Phenols					
2-Methylphenol	89.00	U	ug/kg	63	1.41
MW03a (MWSB03aR1, Foster Wheeler, 1998)					
Low Molecular Weight Polycyclic Hydrocarbons					
Acenaphthene	670.00		ug/kg	500	1.34
Metals					
Mercury	0.87		mg/kg	0.59	1.47
Polychlorinated Biphenyls (PCBs)					
PCB (total)	690.00		ug/kg	300	2.30
Pesticides					
4,4-DDD	23.00	P	ug/kg	16	1.44
MW03b (MWSB03bR1, Foster Wheeler, 1998)					
Phenols					
2,4-Dimethylphenol	80.00	E	ug/kg	29	2.76
Pentachlorophenol	800.00		ug/kg	360	2.22
MW04b-SP (MWSB04bR1 SP, Foster Wheeler, 1998)					
Miscellaneous Extractable Compounds					
Benzoic acid	990.00	E	ug/kg	650	1.52
Benzyl alcohol	85.00	E	ug/kg	73	1.16
Metals					
Mercury	0.68		mg/kg	0.59	1.15

Table 10. Round 1A Bank Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
Phenols					
2-Methylphenol	260.00		ug/kg	63	4.13
MW10a (MWSB10aR1, Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	1900.00		ug/kg	1600	1.19
Benzo(g,h,i)perylene	730.00		ug/kg	720	1.01
Benzofluoranthenes	6200.00		ug/kg	3600	1.72
Dibenzo(a,h)anthracene	360.00		ug/kg	230	1.57
Fluoranthene	4300.00		ug/kg	2500	1.72
Indeno(1,2,3-cd)pyrene	780.00		ug/kg	690	1.13
Total HPAH	20770.00		ug/kg	17000	1.22
Low Molecular Weight Polycyclic Hydrocarbons					
Phenanthrene	2400.00		ug/kg	1500	1.60
Miscellaneous Extractable Compounds					
Benzoic acid	730.00	B	ug/kg	650	1.12
Metals					
Arsenic	166.00		mg/kg	57	2.91
Copper	2150.00	N	mg/kg	390	5.51
Lead	777.00		mg/kg	450	1.73
Mercury	1.80	*	mg/kg	0.59	3.05
Zinc	1390.00	N	mg/kg	410	3.39
MW10b (MWSB10bR1, Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)anthracene	1800.00		ug/kg	1600	1.13
Benzofluoranthenes	7400.00		ug/kg	3600	2.06
Total HPAH	19084.00		ug/kg	17000	1.12
Metals					
Arsenic	130.00		mg/kg	57	2.28
Copper	1370.00	N	mg/kg	390	3.51
Lead	3220.00		mg/kg	450	7.16
Mercury	1.90	*	mg/kg	0.59	3.22
Silver	6.20		mg/kg	6.1	1.02
Zinc	1330.00	N	mg/kg	410	3.24
Phenols					
Pentachlorophenol	680.00		ug/kg	360	1.89

Table 10. Round 1A Bank Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
MW10c (MWSB10cR1, Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzo(a)pyrene	1800.00		ug/kg	1600	1.13
Benzo(g,h,i)perylene	1300.00		ug/kg	720	1.81
Benzofluoranthenes	7800.00		ug/kg	3600	2.17
Fluoranthene	2900.00		ug/kg	2500	1.16
Indeno(1,2,3-cd)pyrene	1200.00		ug/kg	690	1.74
Total HPAH	21693.00		ug/kg	17000	1.28
Low Molecular Weight Polycyclic Hydrocarbons					
Phenanthrene	2400.00		ug/kg	1500	1.60
Metals					
Arsenic	131.00		mg/kg	57	2.30
Copper	1660.00	N	mg/kg	390	4.26
Lead	1790.00		mg/kg	450	3.98
Mercury	29.20	*	mg/kg	0.59	49.49
Zinc	1140.00	N	mg/kg	410	2.78
Polychlorinated Biphenyls (PCBs)					
PCB (total)	410.00		ug/kg	300	1.37
Pesticides					
4,4-DDE	10.00	U	ug/kg	9	1.11
Phenols					
2,4-Dimethylphenol	63.00		ug/kg	29	2.17
Phenol	510.00		ug/kg	420	1.21
MW11a (MWSB11aR1, Foster Wheeler, 1998)					
Miscellaneous Extractable Compounds					
N-Nitrosodiphenylamine	35.00	J	ug/kg	28	1.25
Metals					
Mercury	4.20	*	mg/kg	0.59	7.12
MW11a-SP (MWSB11aR1 SP, Foster Wheeler, 1998)					
High Molecular Weight Polycyclic Hydrocarbons					
Benzofluoranthenes	3800.00		ug/kg	3600	1.06
Fluoranthene	2800.00		ug/kg	2500	1.12
Miscellaneous Extractable Compounds					
N-Nitrosodiphenylamine	61.00	J	ug/kg	28	2.18
Metals					
Arsenic	121.00		mg/kg	57	2.12
Copper	605.00	N	mg/kg	390	1.55

Table 10. Round 1A Bank Sediment Exceedences (Continued)

Chemical	Concentration	Flag	Units	SQO	EF
Mercury	2.50	*	mg/kg	0.59	4.24
Zinc	991.00	N	mg/kg	410	2.42
MW11b (MWSB11bR1, Foster Wheeler, 1998)					
Metals					
Mercury	0.62	*	mg/kg	0.59	1.05

SQO - Sediment Quality Objective
EF - Exceednace Factor = Concentration divided by SQO
* - Duplicate analysis not within control limits
B - Analyte found in the associated blank as well as the sample
E - Estimated due to exceedance of linear range of calibration of the instrument
J - Estimated Value
N - Spiked sample recovery not within control limits
P - The percent difference in sample concentration between the two GC columns is > 25%
U - Value not detected

Table 11. Middle Waterway Contaminant Mobility Composite

	CORE	SAMPLE	TOP DEPTH	BOTTOM DEPTH	SOIL TYPE	SHORT DESCRIPTION	SQO Exceedance	Concentration (ug/kg)	Exceedance Ratio (ER)	Notes	Compound	ER
1	MW-024	R2A	1.5	4.0	SM	GRAY SILTY FINE SAND	Hg (mg/kg)	0.53	0.90	Non-detect above SQO;	N-nitrosodiphenylamine 34 U	1.2
							Acenaphthene	730	1.46			
							Fluoranthene	2700	1.08			
2		R3A	4.0	8.0	SM	GRAY SILTY FINE SAND				Non-detect above SQO;	N-nitrosodiphenylamine 31 U	1.1
3	MW-025	R2A	0.4	5.0	OL	BLACK ORGANIC CLAYEY SILT	Hg (mg/kg)	1.2	2.03	Non-detect above SQO;	N-nitrosodiphenylamine 37 U	1.3
4		R3A	5.0	8.0	SP	BLACK MEDIUM SAND				Non-detect above SQO;	N-nitrosodiphenylamine 29 U	1.0
5		R4A	8.0	12.0	SP	BLACK MEDIUM SAND				Non-detect above SQO;	N-nitrosodiphenylamine 29 U	1.0
6	MW-026	R2A	0.4	2.8	CL	DARK GRAY SILTY CLAY				Non-detect above SQO;	N-nitrosodiphenylamine 34 U	1.2
7		R3A	5.0	8.0	SM	DARK GRAY SILTY FINE SAND				Non-detect above SQO;	N-nitrosodiphenylamine 31 U	1.1
8		R4A	8.0	12.0	SM	DARK GRAY SILTY FINE SAND				Non-detect above SQO;	N-nitrosodiphenylamine 31 U	1.1
9	MW-027	R2A	1.0	3.8	ML	BLACK CLAYEY SILT	Hg (mg/kg)	6	10.17	Non-detect above SQO;	N-nitrosodiphenylamine 42 U	1.5
							DDE	9.8	1.09			
							DDD	18	1.13			
							Arsenic (mg/kg)	130	2.28			
							Antimony (mg/kg)	470	3.13			
							Copper (mg/kg)	2900	7.44			
							Silver (mg/kg)	40	6.56			
							Zinc (mg/kg)	560	1.37			
							Acenaphthene	660	1.32			
							Fluorene	860	1.59			
							Phenanthrene	1700	1.13			
							2,4,dimethylphenol	62	2.14			
10		R3A	5.8	7.0	ML	GRAY SANDY SILT	Acenaphthene	1600	3.20	Non-detect above SQO;	N-nitrosodiphenylamine 33 U	1.2
							Fluorene	3100	5.74			
							Anthracene	1300	1.35			
							Dibenzofuran	1000	1.85			
							Fluoranthene	2500	1.00			
11		R4A	7.0	11.5	ML	GRAY SANDY SILT	2,4dimethylphenol	36	1.24	Non-detect above SQO;	N-nitrosodiphenylamine 32 U	1.1
12	MW-028	R2A	0.3	2.5	SM	BLACK SILTY FINE SAND				Non-detect above SQO;	N-nitrosodiphenylamine 46 U	1.6
13		R3A	2.5	6.0	SP	BLACK MEDIUM SAND				Non-detect above SQO;	N-nitrosodiphenylamine 44 U	1.6
14		R4A	6.0	10.0	SM	BLACK SILTY FINE SAND				Non-detect above SQO;	N-nitrosodiphenylamine 47 U	1.7
15	MW-029	R2A	1.2	4.0	SM	GRAY SILTY FINE SAND				Non-detect above SQO;	N-nitrosodiphenylamine 31 U	1.1
16		R3A	4.0	8.0	SM	GRAY SILTY FINE SAND				Non-detect above SQO;	N-nitrosodiphenylamine 30 U	1.1
17		R4A	8.0	12.0	SM	GRAY SILTY FINE SAND				Non-detect above SQO;	N-nitrosodiphenylamine 31 U	1.1

NOTE: This is the information available at the time the Composite was created. These data may not be consistent with the final validated data presented in Appendix D. Only chemicals known to exceed the SQO's at the time this table was created were included in the table. The absence of values in the table indicates there were no known exceedances.

Table 11. Middle Waterway Contaminant Mobility Composite (Cont.)

	CORE	SAMPLE	TOP DEPTH	BOTTOM DEPTH	SOIL TYPE	SHORT DESCRIPTION	SQO Exceedance	Concentration (ug/kg)	Exceedance Ratio (ER)	Notes	Compound		ER
18	MW-030	R2A	0.6	5.5	CL	BLACK CLAYEY SILT/SILTY CLAY	Hg (mg/kg)	0.63	1.07	Non-detect above SQO;	N-nitrosodiphenylamine		
							14 PAHs with SQO exceedances						
							dibenzofuran	4800	8.89				
							2,4dimethylphenol	50	1.72				
19		R3A	7.0	9.0	SP	BLACK MEDIUM SAND	2,4dimethylphenol	37	1.28	Non-detect above SQO;	N-nitrosodiphenylamine	37 U	1.3
20	MW-031	R2A	1.7	4.0	ML	BLACK , FINE SANDY SILT	Hg (mg/kg)	9	15.25	Non-detect above SQO;	N-nitrosodiphenylamine		
							Copper (mg/kg)	1100	2.82				
							Lead (mg/kg)	1000	2.22				
							Phenol	550	1.31				
							2,4dimethylphenol	98	3.38				
							DDD	36	2.25				
							DDT	71	2.09				
							dibenzofuran	760	1.41				
							14 PAHs with SQO exceedances						
21		R3A	4.0	5.6	ML	GRAY, FINE SANDY SILT	2,4dimethylphenol	34	1.17	Non-detect above SQO;	N-nitrosodiphenylamine	52 U	1.9
22		R4A	5.6	10.0	SP	BLACK MEDIUM SAND				Non-detect above SQO;	N-nitrosodiphenylamine	42 U	1.5
23	MW-034	R2A	0.3	1.8	ML	BLACK, FINE SANDY SILT				Non-detect above SQO;	N-nitrosodiphenylamine	32 U	1.1
24		R3A	1.8	4.0	SP	BLACK MEDIUM SAND/GRAY SANDY SILT				Non-detect above SQO;	N-nitrosodiphenylamine	30 U	1.1
25		R4A	4.0	7.0	SM	GRAY SILTY FINE SAND				Non-detect above SQO;	N-nitrosodiphenylamine	32 U	1.1
26	MW-035	R2A	0.5	1.5	SM	BLACK, SILTY FINE SAND				Non-detect above SQO;	N-nitrosodiphenylamine	30 U	1.1
27		R3A	1.5	8.0	SM	GRAY, SILTY FINE SAND	diethylphthalate	1100	5.50	Non-detect above SQO;	N-nitrosodiphenylamine	32 U	1.1
28		R4A	8.0	12.0	SM	GRAY SILTY FINE SAND				Non-detect above SQO;	N-nitrosodiphenylamine	32 U	1.1
29	MW-037	R2A	1.0	4.7	SP	BLACK, MEDIUM SAND	Hg (mg/kg)	1.3	2.20	Non-detect above SQO;	N-nitrosodiphenylamine	30 U	1.1
30		R3A	4.7	10.0	SM	GRAY SILTY FINE SAND				Non-detect above SQO;	N-nitrosodiphenylamine	29 U	1.0
31		R4A	10.5	12.0	SP	BLACK, MEDIUM SAND				Non-detect above SQO;	N-nitrosodiphenylamine	48 U	1.7
32	MW-040	R2A	1.2	3.5	SM	DARK GRAY, SILTY, FINE SAND	Hg (mg/kg)	1.2	2.03	Non-detect above SQO;	N-nitrosodiphenylamine	46 U	1.6
33		R3A	3.5	8.0	SM	GRAY, SILTY FINE SAND				Non-detect above SQO;	N-nitrosodiphenylamine	44 U	1.6
34		R4A	8.0	9.5	SP	BLACK, MEDIUM SAND				Non-detect above SQO;	N-nitrosodiphenylamine	40 U	1.4

NOTE: This is the information available at the time the Composite was created. These data may not be consistent with the final validated data presented in Appendix D. Only chemicals known to exceed the SQO's at the time this table was created were included in the table. The absence of values in the table indicates there were no known exceedances.

Core interval included in Contaminant Mobility Composite

[1] Included 0-2 ft interval in composite per EPA direction.

Table 12. Middle Waterway Sediment Volumes Used in Anoxic Composite Sample

Station	Depth Interval In Feet.	Percent Of Composite	Jars Filled With Anoxic Sediment	Volume Used In Anoxic Composite
MW024	4.0	11.2	(2) 4 Liter (L)	3 L
MW025	5.0	14.0	(2) 4 L, (3) 1 L	4 L
MW027	7.0	19.6	(8) 4 L	6 L
MW029	2.0	5.6	(1) 4 L	2 L
MW030	5.5	15.4	(3) 4 L	4.5 L
MW031	4.0	11.2	(1) 4 L, (1) 3 L	3 L
MW037	4.7	13.2	(2) 4 L, (2) 1 L	3 L
MWO40	3.5	9.8	(2) 4 L	3 L
TOTALS	35.7	100	92 L	28.5 L

Table 13. Analytical Results for the Contaminant Mobility Sediment Composite Sample

		Contaminant Mobility Bulk Chemistry				Predicted Middle Waterway Bulk Chemistry[d]		
Parameter	Sediment Quality Objective	Middle Waterway Round 1A Contaminant Mobility Composite	Thea Foss Dredge Prism Composite[a]	Thea Foss SSMA 7 Composite[b]	Middle Waterway Tideflat "Hotspot" Bulk Chemistry[c]	Volume-Weighted Predicted Concentrations 5,000 cy	Volume-Weighted Predicted Concentrations 10,000 cy	Volume-Weighted Predicted Concentrations 15,000 cy
TOC (%)		2.4	3	3.9	7.2	—	—	—
SVOCs (ug/kg)								
Benzo(a)anthracene	1600	1700	7067	20550	10116	2261	2822	3383
Benzo(a)pyrene	1600	1200	6733	17350	6671	1565	1930	2294
Benzo(g,h,i)perylene	720	680	2500	4250	2552	805	930	1054
Benzofluoranthenes	3600	2100	7667	21600	10607	2667	3234	3801
Chrysene	2800	2000	7267	21050	5597	2240	2480	2719
Dibenz(a,h)anthracene	230	210	610	1050	449	226	242	258
Fluoranthene	2500	5600	11200	37950	14007	6160	6721	7281
Indeno(1,2,3-cd)pyrene	690	610	2080	3565	2720	751	891	1032
Pyrene	3300	3900	16567	51600	57533	7476	11051	14627
Total HPAH	17000	18000	51690	178965	110043	24136	30272	36409
2-Methylnaphthalene	670	290	910	—	782	323	356	388
Acenaphthylene	1300	150	1380	1365	4309	427	704	982
Acenaphthene	500	1400	2700	50095	42443	4136	6872	9609
Anthracene	960	1900	7367	29800	8749	2357	2813	3270
Fluorene	540	2500	3133	29135	9409	2961	3421	3882
Naphthalene	2100	530	807	105180	15859	1552	2574	3596
Phenanthrene	1500	6300	20267	91050	32365	8038	9775	11513
Total LPAH	5200	13070	36563	361760	109633	19508	25945	32383
Phenolics (ug/kg)								
2,4-Dimethylphenol	29	20	19 U	—	28	21	21	22
2-Methylphenol	63	10	19 U	—	31	11	13	14
4-Methylphenol	670	99	97 U	—	216	107	115	122
Pentachlorophenol	360	7.7	193 U	—	128	16	24	32
Phenol	420	49	97 U	—	176	57	66	74
Phthalates (ug/kg)								
bis(2-Ethylhexyl)phthalate	1300	130	737 U	6900	794	174	219	263
Butylbenzylphthalate	900	60 U	104 U	425 UJ	139	65	70	76
Diethylphthalate	200	43 U	97 U	99 U	78	45	48	50
Dimethylphthalate	160	38 U	97 U	99 U	82	41	44	47
Di-n-butylphthalate	1400	40 U	97 U	114.5	89	43	47	50
Di-n-octylphthalate	6200	290 U	97 U	765	152	281	272	262
1,2,4-Trichlorobenzene	51	8 U	19 U	—	19	8	9	10
1,2-Dichlorobenzene	50	3 U	19 U	—	22	4	6	7
1,3-Dichlorobenzene	170	3 U	97 U	—	60.9 U	7	11	15
1,4-Dichlorobenzene	110	3.0 U	97 U	—	74	8	13	17
Benzoic acid	650	55	487 U	—	376	76	98	119
Benzyl alcohol	73	2.1	19 U	—	18	3	4	5
Dibenzofuran	540	780	750	—	896	788	795	803
Hexachlorobenzene	22	3 U	97 U	—	6.7 U	2.8	3.1	3.3
Hexachlorobutadiene	11	3 U	97 U	—	7.9 U	2.9	3.2	3.6
N-Nitrosodiphenylamine	28	26 U	19 U	—	38	26.8	27.6	28.5
Metals (mg/kg)								
Antimony	150	3.9 U	—	—	4	3.9	4.0	4.0
Arsenic	57	13.2	10.9	39	16	13.4	13.5	13.7
Cadmium	5.1	0.4 U	1.8	9.3	2	0.47	0.55	0.63
Copper	390	138	70.2	363	149	138.7	139.4	140.1
Lead	450	106	126	886.5	265	117	127	138
Mercury	0.59	1.1	0.78	1.3	0.69	1.07	1.05	1.02
Nickel	140	10.6	20	140.6	19	11.1	11.7	12.2
Silver	6.1	0.8 U	2.8	14.1	0.97	0.79	0.81	0.82
Zinc	410	108	176.2	1081	199	114	120	126
Pesticides/PCBs (ug/kg)								
Total PCBs	300	34 J	61	480	137	41	48	55
4,4'-DDD	16	5.0 U	8.6 U	159	10.8 U	5.4	5.8	6.2
4,4'-DDE	9	5.0 U	3.9 U	29 U	10.8 U	5.4	5.8	6.2
4,4'-DDT	34	5.0 U	7.9 U	69.5 UJ	18.2 U	5.9	6.8	7.6
VOCs (ug/kg)								
Ethylbenzene	10	3.0 U	—	—	8.9 U	3.4	3.8	4.2
Tetrachloroethene	57	3.0 U	—	—	8.9 U	3.4	3.8	4.2
Xylenes (total)	40	3.0 U	—	—	10.0 U	3.5	3.9	4.4
Grain Size (%)								
Percent Gravel	--	2	1.3	0.4	3.1	2.1	2.1	2.2
Percent Sand	--	47	51.7	8.1	32.7	46.0	45.1	44.1
Percent Silt	--	42	38.7	69.5	51.2	42.6	43.2	43.8
Percent Clay	--	9	8.3	13.1	13.0	9.3	9.5	9.8
Percent Fines	--	51	47.0	82.5	70.5	52.3	53.6	54.9

[a] Data from Table 6-2 of Thea Foss Round 3 report (HartCrowser 1998). These data are included to provide a comparison with the relatively large volume and similar chemical concentration of other CB/NT sediments that may be co-disposed with Middle Waterway sediments.

[b] Data calculated from Table 6-2 of Thea Foss Round 3 report (HartCrowser 1998). These data are included to provide a comparison with the relatively large volume and similar chemical concentration of other CB/NT sediments that may be co-disposed with Middle Waterway sediments.

[c] In the absence of Round 1B data necessary to understand the spatial resolution of sediments that require removal, we have defined potential "hotspot" sediments based on the Round 1A and historical chemical data from the head of the Middle Waterway. Specifically, the representative chemical concentration of the potential "hotspot" sediments are based on the average chemical concentration from stations located with the potential "hotspot" area(s). Stations used in developing the average concentration for the potential hotspot area within the tideflats included stations from Round 1A and historical stations with any SQO exceedences: MW050, MW051, MW052, MW054, TF-21, TF-22, TF-23, HC-1, HC-3, MD-11. For chemicals that were not detected in a sample, the detection limit was used as the concentration and included in the calculation.

[d] In the absence of Round 1B data necessary to understand the spatial resolution of sediments that require removal, we have evaluated three (3) potential "hotspot" volumes (5000, 10,000, and 15,000 cubic yards). These preliminary volumes are based on an evaluation of Round 1A and historical chemical data and include the assumption that the sediments to be removed are based on hotspot removal with replacement of clean sediment back to the original elevation. Volume-weighted concentrations assume that a total of 75,000 cy is the total amount of sediments (including overdredge) potentially to be removed from the Middle Waterway and that the potential hotspot sediments will represent a portion of that volume. For example, the volume-weighted concentration for mercury in the 10,000 cy scenario is calculated by multiplying the bulk composite concentration by 65,000, adding that product to the average hotspot concentration and 10,000 cy, and then dividing by 75,000 cy (i.e., [(1.7*65,000)+(0.69*10,000)]/75,000 = 1.57).

Table 14. Analytical Results for the Contaminant Mobility Tests (MET and DRET)[a]

Parameter	MET (Dissolved)	MET (Total)	DRET (Total)	Background Site Water (Dissolved)	Background Site Water (Total)	Chronic Marine Water Quality Standard
Conventionals						
TOC (mg/L)	24	26	29	18	9.7	
TSS (mg/L)	----	----	----	----	----	
Metals (mg/L)						
Antimony	0.023	0.025	<0.0050	<0.0050	<0.0050	0.5
Arsenic	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.036
Cadmium	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.008
Chromium (Total)	<0.0070	<0.0070	<0.0070	<0.0070	<0.0070	0.05
Copper	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.025
Lead	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0058
Mercury	0.00000178	0.00000854	0.00000506	0.00000153	0.00000096	0.000025
Nickel	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0079
Silver	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0012
Zinc	0.0001	<0.0070	<0.0070	<0.0070	<0.0070	0.0766
Organics (ug/L)						
Pentachlorophenol	<1.8	<1.8	<1.8	<1.8	<1.8	10.9
Acenaphthene	5.8	5.6	2.5	<1.7	<1.7	710
Fluoranthene	<1.6	1.1 J	<1.6	<1.6	<1.6	16
Naphthalene	<2.0	<2.0	<2.0	<2.0	<2.0	2350 (acute)
Phenanthrene	6.2	6.5	3.4	<1.4	<1.4	4.6
Hexachlorobutadiene	<0.050 E	<0.050 E	<0.050 E	<0.050 E	<0.050 E	32 (acute)
Hexachloroethane	<3.1	<3.1	<3.1	<3.1	<3.1	940 (acute)
Chlordane	<0.050 E	<0.050 E	<0.050 E	<0.050 E	<0.050 E	0.004
Dieldrin	<0.10 E	<0.10 E	<0.10 E	<0.10 E	<0.10 E	0.0019
Heptachlor	<0.050 E	<0.050 E	<0.050 E	<0.050 E	<0.050 E	0.0036

[a] Parameters and water quality standards listed are taken from Table 6 of the Sampling and Analysis Plan (Foster Wheeler Environmental 1998b)

---- = data not available at this time.

E = estimated value

Table 15. Analytical Results for the Contaminant Mobility Tests (TCLT)

Parameter	Chronic Marine Water Qual. Standard	TCLT Equipment Rinsate	TCLT PV1	TCLT PV1.5	TCLT PV2.5	TCLT PV3	TCLT PV4	TCLT PV5	TCLT PV6	TCLT PV6.3	TCLT PV7.3
Conventionals											
Conductivity (millimhos)			14.63	11.1	6.7	3.47	2.44	1.54	0.88	0.77	0.53
Dissolved Oxygen (ppm)			0.4	0.8	0.2	0.7	0.3	0.7	0.5	0.3	0.15
Eh (mv)			29	116.3	-83.1	-20.4	-20.6	-35.3	-81.6	-9.5	-4
Ferrous Iron (mg/L)			NA	NA	NA	NA	NA	NA	NA	NA	NA
pH ()			7.74	8.16	8.05	8.2	8.09	8.1	7.88	8.5	8.37
Sulfide (mg/L)			NA	NA	NA	NA	NA	NA	NA	NA	NA
Turbidity (NTU)			NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals											
Antimony	0.5	0.005 U	NA	0.005 U	NA	0.005 U	NA	0.005 U	NA	0.005 U	NA
Arsenic	0.036	0.005 U	NA	0.005 U	NA	0.005 U	NA	0.005 UG	NA	0.005 UG	NA
Cadmium	0.008	0.0005 U	NA	0.0005 U	NA	0.0005 U	NA	0.0005 U	NA	0.0005 U	NA
Chromium	0.05	0.007 U	NA	0.007 U	NA	0.007 U	NA	0.007 U	NA	0.007 U	NA
Copper	0.025	0.002 U	NA	0.002 U	NA	0.0034	NA	0.0053	NA	0.0064	NA
Lead	0.0058	0.001 U	NA	0.001 U	NA	0.0023	NA	0.0049	NA	0.0072	NA
Mercury	0.000025		NA	0.0000222	NA	0.0000319	NA	0.0000626	NA	0.0000796	NA
Nickel	0.0079	0.0286	NA	0.0149	NA	0.005 U	NA	0.005 U	NA	0.005 U	NA
Silver	0.0012	0.0005 U	NA	0.0005 U	NA	0.0005 U	NA	0.0005 U	NA	0.0005 U	NA
Zinc	0.0766	0.007 U	NA	0.007 U	NA	0.007 U	NA	0.0078	NA	0.0134	NA
Organics											
Acenaphthene	710		3.9	NA	5.2	NA	4.6	NA	1.8 G	NA	4
alpha-Chlordane	0.004		0.047 U	NA	0.054 UE	NA	0.058 U	NA	0.05 U	NA	0.051
Dieldrin	0.0019		0.094 U	NA	0.11 UE	NA	0.12 U	NA	0.1 U	NA	0.1 U
Fluoranthene	16		1.6 U	NA	1.6 U	NA	1.2 J	NA	1.7	NA	2.1
gamma-Chlordane			0.047 U	NA	0.054 UE	NA	0.058 U	NA	0.05 U	NA	0.051 U
Heptachlor	0.0036		0.047 U	NA	0.054 UE	NA	0.058 U	NA	0.05 U	NA	0.051 U
Hexachlorobutadiene	32		0.047 U	NA	0.054 UE	NA	0.058 U	NA	0.05 U	NA	0.051 U
Hexachloroethane	940		3.1 U	NA	3.1 U	NA	3.1 U	NA	3.1 U	NA	3.4 U
Naphthalene	2350		2 U	NA	2 U	NA	2 U	NA	2 U	NA	2.1 U
Pentachlorophenol	10.9		1.8 U	NA	1.8 U	NA	1.8 U	NA	1.8 U	NA	1.9 U
Phenanthrene	4.6		3	NA	5	NA	5.1	NA	4.5	NA	4.6

PV = pore volume (1 15 L/pore volume)
NA = pore volume sample not anlyzed for these parameters
ND = no data, sample container broken
* = duplicate analysis not within control limits
B = analyte detected in samples and in method blank

E = estimated value
G = value is greater than minimum value shown
J = estimated value
N = spiked sample recovery not within control limits
U = value not detected

Table 15. Analytical Results for the Contaminant Mobility Tests (TCLT) (Cont.)

Parameter	Chronic Marine Water Qual. Standard	TCLT PV8	TCLT PV9	TCLT PV10	TCLT PV11	TCLT PV11.5	TCLT PV12.8	TCLT PV13.4	TCLT PV14.4	TCLT PV14.9	TCLT PV15.8
Conventionals											
Conductivity (millimhos)		0.46	0.33	0.28	0.31	0.32	0.3	0.35	0.26	0.25	0.24
Dissolved Oxygen (ppm)		1.1	0.4	0.3	0.15	0.35	0.4	0.4	0.4	0.3	0.3
Eh (mv)		-2.5	-17.6	-12.7	-44	11.9	81	-6.3	-25.3	3	-20.6
Ferrous Iron (mg/L)		0.07	0.07	0.1	0.18	0.16	0.18	0.18	0.26	0.24	0.24
pH ()		8.3	8.57	8.55	8.53	8.57	8.85	8.87	8.76	9.11	9.17
Sulfide (mg/L)		0.07	NA	NA	NA	NA	NA	NA	NA	NA	NA
Turbidity (NTU)		NA	NA	34.7	66.9	71.4	72.8	98	106.7	108.8	114.5
Metals											
Antimony	0.5	0.005 U	NA	0.005 U	NA	0.005 U	NA	0.005 U	NA	0.005 U	NA
Arsenic	0.036	0.005 U	NA	0.005 U	NA	0.005 U	NA	0.005 U	NA	0.005 U	NA
Cadmium	0.008	0.0005 U	NA	0.0005 U	NA	0.0005 UN	NA	0.00054	NA	0.001 U	NA
Chromium	0.05	0.0092	NA	0.007 U	NA	0.0117	NA	0.0221	NA	0.0214	NA
Copper	0.025	0.0268	NA	0.0288	NA	0.0664	NA	0.106	NA	0.126	NA
Lead	0.0058	0.0191	NA	0.0233 *	NA	0.0531	NA	0.0712	NA	0.0936	NA
Mercury	0.000025	0.000212	NA	0.000161	NA	ND	NA	0.0005955	NA	0.0008255	NA
Nickel	0.0079	0.005 U	NA	0.005 U	NA	0.0079	NA	0.0165	NA	0.0129	NA
Silver	0.0012	0.0005 U	NA	0.0005 U	NA	0.0005 U	NA	0.0005 U	NA	0.0005 U	NA
Zinc	0.0766	0.0212	NA	0.0234	NA	0.0482 B	NA	0.0762	NA	0.0908	NA
Organics											
Acenaphthene	710	NA	4.2	NA	4.3	NA	5.3	NA	5.5	NA	5.5
alpha-Chlordane	0.004	NA	0.052 U	NA	0.054 U	NA	0.057 UE	NA	0.057 U	NA	0.054 UE
Dieldrin	0.0019	NA	0.1 U	NA	0.11 U	NA	0.11 UE	NA	0.11 U	NA	0.11 UE
Fluoranthene	16	NA	2.2	NA	2.3	NA	3.5	NA	3.7	NA	3.7
gamma-Chlordane		NA	0.052 U	NA	0.054 U	NA	0.057 UE	NA	0.057 U	NA	0.054 UE
Heptachlor	0.0036	NA	0.052 U	NA	0.054 U	NA	0.057 UE	NA	0.057 U	NA	0.054 UE
Hexachlorobutadiene	32	NA	0.052 U	NA	0.054 U	NA	0.057 UE	NA	0.057 U	NA	0.054 UE
Hexachloroethane	940	NA	3.8 U	NA	3.1 U	NA	3.1 U	NA	3.3 U	NA	3.4 U
Naphthalene	2350	NA	2.4 U	NA	2 U	NA	2 U	NA	2.1 U	NA	2.1 U
Pentachlorophenol	10.9	NA	2.1 U	NA	1.8 U	NA	1.8 U	NA	1.9 U	NA	1.9 U
Phenanthrene	4.6	NA	5.6	NA	2.2	NA	9.4	NA	4.8	NA	8.5

PV = pore volume (1 15 L/pore volume)
NA = pore volume sample not anlyzed for these parameters
ND = no data, sample container broken
* = duplicate analysis not within control limits
B = analyte detected in samples and in method blank

E = estimated value
G = value is greater than minimum value shown
J = estimated value
N = spiked sample recovery not within control limits
U = value not detected

Table 15. Preliminary Analytical Results for the Contaminant Mobility Tests (TCLT) (Cont.)

Parameter	Chronic Marine Water Qual. Standard	TCLT PV16.5	TCLT PV17.5	TCLT PV18	TCLT PV19	TCLT PV19.6	TCLT PV20.6	TCLT PV21.2	TCLT PV22.2	TCLT PV22.9	TCLT PV23.8
Conventionals											
Conductivity (millimhos)		0.2	0.21	0.25	0.2	0.15	0.17	0.16	0.147	0.176	0.173
Dissolved Oxygen (ppm)		0.25	0.3	0.3	0.5	0.4	0.4	0.35	0.4	0.45	0.5
Eh (mv)		-33.1	-6.3	17.6	6.8	13	12.5	-15.8	15.3	-27.3	-14.6
Ferrous Iron (mg/L)		0.31	0.22	0.2	0.15	0.16	0.15	0.18	0.13	0.12	0.17
pH ()		9.01	8.96	8.66	8.88	9.26	9.5	9.61	9.48	9.59	9.71
Sulfide (mg/L)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Turbidity (NTU)		102.1	92	82	76.5	75.6	88.2	90.5	85.7	74.7	81.3
Metals											
Antimony	0.5	0.005 U	NA	0.005 U	NA	0.005 U	NA	0.005	NA	0.005	NA
Arsenic	0.036	0.005 U	NA	0.005 U	NA	0.005 U	NA	0.005	NA	0.005	NA
Cadmium	0.008	0.00061	NA	0.001 U	NA	0.0005 U	NA	0.0006 E	NA	0.00052 U	NA
Chromium	0.05	0.0124	NA	0.0167	NA	0.0149	NA	0.0162 U	NA	0.0122 U	NA
Copper	0.025	0.114	NA	0.0989 G	NA	0.0871	NA	0.102 U	NA	0.0828 U	NA
Lead	0.0058	0.0807 N	NA	0.086 E	NA	0.0724	NA	0.0876 B	NA	0.0694 B	NA
Mercury	0.000025	0.0008163	NA	0.0007415	NA	0.0006523	NA	0.000744	NA	0.0006753	NA
Nickel	0.0079	0.0087	NA	0.0131	NA	0.0093	NA	0.0098 E	NA	0.0053 E	NA
Silver	0.0012	0.0005 U	NA	0.0005 U	NA	0.0002 U	NA	0.0005	NA	0.0005	NA
Zinc	0.0766	0.0803	NA	0.0787	NA	0.0666	NA	0.0742 U	NA	0.0637 U	NA
Organics											
Acenaphthene	710	NA	5.3	NA	4.3 G	NA	4.9	NA	4.4	NA	4
alpha-Chlordane	0.004	NA	0.052 U	NA	0.052 U	NA	0.052 U	NA	0.054 U	NA	0.11 U
Dieldrin	0.0019	NA	0.1 U	NA	0.1 U	NA	0.1 U	NA	0.11 U	NA	0.22 U
Fluoranthene	16	NA	3.1	NA	2.1	NA	2.7	NA	2	NA	2
gamma-Chlordane		NA	0.052 U	NA	0.052 U	NA	0.052 U	NA	0.054 U	NA	0.11 U
Heptachlor	0.0036	NA	0.052 U	NA	0.052 U	NA	0.052 U	NA	0.054 U	NA	0.11 U
Hexachlorobutadiene	32	NA	0.052 U	NA	0.052 U	NA	0.052 UE	NA	0.054 UE	NA	0.11 U
Hexachloroethane	940	NA	3.3 U	NA	3.3 U	NA	3.4 U	NA	3.4 U	NA	3.2 U
Naphthalene	2350	NA	2.1 U	NA	2.1 U	NA	2.2 U	NA	2.1 U	NA	2 U
Pentachlorophenol	10.9	NA	1.9 U	NA	1.9 U	NA	2 U	NA	1.9 UG	NA	1.8 UG
Phenanthrene	4.6	NA	8	NA	5.5	NA	7.4	NA	5.7	NA	3.3

PV = pore volume (1 15 L/pore volume)
NA = pore volume sample not anlyzed for these parameters
ND = no data, sample container broken
* = duplicate analysis not within control limits
B = analyte detected in samples and in method blank

E = estimated value
G = value is greater than minimum value shown
J = estimated value
N = spiked sample recovery not within control limits
U = value not detected

Table 15. Preliminary Analytical Results for the Contaminant Mobility Tests (TCLT) (Cont.)

Parameter	Chronic Marine Water Qual. Standard	TCLT PV24.3	TCLT PV25.3	TCLT PV25.9	TCLT PV26.9	TCLT PV27.4	TCLT PV28.4	TCLT PV29.1	TCLT PV30	TCLT PV32.9
Conventionals										
Conductivity (millimhos)		0.168	0.161	0.154	0.14	NA	NA	NA	NA	NA
Dissolved Oxygen (ppm)		0.4	0.45	0.4	0.2	NA	NA	NA	NA	NA
Eh (mv)		-18.2	-17.6	-15.3	-6.5	NA	NA	NA	NA	NA
Ferrous Iron (mg/L)		0.16	0.14	0.13	0.13	NA	NA	NA	NA	NA
pH ()		9.76	9.78	9.91	9.83	NA	NA	NA	NA	NA
Sulfide (mg/L)		NA	NA	NA	NA	NA	NA	NA	NA	NA
Turbidity (NTU)		80.6	79.5	72.6	80.5	NA	NA	NA	NA	NA
Metals										
Antimony	0.5	0.005 U	NA	0.005 U	NA	0.005 U	NA	0.005 U	NA	0.005 U
Arsenic	0.036	0.005 U	NA	0.005 U	NA	0.005 U	NA	0.005 U	NA	0.005 U
Cadmium	0.008	0.0005 U	NA	0.0005 U	NA	0.0005 U	NA	0.0005 U	NA	0.0005 U
Chromium	0.05	0.0078	NA	0.0125	NA	0.0091	NA	0.007 U	NA	0.007 U
Copper	0.025	0.0975	NA	0.072	NA	0.0657	NA	0.0574	NA	0.0397
Lead	0.0058	0.0708 B	NA	0.062	NA	0.0616	NA	0.0495	NA	0.0363
Mercury	0.000025	0.0006531	NA	0.0005753	NA	0.0005397	NA	0.0004079	NA	0.0003
Nickel	0.0079	0.007 E	NA	0.0065	NA	0.007	NA	0.005 U	NA	0.005 U
Silver	0.0012	0.0005 U	NA	0.0005 U	NA	0.0005 U	NA	0.0005 U	NA	0.0005 U
Zinc	0.0766	0.064	NA	0.058	NA	0.0593	NA	0.0411	NA	0.0423
Organics										
Acenaphthene	710	NA	4.2	NA	4.2	NA	4	NA	3.8 G	NA
alpha-Chlordane	0.004	NA	0.11 UE	NA	0.1 UE	NA	0.1 U	NA	0.1 U	NA
Dieldrin	0.0019	NA	0.23 UE	NA	0.1 UE	NA	0.2 U	NA	0.2 U	NA
Fluoranthene	16	NA	2	NA	2	NA	1.7	NA	1.6 J	NA
gamma-Chlordane		NA	0.11 UE	NA	0.1 UE	NA	0.1 U	NA	0.1 U	NA
Heptachlor	0.0036	NA	0.11 UE	NA	0.1 UE	NA	0.1 U	NA	0.1 U	NA
Hexachlorobutadiene	32	NA	0.11 UE	NA	0.1 UE	NA	0.1 U	NA	0.1 UE	NA
Hexachloroethane	940	NA	3.5 U	NA	3.4 U	NA	3.1 U	NA	3.2 U	NA
Naphthalene	2350	NA	2.2 U	NA	2.2 U	NA	2 U	NA	2 U	NA
Pentachlorophenol	10.9	NA	2 UG	NA	2 U	NA	1.8 U	NA	1.8 U	NA
Phenanthrene	4.6	NA	5.2	NA	4.4	NA	4	NA	4	NA

PV = pore volume (1 15 L/pore volume)
NA = pore volume sample not anlyzed for these parameters
ND = no data, sample container broken
* = duplicate analysis not within control limits
B = analyte detected in samples and in method blank

E = estimated value
G = value is greater than minimum value shown
J = estimated value
N = spiked sample recovery not within control limits
U = value not detected

Table 16. Summary of Bioassay Results For Controls and Reference Stations and Comparison to Performance Criteria

Sample ID	*Rhepoxynius abronius* Mean Percent Mortality[a]	*Mytilus edulis* Mean Percent Normal Survival[a]	*Neanthes arenaceodentata* Mean Individual Growth (MIG) Rate (mg/organism/day dry weight)[a]
Negative Control			
Performance Criteria	< 10% mortality	> 70% normal survival	< 10% mortality; MIG 0.38 mg/organism /day
Test Performance	1 ± 2.2%	82.5 ± 6.4%	8%; 0.68 ± 0.14
Reference Sediment			
Performance Criteria	< 25 % mortality	>0.65*(control)	> 0.8*(MIG control)
MWRC208	5.0 ± 3.5%	76.4 ± 1.5%	0.56 ± 0.11
MWRCR209	3.0 ± 4.5%	75.6 ± 4.2%	0.44 ± 0.11
MWRCR210	6.0 ± 4.2%	72.5 ± 6.1%	NA

[a] Mean and standard deviation for five replicate samples.
NA = not analyzed.

Table 17. Pollution-tolerant and Opportunistic Taxa at Middle Waterway Benthic Reference Stations

TAXON	NODC CODE	Station MWRH 205 Mean	MWRH 206 Mean	MWRH 207 Mean
***Capitella capitata* 'hyperspecies'**	5001600101	81	44.6	69.2
Capitellidae sp. Indet.	5001600000	0	0	0
Eteone sp. Indet.	5001130200	6.4	1.8	2.4
Glycinde polygnatha	5001280105	0.8	0.6	0
Heteromastus filobranchus	5001600203	0	0	0
Lumbrineris sp. Indet.	5001310100	0.4	0	0
Mediomastus sp. Indet.	5001600400	0	0.8	0.2
Nereis virens	5001240302	0.2	0	0
Oligochaeta sp. Indet.	5004	608.8	145.6	274.6
Polydora cornuta	5001430411	0	0.2	2
Polydora sp. Juv.	5001430400	0	0.6	2.2
Prionospio lighti	5001430521	0	0.4	0
Pseudopolydora kempi	5001431501	1.6	2.8	6.4
Pygospio elegans	5001431302	8.2	3.2	25.4
Tharyx parvus	5001500303	0.4	0.2	2.2
Macoma balthica	5515310116	1	0	1.2
Macoma nasuta	5515310114	0.8	4.4	1.2
Macoma sp. Indet.	5515310100	0.2	0	0
Macoma sp. Juv.	5515310100	0.4	0.2	0
Mytilus sp. Juv.	5507010100	0.6	0	0.2
Corophiidae sp. Indet.	6169150000	55.8	5.2	21.4
Monocorophium insidiosum	6169150211	80.6	17.6	73.2
***Monocorophium* sp. Juv.**	6169150200	88.6	8	19.8
Sum		935.8	236.2	501.6
Percent of Total Abundance		76.3	74.8	75.8
Mean Total Abundance		1222.4	314	661.8
Number of Taxa	23	17	16	15
Total Organic Carbon (%)		8.7	3.4	8.1

Note: Bold taxa show clear response to TOC %

Table 18. Grain Size Data for Reference and Test Sediments and Assignments of Test Reference Pairs for Comparison of Bioassay and Benthic Test Results

Station ID	Total Organic Carbon (%)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Fines (Silt + Clay) (%)	Comparative Reference Station
MWRH205	8.7	6.2	72.9	13.7	7.1	20.8	N/A
MWRH206	3.4	6.2	41.1	48.3	10	58.3	N/A
MWRH207	8.1	8.2	48.2	34.3	9.3	43.6	N/A
MWRC208	0.27	0.1	72.3	24.1	2.5	28.0	N/A
MWRC209	0.51	0	46.7	48.1	5.3	53.3	N/A
MWRC210	0.56	0	28.9	64.7	6.4	71.1	N/A
MW022	4.35	59.8	21.5	14	4.7	18.7	MWRC208
MW024	4.42	9	38.1	38.2	14.7	53	MWRC209
MW025	3.03	1.7	38.3	41.6	18.4	60	MWRC209
MW039	2.98	2.6	57.1	32.2	8.1	40.3	MW208; MW207[b,c]
MW040	1.44	0	58.1	37.1	4.8	41.9	MWRC209
MW043	2.26	0.2	48	44	7.8	51.8	MW210; MW206[b]
MW048	2.79	0.3	36	55	8.8	63.8	MW209; MW206[b]
MW049	1.65	0.9	70.1	23.3	5.6	29	MW208; MW205[b,c]
MW052	3.32	0.4	46.2	44.3	9.1	53.4	MW209; MW206[b]
MW054	13.0	11.2	30.7	41.9	16.2	58	MW209; MW206[b]

[a] Mean of triplicate analysis.

[b] First station used for bioassays, second station used for benthic comparisons.

[c] Most appropriate station for benthic comparison based on grain size. Pollution –tolerant and opportunistic taxa are dominant in reference stations. Per Tables 24 and 25 of EPA-approved Work Plan, reference stations do not meet performance criteria. In addition, physical parameters (e.g., TOC) indicate that reference stations MW205 and MW207 are not appropriate (see June 24, 1998 memorandum on chronic biological testing), therefore, all benthic comparisons, except MW049, were made using station MW206. EPA directed MWAC to use station MW205 to compare with MW049 even though the EPA-approved acceptance criteria were not met at this location.

Table 19. Summary of Results of the *Rhepoxynius abronius* Bioassays

STATION ID	REFERENCE STATION[a]	MEAN MORTALITY[b] (%)	STATISTICAL SIGNIFICANCE[c] Significant Difference?	NO ADVERSE	MINOR ADVERSE
MW022	MWRC208	7.0 ± 4.5%	No	Pass	Pass
MW024	MWRC209	18.0 ± 8.4%	Yes	Pass	Pass
MW025	MWRC209	11.0 ± 8.2%	No	Pass	Pass
MW039	MW208	6.0 ± 2.2%	No	Pass	Pass
MW040	MWRC209	4.0 ± 4.2%	No	Pass	Pass
MW043	MW210	5.0 ± 5.0%	No	Pass	Pass
MW048	MW209	10.0 ± 9.4%	No	Pass	Pass
MW049	MW208	4.0 ± 5.5%	No	Pass	Pass
MW052	MW209	6.0 ± 6.5%	Yes	Pass	Pass
MW054	MW209	9.0 ± 4.2%	Yes	Pass	Pass

NOTE: No Adverse – as defined in Table 24 of Work Plan
Minor Adverse – as defined in Table 25 of Work Plan

[a] Corresponding reference station with similar grain size.
[b] Mean and standard deviation for five replicate samples.
[c] Statistically significant increases in percent mortality compared to reference as determined by a t-test (normally distributed data) at the $\alpha = 0.05$ level.

Table 20. Summary of Results of the *Mytilus* sp. Bioassays

STATION ID	Reference Station[a]	Mean Normal Survival[b] (%)	Statistical Significance[c] Significant Difference?	NO ADVERSE	MINOR ADVERSE
MW022	MWRC208	66.4 ± 9.5%	Yes	Pass	Pass
MW024	MWRC209	78.2 ± 6.5%	No	Pass	Pass
MW025	MWRC209	72.5 ± 7.5%	No	Pass	Pass
MW039	MW208	76.7 ± 5.0%	No	Pass	Pass
MW040	MWRC209	73.6 ± 6.7%	No	Pass	Pass
MW043	MW210	77.4 ± 3.6%	No	Pass	Pass
MW048	MW209	70.5 ± 5.9%	Yes	Pass	Pass
MW049	MW208	77.8 ± 5.2%	No	Pass	Pass
MW052	MW209	71.0 ± 8.4%	No	Pass	Pass
MW054	MW209	67.9 ± 7.2%	Yes	Pass	Pass

NOTE: No Adverse – as defined in Table 24 of Work Plan
Minor Adverse – as defined in Table 25 of Work Plan

[a] Corresponding reference station with similar grain size.
[b] Mean and standard deviation for five replicate samples.
[c] Statistically significant increases in percent mortality compared to reference as determined by a t-test (normally distributed data) at the $\alpha = 0.1$ level.

Table 21. Summary of Results of the *Neanthes arenaceodentata* Bioassays

Station ID	Reference Station[a]	Mean Individual Growth Rate (mg/organism/ day, dry wt)[b]	Statistical Significance[c] Significant Difference?	No Adverse	Minor Adverse
MW022	MW208	0.62 ± 0.11	No	Pass	Pass
MW024	MW209	0.47 ± 0.10	No	Pass	Pass
MW025	MW209	0.32 ± 0.07	Yes	Fail	Pass
MWO40	MW209	0.43 ± 0.04	No	Pass	Pass

NOTE: No Adverse – as defined in Table 24 of Work Plan
Minor Adverse – as defined in Table 25 of Work Plan

[a] Corresponding reference station with similar grain size.
[b] Mean and standard deviation for five replicate samples.
[c] Statistically significant increases in percent mortality compared to reference as determined by a t-test (normally distributed data) at the $\alpha = 0.05$ level. Note: all statistical tests were performed using reference station MW208 because reference station MW209 failed to meet the performance criteria.

Table 22. Summary of Results of the Benthic Infaunal Abundance Analyses

Station ID	Reference Station[a,d]	Mean Polychaete Abundance[b] # ind/0.023 m²	Statistical Significance and < 50% Reference?[c]	Mean Mollusc Abundance[b] # ind/0.023 m²	Statistical Significance and < 50% Reference?[c]	Mean Crustacean Abundance[b] # ind/0.023 m²	Statistical Significance and < 50% Reference?[c]	No Adverse[d]	Minor Adverse[d]
MW039	MW206	97.6 ± 20.5	No	3.8 ± 2.2	No	12.8 ± 11.4	Yes	Fail	Pass
MW043	MW206	82.6 ± 21.2	No	4.0 ± 2	No	57.0 ± 11.3	No	Pass	Pass
MW048	MW206	100.2 ± 30.1	No	6.0 ± 2.2	No	82.4 ± 35.8	No	Pass	Pass
MW049	MW205	124.2 ± 38.5	No	1.2 ± 1.1	No	50.2 ± 15.2	Yes	Fail	Pass
MW052	MW206	200.6 ± 93.5	No	4.2 ± 1.1	No	43.4 ± 30.3	No	Pass	Pass
MW054	MW206	154.4 ± 60.8	No	0.8 ± 0.8	Yes	274.8 ± 31.2	No	Fail	Pass
MW205	N/A	228.2 ± 72.3	N/A	3.0 ± 2.3	N/A	372.2 ± 119.1	N/A	N/A	N/A
MW206	N/A	109.4 ± 18.2	N/A	5.0 ± 1.6	N/A	51.6 ± 18.5	N/A	N/A	N/A
MW207	N/A	213.6 ± 79.9	N/A	2.6 ± 1.1	N/A	157.2 ± 34.9	N/A	N/A	N/A

NOTE: No Adverse – as defined in Table 24 of Work Plan
Minor Adverse – as defined in Table 25 of Work Plan

[a] Corresponding reference station with similar grain size.
[b] Mean and standard deviation for five replicate samples.
[c] Statistically significant less abundance compared to reference as determined by a t-test (normally distributed data) at the $\alpha = 0.05$ level.
[d] Pollution –tolerant and opportunistic taxa are dominant in reference stations. Per Tables 24 and 25 of EPA-approved Work Plan, reference stations do not meet performance criteria. In addition, physical parameters (e.g., TOC) indicate that reference stations MW205 and MW207 are not appropriate (see June 24, 1998 memorandum on chronic biological testing), therefore, all comparisons, except MW049, were made using station MW206. EPA directed MWAC to use station MW205 to compare with MW049 even though the EPA-approved acceptance criteria were mot met at this location.

Table 23. Sediment Standards Biological Criteria

NO ADVERSE BIOLOGICAL CRITERIA	MINOR ADVERSE BIOLOGICAL CRITERIA
Sediments are determined to have adverse effects on biological resources when any one of the confirmatory marine sediment biological tests of WAC 173-204-315(1) demonstrates the following results: 1) Amphipod: The test sediment has a significantly higher[a] mean mortality than the reference sediment, and the test sediment mean mortality exceeds 25 percent, on an absolute basis. 2) Larval: The test sediment has a mean survivorship of normal larvae that is significantly less[a] than the mean normal survivorship in the reference sediment, and the test sediment mean normal survivorship is less than 85 percent of the mean normal survivorship in the reference sediment (i.e., the test sediment has a mean combined abnormality and mortality that is greater than oe equal to 15 percent relative to time-final in the reference sediment). 3) Juvenile polychaete: The test sediment has a mean individual growth rate that is statistically different[a] from the reference sediment mean individual growth rate, and the test sediment has a mean individual growth rate of less than 70 percent of the reference sediment mean individual growth rate. 4) Benthic Infaunal Analysis – Major Benthic Taxa: Mean abundance of any one group < 50% of reference AND significantly ($P \leq 0.05$) different.	The minor adverse criteria is exceeded when any two of the biological tests exceed the no adverse biological criteria, or one of the following test determinations is made: 1) Amphipod: The test sediment has a significantly higher[a] mean mortality than the reference sediment, and the test sediment mean mortality is greater than a value represented by the reference sediment mean mortality plus thirty percent, on an absolute basis. 2) Larval: The test sediment has a mean survivorship of normal larvae that is significantly less[a] than the mean normal survivorship in the reference sediment, and the test sediment mean normal survivorship is less than 70 percent of the mean normal survivorship in the reference sediment (i.e., the test sediment has a mean combined abnormality and mortality that is greater than or equal to 30 percent relative to time-final in the reference sediment). 3) Juvenile polychaete: The test sediment has a mean individual growth rate that is statistically different[a] from the reference sediment mean individual growth rate, and the test sediment has a mean individual growth rate of less than 50 percent of the reference sediment mean individual growth rate. 4) Benthic Infaunal Analysis – Major Benthic Taxa: Mean abundance of any two groups < 50% of reference AND significantly ($P \leq 0.05$) different.

NOTE: No Adverse – as defined in Table 24 of Work Plan
Minor Adverse – as defined in Table 25 of Work Plan

[a] Statistical significance is defined using a *t*-test, p= 0.05 for all test except the larval test, where p= 0.1..

Table 24. Comparison of Bioassay/Benthic Results and Sediment Biological Effects Interpretive Criteria

Station ID	*R. abronius*		*Mytilus* sp.		*N. arenaceodentata*		Benthic Infaunal Abundance[a]		Designation
	No Adverse	Minor Adverse	No Adverse	Minor Adverse	No Adverse	Minor Adverse	No Adverse	Minor Adverse	
MW022	Pass	Pass	Pass	Pass	Pass	Pass			Pass
MW024	Pass	Pass	Pass	Pass	Pass	Pass			Pass
MW025	Pass	Pass	Pass	Pass	Fail	Pass			Minor Adverse
MW039	Pass	Pass	Pass	Pass			Fail	Pass	Minor Adverse
MW040	Pass	Pass	Pass	Pass	Pass	Pass			Pass
MW043	Pass	Pass	Pass	Pass			Pass	Pass	Pass
MW048	Pass	Pass	Pass	Pass			Pass	Pass	Pass
MW049	Pass	Pass	Pass	Pass			Fail[b]	Pass	Minor Adverse[b]
MW052	Pass	Pass	Pass	Pass			Pass	Pass	Pass
MW054	Pass	Pass	Pass	Pass			Pass[c]	Pass	Pass

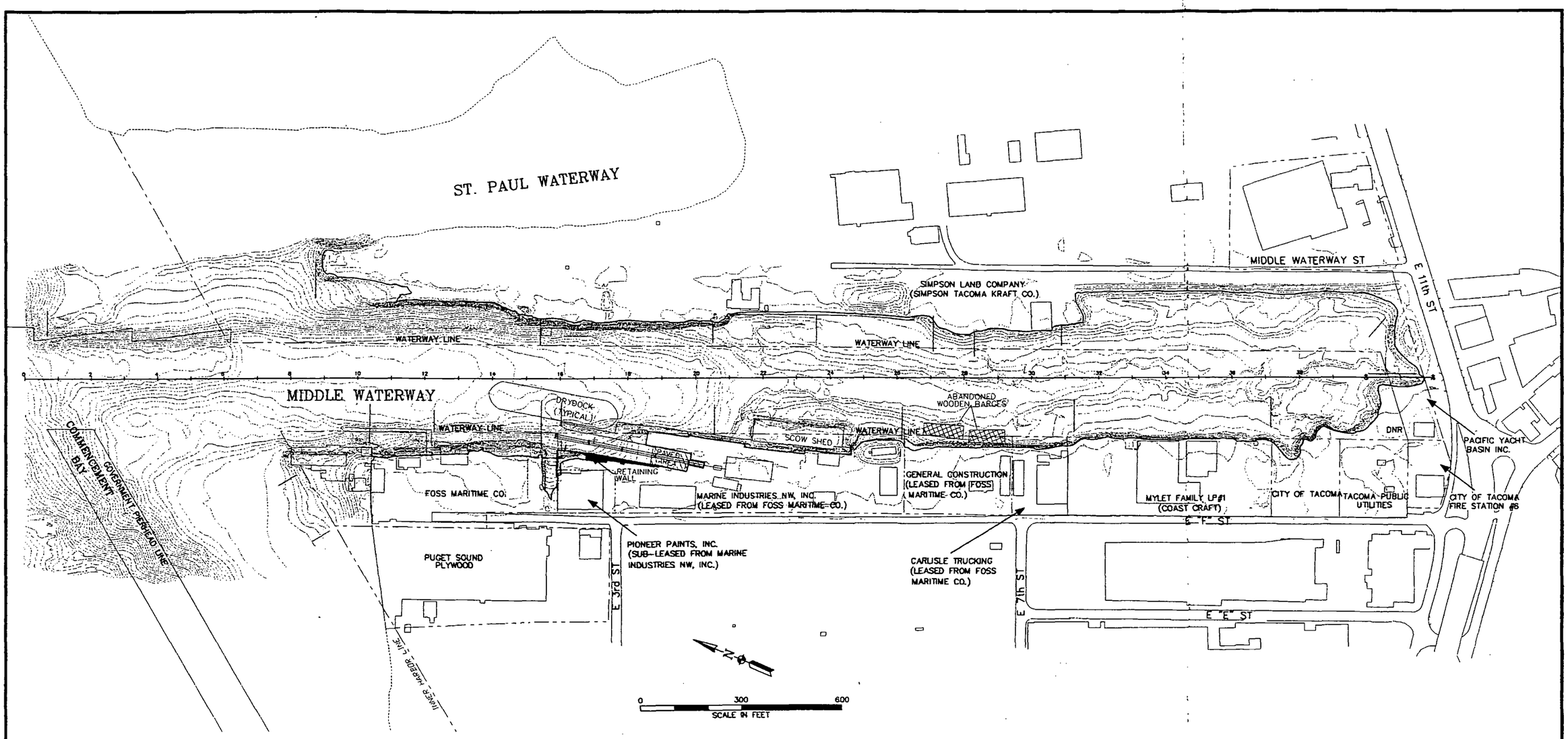
NOTE: No Adverse – as defined in Table 24 of Work Plan
Minor Adverse – as defined in Table 25 of Work Plan

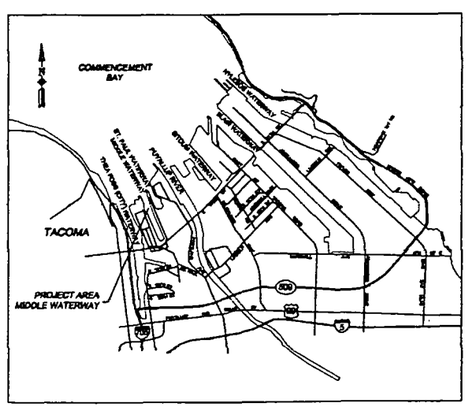
[a] Pollution-tolerant and opportunistic taxa are dominant in reference stations. Per Tables 24 and 25 of EPA-approved Work Plan, reference stations do not meet performance criteria. In addition, physical parameters (e.g., TOC) indicate that reference stations MW205 and MW207 are not appropriate (see June 24, 1998 memorandum on chronic biological testing). Therefore, all comparisons, except MW049, were made using MW206.

[b] Designation based on EPA direction to MWAC to use station MW205 to compare with MW049 even though the EPA-approved Work Plan decision criteria were not met at this location and MW049 had no SQO exceedances.

[c] Benthic threshold exceedance based on mollusc abundance set aside per discussions with EPA (November 11, 1998 meeting; EPA 1998 comment letter).

FIGURES





NOTES:

1. Horizontal Datum: WA State Plane South Zone (NAD 83-91)
   Vertical Datum: COE Mean Lower Low Water

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Figure 1
Middle Waterway Problem Area
Vicinity & Site Map

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PLOT/UPDATE: August 12, 1999

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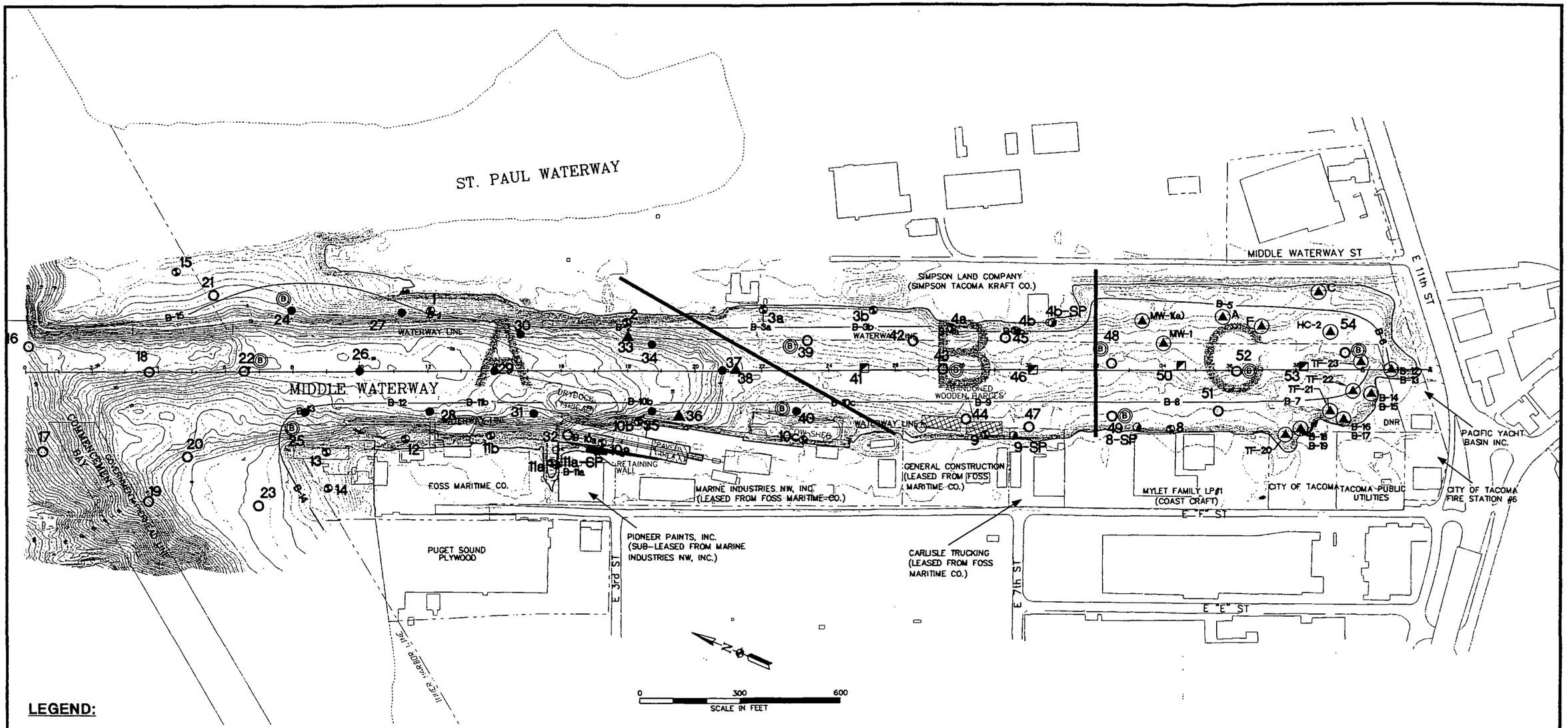

LEGEND:

- ○ SURFACE SEDIMENT SAMPLE LOCATION
- ● SURFACE SEDIMENT AND CO-LOCATED SUBSURFACE SEDIMENT CORE LOCATION
- ◩ SHALLOW (0-2 FEET) SUBSURFACE SEDIMENT SAMPLE LOCATION (1 COMPOSITE SAMPLE)
- B-10b WATERWAY BANK SECTIONS (B-3, B-10, AND B-11 SUBSECTIONED)
- REPRESENTATIVE LOCATION OF COMPOSITE BANK SAMPLE
- SUPPLEMENTAL SAMPLE LOCATION
- AUTOMATIC BIOLOGICAL TESTING SAMPLE LOCATIONS
- PROPERTY LINE (INCLUDING LEASES)
- HISTORICAL STATIONS

NOTES:

1. Property line information has been compiled from multiple data sources, which have not been verified. This data is to be used for reference purposes only.
2. Horizontal Datum: WA State Plane South Zone (NAD 83-91)
   Vertical Datum: COE Mean Lower Low Water.
3. Samples not collected in bank segments B-5, B-6, or B-7.

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Figure 2
Middle Waterway Problem Area
Round 1A and Selected
Historical Sample Stations

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PLOT/UPDATE: August 12, 1999

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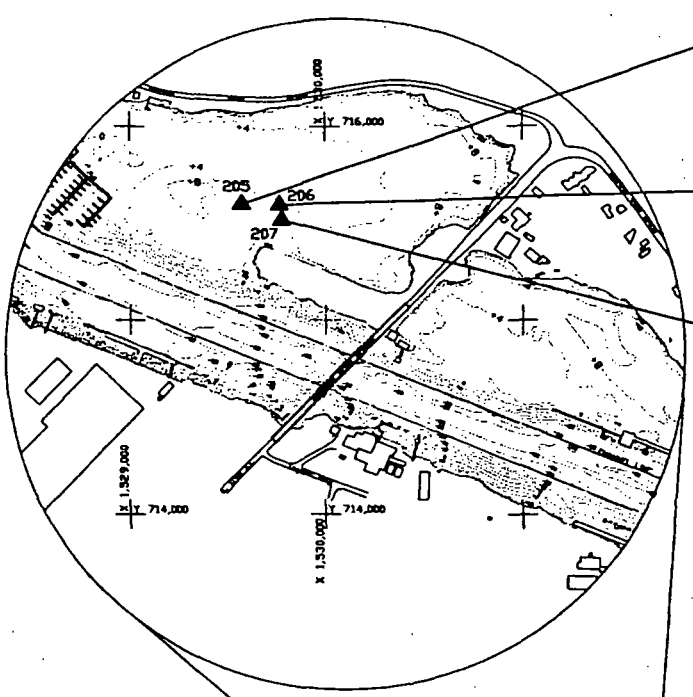
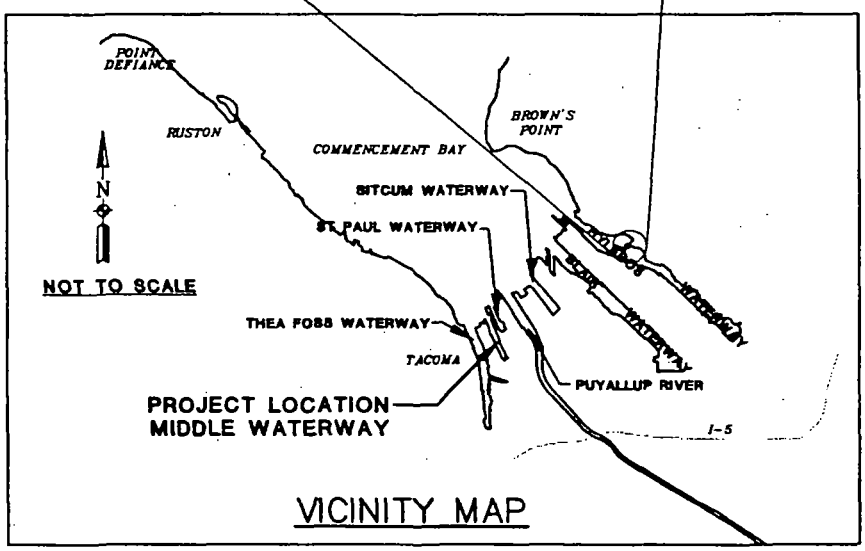


MW205	SURFACE
FINES	20.80%
TOC	8.70%

MW206	SURFACE
FINES	58.30%
TOC	3.40%

MW207	SURFACE
FINES	43.60%
TOC	8.10%
2-METHYLPHENOL	1.490 U



VICINITY MAP

MIDDLE WATERWAY

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LEGEND:

STATION	DEPTH
PERCENT FINES	%
PERCENT TOC	%
CHEMICAL	EXCEEDENCE FACTOR

NOTES:

1. BASE MAP COURTESY HYLEBOS CLEANUP COMMITTEE
2. VERTICAL DATUM: PORT OF TACOMA/CORPS OF ENGINEERS MLLW ESTABLISHED 1973 (BASED ON 1941 MLLW) MEAN LOWER LOW WATER = 0.0
3. HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE (NAD 27).

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FIGURE 3
ROUND 1A
BENTHIC REFERENCE SAMPLE LOCATION

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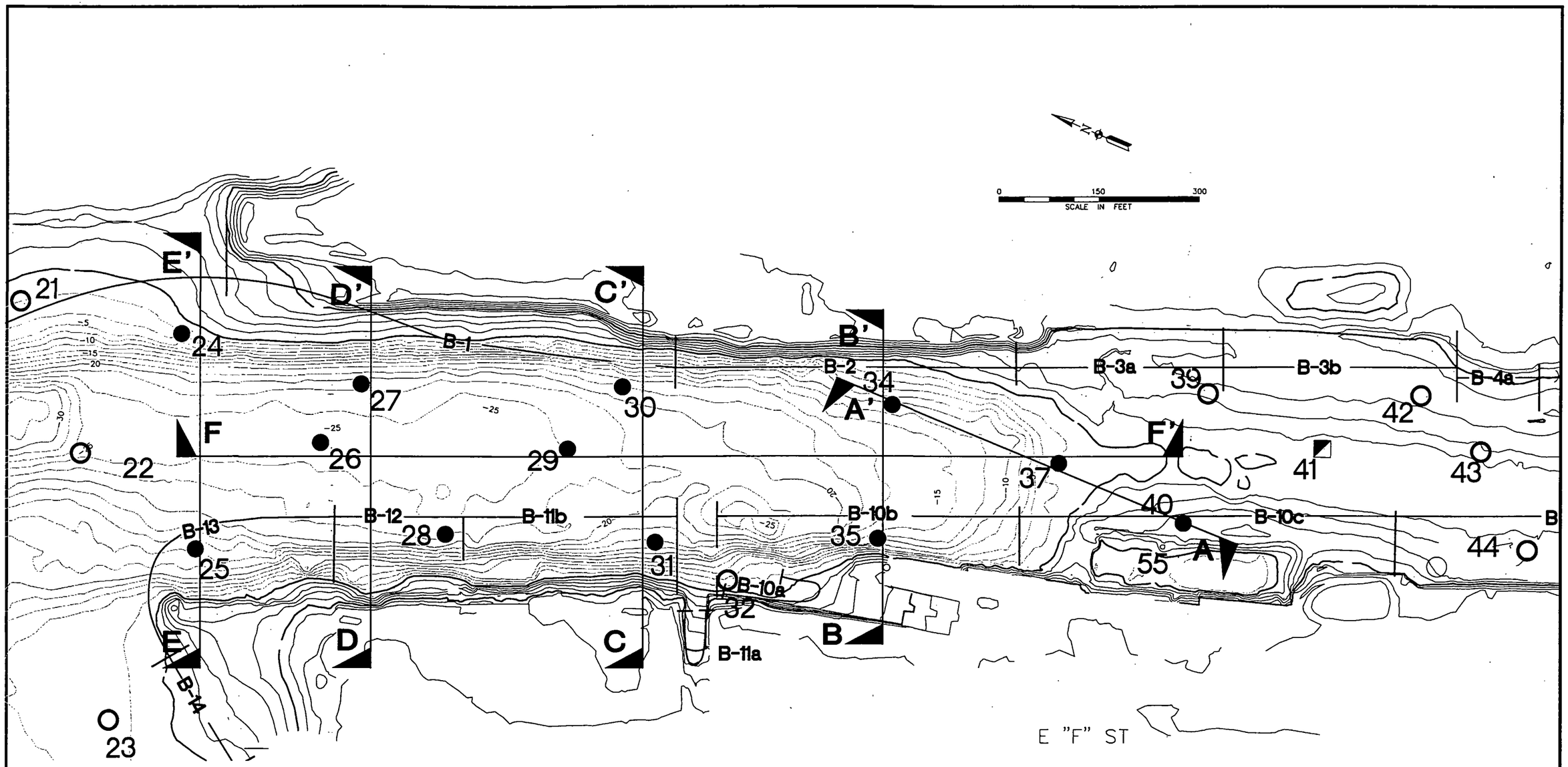

LEGEND

—B-12— Waterway Bank Composite (B-3, B-10, and B-11 subsectioned)

O Surface Sediment Sample Location

● Surface Sediment and Co-located Subsurface Sediment Core Location

NOTES:

1. Property line information has been compiled from multiple data sources, which have not been verified. This data is to be used for reference purposes only.
2. Horizontal Datum: WA State Plane South Zone (NAD83-91)
   Vertical Datum: COE Mean Lower Low Water (MLLW)

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Figure 4
Middle Waterway Problem Area
Round 1A Stations
GEOLOGIC CROSS SECTION LOCATIONS

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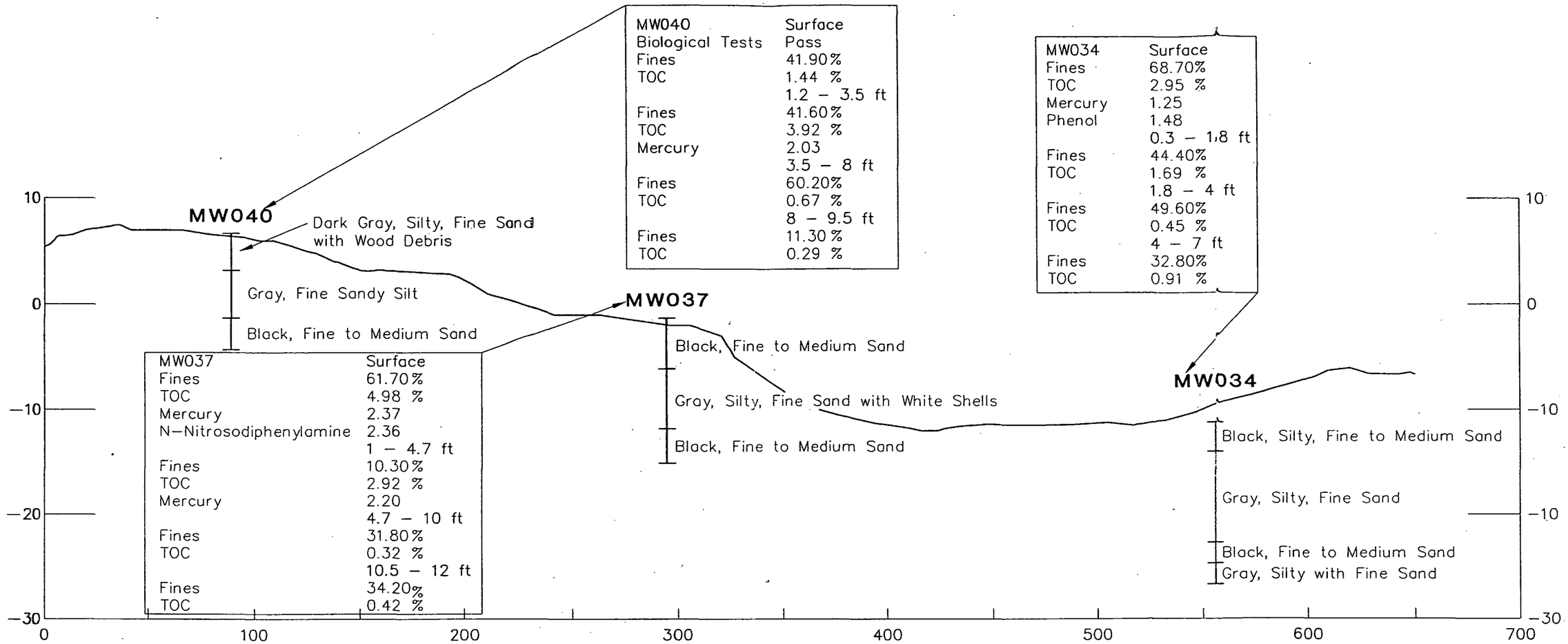

SECTION A-A'

SCALE – 1"=50' HOR
1"=10' VERT

LEGEND

MW040

Subsurface core location and elevations of top and bottom of sediment recovered.

Existing mudline

NOTES

1. The stratigraphic contacts are generalizations based on visual observations and test data. Variations between generalizations shown and actual conditions should be expected.
2. Refer to Figure 7 for cross section locations.

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Figure 5
Middle Waterway Problem Area
Round 1A Stations
CROSS SECTION A–A'

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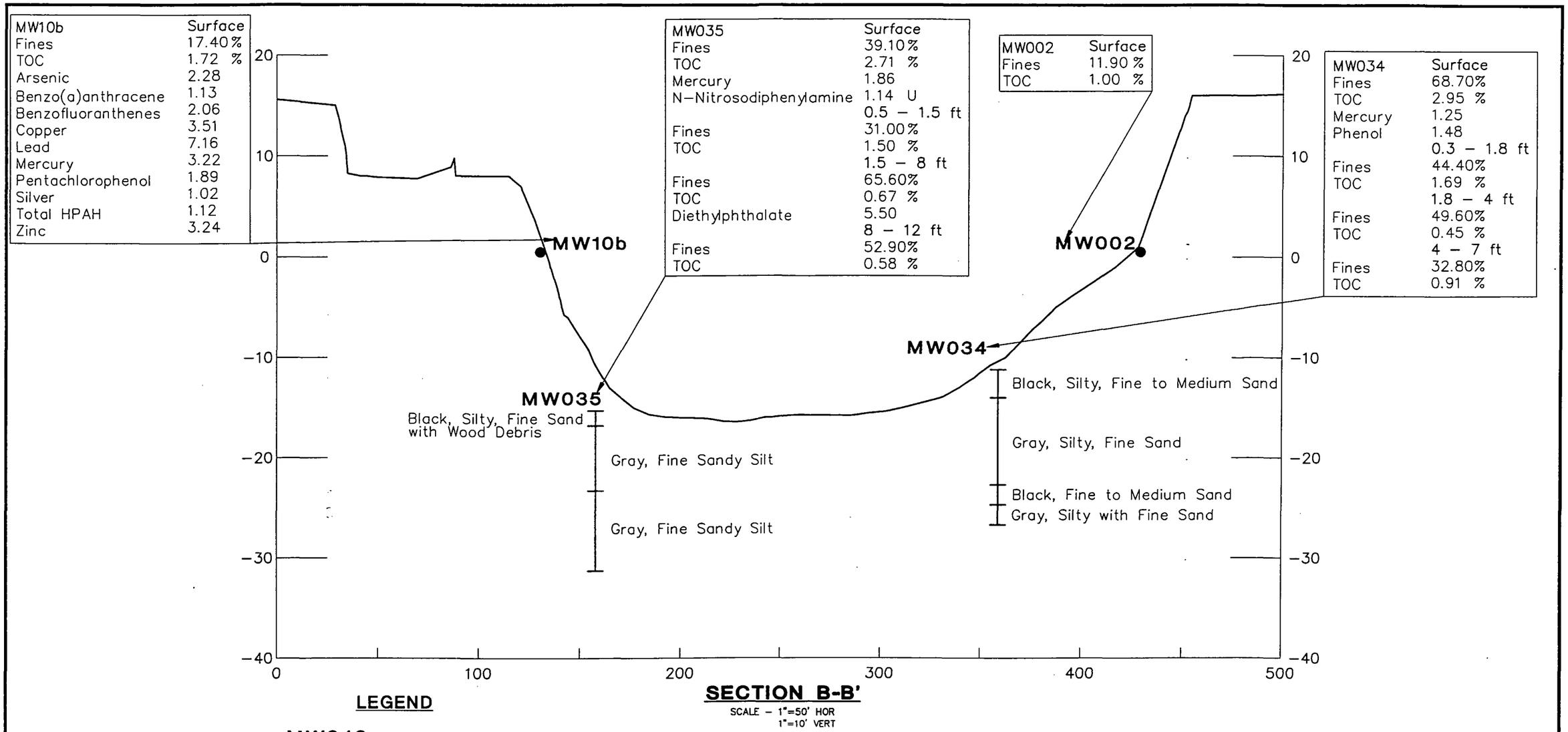

SECTION B-B'

SCALE – 1"=50' HOR
1"=10' VERT

LEGEND

MW040

Subsurface core location and elevations of top and bottom of sediment recovered.

Existing mudline

NOTES

1. The stratigraphic contacts are generalizations based on visual observations and test data. Variations between generalizations shown and actual conditions should be expected.
2. Refer to Figure 7 for cross section locations.

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Figure 6
Middle Waterway Problem Area
Round 1A Stations
CROSS SECTION B-B'

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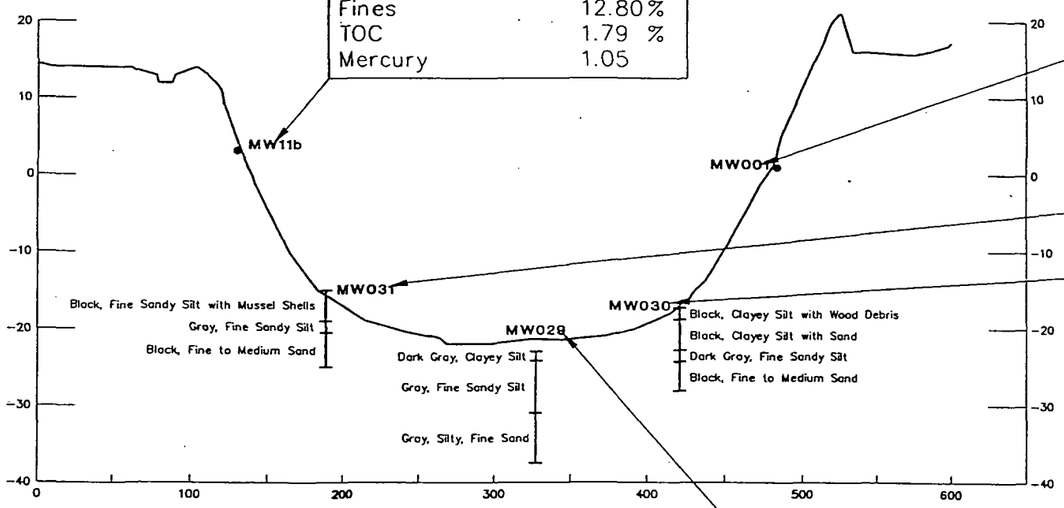

SECTION C-C'

SCALE – 1"=100' HOR
1"=20' VERT

MW11b	Surface
Fines	12.80%
TOC	1.79 %
Mercury	1.05

MW001	Surface
Fines	11.80 %
TOC	2.00 %
2,4–Dimethylphenol	1.48 U
2–Methylphenol	1.22 U

FOR SURFACE SAMPLE SEE FIGURE 11

MW031	1.7 – 4 ft
Fines	31.30%
TOC	5.86 %
2,4–Dimethylphenol	3.38
4,4–DDD	2.25
4,4–DDT	2.09
Anthracene	3.75
Benzo(a)anthracene	1.88
Benzo(a)pyrene	1.44
Benzo(g,h,i)perylene	2.08
Benzofluoranthenes	2.78
Copper	2.72
Chrysene	1.18
Dibenzo(a,h)anthracene	3.00
Fluoranthene	1.28
Fluorene	1.67
Indeno(1,2,3–cd)pyrene	2.03
Lead	2.27
Mercury	15.25
N–Nitrosodiphenylamine	1.93 U
Phenanthrene	1.87
Phenol	1.36
Pyrene	1.48
Total LPAH	1.77
Total HPAH	1.78
	4 – 5.6 ft
Fines	52.30%
TOC	3.39 %
2,4–Dimethylphenol	1.17
	5.6 – 10 ft
Fines	13.80%
TOC	0.49 %

MW030	Surface
Fines	67.00%
TOC	3.61 %
Mercury	3.39
	0.5 – 5.5 ft
Fines	80.30%
TOC	3.26 %
2,4–Dimethylphenol	1.72
2–Methylnaphthalene	1.79
Acenaphthene	14.40
Anthracene	4.48
Benzo(a)anthracene	2.81
Benzo(a)pyrene	1.50
Benzo(g,h,i)perylene	2.22
Benzofluoranthenes	2.28
Chrysene	1.75
Dibenzo(a,h)anthracene	2.57
Dibenzofuran	8.89
Fluoranthene	7.20
Fluorene	22.22
Indeno(1,2,3–cd)pyrene	1.88
Mercury	1.08
Naphthalene	1.90
N–Nitrosodiphenylamine	5.71 U
Phenanthrene	16.67
Pyrene	3.64
Total LPAH	10.46
Total HPAH	3.15
	7 – 9 ft
Fines	23.40%
TOC	6.03 %
2,4–Dimethylphenol	1.28

MW029	Surface
Fines	64.70%
TOC	3.02 %
Mercury	2.03
	1.2 – 4 ft
Fines	26.10%
TOC	0.36 %
	4 – 8 ft
Fines	51.00%
TOC	0.38 %
	8 – 12 ft
Fines	32.90%
TOC	0.45 %

Subsurface core location and elevations of top and bottom of sediment recovered.

Existing mudline

NOTES

1. The stratigraphic contacts are generalizations based on visual observations and test data. Variations between generalizations shown and actual conditions should be expected.
2. Refer to Figure 7 for cross section locations.

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Figure 7
Middle Waterway Problem Area
Round 1A Stations
CROSS SECTION C–C'

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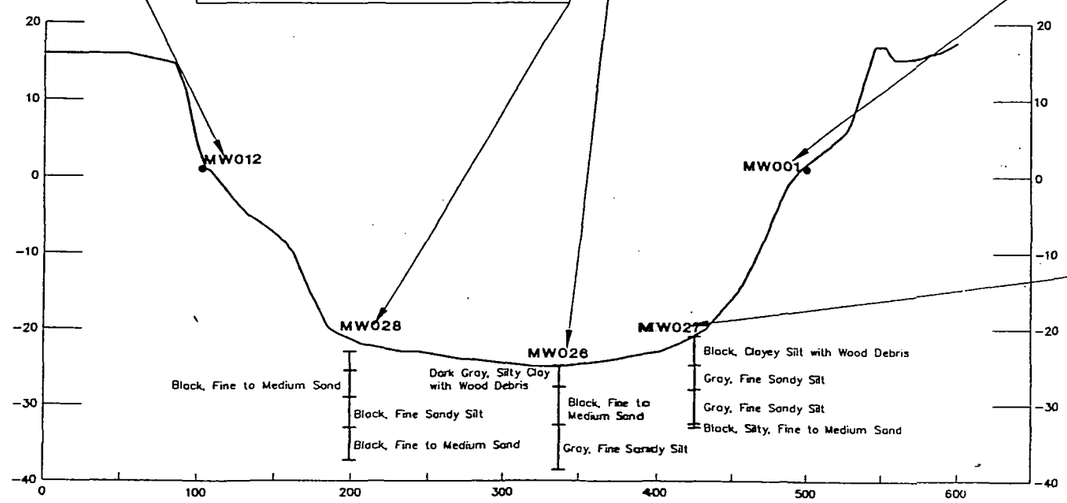
MW012	Surface
Fines	19.60%
TOC	4.86 %
Mercury	2.20

MW028	Surface
Fines	27.20%
TOC	1.26 %
Fluorene	1.02
	0.3 – 2.5 ft
Fines	21.60%
TOC	1.47 %
	2.5 – 6 ft
Fines	10.50%
TOC	0.75 %
	6 – 10 ft
Fines	69.80%
TOC	1.41 %

MW026	Surface
Fines	46.70%
TOC	2.44 %
Arsenic	1.23
Zinc	1.03
	0.4 – 2.7 ft
Fines	86.90%
TOC	0.98 %
	5 – 8 ft
Fines	56.20%
TOC	0.43 %
	8 – 12 ft
Fines	60.60%
TOC	0.40 %

MW001	Surface
Fines	11.80 %
TOC	2.00 %
2,4–Dimethylphenol	1.48 U
2–Methylphenol	1.22 U

MW027	Surface
Fines	58.30%
TOC	3.32 %
Mercury	1.51
	1 – 3.8 ft
Fines	44.20%
TOC	5.95 %
2,4–Dimethylphenol	2.14
4,4–DDD	1.13
4,4–DDE	1.09
Acenaphthene	1.32
Antimony	3.11
Arsenic	2.28
Copper	7.44
Fluoranthene	1.28
Fluorene	1.59
Mercury	10.17
Phenanthrene	1.13
Silver	6.51
Total LPAH	1.07
Zinc	1.37
	3.8 – 7 ft
Fines	82.90%
TOC	1.43 .%
Acenaphthene	3.00
Anthracene	2.29
Dibenzofuran	1.85
Fluoranthene	1.72
Fluorene	5.56
N–Nitrosodiphenylamine	1.18 U
Phenanthrene	4.40
Total LPAH	2.76
	7– 11.5 ft
Fines	62.40%
TOC	0.65 %
2,4–Dimethylphenol	1.24



SECTION D-D'

SCALE – 1"=100' HOR
1"=20' VERT

LEGEND

MW040

Subsurface core location and elevations of top and bottom of sediment recovered.

Existing mudline

NOTES

1. The stratigraphic contacts are generalizations based on visual observations and test data. Variations between generalizations shown and actual conditions should be expected.
2. Refer to Figure 7 for cross section locations.

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Figure 8
Middle Waterway Problem Area
Round 1A Stations
CROSS SECTION D–D'

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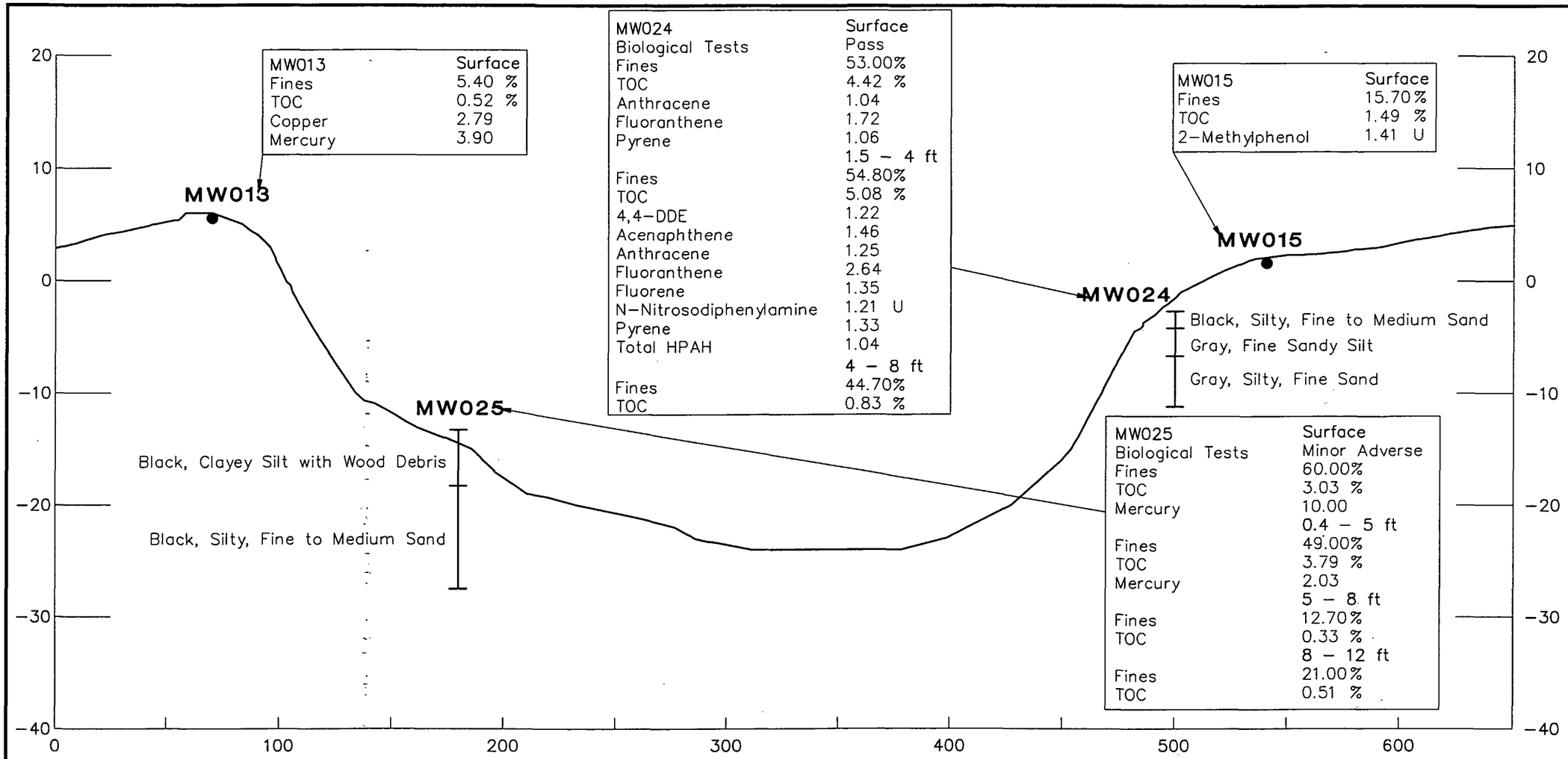

SECTION E-E'

SCALE – 1"=50' HOR
1"=10' VERT

LEGEND

MW040

Subsurface core location and elevations of top and bottom of sediment recovered.

Existing mudline

NOTES

1. The stratigraphic contacts are generalizations based on visual observations and test data. Variations between generalizations shown and actual conditions should be expected.
2. Refer to Figure 7 for cross section locations.

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Figure 9
Middle Waterway Problem Area
Round 1A Stations
CROSS SECTION E–E'

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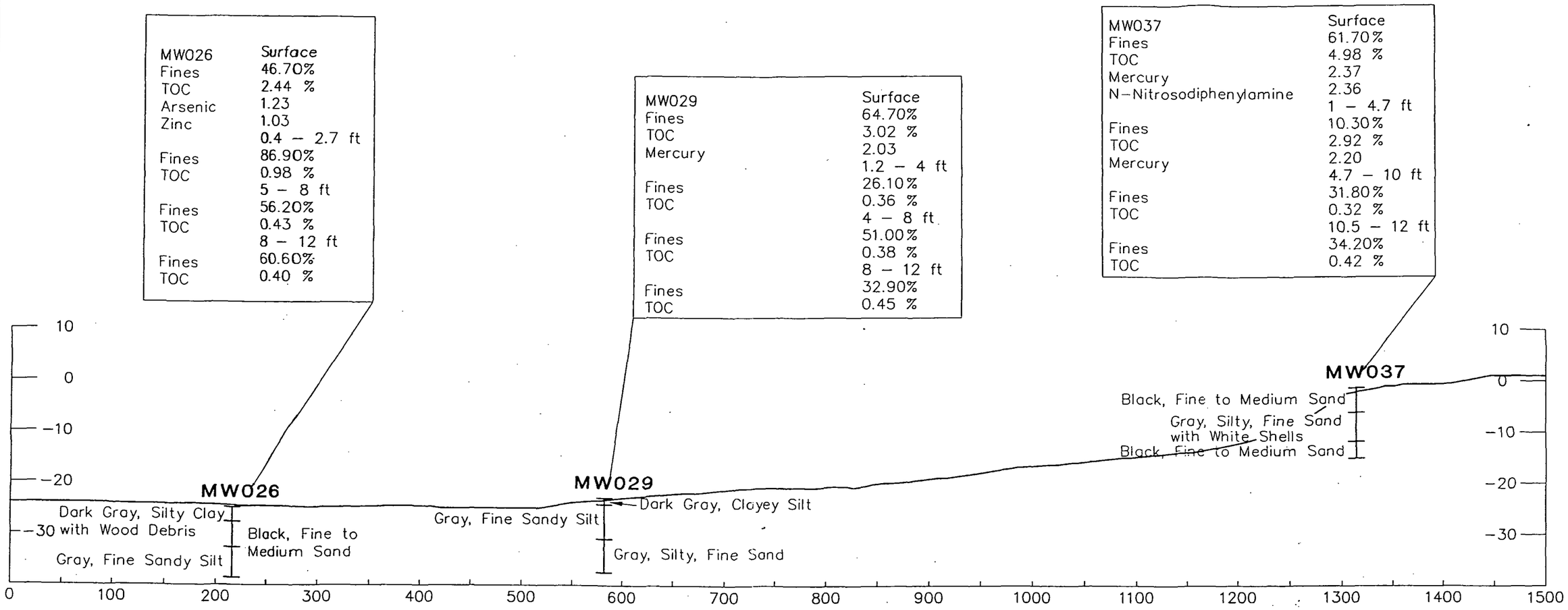

SECTION F-F'

SCALE – 1"=100' HOR
1"=20' VERT

LEGEND

MW040

Subsurface core location and elevations of top and bottom of sediment recovered.

Existing mudline

NOTES

1. The stratigraphic contacts are generalizations based on visual observations and test data. Variations between generalizations shown and actual conditions should be expected.
2. Refer to Figure 7 for cross section locations.

MIDDLE WATERWAY

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Figure 10
Middle Waterway Problem Area
Round 1A Stations
CROSS SECTION F–F'

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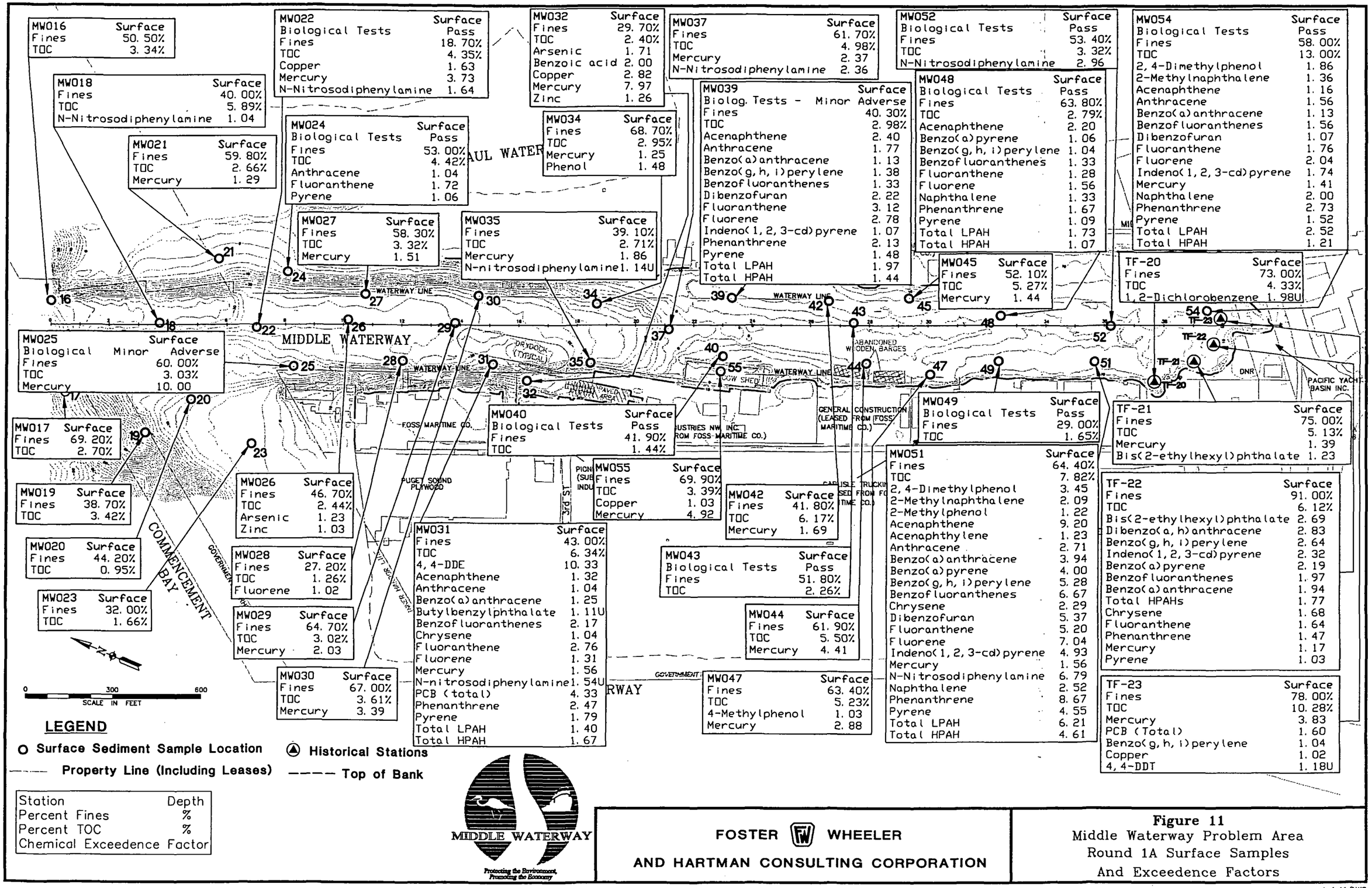


MW016	Surface
Fines	50.50%
TOC	3.34%

MW018	Surface
Fines	40.00%
TOC	5.89%
N-Nitrosodiphenylamine	1.04

MW021	Surface
Fines	59.80%
TOC	2.66%
Mercury	1.29

MW022	Surface
Biological Tests	Pass
Fines	18.70%
TOC	4.35%
Copper	1.63
Mercury	3.73
N-Nitrosodiphenylamine	1.64

MW024	Surface
Biological Tests	Pass
Fines	53.00%
TOC	4.42%
Anthracene	1.04
Fluoranthene	1.72
Pyrene	1.06

MW027	Surface
Fines	58.30%
TOC	3.32%
Mercury	1.51

MW032	Surface
Fines	29.70%
TOC	2.40%
Arsenic	1.71
Benzoic acid	2.00
Copper	2.82
Mercury	7.97
Zinc	1.26

MW034	Surface
Fines	68.70%
TOC	2.95%
Mercury	1.25
Phenol	1.48

MW035	Surface
Fines	39.10%
TOC	2.71%
Mercury	1.86
N-nitrosodiphenylamine	1.14U

MW037	Surface
Fines	61.70%
TOC	4.98%
Mercury	2.37
N-Nitrosodiphenylamine	2.36

MW039	Surface
Biolog. Tests -	Minor Adverse
Fines	40.30%
TOC	2.98%
Acenaphthene	2.40
Anthracene	1.77
Benzo(a)anthracene	1.13
Benzo(g,h,i)perylene	1.38
Benzofluoranthenes	1.33
Dibenzofuran	2.22
Fluoranthene	3.12
Fluorene	2.78
Indeno(1,2,3-cd)pyrene	1.07
Phenanthrene	2.13
Pyrene	1.48
Total LPAH	1.97
Total HPAH	1.44

MW052	Surface
Biological Tests	Pass
Fines	53.40%
TOC	3.32%
N-Nitrosodiphenylamine	2.96

MW048	Surface
Biological Tests	Pass
Fines	63.80%
TOC	2.79%
Acenaphthene	2.20
Benzo(a)pyrene	1.06
Benzo(g,h,i)perylene	1.04
Benzofluoranthenes	1.33
Fluoranthene	1.28
Fluorene	1.56
Naphthalene	1.33
Phenanthrene	1.67
Pyrene	1.09
Total LPAH	1.73
Total HPAH	1.07

MW054	Surface
Biological Tests	Pass
Fines	58.00%
TOC	13.00%
2,4-Dimethylphenol	1.86
2-Methylnaphthalene	1.36
Acenaphthene	1.16
Anthracene	1.56
Benzo(a)anthracene	1.13
Benzofluoranthenes	1.56
Dibenzofuran	1.07
Fluoranthene	1.76
Fluorene	2.04
Indeno(1,2,3-cd)pyrene	1.74
Mercury	1.41
Naphthalene	2.00
Phenanthrene	2.73
Pyrene	1.52
Total LPAH	2.52
Total HPAH	1.21

MW045	Surface
Fines	52.10%
TOC	5.27%
Mercury	1.44

TF-20	Surface
Fines	73.00%
TOC	4.33%
1,2-Dichlorobenzene	1.98U

MW025	Surface
Biological	Minor Adverse
Fines	60.00%
TOC	3.03%
Mercury	10.00

MW017	Surface
Fines	69.20%
TOC	2.70%

MW019	Surface
Fines	38.70%
TOC	3.42%

MW020	Surface
Fines	44.20%
TOC	0.95%

MW023	Surface
Fines	32.00%
TOC	1.66%

MW026	Surface
Fines	46.70%
TOC	2.44%
Arsenic	1.23
Zinc	1.03

MW028	Surface
Fines	27.20%
TOC	1.26%
Fluorene	1.02

MW029	Surface
Fines	64.70%
TOC	3.02%
Mercury	2.03

MW030	Surface
Fines	67.00%
TOC	3.61%
Mercury	3.39

MW040	Surface
Biological Tests	Pass
Fines	41.90%
TOC	1.44%

MW055	Surface
Fines	69.90%
TOC	3.39%
Copper	1.03
Mercury	4.92

MW042	Surface
Fines	41.80%
TOC	6.17%
Mercury	1.69

MW031	Surface
Fines	43.00%
TOC	6.34%
4,4-DDE	10.33
Acenaphthene	1.32
Anthracene	1.04
Benzo(a)anthracene	1.25
Butylbenzylphthalate	1.11U
Benzofluoranthenes	2.17
Chrysene	1.04
Fluoranthene	2.76
Fluorene	1.31
Mercury	1.56
N-nitrosodiphenylamine	1.54U
PCB (total)	4.33
Phenanthrene	2.47
Pyrene	1.79
Total LPAH	1.40
Total HPAH	1.67

MW043	Surface
Biological Tests	Pass
Fines	51.80%
TOC	2.26%

MW044	Surface
Fines	61.90%
TOC	5.50%
Mercury	4.41

MW047	Surface
Fines	63.40%
TOC	5.23%
4-Methylphenol	1.03
Mercury	2.88

MW049	Surface
Biological Tests	Pass
Fines	29.00%
TOC	1.65%

MW051	Surface
Fines	64.40%
TOC	7.82%
2,4-Dimethylphenol	3.45
2-Methylnaphthalene	2.09
2-Methylphenol	1.22
Acenaphthene	9.20
Acenaphthylene	1.23
Anthracene	2.71
Benzo(a)anthracene	3.94
Benzo(a)pyrene	4.00
Benzo(g,h,i)perylene	5.28
Benzofluoranthenes	6.67
Chrysene	2.29
Dibenzofuran	5.37
Fluoranthene	5.20
Fluorene	7.04
Indeno(1,2,3-cd)pyrene	4.93
Mercury	1.56
N-Nitrosodiphenylamine	6.79
Naphthalene	2.52
Phenanthrene	8.67
Pyrene	4.55
Total LPAH	6.21
Total HPAH	4.61

TF-21	Surface
Fines	75.00%
TOC	5.13%
Mercury	1.39
Bis(2-ethylhexyl)phthalate	1.23

TF-22	Surface
Fines	91.00%
TOC	6.12%
Bis(2-ethylhexyl)phthalate	2.69
Dibenzo(a,h)anthracene	2.83
Benzo(g,h,i)perylene	2.64
Indeno(1,2,3-cd)pyrene	2.32
Benzo(a)pyrene	2.19
Benzofluoranthenes	1.97
Benzo(a)anthracene	1.94
Total HPAHs	1.77
Chrysene	1.68
Fluoranthene	1.64
Phenanthrene	1.47
Mercury	1.17
Pyrene	1.03

TF-23	Surface
Fines	78.00%
TOC	10.28%
Mercury	3.83
PCB (Total)	1.60
Benzo(g,h,i)perylene	1.04
Copper	1.02
4,4-DDT	1.18U

Figure 11
Middle Waterway Problem Area
Round 1A Surface Samples
And Exceedence Factors

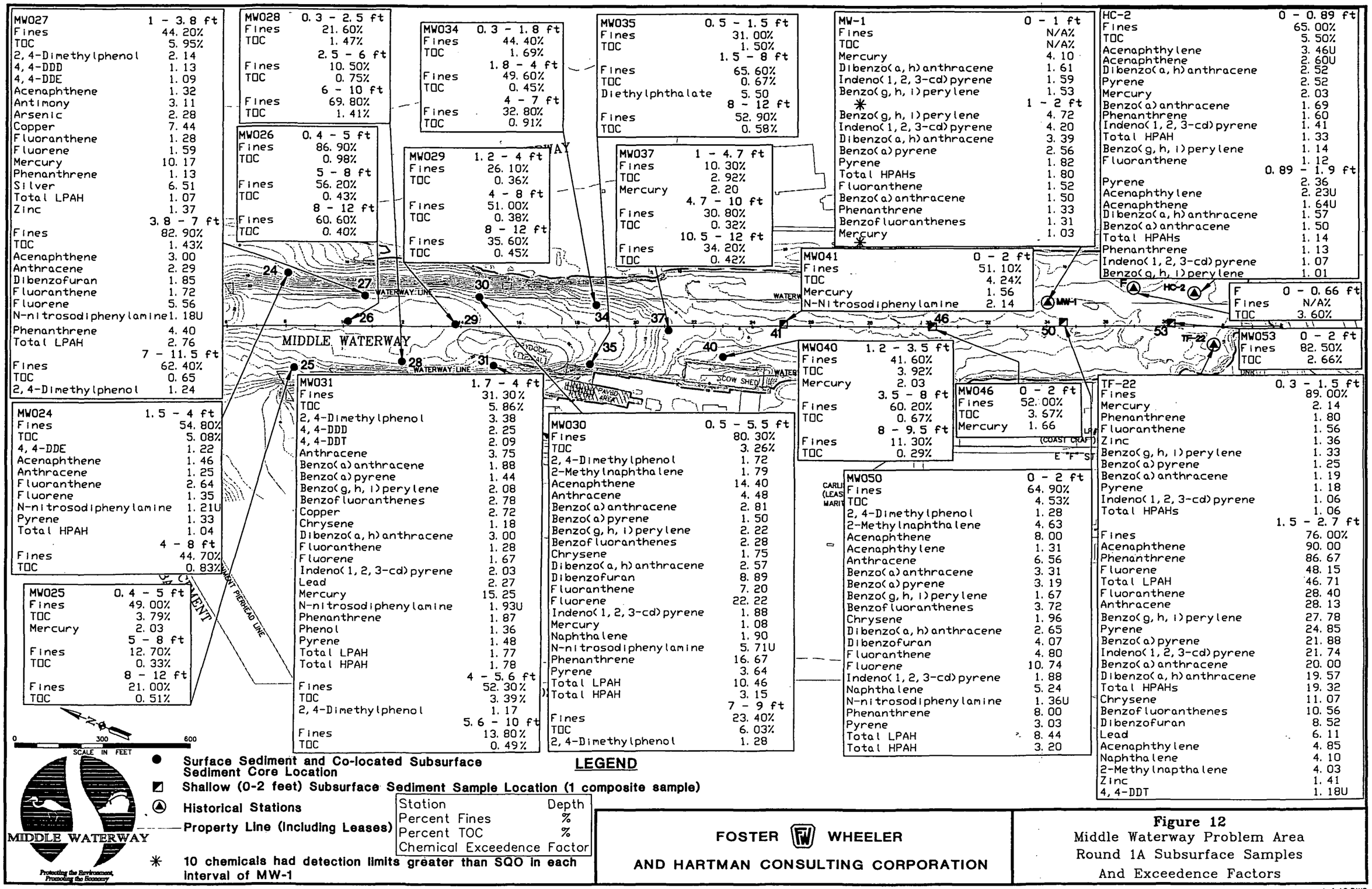


Figure 12
Middle Waterway Problem Area
Round 1A Subsurface Samples
And Exceedence Factors

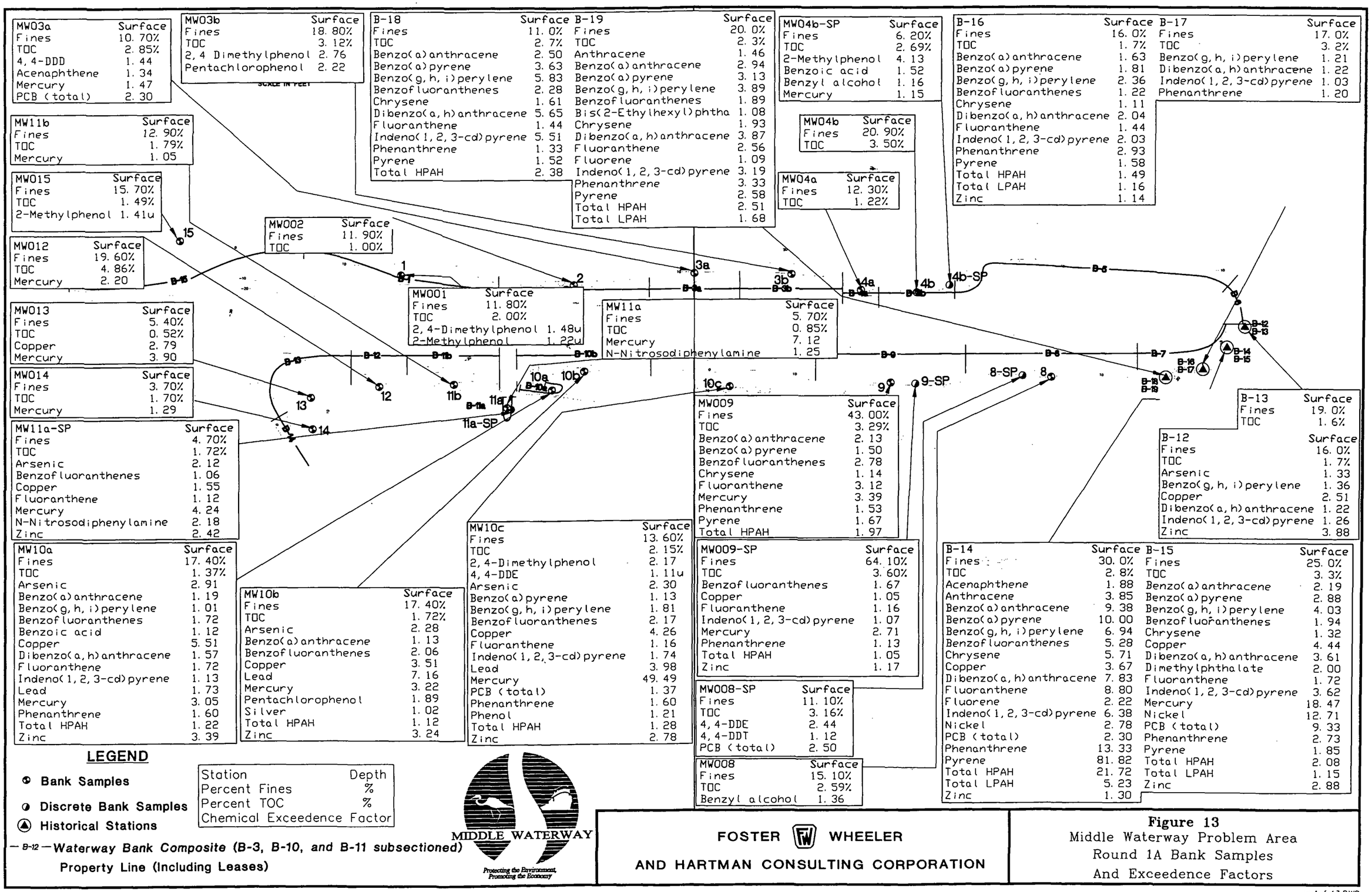
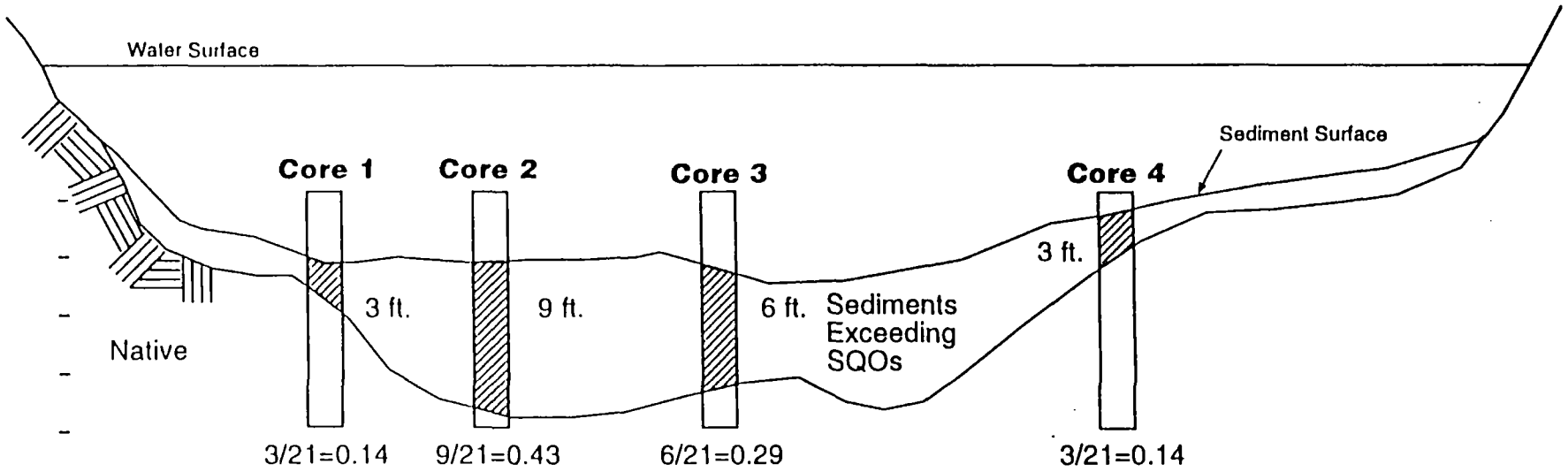


Figure 13
Middle Waterway Problem Area
Round 1A Bank Samples
And Exceedence Factors



1) The total core length of sediments exceeding SQOs is 3 ft.+9 ft.+6 ft.+3 ft.=21 ft.

2) Core 1 represents 3/21 or 0.14 of this amount. Therefore, a composite representative of the sediments exceeding the SQOs will contain a volume of material from Core 1 equal to 0.14 of the total volume necessary to complete contaminant mobility testing.

3) By weighing the amount of sediment used from each core in the composite and by excluding native material over-dredged, a conservative representative composite sample will be obtained.

MIDDLE WATERWAY

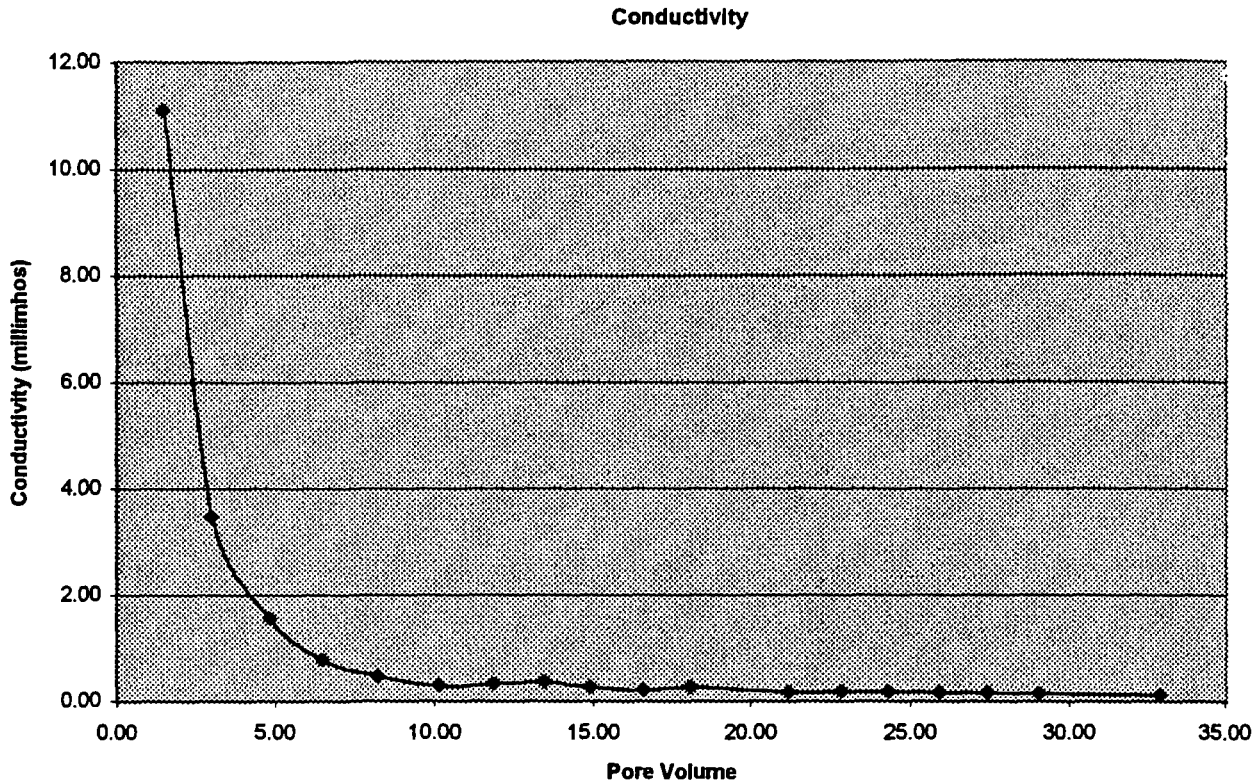
Protecting the Environment, Promoting the Economy

FOSTER WHEELER

AND HARTMAN CONSULTING CORPORATION

Figure 14
Middle Waterway Problem Area
Contaminant Mobility Composite
Weighting Scheme

Figure 15 - TCLT Plots (Leachate concentrations vs pore volume)



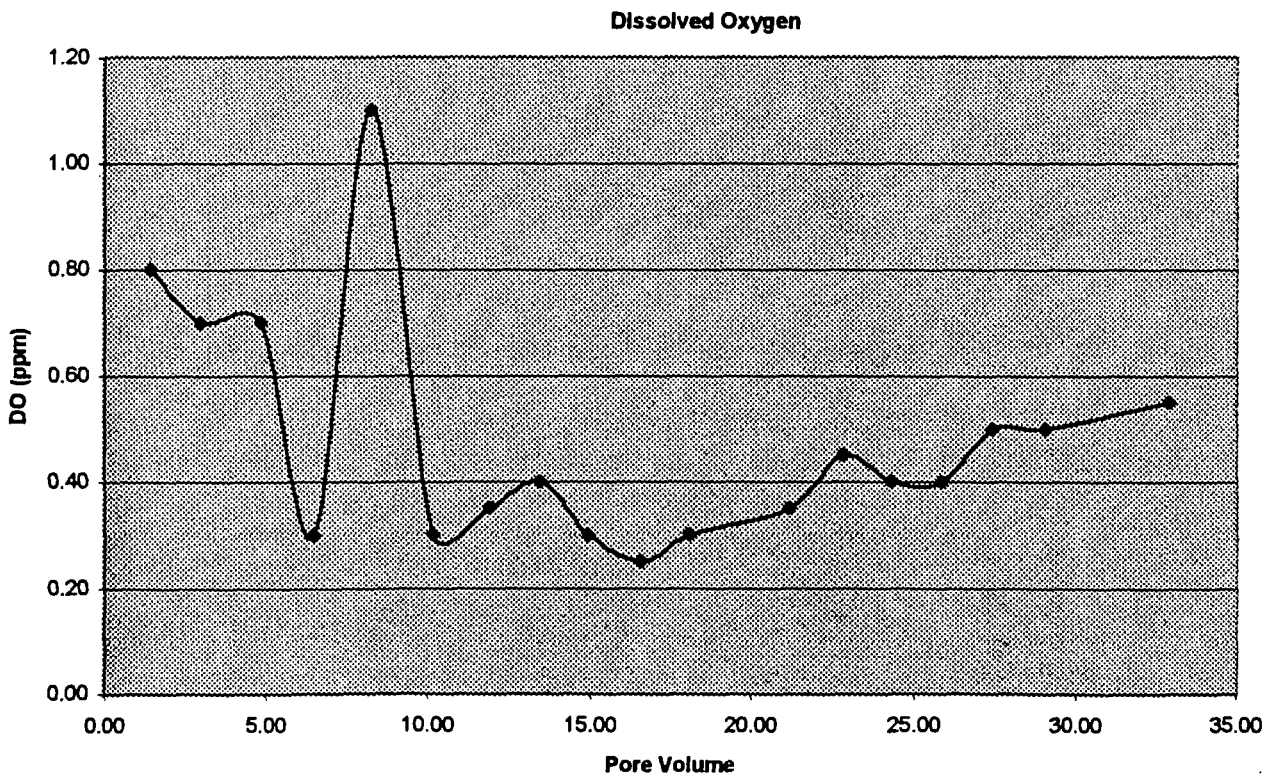


Figure 15 - TCLT Plots (Leachate concentrations vs pore volume)

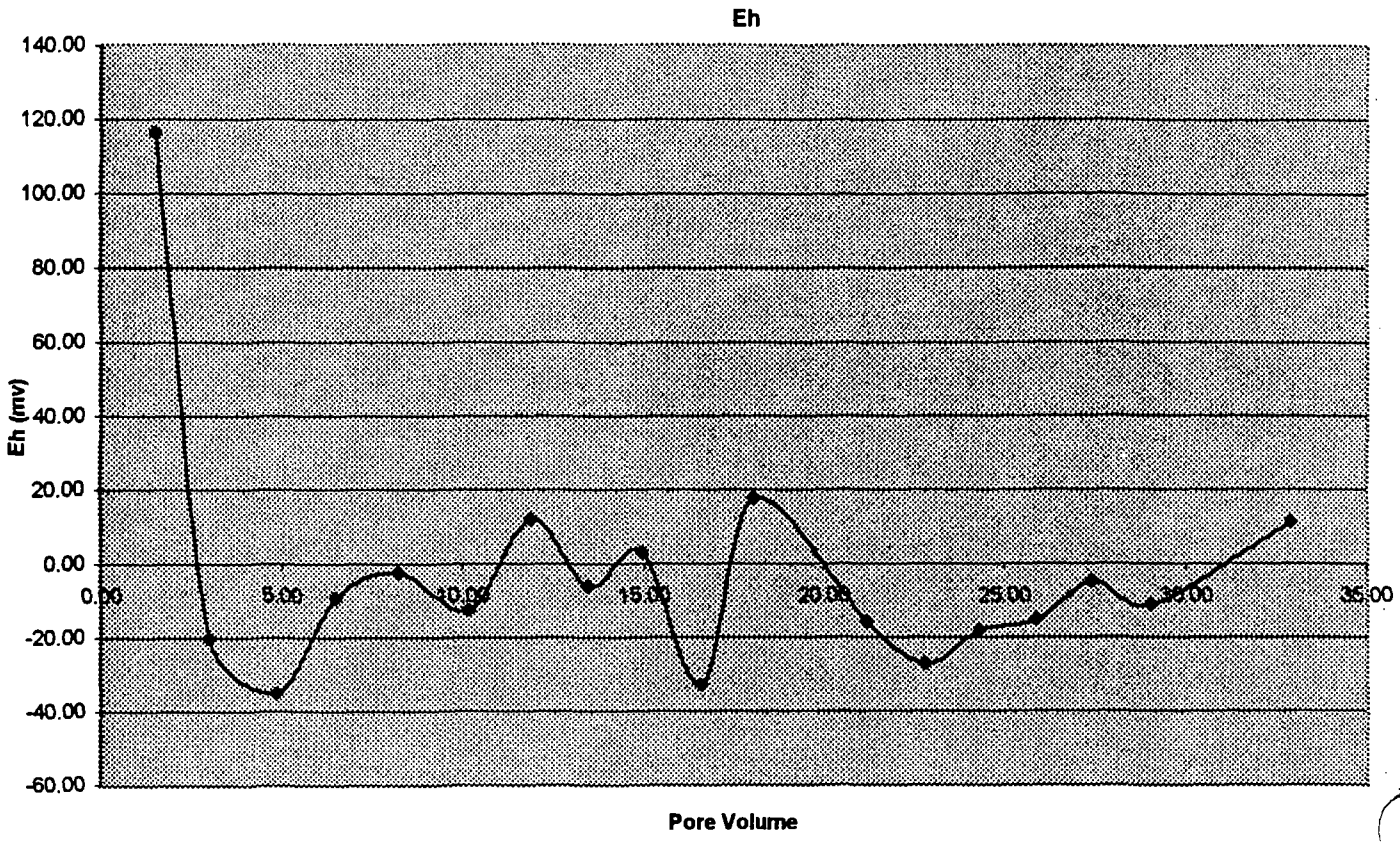
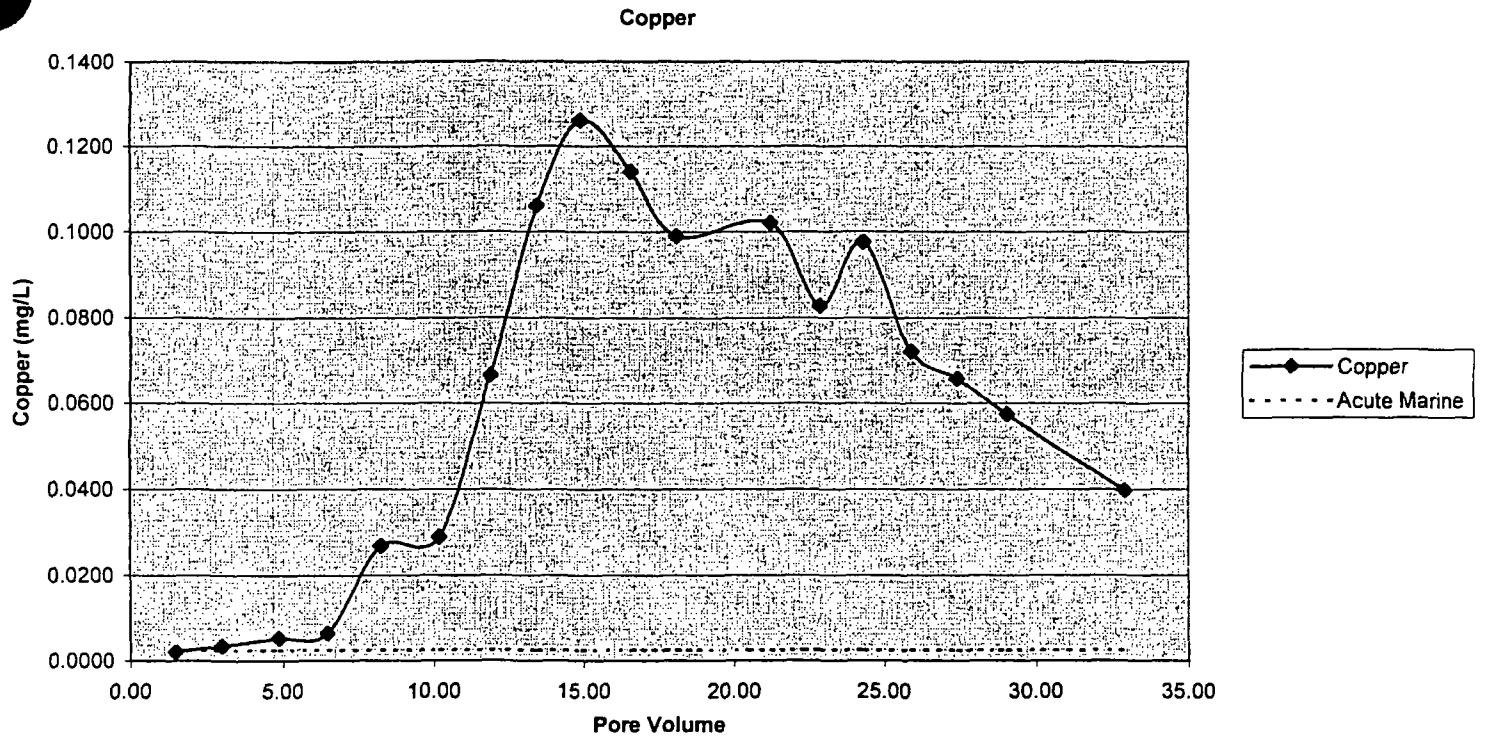


Figure 15 - TCLT Plots (Leachate concentrations vs pore volume)



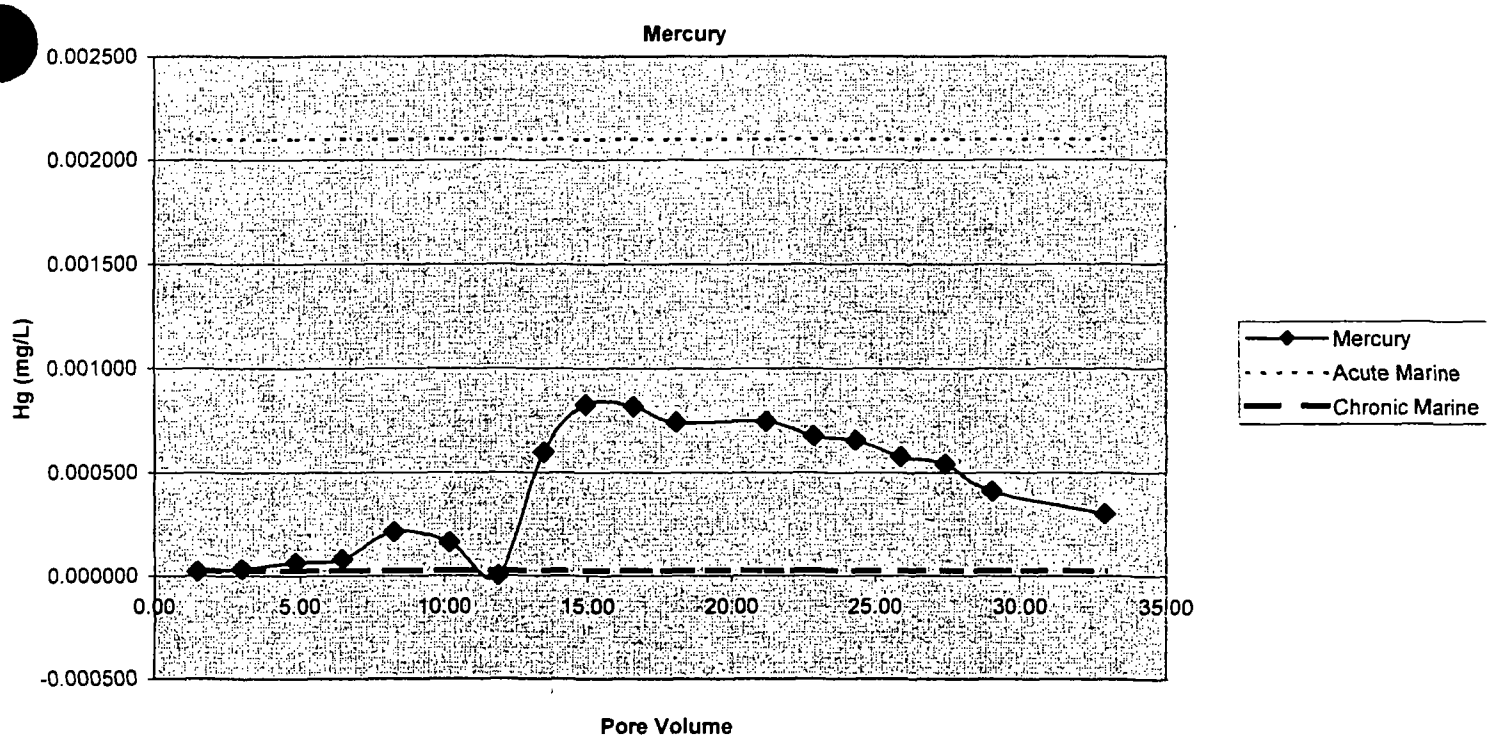
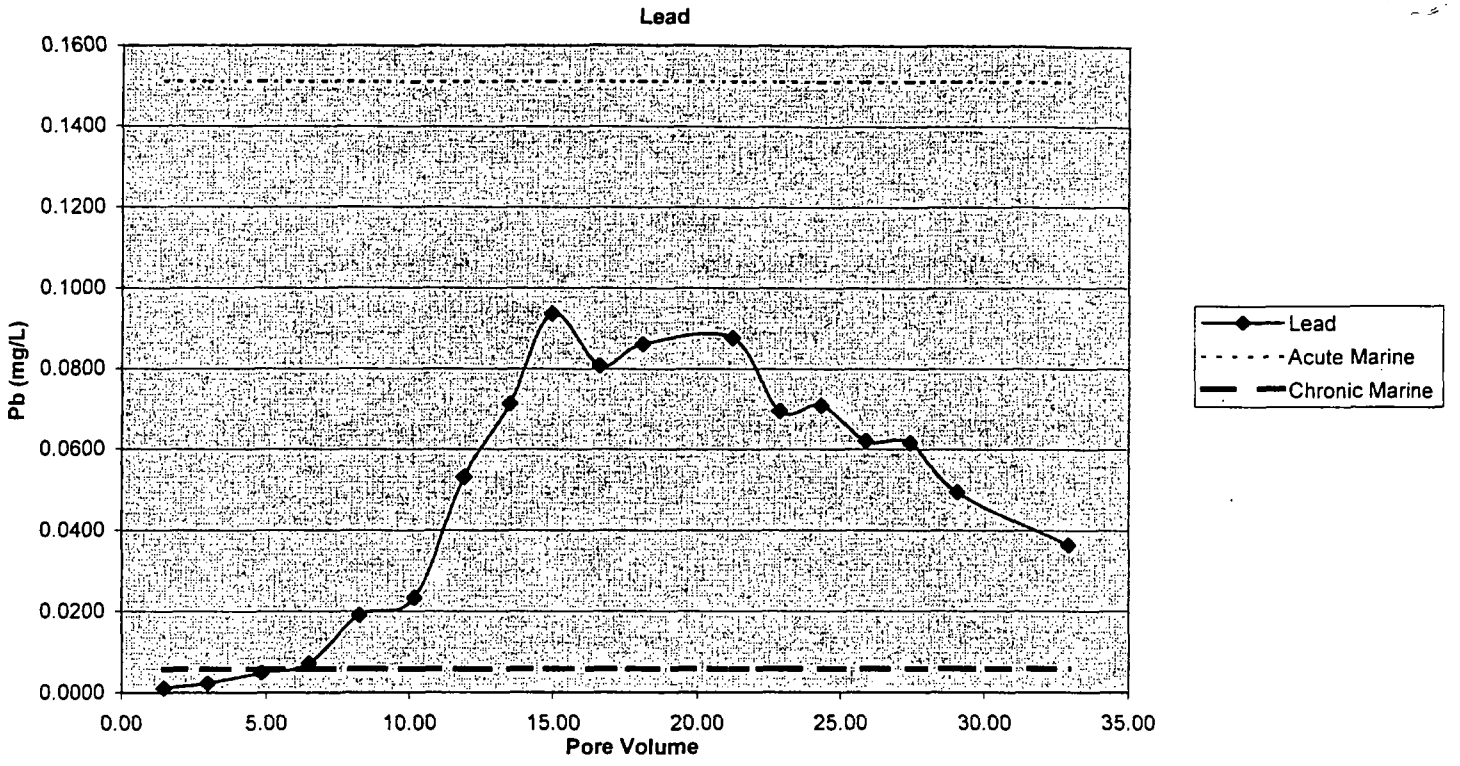
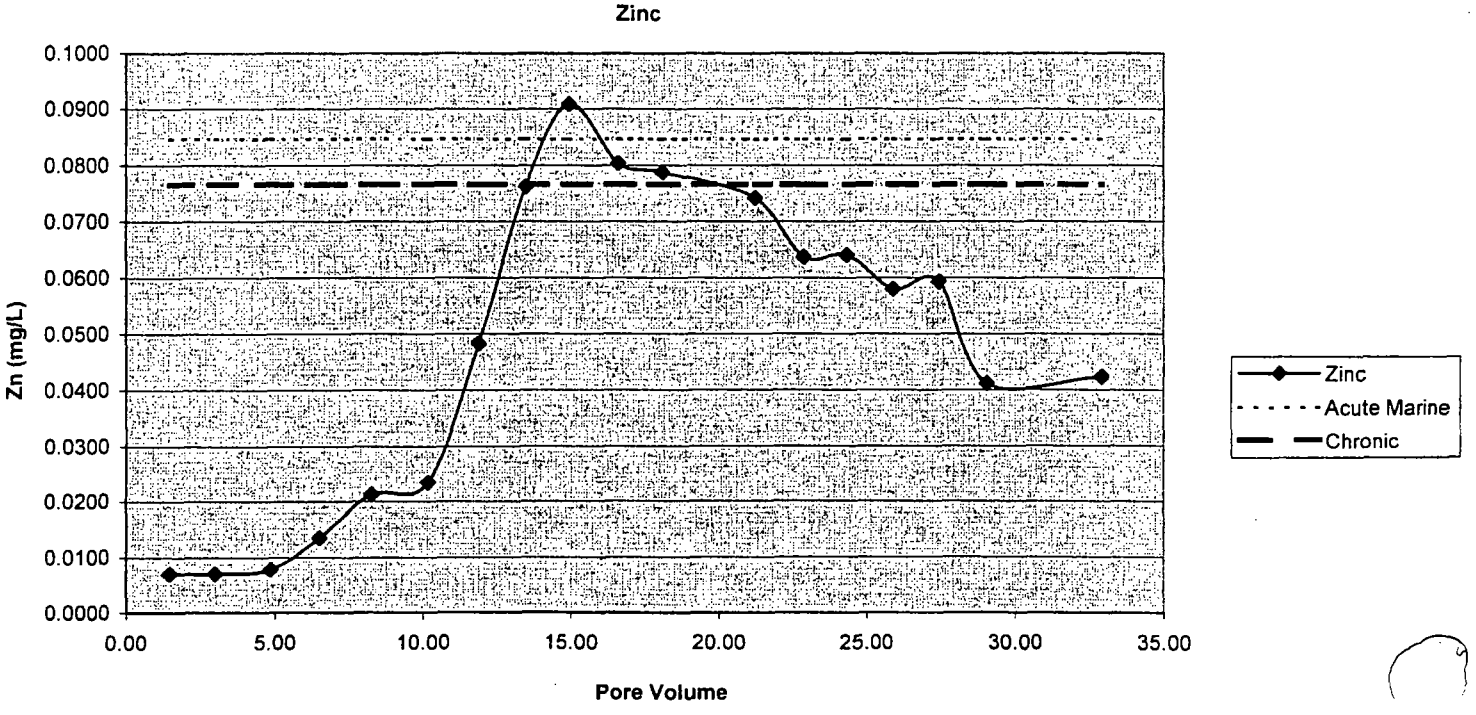


Figure 15 - TCLT Plots (Leachate concentrations vs pore volume)





APPENDIX A

APPENDIX A

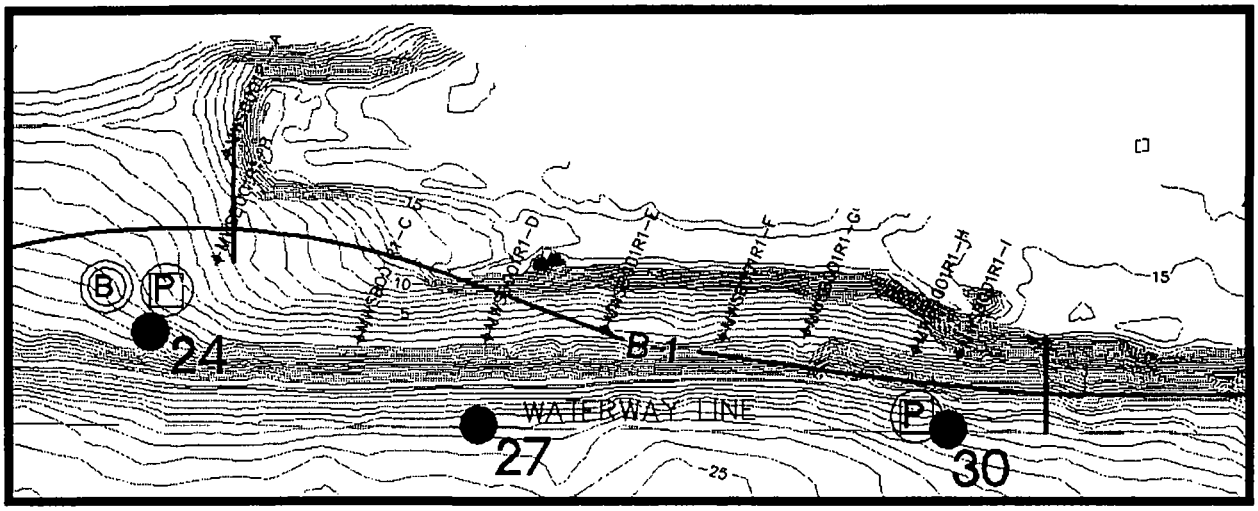
FIELD FORMS

BANK SEGMENT SAMPLING FORMS

Waterway Bank Segment Sampling Summary - (B-1)

Sample ID:	**B-1** (MWSB001R1)	Sample Method:	Hand
No. of Discrete Samples:	9	Spacing Interval:	~50'
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A	8	Parallel to end of rip rap wall north ± 35'
B	4	Midway along line from stake at rip rap corner to outward dolphin
C	0	Near 4th pier (dolphin) in from end ± 10 feet south of north end of concrete rip rap
D	0	Midway between 5th & 6th dolphin ± 25 feet from base of rip rap (Discrete)
E	0	Midway between 6th & 7th dolphins
F	-1	9th dolphin black/sandy rocks on top
G	-.5	10th dolphin. Black (H_2S smell) sheen
H	-.5	Past 11th dolphin ± 10 black/rocks
I	0	50 feet north of old pier area (group of 14-16 pilings) some sheen

Comments: Volatile and sulfide collected at (discrete) only.

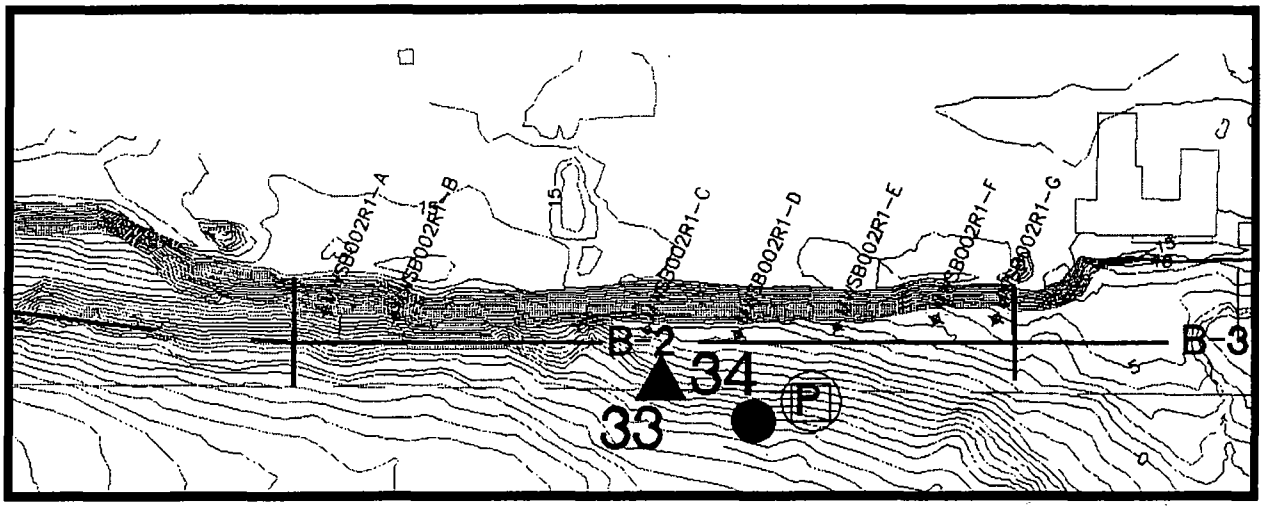
Total Sample Volume: Approximately 4L Sampled by: EW

Date/Time Sampled: 13:15 05/28/98

Waterway Bank Segment Segment Sampling Summary - (B-2)

Sample ID:	**B-2** (MWSB002R1)	Sample Method:	Hand
No. of Discrete Samples:	7	Spacing Interval:	~50'
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A	0	30 feet south of north boundary stake 2' east of piers (center group in cluster)
B	0	50 feet south; coarse with sheen
C	-1	200 feet south at end of rocky rip rap area (discrete)
D	-1	50 feet south; black under brown shells
E	2	50 feet south; olive top (1/2 cm) dark brown below
F	3.5	50 feet south; brown
G	5	35 feet south; black under olive

Comments: Volatile and sulfide collected at (discrete) only.

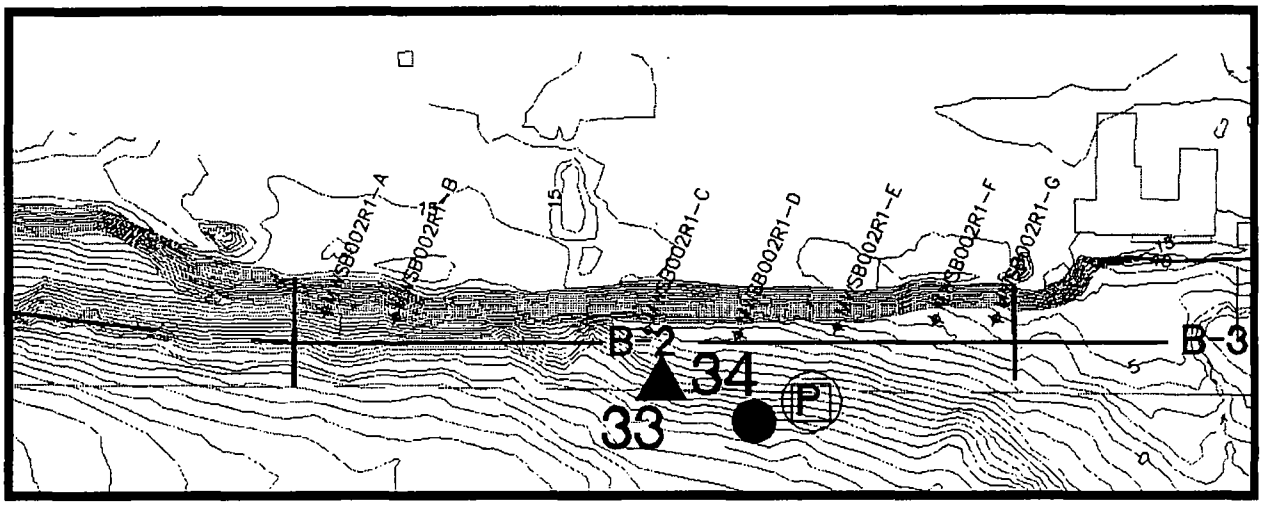
Total Sample Volume: Approximately 4L Sampled by: EW

Date/Time Sampled: 13:30 05/28/98

Waterway Bank Segment Segment Sampling Summary - (B-2)

Sample ID:	**B-2** (MWSB002R1)	Sample Method:	Hand
No. of Discrete Samples:	7	Spacing Interval:	~50'
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A	0	30 feet south of north boundary stake 2' east of piers (center group in cluster)
B	0	50 feet south; coarse with sheen
C	-1	200 feet south at end of rocky rip rap area (discrete)
D	-1	50 feet south; black under brown shells
E	2	50 feet south; olive top (1/2 cm) dark brown below
F	3.5	50 feet south; brown
G	5	35 feet south; black under olive

Comments: Volatile and sulfide collected at (discrete) only.

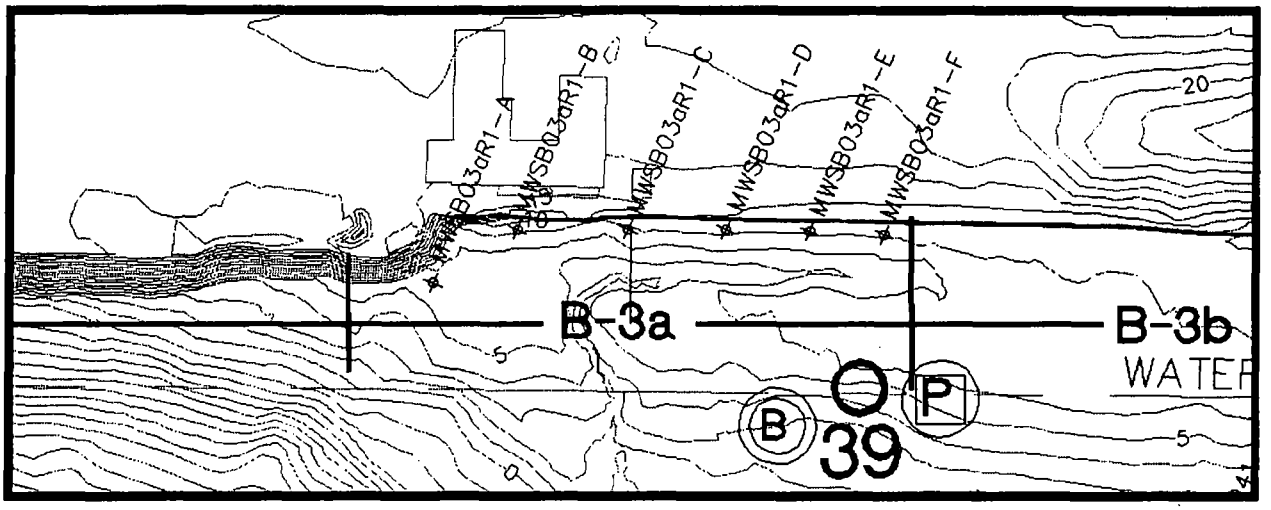
Total Sample Volume: Approximately 4L Sampled by: EW

Date/Time Sampled: 13:30 05/28/98

Waterway Bank Segment Sampling Summary - (B-3a)

Sample ID:	**B-3a** (MWSB03aR1)	Sample Method:	Hand
No. of Discrete Samples:	6	Spacing Interval:	~50'
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A	5.5	35 feet south of north boundary; black under soft olive layer
B	7	45 feet south grey/brown
C	7	50 feet south; EPA location for composite portion black with red brick
D	7	50 feet south brown (discrete)
E	7	50 feet south black; wood
F	7	40 feet south; 10' north of south boundary

Comments: Volatile and sulfide collected at (discrete) only.

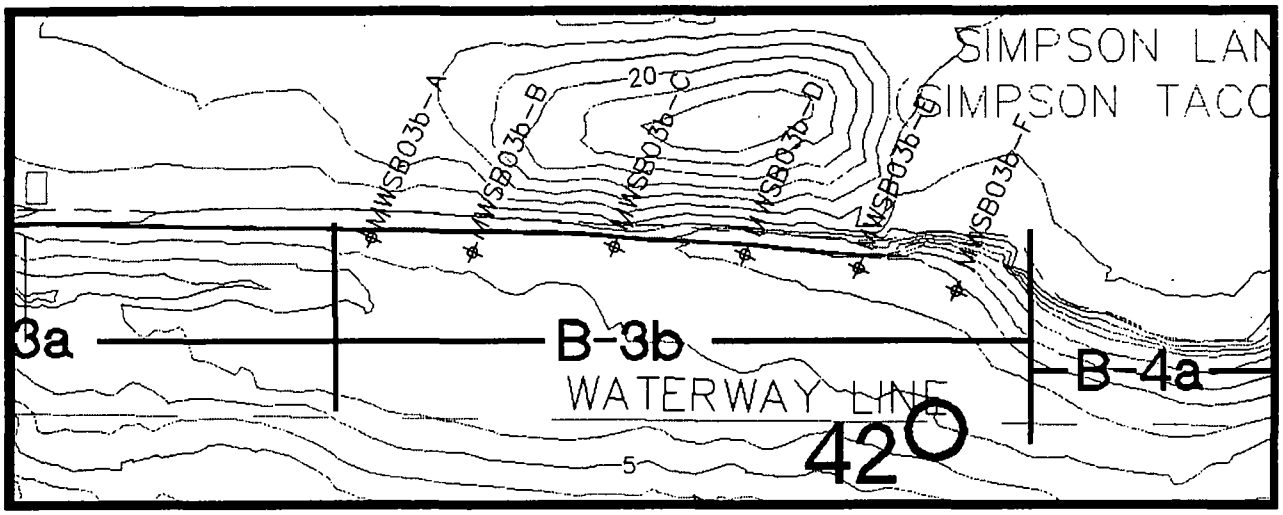
Total Sample Volume: Approximately 4L Sampled by: EW

Date/Time Sampled: 14:20 05/28/98

Waterway Bank Segment Sampling Summary - (B-3b)

Sample ID:	**B 3b** (MWSB03b)	Sample Method:	Hand
No. of Discrete Samples:	6	Spacing Interval:	~50'
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A	7	20 feet south from north boundary; brown
B	7	50 feet south; red sheen (from bacteria?)
C	8	50 feet south; base of slope below rip rap; brown
D	8	50 feet south; dark brown/ black (Discrete)
E	8	50 feet south; base of slope; top of rip rap; wood
F	9	20 feet from south boundary; olive top/black below

Comments: Volatile and sulfide collected at (discrete) only.

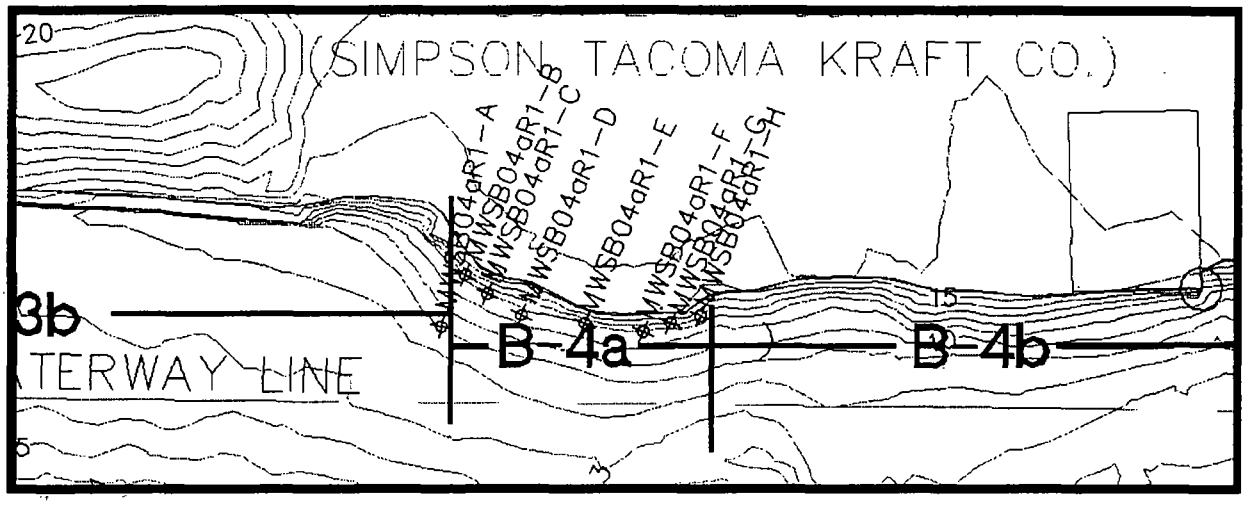
Total Sample Volume: Approximately 4L Sampled by: EW

Date/Time Sampled: 15:00 05/28/98

Waterway Bank Segment Sampling Summary - (B-4a)

Sample ID:	**B-4a** (MWSB04aR1)	Sample Method:	Hand
No. of Discrete Samples:	8	Spacing Interval:	~25'
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A	9	At north stake 30' from bottom of vertical bank
B	13	Same location 5' from foot of vertical bank
C	12	25 feet south 10' from base of vertical bank.
D	11.5	25 feet south 10' from base of vertical wall
E	12	25 feet south - 12' off vertical fence black
F	12	30 feet south - 20' off vertical face brown/black with sheen
G	13	5 feet north of south boundary 5' below vertical face (wood in face here)
H	13	On south boundary black sheen

Comments: Volatile and sulfide collected at (discrete) only.

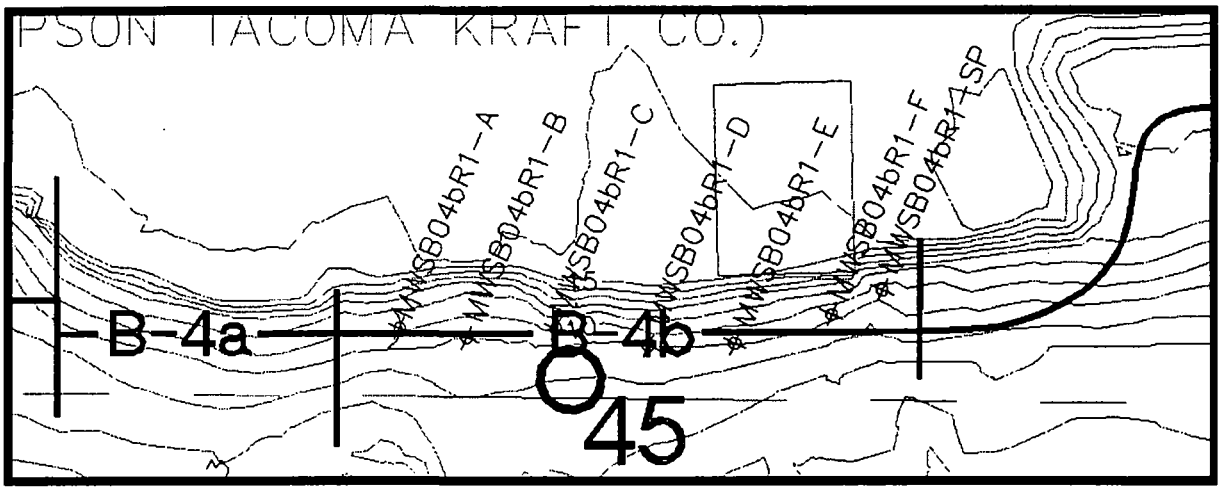
Total Sample Volume: Approximately 4L Sampled by: EW

Date/Time Sampled: 15:22 05/28/98

Waterway Bank Segment Sampling Summary - (B-4b)

Sample ID:	**B-4b** (MWSB04bR1 & MWSB04bR1SP)	Sample Method:	Hand
No. of Discrete Samples:	6	Spacing Interval:	~40'
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A	10	10 feet south from north boundary 20' below vertical
B	9	40 feet south 10' below wet face; sheen red/brown to black
C	10	40 feet south 20' below wet face @ slope break (wood) black
D	9	40 feet south 15' below wet face seepy area below old "inactive" pipe; (black)
E	9	40 feet south black; very soft
F	9	60 feet south, 15' north of south boundary; black soft
SP	9.5	60 feet south, 15' north of south boundary; black soft

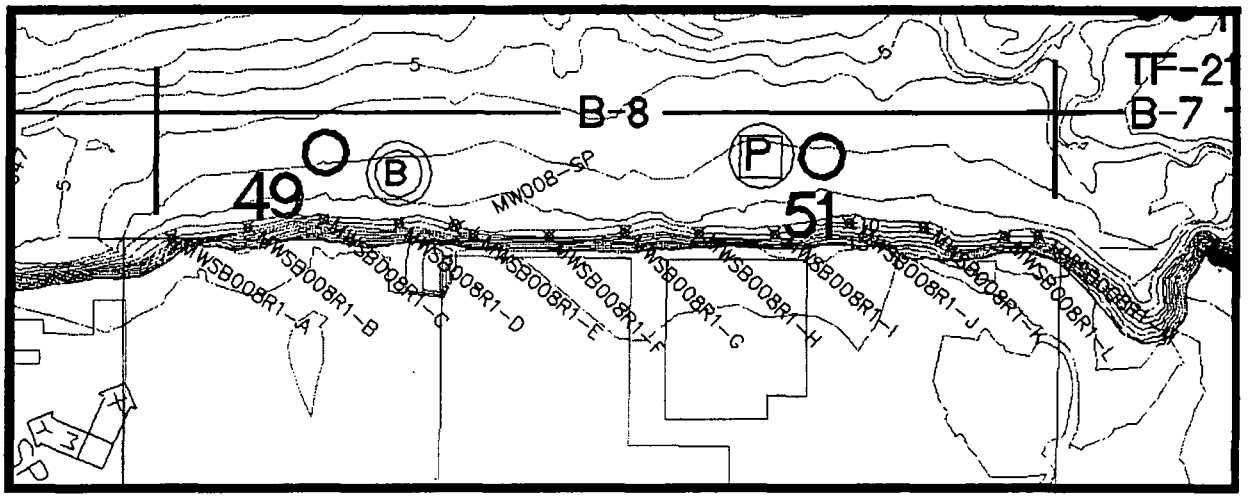
Comments: Volatile and sulfide collected at (discrete) only.

Total Sample Volume:	Approximately 4L	Sampled by: EW	
Date/Time Sampled:	15:27 05/28/98	Photos: Roll No. 5	Photo No. 18
		Special 4b 5	19

Waterway Bank Segment Sampling Summary - (B-8)

Sample ID:	B-8 (MWSB008R1 & 008S1 MWSB008R1SP)	Sample Method:	Hand
No. of Discrete Samples:	13	Spacing Interval:	~50'
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A	10	North end up the bank 10' from flag pt. - wood debris
B	10	50' south brown with black below
C	10	50' south brown with black below
D	10	50' south ~20' from fence with razor wire black
E	9	50' s just south of roofing material (Discrete)
F	10	50' sandy
G	10	50' south between Mylet buildings at base of slope; red brick
H	10	50' south at DNR stake
I	10	50' south end Mylet building - brown/black/red brown
J	10	50' Dark brown
K	10	Below shed at south end Mylet - black, (Oyster shells laying around)
L	10	South end segment brown/black with underlying red or red brown; glass below surfa

Comments: Volatile and sulfide collected at (discrete) only.

Total Sample Volume: Approximately 4L Sampled by: EW

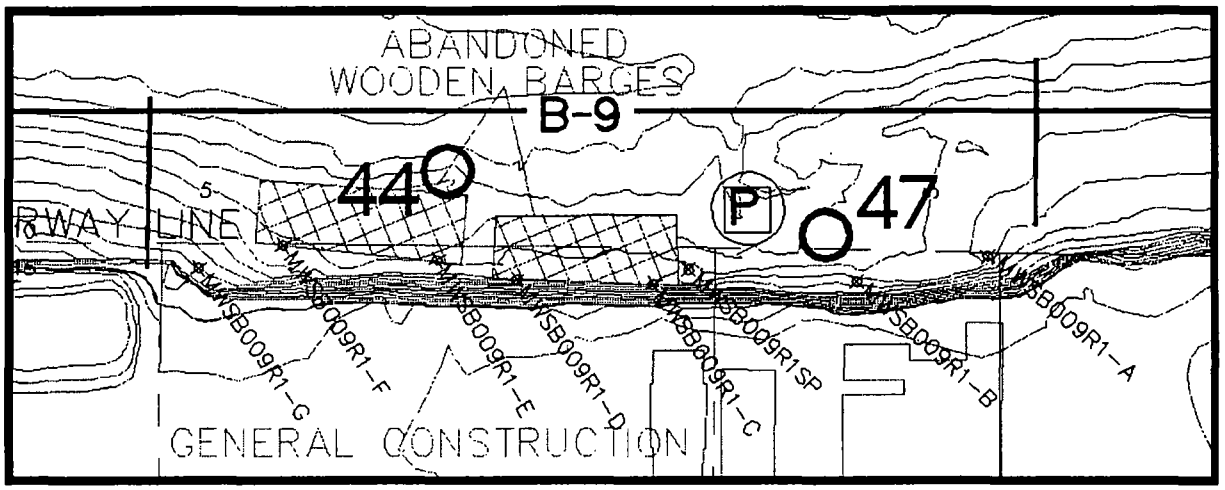
Date/Time Sampled: 05/27/98 16:20

SP 05/28/98 10:30 Photos: Roll No. 5 (SP) Photo No. 12(SP)

Waterway Bank Segment Sampling Summary - (B-9)

Sample ID:	**B-9** (MWSB009R1 & MWSB009R1SP)	Sample Method:	Hand
No. of Discrete Samples:	7/1	Spacing Interval:	± 50 ft.
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A	7	End of rip rap at south end of segment 30' from stake.
B	7.5	Between old green warehouse next to GC property - near old winch (wood/mulch)
C	6	Near south end of south barge (brown/black/ red at depth)
D	6	15 feet south of north end south barge, black shallow olive layer
E	5	15 feet north of south end north barge, olive top black under soft
F	5	± 15 feet south of north end north barge black under olive top; soft
G	9	± 20 feet south of north boundary black below olive top, sand/ silty

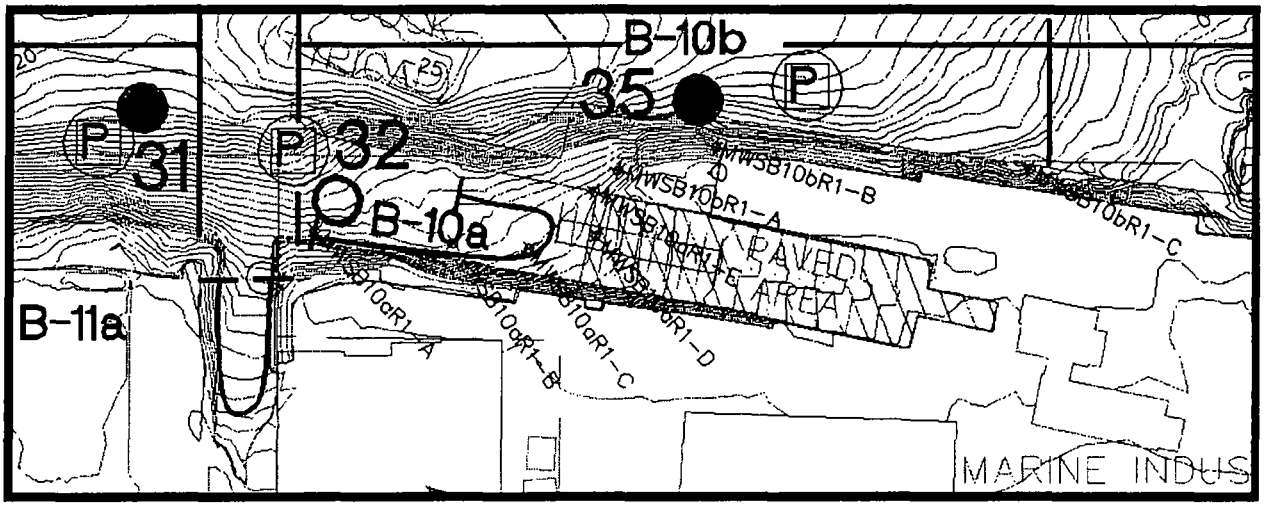
Comments: Volatile and sulfide collected at (discrete) only.

Total Sample Volume:	Approximately 4L each	Sampled by: EW	
Date/Time Sampled:	10:51 05/28/98	Photos: Roll No. 5	Photo No. 13

Waterway Bank Segment Sampling Summary - (B-10a & B-10b)

Sample ID:	**B-10a&b** (MWSB10aR1 and 10bR1)	Sample Method:	Hand
No. of Discrete Samples:	5(10a)/3(10b)	Spacing Interval:	As available
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete at 4 for 10a / at 2 for 10b

Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
10a		
A	0	10-12' south of boat ramp 1 & 1/2' from base of wall; brown
B	0	At south end of ship way near base of rip rap; brown
C	2	Halfway between 10aR1-B and ship rails; black
D	4	Between ship rails; black
E	2	Opposite side of tracks along pier; brown/black
10b		
A	2	North end of segment - middle of pier; brown
B	0	30' South along shoreline - near seep; brown, soft
C	0	Near south end of segment; brown, soft

Comments: Volatile and sulfide collected at (discrete) only.

Total Sample Volume: Approximately 4L Sampled by: EW

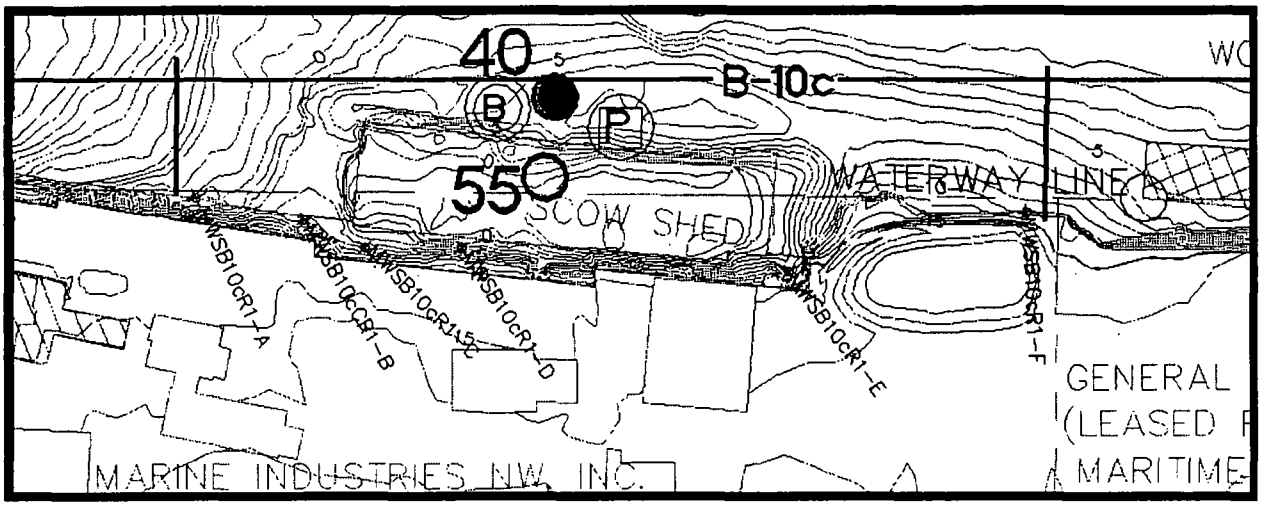
Date/Time Sampled: 05/27/98 Photos: Roll No. 5 Photo No. 7,8,9

10a 13:55
10b 14.:13

Waterway Bank Segment Sampling Summary (B-10c)

Sample ID:	**B-10c** (MWSB10cR1)	Sample Method:	Hand
No. of Discrete Samples:	6	Spacing Interval:	As available
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A	-1	North end ~10 feet from stake ~3' from waterline 1 1/2' inside outer pier
B	5	50' south ~10' south of access ladder
C	5	50 ' south area entrance to Scow shed
D	3	60' south across from 5th pier on outside of shed (Discrete)
E	3	South end of shed in corner
F	10	~20-30' from south boundary stake

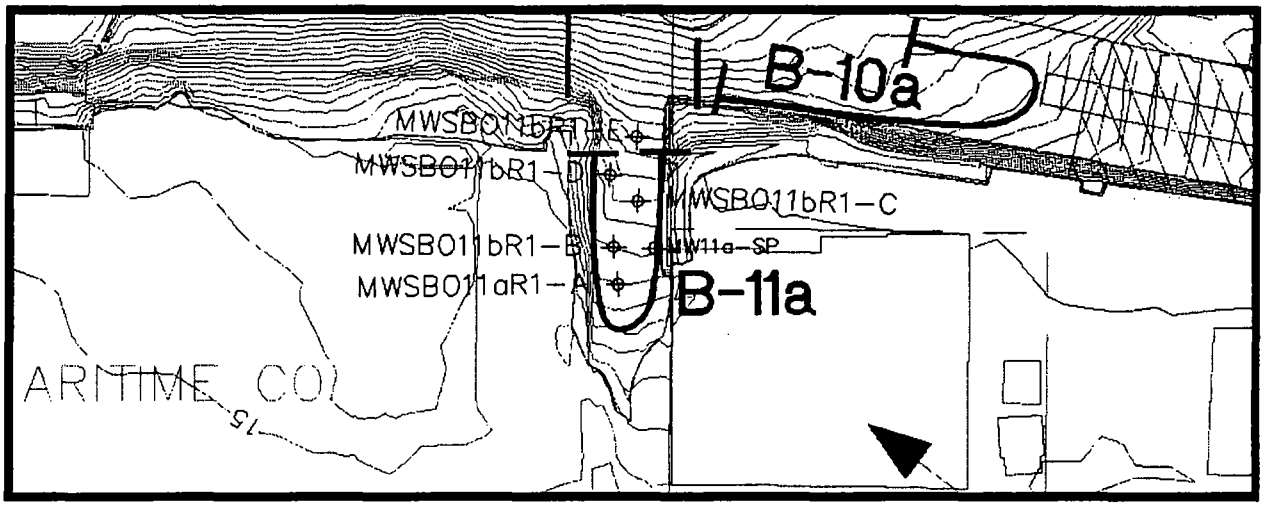
Comments: Volatile and sulfide collected at (discrete) only.

Total Sample Volume:	4L	Sampled by: EW	
Date/Time Sampled:	05/27/98 14:30	Photos: Roll No. 5	Photo No. 10

Waterway Bank Segment Sampling Summary (B-11a)

Sample ID:	**B-11a** (MWSB11aR1 & MWSB11aR1-SP)	Sample Method:	Hand
No. of Discrete Samples:	5	Spacing Interval:	Random
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A B C	10 9 7	Randomly placed side to side along the length of the boat ramp. Upper areas were dark brown. Areas close to the water were brown with black below. All samples were sandy with those near the water having a finer grain and being softer.
D E SP	7 4 9	

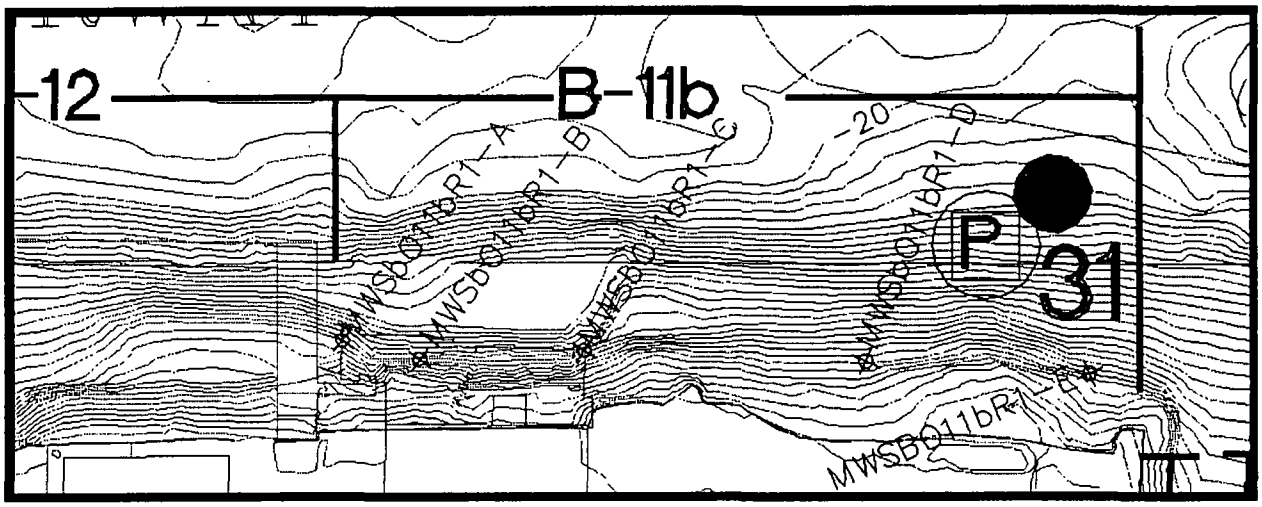
Comments: Volatile and sulfide collected at (discrete) only.

Total Sample Volume:	4L	Sampled by:	EW
Date/Time Sampled:	13:30 05/27/98		

Waterway Bank Segment Sampling Summary - (B-11b)

Sample ID:	**B-11b** (MWSB11bR1)	Sample Method:	Hand
No. of Discrete Samples:	5	Spacing Interval:	As available
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A	0	Northend of abandoned dock 2' off top of slope within seep area ~10' south of Foss dock
B	0	~35 Feet south along shore
C	0	South end of abandoned dock below rip rap black (Discrete except volatiles)
D	6	Midway between Foss dock and shipway boat launch
E	6	Approximately 20' north of boat launch. No sampling sites between Foss dock and site D due to rip rap and debris. Limited sampling sites under Foss dock. Volatiles taken at last station (Volatiles)

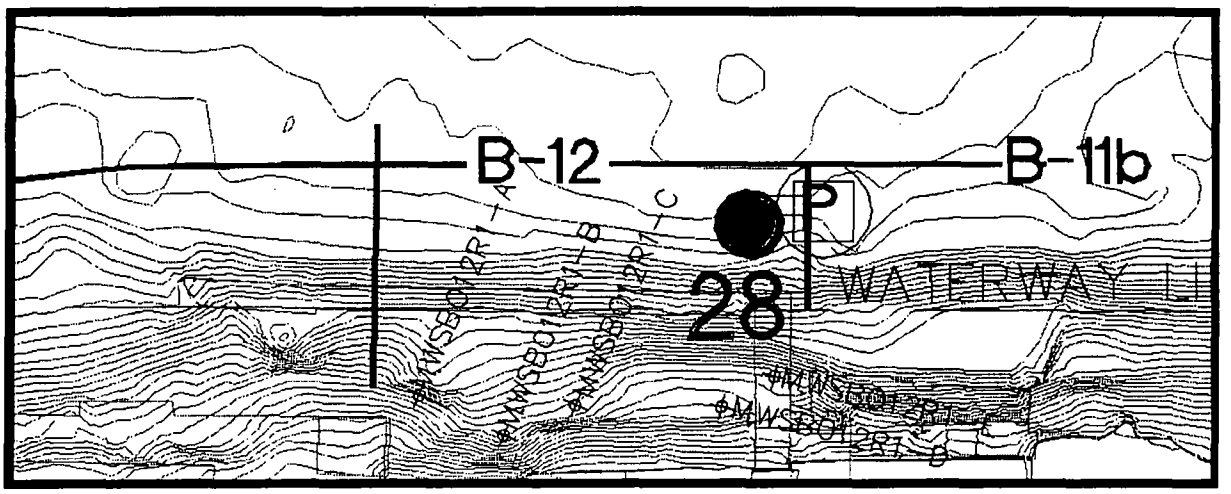
Comments: Volatile and sulfide collected at (discrete) only. Locations A & B are just inside the outer limit of the old dock.

Total Sample Volume:	4L	Sampled by:	
Date/Time Sampled:	13:05 05/27/98	Photos: Roll No. 5	Photo No. 4,5

Waterway Bank Segment Sampling Summary - (B-12)

Sample ID:	**B-12** (MWSB012R1)	Sample Method:	Hand
No. of Discrete Samples:	4 sub samples	Spacing Interval:	As available
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A	0	20' from pier area at south end of old shipyard building brown shell.
B	1	Even with last pier at top of bank holding up Foss parking area 3 feet from base of rip rap brown/black
C	0	Even with 3rd dolphin on floating dock 5' from base of rip rap. Dark brown (Discrete)
D	4	Even with south face of Foss Building 8' from top of slope in area where sediment is present Dark brown
E	1	Between 2nd and 3rd set of piers under Foss dock, black with olive top.

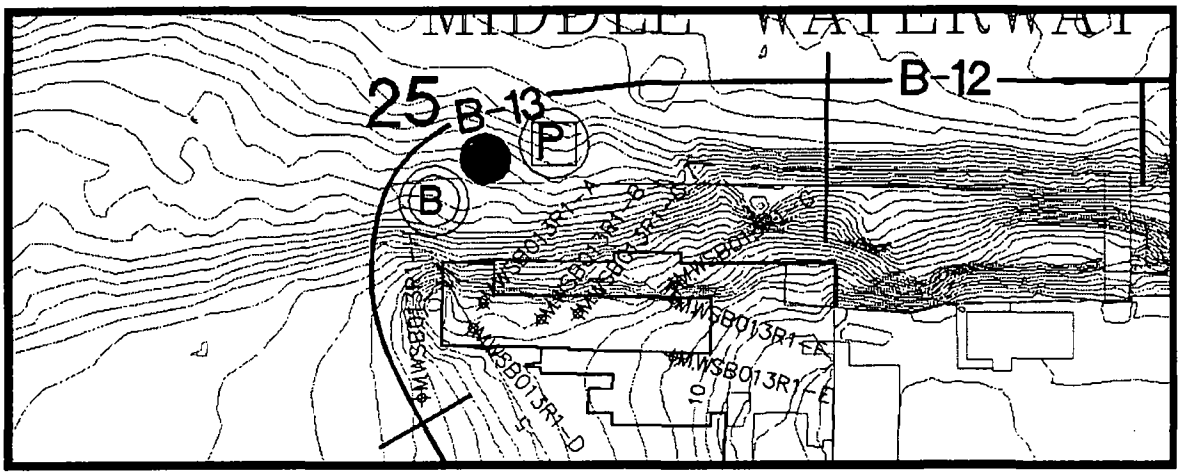
Comments: Volatile and sulfide collected at (discrete) only.

Total Sample Volume:	Approximately 4L	Sampled by: EW	
Date/Time Sampled:	12:50 05/27/98	Photos: Roll No. 5	Photo No. 1-2

Waterway Bank Segment Sampling Summary - (B-13)

Sample ID:	**B-13** (MWSB013R1)	Sample Method:	Hand
No. of Discrete Samples:	7	Spacing Interval:	Random
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A B C	4 5 5.5	See descriptions of locations in log book. Sampled at random locations under the old shipyard building
D E F	5.5 9 7	
G H	6 0.5	

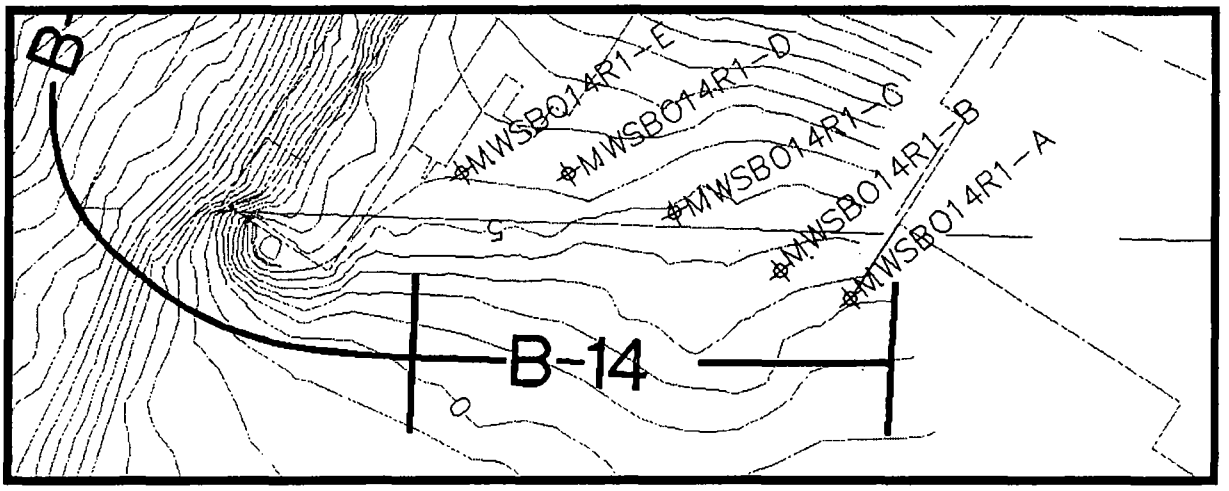
Comments:Volatile and sulfide collected at (discrete) only.

Total Sample Volume:	Approximately 4L	Sampled by: EW	
Date/Time Sampled:	11:40 05/27/98	Photos: Roll No. 4	Photo No. 19-23

Waterway Bank Segment Sampling Summary (B-14)

Sample ID:	**B-14** (MWSB014R1)	Sample Method:	Spoon
No. of Discrete Samples:	5 sub sections	Spacing Interval:	~50'
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A B C	2 3.5 5	Subsections followed seep line along slope break lined up with third column from top of log chute on abandoned shipyard building (Discrete at C)
D E	6.5 6	Near face of abandoned ship rail following along seep line. Closer to the water due to curve of beach area.

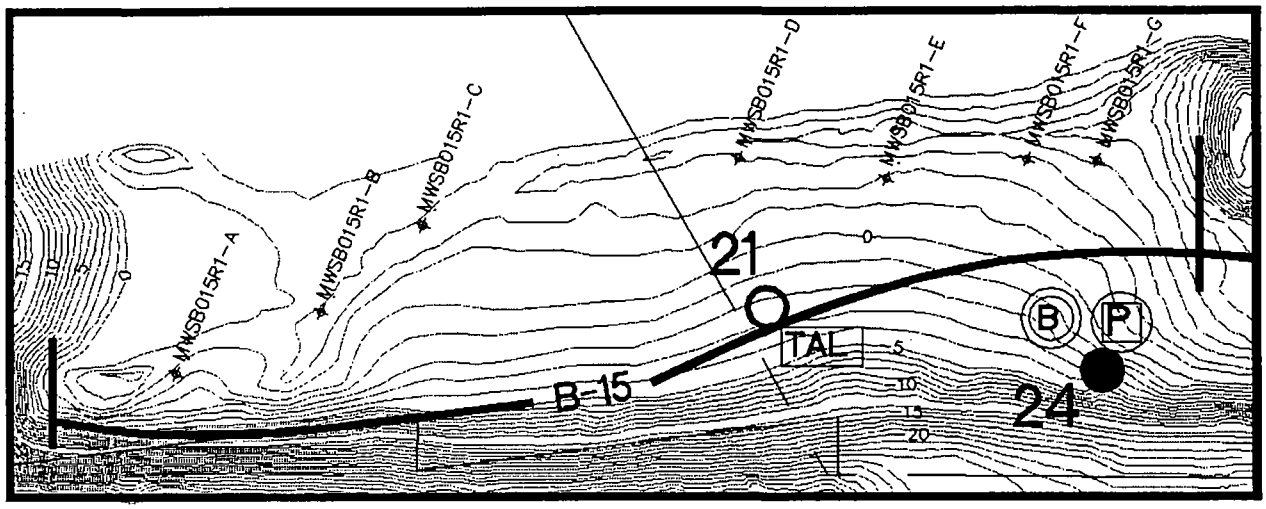
Comments:Volatile and sulfide collected at (discrete) only.

Total Sample Volume:	Approximately 4L	Sampled by: EW	
Date/Time Sampled:	11:20 05/27/98	Photos: Roll No. 4	Photo No. 19/20

Waterway Bank Segment Sampling Summary (B-15)

Sample ID:	**B-15** (MWSB0015R1)	Sample Method:	Hand
No. of Discrete Samples:	7	Spacing Interval:	As available
Sample Type:	Surface		
Sample Depth:	0-10 cm		

Waterway Bank Segment Plan



Discrete Sample Location Description

Discrete Sample Identifier	Approximate Elevation	Field Location Description
A	0	50 feet south of north end of spit
B	2	75 feet south; shells & wood
C	2	Near fork in shell deposition pattern just north of spot where center pier disappear
D	3	75 north of large rock pile (Discrete)
E	2	At pile of rocks; 20 feet west
F	3	Halfway between rock pile and shoreline (wood)
G	4	At base of shoreline - seep area

Comments: Volatile and sulfide collected at (discrete)only.

Total Sample Volume: Sampled by:

Date/Time Sampled: 12:40 05/28/98 Photos: Roll No. 5 Photo No. 14

SEDIMENT SAMPLE COLLECTION FORMS

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSS016R1

Sampling Data

Date: 5/14/98 Time: 9:36 Sampled by: RWI Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Near end of old pier (pilings) on east side

---

Deployment No: 1 Time: 9:36 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth ~~46'~~ 48.3' Penetration Depth 12 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum (None) Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. 15

Comments: _____

16:39:15

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSS017R1

Sampling Data

Date: 5/14/98 Time: 10:20 Sampled by: RW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Mouth of Waterway

17:16:39

Deployment No: A Time: 10:20 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 61.6' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Too Full

17:25:24

Deployment No: B Time: 10:28 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 56.0' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Too Full & Washing

17:31:10

Deployment No: C Time: 10:35 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 61.6' Penetration Depth 22.5 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. 20 & 21

Comments: Half too full: using 2nd half - Fresh Wood Chips @ 8-10"

Deployment No: _____ Time: _____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth ~~22.5 cm~~ CAH RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black CAH Light Brown ~~Dark Brown~~ CAH

Sediment Odor: ~~H_2S~~ Petroleum None Slight ~~Moderate~~ Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSS018R1

Sampling Data

Date: 5/14/98 Time: 10:35 Sampled by: RCW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Mouth of Waterway - West

Deployment No: A Time: 11:30 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 33.6' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. ¢ Photo No. ¢

Comments: Washing - Rejected

18:32:00

Deployment No: B Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 33.2' Penetration Depth 18 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. 23

Comments: _____

18:42:25

Deployment No: _____ Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSS019R1

Sampling Data

Date: 5/14/98 Time: 13:02 Sampled by: RW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Mouth - West of Foss

Deployment No: A Time: 13:02 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 23.4' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Ø Photo No. Ø

Comments: Rejected - No Overlying Water on Half

~~20:09:06~~ CAR 20:10:26

Deployment No: B Time: 13:20 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 24.8' Penetration Depth ~~20 cm~~ CAR RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) Clay ?

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. ~~2~~ Photo No. _____

Comments: Rejected - Washing & debris in jaws

20:17:26

Deployment No: C Time: 13:24 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 25.6' Penetration Depth 20 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) Clay ?

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. 24

Comments: _____

20:23:22

Deployment No: _____ Time: _____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSS020R1

Sampling Data

Date: 5/14/98 Time: 13:52 Sampled by: RW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 13:52 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 9.0' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 3 Photo No. 1

Comments: _____

20:48:01

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem. Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MUSS021R1

Sampling Data

Date: 5/14/98 Time: 11:10 Sampled by: RW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Near former pier on east of water

Deployment No: A Time: 11:10 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 4.6' Penetration Depth 12 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. 22

Comments: _____

17:59:56

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive *Conventionals*
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSS022R1

Sampling Data

Date: 5/15/98 Time: 16:10 Sampled by: RW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 16:10 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 25.2' Penetration Depth 20cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 3 Photo No. ~~20~~ 19

Comments: Lots of gravel

23:11:28

Deployment No: B Time: 16:38 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 25.5' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 3 Photo No. 20

Comments: Much less gravel than A grab

23:38:15

Deployment No: _____ Time: _____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: _____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWBS022R1

Sampling Data

Date: 5/15/98 Time: 17:00 Sampled by: RW Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar* Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

* Subsampled from Power Grab following 20 unsuccessful tries

Deployment No: A Time: 17:00 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 26.4' Penetration Depth 6 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Only sample not subsampled from larger sample

Deployment No: B Time: 17:05 42 CMA Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 26.7' Penetration Depth 7 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: C Time: 17:57 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 28.2' Penetration Depth 7 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: D Time: 18:04 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 27.2 Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: E Time: 18:10 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 30.4' Penetration Depth 7cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: F Time: 18:15 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 30.45' Penetration Depth 7cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: G Time: 19:28 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 30.4' Penetration Depth 8cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: 1 Rejected

Deployment No: H Time: ~~18:34~~ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth ~~30.4~~' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Rejected

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSS023R1

Sampling Data

Date: 5/14/98 Time: 16:24 Sampled by: RW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 16:24 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 6.6' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: No Good - Washing - Wood Debris

23:24:23

Deployment No: B Time: 16:35 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 7.0' Penetration Depth 18 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C (M) (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs Shell Fragments

Sediment Colors: Gray Black Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 3 Photo No. 4

Comments: Good - Some Wood Debris & Kelp like filaments

23:32:00

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

MWBS024R1
MWAS024R1

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSS024R1

Sampling Data

Date: 5/15/98 Time: 11:00 Sampled by: RW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

18:02:50

Deployment No: A Time: 11:00 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 10.0' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Washing

18:07:05

Deployment No: B Time: 11:05 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 9.9' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Washing

18:10:07

Deployment No: C Time: 11:11 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 10.8' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Too Little Retrieving

18:19:40

Deployment No: D Time: 11:20 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 11.6' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs Seaweed/Shell frags

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 3 Photo No. 16

Comments: _____

18:35:13

Deployment No: E Time: 11 : 41 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 12.6' Penetration Depth 20cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs Shells / Sea weed

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 3 Photo No. 17

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWBS024R1

Sampling Data

Date: 5/15/98 Time: 12:18 Sampled by: GB Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 12:18 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 10.4' Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Shells & Wood Debris

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: B Time: 12:22 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 9.6' Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Shells / Wood Debris

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: 2 Rejects

Deployment No: C Time: 12:25 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 11.8' Penetration Depth 9 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Shells / Wood Debris (sm)

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Sheen

Deployment No: D Time: 12:27 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 9.4' Penetration Depth 10 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Shells / Wood debris (sm)

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 3 Photo No. 15

Comments: 1 Reject

Deployment No: E Time: 12:32 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 10.4' Penetration Depth 9½ cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Shells & wood debris

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: 1 Reject

Deployment No: F Time: 12:35 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 9.8' Penetration Depth 10 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Shells & wood debris

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: G Time: 12:37 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 10.3' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Shells & wood debris

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: Substrate for the benthic grabs were done by deploying the grab, grab & sub sampling with the ponar. However, samples were not analyzed for benthos because the similar substrate could be found in abundance

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSSD25R1

Sampling Data

Date: 5/15/98 Time: 13:47 Sampled by: RW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 13:47 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 12.6' Penetration Depth 22.5' RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

20:43:37

Deployment No: B Time: 13:58 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 10.8' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 3 Photo No. 18

Comments: _____

20:58:49

Deployment No: ~~C~~ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWBS025R1

Sampling Data

Date: 5/15/98 Time: 14:39 Sampled by: RW Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 14:39 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 12.2' Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) (Clay)

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown (Dark Brown) Not as much wood as Station 24

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: 1 Reject

Deployment No: B Time: 14:43 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 13.2' Penetration Depth 6 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) (Clay)

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: C Time: 14:48 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 13.6' Penetration Depth 9 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) (Clay)

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: D Time: 14:51 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 15.6' Penetration Depth 9 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) (Clay)

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: E Time: 14:53 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 14.1 Penetration Depth 8cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Algae & Mussel Shells

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: F Time: 14:57 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 14.4' Penetration Depth 9 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: G Time: 15:00 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 12.3' Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSS0326R1 & 51

Sampling Data

Date: _____ Time: ___:___ Sampled by: _____ Checked by: _____

Equipment: Single vanVeen (.1m^2) Double vanVeen (.2m^2) Small vanVeen (.025m^2) Core

Location Description: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MW55027R1

Sampling Data

Date: 5/14/98 Time: 14 : 15 Sampled by: RW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 14 : 15 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 20.7 Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Wood Debris

Deployment No: B Time: 14 : 24 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 21.0' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

21:20:02

Deployment No: C Time: 14 : 27 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 21.0' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

21:24:45

Deployment No: D Time: 14 : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 21.7' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

21:28:46

21:35:41

Deployment No: E Time: 14:32 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 22.2' Penetration Depth 23cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 3 Photo No. 2

Comments: Wood & debris

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSS02ER1

Sampling Data

Date: 5/13/98 Time: 15:41 Sampled by: CAH Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Near Foss Dock

Deployment No: A Time: 15:41 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 26.4' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Rejected - Small log in jaws 3" dia

22:38:30

Deployment No: B Time: 15:44 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 26.4' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Large piece of metal debris

22:41:39

Deployment No: C Time: 15:47 Northing: _____ Easting _____

Bio/Chem: Bottom Depth 26.4' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Reject - Wood in jaws - lots of rocks - Moving south

22:44:09

Deployment No: D Time: 15:55 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 26.5' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Debris/metal

22:51:51

Deployment No: E Time: 15:58 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 27.6 Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Cable/Rope - Rejected

2:54:05

Deployment No: F Time: 16:05 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 27.6 Penetration Depth 17.5cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. 9

Comments: Rocky surface

2:56:50

Deployment No: G Time: 16:17 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 27.8' Penetration Depth 20cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. 12

Comments: _____

3:13:25

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem. Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chemistry Only

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSS029R1

Sampling Data

Date: 5/13/98 Time: 12:40 Sampled by: RW/EW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Off End of Dry Dock

Deployment No: A Time: 12:40 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 23.9' Penetration Depth 30 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs Shells/Wood

Sediment Colors: Gray Black Light Brown Dark Brown Sheen

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Ø Photo No. Ø

Comments: Used one corner which was submerged & met criteria

19:40:12

Deployment No: B Time: 12:52 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 22.1' Penetration Depth 24 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Wood debris

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. 1

Comments: _____

19:52:48

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chem + TBT

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSS030R1

Sampling Data

Date: 5/13/98 Time: 13:14 Sampled by: RW/EW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: East side of waterway opposite of dry dock

---

Deployment No: A Time: 13:14 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 16.2' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Wood / Anemone

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Ø Photo No. Ø

Comments: Washed - Rejected

20:13:34

Deployment No: B Time: 13:23 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 17.2' Penetration Depth 15 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs shrimp

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. 2

Comments: Shells/Wood

20:20:30

Deployment No: C Time: 13:42 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 17.2' Penetration Depth 21.5 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. ~~3~~ 4

Comments: _____

20:38:08

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. 31
MWSS0~~34~~R1

Sampling Data

Date: 5/13/98 Time: 14:47 Sampled by: RW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Station 31 inside drydock (west)

Deployment No: A Time: 14:47 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth ~~10.6~~ 14.0' Penetration Depth 20 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) (Clay)

Large Fauna: Starfish Worms Clams Crabs Anemone

Sediment Colors: (Gray) (Black) Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. 6

Comments: 40-50 percent wood waste Rejected

21:44:04

Deployment No: B Time: 14:58 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 14.0' Penetration Depth 10cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) (Clay)

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: (Gray) (Black) Light Brown Dark Brown Olive tan

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. 7

Comments: Much less wood debris 20-25%

21:56:54

Deployment No: C Time: 15:16 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 13.8' Penetration Depth 20 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) (Clay)

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: (Gray) (Black) Light Brown Dark Brown Olive tan

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. 8

Comments: 10-15% wood

22:14:01

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSS032RJ

Sampling Data

Date: 5/14/98 Time: 15:36 Sampled by: RW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 15:36 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 7.0' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Overfill

22:34:56

Deployment No: B Time: 15:40 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 6.6' Penetration Depth ~~16~~ 26 cm CAN RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs Shells/Shrm

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 3 Photo No. 3

Comments: Good Grab - Used for Chemistry

22:37:05

Deployment No: C Time: 15:57 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 6.8' Penetration Depth ~~16~~ 24 cm OAN RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Good Grab - Pore Water (TBT) Extraction

22:56:11

Deployment No: _____ Time: _____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. NWSS034R1

Sampling Data

Date: 5/13/98 Time: 17:15 Sampled by: CAA Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: East Waterway across from Scow Shed

Deployment No: A Time: 17:15 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 16.8' Penetration Depth 20 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. 13

Comments: _____

00:11:59

Deployment No: B Time: 17:35 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 18.7' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 2 Photo No. 14

Comments: _____

00:31:50

Deployment No: C Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chem + TBT

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWSS035R1

Sampling Data

Date: 5/13/98 Time: 11:40 Sampled by: CAA/EW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab 0.3m² Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 11:40 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 14.2' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: No Recovery - wood

Deployment No: ~~2~~B Time: 11:42 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 14.6' Penetration Depth 8" RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs shells/wood/sheen

Sediment Colors: (Gray) Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 1 Photo No. ~~24~~ 23

Comments: ~~No Recovery~~ - Metal Debris (Welding Rod)

18:38:54

Deployment No: 3 Time: 12:12 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 14.2' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) (Clay)

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: (Gray) Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 1 Photo No. 24

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWS5037R1

Sampling Data

Date: 5/15/98 Time: 9:48 Sampled by: RW Checked by: _____

Equipment: Single vanVeen (.1m²) Power Grab Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 9:48 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 15.8' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Rejected - Too Full

16:46:18

Deployment No: B Time: 9:52 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 13.5' Penetration Depth 20cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs Shell fragments

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 3 Photo No. 7

Comments: Good

16:50:17

Deployment No: _____ Time: _____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: _____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. 1WST039R1

Sampling Data

Date: 5/19/98 Time: 15:40 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) (Hand) Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Simpson side across from Scrap Shed

Deployment No: N/A Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth N/A Penetration Depth 0 - 10 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) Clay ?

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum (None) Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Shell fragments and wood debris algae on the surface

Deployment No: _____ Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MW5TC39R1

Sampling Data

Date: 5/19/98 Time: 15:40 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Simpson side of MWW, across from scow shed - station on shoal

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Deployment No: A Time: 1540 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 7cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming Field Grain size = 28% fines

Photo Log: Roll No. _____ Photo No. _____

Comments: Some shell frags./wood debris - algae at surface

Deployment No: B Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 8cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same as A

Deployment No: C Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 7cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray ~~Black~~ Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same as A

Deployment No: D Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 9cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same as A

Deployment No: E Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same as A

Deployment No: F Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same as A

Deployment No: G Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 7 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same as A

Deployment No: Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments:

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments:

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MUBTC 40 R1

Sampling Data

Date: 5/18/98 Time: 17:30 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Near Scow Shed

See field log for description

Deployment No: A1 Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 6 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C (M) (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum (None) Slight Moderate Strong Overwhelming

Photo Log: Roll No. ____ Photo No. ____

Comments: Olive top with dark brown/black below

Deployment No: B3 Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 7 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C (M) (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. ____ Photo No. ____

Comments: Same

Deployment No: C1 Time: ___:___ Northing: _____ Easting _____

Bio/Chem: Bottom Depth _____ Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C (M) (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. ____ Photo No. ____

Comments: Same

Deployment No: D1 Time: ___:___ Northing: _____ Easting _____

Bio/Chem: Bottom Depth _____ Penetration Depth 7 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C (M) (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. ____ Photo No. ____

Comments: Same

Deployment No: E Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: F Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: G Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 9 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments:

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments:

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWST04OR1

Sampling Data

Date: 5/18/98 Time: 17:30 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Hand Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Near Scow Shed

Deployment No: N/A Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 0-10 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Olive top with dark brown/black below

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No. _____ Time. ___:___ Northing: _____ Easting _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time. ___:___ Northing. _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem. Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWCT04R2

Sampling Data

Date: 5/21/98 Time: 11:02 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Drop Core Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 11:02 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: No Good

Deployment No: B Time: 11:05 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth ± 5' Penetration Depth 18" RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. 3 Photo No. 24

Comments: Lost to wash out – Clips not placed in time

Deployment No: C Time: 11:16 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth ± 5' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: No good

Deployment No: D Time: 11:43 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Good

Deployment No: 15 Time: 12 : 20 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWST042R1

Sampling Data

Date: 5/22/98 Time: 17:50 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Simpson side across from abandoned barges

Deployment No: A Time: 17:50 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 3.0' Penetration Depth 18 cm ± RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Fine grained & soft

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MW~~8~~ 6B T043R1

Sampling Data

Date: 5/19/98 Time: 18:20 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 1820 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 10cm RPD Depth _____

Sediment Type: Cobble Gravel **Sand** C M **F** **Silt** Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown **Dark Brown** olive on surface

Sediment Odor: H_2S Petroleum **None** Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Very "mucky" + soft field Grain size = 36% fines

Deployment No: B Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 10cm RPD Depth _____

Sediment Type: Cobble Gravel **Sand** C M **F** **Silt** Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown **Dark Brown** olive at surface

Sediment Odor: H_2S Petroleum **None** Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same as A

Deployment No: C Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 10cm RPD Depth _____

Sediment Type: Cobble Gravel **Sand** C M **F** **Silt** Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown **Dark Brown** olive at surface

Sediment Odor: H_2S Petroleum **None** Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: D Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 9cm RPD Depth _____

Sediment Type: Cobble Gravel **Sand** C M **F** **Silt** Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown **Dark Brown** olive at surface

Sediment Odor: H_2S Petroleum **None** Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same as A

Deployment No: E Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 10 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown Olive on surface

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same as A

Deployment No: F Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown Olive on surface

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same as A

Deployment No: G Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 10 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Olive Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same as A

Deployment No: Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments:

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments:

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWST043R1

Sampling Data

Date: 5/19/98 Time: 18:20 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) (Hand) Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Center of waterway near barges

Deployment No: N/A Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth N/A Penetration Depth 0-10cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown (Dark Brown) olive surface

Sediment Odor: H_2S Petroleum (None) Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: mucky & soft

Deployment No: _____ Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWST044R1

Sampling Data

Date: 5/20/98 Time: 15:23 Sampled by: _____ Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Between beached barges

Deployment No: A Time: 15:23 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 3'-2" Penetration Depth 9 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Redox 1 cm

Deployment No: B Time: 15:28 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 9 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No _____ Photo No. _____

Comments: Reject - Empty

Deployment No: C Time: 15:30 Northing: _____ Easting _____

Bio/Chem: Bottom Depth ~~4~~ 3'-1" Penetration Depth 8.5 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown [illegible]

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Card board in grab

Deployment No: D Time: 15:39 Northing: _____ Easting _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Reject 5 cm

Deployment No: E Time: 15:41 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum (None) Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Reject (5.5cm)

Deployment No: F Time: 15:43 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 2'-8" Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F (Silt) (Clay)

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown Dark Brown Olive top

Sediment Odor: (H_2S) Petroleum (None) (Slight) Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: G Time: 15:46 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 2'-7.5" Penetration Depth 10 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F (Silt) (Clay)

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown Dark Brown Olive top

Sediment Odor: (H_2S) Petroleum None Slight (Moderate) (Strong) Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: More black & oozy than previous samples

Deployment No: _____ Time: _____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWST045R1

Sampling Data

Date: 5/28/98 Time: 15:45 Sampled by: EE EW Checked by: _____

Equipment: Single vanVeen (.1m²) (Hand) Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Simpson side near corrugated metal government bldg.

Deployment No: N/A Time: 15:45 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth N/A Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) (Clay)

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown (Dark Brown) Olive top

Sediment Odor: H_2S Petroleum (None) Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Mucky on top - slightly firmer below

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWCT046R2

Sampling Data

Date: 5/21/98 Time: 12:40 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Drop Core Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 12:45 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 4.6' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Lost

Deployment No: B Time: 12:51 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 4.6' Penetration Depth 7" RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs Shells

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: C Time: 13:05 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 3" RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Tinted

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: D Time: 13:25 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 3.5' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: E Time: 13:40 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 5.3' Penetration Depth 9 RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWST047R1

Sampling Data

Date: 5/20/98 Time: ___:___ Sampled by: _____ Checked by: _____

Equipment: Single vanVeen (.1m²) Ponar (Petite) Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Tied to old log raft south of grounded barges

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Deployment No: A Time: 14:22 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 4' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. ___ Photo No. ___

Comments: Rejected - Too empty

Deployment No: B Time: 14:24 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 7 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. ___ Photo No. ___

Comments: _____

Deployment No: C Time: [illegible] Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. ___ Photo No. ___

Comments: _____

Deployment No: D Time: [illegible] Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. ___ Photo No. ___

Comments: _____

Deployment No: E/F Time: 14 : 32 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Reject - Not enough

Deployment No: G Time: 14 : 41 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel ? Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs ~~Mussel~~ Mussel Shells

Sediment Colors: Gray Black Light Brown Dark Brown Olive Surface

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: H Time: 14 : 47 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 7 cm RPD Depth _____

Sediment Type: Cobble Gravel ? Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Olive Surface

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: I Time: 14 : 56 Northing: _____ Easting: _____

Bio/Chem. Bottom Depth 2' - 7.5" Penetration Depth ~~[illegible]~~ / 7 cm / 9 cm RPD Depth _____

Sediment Type: Cobble Gravel ? Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Wood debris

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: [illegible]

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

[illegible] - 8 cm - Same description black firm clayey silt - Moderate H_2S

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWST048R1

Sampling Data

Date: 5/19/98 Time: 16:50 Sampled by: _____ Checked by: _____

Equipment: Single vanVeen (.1m²) Hand Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Simpson side off of restoration area (north end of area)

Deployment No: N/A Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 0-10 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Very mucky & wet, little debris

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWBT048R1

Sampling Data

Date: 5/19/98 Time: 16:50 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Simpson side off of revegetation area (north end)

Deployment No: A Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth N/A Penetration Depth 9 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs amphipods

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Very wet & mucky / little debris

Deployment No: B Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 16 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: C Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: D Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: E Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: F Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: G Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments:

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments:

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWST049R7

Sampling Data

Date: 5/18/98 Time: 13:50 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Hand Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: West side near Mylet Property

Deployment No: N/A Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 0-10 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Olive tops

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: muddy on top / firmer below

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWBT049R1

Sampling Data

Date: 5/15/99 Time: 13:50 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Nine Mile

Deployment No: 1 Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 6 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C (M) (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown (Dark Brown) Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: 13 Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 6 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C (M) (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown (Dark Brown) Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: 11 Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 7 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C (M) (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: 12 Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 7 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C (M) (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown (Dark Brown) Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

See lab for description

Deployment No: E Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments:

Deployment No: F Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments:

Deployment No: G Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments:

Deployment No: Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments:

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments:

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWCTOSOR2

Sampling Data

Date: 5/21/98 Time: 14:00 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Drop Core Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 14:00 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 5' Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: No Recovery

Deployment No: B Time: 14:10 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Empty

Deployment No: C Time: 14:20 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 6.5' Penetration Depth 11 inches RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: [illegible]

Deployment No: D Time: 14:32 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MUSTO51121

Sampling Data

Date: 5/20/98 Time: 17:00 Sampled by: _____ Checked by: _____

Equipment: Single vanVeen (.1m²) Hand Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: New Myrtle Property (south end)

Deployment No: N/A Time: 17:00 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Lots of wood debris & golf balls

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWST052R1

Sampling Data

Date: 5/19/98 Time: 18:52 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Hand Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Centerline near buoy

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Very mucky

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. 6B MW~~8~~T052R1

Sampling Data

Date: 5/19/98 Time: 18:52 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: near head of waterway + center line (Simpson side of channel)

Deployment No: A Time: 18:50 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown (Dark Brown) olive at surface

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Very mucky Field Grain size = 42% fines

Deployment No: B Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 9 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown (Dark Brown) olive at surface

Sediment Odor: H_2S Petroleum (None) Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same as A

Deployment No: C Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 10 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown (Dark Brown) olive at surface

Sediment Odor: H_2S Petroleum (None) Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same as A

Deployment No: D Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 10 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown (Dark Brown) olive at surface

Sediment Odor: H_2S Petroleum (None) Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same as A

Deployment No: E Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 9cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown olive at surface

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same as A

Deployment No: F Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 10cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown olive at surface

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same as A

Deployment No: G Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown olive at surface

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same as A

Deployment No: Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments:

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments:

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWCT053R1

Sampling Data

Date: 5/21/98 Time: 14:30 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) drop core Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Near head of waterway in center

Deployment No: A Time: 14:30 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Lost

Deployment No: B Time: 14:35 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 20" RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Very firm (needed more pounding w/ hammer than others)

Deployment No: _____ Time: _____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: _____ Northing: _____ Easting _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWST054R1

Sampling Data

Date: 5/18/98 Time: 11:54 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Hand Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Near head of waterway - center

Deployment No: N/A Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F ? Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Lots of wood debris/muddy on top

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

See log book for sediment description

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWBT054R1

Sampling Data

Date: 5/18/98 Time: 11:54 Sampled by: Eu Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Hand off waterway

Deployment No: A Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 6 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F? Silt Clay

Large Fauna: Starfish Worms Clams Crabs polychetes

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Lots of wood debris / mucky on top

Deployment No: B Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 6 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F? Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: C Time: : Northing: _____ Easting _____

Bio/Chem: Bottom Depth _____ Penetration Depth 7 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: D Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 9 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F? Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: E Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F ? Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: F Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F ? Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: G Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F ? Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments:

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments:

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MNS5055R1

Sampling Data

Date: 5/21/98 Time: 15:55 Sampled by: _____ Checked by: _____

Equipment: Single vanVeen (.1m²) Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: In scow shed

Deployment No: A Time: 15:55 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Too Empty

Deployment No: B Time: 15:58 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 7.9' Penetration Depth 17 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Mussel shells

Deployment No: _____ Time: _____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: _____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. Baseline MWRM201R1

Sampling Data

Date: _____ Time: 16:30 Sampled by: _____ Checked by: _____

Equipment: Single vanVeen (.1m²) Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: 16:30 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 9 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: B Time: 16:32 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 6 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: C Time: 16:37 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 15' Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: D Time: 16:40 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 14.9' Penetration Depth 9½ cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: E Time: 16:43 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 15' Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: F Time: 16:45 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 15' Penetration Depth 7 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: G Time: 16:47 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 15' Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. Chem MWRM201R1

Sampling Data

Date: 5/22/98 Time: 13:56 Sampled by: EW Checked by: _____

Equipment: (Single vanVeen (.1m²)) Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: _____

Deployment No: A Time: ~~14:00~~ 13:56 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 9 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C (M) (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: (Gray) (Black) Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Drops between empty/rejected

Deployment No: E Time: 14:48 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth ±16' Penetration Depth 10 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C (M) (F) (Silt) (Clay)

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown (Dark Brown) _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ____:____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWRM202R1

Sampling Data

Date: 5/25/96 Time: 15:11 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: [illegible]

Deployment No: A Time: 15:11 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 23' Penetration Depth 6 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: [illegible]

Deployment No: B Time: 15:21 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 23' Penetration Depth 9 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: C Time: [illegible] Northing: _____ Easting: _____

Bio/Chem: Bottom Depth [illegible] Penetration Depth 6 Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: D Time: 15:[illegible] Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 23' Penetration Depth 6 RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: E Time: 15:30 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 26' Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: F Time: 15:33 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 23' Penetration Depth 7 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: G Time: 15:38 Northing: _____ Easting: _____

Bio/Chem: Bottom Depth 26' Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Deployment No: _____ Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth _____ RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: _____

Analytical Laboratory: *Chemistry Lab* *Geotech Lab* *Bioassay Lab* *Benthic Lab*

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments: _____

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chem & Benthic

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWRH205R1

Sampling Data

Date: 5/26/98 Time: 12:35 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Benthic grabs & chemistry at same location
Chem collected by hand

Deployment No: A Time: _____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: lots of wood debris - Much deeper redox level to 3/4 cm

---

Deployment No: B Time: _____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: C Time: _____ Northing: _____ Easting _____

Bio/Chem: Bottom Depth _____ Penetration Depth 7 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: D Time: _____ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 8 cm RPD Depth _____

Sediment Type: Cobble Gravel (Sand) C M (F) (Silt) Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray (Black) Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: E Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 9 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: F Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 8 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: G Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 9 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments:

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments:

FOSTER WHEELER ENVIRONMENTAL CORPORATION

~~MWRH~~ Benthic + Cl

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWRH206R1

Sampling Data

Date: 5/26/98 Time: 13:25 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Chemistry sampled by ~~hand~~ hand at same location with descriptions similar to below

---

Deployment No: A Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 9cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: fined grained w/ some wood debris

Deployment No: B Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 10 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: C Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 10 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: D Time: ___:___ Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 9 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: E Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 10 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: F Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 9 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: G Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 9 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown Olive top

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments:

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments:

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chem & Benthic

SEDIMENT SAMPLE COLLECTION FORM

Sample No. MWRH20721

Sampling Data

Date: 5/26/98 Time: 14:00 Sampled by: EW Checked by: _____

Equipment: Single vanVeen (.1m²) Petite Ponar Double vanVeen (.2m²) Small vanVeen (.025m²) Core

Location Description: Chemistry sample collected by hand at same site

---

Deployment No: A Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 9cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Very soupy & fine-grained/some wood debris

Deployment No: B Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 9cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: C Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 10 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: D Time: : Northing: _____ Easting: _____

Bio/Chem: Bottom Depth _____ Penetration Depth 10 cm RPD Depth _____

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs _____

Sediment Colors: Gray Black Light Brown Dark Brown _____

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. _____ Photo No. _____

Comments: Same

Deployment No: E Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 9 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: F Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 9 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: G Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth 9 cm RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay ?

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments: Same

Deployment No: Time: : Northing: Easting:

Bio/Chem: Bottom Depth Penetration Depth RPD Depth

Sediment Type: Cobble Gravel Sand C M F Silt Clay

Large Fauna: Starfish Worms Clams Crabs

Sediment Colors: Gray Black Light Brown Dark Brown

Sediment Odor: H_2S Petroleum None Slight Moderate Strong Overwhelming

Photo Log: Roll No. Photo No.

Comments:

Analytical Laboratory: Chemistry Lab Geotech Lab Bioassay Lab Benthic Lab

Analyses Requested: SQO List Benthic Counts Atterberg Limits Archive Conventionals
TAL Bioassay Specific Gravity Contaminant Transport Suite

Comments:

APPENDIX B

APPENDIX B

CORE LOGS

SEDIMENT CLASSIFICATION SYSTEM

SAMPLE DESCRIPTION

Classification of sediments in this report are based on visual observations which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field nor laboratory testing unless presented herein. Visual-manual classification methods of ASTM D 2488 modified by use of PSEP definition of clay, silt, sand, and gravel were used.

Density/Consistency

Soil density/consistency in borings is related primarily to the Standard Penetration Resistance. Soil density/consistency in surface samples or cores estimated based on visual observation.

SAND or GRAVEL Density	Standard Penetration Resistance (N) in Blows/Foot	SILT or CLAY Consistency	Standard Penetration Resistance (N) in Blows/Foot
Very loose	0 - 4	Very soft	0 - 2
Loose	4 - 10	Soft	2 - 4
Medium dense	10 - 30	Medium stiff	4 - 8
Dense	30 - 50	Stiff	8 - 15
Very dense	>50	Very stiff	15 - 30
		Hard	>30

LEGEND FOR SOIL DESCRIPTION

Soil Descriptions format:

"Moisture, color, modifying constituent, MAJOR CONSTITUENT, with minor constituents"

Coarse-Grained Sediment

Silt or Clay Modifying Constituent:	>12%
Silt or Clay Minor Constituent:	5 to 12%
Sand or Gravel Minor Constitutent:	>15%

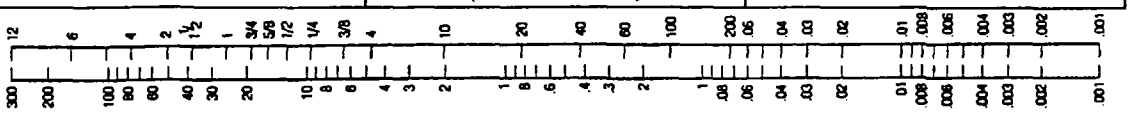
Fine-Grained Sediment

Modifying Constituent:	>30%
Minor Constituent:	15 to 29%

SEDIMENT CLASSIFICATION SYSTEM

GRAND SIZE

Size of Opening In Inches	Number of Mesh per Inch (US Standard)	Grain Size in Millimeters



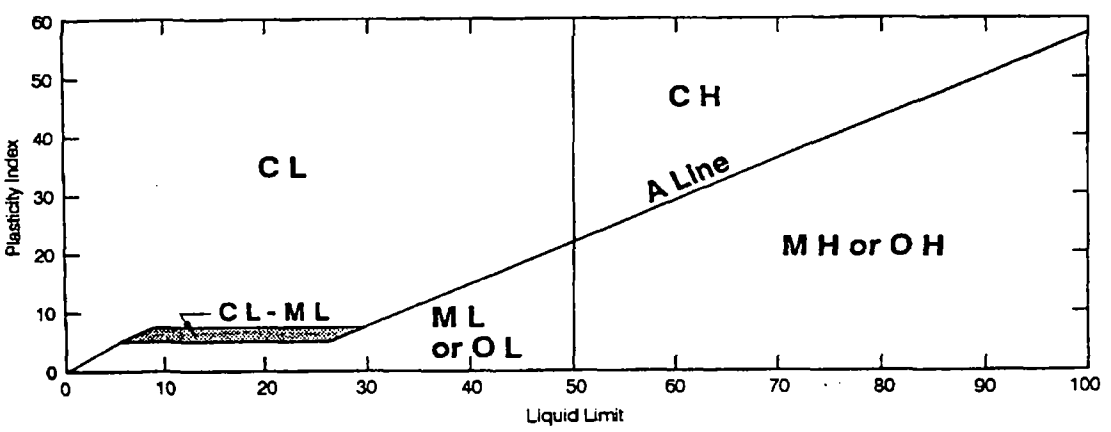
COBBLES	GRAVEL	SAND	SILT	CLAY
Coarse-Grained Soils			Fine-Grained Soils	

COARSE-GRAINED SOILS

G W	G P	G M	G C	S W	S P	S M	S C
Clean GRAVEL <5% fines		GRAVEL with >12% fines		Clean SAND <5% fines		SAND with >12% fines	
GRAVEL >50% coarse fraction larger than 2.0 mm				SAND > 50% coarse fraction smaller than 2.0 mm			
Coarse-Grained Soils >50% larger than 0.0625 mm							

FINE-GRAINED SOILS

M L	C L	O L	M H	C H	O H	Pt
SILT	CLAY	Organic	SILT	CLAY	Organic	Highly Organic Soils
Soils with Liquid Limit <50%			Soils with Liquid Limit >50%			
Fine-Grained Soils >50% smaller than 0.0625 mm						



1. Size classification based on Puget Sound Estuary Program (PSEP) test method for "Conventional Sediment Variables"

2. Classification based on American Society of Testing and Materials (ASTM) D-2487.

MIDDLE WATERWAY PROBLEM WATERWAY
TACOMA, WASHINGTON

Tide Level	4.9
Water Depth	7.6
Mudline Elev.	-2.7

	Field	Lab
Date	5/12/98	5/13/98
Time	928	1200

CORE LOCATION	**MW024**
DRIVE LENGTH, ft.	10.5
RECOVERY, ft.	8.5
RECOVERY, %	81

LAB. GRAIN SIZE in percent				DESCRIPTION OF CORE TUBES BASED ON TUBE LENGTHS				SUMMARY LOG BASED ON INSITU DEPTHS
GRAVEL	SAND	SILT	CLAY	Tube No. and Depth	Sample No. and Depth	Visual Sample Description	DEPTH	
				R2A		Wet, black, organic SILT.	1	Organic SILT
						Wet, black, fine to medium SAND.	2	Fine to Medium SAND
2	44	46	9		R2A 1.5-4.0	Wet, gray, silty, fine SAND to fine sandy SILT.	3	
							4	
				R3A			5	Silty fine SAND and Fine sandy SILT.
0	55	40	4		R3A 4.0-8.0	Wet, gray, silty, fine SAND.	6	
							7	
							8	
							9	
							10	
							11	
							12	
							13	
							14	
							15	
							16	
							17	

NOTES
1. The stratigraphic contacts are generalizations based on visual observations and laboratory test data. Variations between generalizations shown and actual conditions should be expected.
2. Grain size based on PSEP Method .
3. Soil descriptions based on ASTM D-2488 Method.
4. See legend for interpretation notes.
5. Core tube logged is Replicate "A" at this station.

Sampled by: Marine Sampling Service Field Log by: Carol Hutley Logged by: Mark Otten, P.E.	FOSTER WHEELER and HARTMAN CONSULTING CORPORATION	**FIGURE A-1** Middle Waterway Phase 1A Sampling Stations CORE LOGS

MIDDLE WATERWAY PROBLEM WATERWAY
TACOMA, WASHINGTON

Tide Level	4.9
Water Depth	19.0
Mudline Elev.	-13.3

	Field	Lab
Date	5/11/98	5/12/98
Time	1508	1540

CORE LOCATION	MW025
DRIVE LENGTH, ft.	17.0
RECOVERY, ft.	14.2
RECOVERY, %	84

GRAIN SIZE in percent				DESCRIPTION OF CORE TUBES BASED ON TUBE LENGTHS				SUMMARY LOG BASED ON INSITU DEPTHS
GRAVEL	SAND	SILT	CLAY	Tube No. and Depth	Sample No. and Depth	Visual Sample Description	DEPTH	
				R2A			1	
							2	
6	45	39	10		R2A 0.4-5.0	Wet, black, organic, clayey, sandy SILT with 2 inch long wood debris.	3	Organic SILT with wood chips.
							4	
				R3A			5	
							6	
0	87	10	3		R3A 5.0-8.0	Wet, black, fine to medium SAND with silt.	7	
							8	
				R4A			9	
1	78	17	4		R4A 8.0-12.0	Wet, black, fine to medium SAND with silt.	10	Fine to medium SAND.
							11	
							12	
				R5A			13	
							14	
							15	
							16	
							17	

NOTES
1. The stratigraphic contacts are generalizations based visual observations and laboratory test data. Variations between generalizations shown and actual conditions should be expected.
2. Grain size based on PSEP Method
3. Soil descriptions based on ASTM D-2488 Method.
4. See legend for interpretation notes.
5. Core tube logged is Replicate "A" at this station.

Sampled by: Marine Sampling Service Field Log by: Carol Hutley Logged by: Mark Otten, P.E.	FOSTER WHEELER and HARTMAN CONSULTING CORPORATION	**FIGURE A-2** Middle Waterway Phase 1A Sampling Stations CORE LOGS

MIDDLE WATERWAY PROBLEM WATERWAY
TACOMA, WASHINGTON

Tide Level	1.8
Water Depth	26.7
Mudline Elev.	-24.9

	Field	Lab
Date	5/11/98	5/12/98
Time	1332	1400

CORE LOCATION	MW026
DRIVE LENGTH, ft.	17.0
RECOVERY, ft.	13.7
RECOVERY, %	81

GRAIN SIZE in percent

GRAVEL	SAND	SILT	CLAY
0	13	71	16
0	44	50	6
0	39	50	10

DESCRIPTION OF CORE TUBES BASED ON TUBE LENGTHS

Tube No. and Depth	Sample No. and Depth	Visual Sample Description	DEPTH
R2A	R2A 0.4-2.8	Wet, dark gray, silty CLAY with some fine wood debris.	1
			2
			3
		Wet, black, fine to medium SAND.	4
			5
R3A	R3A 5.0-8.0	Wet, dark gray, fine sandy SILT.	6
			7
			8
R4A	R4A 8.0-12.0	Wet, dark gray, fine sandy SILT.	9
			10
			11
			12
R5A			13
			14
			15
			16
			17

NOTES
1. The stratigraphic contacts are generalizations based visual observations and laboratory test data. Variations between generalizations shown and actual conditions should be expected.
2. Grain size based on PSEP Method
3. Soil descriptions based on ASTM D-2488 Method.
4. See legend for interpretation notes.
5. Core tube logged is Replicate "A" at this station.

SUMMARY LOG BASED ON INSITU DEPTHS

Silty CLAY with wood debris.

Fine to Medium SAND.

Fine sandy SILT.

Sampled by: Marine Sampling Service Field Log by: Carol Hutley Logged by: Mark Otten, P.E.	FOSTER WHEELER and HARTMAN CONSULTING CORPORATION	**FIGURE A-3** Middle Waterway Phase 1A Sampling Stations CORE LOGS

MIDDLE WATERWAY PROBLEM WATERWAY
TACOMA, WASHINGTON

Tide Level	0.0
Water Depth	21.0
Mudline Elev.	-21.0

	Field	Lab
Date	5/11/98	5/12/98
Time	1143	1100

CORE LOCATION	**MW027**
DRIVE LENGTH, ft.	16.0
RECOVERY, ft.	12.0
RECOVERY, %	75

GRAIN SIZE in percent

GRAVEL	SAND	SILT	CLAY
21	35	30	14
0	17	69	14
0	38	55	7

DESCRIPTION OF CORE TUBES BASED ON TUBE LENGTHS

Tube No. and Depth	Sample No. and Depth	Visual Sample Description	DEPTH
R2A		Wet, black, clayey, organic SILT.	1
	R2A 1.0-3.8	Wet, black, clayey SILT with fine wood chips.	2, 3, 4
R3A	R3A 3.8-7.0	Wet, gray, fine sandy, SILT.	5
		Wet, gray to black, clayey SILT.	6, 7
R4A	R4A .0-11.5	Wet, gray, fine sandy SILT. and layer of wet, gray SILT at 9.0 ft.	8, 9, 10, 11
		Wet, black, fine SAND.	12
			13, 14, 15, 16, 17

NOTES
1. The stratigraphic contacts are generalizations based visual observations and laboratory test data. Variations between generalizations shown and actual conditions should be expected.
2. Grain size based on PSEP Method
3. Soil descriptions based on ASTM D-2488 Method.
4. See legend for interpretation notes.
5. Core tube logged is Replicate "A" at this station.

SUMMARY LOG BASED ON INSITU DEPTHS

- Organic SILT.
- Clayey SILT with wood chips.
- Fine sandy SILT.
- Clayey SILT.
- Fine sandy SILT.

Sampled by: Marine Sampling Service Field Log by: Carol Hutley Logged by: Mark Otten, P.E.	FOSTER WHEELER and HARTMAN CONSULTING CORPORATION	**FIGURE A-4** Middle Waterway Phase 1A Sampling Stations CORE LOGS

MIDDLE WATERWAY PROBLEM WATERWAY
TACOMA, WASHINGTON

Tide Level	1.9
Water Depth	24.9
Mudline Elev.	-23.0

	Field	Lab
Date	5/8/98	5/11/98
Time	1135	1100

CORE LOCATION	MW028
DRIVE LENGTH, ft.	17.0
RECOVERY, ft.	14.3
RECOVERY, %	84

GRAIN SIZE in percent

GRAVEL	SAND	SILT	CLAY
1	78	19	3
1	88	9	2
0	30	59	11

DESCRIPTION OF CORE TUBES BASED ON TUBE LENGTHS

Tube No. and Depth	Sample No. and Depth	Visual Sample Description	DEPTH
R2A	R2A 0.3-2.5	Wet, black, silty, sandy GRAVEL.	1
		Wet, black, silty, fine SAND.	2
			3
R3A	R3A 2.5-6.0	Wet, black, fine to medium SAND with silt and red speckled material.	4
			5
			6
			7
R4A	R4A 6.0-10.0	Wet, black, fine sandy SILT.	8
			9
			10
			11
R5A	S5A	Wet, black, fine to medium SAND with silt and red speckled material.	12
			13
			14
			15
			16
			17

NOTES
1. *The stratigraphic contacts are generalizations based visual observations and laboratory test data Variations between generalizations shown and actual conditions should be expected.*
2. Grain size based on PSEP Method
3. Soil descriptions based on ASTM D-2488 Method.
4. See legend for interpretation notes.
5. Core tube logged is Replicate "A" at this station.

SUMMARY LOG BASED ON INSITU DEPTHS

- Sandy GRAVEL
- Silty, fine SAND.
- Fine to medium SAND with silt.
- Fine sandy SILT.
- Fine to medium SAND with silt.

Sampled by: Marine Sampling Service Field Log by: Carol Hutley Logged by: Mark Otten, P.E.	FOSTER WHEELER and HARTMAN CONSULTING CORPORATION	**FIGURE A-5** Middle Waterway Phase 1A Sampling Stations CORE LOGS

MIDDLE WATERWAY PROBLEM WATERWAY
TACOMA, WASHINGTON

Tide Level	0.9
Water Depth	23.9
Mudline Elev.	-23.0

	Field	Lab
Date	5/12/98	5/14/98
Time	1335	930

CORE LOCATION	MW029
DRIVE LENGTH, ft.	17.0
RECOVERY, ft.	14.5
RECOVERY, %	85

GRAIN SIZE in percent				DESCRIPTION OF CORE TUBES BASED ON TUBE LENGTHS				SUMMARY LOG BASED ON INSITU DEPTHS
GRAVEL	SAND	SILT	CLAY	Tube No. and Depth	Sample No. and Depth	Visual Sample Description	DEPTH	
				R2A		Wet, black, organic SILT.		Organic SILT.
							1	Clayey SILT.
						Wet, dark gray, clayey SILT.		
							2	
0	74	23	3		R2A 1.2-4.0	Wet, gray, silty, fine SAND.	3	
							4	
				R3A			5	
0	49	44	7		R3A 4.0-8.0	Wet, gray, fine sandy SILT.	6	
							7	
							8	Silty, fine SAND and Fine sandy SILT.
							9	
0	65	28	4	R4A	R4A .0-12.0	Wet, gray, silty, fine SAND. SILT with trace fine sand 9.5 to 10.5	10	
							11	
							12	
				R5A			13	
							14	
							15	
							16	
							17	

NOTES
1. The stratigraphic contacts are generalizations based visual observations and laboratory test data. Variations between generalizations shown and actual conditions should be expected
2. Grain size based on PSEP Method
3. Soil descriptions based on ASTM D-2488 Method
4. See legend for interpretation notes
5. Core tube logged is Replicate "A" at this station.

Sampled by: Marine Sampling Service Field Log by: Carol Hutley Logged by: Mark Otten, P.E.	FOSTER WHEELER and HARTMAN CONSULTING CORPORATION	**FIGURE A-6** Middle Waterway Phase 1A Sampling Stations CORE LOGS

MIDDLE WATERWAY PROBLEM WATERWAY
TACOMA, WASHINGTON

Tide Level	3.2
Water Depth	20.5
Mudline Elev.	-17.3

	Field	Lab
Date	5/11/98	5/12/98
Time	940	930

CORE LOCATION	MW030
DRIVE LENGTH, ft.	16.0
RECOVERY, ft.	10.8
RECOVERY, %	68

GRAIN SIZE in percent				DESCRIPTION OF CORE TUBES BASED ON TUBE LENGHTS				SUMMARY LOG BASED ON INSITU DEPTHS
GRAVEL	SAND	SILT	CLAY	Tube No. and Depth	Sample No. and Depth	Visual Sample Description	DEPTH	
				R2A		Wet, black, clayey SILT with chunks of wood at surface. Strong odor and oil sheen.	1	Clayey SILT with wood.
							2	
						VOID with 2 gallons water from 1.4 to 4.0 feet.	3	
4	16	60	21		R2A 0.5-5.5		4	Clayey SILT with sand.
				R3A		Wet, black, clayey SILT to silty CLAY with sand.	5	
						Wet, black to dark gray, fine sandy, clayey SILT.	6	
							7	
0	76	20	3		R3A 7.0-9.0	Wet, black, fine to medium SAND with silt and red speckled material.	8	
				R4A			9	Fine sandy, clayey SILT.
							10	
							11	Fine to medium SAND with silt.
							12	
				R5A			13	
							14	
							15	
							16	
							17	

NOTES
1. The stratigraphic contacts are generalizations based visual observations and laboratory test data Variations between generalizations shown and actual conditions should be expected.
2. Grain size based on PSEP Method
3. Soil descriptions based on ASTM D-2488 Method
4. See legend for interpretation notes.
5. Core tube logged is Replicate "A" at this station.

Sampled by: Marine Sampling Service Field Log by: Carol Hutley Logged by: Mark Otten, P.E.	FOSTER WHEELER and HARTMAN CONSULTING CORPORATION	**FIGURE A-7** Middle Waterway Phase 1A Sampling Stations CORE LOGS

MIDDLE WATERWAY PROBLEM WATERWAY
TACOMA, WASHINGTON

Tide Level	4.9
Water Depth	19.9
Mudline Elev.	-15.0

	Field	Lab
Date	5/8/98	5/11/98
Time	1304	1530

CORE LOCATION	MW031
DRIVE LENGTH, ft.	16.0
RECOVERY, ft.	10.0
RECOVERY, %	63

GRAIN SIZE in percent				DESCRIPTION OF CORE TUBES BASED ON TUBE LENGHTS				SUMMARY LOG BASED ON INSITU DEPTHS
GRAVEL	SAND	SILT	CLAY	Tube No. and Depth	Sample No. and Depth	Visual Sample Description	DEPTH	
				R2A		Wet, black, organic SILT. (very soft)	1	Organic SILT.
							2	
15	54	24	8		R2A 1.7-4.0	Wet, black, silty, fine SAND. with mussel shells and calcium carbonate "honey-comb" material 3.5 to 4.0 feet.	3	
							4	Silty, fine SAND with mussel shells.
2	46	41	11	R3A	R3A 4.0-5.6	Wet, gray, fine sandy SILT.	5	
							6	
							7	
1	86	12	2		R4A 5.6-10.0	Wet, black, fine to medium SAND with silt and red speckled material.	8	Fine sandy SILT.
							9	
				R4A			10	
							11	Fine to Medium SAND with silt.
							12	
							13	
							14	
							15	
							16	
							17	

NOTES
1. The stratigraphic contacts are generalizations based visual observations and laboratory test data. Variations between generalizations shown and actual *conditions should be expected.*
2. Grain size based on PSEP Method
3. Soil descriptions based on ASTM D-2488 Method.
4. See legend for interpretation notes.
5. Core tube logged is Replicate "A" at this station.

Sampled by: Marine Sampling Service Field Log by: Carol Hutley Logged by: Mark Otten, P.E.	FOSTER WHEELER and HARTMAN CONSULTING CORPORATION	**FIGURE A-8** Middle Waterway Phase 1A Sampling Stations CORE LOGS

MIDDLE WATERWAY PROBLEM WATERWAY
TACOMA, WASHINGTON

Tide Level	0.8
Water Depth	11.8
Mudline Elev.	-11.2

	Field	Lab
Date	5/12/98	5/14/98
Time	1110	1200

CORE LOCATION	MW034
DRIVE LENGTH, ft.	16.0
RECOVERY, ft.	15.5
RECOVERY, %	97

GRAIN SIZE in percent				DESCRIPTION OF CORE TUBES BASED ON TUBE LENGTHS				SUMMARY LOG BASED ON INSITU DEPTHS
GRAVEL	SAND	SILT	CLAY	Tube No. and Depth	Sample No. and Depth	Visual Sample Description	DEPTH	
3	53	37	7	R2A	R2A 0.3-1.8	Wet, black to dark gray, silty fine SAND.	1	Silty, fine SAND.
							2	
0	50	44	5		R3A 1.8-4.0	Wet, black, fine to medium SAND with silt and red speckled material.	3	Fine to medium SAND.
						Wet, gray, fine sandy SILT.	4	Fine, sandy SILT.
0	67	29	4	R3A	R4A 4.0-7.0	Wet, gray, silty fine SAND.	5	Silty, fine SAND.
							6	
							7	
						Less silty 7.0 to 8.0 feet.	8	
				R4A			9	
							10	
						Wet, gray, clayey SILT.	11	
							12	Clayey SILT.
				R5A		Wet, black, fine to medium SAND with red speckled material.	13	Fine to medium SAND.
							14	
						Wet, gray SILT with fine sand. Silty CLAY 14.0 to 14.5 feet.	15	SILT with fine sand.
							16	
							17	

NOTES
1. The stratigraphic contacts are generalizations based visual observations and laboratory test data. Variations between generalizations shown and actual conditions should be expected.
2. Grain size based on PSEP Method
3. Soil descriptions based on ASTM D-2488 Method.
4. See legend for interpretation notes.
5. Core tube logged is Replicate "A" at this station.

Sampled by: Marine Sampling Service Field Log by: Carol Hutley Logged by: Mark Otten, P.E.	FOSTER WHEELER and HARTMAN CONSULTING CORPORATION	FIGURE A-9 Middle Waterway Phase 1A Sampling Stations CORE LOGS

MIDDLE WATERWAY PROBLEM WATERWAY
TACOMA, WASHINGTON

Tide Level	4.5
Water Depth	19.8
Mudline Elev.	-15.3

	Field	Lab
Date	5/12/98	5/14/98
Time	1520	830

CORE LOCATION	MW035
DRIVE LENGTH, ft.	17.0
RECOVERY, ft.	16.0
RECOVERY, %	94

GRAIN SIZE in percent				DESCRIPTION OF CORE TUBES BASED ON TUBE LENGTHS				SUMMARY LOG BASED ON INSITU DEPTHS
GRAVEL	SAND	SILT	CLAY	Tube No. and Depth	Sample No. and Depth	Visual Sample Description	DEPTH	
						Wet, black, organic SILT.		Organic SILT.
					R2A		1	
2	67	25	6		0.5-1.5	Wet, black, silty, fine SAND		Silty, fine SAND & wood debris.
				R2A		with wood debris & trace shells	2	
							3	
							4	
0	34	58	8		R3A	Wet, gray, fine, sandy SILT.		Fine, sandy SILT.
					1.5-8.0		5	
				R3A			6	
							7	
							8	
							9	
0	47	48	5	R4A	R4A	Wet, gray, silty, fine SAND	10	
					8.0-12.0	to fine, sandy SILT.		
					S4A		11	
							12	Fine, sandy SILT
							13	
				R5A			14	
							15	
							16	
							17	

NOTES
1. The stratigraphic contacts are generalizations based visual observations and laboratory test data. Variations between generalizations shown and actual conditions should be expected.
2. Grain size based on PSEP Method
3. Soil descriptions based on ASTM D-2488 Method.
4. See legend for interpretation notes.
5. Core tube logged is Replicate "A" at this station.

Sampled by: Marine Sampling Service Field Log by: Carol Hutley Logged by: Mark Otten, P.E.	FOSTER WHEELER and HARTMAN CONSULTING CORPORATION	**FIGURE A-10** Middle Waterway Phase 1A Sampling Stations CORE LOGS

MIDDLE WATERWAY PROBLEM WATERWAY
TACOMA, WASHINGTON

Tide Level	10.5
Water Depth	11.8
Mudline Elev.	-1.3

	Field	Lab
Date	5/11/98	5/13/98
Time	1718	930

CORE LOCATION	MW037
DRIVE LENGTH, ft.	16.5
RECOVERY, ft.	13.8
RECOVERY, %	84

GRAIN SIZE in percent				DESCRIPTION OF CORE TUBES BASED ON TUBE LENGTHS				SUMMARY LOG BASED ON INSITU DEPTHS
GRAVEL	SAND	SILT	CLAY	Tube No. and Depth	Sample No. and Depth	Visual Sample Description	DEPTH	
				R2A		Wet, black, organic SILT with small shells.	1	Organic SILT.
							2	
3	87	8	2		R2A 1.0-4.7	Wet. black, fine to medium SAND with silt. Small wood debris 2.5 to 3.5 feet.	3	
							4	Fine to medium SAND.
				R3A			5	
0	69	26	5				6	
					R3A 4.7-10.5	Wet, gray, silty fine SAND with scattered white shells.	7	
							8	
				R4A			9	Silty, fine SAND.
0	66	29	5				10	
							11	
					R4A 10.5-12	Wet, black, silty, fine to medium SAND with red speckled material.	12	
							13	
							14	
							15	Silty SAND.
							16	
							17	

NOTES
1. The stratigraphic contacts are generalizations based *visual observations and laboratory test data.* Variations between generalizations shown and actual conditions should be expected.
2. Grain size based on PSEP Method
3. Soil descriptions based on ASTM D-2488 Method.
4. See legend for interpretation notes.
5. Core tube logged is Replicate "A" at this station.

Sampled by: Marine Sampling Service Field Log by: Carol Hutley Logged by: Mark Otten, P.E.	FOSTER WHEELER and HARTMAN CONSULTING CORPORATION	**FIGURE A-11** Middle Waterway Phase 1A Sampling Stations CORE LOGS

MIDDLE WATERWAY PROBLEM WATERWAY
TACOMA, WASHINGTON

Tide Level	9.8
Water Depth	3.1
Mudline Elev.	6.7

	Field	Lab
Date	5/8/98	5/11/98
Time	1615	1615

CORE LOCATION	MW040
DRIVE LENGTH, ft.	14.0
RECOVERY, ft.	11.0
RECOVERY, %	79

GRAIN SIZE in percent				DESCRIPTION OF CORE TUBES BASED ON TUBE LENGTHS				SUMMARY LOG BASED ON INSITU DEPTHS
GRAVEL	SAND	SILT	CLAY	Tube No. and Depth	Sample No. and Depth	Visual Sample Description	DEPTH	
				R2A		Wet, dark gray, silty, fine SAND. with wood bark.	1	Silty, fine SAND.
						White shells and brick at 0.3 ft.	2	
2	57	36	5		R2A 1.2-3.5	Wet, dark gray, silty, fine SAND with fine wood debris.	3	Silty, fine SAND with fine wood debris.
							4	
				R3A			5	
0	40	53	7		R3A 3.5-8.0	Wet, gray, fine, sandy SILT. with white shells.	6	
							7	Fine, sandy SILT with white shells.
							8	
1	88	9	2	R4A	R4A 8.0-9.5	Wet, black, fine to medium SAND with silt and red speckled material.	9	
							10	
							11	
				NOTES 1. The stratigraphic contacts are generalizations based visual observations and laboratory test data. Variations between generalizations shown and actual conditions should be expected.			12	Fine to medium SAND.
							13	
				2. Grain size based on PSEP Method			14	
				3. Soil descriptions based on ASTM D-2488 Method.				
				4. See legend for interpretation notes.			15	
				5. Core tube logged is Replicate "A" at this station.			16	
							17	

Sampled by: Marine Sampling Service Field Log by: Carol Hutley Logged by: Mark Otten, P.E.	FOSTER WHEELER and HARTMAN CONSULTING CORPORATION	FIGURE A-12 Middle Waterway Phase 1A Sampling Stations CORE LOGS

APPENDIX C

APPENDIX C

GEOTECHNICAL REPORT

Creative Engineering Options INC.

CEO

A firm practicing in the geosciences

PREPARED FOR

MARINE INDUSTRIES, INC.

GEOTECHNICAL ENGINEERING STUDY
PROPOSED REPLACEMENT WAREHOUSE
MARINE INDUSTRIES FACILITY
313 EAST "F" STREET
TACOMA, WASHINGTON

Glen Mann, P.E.
President

96-1703

September 5, 1996

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Creative Engineering Options INC.

CEO

A firm practicing in the geosciences

September 5, 1996 96-1703

Mr. Bob Morris
c/o Sitts & Hill Engineering
2901 South 40th Street
Tacoma, Washington 98409

Attention: Mr. Brent Leslie

Gentlemen:

We are pleased to submit herewith our report entitled "Geotechnical Engineering Study, Proposed Replacement Warehouse, Marine Industries Facility, 313 East "F" Street, Tacoma, Washington". The primary purposes of this study were to explore and characterize the subsurface soil and groundwater conditions beneath the proposed building area, and to develop geotechnical recommendations for site earthwork operations and foundation design. This report presents the results of the limited field exploration and our engineering analyses.

The opinions and recommendations contained in this report are based on the limited information made available to us at the time of writing, and developed from our data review, limited field exploration and laboratory testing programs and our engineering analyses. We proceeded with our services on the basis of Mr. Bob Morris' July 27, 1996 written authorization.

In our professional opinion, based on the results of this study, it is geotechnically feasible to construct the proposed warehouse building generally as planned. The proposed structure may be supported on conven-tional spread footings bearing on a new pad of compacted structural fill of at least two feet in thickness.

In general, providing the recommendations for site preparation and general earthwork are closely followed, both the re-densified in-place fill soils and any new compacted structural fills should be sufficiently competent to support a concrete slab-on-grade floor system. However, we do recommend that at least the surficial one foot of floor slab subgrade soil be overexcavated and then replaced, under control, as a compacted structural fill.

Given the general nature and the density of the in-situ soils encountered beneath this site, and the presence of a tidally affected shallow local water level, we believe the site is at moderate to high risk of liquefaction and associated settlement under the affects of a seismic event on the order of 6.5 on the Richter scale, or greater. The majority of the in-situ soils appear to be generally suitable for re-use as a structural fill provided they are free of debris and other deleterious material and are placed and compacted within about three points of the optimum moisture content. If they become wet, they may be difficult to work and compact.

We appreciate the opportunity to provide this service and look forward to working with you during the construction phase of this project. Should you have any questions regarding this report, please call.

Very truly yours,

CREATIVE ENGINEERING OPTIONS, INC.

Glen Mann, P.E.
President

gm/Marinel.Rpt/eb31

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL ENGINEERING REPORT

As the client of a consulting geotechnical engineer, you should know that site subsurface conditions cause more construction problems than any other factor. ASFE/The Association of Engineering Firms Practicing in the Geosciences offers the following suggestions and observations to help you manage your risks.

A GEOTECHNICAL ENGINEERING REPORT IS BASED ON A UNIQUE SET OF PROJECT-SPECIFIC FACTORS

Your geotechnical engineering report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. These factors typically include: the general nature of the structure involved, its size, and configuration; the location of the structure on the site; other improvements, such as access roads, parking lots, and underground utilities, and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask your geotechnical engineer to evaluate how factors that change subsequent to the date of the report may affect the report's recommendations.

Unless your geotechnical engineer indicates otherwise, do not use your geotechnical engineering report

- when the nature of the proposed structure is changed, for example, if an office building will be erected instead of a parking garage, or a refrigerated warehouse will be built instead of an unrefrigerated [illegible]
- when the size, elevation, or configuration of the proposed structure is altered,
- when the location or orientation of the proposed structure is modified,
- [illegible] change of ownership, or
- [illegible] to an adjacent site

[illegible] geotechnical engineers cannot accept responsibility for [illegible] if they are not consulted after [illegible] in their report's development have [illegible]

SUBSURFACE CONDITIONS CAN CHANGE

[illegible] engineering report is based on conditions [illegible] at the time of subsurface exploration [illegible] construction decisions on a geotechnical [illegible] adequacy may have been [illegible] with your geotechnical consultant [illegible] additional tests are advisable before [illegible] Note too that additional tests may [illegible] subsurface conditions are affected by [illegible] at or adjacent to the site or by [illegible] floods, earthquakes, or ground [illegible] Keep your geotechnical consultant [illegible] events.

MOST GEOTECHNICAL FINDINGS ARE PROFESSIONAL JUDGMENTS

Site exploration identifies actual subsurface conditions only at those points where samples are taken. The data were extrapolated by your geotechnical engineer who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your geotechnical engineer can work together to help minimize their impact. Retaining your geotechnical engineer to observe construction can be particularly beneficial in this respect.

A REPORT'S RECOMMENDATIONS CAN ONLY BE PRELIMINARY

The construction recommendations included in your geotechnical engineer's report are preliminary, because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Because actual subsurface conditions can be discerned only during earthwork, you should retain your geotechnical engineer to observe actual conditions and to finalize recommendations. Only the geotechnical engineer who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations are valid and whether or not the contractor is abiding by applicable recommendations. The geotechnical engineer who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

GEOTECHNICAL SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND PERSONS

Consulting geotechnical engineers prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a [illegible] contractor or even another civil engineer. Unless indicated otherwise, your geotechnical engineer prepared your report expressly for you and expressly for purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the geotechnical engineer. No party should apply this report for any purpose other than that originally contemplated without first conferring with the geotechnical engineer.

GEOENVIRONMENTAL CONCERNS ARE NOT AT ISSUE

Your geotechnical engineering report is not likely to relate any findings, conclusions, or recommendations

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APPENDIX A - Field Exploration Program

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96-1703

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Plate 3	Typical Utility Trench Fill
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Plate 5	Foundation Support Detail
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GEOTECHNICAL ENGINEERING STUDY
PROPOSED REPLACEMENT WAREHOUSE
MARINE INDUSTRIES FACILITY
313 EAST "F" STREET
TACOMA, WASHINGTON

96-1703

INTRODUCTION

General

As requested, this report summarizes the results of our geotechnical engineering study for the project. To the best of our understanding, the project incorporates the construction of either a new metal framed or a concrete tilt-up warehouse building with a concrete floor slab system. This structure, located in a slightly different position on the site than the original structure, is to replace an old warehouse building recently destroyed by fire. We proceeded with our services on the basis on Mr. Bob Morris's July 27, 1996 written authorization.

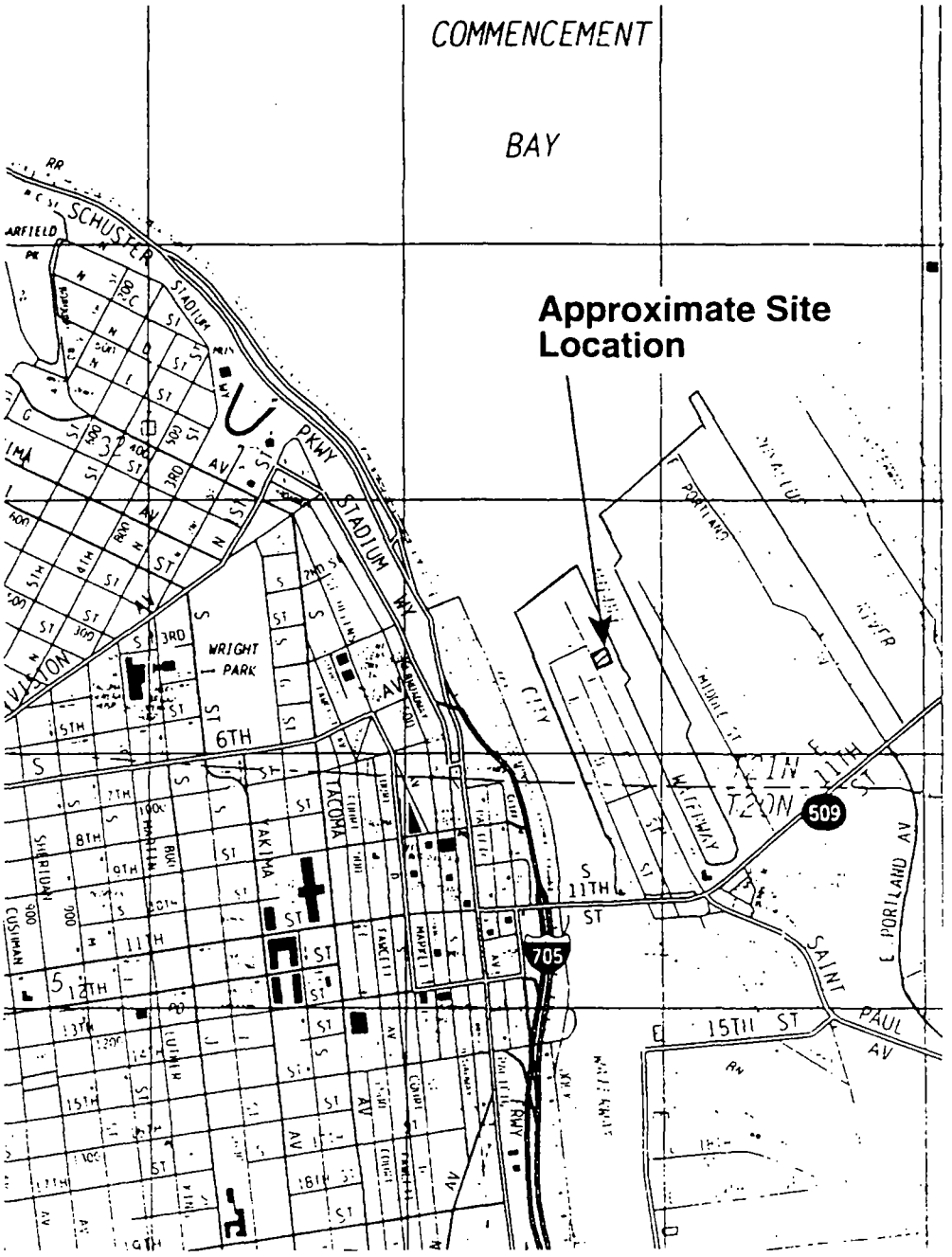
The primary purposes of our limited subsurface exploration program were to approximately determine the site's general soil and groundwater characteristics and their potential behavior under load, and to develop geotechnical recommendations for site development. The results of our study were used as a basis for formulation of geotechnical recommendations for design and construction of building foundations and floor slabs, site earthwork and grading operations, trench backfill, and site drainage control measures.

The site is located approximately as shown on the Vicinity Map, Plate 1. The general layout of the proposed project is presented on the attached Site Plan, Plate 2. This site plan also shows the approximate locations of our exploratory Dutch Cone Probes.

This report addresses the geotechnical aspects of site development only. It does not address any environmental or wetland and biological aspects of the site conditions, such as the potential presence of toxic or hazardous conditions or buried tanks, or of wetlands. If the environmental aspects of site development need to be addressed, it should be done under a separate contract.

Project Description

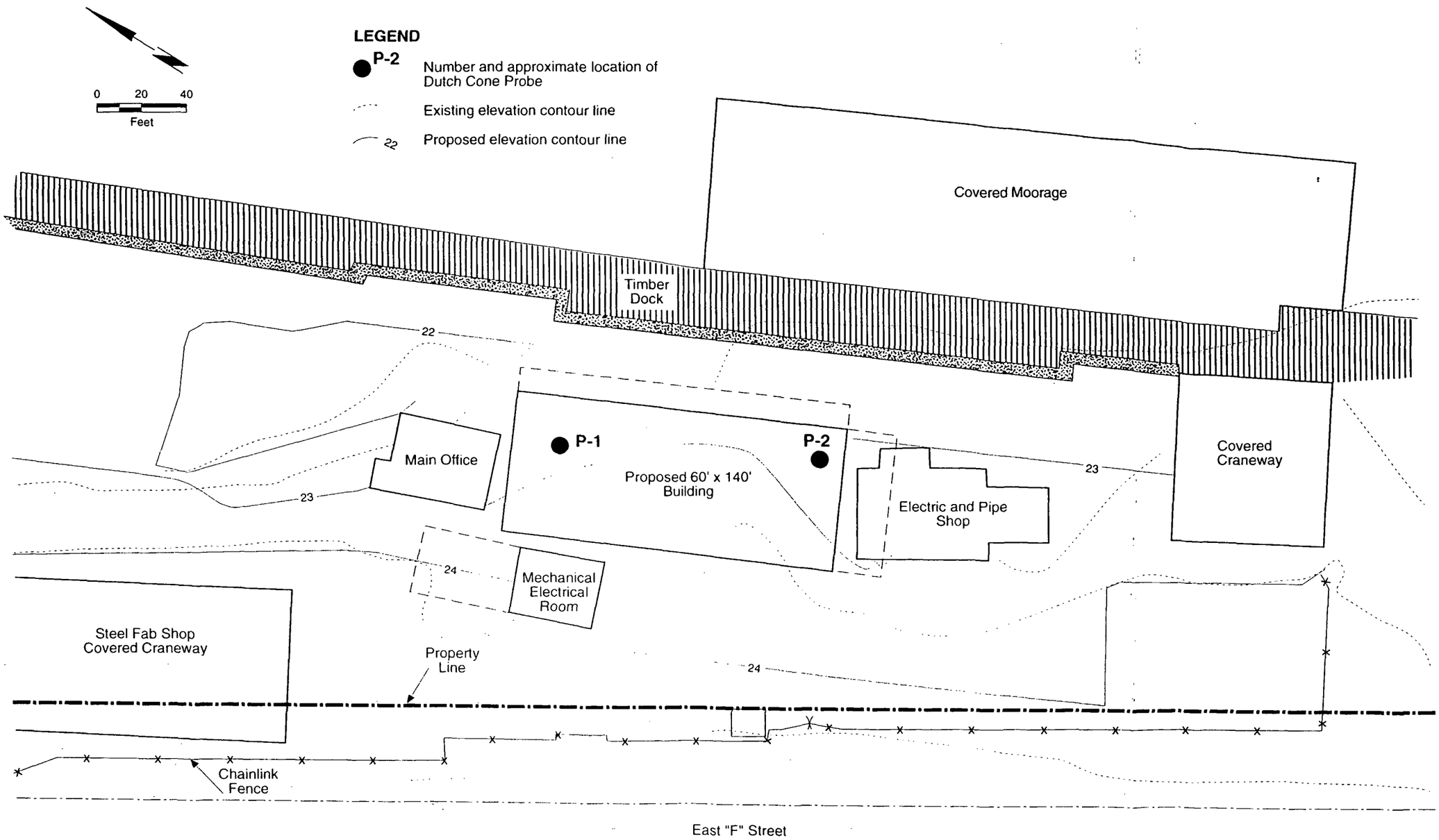
We understand from our discussions with Mr. Leslie of Sitts & Hill Engineering, the project civil engineer, that the current plan is to build a new warehouse structure of either prefabricated metal or concrete tilt-up construction. This new warehouse will have a



Reference: Thomas Brothers Map: Pierce County 1996 edition, map number grid .

Creative Engineering Options INC. CEO A Firm Practicing in the Geosciences	VICINITY MAP	Plate 1

96-1703 / 8 12 96



Reference: Remedial Action Plan Site Improvements, sheet C-3, Grading and Drainage Plan, by Sitts & Hill Engineers, Inc., project no 8263, dated 5/28/96.

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SITE PLAN

Plate
2

96-1703 / 8.12.96

concrete slab-on-grade floor system, and will be constructed essentially at the existing site grade. This new structure is located approximately over the pad of the original structure recently destroyed by fire.

Although no specific design data are currently available to us, based on our experience with similar construction we estimate that the maximum combined dead plus live loads are likely to be on the order of the following:

■ Vertical Column load	=	75 kips
■ Horizontal column load (prefabricated metal building)	=	15 kips
■ Wall load	=	1 to 2 kips per linear foot
■ Floor load	=	250 psf

Little excavation work, either as cut or fill, is expected on this project, other than to remove the remnants of the old buildings floor slab and to install any new below grade utilities.

Scope of Services

Our scope of services, also developed from our discussions with Mr. Leslie, and from our experience on similar projects, is designed to obtain as much subsurface information from the site as possible within the imposed access, time and budgetary constraints. More specifically, our scope includes the following:

- *Performance of a limited subsurface exploration in at least two* locations to help determine the most appropriate type of building foundation by means of two exploratory Dutch Cone Probes,

- Provision of geotechnical recommendations for site earthwork and grading, including overexcavation, fill placement and compaction, utility trench excavation and backfilling, temporary and permanent site excavation slopes, and suitability of on-site soils for re-use as compacted structural fill, if appropriate,

- Provision of geotechnical recommendations regarding the axial, lateral and uplift capacity of both timber and augercast pile foundations, or the allowable soil bearing pressure and resistance to lateral loads for conventional spread footing foundations, as appropriate,

- Provision of an estimate of the potential magnitudes of total and differential settlement, and the approximate rates at which they should be expected to occur, under the proposed new building loads,

- Evaluation of the site's potential for liquefaction under seismic conditions and of the seismic history, and provision of an appropriate design seismic acceleration and seismic zone value,

- Provision of geotechnical recommendations for design and installation of both short and long term site drainage and erosion control measures, and

- Provision of four copies of a written final report summarizing the above information.

This report has been prepared for specific application to this Marine Industries replacement Warehouse project only and is for the exclusive use of Marine Industries, Inc., and their other representatives, consultants and contractors. No other warranty, expressed or implied, is made. We recommend that this report, in its entirety, be made readily available for the contractor(s) information and estimating purposes. However, provision of this report should not relieve the contractor from making his own site study.

Our recommendations, based on our data review, site observations, and engineering analyses, are presented following the discussion of site conditions. A more detailed account of the limited field exploration program is included as Appendix A.

SITE CONDITIONS

Surface

The site is located approximately in the center of the Marine Industries Inc., property on the east side of East "F" Street, overlooking the Middle Waterway, in the Port of Tacoma, Washington (see Plate 1). It is essentially flat and level and is partially occupied by an existing concrete floor slab, the remnant of a recent fire destroyed building. The building footprint extends out beyond the original structures' floor pad area over gravel covered site access roadway and travelled areas as indicated on Plate 2, Site Plan.

The site exhibits about three feet of topographic change across the width of the site from west edge of the timber deck to the site entryway. The proposed building area is bounded to the north by an existing two-story, wood-frame office building and single-story metal storage and workshop structure. To the east is a timber deck structure which extends out at approximately existing site grade over the edge of the Middle Waterway. To the south is a single-story metal workshop and storage building, and to the west an extension of a single-story metal workshop and the sites' access driveway.

We did not observe any visible evidence of standing surficial water on the building area at the time of our field study.

Subsurface

The site was explored by hydraulically pushing a series of two exploratory Dutch Cone Probes which extended to a maximum depth of approximately forty-five and one half (45-½) feet below the existing ground surface at the exploratory locations. It should be clearly understood that this form of subsurface exploration does not provide any samples suitable for visual evaluation. The following descriptions, and those presented on the Dutch Cone Probe logs in Appendix A, are based on our interpretation of the frictional and cone resistance, the use of interpretive charts, and our experience in the general area. As such, the presented descriptions are considered to be a reasonable representation of the stratification and nature of the subsurface soil conditions.

The approximate probe locations are shown on the Site Plan, Plate 2. A description of the limited field exploration program, along with more detailed descriptions of the subsurface conditions encountered at each location explored, is presented in Appendix A and on the

Dutch Cone Probe logs contained in that Appendix. The following is a generalized description of the subsurface conditions interpreted from the Dutch Cone Probes.

Both of our exploratory Dutch Cone probes encountered generally similar subsurface conditions. At Probe 1 we pre-drilled to a depth of approximately three feet so that the cone could penetrate through the existing surficial fill layer. This layer consists predominantly of a silty fine to coarse sand, but contains a substantial amount of broken brick fragments and individual bricks. Beneath the surficial fill we penetrated interlayered loose to medium dense silty sands and soft to medium stiff sandy silts which extended to a depth of approximately twenty-two (22) feet. According to the Unified Soil Classification System (USCS) these soils are classified as an SM or an ML, respectively.

Beneath these interlayered soils, and extending to the depth explored, we penetrated an intermixed, medium dense, silty sand and clean sand. We classified these soils in general accordance with the USCS as an SM and an SP, respectively.

At Probe 2, on the southern end of the building pad area, we pre-drilled through about two feet of the brick laden surficial fill layer. Beneath the fill we penetrated interlayered loose to medium dense sand and silty sand and soft to medium stiff sandy silts to a depth of approximately twenty-nine (29) feet. These soils were classified by the USCS as either an SP, an SM or an ML. Underlying these interlayered soils we penetrated an approximately thirteen (13) foot thick layer of soft to medium stiff clayey silt, which we classified by the USCS as an ML. Beneath this, and extending to the depth explored, we found a very stiff silt. This latter material was also classified as an ML by the USCS.

Based on our interpretations of the encountered subsurface conditions, and our visual evaluation of the surficial fill materials, it is our professional opinion that virtually all of the soils found beneath this site, extending to the depths explored, may be considered "adequate" to provide support for typical static and operational live loads. The in-place density appears to increase with depth, particularly below a depth of about twenty-two (22) to twenty-five (25) feet. After controlled redensification of the surficial fill materials, these soils should typically be capable of supporting the anticipated building load without undergoing any significant settlement activity.

Although containing varying amounts of fines (silt sized particles) and pieces of broken brick, the majority of the shallow in-place fill soils are considered to be granular and suitable for re-use as a compacted structural fill beneath the proposed structure. However, it will be necessary to keep them within about three points of the optimum moisture content, and to make sure that no large pieces of brick remain that might cause the generation of a "hard spot" beneath the building. If localized settlement does occur over

time, such "hard spots" can cause portions of the floor slab or foundation to "drape" over them thereby resulting in generation of unanticipated stresses in the structure.

The relatively clean in-place soils are also considered to be relatively free-draining in nature. However, given the tidal rise and fall in the adjacent Middle Waterway, they are unlikely to be capable of absorbing any significant amounts of surface water inflow.

Groundwater

No visual evidence of an established groundwater level was observed on the Dutch Cone Probe rods at the time of our field study. However, as mentioned above, the site fronts onto the Middle Waterway in the Port of Tacoma. There is a significant tidal rise and fall which directly impacts the soils beneath this site. As a result of this tidal activity the soils are repeatedly wetted and partially drained. We estimate that at high tide the local water level is at a depth of approximately four to five feet below the existing site grade.

It has also been our experience that groundwater and seepage levels should not be considered static. Typically, fluctuations in the levels and rate of flow can, and often do, occur on a seasonal basis, after periods of heavy or sustained precipitation, or from surface flow from elsewhere on the property or its surroundings in addition to the potential tidal impacts. Any potential earthwork contractor should be aware of this and should take appropriate measures in his bid by including a contingency in his budget and schedule to accommodate the potential problem.

DISCUSSION AND RECOMMENDATIONS

General

Based on the results of our study, it is our professional opinion that it is geotechnically feasible to construct the proposed replacement warehouse building generally as planned. The building may be supported on conventional spread footings bearing on at least two feet of newly placed compacted structural fill (described later in this report).

It is also possible to support the structure on either driven-in-place timber piles or drilled-in-place concrete augercast piles. However, given the proposed building usage, the overall structural integrity of the other on-site structures which are spread footing supported, and the potential cost and site disturbance likely with the installation of a piled foundation, we do not believe either pile option is appropriate for this project. We have, therefore, not given either pile option further consideration in this report.

The in-place surficial fill soils, or a new pad of compacted structural fill material, should also be capable of supporting a conventional concrete floor slab and floor load without undergoing any significant deformation. However, it will be necessary to perform some controlled redensification of the in-place fills (after removal of the existing floor slab) to help create a somewhat more competent fill "bridge" on which to build the new floor slab.

From our evaluation of the general competency of the in-place site soils it is our professional opinion that these materials are unlikely to be subject to any significant degree of building load related settlement during the reasonable lifetime of the structure. In order to further help in prevention of load related settlement it will also be necessary to perform the above-mentioned redensification of the surficial fill layer.

From our evaluation of the site conditions, and given the presence of a periodically shallow local water level that can surge and saturate the in-place soils, it is our opinion that the site may be subject to a moderate to high degree of liquefaction risk. The vast majority of the soils in the Port of Tacoma area are considered to be Category I soils in terms of liquefaction risk. This category is considered to exhibit a "high" liquefaction susceptibility.

The shallow in-place fill and native soils are also suitable for re-use as a compacted structural fill elsewhere on the property, if desired. We recommend, however, that they be kept within about three points of optimum moisture content to help avoid pumping under compaction or construction traffic activity. It will also be necessary to remove, or break up, any large "chunks" of brick contained within the surficial fills before re-using them. Given the essentially flat and level nature of the site, however, suggests that there is unlikely to

be any surplus material available for use as a structural fill. Thus, if any fill is required it will almost certainly need to be imported from elsewhere.

These and other geotechnical aspects of the project are discussed in more detail in the following sections of this report.

Site Preparation and General Earthwork

General: Based on our discussions with Mr. Leslie of Sitts & Hill Engineering, the project engineer, and our review of the preliminary project plans, we believe that the proposed construction is geotechnically feasible provided that our recommendations are carefully followed. Based on the current plans it appears that there is unlikely to be any significant degree of either cut or fill on this project. After removal of the existing concrete slab it is possible that a small amount of site levelling may be required to create a level building pad on which to construct the new floor, but this is likely to be kept to within about one foot to eighteen (18) inches in thickness. The following paragraphs outline the earthwork measures likely to be involved in site development.

Demolition: The first step in development of the building pad for the proposed replacement warehouse is to break up and remove the remnant floor slab from the old fire destroyed building. We estimate that this slab is about four inches thick, but it may well be thicker in some places since it was apparently constructed with little control. The slab thickness may also be affected by the nature of the fill subgrade over which it was originally placed. All of the structural elements from the original building should be removed from the site and disposed in accordance with the applicable local, State and Federal regulations.

Stripping and Clearing: Once the remnant structure has been demolished and removed the proposed building pad should be stripped and cleared of all remaining debris, and any other deleterious material that might detrimentally impact site excavation or foundation support. We estimate that an average stripping depth of about four inches may be required. Stripped materials are considered to be generally unsuitable for re-use in structural support. They should be removed from the site and disposed in accordance with the applicable local, State and Federal regulations.

The owner should also be aware that, since there are large areas of the proposed building pad that were not subject to direct in-place exploration, it is possible that greater thicknesses of unsuitable material may exist in some locations beneath the proposed construction area. Because of this, we recommend that the owner provide a contingency in the budget and schedule to accommodate this risk.

Overexcavation: *In order to provide a sound and competent foundation subgrade we* recommend that approximately two feet of material be overexcavated from beneath the building foundation invert elevation for the full alignment. The overexcavation should extend for a lateral distance equal to, or greater than, the fill thickness beyond the foundation perimeters. Thus, for an eighteen (18) inch wide footing unit the overexcavation width should be about five and one half feet. It is also possible that there may need to be some additional overexcavation to install new below grade utility lines.

We also recommend that the upper one foot of existing subgrade soil also be overexcavated to allow for careful redensification of the exposed subgrade. The overexcavated materials can, in both cases, be re-used as a compacted structural fill (described later in this text).

In any excavation in excess of four feet in depth that is not shored the excavation side slopes must be laid back at an appropriate gradient in conformance with the current local and OSHA safety standards (discussed later in this report). This should be expected to increase the amount of material that must be excavated, stockpiled and either re-placed or re-used as backfill.

All overexcavated material not removed from the site and disposed should be stockpiled. Stockpiled material should, where possible, be protected against the elements. This can be accomplished by covering the stockpile(s) with a pegged or sandbagged in-place visqueen sheeting. We recommend all stockpiles be set back at least fifteen (15) feet from the crest of any slope or excavation. Only the re-usable soils should be stockpiled. Any unsuitable soils should be removed from the site and disposed in accordance with the appropriate local, State and Federal regulations. As a precautionary measures we recommend the installation of either a shallow swale or a low earthen berm around the toe of the stockpile(s) to help prevent surface flow from the stockpile surface from reaching the excavated building areas of the site, or from transporting soil fines onto other undisturbed areas of the property.

Proofrolling and Redensification: The existing ground surface exposed by overexcavation and where structural fill, foundations or floor slabs are to be placed, should be proofrolled and redensified under our representative's observation. Depending on the time of construction, the proofrolling and redensification can be accomplished with a vibratory steel wheel roller if the soil is dry. If moist, we recommend the use of only the roller's dead weight. In wet weather, proofrolling and redensification should be discontinued to avoid the risk of pumping moisture up into the fill soil and, thereby, creating an unacceptable condition that might require re-excavation and re-placement of the partially compacted fill soil.

The purpose of the proofrolling is to determine the presence and define the approximate areal extent of any soft or unstable areas. Soil in any soft or unstable areas should be moisture conditioned, as appropriate, and re-compacted. If after re-compaction these areas remain soft or unstable, they should be overexcavated and the unsuitable materials removed and replaced with compacted structural fill, or a crushed rock, to a depth that provides a stable base. Typically, a depth of two to three feet is adequate for this purpose.

Because of the relatively loose soil conditions beneath this site we recommend that the proofrolling operation be extended to a more comprehensive redensification program. This means that more compactive effort will be required. We recommend that the roller make no less than four passes to redensify the shallow in-place soils. One pass is considered to be one passage of the compaction equipment in each direction, forwards and backwards, over the same strip of subgrade. We estimate that with a suitably sized vibratory steel wheel roller it should be possible to redensify and compact approximately the upper three to four feet of subgrade soil. This should help create a partial "bridge" over the building pad area that will tend to better distribute the building loads.

Structural Fill: Structural fill is defined as any fill placed under buildings, roadways, slabs, or any other load-bearing areas. Ideally, but particularly for wet weather construction, structural fills should consist of a free-draining granular material with a maximum size of three inches. The material should have 75% passing the number 4 mesh sieve and no more than 5 percent fines (silt and clay sized material passing the No. 200 mesh sieve). During dry weather any organic-free, **compactible** material meeting the above maximum size criterion is acceptable for this purpose.

From our field observations, it is our professional opinion that the in-situ shallow fill soils are in a generally suitable condition for re-use as a structural fill after they have been overexcavated and the larger debris removed. However, it is important that they be kept within about three points of the materials' optimum moisture content so that the desired degree of compaction can be achieved. As indicated, since this existing surficial fill contains substantial amounts of broken brick debris it is **crucial** that the compaction effort be closely monitored. This will allow us to verify that the brick materials are thoroughly broken and the brick debris and soil matrix are well integrated and densified.

As indicated earlier, the site is essentially flat and level. Since the new structure is to be constructed approximately at the existing grade, with the exception of the overexcavated materials along the foundation alignment, there does not appear to be much likelihood that there will be any surplus material available for re-use as a structural fill. It appears likely, therefore, that if fill materials are required they will need to be imported from elsewhere.

Fill Placement and Compaction: Structural fill under floor slabs and footings, in utility trenches, or in driveway or parking area subgrades on this site should be placed in thin horizontal lifts not exceeding six inches in loose thickness for heavy compactors and four inches for hand held compaction equipment. Each lift should be compacted to a minimum of 95 percent of the maximum dry density, as determined by ASTM Test Method D-1557-91 (Modified Proctor), or to the applicable minimum City or County standard, whichever is the more conservative.

In roadway areas, we recommend that the upper twelve (12) inches of native subgrade soil be thoroughly re-densified and the upper twelve (12) inches of any subgrade fill be compacted to at least 95 percent of the maximum dry density, as determined by ASTM D-1557-91.

To facilitate the earthwork and compaction process, the earthwork contractor should place and compact fill materials at or near (typically within about three points) the optimum moisture content. If fill materials are on the wet side of optimum, they can be dried by periodic windrowing and aeration or by intermixing lime or cement powder to absorb excess moisture. It will also be necessary to break up any large "chunks" of brickwork or other debris before redensifying this surficial fill layer.

It is also **important** that no large or heavy compaction equipment be used within about five feet of either a retaining or basement wall, or any manhole or catch basin structure. If large equipment is used in these areas it is likely that excessive lateral pressures could be applied to the structure by the equipment and this could lead to damage to, if not failure of, the structures. We recommend that a small walk-behind roller be used in these areas, and that the fill be placed in loose lifts of no more than four inches in thickness.

Utility Trench Fill: We recommend that all existing utilities be located and identified before any work is performed in an effort to avoid potential risk of damage during construction. It is our current understanding that there may be several existing live utilities within the proposed building area of the site. If utility pipes are encountered during construction, they should be plugged or removed so that they do not provide a conduit for water and cause soil saturation and stability problems. We recommend that the owner attempt to bring any new utility line into the building pad area by the shortest possible route available. Phone and power may be available be means of either overhead pole supply or by underground line. However, the majority of the utilities, such as water, gas, sewer and storm drainage will most likely be underground.

Although cables are significantly less susceptible to settlement activity or distortion in installation, pipes are normally more sensitive. Pipes can change shape because of inadequate support or excessive overhead loading. To avoid this possibility, we

recommend that the contractor(s) make sure that each utility line is set on a suitable bedding material in accordance with the manufacturers' recommendations. Once set in-place, it is critical that adequate fill support is provided beneath the pipe haunches to help prevent pipe distortion under load, and that the fill cover within about one foot of the crown of the pipe be adequately compacted with hand operated compaction equipment.

In our experience utility trench fill has been the source of the majority of post construction fill settlement problems, particularly in pavement areas. Many utility contractors do not expend any effort in placing trench backfill in thin layers, as described above, or in compacting each layer of backfill to the recommended degree. As a result, over a relatively short period the trench backfill has a tendency to settle thereby leaving a hollow or depression along its alignment.

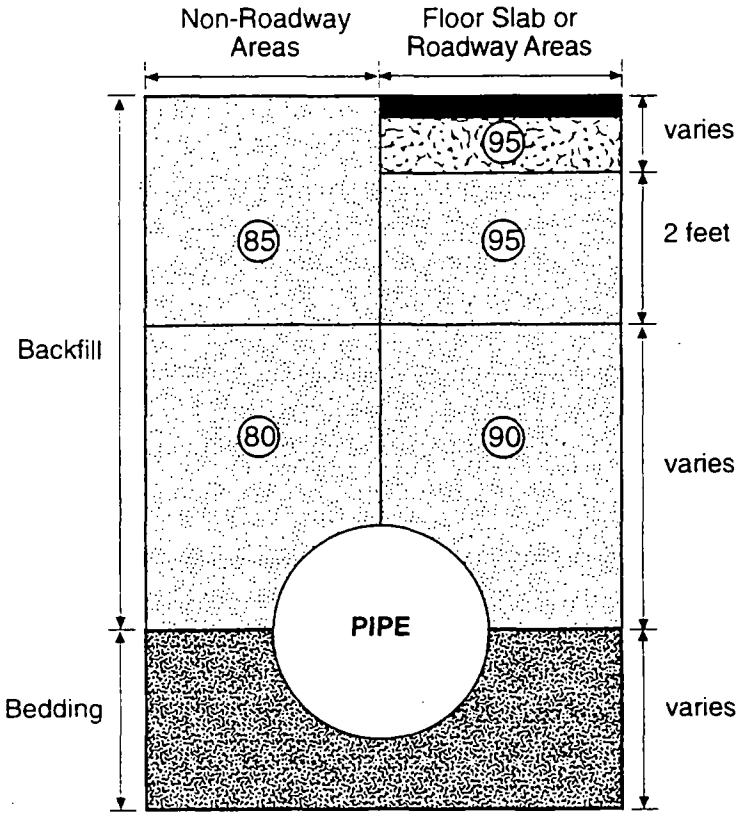
We strongly recommend that all utility trench backfill be placed and compacted in the same manner as described for structural fill above. A typical depiction of the appropriate degree of fill compaction is presented on Plate 3, attached. We also recommend that the project specifications include specific mention of the need to compact the utility trench fill to the degree specified in the Fill Placement and Compaction section of this text. We also strongly recommend that the project specifications include the following specifics:

- All utility trench fill **must** be compacted to the degree specified in the Fill Placement and Compaction section of this text, and as indicated on the project plans and specifications.

- All utility trench backfill **must** be monitored and regularly tested with a nuclear density testing gauge to verify that the appropriate degree of in-situ compaction has been achieved in the field.

- All of the in-place density test data should be provided to the geotechnical engineer of record for the project for his review as quickly after its performance as is possible.

We also recommend that **the owner insist on the performance of in-situ density testing of all trench backfills**. As indicated above, this will allow for verification of the degree of in-place fill compaction achieved in the field, and should point out areas where problems might exist. Based on recent experience, we also recommend that, if not



LEGEND

Asphalt/Concrete Pavement/Concrete Floor Slab

Base Material/Slab Base Rock

Backfill: compacted on-site soil or imported select fill material

Bedding material: material type depends on type of pipe and laying conditions. Bedding should conform to the manufacturers recommendations for the type of pipe selected.

(90) Minimum percentage of maximum laboratory dry density as determined by ASTM Test Method D 1557-78 (Modified Proctor).

Creative Engineering Options INC CEO	TYPICAL UTILITY TRENCH DETAIL	Plate 3

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specifically directed by the owner, all prudent utility trench contractors take it upon themselves to make sure that some form of backfill compaction verification is performed during the project. Failure to do so can result in problems with trench backfill settlement and, often, this leads to litigation.

The owner might also consider including a section in the project specifications that requires the utility contractor to make good all trench backfill settlement at his cost. This should prove to be somewhat of an incentive to achieve a reasonable degree of trench backfill compaction.

When performing in-situ trench backfill density tests it is critical that the nuclear testing gauge be calibrated in the trench. If the testing technician fails to calibrate the gauge in the trench the density readings obtained are likely to be worthless.

Fill Source Evaluation: In the event that fill materials are to be imported to the site, and if on-site soils are to be re-used as a fill, it will be necessary to evaluate the potential fill source before any material is removed and used. We recommend that the geotechnical engineer be required to visit each and every potential fill source to obtain randomly selected representative samples of the potential source materials.

These samples will then be submitted for laboratory testing to determine the material's maximum dry density and optimum moisture content. The source materials should be tested in general accordance with ASTM Test Method D-1557-91 (Modified Proctor). The Maximum density and the optimum moisture content are then used in the field as a gauge to determine the approximate degree of fill compaction being achieved by the earthwork contractor. Depending on the general composition of the source materials, a gradational analysis may be appropriate to determine both the gravel and fines content.

Wet Weather Construction: As indicated earlier, some of the in-place soils are considered to be "moisture sensitive" in nature. This means that they may be difficult to work or compact when wet, and that they should be expected to deteriorate rapidly under construction activity, even pedestrian traffic.

To help reduce the potential negative impacts wet weather might have on these soils we recommend that earthwork be performed in relatively small areas to minimize the exposure of the soils to wet weather. All excavation and/or removal of materials should be rapidly followed by the placement and compaction of new non-sensitive backfill materials. It might also prove helpful if the size and type of construction equipment be limited to help prevent soil disturbance. Depending on the conditions at the time of construction it might also prove helpful to use a large trackhoe for earthwork operations to minimize the amount of equipment traffic across the site.

Excavations and Slopes

As indicated earlier, site development does not appear likely to involve excavations of any significant depth, with the possible exception of utility trench installation. Although the potential extent of the excavation work appears to be somewhat constrained, both the owner and the earthwork contractor should be aware that in no case should slope heights or excavation depths, including utility trenches, exceed those specified in local, state and federal government safety regulations, particularly the new OSHA Health and Safety Standards for excavations, 29 CFR Part 1926, dated October 31, 1989.

We understand that these regulations are being strictly enforced and, if they are not closely followed, both the owner and the earthwork contractor could be liable for substantial fines. We also recommend that the owner's and contractor's attention be directed to the following local and state regulations. WSDOT Section 2-09.3(3)B, and Washington Industrial Safety and Health Act, Chapter 49.17 RCW.

Based on the observed soil conditions over the proposed building area of the site we believe that the soils beneath the thin surficial soil layer within the potential depth of construction excavation should be classified as Type C soils in accordance with current OSHA regulations. Thus, excavations extending down to depths of greater than four feet into these soils should be sloped back at a gradient of 1.5H:1V, or flatter.

We also strongly recommend that, if utility trench excavations are to extend to a greater depth than four feet, the utility contractor employ a steel trench box to help preserve the integrity of the excavation. Failure to use a trench box could result in trench sloughing or collapse and development of a significant threat to his workers health and safety.

The earthwork contractor should request that all excavations be observed by our representative to verify that conditions are as anticipated. If warranted, supplementary recommendations can then be developed to enhance stability. Such recommendations should include, but not necessarily be limited to, flattening of slopes or installation of surface or subsurface drains.

It is also critical that all exposed cut, fill or trench slope faces be protected against erosion. This can typically be managed by covering the exposed face with a sandbagged or pegged-in-place impermeable plastic sheeting. In addition, we recommend that a shallow swale or ditch be dug along the toe of any excavated slope to collect the surface water runoff. The collected water should be directed to a positive and permanent discharge, such as a nearby storm drain.

Foundations

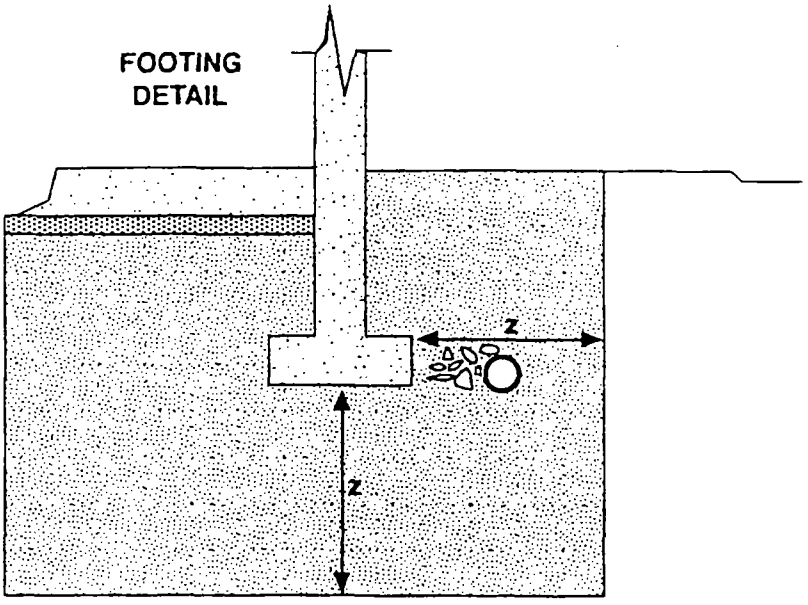
General: As indicated earlier, it is our professional opinion that the proposed structure can be supported on conventional spread footings. These footings should bear directly on a new compacted structural fill pad. The new structural fill pad should be at least two feet thick. The pad should also extend horizontally for a distance beyond each foundation perimeter equal to, or greater than, the thickness of the fill beneath the footing. This tends to help in resisting the potential for lateral shear failure in the near surface soils under load. This fill option is pictorially depicted on Plate 4, attached.

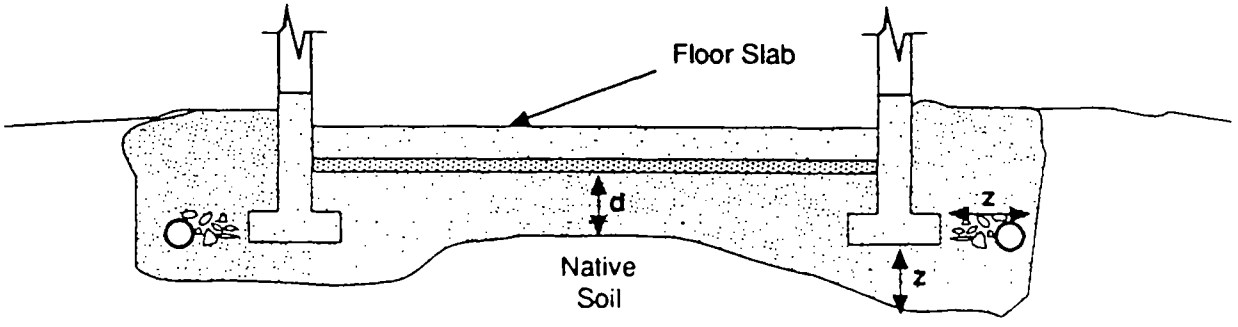
Conventional Foundation Design Parameters: We recommend the following geotechnical parameters be used in design and construction of conventional spread footings for the new building:

■ Allowable soil bearing pressure for footing supported on at least two feet of compacted structural fill at a depth of 1.5 feet below grade	=	2,000 psf
■ Minimum burial depth of perimeter footings below lowest final design exterior grade	=	24 inches
■ Minimum depth of interior footings below top of floor slab	=	24 inches
■ Minimum width of perimeter footings	=	18 inches
■ Minimum lateral dimension of column footings	=	5 feet

A one-third increase in the above allowable soil bearing pressure may be used when considering short term transitory wind and seismic loads.

Schematic Only - Not to Scale





LEGEND

Compacted structural fill

Free-draining capillary break with minimum thickness of 6 inches

Perforated or slotted, rigid plastic drain line laid with sufficient gradient to initiate gravity flow, with minimum diameter or 4 inches, bedded on and surrounded with free-draining granular drainage material per report text

NOTES

- Minimum thickness of compacted structural fill , z. ≈ 24 inches
- Minimum lateral width of compacted structural fill beyond footing perimeters. ≈ 24 inches
- Minimum thickness of compacted structural fill beneath floor slab ≈ 1 foot
- Excavated native subgrade to be thoroughly proofrolled and re-densified in accordance with recommendations in attached text before any structural fill is placed
- All structural fill to be compacted to at least 95 percent of the maximum ASTM Test Method D-1557-78 (Modified Proctor) dry density.

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Should portions of any column foundations be located in a cut to fill transition area, the foundation should either be extended down to bear on the underlying competent native soil or supported on a structural fill that should be at least two feet thick. This form of foundation support is pictorially depicted on Plate 5, attached.

Settlement: On the basis of the observed site soil conditions and our engineering analyses, and working on the assumption that the foundations will bear on re-densified in-situ fill soils, or on a compacted structural fill, it is our opinion that the maximum settlement potential under the proposed combined building dead and live loads is likely to be within the building's tolerable limits. We estimate that the maximum potential settlement is likely to be of the following order:

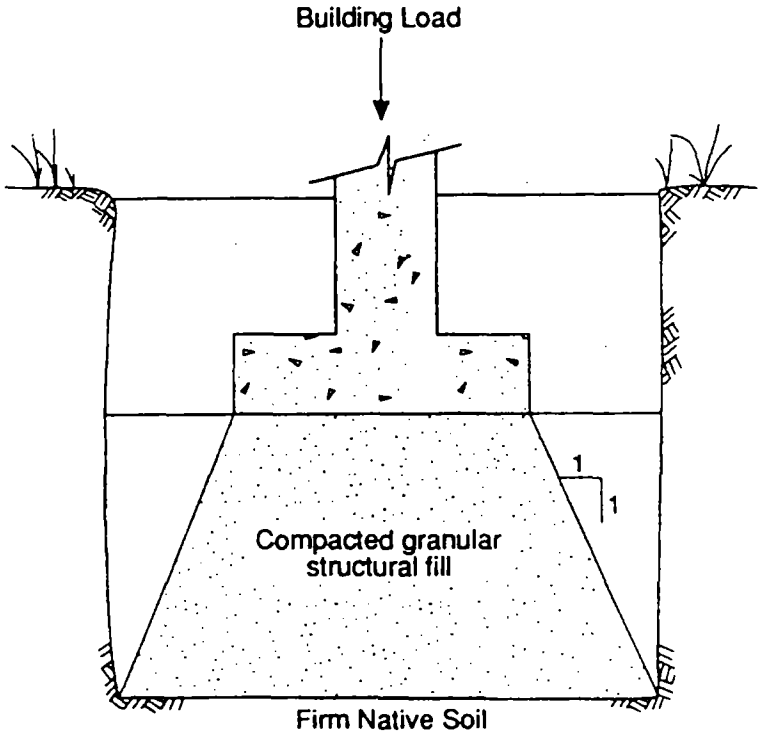
■ Total estimated post-construction settlement	=	1 inch, or less
■ Maximum estimated differential settlement across half the length of the building	=	1/2 inch, or less
■ Maximum estimated settlement at center of building floor under uniform 250 psf load	=	1-1/2 inches

The owner should understand that the majority of these magnitudes of total and differential settlement should be expected to occur as the dead loads are applied during the construction of the building. The remainder should be expected to occur after construction is completed.

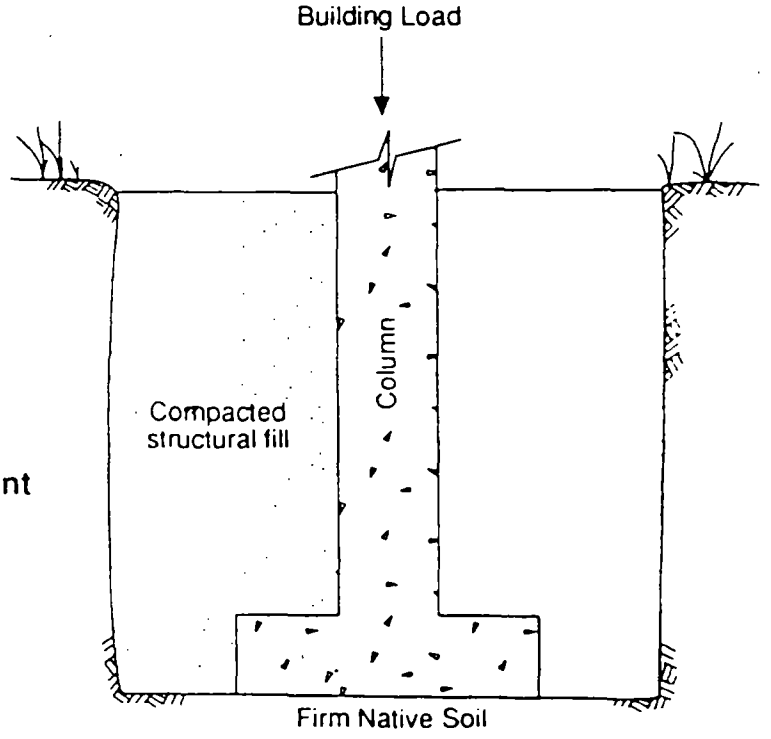
Lateral Load Resistance: Lateral loads can be resisted by a combination of passive pressures acting on the buried portions of the building and foundations, or friction between the concrete elements of the foundation and floor slab and the underlying subgrade. For the former, the concrete must be placed neat against competent native soil or compacted structural fill. We recommend the following parameters be used in design.

■ Passive pressure equivalent fluid weight provided by re-densified in-place soil	=	310 pcf

Schematic Only - Not to Scale



Option 1 -
Excavation and backfill



Option 2 -
Transfer load to competent native soil

Creative Engineering Options INC
CEO

FOUNDATION SUPPORT DETAIL

Plate
5

9E 1703/ 8 12 96

■	Coefficient of friction	=	0.34
■	Passive pressure equivalent fluid weight provided by newly placed and compacted structural fill soil	=	340 pcf
■	Coefficient of friction applicable to compacted structural fill	=	0.38

We also recommend the upper one foot of passive pressure be neglected in design unless the soil is overlain with either a floor slab or paving.

Slab-on-Grade Floor

A concrete slab-on-grade floor supported on at least one foot of re-densified in-place fill soil, or on a new compacted structural fill pad, is appropriate for this structure. We recommend that at least the surficial one foot of in-place material be overexcavated and the exposed subgrade redensified as described earlier in this report. Once the subgrade has been adequately redensified, the overexcavated material may be replaced in loose lifts of no more than six inches in thickness and compacted as described earlier. Any disturbed soils should be carefully re-compacted before constructing the slab. We recommend that the following parameter be used in floor slab design:

■	Modulus of vertical subgrade reaction for floor slab design	=	122 pci

Because of the potential for underslab seepage, we recommend a capillary break be included beneath the slab to provide space for vapor transmission. This capillary break should consist of at least four inches of clean, free-draining granular material, such as coarse sand or pea gravel.

In areas where moisture vapor transmission through the slab is undesirable, we recommend an impermeable vapor barrier be installed over the capillary break beneath the slab. A 6 mil plastic membrane is typically adequate for this purpose. This membrane will help prevent moisture vapor transmission up through the slab and the associated

moisture-related damage to interior furnishings and salt generation in the surface of concrete slabs.

It is very important that all building utilities are installed **before** the capillary break and visqueen barrier are installed to avoid damaging them. Damage to either element could result in a non-functioning system and that could lead to creation of the problems this system is designed to avoid.

As an additional protective measure, the owner should also consider placing two to four inches of damp sand over the membrane. This will help protect the membrane during construction and will help in curing of the concrete slab. It will also help to prevent cement paste bleeding down into the underlying capillary break through joints or tears in the visqueen barrier.

Seismic Risk

While we did not perform a detailed seismic risk analysis for this project, it is clear that earthquake ground motion response is a particularly important factor and that it should be carefully considered in structural design.

Historically, the Puget Sound Region has been subjected to frequent earthquakes of moderate intensity, and is designated in the Uniform Building Code as Seismic Zone 3. Two earthquakes that resulted in significant damage occurred in 1949 near Olympia, and in 1965 near Seattle. The April 3, 1949 earthquake is the largest recorded earthquake in the region, reaching a magnitude of 7.1. It was felt over 150,000 square miles, resulting in $25 million in damages, eight (8) deaths and many injuries. The April 29, 1965 earthquake of magnitude 6.5 was felt over 130,000 square miles, and resulted in widespread damage in the Seattle area. The area was also subjected to a Magnitude 5.0 earthquake during 1995 and a 5.4 earthquake in May of 1996.

Based on seismic risk analyses we have performed for similar sites in the Puget Sound region, and considering the generally dense nature of the in-situ materials, we estimate, conservatively, that the design peak ground acceleration at the site should be considered to be on the order of the following:

- Peak horizontal seismic acceleration = 0.20g.
- UBC Seismic Zone factor, Z = 0.30

Approximate acceleration levels are only estimatable at this time for the state of practice due to complexities of the area that could include focusing and other complex concepts.

In accordance with the UBC guidelines we recommend that this site be considered to fall within that with a profile comprising, in general, of seventy (70) feet or more in depth with more than twenty (20) feet of soft to medium stiff clay, but not more than forty (40) feet of soft clay. [While this is not a strict representation of this site it does provide a reasonable correlation to the in-place conditions.] For these general conditions the site should, in accordance with Table 23-J, be considered to be a Type S_3 site. We recommend the following factor be used in design:

- S Factor = 1.5

Liquefaction

Degree of Risk: As part of our evaluation of the in-place soil liquefaction risk we reviewed the information presented on the Liquefaction Susceptibility For The Poverty Bay Quadrangle (Palmer, Walsh, Logan & Gerstel; 1995) to approximately determine the general degree of liquefaction susceptibility of the site. According to this map, although it does not specifically cover the site, the Port of Tacoma area encompassed by the various waterways is considered to be a Category I area. This means that the risk of liquefaction is considered to be high.

Based on our interpretation of the Dutch Cone Probe logs, and using our experience in the general area of this site, it appears that the in-place soils are predominantly granular though fine grained. That is, they comprise a mixture predominantly made up of sand and silt sized particles, which are soil particles passing the number 200 mesh sieve, which are typically in a loose to medium dense condition. As previously indicated, there is also a relatively shallow local water level beneath this site which is tidally affected. This water level is considered capable of "surging" and saturating the surrounding soils.

Given this combination of soil and groundwater conditions, and the indicated degree of liquefaction susceptibility it is our professional opinion that the risk of liquefaction within the upper twenty-five (25) feet, or so, of the in-place soils beneath this site should be considered moderate to high. This means that for an earthquake of sufficient magnitude, probably a magnitude 6.5 on the Richter scale, some, if not all, of the site soils are likely to liquefy. If liquefaction should occur it is also anticipated that liquefaction related settlement will also occur.

Liquefaction Related Settlement: Using the methodology of Tokimatsu and Seed we have determined what we believe to be a reasonable estimate of the maximum amount of settlement likely to occur within the soils beneath this site should liquefaction occur. We estimate that settlements could occur within the following, we believe relatively conservative, range:

- Maximum estimated range of total liquefaction related settlement = 12 to 18 inches

It should be clearly understood that redensification of the in-place surficial soils will not eliminate the risk of liquefaction related settlement occurring. However, it should be expected to help reduce the magnitude of building load related settlement within the surficial fill layer and may slightly reduce the magnitude of liquefaction related settlement.

Liquefaction Related Damage: In the event that such liquefaction related settlement were to occur it would likely result in some deformation to, or damage of, the structure. However, it is appropriate to recognize that is such liquefaction does occur it should be expected to impact all of the site soils, not just those beneath the new building. As a result it is not unreasonable to believe that a substantial portion of the estimated maximum liquefaction related settlement would occur in a relatively uniform manner across the property. Thus, the structure should also settle in a relatively uniform manner.

Nevertheless, some differential movement should be expected to occur and this would likely be reflected in the form of door and window frame wracking, cracking and separation of the floor slab, and separation between the structure and the surrounding site grade. If there are internal shelving units within the building they could become distorted, and could even peel free of the walls.

Perhaps the most critical concern is related to the potential for separation of the lifeline utilities that will serve this building. Liquefaction related settlement can cause fracture or breakage in electric, phone, water, gas, and sewer lines. Based on the experience in the recent Northridge, California, earthquake more damage was done to buildings because the broken lifeline utilities could not be turned off than was attributed to liquefaction. For example, in one structure it provided impossible to turn off the electricity because the live lines had fallen onto the floor where they were covered with leaking water preventing work crew access. As a result, the structure suffered considerable water damage but virtually no liquefaction damage.

Because of this we recommend that all utility line valves and switches be located in a small shed or structure outside the building. All key employees should be made clearly aware of the location of this structure and the enclosed valves and switches so that lifeline utilities can be quickly turned off in the event of an earthquake and the potential associated damages eliminated or significantly reduced.

Site Drainage

General: A well established groundwater level is present at relatively shallow depth beneath the site. While we do not believe it will detrimentally impact either the construction effort of the completed building, we do believe it is prudent to install both short and long-term drainage control measures as part of project design and construction.

Short Term Drainage Measures: Over the short term, we recommend that the earthwork contractor be prepared to install several shallow sump pits to collect water in utility or foundation excavations. All collected water should be pumped to a positive and permanent discharge. (A positive and permanent discharge might consist of a nearby storm drain catch basin, or similar facility.)

It is essential that all surface runoff be directed away from the crest line of all excavations, including utility trenches, and not be allowed to sheet flow over the exposed faces. Thus the excavations and site should be graded so that surface water is directed off the site and away from the top of any natural or man made slopes or excavations. Water should not be allowed to stand in any area where a building or floor slab is to be constructed. During construction, the earthwork contractor should roller seal all loose surfaces at night or at the beginning of a weekend to reduce the potential for moisture infiltration into the subgrade soils.

Site grades should allow for drainage away from building foundations. We suggest that the ground be sloped at a gradient of three percent for a distance of at least ten (10) feet away from a building, except in areas that are to be paved.

Any excavation or slope areas, including utility trench excavations, should be protected against the elements during construction. This can be accomplished by overlaying the exposed slope surface with a sandbagged or pegged-in-place visqueen barrier. Temporary site grading should be performed to create site grades that direct water away from the excavation. We also recommend that the contractor consider installing either a shallow swale or ditch along the toe of any protected slope to collect any surface water runoff and to direct it to a positive and permanent discharge.

Long Term Drainage Measures: In the long term, perhaps the most critical element of drainage control is to install footing drains along all building perimeters. These drains should consist of a rigid, smooth walled, perforated or slotted, plastic pipe bedded on and surrounded by a free-draining granular material. The pipe should have a minimum diameter of four inches and should be provided with sufficient gradient to initiate gravity flow to a positive and permanent discharge such as a storm drain catch basin. All drains should be installed at or below the footing invert elevation with the perforations or slots facing downwards. A typical detail is provided on Plate 6, attached.

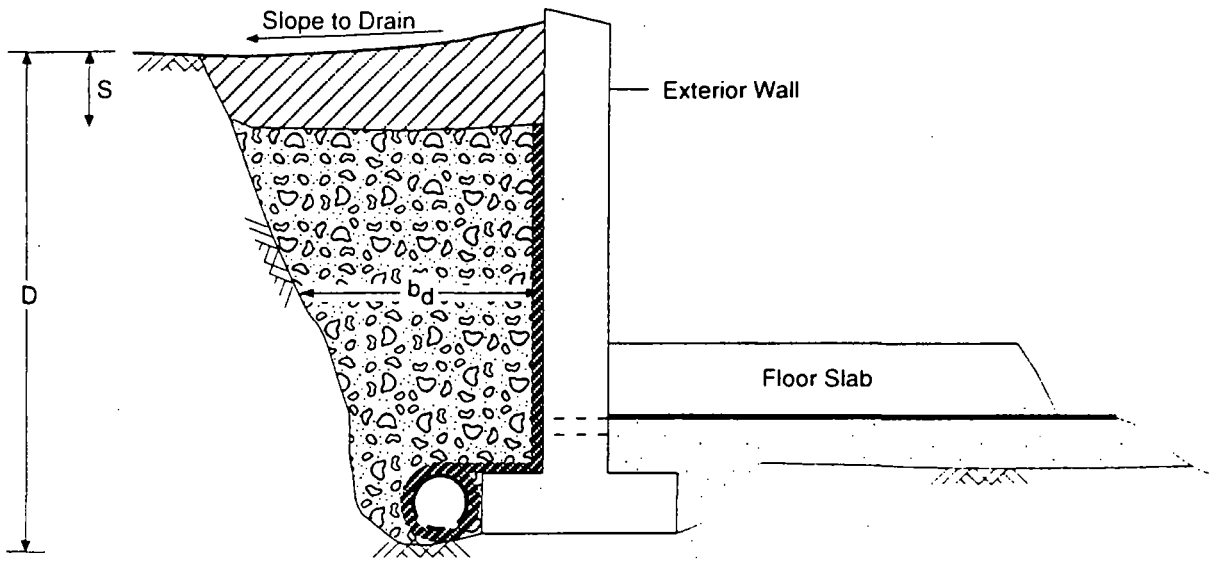
We suggest appropriate subsurface drainline locations be established during the earthwork phase of the project by our representative when seepage areas and conditions may be more clearly defined. All areas to receive these drainlines should be observed by the geotechnical engineer. Where the immigration of fines from the native soil into the above-referenced drainage material may compromise the drain, the gravel backfill should be protected by a geotextile filter cloth. In this case we recommend the use of a Mirafi 140N geotextile, or an equivalent approved by the geotechnical engineer.

Roof Drainage: Under no circumstances should the building roof downspout lines be connected to the footing drains. Downspouts **must** be separately tightlined to discharge. We also recommend the installation of sufficient cleanouts to allow for easy and periodic downspout drainline flushing and maintenance. It has been our experience that the most functional cleanout spacing if for one to be installed at any bend in a drain system and at a spacing of about thirty-five (35) feet in straight pipe runs. This will help to keep the potential extent of drain line clogging to a small segment of pipe that can be cleared with relative ease.

Erosion Control: We also recommend, as a minimum measure, that the earthwork contractor erect a silt fence along the downgrade perimeters of the construction area. These fences should be set sufficiently far from the edge of any excavation to allow for free passage for the workmen. They should, however, be upgrade of any drainage control swale or berm.

The silt fence should consist of a geotextile fabric produced for this purpose and suitable for erosion control, such as a Mirafi Envirofence or an approved equivalent. It should be supported on "Hog Wire" attached to steel or wooden stakes driven into the ground at relatively close center to center spacings. Approximately the bottom twelve (12) inches of the geotextile should be buried into the site subgrade to help avoid the risk of sediment laden water flowing out beneath the fence. A typical pictorial depiction of this filter fence is presented on Plate 7, attached.

Schematic Only - Not to Scale



LEGEND

Surface seal of native soil or other low permeability material. (Can be separated from underlying free-draining by building paper, visqueen or geotextile, at owner's discretion.

Free-draining, granular backfill material meeting the gradation specification presented below.

6-inch minimum diameter, perforated or slotted rigid concrete, metal, or plastic pipe with tight joints, with a positive gradient sufficient to generate gravity flow and provided with accessible cleanouts at regular intervals. Perforations (3/16 to 1/4 inch diameter) to be in lower half of pipe, with lower quarter segment unperforated to facilitate water flow. Slotted pipe to have 1/8-inch maximum width slots. Must NOT be tied to roof downspout or perimeter footing drain lines.

Alternative geotextile drainage fabric attached to wall after the wall has been damp-proofed.

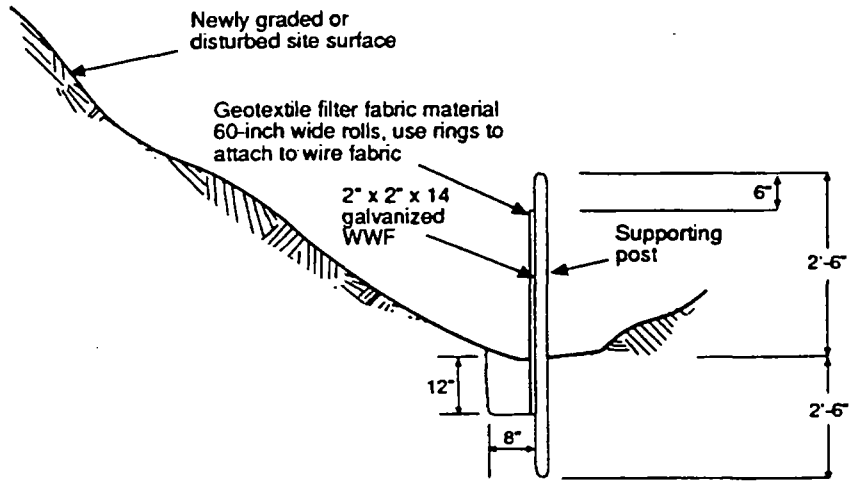
Capillary break placed beneath floor slab consisting of clean pea-gravel, 1/2-inch minimum washed rock, or clean sand, with a minimum thickness, t, of 4 inches. Capillary break to be separated from floor slab by impermeable plastic membrane.

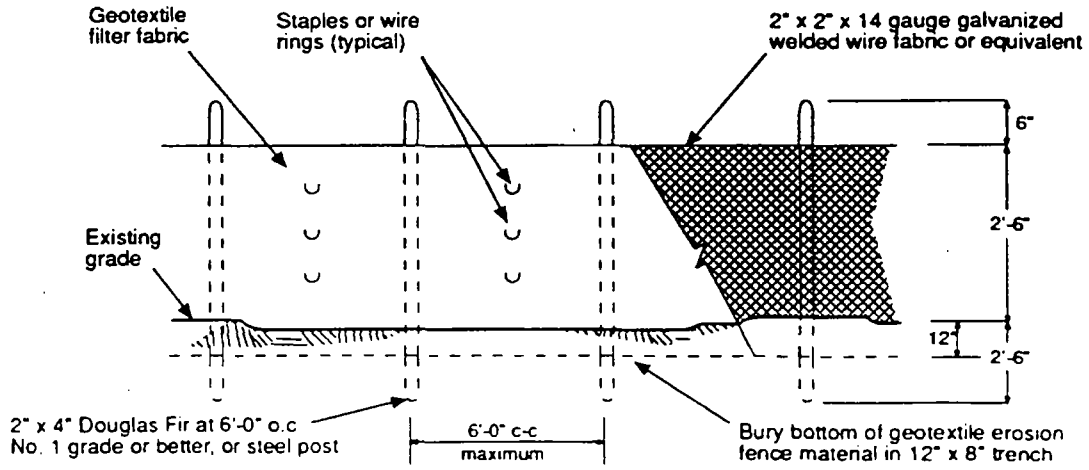
NOTES

- Minimum depth of footing burial, D = 18 inches.
- Estimated thickness of impermeable surface layer, S, = 6 to 12 inches.
- Capillary drainage material beneath floor slab should be hydraulically connected to perimeter subdrain pipe. (Use of 2-inch minimum diameter weep holes, as shown above, is one option of achieving this end.)
- Any backfill within 18-inches of wall should be compacted with hand-operated compaction equipment only. Heavy compaction equipment should not be used within 5 feet of wall to help avoid imposition of additional lateral load on that wall which could cause wall damage.
- All wall backfill should be placed and compacted in accordance with the recommendations contained in the Fill Placement and Compaction section of the attached CEO, Inc. report.
- Wall drainage and backfill material should meet the following gradation requirements, unless otherwise recommended by the geotechnical engineer:

Material and Sieve Size	Percentage of Material Passing
3 inch	100
1-1/2 inch	80 - 100
3/4 inch	60 - 90
1/4 inch	50 - 80
#10 mesh	35 - 65
#50 mesh	25 - 45
#100 mesh	10 - 15
#200 mesh	0 - 3

Schematic Only - Not to Scale





NOTES

- The filter should be purchased in a continuous roll cut to the length of the barrier to avoid use of joints. When joints are necessary, filter cloth should be spliced together only at a support post, with a minimum six-inch overlap, and both ends securely fastened to the post.
- The filter fabric fence should be installed to follow the site contours (where feasible). The fence posts should be spaced a maximum of six feet apart and driven securely into the ground (minimum, of 30 inches)
- A trench should be excavated, roughly eight inches wide and twelve inches deep, upslope and adjacent to the wood post to allow the filter fabric to be buried.
- When standard strength filter fabric is used, a wire mesh support should be fastened securely to the upslope side of the posts using heavy-duty wire staples at least one inch long, tie wires, of hog rings. The wire should extend into the trench a minimum of four inches and should not extend more than thirty-six inches above the original ground surface.
- The standard strength filter fabric should be stapled or wired to the fence, and a minimum of twenty inches of the fabric should be extended into the trench. The fabric should not extend more than thirty-six inches above the original ground surface Filter fabric should not be stapled to existing trees.
- When extra-strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts
- The 12" x 8" trench should be backfilled with 3/4 inch minimum diameter washed gravel.
- Filter fabric fences should be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.
- Filter fabric fences should be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs should be made immediately by the contractor.

Creative Engineering Options INC CEO	TYPICAL FILTER FENCE DETAIL	Plate 7

96-1703 / 8 12 96

CLOSURE

Limitations

The above information is being provided solely as a service to our client. Under no circumstances should the above information be interpreted to mean that Creative Engineering Options, Inc., is assuming any responsibility for construction site safety, measurements or dimensions, or the contractors or subcontractors activities, means or measures. Such a responsibility is not being implied and should not be inferred.

Our recommendations and conclusions are based on the site materials observed, limited and selective geotechnical laboratory testing, engineering analyses, the design information provided, and our experience and engineering judgement. The conclusions and recommendations are professional opinions derived in a manner consistent with that level of care, skill and competence ordinarily exercised by other members of the profession in good standing currently practicing under similar conditions in this area only. No other warranty, expressed or implied, is made.

The recommendations submitted in this report are based upon the data obtained from the exploratory Dutch Cone Probes and site observations. These data pertain to the times and locations where they were obtained only, but are assumed to be reasonably representative of the conditions beneath the majority of the area explored. Soil and groundwater conditions between exploratory locations may vary from those encountered. The nature and extent of variations between the exploratory locations may not become evident until construction. If variations do appear, the geotechnical engineer should be requested to re-evaluate the recommendations of this report and to modify or verify them in writing prior to proceeding with the construction.

Additional Services

Plan and Specification Review: We recommend that CEO, Inc. be retained to perform a general review of the final design plans and specifications. This will allow us to verify that the earthwork and foundation recommendations have been properly interpreted and implemented in the design plans and in the construction specifications.

Pre-Construction Meeting: *We strongly recommend that a pre-construction meeting be* held on-site prior to any work being started. The meeting should be attended by the owner (or his representative), the architect and structural engineer, the contractor, the geotechnical engineer, and any of the appropriate City and/or County staff. By discussing

the proposed construction sequence and outlining potential problems at this meeting it should be possible to make sure that the contractor is aware of all the potential difficulties he might encounter during construction. In this manner it is also possible to avoid a significant number of construction extras and to help provide a smooth running project. It also provides the opportunity to verify that the contractor has received a copy of the geotechnical report and, more importantly, has read and understood the recommendations contained in that report.

Construction Monitoring and Testing: For continuity, we also recommend that CEO be retained to provide geotechnical services during construction. This is to observe compliance with the design concepts, specifications or recommendations and to allow design changes in the event subsurface conditions differ from those anticipated prior to the start of construction. It also allows us to verify, on the owners behalf, that the foundation and floor area subgrades are competent and capable of providing adequate support. We do not accept any responsibility for the performance of the foundation or earthwork or any other geotechnical aspect of the project unless we are retained to review the construction drawings and specifications, and to provide construction observation and testing services.

APPENDIX A

96-1703

FIELD EXPLORATION PROGRAM

APPENDIX A

96-1703

Field Exploration Program

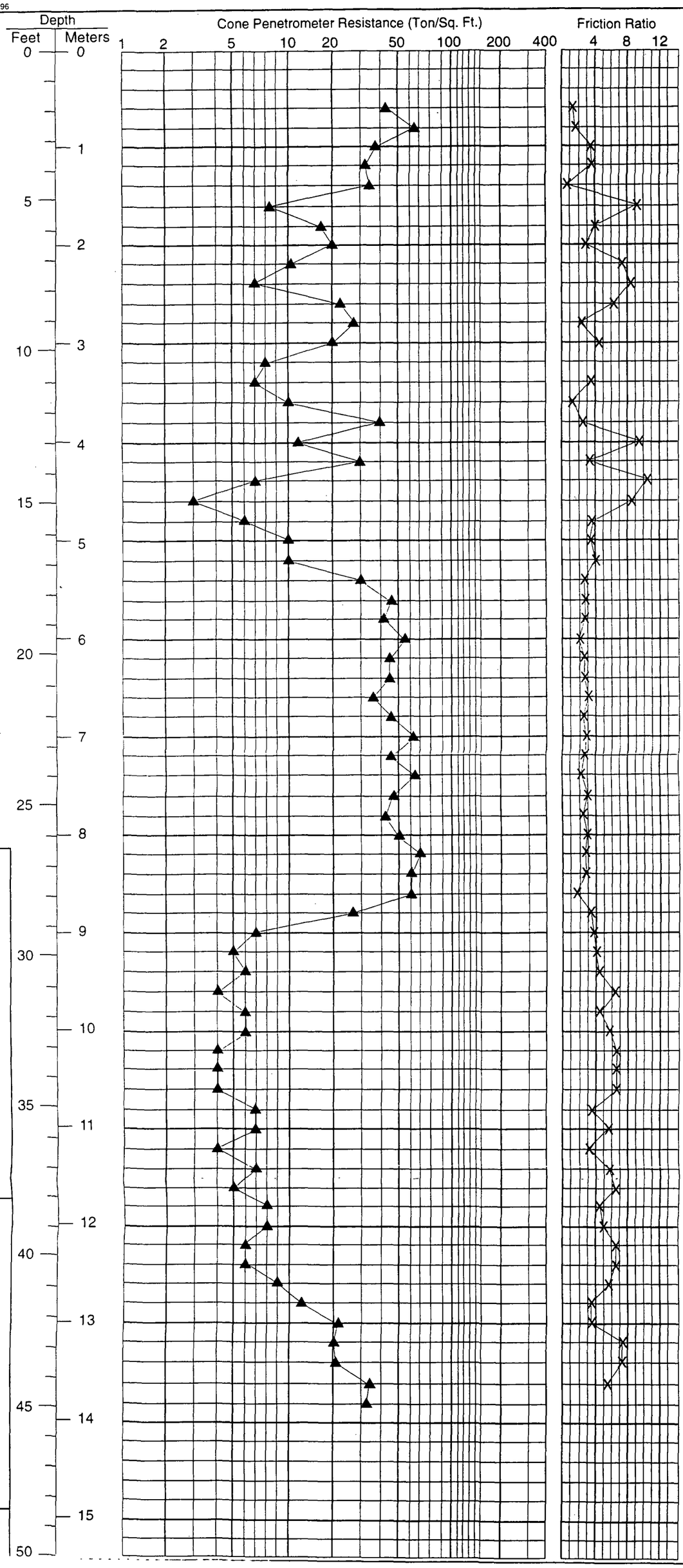
Our field exploration was performed on July 29, 1996. The subsurface conditions were explored by hydraulically inserting two exploratory Dutch Cone Probes to a maximum depth of approximately forty-five and one half (45-1/2) feet below the existing surface at the approximate locations shown on Plate 2, Site Plan. The probes were inserted with a rubber tired, truck mounted, drill provided and operated by our subcontractor, Subterranean of Milton, Washington.

The approximate Dutch Cone Probe locations were determined by pacing from the northwestern corner peg for the new structure. The Dutch Cone elevations were approximately determined by interpolation between contour lines shown on an untitled and undated section of a site topographic plan provided by the civil engineer, Sitts & Hill Engineers. The locations and elevations of the Probes should be considered accurate only to the degree implied by the methods used.

The field exploration was continuously monitored by an engineer from our firm who maintained a log of each probe. Our representative recorded the cone resistance and friction ratio as the probes were incrementally inserted into the ground. He subsequently interpreted the nature and classification of the penetrated soils. The soils were classified in general accordance with the Unified Soil Classification System (USCS).

The number and approximate location of each of the Dutch Cone Probes are shown on the Site Plan, Plate 2. Individual logs of the Probes are presented on Plates 8 and 9. The final logs represent our interpretation of the field logs. The stratification lines on the logs represent the approximate boundary between soil types. In actuality, the transition may be more gradual or more severe.

96-1703 / 8.12.96



Soil Interpretation

Pre-drilled

Loose to medium dense SAND (SP) and/or silty SAND (SM)

Soft to medium stiff clayey SILT (ML) interlayered with sandy SILT (SM) and silty SAND (SP) lenses

Loose SAND (SP) and/or silty SAND (SM)

Soft to medium stiff clayey SILT (ML)

Very stiff SILT (ML)

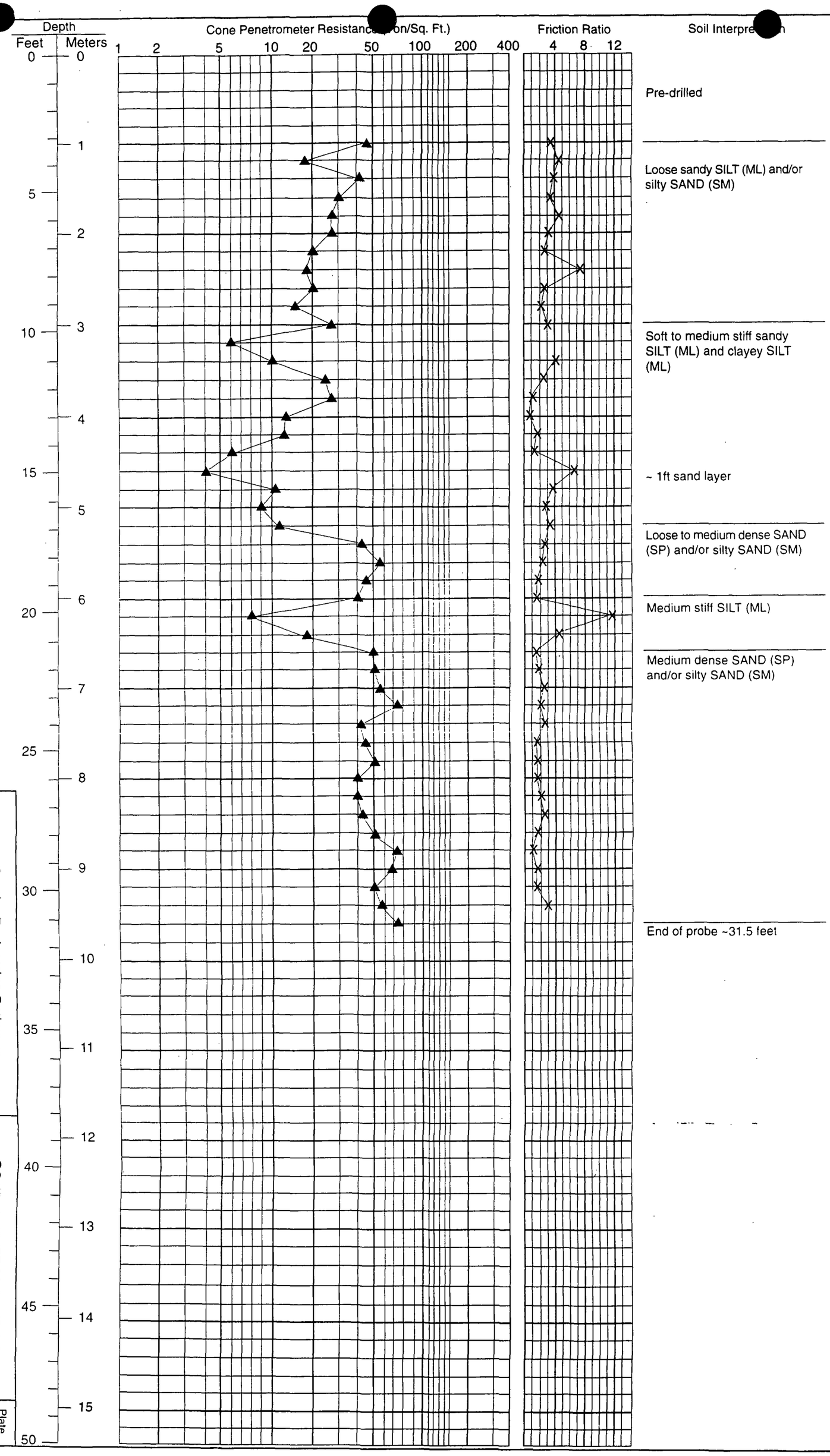
End of probe ~45.5 feet

CEO Creative Engineering Options INC.

CONE PENETROMETER LOG

Plate 9

96-1703



Creative Engineering Options INC.
A Firm Practicing in the Geosciences

CONE PENETROMETER LOG

Plate 8

DISTRIBUTION

96-1703

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Sitts & Hill Engineering
2901 South 40th Street
Tacoma, Washington 98409

Attention: Mr. Brent Leslie

gm/Marinel.Rpt/eb31

APPENDIX D

APPENDIX D

ANALYTICAL DATA

Sample Location and Identification Scheme

Each sediment sample location (and depth) will be assigned a unique alpha-numeric identifier up to ten characters in length. This designation system will facilitate the identification and tracking of each sample. The identifier is divided as follows:

- First two letters identify the project:

  MW = Middle Waterway

- Next letter identifies the type of sample:

  S = Surface Sample

  C = Subsurface Sample

  R = Reference Site

  A = Biological Sample (Bioassay)

  B = Benthic Community Analysis

- Next letter identifies the sampling area:

  B = Bank (Shoreline)

  T = Tideflat

  S = Subtidal

  H = Hylebos Reference Site

  M = Milwaukee/Sitcum Reference Site

  C = Carr Inlet Reference Site

- Next three digits identify the station number (within the specified area), for example, 001, 002, 03a, 011b, 036;
- Next letter identifies sample use:

  R = Regular Sample

  S = Split (duplicate) Sample

  E = Equipment Rinsate

  T = Trip Blank

  W = Source Water

- Next digit indicates the depth interval:

  1 = Surface

  2 = First Core Interval

  3 = Second Core Interval

  4 = Third Core Interval

- Next letter identifies replicates (benthic, cores): A, B, C, ...Z.

Note: Core replicate designations will only be used to manage samples in the field. These designations are not applicable once sample intervals have been selected and samples have been composited for chemical analysis.

Appendix D.1 - Chemical and Physical Data

Analyte Class Listing

Conventionals

Ammonia
Ammonia As Nitrogen
Conductivity
Dissolved Oxygen
Eh
Ferrous Iron
pH
pH in CaCl2
Sulfide
Total Solids
Total Sulfides
Turbidity

Total Organic Carbon

TOC

Grain size

Percent Clay
Percent Fines
Percent Gravel
Percent Sand
Percent Silt

Metals

Antimony
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Silver
Zinc

Phenols

2,4-Dimethylphenol
2-Fluorophenol
2-Methylphenol

4-Methylphenol

Pentachlorophenol

Phenol

Low Molecular Weight Polycyclic Hydrocarbons

2-Methylnaphthalene

Acenaphthene

Acenaphthylene

Anthracene

Fluorene

Naphthalene

Phenanthrene

Total LPAH

High Molecular Weight Polycyclic Hydrocarbons

Benzo(a)anthracene

Benzo(a)pyrene

Benzo(b)fluoranthene

Benzo(g,h,i)perylene

Benzo(k)fluoranthene

Benzofluoranthenes

Chrysene

Dibenzo(a,h)anthracene

Fluoranthene

Indeno(1,2,3-cd)pyrene

Pyrene

Total HPAH

Chlorinated Aromatic Compounds

1,2,4-Trichlorobenzene

1,2-Dichlorobenzene

1,3-Dichlorobenzene

1,4-Dichlorobenzene

Hexachlorobenzene

Volatile Organic Compounds

Ethylbenzene

m,p-Xylene

o-Xylene

Tetrachloroethene

Trichloroethene

Xylenes (Total)

Chlorinated Aliphatic Compound

Hexachlorobutadiene

Phthalates

bis(2-Ethylhexyl)phthalate

Butylbenzylphthalate

Di-n-butylphthalate

Di-n-octylphthalate

Diethylphthalate

Dimethylphthalate

Miscellaneous Extractable Compounds

Benzoic acid

Benzyl alcohol

Dibenzofuran

Hexachloroethane

N-Nitrosodiphenylamine

Pesticides

4,4-DDD

4,4-DDE

4,4-DDT

Aldrin

alpha-Chlordane

Dieldrin

gamma-BHC (Lindane)

gamma-Chlordane

Heptachlor

Total DDT

Polychlorinated Biphenyls (PCBs)

Aroclor 1016

Aroclor 1016/1242

Aroclor 1221

Aroclor 1232

Aroclor 1242

Aroclor 1248

Aroclor 1254

Analyte Class Listing

Aroclor 1260

PCB (total)

TBT

Dibutyltin

Monobutyltin

Tetrabutyltin

Tributyltin

Total Volatile Solids

Total Volatile Solids

Tentatively Identified Compounds

1,2,4-Trithiolane

2-Cyclohexen-1-one, 3,5,5-Tri

Bicyclo[3.1.0]HEXAN-3-ONE,4-me

Lenthionine

Methane, Thiobis

Unknown Hydrocarbon

Unknown Hydrocarbon (8270)

Unknown Hydrocarbon (VOC)

Unknown Polynuclear Aromatic

Unknown VOC

Appendix D.1 - Chemical and Physical Data

Station	Sample ID	Concentration	Flag	Units
Conventionals				
Ammonia				
Surface Samples				
TF-20	TF-20	46.00		%
TF-21	TF-21A	68.00		%
TF-22	TF-22A	30.00		%
TF-23	TF-23	63.00		%
Subsurface Samples				
TF-22	TF-22B	54.00		%
TF-22	TF-22C	67.00		%
Bank Samples				
B-12	B-12	10.00		%
B-13	B-13	15.00		%
B-14	B-14	35.00		%
B-15	B-15	23.00		%
B-16	B-16	22.00		%
B-17	B-17	14.00		%
B-18	B-18	17.00		%
B-19	B-19	16.00		%
Ammonia As Nitrogen				
Surface Samples				
MW016	MWSS016R1	13.80		mg/kg
MW017	MWSS017R1	7.90		mg/kg
MW018	MWSS018R1	7.70		mg/kg
MW019	MWSS019R1	9.90		mg/kg
MW020	MWSS020R1	6.70		mg/kg
MW021	MWSS021R1	13.80		mg/kg
MW022	MWSS022R1	1.30		mg/kg
MW023	MWSS023R1	7.80		mg/kg
MW024	MWSS024R1	14.00		mg/kg
MW025	MWSS025R1	12.00		mg/kg
MW026	MWSS026R1	6.10		mg/kg
MW026	MWSS026S1	11.80		mg/kg
MW027	MWSS027R1	8.80		mg/kg
MW028	MWSS028R1	2.00		mg/kg
MW029	MWSS029R1	14.50		mg/kg
MW030	MWSS030R1	13.40		mg/kg
MW031	MWSS031R1	20.20		mg/kg
MW032	MWSS032R1	12.60		mg/kg
MW034	MWSS034R1	23.40		mg/kg
MW035	MWSS035R1	20.80		mg/kg
MW037	MWSS037R1	15.10		mg/kg
MW039	MWST039R1	10.10		mg/kg

Station	Sample ID	Concentration	Flag	Units
MW040	MWSS040R1	6.20		mg/kg
MW040	MWST040R1	4.20		mg/kg
MW040	MWST040S1	4.50		mg/kg
MW042	MWST042R1	6.60		mg/kg
MW043	MWST043R1	8.40		mg/kg
MW044	MWST044R1	9.00		mg/kg
MW045	MWST045R1	12.30		mg/kg
MW047	MWST047R1	8.00		mg/kg
MW048	MWST048R1	9.50		mg/kg
MW049	MWST049R1	3.50		mg/kg
MW051	MWST051R1	14.00		mg/kg
MW052	MWST052R1	10.30		mg/kg
MW054	MWST054R1	6.50		mg/kg
MW055	MWSS055R1	10.80		mg/kg
Subsurface Samples				
MW024	MWCS024R2A	20.20		mg/kg
MW024	MWCS024R3A	12.20		mg/kg
MW025	MWCS025R2A	13.90		mg/kg
MW025	MWCS025R3A	19.90		mg/kg
MW025	MWCS025R4A	21.10		mg/kg
MW026	MWCS026R2A	15.90		mg/kg
MW026	MWCS026R3A	9.80		mg/kg
MW026	MWCS026R4A	19.10		mg/kg
MW027	MWCS027R2A	121.00		mg/kg
MW027	MWCS027R3A	74.60		mg/kg
MW027	MWCS027R4A	65.10		mg/kg
MW028	MWCS028R2A	0.30		mg/kg
MW028	MWCS028R3A	1.20		mg/kg
MW028	MWCS028R4A	13.10		mg/kg
MW029	MWCS029R2A	35.70		mg/kg
MW029	MWCS029R3A	28.70		mg/kg
MW029	MWCS029R4A	30.20		mg/kg
MW030	MWCS030R2A	109.00		mg/kg
MW030	MWCS030R3A	8.10		mg/kg
MW030	MWCS030S2A	99.20		mg/kg
MW031	MWCS031R2A	31.10		mg/kg
MW031	MWCS031R3A	51.70		mg/kg
MW031	MWCS031R4A	24.70		mg/kg
MW034	MWCS034R2A	1.50		mg/kg
MW034	MWCS034R3A	1.30		mg/kg
MW034	MWCS034R4A	7.60		mg/kg
MW035	MWCS035R2A	0.80		mg/kg
MW035	MWCS035R3A	5.60		mg/kg
MW035	MWCS035R4A	24.20		mg/kg
MW035	MWCS035S4A	23.50		mg/kg
MW037	MWCS037R2A	5.70		mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW037	MWCS037R3A	45.60		mg/kg
	MW037	MWCS037R4A	47.60		mg/kg
	MW040	MWCS040R2A	2.80		mg/kg
	MW040	MWCS040R3A	0.40		mg/kg
	MW040	MWCS040R4A	1.50		mg/kg
	MW041	MWCT041R2	10.10		mg/kg
	MW046	MWCT046R2	4.50		mg/kg
	MW050	MWCT050R2	13.20		mg/kg
	MW053	MWCT053R2	5.30		mg/kg
Bank Samples					
	MW001	MWSB001R1	12.50		mg/kg
	MW002	MWSB002R1	9.10		mg/kg
	MW008	MWSB008R1	12.20		mg/kg
	MW008	MWSB008S1	5.40		mg/kg
	MW008-SP	MWSB008R1 SP	9.60		mg/kg
	MW009	MWSB009R1	10.00		mg/kg
	MW009-SP	MWSB009R1 SP	14.00		mg/kg
	MW012	MWSB012R1	2.00		mg/kg
	MW013	MWSB013R1	1.70		mg/kg
	MW014	MWSB014R1	6.70		mg/kg
	MW015	MWSB015R1	9.30		mg/kg
	MW015	MWSB015S1	17.00		mg/kg
	MW03a	MWSB03aR1	11.10		mg/kg
	MW03b	MWSB03bR1	11.80		mg/kg
	MW04a	MWSB04aR1	10.50		mg/kg
	MW04b	MWSB04bR1	13.20		mg/kg
	MW04b-SP	MWSB04bR1 SP	4.00		mg/kg
	MW10a	MWSB10aR1	6.80		mg/kg
	MW10b	MWSB10bR1	6.70		mg/kg
	MW10c	MWSB10cR1	4.70		mg/kg
	MW11a	MWSB11aR1	6.60		mg/kg
	MW11a-SP	MWSB11aR1 SP	3.60		mg/kg
	MW11b	MWSB11bR1	6.40		mg/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	30.10		mg/kg
Conductivity					
Contaminant Mobility Samples					
	Bulk Sediment	TCLT-PV 01	14.63		millimhos
	Bulk Sediment	TCLT-PV 01.5	11.10		millimhos
	Bulk Sediment	TCLT-PV 02.5	6.70		millimhos
	Bulk Sediment	TCLT-PV 03	3.47		millimhos
	Bulk Sediment	TCLT-PV 04	2.44		millimhos
	Bulk Sediment	TCLT-PV 05	1.54		millimhos
	Bulk Sediment	TCLT-PV 06	0.88		millimhos
	Bulk Sediment	TCLT-PV 06.3	0.77		millimhos

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	TCLT-PV 07.3	0.53		millimhos
	Bulk Sediment	TCLT-PV 08	0.46		millimhos
	Bulk Sediment	TCLT-PV 09	0.33		millimhos
	Bulk Sediment	TCLT-PV 10	0.28		millimhos
	Bulk Sediment	TCLT-PV 11	0.31		millimhos
	Bulk Sediment	TCLT-PV 11.5	0.32		millimhos
	Bulk Sediment	TCLT-PV 12.8	0.30		millimhos
	Bulk Sediment	TCLT-PV 13.4	0.35		millimhos
	Bulk Sediment	TCLT-PV 14.4	0.26		millimhos
	Bulk Sediment	TCLT-PV 14.9	0.25		millimhos
	Bulk Sediment	TCLT-PV 15.8	0.24		millimhos
	Bulk Sediment	TCLT-PV 16.5	0.20		millimhos
	Bulk Sediment	TCLT-PV 17.5	0.21		millimhos
	Bulk Sediment	TCLT-PV 18	0.25		millimhos
	Bulk Sediment	TCLT-PV 19	0.20		millimhos
	Bulk Sediment	TCLT-PV 19.6	0.15		millimhos
	Bulk Sediment	TCLT-PV 20.6	0.17		millimhos
	Bulk Sediment	TCLT-PV 21.2	0.16		millimhos
	Bulk Sediment	TCLT-PV 22.2	0.15		millimhos
	Bulk Sediment	TCLT-PV 22.9	0.18		millimhos
	Bulk Sediment	TCLT-PV 23.8	0.17		millimhos
	Bulk Sediment	TCLT-PV 24.3	0.17		millimhos
	Bulk Sediment	TCLT-PV 25.3	0.16		millimhos
	Bulk Sediment	TCLT-PV 25.9	0.15		millimhos
	Bulk Sediment	TCLT-PV 26.9	0.14		millimhos
	Bulk Sediment	TCLT-PV 27.4	0.15		millimhos
	Bulk Sediment	TCLT-PV 28.4	0.14		millimhos
	Bulk Sediment	TCLT-PV 29.1	0.13		millimhos
	Bulk Sediment	TCLT-PV 30	0.13		millimhos
	Bulk Sediment	TCLT-PV 32.9	0.11		millimhos
Dissolved Oxygen					
Contaminant Mobility Samples					
	Bulk Sediment	TCLT-PV 01	0.40		ppm
	Bulk Sediment	TCLT-PV 01.5	0.80		ppm
	Bulk Sediment	TCLT-PV 02.5	0.20		ppm
	Bulk Sediment	TCLT-PV 03	0.70		ppm
	Bulk Sediment	TCLT-PV 04	0.30		ppm
	Bulk Sediment	TCLT-PV 05	0.70		ppm
	Bulk Sediment	TCLT-PV 06	0.50		ppm
	Bulk Sediment	TCLT-PV 06.3	0.30		ppm
	Bulk Sediment	TCLT-PV 07.3	0.15		ppm
	Bulk Sediment	TCLT-PV 08	1.10		ppm
	Bulk Sediment	TCLT-PV 09	0.40		ppm
	Bulk Sediment	TCLT-PV 10	0.30		ppm
	Bulk Sediment	TCLT-PV 11	0.15		ppm
	Bulk Sediment	TCLT-PV 11.5	0.35		ppm

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	TCLT-PV 12.8	0.40		ppm
	Bulk Sediment	TCLT-PV 13.4	0.40		ppm
	Bulk Sediment	TCLT-PV 14.4	0.40		ppm
	Bulk Sediment	TCLT-PV 14.9	0.30		ppm
	Bulk Sediment	TCLT-PV 15.8	0.30		ppm
	Bulk Sediment	TCLT-PV 16.5	0.25		ppm
	Bulk Sediment	TCLT-PV 17.5	0.30		ppm
	Bulk Sediment	TCLT-PV 18	0.30		ppm
	Bulk Sediment	TCLT-PV 19	0.50		ppm
	Bulk Sediment	TCLT-PV 19.6	0.40		ppm
	Bulk Sediment	TCLT-PV 20.6	0.40		ppm
	Bulk Sediment	TCLT-PV 21.2	0.35		ppm
	Bulk Sediment	TCLT-PV 22.2	0.40		ppm
	Bulk Sediment	TCLT-PV 22.9	0.45		ppm
	Bulk Sediment	TCLT-PV 23.8	0.50		ppm
	Bulk Sediment	TCLT-PV 24.3	0.40		ppm
	Bulk Sediment	TCLT-PV 25.3	0.45		ppm
	Bulk Sediment	TCLT-PV 25.9	0.40		ppm
	Bulk Sediment	TCLT-PV 26.9	0.20		ppm
	Bulk Sediment	TCLT-PV 27.4	0.50		ppm
	Bulk Sediment	TCLT-PV 28.4	0.40		ppm
	Bulk Sediment	TCLT-PV 29.1	0.50		ppm
	Bulk Sediment	TCLT-PV 30	0.40		ppm
	Bulk Sediment	TCLT-PV 32.9	0.55		ppm
Eh					
Contaminant Mobility Samples					
	Bulk Sediment	TCLT-PV 01	29.00		mv
	Bulk Sediment	TCLT-PV 01.5	116.30		mv
	Bulk Sediment	TCLT-PV 02.5	-83.10		mv
	Bulk Sediment	TCLT-PV 03	-20.40		mv
	Bulk Sediment	TCLT-PV 04	-20.60		mv
	Bulk Sediment	TCLT-PV 05	-35.30		mv
	Bulk Sediment	TCLT-PV 06	-81.60		mv
	Bulk Sediment	TCLT-PV 06.3	-9.50		mv
	Bulk Sediment	TCLT-PV 07.3	-4.00		mv
	Bulk Sediment	TCLT-PV 08	-2.50		mv
	Bulk Sediment	TCLT-PV 09	-17.60		mv
	Bulk Sediment	TCLT-PV 10	-12.70		mv
	Bulk Sediment	TCLT-PV 11	-44.00		mv
	Bulk Sediment	TCLT-PV 11.5	11.90		mv
	Bulk Sediment	TCLT-PV 12.8	81.00		mv
	Bulk Sediment	TCLT-PV 13.4	-6.30		mv
	Bulk Sediment	TCLT-PV 14.4	-25.30		mv
	Bulk Sediment	TCLT-PV 14.9	3.00		mv
	Bulk Sediment	TCLT-PV 15.8	-20.60		mv
	Bulk Sediment	TCLT-PV 16.5	-33.10		mv

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	TCLT-PV 17.5	-6.30		mv
	Bulk Sediment	TCLT-PV 18	17.60		mv
	Bulk Sediment	TCLT-PV 19	6.80		mv
	Bulk Sediment	TCLT-PV 19.6	13.00		mv
	Bulk Sediment	TCLT-PV 20.6	12.50		mv
	Bulk Sediment	TCLT-PV 21.2	-15.80		mv
	Bulk Sediment	TCLT-PV 22.2	15.30		mv
	Bulk Sediment	TCLT-PV 22.9	-27.30		mv
	Bulk Sediment	TCLT-PV 23.8	-14.60		mv
	Bulk Sediment	TCLT-PV 24.3	-18.20		mv
	Bulk Sediment	TCLT-PV 25.3	-17.60		mv
	Bulk Sediment	TCLT-PV 25.9	-15.30		mv
	Bulk Sediment	TCLT-PV 26.9	-6.50		mv
	Bulk Sediment	TCLT-PV 27.4	-4.90		mv
	Bulk Sediment	TCLT-PV 28.4	6.70		mv
	Bulk Sediment	TCLT-PV 29.1	-11.20		mv
	Bulk Sediment	TCLT-PV 30	11.00		mv
	Bulk Sediment	TCLT-PV 32.9	11.20		mv
Ferrous Iron					
Contaminant Mobility Samples					
	Bulk Sediment	TCLT-PV 08	0.07		mg/L
	Bulk Sediment	TCLT-PV 09	0.07		mg/L
	Bulk Sediment	TCLT-PV 10	0.10		mg/L
	Bulk Sediment	TCLT-PV 11	0.18		mg/L
	Bulk Sediment	TCLT-PV 11.5	0.16		mg/L
	Bulk Sediment	TCLT-PV 12.8	0.18		mg/L
	Bulk Sediment	TCLT-PV 13.4	0.18		mg/L
	Bulk Sediment	TCLT-PV 14.4	0.26		mg/L
	Bulk Sediment	TCLT-PV 14.9	0.24		mg/L
	Bulk Sediment	TCLT-PV 15.8	0.24		mg/L
	Bulk Sediment	TCLT-PV 16.5	0.31		mg/L
	Bulk Sediment	TCLT-PV 17.5	0.22		mg/L
	Bulk Sediment	TCLT-PV 18	0.20		mg/L
	Bulk Sediment	TCLT-PV 19	0.15		mg/L
	Bulk Sediment	TCLT-PV 19.6	0.16		mg/L
	Bulk Sediment	TCLT-PV 20.6	0.15		mg/L
	Bulk Sediment	TCLT-PV 21.2	0.18		mg/L
	Bulk Sediment	TCLT-PV 22.2	0.13		mg/L
	Bulk Sediment	TCLT-PV 22.9	0.12		mg/L
	Bulk Sediment	TCLT-PV 23.8	0.17		mg/L
	Bulk Sediment	TCLT-PV 24.3	0.16		mg/L
	Bulk Sediment	TCLT-PV 25.3	0.14		mg/L
	Bulk Sediment	TCLT-PV 25.9	0.13		mg/L
	Bulk Sediment	TCLT-PV 26.9	0.13		mg/L
	Bulk Sediment	TCLT-PV 27.4	0.12		mg/L
	Bulk Sediment	TCLT-PV 28.4	0.08		mg/L

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	TCLT-PV 29.1	0.08		mg/L
	Bulk Sediment	TCLT-PV 30	0.08		mg/L
	Bulk Sediment	TCLT-PV 32.9	0.07		mg/L
pH					
Contaminant Mobility Samples					
	Bulk Sediment	TCLT-PV 01	7.74		pH
	Bulk Sediment	TCLT-PV 01.5	8.16		pH
	Bulk Sediment	TCLT-PV 02.5	8.05		pH
	Bulk Sediment	TCLT-PV 03	8.20		pH
	Bulk Sediment	TCLT-PV 04	8.09		pH
	Bulk Sediment	TCLT-PV 05	8.10		pH
	Bulk Sediment	TCLT-PV 06	7.88		pH
	Bulk Sediment	TCLT-PV 06.3	8.50		pH
	Bulk Sediment	TCLT-PV 07.3	8.37		pH
	Bulk Sediment	TCLT-PV 08	8.30		pH
	Bulk Sediment	TCLT-PV 09	8.57		pH
	Bulk Sediment	TCLT-PV 10	8.55		pH
	Bulk Sediment	TCLT-PV 11	8.53		pH
	Bulk Sediment	TCLT-PV 11.5	8.57		pH
	Bulk Sediment	TCLT-PV 12.8	8.85		pH
	Bulk Sediment	TCLT-PV 13.4	8.87		pH
	Bulk Sediment	TCLT-PV 14.4	8.76		pH
	Bulk Sediment	TCLT-PV 14.9	9.11		pH
	Bulk Sediment	TCLT-PV 15.8	9.17		pH
	Bulk Sediment	TCLT-PV 16.5	9.01		pH
	Bulk Sediment	TCLT-PV 17.5	8.96		pH
	Bulk Sediment	TCLT-PV 18	8.66		pH
	Bulk Sediment	TCLT-PV 19	8.88		pH
	Bulk Sediment	TCLT-PV 19.6	9.26		pH
	Bulk Sediment	TCLT-PV 20.6	9.50		pH
	Bulk Sediment	TCLT-PV 21.2	9.61		pH
	Bulk Sediment	TCLT-PV 22.2	9.48		pH
	Bulk Sediment	TCLT-PV 22.9	9.59		pH
	Bulk Sediment	TCLT-PV 23.8	9.71		pH
	Bulk Sediment	TCLT-PV 24.3	9.76		pH
	Bulk Sediment	TCLT-PV 25.3	9.78		pH
	Bulk Sediment	TCLT-PV 25.9	9.91		pH
	Bulk Sediment	TCLT-PV 26.9	9.83		pH
	Bulk Sediment	TCLT-PV 27.4	9.82		pH
	Bulk Sediment	TCLT-PV 28.4	9.79		pH
	Bulk Sediment	TCLT-PV 29.1	9.83		pH
	Bulk Sediment	TCLT-PV 30	9.68		pH
	Bulk Sediment	TCLT-PV 32.9	9.81		pH

Station	Sample ID	Concentration	Flag	Units
pH in CaCl2				
Surface Samples				
TF-20	TF-20	7.43		pH
TF-21	TF-21A	6.46		pH
TF-22	TF-22A	7.51		pH
TF-23	TF-23	7.53		pH
Subsurface Samples				
TF-22	TF-22B	8.21		pH
TF-22	TF-22C	8.22		pH
Bank Samples				
B-12	B-12	7.28		pH
B-13	B-13	7.16		pH
B-14	B-14	7.05		pH
B-15	B-15	7.23		pH
B-16	B-16	7.11		pH
B-17	B-17	7.63		pH
B-18	B-18	7.23		pH
B-19	B-19	7.38		pH
Sulfide				
Contaminant Mobility Samples				
Bulk Sediment	TCLT-PV 08	0.07		mg/L
Bulk Sediment	TCLT-PV 27.4	0.00		mg/L
Bulk Sediment	TCLT-PV 28.4	0.00		mg/L
Bulk Sediment	TCLT-PV 29.1	0.00		mg/L
Bulk Sediment	TCLT-PV 30	0.00		mg/L
Bulk Sediment	TCLT-PV 32.9	0.00		mg/L
Total Solids				
Surface Samples				
A	A	57.70		%
C	C	75.70		%
F	F	70.00		%
GS-1	GS-1	100.00		%
GS-10	GS-10	69.00		%
GS-12	GS-12	68.60		%
GS-13	GS-13	89.00		%
GS-14	GS-14	67.20		%
GS-2	GS-2	82.70		%
GS-5	GS-5	81.20		%
GS-6	GS-6	88.80		%
GS-7	GS-7	99.60		%
GS-8	GS-8	83.20		%
HC-2	HC-2	43.50		%
MW-1(a)	MW-1(a)	67.40		%

	Station	Sample ID	Concentration	Flag	Units
	MW016	MWSS016R1	55.00		%
	MW017	MWSS017R1	42.00		%
	MW018	MWSS018R1	53.00		%
	MW019	MWSS019R1	47.00		%
	MW020	MWSS020R1	69.00		%
	MW021	MWSS021R1	48.00		%
	MW022	MWSS022R1	60.00		%
	MW023	MWSS023R1	66.00		%
	MW024	MWSS024R1	42.00		%
	MW025	MWSS025R1	50.00		%
	MW026	MWSS026R1	62.00		%
	MW026	MWSS026S1	64.00		%
	MW027	MWSS027R1	48.00		%
	MW028	MWSS028R1	70.00		%
	MW029	MWSS029R1	48.00		%
	MW030	MWSS030R1	46.00		%
	MW031	MWSS031R1	40.00		%
	MW032	MWSS032R1	64.00		%
	MW034	MWSS034R1	55.00		%
	MW035	MWSS035R1	54.00		%
	MW037	MWSS037R1	49.00		%
	MW039	MWST039R1	66.00		%
	MW040	MWSS040R1	66.00		%
	MW040	MWST040R1	65.00		%
	MW040	MWST040S1	56.00		%
	MW042	MWST042R1	55.00		%
	MW043	MWST043R1	62.00		%
	MW044	MWST044R1	41.00		%
	MW045	MWST045R1	51.00		%
	MW047	MWST047R1	38.00		%
	MW048	MWST048R1	55.00		%
	MW049	MWST049R1	63.00		%
	MW051	MWST051R1	50.00		%
	MW052	MWST052R1	55.00		%
	MW054	MWST054R1	40.00		%
	MW055	MWSS055R1	47.00		%
	TF-20	TF-20	49.00		%
	TF-21	TF-21A	47.00		%
	TF-22	TF-22A	43.00		%
	TF-23	TF-23	39.00		%
Subsurface Samples					
	F	F	81.50		%
	MW-1	1	62.70		%
	MW-1	2	65.60		%
	MW024	MWCS024R2A	68.00		%
	MW024	MWCS024R3A	74.00		%

	Station	Sample ID	Concentration	Flag	Units
	MW025	MWCS025R2A	63.00		%
	MW025	MWCS025R3A	80.00		%
	MW025	MWCS025R4A	80.00		%
	MW026	MWCS026R2A	67.00		%
	MW026	MWCS026R3A	74.00		%
	MW026	MWCS026R4A	75.00		%
	MW027	MWCS027R2A	54.00		%
	MW027	MWCS027R3A	70.00		%
	MW027	MWCS027R4A	72.00		%
	MW028	MWCS028R2A	76.00		%
	MW028	MWCS028R3A	78.00		%
	MW028	MWCS028R4A	73.00		%
	MW029	MWCS029R2A	74.00		%
	MW029	MWCS029R3A	77.00		%
	MW029	MWCS029R4A	75.00		%
	MW030	MWCS030R2A	57.00		%
	MW030	MWCS030R3A	81.00		%
	MW030	MWCS030S2A	63.00		%
	MW031	MWCS031R2A	64.00		%
	MW031	MWCS031R3A	66.00		%
	MW031	MWCS031R4A	82.00		%
	MW034	MWCS034R2A	73.00		%
	MW034	MWCS034R3A	77.00		%
	MW034	MWCS034R4A	72.00		%
	MW035	MWCS035R2A	76.00		%
	MW035	MWCS035R3A	73.00		%
	MW035	MWCS035R4A	73.00		%
	MW035	MWCS035S4A	75.00		%
	MW037	MWCS037R2A	77.00		%
	MW037	MWCS037R3A	79.00		%
	MW037	MWCS037R4A	72.00		%
	MW040	MWCS040R2A	75.00		%
	MW040	MWCS040R3A	79.00		%
	MW040	MWCS040R4A	86.00		%
	MW041	MWCT041R2	55.00		%
	MW046	MWCT046R2	52.00		%
	MW050	MWCT050R2	61.00		%
	MW053	MWCT053R2	58.00		%
	TF-22	TF-22B	47.00		%
	TF-22	TF-22C	51.00		%
Bank Samples					
	B-12	B-12	94.00		%
	B-13	B-13	94.00		%
	B-14	B-14	71.00		%
	B-15	B-15	75.00		%
	B-16	B-16	91.00		%

Station	Sample ID	Concentration	Flag	Units
B-17	B-17	71.00		%
B-18	B-18	92.00		%
B-19	B-19	69.00		%
MW001	MWSB001R1	60.00		%
MW002	MWSB002R1	63.00		%
MW008	MWSB008R1	63.00		%
MW008	MWSB008S1	50.00		%
MW008-SP	MWSB008R1 SP	72.00		%
MW009	MWSB009R1	47.00		%
MW009-SP	MWSB009R1 SP	44.00		%
MW012	MWSB012R1	62.00		%
MW013	MWSB013R1	76.00		%
MW014	MWSB014R1	71.00		%
MW015	MWSB015R1	52.00		%
MW015	MWSB015S1	70.00		%
MW03a	MWSB03aR1	51.00		%
MW03b	MWSB03bR1	57.00		%
MW04a	MWSB04aR1	61.00		%
MW04b	MWSB04bR1	64.00		%
MW04b-SP	MWSB04bR1 SP	76.00		%
MW10a	MWSB10aR1	73.00		%
MW10b	MWSB10bR1	68.00		%
MW10c	MWSB10cR1	49.00		%
MW11a	MWSB11aR1	51.00		%
MW11a-SP	MWSB11aR1 SP	57.00		%
MW11b	MWSB11bR1	70.00		%
Total Sulfides				
Surface Samples				
MW016	MWSS016R1	32.00		mg/kg
MW017	MWSS017R1	7.00		mg/kg
MW018	MWSS018R1	180.00		mg/kg
MW019	MWSS019R1	230.00		mg/kg
MW020	MWSS020R1	73.00		mg/kg
MW021	MWSS021R1	53.00		mg/kg
MW022	MWSS022R1	167.00		mg/kg
MW023	MWSS023R1	14.00		mg/kg
MW024	MWSS024R1	723.00		mg/kg
MW025	MWSS025R1	49.50		mg/kg
MW026	MWSS026R1	148.00		mg/kg
MW026	MWSS026S1	80.10		mg/kg
MW027	MWSS027R1	517.00		mg/kg
MW028	MWSS028R1	162.00		mg/kg
MW029	MWSS029R1	962.00		mg/kg
MW030	MWSS030R1	1080.00		mg/kg
MW031	MWSS031R1	302.00		mg/kg
MW032	MWSS032R1	1180.00		mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW034	MWSS034R1	667.00		mg/kg
	MW035	MWSS035R1	279.00		mg/kg
	MW037	MWSS037R1	178.00		mg/kg
	MW039	MWST039R1	13.00		mg/kg
	MW040	MWSS040R1	0.50	UND	mg/kg
	MW040	MWST040R1	5.00		mg/kg
	MW040	MWST040S1	4.00		mg/kg
	MW042	MWST042R1	224.00		mg/kg
	MW043	MWST043R1	6.00		mg/kg
	MW044	MWST044R1	39.00		mg/kg
	MW045	MWST045R1	211.00		mg/kg
	MW047	MWST047R1	620.00		mg/kg
	MW048	MWST048R1	37.00		mg/kg
	MW049	MWST049R1	252.00		mg/kg
	MW051	MWST051R1	56.00		mg/kg
	MW052	MWST052R1	190.00		mg/kg
	MW054	MWST054R1	275.00		mg/kg
	MW055	MWSS055R1	694.00		mg/kg
	TF-20	TF-20	2070.00		mg/kg
	TF-21	TF-21A	50.00		mg/kg
	TF-22	TF-22A	1820.00		mg/kg
	TF-23	TF-23	601.00		mg/kg
Subsurface Samples					
	MW024	MWCS024R2A	12.20		mg/kg
	MW024	MWCS024R3A	5.20		mg/kg
	MW025	MWCS025R2A	792.00		mg/kg
	MW025	MWCS025R3A	54.30		mg/kg
	MW025	MWCS025R4A	51.70		mg/kg
	MW026	MWCS026R2A	174.00		mg/kg
	MW026	MWCS026R3A	260.00		mg/kg
	MW026	MWCS026R4A	186.00		mg/kg
	MW027	MWCS027R2A	181.00		mg/kg
	MW027	MWCS027R3A	257.00		mg/kg
	MW027	MWCS027R4A	120.00		mg/kg
	MW028	MWCS028R2A	49.60		mg/kg
	MW028	MWCS028R3A	38.10		mg/kg
	MW028	MWCS028R4A	93.50		mg/kg
	MW029	MWCS029R2A	32.10		mg/kg
	MW029	MWCS029R3A	67.10		mg/kg
	MW029	MWCS029R4A	36.30		mg/kg
	MW030	MWCS030R2A	657.00		mg/kg
	MW030	MWCS030R3A	54.40		mg/kg
	MW030	MWCS030S2A	620.00		mg/kg
	MW031	MWCS031R2A	727.00		mg/kg
	MW031	MWCS031R3A	113.00		mg/kg
	MW031	MWCS031R4A	2.60		mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW034	MWCS034R2A	30.20		mg/kg
	MW034	MWCS034R3A	33.00		mg/kg
	MW034	MWCS034R4A	57.20		mg/kg
	MW035	MWCS035R2A	70.70		mg/kg
	MW035	MWCS035R3A	54.30		mg/kg
	MW035	MWCS035R4A	46.20		mg/kg
	MW035	MWCS035S4A	69.40		mg/kg
	MW037	MWCS037R2A	69.00		mg/kg
	MW037	MWCS037R3A	6.40		mg/kg
	MW037	MWCS037R4A	4.10		mg/kg
	MW040	MWCS040R2A	1.80		mg/kg
	MW040	MWCS040R3A	17.40		mg/kg
	MW040	MWCS040R4A	19.90		mg/kg
	MW041	MWCT041R2	626.00		mg/kg
	MW046	MWCT046R2	34.00		mg/kg
	MW050	MWCT050R2	826.00		mg/kg
	MW053	MWCT053R2	83.00		mg/kg
	TF-22	TF-22B	206.00		mg/kg
Bank Samples					
	B-12	B-12	98.00	J	mg/kg
	B-13	B-13	24.00	UJ	mg/kg
	B-14	B-14	21.00	UJ	mg/kg
	B-15	B-15	22.00	UJ	mg/kg
	B-16	B-16	26.00	UJ	mg/kg
	B-17	B-17	30.00	UJ	mg/kg
	B-18	B-18	24.00	U	mg/kg
	B-19	B-19	19.00	U	mg/kg
	MW001	MWSB001R1	719.00		mg/kg
	MW002	MWSB002R1	183.00		mg/kg
	MW008	MWSB008R1	982.00		mg/kg
	MW008	MWSB008S1	1230.00		mg/kg
	MW008-SP	MWSB008R1 SP	7.80		mg/kg
	MW009	MWSB009R1	770.00		mg/kg
	MW009-SP	MWSB009R1 SP	663.00		mg/kg
	MW012	MWSB012R1	2.00		mg/kg
	MW013	MWSB013R1	70.00		mg/kg
	MW014	MWSB014R1	3.00		mg/kg
	MW015	MWSB015R1	41.60		mg/kg
	MW015	MWSB015S1	114.00		mg/kg
	MW03a	MWSB03aR1	3.90		mg/kg
	MW03b	MWSB03bR1	135.00		mg/kg
	MW04a	MWSB04aR1	527.00		mg/kg
	MW04b	MWSB04bR1	344.00		mg/kg
	MW04b-SP	MWSB04bR1 SP	223.00		mg/kg
	MW10a	MWSB10aR1	5.00		mg/kg
	MW10b	MWSB10bR1	6.00		mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW10c	MWSB10cR1	7.00		mg/kg
	MW11a	MWSB11aR1	4.00		mg/kg
	MW11a-SP	MWSB11aR1 SP	119.00		mg/kg
	MW11b	MWSB11bR1	199.00		mg/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	1560.00		mg/kg
Turbidity					
Contaminant Mobility Samples					
	Bulk Sediment	TCLT-PV 10	34.70		NTU
	Bulk Sediment	TCLT-PV 11	66.90		NTU
	Bulk Sediment	TCLT-PV 11.5	71.40		NTU
	Bulk Sediment	TCLT-PV 12.8	72.80		NTU
	Bulk Sediment	TCLT-PV 13.4	98.00		NTU
	Bulk Sediment	TCLT-PV 14.4	106.70		NTU
	Bulk Sediment	TCLT-PV 14.9	108.80		NTU
	Bulk Sediment	TCLT-PV 15.8	114.50		NTU
	Bulk Sediment	TCLT-PV 16.5	102.10		NTU
	Bulk Sediment	TCLT-PV 17.5	92.00		NTU
	Bulk Sediment	TCLT-PV 18	82.00		NTU
	Bulk Sediment	TCLT-PV 19	76.50		NTU
	Bulk Sediment	TCLT-PV 19.6	75.60		NTU
	Bulk Sediment	TCLT-PV 20.6	88.20		NTU
	Bulk Sediment	TCLT-PV 21.2	90.50		NTU
	Bulk Sediment	TCLT-PV 22.2	85.70		NTU
	Bulk Sediment	TCLT-PV 22.9	74.70		NTU
	Bulk Sediment	TCLT-PV 23.8	81.30		NTU
	Bulk Sediment	TCLT-PV 24.3	80.60		NTU
	Bulk Sediment	TCLT-PV 25.3	79.50		NTU
	Bulk Sediment	TCLT-PV 25.9	72.60		NTU
	Bulk Sediment	TCLT-PV 26.9	80.50		NTU
	Bulk Sediment	TCLT-PV 27.4	75.40		NTU
	Bulk Sediment	TCLT-PV 28.4	72.30		NTU
	Bulk Sediment	TCLT-PV 29.1	57.80		NTU
	Bulk Sediment	TCLT-PV 30	52.70		NTU
	Bulk Sediment	TCLT-PV 32.9	39.70		NTU
Total Organic Carbon					
TOC					
Surface Samples					
	MW016	MWSS016R1	3.34		%
	MW017	MWSS017R1	2.70		%
	MW018	MWSS018R1	5.89		%
	MW019	MWSS019R1	3.42		%
	MW020	MWSS020R1	0.95		%
	MW021	MWSS021R1	2.66		%

Appendix D.1 - Chemical and Physical Data

Station	Sample ID	Concentration	Flag	Units
MW022	MWSS022R1	4.35		%
MW023	MWSS023R1	1.66		%
MW024	MWSS024R1	4.42		%
MW025	MWSS025R1	3.03		%
MW026	MWSS026R1	2.44		%
MW026	MWSS026S1	3.08		%
MW027	MWSS027R1	3.32		%
MW028	MWSS028R1	1.26		%
MW029	MWSS029R1	3.02		%
MW030	MWSS030R1	3.61		%
MW031	MWSS031R1	6.34		%
MW032	MWSS032R1	2.40		%
MW034	MWSS034R1	2.95		%
MW035	MWSS035R1	2.71		%
MW037	MWSS037R1	4.98		%
MW039	MWST039R1	2.98		%
MW040	MWST040R1	1.44		%
MW040	MWST040S1	1.71		%
MW042	MWST042R1	6.17		%
MW043	MWST043R1	2.26		%
MW044	MWST044R1	5.50		%
MW045	MWST045R1	5.27		%
MW047	MWST047R1	5.23		%
MW048	MWST048R1	2.79		%
MW049	MWST049R1	1.65		%
MW051	MWST051R1	7.82		%
MW052	MWST052R1	3.32		%
MW054	MWST054R1	13.00		%
MW055	MWSS055R1	3.39		%
Subsurface Samples				
MW024	MWCS024R2A	5.08		%
MW024	MWCS024R3A	0.83		%
MW025	MWCS025R2A	3.79		%
MW025	MWCS025R3A	0.32		%
MW025	MWCS025R4A	0.51		%
MW026	MWCS026R2A	0.98		%
MW026	MWCS026R3A	0.43		%
MW026	MWCS026R4A	0.40		%
MW027	MWCS027R2A	5.95		%
MW027	MWCS027R3A	1.43		%
MW027	MWCS027R4A	0.65		%
MW028	MWCS028R2A	1.47		%
MW028	MWCS028R3A	0.75		%
MW028	MWCS028R4A	1.41		%
MW029	MWCS029R2A	0.36		%
MW029	MWCS029R3A	0.38		%

Station	Sample ID	Concentration	Flag	Units
MW029	MWCS029R4A	0.45		%
MW030	MWCS030R2A	3.26		%
MW030	MWCS030R3A	6.03		%
MW030	MWCS030S2A	2.96		%
MW031	MWCS031R2A	5.86		%
MW031	MWCS031R3A	3.39		%
MW031	MWCS031R4A	0.49		%
MW034	MWCS034R2A	1.69		%
MW034	MWCS034R3A	0.45		%
MW034	MWCS034R4A	0.91		%
MW035	MWCS035R2A	1.50		%
MW035	MWCS035R3A	0.67		%
MW035	MWCS035R4A	0.57		%
MW035	MWCS035S4A	0.57		%
MW037	MWCS037R2A	2.92		%
MW037	MWCS037R3A	0.32		%
MW037	MWCS037R4A	0.42		%
MW040	MWCS040R2A	3.92		%
MW040	MWCS040R3A	0.67		%
MW040	MWCS040R4A	0.28		%
MW041	MWCT041R2	4.24		%
MW046	MWCT046R2	3.67		%
MW050	MWCT050R2	4.53		%
MW053	MWCT053R2	2.66		%
Bank Samples				
MW001	MWSB001R1	2.00		%
MW002	MWSB002R1	1.00		%
MW008	MWSB008R1	2.59		%
MW008	MWSB008S1	1.57		%
MW008-SP	MWSB008R1 SP	3.16		%
MW009	MWSB009R1	3.29		%
MW009-SP	MWSB009R1 SP	3.60		%
MW012	MWSB012R1	4.86		%
MW013	MWSB013R1	0.52		%
MW014	MWSB014R1	1.70		%
MW015	MWSB015R1	1.49		%
MW015	MWSB015S1	1.80		%
MW03a	MWSB03aR1	2.85		%
MW03b	MWSB03bR1	3.12		%
MW04a	MWSB04aR1	1.22		%
MW04b	MWSB04bR1	3.50		%
MW04b-SP	MWSB04bR1 SP	2.69		%
MW10a	MWSB10aR1	1.37		%
MW10b	MWSB10bR1	1.72		%
MW10c	MWSB10cR1	2.15		%
MW11a	MWSB11aR1	0.85		%

	Station	Sample ID	Concentration	Flag	Units
	MW11a-SP	MWSB11aR1 SP	1.72		%
	MW11b	MWSB11bR1	1.79		%
Grain size					
Percent Clay					
Surface Samples					
	MW016	MWSS016R1	11.90		%
	MW017	MWSS017R1	12.70		%
	MW018	MWSS018R1	10.40		%
	MW019	MWSS019R1	7.90		%
	MW020	MWSS020R1	7.80		%
	MW021	MWSS021R1	13.20		%
	MW022	MWSS022R1	4.70		%
	MW023	MWSS023R1	4.80		%
	MW024	MWSS024R1	14.70		%
	MW025	MWSS025R1	18.40		%
	MW026	MWSS026R1	11.40		%
	MW027	MWSS027R1	16.90		%
	MW028	MWSS028R1	5.10		%
	MW029	MWSS029R1	17.20		%
	MW030	MWSS030R1	16.90		%
	MW031	MWSS031R1	13.20		%
	MW032	MWSS032R1	7.90		%
	MW034	MWSS034R1	16.40		%
	MW035	MWSS035R1	8.20		%
	MW037	MWSS037R1	10.10		%
	MW039	MWST039R1	8.10		%
	MW040	MWSS040R1	4.10		%
	MW040	MWST040R1	4.80		%
	MW042	MWST042R1	9.10		%
	MW043	MWST043R1	7.80		%
	MW044	MWST044R1	13.60		%
	MW045	MWST045R1	9.60		%
	MW047	MWST047R1	12.30		%
	MW048	MWST048R1	8.80		%
	MW049	MWST049R1	5.60		%
	MW051	MWST051R1	13.20		%
	MW052	MWST052R1	9.10		%
	MW054	MWST054R1	16.20		%
	MW055	MWSS055R1	18.20		%
Subsurface Samples					
	HC-2	S-1	12.00		%
	HC-2	S-2	7.00		%
	HC-2	S-3	33.00		%
	MW024	MWCS024R2A	8.60		%
	MW024	MWCS024R3A	4.00		%

	Station	Sample ID	Concentration	Flag	Units
	MW025	MWCS025R2A	10.00		%
	MW025	MWCS025R3A	2.70		%
	MW025	MWCS025R4A	4.00		%
	MW026	MWCS026R2A	16.10		%
	MW026	MWCS026R3A	6.10		%
	MW026	MWCS026R4A	10.40		%
	MW027	MWCS027R2A	14.10		%
	MW027	MWCS027R3A	13.80		%
	MW027	MWCS027R4A	7.40		%
	MW028	MWCS028R2A	2.90		%
	MW028	MWCS028R3A	2.00		%
	MW028	MWCS028R4A	11.20		%
	MW029	MWCS029R2A	2.70		%
	MW029	MWCS029R3A	6.50		%
	MW029	MWCS029R4A	4.40		%
	MW030	MWCS030R2A	20.60		%
	MW030	MWCS030R3A	3.30		%
	MW030	MWCS030S2A	18.30		%
	MW031	MWCS031R2A	7.80		%
	MW031	MWCS031R3A	11.40		%
	MW031	MWCS031R4A	2.20		%
	MW034	MWCS034R2A	7.40		%
	MW034	MWCS034R3A	5.40		%
	MW034	MWCS034R4A	3.70		%
	MW035	MWCS035R2A	5.50		%
	MW035	MWCS035R3A	7.60		%
	MW035	MWCS035R4A	4.80		%
	MW035	MWCS035S4A	5.40		%
	MW037	MWCS037R2A	2.20		%
	MW037	MWCS037R3A	5.70		%
	MW037	MWCS037R4A	4.80		%
	MW040	MWCS040R2A	5.30		%
	MW040	MWCS040R3A	7.00		%
	MW040	MWCS040R4A	2.20		%
	MW041	MWCT041R2	9.10		%
	MW046	MWCT046R2	14.10		%
	MW050	MWCT050R2	12.60		%
	MW053	MWCT053R2	10.50		%
Bank Samples					
	MW001	MWSB001R1	3.40		%
	MW002	MWSB002R1	5.00		%
	MW008	MWSB008R1	4.40		%
	MW008-SP	MWSB008R1 SP	2.70		%
	MW009	MWSB009R1	8.80		%
	MW009-SP	MWSB009R1 SP	11.40		%
	MW012	MWSB012R1	4.50		%

	Station	Sample ID	Concentration	Flag	Units
	MW013	MWSB013R1	2.10		%
	MW014	MWSB014R1	0.60		%
	MW015	MWSB015R1	3.50		%
	MW03a	MWSB03aR1	3.70		%
	MW03b	MWSB03bR1	4.20		%
	MW04a	MWSB04aR1	2.40		%
	MW04b	MWSB04bR1	4.80		%
	MW04b-SP	MWSB04bR1 SP	2.00		%
	MW10a	MWSB10aR1	4.70		%
	MW10b	MWSB10bR1	5.50		%
	MW10c	MWSB10cR1	4.50		%
	MW11a	MWSB11aR1	1.60		%
	MW11a-SP	MWSB11aR1 SP	1.70		%
	MW11b	MWSB11bR1	4.10		%
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	9.00		%
Percent Fines					
Surface Samples					
	A	A	45.40		%
	C	C	16.00		%
	F	F	42.10		%
	GS-1	GS-1	5.70		%
	GS-10	GS-10	34.40		%
	GS-12	GS-12	18.10		%
	GS-13	GS-13	11.30		%
	GS-14	GS-14	22.50		%
	GS-2	GS-2	10.70		%
	GS-5	GS-5	13.20		%
	GS-6	GS-6	13.50		%
	GS-7	GS-7	3.70		%
	GS-8	GS-8	14.20		%
	HC-2	HC-2	69.40		%
	MW-1(a)	MW-1(a)	12.80		%
	MW016	MWSS016R1	50.50		%
	MW017	MWSS017R1	69.20		%
	MW018	MWSS018R1	40.10		%
	MW019	MWSS019R1	38.70		%
	MW020	MWSS020R1	44.20		%
	MW021	MWSS021R1	59.80		%
	MW022	MWSS022R1	18.70		%
	MW023	MWSS023R1	32.00		%
	MW024	MWSS024R1	53.00		%
	MW025	MWSS025R1	60.00		%
	MW026	MWSS026R1	46.70		%
	MW027	MWSS027R1	58.30		%

	Station	Sample ID	Concentration	Flag	Units
	MW028	MWSS028R1	27.20		%
	MW029	MWSS029R1	64.70		%
	MW030	MWSS030R1	67.00		%
	MW031	MWSS031R1	43.00		%
	MW032	MWSS032R1	29.70		%
	MW034	MWSS034R1	68.70		%
	MW035	MWSS035R1	39.10		%
	MW037	MWSS037R1	61.70		%
	MW039	MWST039R1	40.30		%
	MW040	MWSS040R1	38.10		%
	MW040	MWST040R1	41.90		%
	MW042	MWST042R1	41.70		%
	MW043	MWST043R1	51.80		%
	MW044	MWST044R1	61.90		%
	MW045	MWST045R1	52.10		%
	MW047	MWST047R1	63.40		%
	MW048	MWST048R1	63.80		%
	MW049	MWST049R1	29.00		%
	MW051	MWST051R1	64.40		%
	MW052	MWST052R1	53.40		%
	MW054	MWST054R1	58.00		%
	MW055	MWSS055R1	69.90		%
	TF-20	TF-20	73.00		%
	TF-21	TF-21A	75.00		%
	TF-22	TF-22A	91.00		%
	TF-23	TF-23	78.00		%
Subsurface Samples					
	HC-2	S-1	65.00		%
	HC-2	S-2	78.00		%
	HC-2	S-3	99.00		%
	MW024	MWCS024R2A	54.80		%
	MW024	MWCS024R3A	44.70		%
	MW025	MWCS025R2A	49.00		%
	MW025	MWCS025R3A	12.70		%
	MW025	MWCS025R4A	21.00		%
	MW026	MWCS026R2A	86.90		%
	MW026	MWCS026R3A	56.20		%
	MW026	MWCS026R4A	60.60		%
	MW027	MWCS027R2A	44.20		%
	MW027	MWCS027R3A	82.90		%
	MW027	MWCS027R4A	62.40		%
	MW028	MWCS028R2A	21.60		%
	MW028	MWCS028R3A	10.50		%
	MW028	MWCS028R4A	69.80		%
	MW029	MWCS029R2A	26.10		%
	MW029	MWCS029R3A	51.00		%

	Station	Sample ID	Concentration	Flag	Units
	MW029	MWCS029R4A	32.90		%
	MW030	MWCS030R2A	80.30		%
	MW030	MWCS030R3A	23.40		%
	MW030	MWCS030S2A	74.30		%
	MW031	MWCS031R2A	31.30		%
	MW031	MWCS031R3A	52.30		%
	MW031	MWCS031R4A	13.80		%
	MW034	MWCS034R2A	44.40		%
	MW034	MWCS034R3A	49.60		%
	MW034	MWCS034R4A	32.80		%
	MW035	MWCS035R2A	31.00		%
	MW035	MWCS035R3A	65.60		%
	MW035	MWCS035R4A	52.90		%
	MW035	MWCS035S4A	60.80		%
	MW037	MWCS037R2A	10.30		%
	MW037	MWCS037R3A	31.80		%
	MW037	MWCS037R4A	34.20		%
	MW040	MWCS040R2A	41.60		%
	MW040	MWCS040R3A	60.20		%
	MW040	MWCS040R4A	11.30		%
	MW041	MWCT041R2	51.60		%
	MW046	MWCT046R2	52.00		%
	MW050	MWCT050R2	64.90		%
	MW053	MWCT053R2	82.60		%
	TF-22	TF-22B	89.00		%
	TF-22	TF-22C	76.00		%
Bank Samples					
	B-12	B-12	16.00		%
	B-13	B-13	19.00		%
	B-14	B-14	30.00		%
	B-15	B-15	25.00		%
	B-16	B-16	16.00		%
	B-17	B-17	17.00		%
	B-18	B-18	11.00		%
	B-19	B-19	20.00		%
	MW001	MWSB001R1	11.80		%
	MW002	MWSB002R1	11.90		%
	MW008	MWSB008R1	15.10		%
	MW008-SP	MWSB008R1 SP	11.10		%
	MW009	MWSB009R1	43.00		%
	MW009-SP	MWSB009R1 SP	64.10		%
	MW012	MWSB012R1	19.60		%
	MW013	MWSB013R1	5.40		%
	MW014	MWSB014R1	3.70		%
	MW015	MWSB015R1	15.70		%
	MW03a	MWSB03aR1	10.70		%

Station	Sample ID	Concentration	Flag	Units
MW03b	MWSB03bR1	18.80		%
MW04a	MWSB04aR1	12.30		%
MW04b	MWSB04bR1	20.90		%
MW04b-SP	MWSB04bR1 SP	6.20		%
MW10a	MWSB10aR1	17.40		%
MW10b	MWSB10bR1	17.40		%
MW10c	MWSB10cR1	13.60		%
MW11a	MWSB11aR1	5.70		%
MW11a-SP	MWSB11aR1 SP	4.70		%
MW11b	MWSB11bR1	12.90		%
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	51.00		%
Percent Gravel				
Surface Samples				
MW016	MWSS016R1	25.30		%
MW017	MWSS017R1	3.00		%
MW018	MWSS018R1	18.20		%
MW019	MWSS019R1	8.60		%
MW020	MWSS020R1	2.60		%
MW021	MWSS021R1	1.10		%
MW022	MWSS022R1	59.80		%
MW023	MWSS023R1	0.00		%
MW024	MWSS024R1	9.00		%
MW025	MWSS025R1	1.70		%
MW026	MWSS026R1	19.70		%
MW027	MWSS027R1	1.50		%
MW028	MWSS028R1	45.30		%
MW029	MWSS029R1	1.80		%
MW030	MWSS030R1	3.00		%
MW031	MWSS031R1	3.10		%
MW032	MWSS032R1	3.50		%
MW034	MWSS034R1	0.50		%
MW035	MWSS035R1	4.40		%
MW037	MWSS037R1	2.00		%
MW039	MWST039R1	2.60		%
MW040	MWSS040R1	0.10		%
MW040	MWST040R1	0.00		%
MW042	MWST042R1	1.50		%
MW043	MWST043R1	0.20		%
MW044	MWST044R1	4.50		%
MW045	MWST045R1	1.60		%
MW047	MWST047R1	5.30		%
MW048	MWST048R1	0.30		%
MW049	MWST049R1	0.90		%
MW051	MWST051R1	5.30		%

Appendix D.1 - Chemical and Physical Data

	Station	Sample ID	Concentration	Flag	Units
	MW052	MWST052R1	0.40		%
	MW054	MWST054R1	11.20		%
	MW055	MWSS055R1	0.10		%
Subsurface Samples					
	HC-2	S-1	3.00		%
	HC-2	S-2	0.00		%
	HC-2	S-3	0.00		%
	MW024	MWCS024R2A	1.50		%
	MW024	MWCS024R3A	0.10		%
	MW025	MWCS025R2A	5.50		%
	MW025	MWCS025R3A	0.20		%
	MW025	MWCS025R4A	0.90		%
	MW026	MWCS026R2A	0.10		%
	MW026	MWCS026R3A	0.00		%
	MW026	MWCS026R4A	0.30		%
	MW027	MWCS027R2A	21.00		%
	MW027	MWCS027R3A	0.10		%
	MW027	MWCS027R4A	0.00		%
	MW028	MWCS028R2A	0.80		%
	MW028	MWCS028R3A	1.30		%
	MW028	MWCS028R4A	0.10		%
	MW029	MWCS029R2A	0.00		%
	MW029	MWCS029R3A	0.00		%
	MW029	MWCS029R4A	0.00		%
	MW030	MWCS030R2A	3.60		%
	MW030	MWCS030R3A	0.30		%
	MW030	MWCS030S2A	9.40		%
	MW031	MWCS031R2A	14.60		%
	MW031	MWCS031R3A	1.50		%
	MW031	MWCS031R4A	0.60		%
	MW034	MWCS034R2A	2.70		%
	MW034	MWCS034R3A	0.10		%
	MW034	MWCS034R4A	0.10		%
	MW035	MWCS035R2A	2.00		%
	MW035	MWCS035R3A	0.00		%
	MW035	MWCS035R4A	0.00		%
	MW035	MWCS035S4A	0.00		%
	MW037	MWCS037R2A	3.00		%
	MW037	MWCS037R3A	0.10		%
	MW037	MWCS037R4A	0.00		%
	MW040	MWCS040R2A	1.80		%
	MW040	MWCS040R3A	0.10		%
	MW040	MWCS040R4A	0.70		%
	MW041	MWCT041R2	1.30		%
	MW046	MWCT046R2	0.50		%
	MW050	MWCT050R2	1.00		%

	Station	Sample ID	Concentration	Flag	Units
	MW053	MWCT053R2	1.80		%
Bank Samples					
	MW001	MWSB001R1	13.50		%
	MW002	MWSB002R1	22.40		%
	MW008	MWSB008R1	36.10		%
	MW008-SP	MWSB008R1 SP	27.90		%
	MW009	MWSB009R1	11.00		%
	MW009-SP	MWSB009R1 SP	3.70		%
	MW012	MWSB012R1	14.60		%
	MW013	MWSB013R1	46.00		%
	MW014	MWSB014R1	54.70		%
	MW015	MWSB015R1	5.90		%
	MW03a	MWSB03aR1	14.80		%
	MW03b	MWSB03bR1	5.20		%
	MW04a	MWSB04aR1	8.80		%
	MW04b	MWSB04bR1	5.90		%
	MW04b-SP	MWSB04bR1 SP	6.10		%
	MW10a	MWSB10aR1	11.00		%
	MW10b	MWSB10bR1	38.70		%
	MW10c	MWSB10cR1	34.10		%
	MW11a	MWSB11aR1	24.50		%
	MW11a-SP	MWSB11aR1 SP	23.70		%
	MW11b	MWSB11bR1	31.60		%
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	2.00		%
Percent Sand					
Surface Samples					
	MW016	MWSS016R1	24.20		%
	MW017	MWSS017R1	27.90		%
	MW018	MWSS018R1	41.70		%
	MW019	MWSS019R1	52.70		%
	MW020	MWSS020R1	53.20		%
	MW021	MWSS021R1	39.10		%
	MW022	MWSS022R1	21.50		%
	MW023	MWSS023R1	68.00		%
	MW024	MWSS024R1	38.10		%
	MW025	MWSS025R1	38.30		%
	MW026	MWSS026R1	33.60		%
	MW027	MWSS027R1	40.20		%
	MW028	MWSS028R1	27.50		%
	MW029	MWSS029R1	33.50		%
	MW030	MWSS030R1	30.00		%
	MW031	MWSS031R1	53.90		%
	MW032	MWSS032R1	66.80		%
	MW034	MWSS034R1	30.80		%

	Station	Sample ID	Concentration	Flag	Units
	MW035	MWSS035R1	56.50		%
	MW037	MWSS037R1	36.30		%
	MW039	MWST039R1	57.10		%
	MW040	MWSS040R1	61.80		%
	MW040	MWST040R1	58.10		%
	MW042	MWST042R1	56.70		%
	MW043	MWST043R1	48.00		%
	MW044	MWST044R1	33.60		%
	MW045	MWST045R1	46.30		%
	MW047	MWST047R1	31.30		%
	MW048	MWST048R1	36.00		%
	MW049	MWST049R1	70.10		%
	MW051	MWST051R1	30.30		%
	MW052	MWST052R1	46.20		%
	MW054	MWST054R1	30.70		%
	MW055	MWSS055R1	30.00		%
Subsurface Samples					
	HC-2	S-1	32.00		%
	HC-2	S-2	22.00		%
	HC-2	S-3	1.00		%
	MW024	MWCS024R2A	43.70		%
	MW024	MWCS024R3A	55.20		%
	MW025	MWCS025R2A	45.40		%
	MW025	MWCS025R3A	87.10		%
	MW025	MWCS025R4A	78.10		%
	MW026	MWCS026R2A	13.10		%
	MW026	MWCS026R3A	43.80		%
	MW026	MWCS026R4A	39.10		%
	MW027	MWCS027R2A	34.80		%
	MW027	MWCS027R3A	17.00		%
	MW027	MWCS027R4A	37.60		%
	MW028	MWCS028R2A	77.60		%
	MW028	MWCS028R3A	88.20		%
	MW028	MWCS028R4A	30.10		%
	MW029	MWCS029R2A	73.90		%
	MW029	MWCS029R3A	49.00		%
	MW029	MWCS029R4A	67.10		%
	MW030	MWCS030R2A	16.10		%
	MW030	MWCS030R3A	76.40		%
	MW030	MWCS030S2A	16.40		%
	MW031	MWCS031R2A	54.10		%
	MW031	MWCS031R3A	46.20		%
	MW031	MWCS031R4A	85.60		%
	MW034	MWCS034R2A	52.90		%
	MW034	MWCS034R3A	50.30		%
	MW034	MWCS034R4A	67.10		%

	Station	Sample ID	Concentration	Flag	Units
	MW035	MWCS035R2A	67.00		%
	MW035	MWCS035R3A	34.40		%
	MW035	MWCS035R4A	47.10		%
	MW035	MWCS035S4A	39.20		%
	MW037	MWCS037R2A	86.70		%
	MW037	MWCS037R3A	68.10		%
	MW037	MWCS037R4A	65.80		%
	MW040	MWCS040R2A	56.60		%
	MW040	MWCS040R3A	39.70		%
	MW040	MWCS040R4A	88.10		%
	MW041	MWCT041R2	47.10		%
	MW046	MWCT046R2	47.50		%
	MW050	MWCT050R2	34.00		%
	MW053	MWCT053R2	15.70		%
Bank Samples					
	MW001	MWSB001R1	74.80		%
	MW002	MWSB002R1	65.70		%
	MW008	MWSB008R1	48.80		%
	MW008-SP	MWSB008R1 SP	60.90		%
	MW009	MWSB009R1	46.00		%
	MW009-SP	MWSB009R1 SP	32.10		%
	MW012	MWSB012R1	65.80		%
	MW013	MWSB013R1	48.60		%
	MW014	MWSB014R1	41.50		%
	MW015	MWSB015R1	78.40		%
	MW03a	MWSB03aR1	74.60		%
	MW03b	MWSB03bR1	76.10		%
	MW04a	MWSB04aR1	78.90		%
	MW04b	MWSB04bR1	73.20		%
	MW04b-SP	MWSB04bR1 SP	87.70		%
	MW10a	MWSB10aR1	71.50		%
	MW10b	MWSB10bR1	43.90		%
	MW10c	MWSB10cR1	52.30		%
	MW11a	MWSB11aR1	69.80		%
	MW11a-SP	MWSB11aR1 SP	71.60		%
	MW11b	MWSB11bR1	55.60		%
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	47.00		%
Percent Silt					
Surface Samples					
	MW016	MWSS016R1	38.60		%
	MW017	MWSS017R1	56.50		%
	MW018	MWSS018R1	29.70		%
	MW019	MWSS019R1	30.90		%
	MW020	MWSS020R1	36.40		%

Appendix D.1 - Chemical and Physical Data

Station	Sample ID	Concentration	Flag	Units
MW021	MWSS021R1	46.60		%
MW022	MWSS022R1	14.00		%
MW023	MWSS023R1	27.20		%
MW024	MWSS024R1	38.20		%
MW025	MWSS025R1	41.60		%
MW026	MWSS026R1	35.30		%
MW027	MWSS027R1	41.40		%
MW028	MWSS028R1	22.10		%
MW029	MWSS029R1	47.60		%
MW030	MWSS030R1	50.10		%
MW031	MWSS031R1	29.90		%
MW032	MWSS032R1	21.80		%
MW034	MWSS034R1	52.20		%
MW035	MWSS035R1	30.90		%
MW037	MWSS037R1	51.70		%
MW039	MWST039R1	32.20		%
MW040	MWSS040R1	34.00		%
MW040	MWST040R1	37.10		%
MW042	MWST042R1	32.60		%
MW043	MWST043R1	44.00		%
MW044	MWST044R1	48.30		%
MW045	MWST045R1	42.50		%
MW047	MWST047R1	51.10		%
MW048	MWST048R1	55.00		%
MW049	MWST049R1	23.30		%
MW051	MWST051R1	51.20		%
MW052	MWST052R1	44.30		%
MW054	MWST054R1	41.90		%
MW055	MWSS055R1	51.60		%
Subsurface Samples				
HC-2	S-1	53.00		%
HC-2	S-2	71.00		%
HC-2	S-3	66.00		%
MW024	MWCS024R2A	46.20		%
MW024	MWCS024R3A	40.60		%
MW025	MWCS025R2A	39.10		%
MW025	MWCS025R3A	10.00		%
MW025	MWCS025R4A	17.00		%
MW026	MWCS026R2A	70.80		%
MW026	MWCS026R3A	50.10		%
MW026	MWCS026R4A	50.20		%
MW027	MWCS027R2A	30.10		%
MW027	MWCS027R3A	69.10		%
MW027	MWCS027R4A	55.10		%
MW028	MWCS028R2A	18.70		%
MW028	MWCS028R3A	8.50		%

	Station	Sample ID	Concentration	Flag	Units
	MW028	MWCS028R4A	58.70		%
	MW029	MWCS029R2A	23.40		%
	MW029	MWCS029R3A	44.50		%
	MW029	MWCS029R4A	28.50		%
	MW030	MWCS030R2A	59.70		%
	MW030	MWCS030R3A	20.10		%
	MW030	MWCS030S2A	56.00		%
	MW031	MWCS031R2A	23.60		%
	MW031	MWCS031R3A	40.90		%
	MW031	MWCS031R4A	11.60		%
	MW034	MWCS034R2A	36.90		%
	MW034	MWCS034R3A	44.20		%
	MW034	MWCS034R4A	29.20		%
	MW035	MWCS035R2A	25.40		%
	MW035	MWCS035R3A	58.00		%
	MW035	MWCS035R4A	48.10		%
	MW035	MWCS035S4A	55.40		%
	MW037	MWCS037R2A	8.20		%
	MW037	MWCS037R3A	26.10		%
	MW037	MWCS037R4A	29.40		%
	MW040	MWCS040R2A	36.40		%
	MW040	MWCS040R3A	53.20		%
	MW040	MWCS040R4A	9.10		%
	MW041	MWCT041R2	42.50		%
	MW046	MWCT046R2	37.90		%
	MW050	MWCT050R2	52.30		%
	MW053	MWCT053R2	72.10		%
Bank Samples					
	MW001	MWSB001R1	8.40		%
	MW002	MWSB002R1	6.90		%
	MW008	MWSB008R1	10.70		%
	MW008-SP	MWSB008R1 SP	8.40		%
	MW009	MWSB009R1	34.20		%
	MW009-SP	MWSB009R1 SP	52.70		%
	MW012	MWSB012R1	15.10		%
	MW013	MWSB013R1	3.30		%
	MW014	MWSB014R1	3.10		%
	MW015	MWSB015R1	12.20		%
	MW03a	MWSB03aR1	7.00		%
	MW03b	MWSB03bR1	14.60		%
	MW04a	MWSB04aR1	9.90		%
	MW04b	MWSB04bR1	16.10		%
	MW04b-SP	MWSB04bR1 SP	4.20		%
	MW10a	MWSB10aR1	12.70		%
	MW10b	MWSB10bR1	11.90		%
	MW10c	MWSB10cR1	9.10		%

Station	Sample ID	Concentration	Flag	Units
MW11a	MWSB11aR1	4.10		%
MW11a-SP	MWSB11aR1 SP	3.00		%
MW11b	MWSB11bR1	8.80		%
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	42.00		%
Metals				
Antimony				
Surface Samples				
MW016	MWSS016R1	5.40	UE	mg/kg
MW017	MWSS017R1	6.10	UE	mg/kg
MW018	MWSS018R1	4.80	UE	mg/kg
MW019	MWSS019R1	5.40	UE	mg/kg
MW020	MWSS020R1	3.70	UE	mg/kg
MW021	MWSS021R1	5.40	UE	mg/kg
MW022	MWSS022R1	5.00		mg/kg
MW023	MWSS023R1	3.80	UE	mg/kg
MW024	MWSS024R1	6.20	U	mg/kg
MW025	MWSS025R1	5.10	U	mg/kg
MW026	MWSS026R1	15.60		mg/kg
MW026	MWSS026S1	26.20		mg/kg
MW027	MWSS027R1	5.40	UE	mg/kg
MW028	MWSS028R1	3.70	UG	mg/kg
MW029	MWSS029R1	6.10	G	mg/kg
MW030	MWSS030R1	5.80	UG	mg/kg
MW031	MWSS031R1	6.80	UG	mg/kg
MW032	MWSS032R1	12.10	E	mg/kg
MW034	MWSS034R1	4.60	UG	mg/kg
MW035	MWSS035R1	5.00	UG	mg/kg
MW037	MWSS037R1	5.60	U	mg/kg
MW039	MWST039R1	4.00	U	mg/kg
MW040	MWST040R1	3.90	U	mg/kg
MW040	MWST040S1	4.70	U	mg/kg
MW042	MWST042R1	4.60	U	mg/kg
MW043	MWST043R1	4.10	U	mg/kg
MW044	MWST044R1	6.70	U	mg/kg
MW045	MWST045R1	5.10	U	mg/kg
MW047	MWST047R1	6.80	U	mg/kg
MW048	MWST048R1	4.70	U	mg/kg
MW049	MWST049R1	4.20	U	mg/kg
MW051	MWST051R1	5.30	U	mg/kg
MW052	MWST052R1	4.70	U	mg/kg
MW054	MWST054R1	6.50	U	mg/kg
MW055	MWSS055R1	5.50	U	mg/kg

Station	Sample ID	Concentration	Flag	Units
Subsurface Samples				
MW024	MWCS024R2A	4.00	UG	mg/kg
MW024	MWCS024R3A	3.60	UG	mg/kg
MW025	MWCS025R2A	6.00	E	mg/kg
MW025	MWCS025R3A	3.40	UG	mg/kg
MW025	MWCS025R4A	3.40	UG	mg/kg
MW026	MWCS026R2A	4.10	UG	mg/kg
MW026	MWCS026R3A	3.70	UG	mg/kg
MW026	MWCS026R4A	3.40	UG	mg/kg
MW027	MWCS027R2A	467.00	E	mg/kg
MW027	MWCS027R3A	3.60	UG	mg/kg
MW027	MWCS027R4A	3.70	UG	mg/kg
MW028	MWCS028R2A	3.50	U	mg/kg
MW028	MWCS028R3A	3.50	U	mg/kg
MW028	MWCS028R4A	3.70	U	mg/kg
MW029	MWCS029R2A	3.50	U	mg/kg
MW029	MWCS029R3A	3.30	U	mg/kg
MW029	MWCS029R4A	3.60	U	mg/kg
MW030	MWCS030R2A	4.60	UG	mg/kg
MW030	MWCS030R3A	3.20	UG	mg/kg
MW030	MWCS030S2A	4.20	UG	mg/kg
MW031	MWCS031R2A	4.20	U	mg/kg
MW031	MWCS031R3A	3.80	U	mg/kg
MW031	MWCS031R4A	3.30	U	mg/kg
MW034	MWCS034R2A	3.60	U	mg/kg
MW034	MWCS034R3A	3.50	U	mg/kg
MW034	MWCS034R4A	3.50	U	mg/kg
MW035	MWCS035R2A	3.50	U	mg/kg
MW035	MWCS035R3A	3.50	U	mg/kg
MW035	MWCS035R4A	3.50	U	mg/kg
MW035	MWCS035S4A	3.40	U	mg/kg
MW037	MWCS037R2A	3.50	UG	mg/kg
MW037	MWCS037R3A	3.40	UG	mg/kg
MW037	MWCS037R4A	3.70	UG	mg/kg
MW040	MWCS040R2A	3.50	U	mg/kg
MW040	MWCS040R3A	3.40	U	mg/kg
MW040	MWCS040R4A	3.10	U	mg/kg
MW041	MWCT041R2	5.00	U	mg/kg
MW046	MWCT046R2	5.10	U	mg/kg
MW050	MWCT050R2	4.40	U	mg/kg
MW053	MWCT053R2	4.70	U	mg/kg
Bank Samples				
MW001	MWSB001R1	4.30	U	mg/kg
MW002	MWSB002R1	4.10	U	mg/kg
MW008	MWSB008R1	4.20	U	mg/kg
MW008	MWSB008S1	5.50	U	mg/kg

Station	Sample ID	Concentration	Flag	Units
MW008-SP	MWSB008R1 SP	3.50	U	mg/kg
MW009	MWSB009R1	8.80		mg/kg
MW009-SP	MWSB009R1 SP	5.80	U	mg/kg
MW012	MWSB012R1	13.30		mg/kg
MW013	MWSB013R1	15.10		mg/kg
MW014	MWSB014R1	27.00		mg/kg
MW015	MWSB015R1	4.90	U	mg/kg
MW015	MWSB015S1	3.80	U	mg/kg
MW03a	MWSB03aR1	4.90	U	mg/kg
MW03b	MWSB03bR1	4.40	U	mg/kg
MW04a	MWSB04aR1	4.10	U	mg/kg
MW04b	MWSB04bR1	4.00	U	mg/kg
MW04b-SP	MWSB04bR1 SP	3.30	U	mg/kg
MW10a	MWSB10aR1	35.00		mg/kg
MW10b	MWSB10bR1	36.10		mg/kg
MW10c	MWSB10cR1	62.50		mg/kg
MW11a	MWSB11aR1	5.50		mg/kg
MW11a-SP	MWSB11aR1 SP	20.30		mg/kg
MW11b	MWSB11bR1	4.40		mg/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	3.90	UG	mg/kg
Bulk Sediment	DPC-DRET-7298	5.00	U	ug/L
Bulk Sediment	DPC-DUPLICAT	5.00	U	ug/L
Bulk Sediment	DPC-METD-7298	23.40		ug/L
Bulk Sediment	DPC-METT-7298	24.80		ug/L
Bulk Sediment	DPC-WATD-7298	5.00	U	ug/L
Bulk Sediment	DPC-WATT-7298	5.00	U	ug/L
Bulk Sediment	TCLT RINSATE 5	0.00	U	mg/L
Bulk Sediment	TCLT-PV 01.5	0.00	U	mg/L
Bulk Sediment	TCLT-PV 03	0.00	U	mg/L
Bulk Sediment	TCLT-PV 05	0.00	U	mg/L
Bulk Sediment	TCLT-PV 06.3	0.00	U	mg/L
Bulk Sediment	TCLT-PV 08	0.00	U	mg/L
Bulk Sediment	TCLT-PV 10	0.00	U	mg/L
Bulk Sediment	TCLT-PV 11.5	0.00	U	mg/L
Bulk Sediment	TCLT-PV 13.4	0.00	U	mg/L
Bulk Sediment	TCLT-PV 14.9	0.00	U	mg/L
Bulk Sediment	TCLT-PV 16.5	0.00	U	mg/L
Bulk Sediment	TCLT-PV 18	0.00	U	mg/L
Bulk Sediment	TCLT-PV 19.6	0.00	U	mg/L
Bulk Sediment	TCLT-PV 21.2	0.00		mg/L
Bulk Sediment	TCLT-PV 22.9	0.00		mg/L
Bulk Sediment	TCLT-PV 24.3	0.00	U	mg/L
Bulk Sediment	TCLT-PV 25.9	0.00	U	mg/L
Bulk Sediment	TCLT-PV 27.4	0.00	U	mg/L
Bulk Sediment	TCLT-PV 29.1	0.00	U	mg/L

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	TCLT-PV 32.9	0.00	U	mg/L
Arsenic					
Surface Samples					
	MW016	MWSS016R1	13.40		mg/kg
	MW017	MWSS017R1	10.80		mg/kg
	MW018	MWSS018R1	15.70		mg/kg
	MW019	MWSS019R1	12.50		mg/kg
	MW020	MWSS020R1	5.10		mg/kg
	MW021	MWSS021R1	9.60		mg/kg
	MW022	MWSS022R1	32.20		mg/kg
	MW023	MWSS023R1	8.10		mg/kg
	MW024	MWSS024R1	22.30		mg/kg
	MW025	MWSS025R1	13.90		mg/kg
	MW026	MWSS026R1	70.00		mg/kg
	MW026	MWSS026S1	194.00		mg/kg
	MW027	MWSS027R1	19.60		mg/kg
	MW028	MWSS028R1	7.00		mg/kg
	MW029	MWSS029R1	44.90		mg/kg
	MW030	MWSS030R1	15.70		mg/kg
	MW031	MWSS031R1	15.90		mg/kg
	MW032	MWSS032R1	97.20		mg/kg
	MW034	MWSS034R1	12.80		mg/kg
	MW035	MWSS035R1	19.00		mg/kg
	MW037	MWSS037R1	10.00		mg/kg
	MW039	MWST039R1	7.60		mg/kg
	MW040	MWST040R1	5.80		mg/kg
	MW040	MWST040S1	6.30		mg/kg
	MW042	MWST042R1	12.30		mg/kg
	MW043	MWST043R1	7.40		mg/kg
	MW044	MWST044R1	21.40		mg/kg
	MW045	MWST045R1	12.90		mg/kg
	MW047	MWST047R1	16.40		mg/kg
	MW048	MWST048R1	8.60		mg/kg
	MW049	MWST049R1	5.60		mg/kg
	MW051	MWST051R1	13.00		mg/kg
	MW052	MWST052R1	8.40		mg/kg
	MW054	MWST054R1	15.30		mg/kg
	MW055	MWSS055R1	36.90		mg/kg
	TF-20	TF-20	17.00		mg/kg
	TF-21	TF-21A	25.00		mg/kg
	TF-22	TF-22A	27.00		mg/kg
	TF-23	TF-23	35.00		mg/kg
Subsurface Samples					
	HC-2	S-1	38.00		mg/kg
	HC-2	S-2	3.00		mg/kg

Appendix D.1 - Chemical and Physical Data

Station	Sample ID	Concentration	Flag	Units
HC-2	S-3	2.40		mg/kg
MW-1	1	13.60		mg/kg
MW-1	2	6.30		mg/kg
MW024	MWCS024R2A	13.80		mg/kg
MW024	MWCS024R3A	1.90		mg/kg
MW025	MWCS025R2A	37.00		mg/kg
MW025	MWCS025R3A	1.20		mg/kg
MW025	MWCS025R4A	1.40		mg/kg
MW026	MWCS026R2A	3.50		mg/kg
MW026	MWCS026R3A	1.20		mg/kg
MW026	MWCS026R4A	1.30		mg/kg
MW027	MWCS027R2A	130.00		mg/kg
MW027	MWCS027R3A	8.20		mg/kg
MW027	MWCS027R4A	1.90		mg/kg
MW028	MWCS028R2A	1.50		mg/kg
MW028	MWCS028R3A	0.93		mg/kg
MW028	MWCS028R4A	1.50		mg/kg
MW029	MWCS029R2A	1.10	*N	mg/kg
MW029	MWCS029R3A	1.30	*N	mg/kg
MW029	MWCS029R4A	1.20	*N	mg/kg
MW030	MWCS030R2A	7.40		mg/kg
MW030	MWCS030R3A	0.93		mg/kg
MW030	MWCS030S2A	5.60		mg/kg
MW031	MWCS031R2A	26.40		mg/kg
MW031	MWCS031R3A	5.40		mg/kg
MW031	MWCS031R4A	1.00		mg/kg
MW034	MWCS034R2A	6.20	*N	mg/kg
MW034	MWCS034R3A	0.99	*N	mg/kg
MW034	MWCS034R4A	1.10	*N	mg/kg
MW035	MWCS035R2A	12.60	*N	mg/kg
MW035	MWCS035R3A	1.50	*N	mg/kg
MW035	MWCS035R4A	1.40	*N	mg/kg
MW035	MWCS035S4A	1.20	*N	mg/kg
MW037	MWCS037R2A	4.40		mg/kg
MW037	MWCS037R3A	2.60		mg/kg
MW037	MWCS037R4A	1.90		mg/kg
MW040	MWCS040R2A	5.10		mg/kg
MW040	MWCS040R3A	2.30		mg/kg
MW040	MWCS040R4A	0.76		mg/kg
MW041	MWCT041R2	13.00		mg/kg
MW046	MWCT046R2	10.60		mg/kg
MW050	MWCT050R2	5.50		mg/kg
MW053	MWCT053R2	4.00		mg/kg
TF-22	TF-22B	35.00		mg/kg
TF-22	TF-22C	21.00		mg/kg

	Station	Sample ID	Concentration	Flag	Units
Bank Samples					
	B-12	B-12	76.00		mg/kg
	B-13	B-13	14.00		mg/kg
	B-14	B-14	26.00		mg/kg
	B-15	B-15	49.00		mg/kg
	B-16	B-16	24.00		mg/kg
	B-17	B-17	34.00		mg/kg
	B-18	B-18	11.00		mg/kg
	B-19	B-19	21.00		mg/kg
	MW001	MWSB001R1	25.60		mg/kg
	MW002	MWSB002R1	8.60		mg/kg
	MW008	MWSB008R1	8.40		mg/kg
	MW008	MWSB008S1	12.90		mg/kg
	MW008-SP	MWSB008R1 SP	9.20		mg/kg
	MW009	MWSB009R1	44.90		mg/kg
	MW009-SP	MWSB009R1 SP	39.20		mg/kg
	MW012	MWSB012R1	32.10		mg/kg
	MW013	MWSB013R1	53.50		mg/kg
	MW014	MWSB014R1	40.20		mg/kg
	MW015	MWSB015R1	8.70		mg/kg
	MW015	MWSB015S1	5.50		mg/kg
	MW03a	MWSB03aR1	15.80		mg/kg
	MW03b	MWSB03bR1	9.90		mg/kg
	MW04a	MWSB04aR1	5.20		mg/kg
	MW04b	MWSB04bR1	7.20		mg/kg
	MW04b-SP	MWSB04bR1 SP	3.80		mg/kg
	MW10a	MWSB10aR1	166.00		mg/kg
	MW10b	MWSB10bR1	130.00		mg/kg
	MW10c	MWSB10cR1	131.00		mg/kg
	MW11a	MWSB11aR1	17.20		mg/kg
	MW11a-SP	MWSB11aR1 SP	121.00		mg/kg
	MW11b	MWSB11bR1	19.20		mg/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	13.20	E	mg/kg
	Bulk Sediment	DPC-DRET-7298	5.00	U	ug/L
	Bulk Sediment	DPC-DUPLICAT	5.00	U	ug/L
	Bulk Sediment	DPC-METD-7298	5.00	U	ug/L
	Bulk Sediment	DPC-METT-7298	5.00	U	ug/L
	Bulk Sediment	DPC-WATD-7298	5.00	U	ug/L
	Bulk Sediment	DPC-WATT-7298	5.00	U	ug/L
	Bulk Sediment	TCLT RINSATE 5	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 01.5	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 03	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 05	0.00	UG	mg/L
	Bulk Sediment	TCLT-PV 06.3	0.00	UG	mg/L
	Bulk Sediment	TCLT-PV 08	0.00	U	mg/L

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	TCLT-PV 10	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 11.5	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 13.4	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 14.9	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 16.5	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 18	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 19.6	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 21.2	0.00		mg/L
	Bulk Sediment	TCLT-PV 22.9	0.00		mg/L
	Bulk Sediment	TCLT-PV 24.3	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 25.9	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 27.4	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 29.1	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 32.9	0.00	U	mg/L
Cadmium					
Surface Samples					
	MW016	MWSS016R1	0.46	U	mg/kg
	MW017	MWSS017R1	0.61	U	mg/kg
	MW018	MWSS018R1	0.48	U	mg/kg
	MW019	MWSS019R1	0.54	U	mg/kg
	MW020	MWSS020R1	0.37	U	mg/kg
	MW021	MWSS021R1	0.54	U	mg/kg
	MW022	MWSS022R1	0.81		mg/kg
	MW023	MWSS023R1	0.38	U	mg/kg
	MW024	MWSS024R1	0.70		mg/kg
	MW025	MWSS025R1	0.51	U	mg/kg
	MW026	MWSS026R1	0.68		mg/kg
	MW026	MWSS026S1	0.70		mg/kg
	MW027	MWSS027R1	0.54	U	mg/kg
	MW028	MWSS028R1	0.37	U	mg/kg
	MW029	MWSS029R1	0.78		mg/kg
	MW030	MWSS030R1	0.64		mg/kg
	MW031	MWSS031R1	0.68	U	mg/kg
	MW032	MWSS032R1	0.40	U	mg/kg
	MW034	MWSS034R1	0.52		mg/kg
	MW035	MWSS035R1	0.59		mg/kg
	MW037	MWSS037R1	0.56	U	mg/kg
	MW039	MWST039R1	0.40	U	mg/kg
	MW040	MWST040R1	0.39	U	mg/kg
	MW040	MWST040S1	0.47	U	mg/kg
	MW042	MWST042R1	0.46	U	mg/kg
	MW043	MWST043R1	0.41	U	mg/kg
	MW044	MWST044R1	0.78		mg/kg
	MW045	MWST045R1	0.51	U	mg/kg
	MW047	MWST047R1	0.87		mg/kg
	MW048	MWST048R1	0.52		mg/kg

Station	Sample ID	Concentration	Flag	Units
MW049	MWST049R1	0.42	U	mg/kg
MW051	MWST051R1	0.78		mg/kg
MW052	MWST052R1	0.52		mg/kg
MW054	MWST054R1	1.20		mg/kg
MW055	MWSS055R1	1.10		mg/kg
TF-20	TF-20	1.25	U	mg/kg
TF-21	TF-21A	0.85	U	mg/kg
TF-22	TF-22A	1.50		mg/kg
TF-23	TF-23	3.69		mg/kg
Subsurface Samples				
MW024	MWCS024R2A	0.40	U	mg/kg
MW024	MWCS024R3A	0.36	U	mg/kg
MW025	MWCS025R2A	0.88		mg/kg
MW025	MWCS025R3A	0.34	U	mg/kg
MW025	MWCS025R4A	0.34	U	mg/kg
MW026	MWCS026R2A	0.41	U	mg/kg
MW026	MWCS026R3A	0.37	U	mg/kg
MW026	MWCS026R4A	0.34	U	mg/kg
MW027	MWCS027R2A	4.70		mg/kg
MW027	MWCS027R3A	0.36	U	mg/kg
MW027	MWCS027R4A	0.37	U	mg/kg
MW028	MWCS028R2A	0.35	U	mg/kg
MW028	MWCS028R3A	0.35	U	mg/kg
MW028	MWCS028R4A	0.37	U	mg/kg
MW029	MWCS029R2A	0.35	U	mg/kg
MW029	MWCS029R3A	0.33	U	mg/kg
MW029	MWCS029R4A	0.36	U	mg/kg
MW030	MWCS030R2A	0.90		mg/kg
MW030	MWCS030R3A	0.32	U	mg/kg
MW030	MWCS030S2A	0.88		mg/kg
MW031	MWCS031R2A	0.64		mg/kg
MW031	MWCS031R3A	0.38	U	mg/kg
MW031	MWCS031R4A	0.33	U	mg/kg
MW034	MWCS034R2A	0.36	U	mg/kg
MW034	MWCS034R3A	0.35	U	mg/kg
MW034	MWCS034R4A	0.35	U	mg/kg
MW035	MWCS035R2A	0.35	U	mg/kg
MW035	MWCS035R3A	0.35	U	mg/kg
MW035	MWCS035R4A	0.35	U	mg/kg
MW035	MWCS035S4A	0.34	U	mg/kg
MW037	MWCS037R2A	0.35	U	mg/kg
MW037	MWCS037R3A	0.34	U	mg/kg
MW037	MWCS037R4A	0.37	U	mg/kg
MW040	MWCS040R2A	0.35	U	mg/kg
MW040	MWCS040R3A	0.34	U	mg/kg
MW040	MWCS040R4A	0.31	U	mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW041	MWCT041R2	0.63		mg/kg
	MW046	MWCT046R2	0.54		mg/kg
	MW050	MWCT050R2	0.44	U	mg/kg
	MW053	MWCT053R2	0.47	U	mg/kg
	TF-22	TF-22B	3.03		mg/kg
	TF-22	TF-22C	1.64		mg/kg
Bank Samples					
	B-12	B-12	1.80		mg/kg
	B-13	B-13	0.30		mg/kg
	B-14	B-14	1.00		mg/kg
	B-15	B-15	1.90		mg/kg
	B-16	B-16	1.00		mg/kg
	B-17	B-17	0.80		mg/kg
	B-18	B-18	0.70		mg/kg
	B-19	B-19	0.20		mg/kg
	MW001	MWSB001R1	0.43	U	mg/kg
	MW002	MWSB002R1	0.41	U	mg/kg
	MW008	MWSB008R1	0.42	U	mg/kg
	MW008	MWSB008S1	0.55	U	mg/kg
	MW008-SP	MWSB008R1 SP	0.35	U	mg/kg
	MW009	MWSB009R1	0.56	U	mg/kg
	MW009-SP	MWSB009R1 SP	0.86		mg/kg
	MW012	MWSB012R1	0.43	U	mg/kg
	MW013	MWSB013R1	0.37		mg/kg
	MW014	MWSB014R1	0.39		mg/kg
	MW015	MWSB015R1	0.49	U	mg/kg
	MW015	MWSB015S1	0.38	U	mg/kg
	MW03a	MWSB03aR1	0.49	U	mg/kg
	MW03b	MWSB03bR1	0.44	U	mg/kg
	MW04a	MWSB04aR1	0.41	U	mg/kg
	MW04b	MWSB04bR1	0.40	U	mg/kg
	MW04b-SP	MWSB04bR1 SP	0.33	U	mg/kg
	MW10a	MWSB10aR1	3.90		mg/kg
	MW10b	MWSB10bR1	3.20		mg/kg
	MW10c	MWSB10cR1	1.90		mg/kg
	MW11a	MWSB11aR1	0.51	U	mg/kg
	MW11a-SP	MWSB11aR1 SP	0.80		mg/kg
	MW11b	MWSB11bR1	0.42		mg/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	0.39	U	mg/kg
	Bulk Sediment	DPC-DRET-7298	0.50	U	ug/L
	Bulk Sediment	DPC-DUPLICAT	0.50	U	ug/L
	Bulk Sediment	DPC-METD-7298	0.50	U	ug/L
	Bulk Sediment	DPC-METT-7298	0.50	U	ug/L
	Bulk Sediment	DPC-WATD-7298	0.50	U	ug/L
	Bulk Sediment	DPC-WATT-7298	0.50	U	ug/L

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	TCLT RINSATE 5	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 01.5	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 03	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 05	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 06.3	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 08	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 10	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 11.5	0.00	UN	mg/L
	Bulk Sediment	TCLT-PV 13.4	0.00		mg/L
	Bulk Sediment	TCLT-PV 14.9	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 16.5	0.00		mg/L
	Bulk Sediment	TCLT-PV 18	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 19.6	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 21.2	0.00	E	mg/L
	Bulk Sediment	TCLT-PV 22.9	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 24.3	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 25.9	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 27.4	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 29.1	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 32.9	0.00	U	mg/L
Chromium					
Surface Samples					
	MW021	MWSS021R1	15.90		mg/kg
	MW054	MWST054R1	20.40		mg/kg
	TF-20	TF-20	26.00		mg/kg
	TF-21	TF-21A	33.00		mg/kg
	TF-22	TF-22A	32.00		mg/kg
	TF-23	TF-23	39.00		mg/kg
Subsurface Samples					
	MW053	MWCT053R2	15.30		mg/kg
	TF-22	TF-22B	62.00		mg/kg
	TF-22	TF-22C	38.00		mg/kg
Bank Samples					
	B-12	B-12	46.00	J	mg/kg
	B-13	B-13	18.00	J	mg/kg
	B-14	B-14	168.00	J	mg/kg
	B-15	B-15	1020.00	J	mg/kg
	B-16	B-16	83.00	J	mg/kg
	B-17	B-17	84.00	J	mg/kg
	B-18	B-18	26.00		mg/kg
	B-19	B-19	54.00		mg/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-DRET-7298	7.00	U	ug/L
	Bulk Sediment	DPC-DUPLICAT	7.00	U	ug/L

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	DPC-METD-7298	7.00	U	ug/L
	Bulk Sediment	DPC-METT-7298	7.00	U	ug/L
	Bulk Sediment	DPC-WATD-7298	7.00	U	ug/L
	Bulk Sediment	DPC-WATT-7298	7.00	U	ug/L
	Bulk Sediment	TCLT RINSATE 5	0.01	U	mg/L
	Bulk Sediment	TCLT-PV 01.5	0.01	U	mg/L
	Bulk Sediment	TCLT-PV 03	0.01	U	mg/L
	Bulk Sediment	TCLT-PV 05	0.01	U	mg/L
	Bulk Sediment	TCLT-PV 06.3	0.01	U	mg/L
	Bulk Sediment	TCLT-PV 08	0.01		mg/L
	Bulk Sediment	TCLT-PV 10	0.01	U	mg/L
	Bulk Sediment	TCLT-PV 11.5	0.01		mg/L
	Bulk Sediment	TCLT-PV 13.4	0.02		mg/L
	Bulk Sediment	TCLT-PV 14.9	0.02		mg/L
	Bulk Sediment	TCLT-PV 16.5	0.01		mg/L
	Bulk Sediment	TCLT-PV 18	0.02		mg/L
	Bulk Sediment	TCLT-PV 19.6	0.01		mg/L
	Bulk Sediment	TCLT-PV 21.2	0.02	U	mg/L
	Bulk Sediment	TCLT-PV 22.9	0.01	U	mg/L
	Bulk Sediment	TCLT-PV 24.3	0.01		mg/L
	Bulk Sediment	TCLT-PV 25.9	0.01		mg/L
	Bulk Sediment	TCLT-PV 27.4	0.01		mg/L
	Bulk Sediment	TCLT-PV 29.1	0.01	U	mg/L
	Bulk Sediment	TCLT-PV 32.9	0.01	U	mg/L
Copper					
Surface Samples					
	MW016	MWSS016R1	139.00	E	mg/kg
	MW017	MWSS017R1	83.20	E	mg/kg
	MW018	MWSS018R1	110.00	E	mg/kg
	MW019	MWSS019R1	77.50	E	mg/kg
	MW020	MWSS020R1	51.30	E	mg/kg
	MW021	MWSS021R1	117.00	E	mg/kg
	MW022	MWSS022R1	637.00		mg/kg
	MW023	MWSS023R1	68.20	E	mg/kg
	MW024	MWSS024R1	190.00		mg/kg
	MW025	MWSS025R1	174.00		mg/kg
	MW026	MWSS026R1	159.00		mg/kg
	MW026	MWSS026S1	157.00		mg/kg
	MW027	MWSS027R1	237.00	E	mg/kg
	MW028	MWSS028R1	60.00		mg/kg
	MW029	MWSS029R1	333.00		mg/kg
	MW030	MWSS030R1	247.00		mg/kg
	MW031	MWSS031R1	339.00		mg/kg
	MW032	MWSS032R1	1100.00	E	mg/kg
	MW034	MWSS034R1	176.00		mg/kg
	MW035	MWSS035R1	254.00		mg/kg

Station	Sample ID	Concentration	Flag	Units
MW037	MWSS037R1	130.00		mg/kg
MW039	MWST039R1	78.30		mg/kg
MW040	MWST040R1	62.40		mg/kg
MW040	MWST040S1	81.70		mg/kg
MW042	MWST042R1	105.00		mg/kg
MW043	MWST043R1	73.50		mg/kg
MW044	MWST044R1	167.00		mg/kg
MW045	MWST045R1	103.00		mg/kg
MW047	MWST047R1	175.00		mg/kg
MW048	MWST048R1	79.00		mg/kg
MW049	MWST049R1	53.60		mg/kg
MW051	MWST051R1	148.00		mg/kg
MW052	MWST052R1	97.60		mg/kg
MW054	MWST054R1	134.00		mg/kg
MW055	MWSS055R1	402.00		mg/kg
TF-20	TF-20	147.00	J	mg/kg
TF-21	TF-21A	174.00	J	mg/kg
TF-22	TF-22A	277.00	J	mg/kg
TF-23	TF-23	398.00	J	mg/kg
Subsurface Samples				
HC-2	S-1	200.00		mg/kg
HC-2	S-2	25.00		mg/kg
HC-2	S-3	37.00		mg/kg
MW-1	1	165.00		mg/kg
MW-1	2	70.00		mg/kg
MW024	MWCS024R2A	79.90		mg/kg
MW024	MWCS024R3A	16.30		mg/kg
MW025	MWCS025R2A	272.00		mg/kg
MW025	MWCS025R3A	10.00		mg/kg
MW025	MWCS025R4A	16.90		mg/kg
MW026	MWCS026R2A	32.80		mg/kg
MW026	MWCS026R3A	19.00		mg/kg
MW026	MWCS026R4A	16.20		mg/kg
MW027	MWCS027R2A	2900.00		mg/kg
MW027	MWCS027R3A	38.80		mg/kg
MW027	MWCS027R4A	22.10		mg/kg
MW028	MWCS028R2A	16.00		mg/kg
MW028	MWCS028R3A	10.00		mg/kg
MW028	MWCS028R4A	17.80		mg/kg
MW029	MWCS029R2A	12.50		mg/kg
MW029	MWCS029R3A	16.00		mg/kg
MW029	MWCS029R4A	16.10		mg/kg
MW030	MWCS030R2A	95.10		mg/kg
MW030	MWCS030R3A	10.00		mg/kg
MW030	MWCS030S2A	88.80		mg/kg
MW031	MWCS031R2A	1060.00		mg/kg

Station	Sample ID	Concentration	Flag	Units
MW031	MWCS031R3A	53.50		mg/kg
MW031	MWCS031R4A	9.30		mg/kg
MW034	MWCS034R2A	53.00		mg/kg
MW034	MWCS034R3A	15.00		mg/kg
MW034	MWCS034R4A	16.70		mg/kg
MW035	MWCS035R2A	91.30		mg/kg
MW035	MWCS035R3A	23.20		mg/kg
MW035	MWCS035R4A	18.60		mg/kg
MW035	MWCS035S4A	18.50		mg/kg
MW037	MWCS037R2A	47.90		mg/kg
MW037	MWCS037R3A	13.80		mg/kg
MW037	MWCS037R4A	15.00		mg/kg
MW040	MWCS040R2A	88.40		mg/kg
MW040	MWCS040R3A	18.60		mg/kg
MW040	MWCS040R4A	13.30		mg/kg
MW041	MWCT041R2	116.00		mg/kg
MW046	MWCT046R2	96.80		mg/kg
MW050	MWCT050R2	38.80		mg/kg
MW053	MWCT053R2	34.80		mg/kg
TF-22	TF-22B	378.00	J	mg/kg
TF-22	TF-22C	195.00	J	mg/kg
Bank Samples				
B-12	B-12	977.00	J	mg/kg
B-13	B-13	83.00	J	mg/kg
B-14	B-14	1430.00	J	mg/kg
B-15	B-15	1730.00	J	mg/kg
B-16	B-16	125.00	J	mg/kg
B-17	B-17	298.00	J	mg/kg
B-18	B-18	66.00	J	mg/kg
B-19	B-19	116.00	J	mg/kg
MW001	MWSB001R1	90.60		mg/kg
MW002	MWSB002R1	75.40		mg/kg
MW008	MWSB008R1	127.00	N	mg/kg
MW008	MWSB008S1	111.00	N	mg/kg
MW008-SP	MWSB008R1 SP	51.90		mg/kg
MW009	MWSB009R1	295.00		mg/kg
MW009-SP	MWSB009R1 SP	408.00		mg/kg
MW012	MWSB012R1	249.00	N	mg/kg
MW013	MWSB013R1	1090.00	N	mg/kg
MW014	MWSB014R1	248.00	N	mg/kg
MW015	MWSB015R1	38.00		mg/kg
MW015	MWSB015S1	34.00		mg/kg
MW03a	MWSB03aR1	103.00		mg/kg
MW03b	MWSB03bR1	85.30		mg/kg
MW04a	MWSB04aR1	55.20		mg/kg
MW04b	MWSB04bR1	58.20		mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW04b-SP	MWSB04bR1 SP	28.20		mg/kg
	MW10a	MWSB10aR1	2150.00	N	mg/kg
	MW10b	MWSB10bR1	1370.00	N	mg/kg
	MW10c	MWSB10cR1	1660.00	N	mg/kg
	MW11a	MWSB11aR1	313.00	N	mg/kg
	MW11a-SP	MWSB11aR1 SP	605.00	N	mg/kg
	MW11b	MWSB11bR1	278.00	N	mg/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	138.00		mg/kg
	Bulk Sediment	DPC-DRET-7298	2.00	U	ug/L
	Bulk Sediment	DPC-DUPLICAT	2.00	U	ug/L
	Bulk Sediment	DPC-METD-7298	2.00	U	ug/L
	Bulk Sediment	DPC-METT-7298	2.00	U	ug/L
	Bulk Sediment	DPC-WATD-7298	2.00	U	ug/L
	Bulk Sediment	DPC-WATT-7298	2.00	U	ug/L
	Bulk Sediment	TCLT RINSATE 5	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 01.5	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 03	0.00		mg/L
	Bulk Sediment	TCLT-PV 05	0.01		mg/L
	Bulk Sediment	TCLT-PV 06.3	0.01		mg/L
	Bulk Sediment	TCLT-PV 08	0.03		mg/L
	Bulk Sediment	TCLT-PV 10	0.03		mg/L
	Bulk Sediment	TCLT-PV 11.5	0.07		mg/L
	Bulk Sediment	TCLT-PV 13.4	0.11		mg/L
	Bulk Sediment	TCLT-PV 14.9	0.13		mg/L
	Bulk Sediment	TCLT-PV 16.5	0.11		mg/L
	Bulk Sediment	TCLT-PV 18	0.10	G	mg/L
	Bulk Sediment	TCLT-PV 19.6	0.09		mg/L
	Bulk Sediment	TCLT-PV 21.2	0.10	U	mg/L
	Bulk Sediment	TCLT-PV 22.9	0.08	U	mg/L
	Bulk Sediment	TCLT-PV 24.3	0.10		mg/L
	Bulk Sediment	TCLT-PV 25.9	0.07		mg/L
	Bulk Sediment	TCLT-PV 27.4	0.07		mg/L
	Bulk Sediment	TCLT-PV 29.1	0.06		mg/L
	Bulk Sediment	TCLT-PV 32.9	0.04		mg/L
Lead					
Surface Samples					
	MW016	MWSS016R1	35.80		mg/kg
	MW017	MWSS017R1	26.60		mg/kg
	MW018	MWSS018R1	37.00		mg/kg
	MW019	MWSS019R1	32.00		mg/kg
	MW020	MWSS020R1	11.50		mg/kg
	MW021	MWSS021R1	39.30		mg/kg
	MW022	MWSS022R1	120.00		mg/kg
	MW023	MWSS023R1	23.20		mg/kg

Appendix D.1 - Chemical and Physical Data

	Station	Sample ID	Concentration	Flag	Units
	MW024	MWSS024R1	66.20		mg/kg
	MW025	MWSS025R1	52.50		mg/kg
	MW026	MWSS026R1	88.90		mg/kg
	MW026	MWSS026S1	92.00		mg/kg
	MW027	MWSS027R1	93.60		mg/kg
	MW028	MWSS028R1	31.30		mg/kg
	MW029	MWSS029R1	160.00		mg/kg
	MW030	MWSS030R1	96.30		mg/kg
	MW031	MWSS031R1	206.00		mg/kg
	MW032	MWSS032R1	284.00		mg/kg
	MW034	MWSS034R1	84.20		mg/kg
	MW035	MWSS035R1	111.00		mg/kg
	MW037	MWSS037R1	86.20		mg/kg
	MW039	MWST039R1	43.70		mg/kg
	MW040	MWST040R1	33.10		mg/kg
	MW040	MWST040S1	47.50		mg/kg
	MW042	MWST042R1	71.50		mg/kg
	MW043	MWST043R1	45.30		mg/kg
	MW044	MWST044R1	122.00		mg/kg
	MW045	MWST045R1	92.50		mg/kg
	MW047	MWST047R1	112.00		mg/kg
	MW048	MWST048R1	52.50		mg/kg
	MW049	MWST049R1	41.50		mg/kg
	MW051	MWST051R1	109.00		mg/kg
	MW052	MWST052R1	49.40		mg/kg
	MW054	MWST054R1	368.00		mg/kg
	MW055	MWSS055R1	345.00		mg/kg
	TF-20	TF-20	120.00		mg/kg
	TF-21	TF-21A	154.00		mg/kg
	TF-22	TF-22A	183.00		mg/kg
	TF-23	TF-23	296.00		mg/kg
Subsurface Samples					
	HC-2	S-1	240.00		mg/kg
	HC-2	S-2	7.00		mg/kg
	HC-2	S-3	7.00		mg/kg
	MW-1	1	127.00		mg/kg
	MW-1	2	46.00		mg/kg
	MW024	MWCS024R2A	50.30	*	mg/kg
	MW024	MWCS024R3A	10.00	*	mg/kg
	MW025	MWCS025R2A	174.00		mg/kg
	MW025	MWCS025R3A	2.10		mg/kg
	MW025	MWCS025R4A	4.00		mg/kg
	MW026	MWCS026R2A	6.60		mg/kg
	MW026	MWCS026R3A	2.50		mg/kg
	MW026	MWCS026R4A	2.40		mg/kg
	MW027	MWCS027R2A	249.00		mg/kg

Station	Sample ID	Concentration	Flag	Units
MW027	MWCS027R3A	36.50		mg/kg
MW027	MWCS027R4A	3.20		mg/kg
MW028	MWCS028R2A	11.00	E	mg/kg
MW028	MWCS028R3A	2.10	UE	mg/kg
MW028	MWCS028R4A	2.20	UE	mg/kg
MW029	MWCS029R2A	3.10	N	mg/kg
MW029	MWCS029R3A	2.80	N	mg/kg
MW029	MWCS029R4A	2.30	N	mg/kg
MW030	MWCS030R2A	62.90		mg/kg
MW030	MWCS030R3A	1.90	U	mg/kg
MW030	MWCS030S2A	68.40		mg/kg
MW031	MWCS031R2A	1020.00	E	mg/kg
MW031	MWCS031R3A	36.80	E	mg/kg
MW031	MWCS031R4A	2.00	UE	mg/kg
MW034	MWCS034R2A	39.90	N	mg/kg
MW034	MWCS034R3A	2.60	N	mg/kg
MW034	MWCS034R4A	2.20	N	mg/kg
MW035	MWCS035R2A	78.50	N	mg/kg
MW035	MWCS035R3A	5.20	N	mg/kg
MW035	MWCS035R4A	2.40	N	mg/kg
MW035	MWCS035S4A	3.10	N	mg/kg
MW037	MWCS037R2A	30.10	*	mg/kg
MW037	MWCS037R3A	2.00	U*	mg/kg
MW037	MWCS037R4A	2.20	U*	mg/kg
MW040	MWCS040R2A	52.10	E	mg/kg
MW040	MWCS040R3A	3.00	UE	mg/kg
MW040	MWCS040R4A	1.90	UE	mg/kg
MW041	MWCT041R2	85.00		mg/kg
MW046	MWCT046R2	75.90		mg/kg
MW050	MWCT050R2	22.00		mg/kg
MW053	MWCT053R2	25.10		mg/kg
TF-22	TF-22B	295.00		mg/kg
TF-22	TF-22C	2750.00		mg/kg
Bank Samples				
B-12	B-12	259.00		mg/kg
B-13	B-13	50.00		mg/kg
B-14	B-14	408.00		mg/kg
B-15	B-15	404.00		mg/kg
B-16	B-16	182.00		mg/kg
B-17	B-17	351.00		mg/kg
B-18	B-18	253.00		mg/kg
B-19	B-19	184.00		mg/kg
MW001	MWSB001R1	44.30		mg/kg
MW002	MWSB002R1	86.40		mg/kg
MW008	MWSB008R1	103.00		mg/kg
MW008	MWSB008S1	155.00		mg/kg

Station	Sample ID	Concentration	Flag	Units
MW008-SP	MWSB008R1 SP	51.10		mg/kg
MW009	MWSB009R1	152.00		mg/kg
MW009-SP	MWSB009R1 SP	196.00		mg/kg
MW012	MWSB012R1	92.50		mg/kg
MW013	MWSB013R1	159.00		mg/kg
MW014	MWSB014R1	91.70		mg/kg
MW015	MWSB015R1	16.70		mg/kg
MW015	MWSB015S1	13.40	*	mg/kg
MW03a	MWSB03aR1	181.00		mg/kg
MW03b	MWSB03bR1	83.90		mg/kg
MW04a	MWSB04aR1	39.70		mg/kg
MW04b	MWSB04bR1	60.30		mg/kg
MW04b-SP	MWSB04bR1 SP	66.60		mg/kg
MW10a	MWSB10aR1	777.00		mg/kg
MW10b	MWSB10bR1	3220.00		mg/kg
MW10c	MWSB10cR1	1790.00		mg/kg
MW11a	MWSB11aR1	292.00		mg/kg
MW11a-SP	MWSB11aR1 SP	375.00		mg/kg
MW11b	MWSB11bR1	148.00		mg/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	106.00		mg/kg
Bulk Sediment	DPC-DRET-7298	1.00	U	ug/L
Bulk Sediment	DPC-DUPLICAT	1.00	U	ug/L
Bulk Sediment	DPC-METD-7298	1.00	U	ug/L
Bulk Sediment	DPC-METT-7298	1.00	U	ug/L
Bulk Sediment	DPC-WATD-7298	1.00	U	ug/L
Bulk Sediment	DPC-WATT-7298	1.00	U	ug/L
Bulk Sediment	TCLT RINSATE 5	0.00	U	mg/L
Bulk Sediment	TCLT-PV 01.5	0.00	U	mg/L
Bulk Sediment	TCLT-PV 03	0.00		mg/L
Bulk Sediment	TCLT-PV 05	0.00		mg/L
Bulk Sediment	TCLT-PV 06.3	0.01		mg/L
Bulk Sediment	TCLT-PV 08	0.02		mg/L
Bulk Sediment	TCLT-PV 10	0.02	*	mg/L
Bulk Sediment	TCLT-PV 11.5	0.05		mg/L
Bulk Sediment	TCLT-PV 13.4	0.07		mg/L
Bulk Sediment	TCLT-PV 14.9	0.09		mg/L
Bulk Sediment	TCLT-PV 16.5	0.08	N	mg/L
Bulk Sediment	TCLT-PV 18	0.09	E	mg/L
Bulk Sediment	TCLT-PV 19.6	0.07		mg/L
Bulk Sediment	TCLT-PV 21.2	0.09	B	mg/L
Bulk Sediment	TCLT-PV 22.9	0.07	B	mg/L
Bulk Sediment	TCLT-PV 24.3	0.07	B	mg/L
Bulk Sediment	TCLT-PV 25.9	0.06		mg/L
Bulk Sediment	TCLT-PV 27.4	0.06		mg/L
Bulk Sediment	TCLT-PV 29.1	0.05		mg/L

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	TCLT-PV 32.9	0.04		mg/L
Mercury					
Surface Samples					
	A	A	0.26		mg/kg
	C	C	0.08		mg/kg
	F	F	0.16		mg/kg
	HC-2	HC-2	0.36		mg/kg
	MW-1(a)	MW-1(a)	0.42		mg/kg
	MW016	MWSS016R1	0.26		mg/kg
	MW017	MWSS017R1	0.40		mg/kg
	MW018	MWSS018R1	0.44		mg/kg
	MW019	MWSS019R1	0.57		mg/kg
	MW020	MWSS020R1	0.14	U	mg/kg
	MW021	MWSS021R1	0.76		mg/kg
	MW022	MWSS022R1	2.20	E	mg/kg
	MW023	MWSS023R1	0.38		mg/kg
	MW024	MWSS024R1	0.29	E	mg/kg
	MW025	MWSS025R1	5.90	E	mg/kg
	MW026	MWSS026R1	0.41	E	mg/kg
	MW026	MWSS026S1	0.48	*N	mg/kg
	MW027	MWSS027R1	0.89		mg/kg
	MW028	MWSS028R1	0.19		mg/kg
	MW029	MWSS029R1	1.20		mg/kg
	MW030	MWSS030R1	2.00		mg/kg
	MW031	MWSS031R1	0.92		mg/kg
	MW032	MWSS032R1	4.70		mg/kg
	MW034	MWSS034R1	0.74		mg/kg
	MW035	MWSS035R1	1.10		mg/kg
	MW037	MWSS037R1	1.40	E	mg/kg
	MW039	MWST039R1	0.36	E	mg/kg
	MW040	MWST040R1	0.38	E	mg/kg
	MW040	MWST040S1	0.26	E	mg/kg
	MW042	MWST042R1	1.00	E	mg/kg
	MW043	MWST043R1	0.39	E	mg/kg
	MW044	MWST044R1	2.60	E	mg/kg
	MW045	MWST045R1	0.85		mg/kg
	MW047	MWST047R1	1.70	*N	mg/kg
	MW048	MWST048R1	0.37	E	mg/kg
	MW049	MWST049R1	0.21	E	mg/kg
	MW051	MWST051R1	0.92	E	mg/kg
	MW052	MWST052R1	0.28	E	mg/kg
	MW054	MWST054R1	0.83	E	mg/kg
	MW055	MWSS055R1	2.90	E	mg/kg
	TF-20	TF-20	0.48	J	mg/kg
	TF-21	TF-21A	0.82	J	mg/kg
	TF-22	TF-22A	0.69	J	mg/kg

Station	Sample ID	Concentration	Flag	Units
TF-23	TF-23	2.26	J	mg/kg
Subsurface Samples				
F	F	0.13		mg/kg
HC-2	S-1	1.20		mg/kg
HC-2	S-2	0.10	U	mg/kg
HC-2	S-3	0.10	U	mg/kg
MW-1	1	2.42		mg/kg
MW-1	2	0.61		mg/kg
MW024	MWCS024R2A	0.53		mg/kg
MW024	MWCS024R3A	0.13	U	mg/kg
MW025	MWCS025R2A	1.20		mg/kg
MW025	MWCS025R3A	0.12	U	mg/kg
MW025	MWCS025R4A	0.11	U	mg/kg
MW026	MWCS026R2A	0.15	U	mg/kg
MW026	MWCS026R3A	0.12	U	mg/kg
MW026	MWCS026R4A	0.13	U	mg/kg
MW027	MWCS027R2A	6.00		mg/kg
MW027	MWCS027R3A	0.20		mg/kg
MW027	MWCS027R4A	0.13	U	mg/kg
MW028	MWCS028R2A	0.18		mg/kg
MW028	MWCS028R3A	0.12	U	mg/kg
MW028	MWCS028R4A	0.13	U	mg/kg
MW029	MWCS029R2A	0.13	U	mg/kg
MW029	MWCS029R3A	0.13	U	mg/kg
MW029	MWCS029R4A	0.13	U	mg/kg
MW030	MWCS030R2A	0.64		mg/kg
MW030	MWCS030R3A	0.12	U	mg/kg
MW030	MWCS030S2A	0.61		mg/kg
MW031	MWCS031R2A	9.00		mg/kg
MW031	MWCS031R3A	0.30		mg/kg
MW031	MWCS031R4A	0.12	U	mg/kg
MW034	MWCS034R2A	0.23		mg/kg
MW034	MWCS034R3A	0.13	U	mg/kg
MW034	MWCS034R4A	0.13	U	mg/kg
MW035	MWCS035R2A	0.39		mg/kg
MW035	MWCS035R3A	0.13	U	mg/kg
MW035	MWCS035R4A	0.14	U	mg/kg
MW035	MWCS035S4A	0.13	U	mg/kg
MW037	MWCS037R2A	1.30		mg/kg
MW037	MWCS037R3A	0.13	U	mg/kg
MW037	MWCS037R4A	0.14	U	mg/kg
MW040	MWCS040R2A	1.20		mg/kg
MW040	MWCS040R3A	0.13	U	mg/kg
MW040	MWCS040R4A	0.10	U	mg/kg
MW041	MWCT041R2	0.92	E	mg/kg
MW046	MWCT046R2	0.98	E	mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW050	MWCT050R2	0.34	E	mg/kg
	MW053	MWCT053R2	0.15	UE	mg/kg
	TF-22	TF-22B	1.26	J	mg/kg
	TF-22	TF-22C	0.41	J	mg/kg
Bank Samples					
	B-12	B-12	0.07	J	mg/kg
	B-13	B-13	0.10	J	mg/kg
	B-14	B-14	0.38	J	mg/kg
	B-15	B-15	10.90	J	mg/kg
	B-16	B-16	0.17	J	mg/kg
	B-17	B-17	0.20	J	mg/kg
	B-18	B-18	0.08	J	mg/kg
	B-19	B-19	0.26	J	mg/kg
	MW001	MWSB001R1	0.17		mg/kg
	MW002	MWSB002R1	0.34		mg/kg
	MW008	MWSB008R1	0.39	*	mg/kg
	MW008	MWSB008S1	0.48	*	mg/kg
	MW008-SP	MWSB008R1 SP	0.14	U	mg/kg
	MW009	MWSB009R1	2.00		mg/kg
	MW009-SP	MWSB009R1 SP	1.60		mg/kg
	MW012	MWSB012R1	1.30	*	mg/kg
	MW013	MWSB013R1	2.30	*	mg/kg
	MW014	MWSB014R1	0.76	*	mg/kg
	MW015	MWSB015R1	0.20	U	mg/kg
	MW015	MWSB015S1	0.15	U	mg/kg
	MW03a	MWSB03aR1	0.87		mg/kg
	MW03b	MWSB03bR1	0.40		mg/kg
	MW04a	MWSB04aR1	0.25		mg/kg
	MW04b	MWSB04bR1	0.36		mg/kg
	MW04b-SP	MWSB04bR1 SP	0.68		mg/kg
	MW10a	MWSB10aR1	1.80	*	mg/kg
	MW10b	MWSB10bR1	1.90	*	mg/kg
	MW10c	MWSB10cR1	29.20	*	mg/kg
	MW11a	MWSB11aR1	4.20	*	mg/kg
	MW11a-SP	MWSB11aR1 SP	2.50	*	mg/kg
	MW11b	MWSB11bR1	0.62	*	mg/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	1.10	E	mg/kg
	Bulk Sediment	DPC-DRET-7298	5.06		Other
	Bulk Sediment	DPC-DUPLICAT	3.69		Other
	Bulk Sediment	DPC-METD-7298	1.78		Other
	Bulk Sediment	DPC-METT-7298	8.54		Other
	Bulk Sediment	DPC-WATD-7298	1.53		Other
	Bulk Sediment	DPC-WATT-7298	0.96		Other
	Bulk Sediment	TCLT RINSATE 1	0.00		mg/L
	Bulk Sediment	TCLT-PV 01.5	0.00		mg/L

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	TCLT-PV 03	0.00		mg/L
	Bulk Sediment	TCLT-PV 05	0.00		mg/L
	Bulk Sediment	TCLT-PV 06.3	0.00		mg/L
	Bulk Sediment	TCLT-PV 08	0.00		mg/L
	Bulk Sediment	TCLT-PV 10	0.00		mg/L
	Bulk Sediment	TCLT-PV 13.4	0.00		mg/L
	Bulk Sediment	TCLT-PV 14.9	0.00		mg/L
	Bulk Sediment	TCLT-PV 16.5	0.00		mg/L
	Bulk Sediment	TCLT-PV 18	0.00		mg/L
	Bulk Sediment	TCLT-PV 19.6	0.00		mg/L
	Bulk Sediment	TCLT-PV 21.2	0.00		mg/L
	Bulk Sediment	TCLT-PV 22.9	0.00		mg/L
	Bulk Sediment	TCLT-PV 24.3	0.00		mg/L
	Bulk Sediment	TCLT-PV 25.9	0.00		mg/L
	Bulk Sediment	TCLT-PV 27.4	0.00		mg/L
	Bulk Sediment	TCLT-PV 29.1	0.00		mg/L
	Bulk Sediment	TCLT-PV 32.9	0.00		mg/L
Nickel					
Surface Samples					
	MW016	MWSS016R1	13.40		mg/kg
	MW017	MWSS017R1	16.10		mg/kg
	MW018	MWSS018R1	11.90		mg/kg
	MW019	MWSS019R1	16.50		mg/kg
	MW020	MWSS020R1	10.30		mg/kg
	MW021	MWSS021R1	11.60		mg/kg
	MW022	MWSS022R1	12.00		mg/kg
	MW023	MWSS023R1	7.80		mg/kg
	MW024	MWSS024R1	14.50		mg/kg
	MW025	MWSS025R1	11.60		mg/kg
	MW026	MWSS026R1	15.00		mg/kg
	MW026	MWSS026S1	12.10		mg/kg
	MW027	MWSS027R1	16.00		mg/kg
	MW028	MWSS028R1	9.80		mg/kg
	MW029	MWSS029R1	13.80		mg/kg
	MW030	MWSS030R1	14.20		mg/kg
	MW031	MWSS031R1	14.10		mg/kg
	MW032	MWSS032R1	15.00		mg/kg
	MW034	MWSS034R1	10.90		mg/kg
	MW035	MWSS035R1	12.70		mg/kg
	MW037	MWSS037R1	10.90		mg/kg
	MW039	MWST039R1	7.90		mg/kg
	MW040	MWST040R1	6.50		mg/kg
	MW040	MWST040S1	7.60		mg/kg
	MW042	MWST042R1	8.00		mg/kg
	MW043	MWST043R1	8.80		mg/kg
	MW044	MWST044R1	12.90		mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW045	MWST045R1	9.20		mg/kg
	MW047	MWST047R1	13.20		mg/kg
	MW048	MWST048R1	9.00		mg/kg
	MW049	MWST049R1	8.00		mg/kg
	MW051	MWST051R1	11.60		mg/kg
	MW052	MWST052R1	8.60		mg/kg
	MW054	MWST054R1	14.40		mg/kg
	MW055	MWSS055R1	13.10		mg/kg
	TF-20	TF-20	17.00		mg/kg
	TF-21	TF-21A	18.00		mg/kg
	TF-22	TF-22A	22.00		mg/kg
	TF-23	TF-23	29.00		mg/kg
Subsurface Samples					
	MW024	MWCS024R2A	8.40		mg/kg
	MW024	MWCS024R3A	7.00		mg/kg
	MW025	MWCS025R2A	13.30		mg/kg
	MW025	MWCS025R3A	5.40		mg/kg
	MW025	MWCS025R4A	7.10		mg/kg
	MW026	MWCS026R2A	11.30		mg/kg
	MW026	MWCS026R3A	8.60		mg/kg
	MW026	MWCS026R4A	7.60		mg/kg
	MW027	MWCS027R2A	14.30		mg/kg
	MW027	MWCS027R3A	10.00		mg/kg
	MW027	MWCS027R4A	9.00		mg/kg
	MW028	MWCS028R2A	6.70		mg/kg
	MW028	MWCS028R3A	5.40		mg/kg
	MW028	MWCS028R4A	7.60		mg/kg
	MW029	MWCS029R2A	7.20		mg/kg
	MW029	MWCS029R3A	8.40		mg/kg
	MW029	MWCS029R4A	9.00		mg/kg
	MW030	MWCS030R2A	12.50		mg/kg
	MW030	MWCS030R3A	5.90		mg/kg
	MW030	MWCS030S2A	12.50		mg/kg
	MW031	MWCS031R2A	11.80		mg/kg
	MW031	MWCS031R3A	9.60		mg/kg
	MW031	MWCS031R4A	5.60		mg/kg
	MW034	MWCS034R2A	8.90		mg/kg
	MW034	MWCS034R3A	8.30		mg/kg
	MW034	MWCS034R4A	8.80		mg/kg
	MW035	MWCS035R2A	9.20		mg/kg
	MW035	MWCS035R3A	9.80		mg/kg
	MW035	MWCS035R4A	9.20		mg/kg
	MW035	MWCS035S4A	9.10		mg/kg
	MW037	MWCS037R2A	6.00		mg/kg
	MW037	MWCS037R3A	7.60		mg/kg
	MW037	MWCS037R4A	7.30		mg/kg

Appendix D.1 - Chemical and Physical Data

	Station	Sample ID	Concentration	Flag	Units
	MW040	MWCS040R2A	7.70		mg/kg
	MW040	MWCS040R3A	8.00		mg/kg
	MW040	MWCS040R4A	5.90		mg/kg
	MW041	MWCT041R2	9.60		mg/kg
	MW046	MWCT046R2	9.40		mg/kg
	MW050	MWCT050R2	8.90		mg/kg
	MW053	MWCT053R2	11.40		mg/kg
	TF-22	TF-22B	29.00		mg/kg
	TF-22	TF-22C	31.00		mg/kg
Bank Samples					
	B-12	B-12	116.00		mg/kg
	B-13	B-13	27.00		mg/kg
	B-14	B-14	389.00		mg/kg
	B-15	B-15	1780.00		mg/kg
	B-16	B-16	54.00		mg/kg
	B-17	B-17	60.00		mg/kg
	B-18	B-18	22.00		mg/kg
	B-19	B-19	24.00		mg/kg
	MW001	MWSB001R1	14.00		mg/kg
	MW002	MWSB002R1	10.90		mg/kg
	MW008	MWSB008R1	24.30		mg/kg
	MW008	MWSB008S1	19.00		mg/kg
	MW008-SP	MWSB008R1 SP	11.80		mg/kg
	MW009	MWSB009R1	26.90		mg/kg
	MW009-SP	MWSB009R1 SP	16.80		mg/kg
	MW012	MWSB012R1	12.50		mg/kg
	MW013	MWSB013R1	15.50		mg/kg
	MW014	MWSB014R1	37.60		mg/kg
	MW015	MWSB015R1	7.60		mg/kg
	MW015	MWSB015S1	7.30		mg/kg
	MW03a	MWSB03aR1	16.00		mg/kg
	MW03b	MWSB03bR1	13.70		mg/kg
	MW04a	MWSB04aR1	11.10		mg/kg
	MW04b	MWSB04bR1	9.60		mg/kg
	MW04b-SP	MWSB04bR1 SP	6.50		mg/kg
	MW10a	MWSB10aR1	20.40		mg/kg
	MW10b	MWSB10bR1	21.70		mg/kg
	MW10c	MWSB10cR1	27.40		mg/kg
	MW11a	MWSB11aR1	16.10		mg/kg
	MW11a-SP	MWSB11aR1 SP	23.00		mg/kg
	MW11b	MWSB11bR1	12.30		mg/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	10.60		mg/kg
	Bulk Sediment	DPC-DRET-7298	5.00	U	ug/L
	Bulk Sediment	DPC-DUPLICAT	5.00	U	ug/L
	Bulk Sediment	DPC-METD-7298	5.00	U	ug/L

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	DPC-METT-7298	5.00	U	ug/L
	Bulk Sediment	DPC-WATD-7298	5.00	U	ug/L
	Bulk Sediment	DPC-WATT-7298	5.00	U	ug/L
	Bulk Sediment	TCLT RINSATE 5	0.03		mg/L
	Bulk Sediment	TCLT-PV 01.5	0.01		mg/L
	Bulk Sediment	TCLT-PV 03	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 05	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 06.3	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 08	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 10	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 11.5	0.01		mg/L
	Bulk Sediment	TCLT-PV 13.4	0.02		mg/L
	Bulk Sediment	TCLT-PV 14.9	0.01		mg/L
	Bulk Sediment	TCLT-PV 16.5	0.01		mg/L
	Bulk Sediment	TCLT-PV 18	0.01		mg/L
	Bulk Sediment	TCLT-PV 19.6	0.01		mg/L
	Bulk Sediment	TCLT-PV 21.2	0.01	E	mg/L
	Bulk Sediment	TCLT-PV 22.9	0.01	E	mg/L
	Bulk Sediment	TCLT-PV 24.3	0.01	E	mg/L
	Bulk Sediment	TCLT-PV 25.9	0.01		mg/L
	Bulk Sediment	TCLT-PV 27.4	0.01		mg/L
	Bulk Sediment	TCLT-PV 29.1	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 32.9	0.00	U	mg/L
Silver					
Surface Samples					
	MW016	MWSS016R1	0.92	U	mg/kg
	MW017	MWSS017R1	1.20	U	mg/kg
	MW018	MWSS018R1	0.95	U	mg/kg
	MW019	MWSS019R1	1.10	U	mg/kg
	MW020	MWSS020R1	0.73		mg/kg
	MW021	MWSS021R1	1.10	U	mg/kg
	MW022	MWSS022R1	1.30		mg/kg
	MW023	MWSS023R1	0.77	U	mg/kg
	MW024	MWSS024R1	1.20	U	mg/kg
	MW025	MWSS025R1	1.00	U	mg/kg
	MW026	MWSS026R1	0.88	U	mg/kg
	MW026	MWSS026S1	0.84	U	mg/kg
	MW027	MWSS027R1	1.10	U	mg/kg
	MW028	MWSS028R1	0.74	U	mg/kg
	MW029	MWSS029R1	1.10	U	mg/kg
	MW030	MWSS030R1	1.20	U	mg/kg
	MW031	MWSS031R1	1.40	U	mg/kg
	MW032	MWSS032R1	0.80	U	mg/kg
	MW034	MWSS034R1	0.91	U	mg/kg
	MW035	MWSS035R1	1.00	U	mg/kg
	MW037	MWSS037R1	1.10	U	mg/kg

Station	Sample ID	Concentration	Flag	Units
MW039	MWST039R1	0.81	U	mg/kg
MW040	MWST040R1	0.79	U	mg/kg
MW040	MWST040S1	0.95	U	mg/kg
MW042	MWST042R1	0.92	U	mg/kg
MW043	MWST043R1	0.83	U	mg/kg
MW044	MWST044R1	1.30	U	mg/kg
MW045	MWST045R1	1.00	U	mg/kg
MW047	MWST047R1	1.40	U	mg/kg
MW048	MWST048R1	0.94	U	mg/kg
MW049	MWST049R1	0.84	U	mg/kg
MW051	MWST051R1	1.10	U	mg/kg
MW052	MWST052R1	0.94	U	mg/kg
MW054	MWST054R1	1.30	U	mg/kg
MW055	MWSS055R1	1.10	U	mg/kg
TF-20	TF-20	1.00	UJ	mg/kg
TF-21	TF-21A	1.00	UJ	mg/kg
TF-22	TF-22A	1.00	UJ	mg/kg
TF-23	TF-23	1.00	UJ	mg/kg
Subsurface Samples				
HC-2	S-1	1.00	U	mg/kg
HC-2	S-2	1.00	U	mg/kg
HC-2	S-3	1.00	U	mg/kg
MW024	MWCS024R2A	0.80	U	mg/kg
MW024	MWCS024R3A	0.72	U	mg/kg
MW025	MWCS025R2A	0.85	U	mg/kg
MW025	MWCS025R3A	0.68	U	mg/kg
MW025	MWCS025R4A	0.69	U	mg/kg
MW026	MWCS026R2A	0.81	U	mg/kg
MW026	MWCS026R3A	0.75	U	mg/kg
MW026	MWCS026R4A	0.69	U	mg/kg
MW027	MWCS027R2A	39.70		mg/kg
MW027	MWCS027R3A	0.73	U	mg/kg
MW027	MWCS027R4A	0.73	U	mg/kg
MW028	MWCS028R2A	0.69	U	mg/kg
MW028	MWCS028R3A	0.70	U	mg/kg
MW028	MWCS028R4A	0.74	U	mg/kg
MW029	MWCS029R2A	0.70	U	mg/kg
MW029	MWCS029R3A	0.67	U	mg/kg
MW029	MWCS029R4A	0.71	U	mg/kg
MW030	MWCS030R2A	0.92	U	mg/kg
MW030	MWCS030R3A	0.64	U	mg/kg
MW030	MWCS030S2A	0.84	U	mg/kg
MW031	MWCS031R2A	0.84	U	mg/kg
MW031	MWCS031R3A	0.77	U	mg/kg
MW031	MWCS031R4A	0.65	U	mg/kg
MW034	MWCS034R2A	0.71	U	mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW034	MWCS034R3A	0.70	U	mg/kg
	MW034	MWCS034R4A	0.70	U	mg/kg
	MW035	MWCS035R2A	0.70	U	mg/kg
	MW035	MWCS035R3A	0.70	U	mg/kg
	MW035	MWCS035R4A	0.71	U	mg/kg
	MW035	MWCS035S4A	0.68	U	mg/kg
	MW037	MWCS037R2A	0.70	U	mg/kg
	MW037	MWCS037R3A	0.68	U	mg/kg
	MW037	MWCS037R4A	0.74	U	mg/kg
	MW040	MWCS040R2A	0.71	U	mg/kg
	MW040	MWCS040R3A	0.69	U	mg/kg
	MW040	MWCS040R4A	0.63	U	mg/kg
	MW041	MWCT041R2	0.99	U	mg/kg
	MW046	MWCT046R2	1.00	U	mg/kg
	MW050	MWCT050R2	0.89	U	mg/kg
	MW053	MWCT053R2	0.95	U	mg/kg
	TF-22	TF-22B	1.00	UJ	mg/kg
	TF-22	TF-22C	1.00	UJ	mg/kg
Bank Samples					
	B-12	B-12	1.00	UJ	mg/kg
	B-13	B-13	1.00	UJ	mg/kg
	B-14	B-14	1.00	UJ	mg/kg
	B-15	B-15	1.00	UJ	mg/kg
	B-16	B-16	1.00	UJ	mg/kg
	B-17	B-17	1.00	UJ	mg/kg
	B-18	B-18	1.00	UJ	mg/kg
	B-19	B-19	1.00	UJ	mg/kg
	MW001	MWSB001R1	0.85	U	mg/kg
	MW002	MWSB002R1	0.82	U	mg/kg
	MW008	MWSB008R1	0.84	U	mg/kg
	MW008	MWSB008S1	1.10	U	mg/kg
	MW008-SP	MWSB008R1 SP	0.70	U	mg/kg
	MW009	MWSB009R1	1.10	U	mg/kg
	MW009-SP	MWSB009R1 SP	1.20	U	mg/kg
	MW012	MWSB012R1	0.86		mg/kg
	MW013	MWSB013R1	0.68	U	mg/kg
	MW014	MWSB014R1	0.72	U	mg/kg
	MW015	MWSB015R1	0.98	U	mg/kg
	MW015	MWSB015S1	0.76	U	mg/kg
	MW03a	MWSB03aR1	0.98	U	mg/kg
	MW03b	MWSB03bR1	0.88	U	mg/kg
	MW04a	MWSB04aR1	0.83	U	mg/kg
	MW04b	MWSB04bR1	0.81	U	mg/kg
	MW04b-SP	MWSB04bR1 SP	1.20		mg/kg
	MW10a	MWSB10aR1	1.30		mg/kg
	MW10b	MWSB10bR1	6.20		mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW10c	MWSB10cR1	3.60		mg/kg
	MW11a	MWSB11aR1	1.00		mg/kg
	MW11a-SP	MWSB11aR1 SP	0.91	U	mg/kg
	MW11b	MWSB11bR1	0.77		mg/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	0.78	U	mg/kg
	Bulk Sediment	DPC-DRET-7298	0.50	U	ug/L
	Bulk Sediment	DPC-DUPLICAT	0.50	U	ug/L
	Bulk Sediment	DPC-METD-7298	0.50	U	ug/L
	Bulk Sediment	DPC-METT-7298	0.50	U	ug/L
	Bulk Sediment	DPC-WATD-7298	0.50	U	ug/L
	Bulk Sediment	DPC-WATT-7298	0.50	U	ug/L
	Bulk Sediment	TCLT RINSATE 5	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 01.5	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 03	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 05	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 06.3	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 08	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 10	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 11.5	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 13.4	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 14.9	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 16.5	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 18	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 19.6	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 21.2	0.00		mg/L
	Bulk Sediment	TCLT-PV 22.9	0.00		mg/L
	Bulk Sediment	TCLT-PV 24.3	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 25.9	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 27.4	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 29.1	0.00	U	mg/L
	Bulk Sediment	TCLT-PV 32.9	0.00	U	mg/L
Zinc					
Surface Samples					
	MW016	MWSS016R1	69.40		mg/kg
	MW017	MWSS017R1	76.30		mg/kg
	MW018	MWSS018R1	64.00		mg/kg
	MW019	MWSS019R1	77.60		mg/kg
	MW020	MWSS020R1	40.30		mg/kg
	MW021	MWSS021R1	81.90		mg/kg
	MW022	MWSS022R1	108.00		mg/kg
	MW023	MWSS023R1	53.70		mg/kg
	MW024	MWSS024R1	139.00		mg/kg
	MW025	MWSS025R1	103.00		mg/kg
	MW026	MWSS026R1	423.00		mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW026	MWSS026S1	440.00		mg/kg
	MW027	MWSS027R1	137.00		mg/kg
	MW028	MWSS028R1	59.10		mg/kg
	MW029	MWSS029R1	365.00		mg/kg
	MW030	MWSS030R1	153.00		mg/kg
	MW031	MWSS031R1	171.00		mg/kg
	MW032	MWSS032R1	515.00		mg/kg
	MW034	MWSS034R1	122.00		mg/kg
	MW035	MWSS035R1	264.00		mg/kg
	MW037	MWSS037R1	117.00		mg/kg
	MW039	MWST039R1	56.00		mg/kg
	MW040	MWST040R1	45.60		mg/kg
	MW040	MWST040S1	57.10		mg/kg
	MW042	MWST042R1	78.80		mg/kg
	MW043	MWST043R1	59.80		mg/kg
	MW044	MWST044R1	181.00		mg/kg
	MW045	MWST045R1	96.70		mg/kg
	MW047	MWST047R1	157.00		mg/kg
	MW048	MWST048R1	74.80		mg/kg
	MW049	MWST049R1	56.90		mg/kg
	MW051	MWST051R1	167.00		mg/kg
	MW052	MWST052R1	67.80		mg/kg
	MW054	MWST054R1	245.00		mg/kg
	MW055	MWSS055R1	350.00		mg/kg
	TF-20	TF-20	189.00	J	mg/kg
	TF-21	TF-21A	188.00	J	mg/kg
	TF-22	TF-22A	278.00	J	mg/kg
	TF-23	TF-23	378.00	J	mg/kg
Subsurface Samples					
	HC-2	S-1	380.00		mg/kg
	HC-2	S-2	40.00		mg/kg
	HC-2	S-3	44.00		mg/kg
	MW-1	1	145.00		mg/kg
	MW-1	2	102.00		mg/kg
	MW024	MWCS024R2A	59.50		mg/kg
	MW024	MWCS024R3A	19.40		mg/kg
	MW025	MWCS025R2A	184.00		mg/kg
	MW025	MWCS025R3A	13.70		mg/kg
	MW025	MWCS025R4A	17.70		mg/kg
	MW026	MWCS026R2A	28.60		mg/kg
	MW026	MWCS026R3A	19.10		mg/kg
	MW026	MWCS026R4A	18.00		mg/kg
	MW027	MWCS027R2A	560.00		mg/kg
	MW027	MWCS027R3A	33.40		mg/kg
	MW027	MWCS027R4A	20.20		mg/kg
	MW028	MWCS028R2A	18.90		mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW028	MWCS028R3A	12.90		mg/kg
	MW028	MWCS028R4A	16.90		mg/kg
	MW029	MWCS029R2A	16.10		mg/kg
	MW029	MWCS029R3A	18.70		mg/kg
	MW029	MWCS029R4A	19.70		mg/kg
	MW030	MWCS030R2A	76.20		mg/kg
	MW030	MWCS030R3A	13.40		mg/kg
	MW030	MWCS030S2A	82.50		mg/kg
	MW031	MWCS031R2A	279.00		mg/kg
	MW031	MWCS031R3A	45.60		mg/kg
	MW031	MWCS031R4A	12.80		mg/kg
	MW034	MWCS034R2A	67.90		mg/kg
	MW034	MWCS034R3A	19.00		mg/kg
	MW034	MWCS034R4A	19.00		mg/kg
	MW035	MWCS035R2A	122.00		mg/kg
	MW035	MWCS035R3A	23.10		mg/kg
	MW035	MWCS035R4A	20.40		mg/kg
	MW035	MWCS035S4A	20.10		mg/kg
	MW037	MWCS037R2A	37.20		mg/kg
	MW037	MWCS037R3A	16.90		mg/kg
	MW037	MWCS037R4A	16.00		mg/kg
	MW040	MWCS040R2A	38.30		mg/kg
	MW040	MWCS040R3A	18.90		mg/kg
	MW040	MWCS040R4A	13.50		mg/kg
	MW041	MWCT041R2	107.00		mg/kg
	MW046	MWCT046R2	93.20		mg/kg
	MW050	MWCT050R2	53.60		mg/kg
	MW053	MWCT053R2	50.20		mg/kg
	TF-22	TF-22B	558.00	J	mg/kg
	TF-22	TF-22C	580.00	J	mg/kg
Bank Samples					
	B-12	B-12	1590.00	J	mg/kg
	B-13	B-13	90.00	J	mg/kg
	B-14	B-14	535.00	J	mg/kg
	B-15	B-15	1180.00	J	mg/kg
	B-16	B-16	468.00	J	mg/kg
	B-17	B-17	316.00	J	mg/kg
	B-18	B-18	342.00	J	mg/kg
	B-19	B-19	181.00	J	mg/kg
	MW001	MWSB001R1	107.00		mg/kg
	MW002	MWSB002R1	86.40		mg/kg
	MW008	MWSB008R1	121.00	N	mg/kg
	MW008	MWSB008S1	155.00	N	mg/kg
	MW008-SP	MWSB008R1 SP	55.50		mg/kg
	MW009	MWSB009R1	359.00		mg/kg
	MW009-SP	MWSB009R1 SP	480.00		mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW012	MWSB012R1	281.00	N	mg/kg
	MW013	MWSB013R1	255.00	N	mg/kg
	MW014	MWSB014R1	236.00	N	mg/kg
	MW015	MWSB015R1	44.20		mg/kg
	MW015	MWSB015S1	36.40	*	mg/kg
	MW03a	MWSB03aR1	134.00		mg/kg
	MW03b	MWSB03bR1	97.50		mg/kg
	MW04a	MWSB04aR1	83.30		mg/kg
	MW04b	MWSB04bR1	82.00		mg/kg
	MW04b-SP	MWSB04bR1 SP	81.60		mg/kg
	MW10a	MWSB10aR1	1390.00	N	mg/kg
	MW10b	MWSB10bR1	1330.00	N	mg/kg
	MW10c	MWSB10cR1	1140.00	N	mg/kg
	MW11a	MWSB11aR1	390.00	N	mg/kg
	MW11a-SP	MWSB11aR1 SP	991.00	N	mg/kg
	MW11b	MWSB11bR1	271.00	N	mg/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	108.00	G	mg/kg
	Bulk Sediment	DPC-DRET-7298	7.00	U	ug/L
	Bulk Sediment	DPC-DUPLICAT	7.60		ug/L
	Bulk Sediment	DPC-METD-7298	10.00		ug/L
	Bulk Sediment	DPC-METT-7298	7.00	U	ug/L
	Bulk Sediment	DPC-WATD-7298	7.00	U	ug/L
	Bulk Sediment	DPC-WATT-7298	7.00	U	ug/L
	Bulk Sediment	TCLT RINSATE 5	0.01	U	mg/L
	Bulk Sediment	TCLT-PV 01.5	0.01	U	mg/L
	Bulk Sediment	TCLT-PV 03	0.01	U	mg/L
	Bulk Sediment	TCLT-PV 05	0.01		mg/L
	Bulk Sediment	TCLT-PV 06.3	0.01		mg/L
	Bulk Sediment	TCLT-PV 08	0.02		mg/L
	Bulk Sediment	TCLT-PV 10	0.02		mg/L
	Bulk Sediment	TCLT-PV 11.5	0.05	B	mg/L
	Bulk Sediment	TCLT-PV 13.4	0.08		mg/L
	Bulk Sediment	TCLT-PV 14.9	0.09		mg/L
	Bulk Sediment	TCLT-PV 16.5	0.08		mg/L
	Bulk Sediment	TCLT-PV 18	0.08		mg/L
	Bulk Sediment	TCLT-PV 19.6	0.07		mg/L
	Bulk Sediment	TCLT-PV 21.2	0.07	U	mg/L
	Bulk Sediment	TCLT-PV 22.9	0.06	U	mg/L
	Bulk Sediment	TCLT-PV 24.3	0.06		mg/L
	Bulk Sediment	TCLT-PV 25.9	0.06		mg/L
	Bulk Sediment	TCLT-PV 27.4	0.06		mg/L
	Bulk Sediment	TCLT-PV 29.1	0.04		mg/L
	Bulk Sediment	TCLT-PV 32.9	0.04		mg/L

Station	Sample ID	Concentration	Flag	Units
Phenols				
2,4-Dimethylphenol				
Surface Samples				
MW016	MWSS016R1	1.70	J	ug/kg
MW017	MWSS017R1	1.90	J	ug/kg
MW018	MWSS018R1	2.90	J	ug/kg
MW019	MWSS019R1	3.00	J	ug/kg
MW020	MWSS020R1	18.00	U	ug/kg
MW021	MWSS021R1	7.50	J	ug/kg
MW022	MWSS022R1	8.90	J	ug/kg
MW023	MWSS023R1	1.20	J	ug/kg
MW024	MWSS024R1	12.00	J	ug/kg
MW025	MWSS025R1	4.80	J	ug/kg
MW026	MWSS026R1	8.20	J	ug/kg
MW026	MWSS026S1	10.00	J	ug/kg
MW027	MWSS027R1	5.30	J	ug/kg
MW028	MWSS028R1	5.50	J	ug/kg
MW029	MWSS029R1	11.00	J	ug/kg
MW030	MWSS030R1	7.50	J	ug/kg
MW031	MWSS031R1	16.00	J	ug/kg
MW032	MWSS032R1	12.00	J	ug/kg
MW034	MWSS034R1	7.40	E	ug/kg
MW035	MWSS035R1	6.40	J	ug/kg
MW037	MWSS037R1	7.90	J	ug/kg
MW039	MWST039R1	29.00	E	ug/kg
MW040	MWST040R1	2.50	J	ug/kg
MW040	MWST040S1	3.40	J	ug/kg
MW042	MWST042R1	7.30	J	ug/kg
MW043	MWST043R1	5.00	J	ug/kg
MW044	MWST044R1	12.00	J	ug/kg
MW045	MWST045R1	6.00	E	ug/kg
MW047	MWST047R1	13.00	J	ug/kg
MW048	MWST048R1	13.00	E	ug/kg
MW049	MWST049R1	4.60	J	ug/kg
MW051	MWST051R1	100.00		ug/kg
MW052	MWST052R1	8.20	J	ug/kg
MW054	MWST054R1	54.00		ug/kg
MW055	MWSS055R1	15.00	J	ug/kg
TF-20	TF-20	20.00	U	ug/kg
TF-21	TF-21A	20.00	U	ug/kg
TF-22	TF-22A	20.00	U	ug/kg
TF-23	TF-23	20.00	U	ug/kg
Subsurface Samples				
MW-1	1	190.00	U	ug/kg
MW-1	2	200.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW024	MWCS024R2A	15.00	J	ug/kg
	MW024	MWCS024R3A	2.20	J	ug/kg
	MW025	MWCS025R2A	4.10	J	ug/kg
	MW025	MWCS025R3A	16.00	U	ug/kg
	MW025	MWCS025R4A	16.00	U	ug/kg
	MW026	MWCS026R2A	1.00	J	ug/kg
	MW026	MWCS026R3A	17.00	U	ug/kg
	MW026	MWCS026R4A	17.00	U	ug/kg
	MW027	MWCS027R2A	62.00		ug/kg
	MW027	MWCS027R3A	5.90	J	ug/kg
	MW027	MWCS027R4A	36.00		ug/kg
	MW028	MWCS028R2A	3.00	J	ug/kg
	MW028	MWCS028R3A	25.00	U	ug/kg
	MW028	MWCS028R4A	26.00	U	ug/kg
	MW029	MWCS029R2A	1.40	J	ug/kg
	MW029	MWCS029R3A	17.00	U	ug/kg
	MW029	MWCS029R4A	17.00	U	ug/kg
	MW030	MWCS030R2A	50.00		ug/kg
	MW030	MWCS030R3A	37.00		ug/kg
	MW030	MWCS030S2A	60.00		ug/kg
	MW031	MWCS031R2A	98.00		ug/kg
	MW031	MWCS031R3A	34.00		ug/kg
	MW031	MWCS031R4A	13.00	J	ug/kg
	MW034	MWCS034R2A	5.40	J	ug/kg
	MW034	MWCS034R3A	17.00	U	ug/kg
	MW034	MWCS034R4A	18.00	U	ug/kg
	MW035	MWCS035R2A	5.00	J	ug/kg
	MW035	MWCS035R3A	18.00	U	ug/kg
	MW035	MWCS035R4A	18.00	U	ug/kg
	MW035	MWCS035S4A	17.00	U	ug/kg
	MW037	MWCS037R2A	6.50	J	ug/kg
	MW037	MWCS037R3A	1.70	J	ug/kg
	MW037	MWCS037R4A	18.00	U	ug/kg
	MW040	MWCS040R2A	26.00	J	ug/kg
	MW040	MWCS040R3A	1.30	J	ug/kg
	MW040	MWCS040R4A	22.00	U	ug/kg
	MW041	MWCT041R2	12.00	J	ug/kg
	MW046	MWCT046R2	15.00	J	ug/kg
	MW050	MWCT050R2	37.00		ug/kg
	MW053	MWCT053R2	21.00	J	ug/kg
	TF-22	TF-22B	20.00	U	ug/kg
	TF-22	TF-22C	20.00	U	ug/kg
Bank Samples					
	B-12	B-12	20.00	U	ug/kg
	B-13	B-13	20.00	UJ	ug/kg
	B-14	B-14	20.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
B-15	B-15	20.00	U	ug/kg
B-16	B-16	20.00	U	ug/kg
B-17	B-17	20.00	U	ug/kg
B-18	B-18	20.00	U	ug/kg
B-19	B-19	20.00	U	ug/kg
MW001	MWSB001R1	43.00	UE	ug/kg
MW002	MWSB002R1	1.20	E	ug/kg
MW008	MWSB008R1	4.40	J	ug/kg
MW008	MWSB008S1	4.40	J	ug/kg
MW008-SP	MWSB008R1 SP	3.00	E	ug/kg
MW009	MWSB009R1	23.00	E	ug/kg
MW009-SP	MWSB009R1 SP	9.90	E	ug/kg
MW012	MWSB012R1	6.20	J	ug/kg
MW013	MWSB013R1	0.92	J	ug/kg
MW014	MWSB014R1	1.50	J	ug/kg
MW015	MWSB015R1	2.80	E	ug/kg
MW015	MWSB015S1	1.50	J	ug/kg
MW03a	MWSB03aR1	28.00	E	ug/kg
MW03b	MWSB03bR1	80.00	E	ug/kg
MW04a	MWSB04aR1	1.30	E	ug/kg
MW04b	MWSB04bR1	13.00	E	ug/kg
MW04b-SP	MWSB04bR1 SP	6.10	E	ug/kg
MW10a	MWSB10aR1	18.00	E	ug/kg
MW10b	MWSB10bR1	14.00	J	ug/kg
MW10c	MWSB10cR1	63.00		ug/kg
MW11a	MWSB11aR1	13.00	J	ug/kg
MW11a-SP	MWSB11aR1 SP	13.00	J	ug/kg
MW11b	MWSB11bR1	12.00	J	ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	20.00	R	ug/kg
2-Fluorophenol				
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198			ug/kg
2-Methylphenol				
Surface Samples				
MW016	MWSS016R1	1.60	J	ug/kg
MW017	MWSS017R1	2.30	J	ug/kg
MW018	MWSS018R1	44.00	U	ug/kg
MW019	MWSS019R1	2.40	J	ug/kg
MW020	MWSS020R1	33.00	U	ug/kg
MW021	MWSS021R1	5.80	J	ug/kg
MW022	MWSS022R1	6.80	J	ug/kg
MW023	MWSS023R1	1.20	J	ug/kg
MW024	MWSS024R1	9.90	J	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW025	MWSS025R1	4.40	J	ug/kg
MW026	MWSS026R1	6.80	J	ug/kg
MW026	MWSS026S1	6.60	J	ug/kg
MW027	MWSS027R1	4.00	J	ug/kg
MW028	MWSS028R1	3.60	J	ug/kg
MW029	MWSS029R1	7.40	J	ug/kg
MW030	MWSS030R1	5.60	J	ug/kg
MW031	MWSS031R1	8.50	J	ug/kg
MW032	MWSS032R1	6.50	J	ug/kg
MW034	MWSS034R1	6.00	J	ug/kg
MW035	MWSS035R1	4.70	J	ug/kg
MW037	MWSS037R1	11.00	J	ug/kg
MW039	MWST039R1	18.00	J	ug/kg
MW040	MWST040R1	2.60	J	ug/kg
MW040	MWST040S1	3.60	J	ug/kg
MW042	MWST042R1	7.10	J	ug/kg
MW043	MWST043R1	5.20	J	ug/kg
MW044	MWST044R1	11.00	J	ug/kg
MW045	MWST045R1	7.00	J	ug/kg
MW047	MWST047R1	12.00	J	ug/kg
MW048	MWST048R1	9.40	J	ug/kg
MW049	MWST049R1	4.20	J	ug/kg
MW051	MWST051R1	77.00		ug/kg
MW052	MWST052R1	9.00	J	ug/kg
MW054	MWST054R1	53.00		ug/kg
MW055	MWSS055R1	11.00	J	ug/kg
TF-20	TF-20	20.00	U	ug/kg
TF-21	TF-21A	20.00	U	ug/kg
TF-22	TF-22A	20.00	U	ug/kg
TF-23	TF-23	20.00	U	ug/kg
Subsurface Samples				
MW-1	1	97.00	U	ug/kg
MW-1	2	100.00	U	ug/kg
MW024	MWCS024R2A	12.00	J	ug/kg
MW024	MWCS024R3A	2.00	J	ug/kg
MW025	MWCS025R2A	2.00	J	ug/kg
MW025	MWCS025R3A	29.00	U	ug/kg
MW025	MWCS025R4A	29.00	U	ug/kg
MW026	MWCS026R2A	2.20	J	ug/kg
MW026	MWCS026R3A	31.00	U	ug/kg
MW026	MWCS026R4A	31.00	U	ug/kg
MW027	MWCS027R2A	23.00	J	ug/kg
MW027	MWCS027R3A	4.80	J	ug/kg
MW027	MWCS027R4A	32.00	U	ug/kg
MW028	MWCS028R2A	4.20	J	ug/kg
MW028	MWCS028R3A	44.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW028	MWCS028R4A	47.00	U	ug/kg
	MW029	MWCS029R2A	1.70	J	ug/kg
	MW029	MWCS029R3A	30.00	U	ug/kg
	MW029	MWCS029R4A	31.00	U	ug/kg
	MW030	MWCS030R2A	22.00	J	ug/kg
	MW030	MWCS030R3A	1.80	J	ug/kg
	MW030	MWCS030S2A	18.00	J	ug/kg
	MW031	MWCS031R2A	48.00	J	ug/kg
	MW031	MWCS031R3A	20.00	J	ug/kg
	MW031	MWCS031R4A	2.30	J	ug/kg
	MW034	MWCS034R2A	5.30	J	ug/kg
	MW034	MWCS034R3A	30.00	U	ug/kg
	MW034	MWCS034R4A	32.00	U	ug/kg
	MW035	MWCS035R2A	0.98	J	ug/kg
	MW035	MWCS035R3A	32.00	U	ug/kg
	MW035	MWCS035R4A	0.97	J	ug/kg
	MW035	MWCS035S4A	0.90	J	ug/kg
	MW037	MWCS037R2A	30.00	U	ug/kg
	MW037	MWCS037R3A	29.00	U	ug/kg
	MW037	MWCS037R4A	32.00	U	ug/kg
	MW040	MWCS040R2A	6.50	J	ug/kg
	MW040	MWCS040R3A	44.00	U	ug/kg
	MW040	MWCS040R4A	40.00	U	ug/kg
	MW041	MWCT041R2	11.00	J	ug/kg
	MW046	MWCT046R2	14.00	J	ug/kg
	MW050	MWCT050R2	30.00	J	ug/kg
	MW053	MWCT053R2	14.00	J	ug/kg
	TF-22	TF-22B	20.00	U	ug/kg
	TF-22	TF-22C	20.00	U	ug/kg
Bank Samples					
	B-12	B-12	20.00	U	ug/kg
	B-13	B-13	20.00	UJ	ug/kg
	B-14	B-14	20.00	U	ug/kg
	B-15	B-15	20.00	U	ug/kg
	B-16	B-16	20.00	U	ug/kg
	B-17	B-17	20.00	U	ug/kg
	B-18	B-18	20.00	U	ug/kg
	B-19	B-19	20.00	U	ug/kg
	MW001	MWSB001R1	77.00	U	ug/kg
	MW002	MWSB002R1	1.10	J	ug/kg
	MW008	MWSB008R1	4.10	J	ug/kg
	MW008	MWSB008S1	3.30	J	ug/kg
	MW008-SP	MWSB008R1 SP	2.40	J	ug/kg
	MW009	MWSB009R1	14.00	J	ug/kg
	MW009-SP	MWSB009R1 SP	7.90	J	ug/kg
	MW012	MWSB012R1	3.60	J	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW013	MWSB013R1	30.00	U	ug/kg
	MW014	MWSB014R1	1.50	J	ug/kg
	MW015	MWSB015R1	89.00	U	ug/kg
	MW015	MWSB015S1	33.00	U	ug/kg
	MW03a	MWSB03aR1	9.70	J	ug/kg
	MW03b	MWSB03bR1	2.90	J	ug/kg
	MW04a	MWSB04aR1	38.00	U	ug/kg
	MW04b	MWSB04bR1	10.00	J	ug/kg
	MW04b-SP	MWSB04bR1 SP	260.00		ug/kg
	MW10a	MWSB10aR1	8.60	J	ug/kg
	MW10b	MWSB10bR1	9.20	J	ug/kg
	MW10c	MWSB10cR1	32.00	J	ug/kg
	MW11a	MWSB11aR1	7.60	J	ug/kg
	MW11a-SP	MWSB11aR1 SP	6.70	J	ug/kg
	MW11b	MWSB11bR1	7.00	J	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	10.00	J	ug/kg
4-Methylphenol					
Surface Samples					
	MW016	MWSS016R1	67.00		ug/kg
	MW017	MWSS017R1	36.00		ug/kg
	MW018	MWSS018R1	140.00		ug/kg
	MW019	MWSS019R1	170.00		ug/kg
	MW020	MWSS020R1	42.00		ug/kg
	MW021	MWSS021R1	68.00	J	ug/kg
	MW022	MWSS022R1	76.00		ug/kg
	MW023	MWSS023R1	87.00		ug/kg
	MW024	MWSS024R1	140.00		ug/kg
	MW025	MWSS025R1	73.00		ug/kg
	MW026	MWSS026R1	130.00		ug/kg
	MW026	MWSS026S1	78.00		ug/kg
	MW027	MWSS027R1	74.00		ug/kg
	MW028	MWSS028R1	24.00	J	ug/kg
	MW029	MWSS029R1	100.00		ug/kg
	MW030	MWSS030R1	83.00		ug/kg
	MW031	MWSS031R1	120.00		ug/kg
	MW032	MWSS032R1	94.00		ug/kg
	MW034	MWSS034R1	99.00		ug/kg
	MW035	MWSS035R1	92.00		ug/kg
	MW037	MWSS037R1	220.00		ug/kg
	MW039	MWST039R1	220.00		ug/kg
	MW040	MWST040R1	65.00		ug/kg
	MW040	MWST040S1	98.00		ug/kg
	MW042	MWST042R1	88.00		ug/kg
	MW043	MWST043R1	120.00		ug/kg

Appendix D.1 - Chemical and Physical Data

	Station	Sample ID	Concentration	Flag	Units
	MW044	MWST044R1	240.00		ug/kg
	MW045	MWST045R1	140.00		ug/kg
	MW047	MWST047R1	690.00		ug/kg
	MW048	MWST048R1	150.00		ug/kg
	MW049	MWST049R1	85.00		ug/kg
	MW051	MWST051R1	580.00		ug/kg
	MW052	MWST052R1	190.00		ug/kg
	MW054	MWST054R1	380.00		ug/kg
	MW055	MWSS055R1	140.00		ug/kg
	TF-20	TF-20	99.00	U	ug/kg
	TF-21	TF-21A	99.00	U	ug/kg
	TF-22	TF-22A	95.00	U	ug/kg
	TF-23	TF-23	99.00	U	ug/kg
Subsurface Samples					
	MW-1	1	97.00	U	ug/kg
	MW-1	2	100.00	U	ug/kg
	MW024	MWCS024R2A	190.00		ug/kg
	MW024	MWCS024R3A	25.00		ug/kg
	MW025	MWCS025R2A	12.00	J	ug/kg
	MW025	MWCS025R3A	1.60	J	ug/kg
	MW025	MWCS025R4A	2.20	J	ug/kg
	MW026	MWCS026R2A	4.60	J	ug/kg
	MW026	MWCS026R3A	24.00	U	ug/kg
	MW026	MWCS026R4A	1.20	J	ug/kg
	MW027	MWCS027R2A	210.00		ug/kg
	MW027	MWCS027R3A	54.00		ug/kg
	MW027	MWCS027R4A	1.40	J	ug/kg
	MW028	MWCS028R2A	15.00	J	ug/kg
	MW028	MWCS028R3A	5.20	J	ug/kg
	MW028	MWCS028R4A	36.00	U	ug/kg
	MW029	MWCS029R2A	5.30	J	ug/kg
	MW029	MWCS029R3A	23.00	U	ug/kg
	MW029	MWCS029R4A	23.00	U	ug/kg
	MW030	MWCS030R2A	210.00		ug/kg
	MW030	MWCS030R3A	6.10	J	ug/kg
	MW030	MWCS030S2A	220.00		ug/kg
	MW031	MWCS031R2A	250.00		ug/kg
	MW031	MWCS031R3A	260.00		ug/kg
	MW031	MWCS031R4A	11.00	J	ug/kg
	MW034	MWCS034R2A	43.00		ug/kg
	MW034	MWCS034R3A	1.30	J	ug/kg
	MW034	MWCS034R4A	1.10	J	ug/kg
	MW035	MWCS035R2A	30.00		ug/kg
	MW035	MWCS035R3A	2.00	J	ug/kg
	MW035	MWCS035R4A	24.00	U	ug/kg
	MW035	MWCS035S4A	23.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW037	MWCS037R2A	73.00		ug/kg
	MW037	MWCS037R3A	23.00		ug/kg
	MW037	MWCS037R4A	1.10	J	ug/kg
	MW040	MWCS040R2A	110.00		ug/kg
	MW040	MWCS040R3A	16.00	J	ug/kg
	MW040	MWCS040R4A	1.40	J	ug/kg
	MW041	MWCT041R2	270.00		ug/kg
	MW046	MWCT046R2	270.00		ug/kg
	MW050	MWCT050R2	210.00		ug/kg
	MW053	MWCT053R2	120.00		ug/kg
	TF-22	TF-22B	160.00		ug/kg
	TF-22	TF-22C	98.00	U	ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	94.00	UJ	ug/kg
	B-14	B-14	92.00	U	ug/kg
	B-15	B-15	88.00	U	ug/kg
	B-16	B-16	93.00	U	ug/kg
	B-17	B-17	92.00	U	ug/kg
	B-18	B-18	78.00	U	ug/kg
	B-19	B-19	89.00	U	ug/kg
	MW001	MWSB001R1	38.00	J	ug/kg
	MW002	MWSB002R1	18.00	J	ug/kg
	MW008	MWSB008R1	34.00		ug/kg
	MW008	MWSB008S1	28.00	J	ug/kg
	MW008-SP	MWSB008R1 SP	22.00	J	ug/kg
	MW009	MWSB009R1	93.00		ug/kg
	MW009-SP	MWSB009R1 SP	170.00		ug/kg
	MW012	MWSB012R1	33.00		ug/kg
	MW013	MWSB013R1	11.00	J	ug/kg
	MW014	MWSB014R1	15.00	J	ug/kg
	MW015	MWSB015R1	27.00	J	ug/kg
	MW015	MWSB015S1	11.00	J	ug/kg
	MW03a	MWSB03aR1	71.00		ug/kg
	MW03b	MWSB03bR1	28.00	J	ug/kg
	MW04a	MWSB04aR1	12.00	J	ug/kg
	MW04b	MWSB04bR1	39.00		ug/kg
	MW04b-SP	MWSB04bR1 SP	330.00		ug/kg
	MW10a	MWSB10aR1	270.00		ug/kg
	MW10b	MWSB10bR1	150.00		ug/kg
	MW10c	MWSB10cR1	320.00		ug/kg
	MW11a	MWSB11aR1	57.00	J	ug/kg
	MW11a-SP	MWSB11aR1 SP	68.00		ug/kg
	MW11b	MWSB11bR1	48.00		ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	99.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
Pentachlorophenol				
Surface Samples				
MW016	MWSS016R1	2.90	J	ug/kg
MW017	MWSS017R1	5.20	J	ug/kg
MW018	MWSS018R1	6.60	J	ug/kg
MW019	MWSS019R1	1.60	J	ug/kg
MW020	MWSS020R1	48.00	U	ug/kg
MW021	MWSS021R1	5.00	J	ug/kg
MW022	MWSS022R1	9.60	J	ug/kg
MW023	MWSS023R1	1.50	J	ug/kg
MW024	MWSS024R1	50.00	J	ug/kg
MW025	MWSS025R1	16.00	J	ug/kg
MW026	MWSS026R1	2.40	J	ug/kg
MW026	MWSS026S1	2.30	J	ug/kg
MW027	MWSS027R1	27.00	J	ug/kg
MW028	MWSS028R1	1.50	J	ug/kg
MW029	MWSS029R1	45.00	J	ug/kg
MW030	MWSS030R1	35.00	J	ug/kg
MW031	MWSS031R1	37.00	J	ug/kg
MW032	MWSS032R1	130.00		ug/kg
MW034	MWSS034R1	48.00	J	ug/kg
MW035	MWSS035R1	49.00		ug/kg
MW037	MWSS037R1	23.00	J	ug/kg
MW039	MWST039R1	5.50	J	ug/kg
MW040	MWST040R1	2.00	J	ug/kg
MW040	MWST040S1	3.30	J	ug/kg
MW042	MWST042R1	26.00	J	ug/kg
MW043	MWST043R1	2.90	J	ug/kg
MW044	MWST044R1	22.00	J	ug/kg
MW045	MWST045R1	22.00	J	ug/kg
MW047	MWST047R1	61.00	J	ug/kg
MW048	MWST048R1	18.00	J	ug/kg
MW049	MWST049R1	21.00	J	ug/kg
MW051	MWST051R1	190.00		ug/kg
MW052	MWST052R1	22.00	J	ug/kg
MW054	MWST054R1	15.00	J	ug/kg
MW055	MWSS055R1	74.00		ug/kg
TF-20	TF-20	100.00	UJ	ug/kg
TF-21	TF-21A	100.00	UJ	ug/kg
TF-22	TF-22A	100.00	UJ	ug/kg
TF-23	TF-23	100.00	UJ	ug/kg
Subsurface Samples				
MW-1	1	480.00	U	ug/kg
MW-1	2	510.00	U	ug/kg
MW024	MWCS024R2A	3.30	J	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW024	MWCS024R3A	45.00	U	ug/kg
MW025	MWCS025R2A	53.00	U	ug/kg
MW025	MWCS025R3A	42.00	U	ug/kg
MW025	MWCS025R4A	42.00	U	ug/kg
MW026	MWCS026R2A	50.00	U	ug/kg
MW026	MWCS026R3A	45.00	U	ug/kg
MW026	MWCS026R4A	45.00	U	ug/kg
MW027	MWCS027R2A	20.00	J	ug/kg
MW027	MWCS027R3A	48.00	U	ug/kg
MW027	MWCS027R4A	46.00	U	ug/kg
MW028	MWCS028R2A	66.00	U	ug/kg
MW028	MWCS028R3A	64.00	U	ug/kg
MW028	MWCS028R4A	69.00	U	ug/kg
MW029	MWCS029R2A	45.00	U	ug/kg
MW029	MWCS029R3A	43.00	U	ug/kg
MW029	MWCS029R4A	45.00	U	ug/kg
MW030	MWCS030R2A	59.00	U	ug/kg
MW030	MWCS030R3A	41.00	U	ug/kg
MW030	MWCS030S2A	53.00	U	ug/kg
MW031	MWCS031R2A	40.00	J	ug/kg
MW031	MWCS031R3A	76.00	U	ug/kg
MW031	MWCS031R4A	61.00	U	ug/kg
MW034	MWCS034R2A	2.50	J	ug/kg
MW034	MWCS034R3A	43.00	U	ug/kg
MW034	MWCS034R4A	46.00	U	ug/kg
MW035	MWCS035R2A	5.10	J	ug/kg
MW035	MWCS035R3A	46.00	U	ug/kg
MW035	MWCS035R4A	46.00	U	ug/kg
MW035	MWCS035S4A	45.00	U	ug/kg
MW037	MWCS037R2A	7.90	J	ug/kg
MW037	MWCS037R3A	4.30	J	ug/kg
MW037	MWCS037R4A	46.00	U	ug/kg
MW040	MWCS040R2A	13.00	J	ug/kg
MW040	MWCS040R3A	64.00	U	ug/kg
MW040	MWCS040R4A	58.00	U	ug/kg
MW041	MWCT041R2	47.00	J	ug/kg
MW046	MWCT046R2	45.00	J	ug/kg
MW050	MWCT050R2	13.00	J	ug/kg
MW053	MWCT053R2	4.20	J	ug/kg
TF-22	TF-22B	100.00	UJ	ug/kg
TF-22	TF-22C	100.00	UJ	ug/kg
Bank Samples				
B-12	B-12	100.00	U	ug/kg
B-13	B-13	100.00	UJ	ug/kg
B-14	B-14	100.00	U	ug/kg
B-15	B-15	100.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
B-16	B-16	100.00	U	ug/kg
B-17	B-17	100.00	U	ug/kg
B-18	B-18	100.00	UJ	ug/kg
B-19	B-19	100.00	UJ	ug/kg
MW001	MWSB001R1	11.00	J	ug/kg
MW002	MWSB002R1	8.40	J	ug/kg
MW008	MWSB008R1	100.00	E	ug/kg
MW008	MWSB008S1	73.00	E	ug/kg
MW008-SP	MWSB008R1 SP	25.00	J	ug/kg
MW009	MWSB009R1	52.00	J	ug/kg
MW009-SP	MWSB009R1 SP	41.00	J	ug/kg
MW012	MWSB012R1	39.00	E	ug/kg
MW013	MWSB013R1	6.80	E	ug/kg
MW014	MWSB014R1	6.20	E	ug/kg
MW015	MWSB015R1	130.00	U	ug/kg
MW015	MWSB015S1	48.00	U	ug/kg
MW03a	MWSB03aR1	28.00	J	ug/kg
MW03b	MWSB03bR1	800.00		ug/kg
MW04a	MWSB04aR1	58.00		ug/kg
MW04b	MWSB04bR1	40.00	J	ug/kg
MW04b-SP	MWSB04bR1 SP	6.00	J	ug/kg
MW10a	MWSB10aR1	200.00		ug/kg
MW10b	MWSB10bR1	680.00		ug/kg
MW10c	MWSB10cR1	75.00		ug/kg
MW11a	MWSB11aR1	19.00	E	ug/kg
MW11a-SP	MWSB11aR1 SP	25.00	J	ug/kg
MW11b	MWSB11bR1	22.00	J	ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	7.70	J	ug/kg
Bulk Sediment	DPC-DRET-7298	1.80	U	ug/L
Bulk Sediment	DPC-DUPLICAT	1.80	U	ug/L
Bulk Sediment	DPC-METD-7298	1.80	U	ug/L
Bulk Sediment	DPC-METT-7298	1.80	U	ug/L
Bulk Sediment	DPC-WATD-7298	1.80	U	ug/L
Bulk Sediment	DPC-WATT-7298	1.80	U	ug/L
Bulk Sediment	TCLT RINSATE 1	1.80	U	ug/L
Bulk Sediment	TCLT-PV 01	1.80	U	ug/L
Bulk Sediment	TCLT-PV 02.5	1.80	U	ug/L
Bulk Sediment	TCLT-PV 04	1.80	U	ug/L
Bulk Sediment	TCLT-PV 06	1.80	U	ug/L
Bulk Sediment	TCLT-PV 07.3	1.90	U	ug/L
Bulk Sediment	TCLT-PV 09	2.10	U	ug/L
Bulk Sediment	TCLT-PV 11	1.80	U	ug/L
Bulk Sediment	TCLT-PV 12.8	1.80	U	ug/L
Bulk Sediment	TCLT-PV 14.4	1.90	U	ug/L
Bulk Sediment	TCLT-PV 15.8	1.90	U	ug/L

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	TCLT-PV 17.5	1.90	U	ug/L
	Bulk Sediment	TCLT-PV 19	1.90	U	ug/L
	Bulk Sediment	TCLT-PV 20.6	2.00	U	ug/L
	Bulk Sediment	TCLT-PV 22.2	1.90	UG	ug/L
	Bulk Sediment	TCLT-PV 23.8	1.80	UG	ug/L
	Bulk Sediment	TCLT-PV 25.3	2.00	UG	ug/L
	Bulk Sediment	TCLT-PV 26.9	2.00	U	ug/L
	Bulk Sediment	TCLT-PV 28.4	1.80	U	ug/L
	Bulk Sediment	TCLT-PV 30	1.80	U	ug/L
Phenol					
Surface Samples					
	MW016	MWSS016R1	38.00		ug/kg
	MW017	MWSS017R1	22.00		ug/kg
	MW018	MWSS018R1	45.00	B	ug/kg
	MW019	MWSS019R1	130.00	B	ug/kg
	MW020	MWSS020R1	48.00	B	ug/kg
	MW021	MWSS021R1	34.00	J	ug/kg
	MW022	MWSS022R1	140.00		ug/kg
	MW023	MWSS023R1	29.00		ug/kg
	MW024	MWSS024R1	75.00	B	ug/kg
	MW025	MWSS025R1	42.00	B	ug/kg
	MW026	MWSS026R1	120.00	B	ug/kg
	MW026	MWSS026S1	66.00	B	ug/kg
	MW027	MWSS027R1	45.00		ug/kg
	MW028	MWSS028R1	46.00	B	ug/kg
	MW029	MWSS029R1	75.00	B	ug/kg
	MW030	MWSS030R1	45.00	B	ug/kg
	MW031	MWSS031R1	220.00	B	ug/kg
	MW032	MWSS032R1	71.00		ug/kg
	MW034	MWSS034R1	620.00	E	ug/kg
	MW035	MWSS035R1	73.00	B	ug/kg
	MW037	MWSS037R1	120.00		ug/kg
	MW039	MWST039R1	62.00	B	ug/kg
	MW040	MWST040R1	27.00	B	ug/kg
	MW040	MWST040S1	110.00	B	ug/kg
	MW042	MWST042R1	48.00	B	ug/kg
	MW043	MWST043R1	54.00		ug/kg
	MW044	MWST044R1	94.00	B	ug/kg
	MW045	MWST045R1	72.00		ug/kg
	MW047	MWST047R1	150.00	B	ug/kg
	MW048	MWST048R1	59.00	B	ug/kg
	MW049	MWST049R1	44.00	B	ug/kg
	MW051	MWST051R1	320.00	B	ug/kg
	MW052	MWST052R1	66.00		ug/kg
	MW054	MWST054R1	190.00	B	ug/kg
	MW055	MWSS055R1	100.00	B	ug/kg

Station	Sample ID	Concentration	Flag	Units
TF-20	TF-20	99.00	U	ug/kg
TF-21	TF-21A	99.00	U	ug/kg
TF-22	TF-22A	95.00	U	ug/kg
TF-23	TF-23	99.00	U	ug/kg
Subsurface Samples				
MW-1	1	97.00	U	ug/kg
MW-1	2	100.00	U	ug/kg
MW024	MWCS024R2A	51.00		ug/kg
MW024	MWCS024R3A	7.80	J	ug/kg
MW025	MWCS025R2A	9.60	J	ug/kg
MW025	MWCS025R3A	3.80	J	ug/kg
MW025	MWCS025R4A	2.70	J	ug/kg
MW026	MWCS026R2A	8.00	J	ug/kg
MW026	MWCS026R3A	3.50	JB	ug/kg
MW026	MWCS026R4A	5.20	J	ug/kg
MW027	MWCS027R2A	110.00		ug/kg
MW027	MWCS027R3A	12.00	J	ug/kg
MW027	MWCS027R4A	5.10	J	ug/kg
MW028	MWCS028R2A	15.00	BJ	ug/kg
MW028	MWCS028R3A	8.10	JB	ug/kg
MW028	MWCS028R4A	13.00	BJ	ug/kg
MW029	MWCS029R2A	3.50	JB	ug/kg
MW029	MWCS029R3A	14.00	U	ug/kg
MW029	MWCS029R4A	2.50	JB	ug/kg
MW030	MWCS030R2A	75.00		ug/kg
MW030	MWCS030R3A	6.40	J	ug/kg
MW030	MWCS030S2A	71.00		ug/kg
MW031	MWCS031R2A	570.00	B	ug/kg
MW031	MWCS031R3A	58.00	B	ug/kg
MW031	MWCS031R4A	9.50	JB	ug/kg
MW034	MWCS034R2A	22.00	B	ug/kg
MW034	MWCS034R3A	4.90	JB	ug/kg
MW034	MWCS034R4A	5.90	JB	ug/kg
MW035	MWCS035R2A	27.00	B	ug/kg
MW035	MWCS035R3A	5.80	JB	ug/kg
MW035	MWCS035R4A	5.80	JB	ug/kg
MW035	MWCS035S4A	3.30	JB	ug/kg
MW037	MWCS037R2A	35.00		ug/kg
MW037	MWCS037R3A	4.20	J	ug/kg
MW037	MWCS037R4A	2.30	J	ug/kg
MW040	MWCS040R2A	20.00	JB	ug/kg
MW040	MWCS040R3A	10.00	JB	ug/kg
MW040	MWCS040R4A	5.40	BJ	ug/kg
MW041	MWCT041R2	86.00	B	ug/kg
MW046	MWCT046R2	94.00	B	ug/kg
MW050	MWCT050R2	100.00	B	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW053	MWCT053R2	35.00	B	ug/kg
	TF-22	TF-22B	96.00	U	ug/kg
	TF-22	TF-22C	98.00	U	ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	94.00	UJ	ug/kg
	B-14	B-14	92.00	U	ug/kg
	B-15	B-15	88.00	U	ug/kg
	B-16	B-16	93.00	U	ug/kg
	B-17	B-17	92.00	U	ug/kg
	B-18	B-18	78.00	U	ug/kg
	B-19	B-19	89.00	U	ug/kg
	MW001	MWSB001R1	29.00	J	ug/kg
	MW002	MWSB002R1	52.00		ug/kg
	MW008	MWSB008R1	62.00		ug/kg
	MW008	MWSB008S1	61.00		ug/kg
	MW008-SP	MWSB008R1 SP	46.00		ug/kg
	MW009	MWSB009R1	17.00	U	ug/kg
	MW009-SP	MWSB009R1 SP	110.00		ug/kg
	MW012	MWSB012R1	25.00		ug/kg
	MW013	MWSB013R1	24.00		ug/kg
	MW014	MWSB014R1	30.00		ug/kg
	MW015	MWSB015R1	17.00	J	ug/kg
	MW015	MWSB015S1	72.00	B	ug/kg
	MW03a	MWSB03aR1	55.00		ug/kg
	MW03b	MWSB03bR1	36.00		ug/kg
	MW04a	MWSB04aR1	16.00	J	ug/kg
	MW04b	MWSB04bR1	27.00		ug/kg
	MW04b-SP	MWSB04bR1 SP	200.00	B	ug/kg
	MW10a	MWSB10aR1	140.00		ug/kg
	MW10b	MWSB10bR1	200.00		ug/kg
	MW10c	MWSB10cR1	510.00		ug/kg
	MW11a	MWSB11aR1	160.00		ug/kg
	MW11a-SP	MWSB11aR1 SP	110.00		ug/kg
	MW11b	MWSB11bR1	180.00		ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	49.00	B	ug/kg
Low Molecular Weight Polycyclic Hydrocarbons					
2-Methylnaphthalene					
Surface Samples					
	A	A	23.00	U	ug/kg
	C	C	19.00	U	ug/kg
	F	F	21.00	U	ug/kg
	HC-2	HC-2	33.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW-1(a)	MW-1(a)	20.00	U	ug/kg
MW016	MWSS016R1	61.00		ug/kg
MW017	MWSS017R1	64.00		ug/kg
MW018	MWSS018R1	99.00		ug/kg
MW019	MWSS019R1	84.00		ug/kg
MW020	MWSS020R1	20.00	J	ug/kg
MW021	MWSS021R1	120.00		ug/kg
MW022	MWSS022R1	130.00		ug/kg
MW023	MWSS023R1	48.00		ug/kg
MW024	MWSS024R1	180.00		ug/kg
MW025	MWSS025R1	190.00		ug/kg
MW026	MWSS026R1	280.00		ug/kg
MW026	MWSS026S1	120.00		ug/kg
MW027	MWSS027R1	170.00		ug/kg
MW028	MWSS028R1	280.00		ug/kg
MW029	MWSS029R1	200.00		ug/kg
MW030	MWSS030R1	180.00		ug/kg
MW031	MWSS031R1	280.00		ug/kg
MW032	MWSS032R1	260.00		ug/kg
MW034	MWSS034R1	290.00	E	ug/kg
MW035	MWSS035R1	220.00		ug/kg
MW037	MWSS037R1	220.00		ug/kg
MW039	MWST039R1	580.00		ug/kg
MW040	MWST040R1	94.00		ug/kg
MW040	MWST040S1	220.00		ug/kg
MW042	MWST042R1	190.00		ug/kg
MW043	MWST043R1	160.00		ug/kg
MW044	MWST044R1	240.00		ug/kg
MW045	MWST045R1	110.00		ug/kg
MW047	MWST047R1	240.00		ug/kg
MW048	MWST048R1	490.00		ug/kg
MW049	MWST049R1	110.00		ug/kg
MW051	MWST051R1	1400.00		ug/kg
MW052	MWST052R1	360.00		ug/kg
MW054	MWST054R1	910.00		ug/kg
MW055	MWSS055R1	210.00		ug/kg
TF-20	TF-20	99.00	U	ug/kg
TF-21	TF-21A	99.00	U	ug/kg
TF-22	TF-22A	95.00	U	ug/kg
TF-23	TF-23	130.00		ug/kg
Subsurface Samples				
F	F	18.00	U	ug/kg
MW-1	1	80.00	J	ug/kg
MW-1	2	180.00		ug/kg
MW024	MWCS024R2A	210.00		ug/kg
MW024	MWCS024R3A	33.00	J	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW025	MWCS025R2A	190.00		ug/kg
	MW025	MWCS025R3A	3.60	J	ug/kg
	MW025	MWCS025R4A	5.30	J	ug/kg
	MW026	MWCS026R2A	19.00	J	ug/kg
	MW026	MWCS026R3A	5.70	J	ug/kg
	MW026	MWCS026R4A	4.50	J	ug/kg
	MW027	MWCS027R2A	410.00		ug/kg
	MW027	MWCS027R3A	320.00		ug/kg
	MW027	MWCS027R4A	21.00	J	ug/kg
	MW028	MWCS028R2A	30.00	J	ug/kg
	MW028	MWCS028R3A	8.00	J	ug/kg
	MW028	MWCS028R4A	6.90	J	ug/kg
	MW029	MWCS029R2A	17.00	J	ug/kg
	MW029	MWCS029R3A	7.00	J	ug/kg
	MW029	MWCS029R4A	6.00	J	ug/kg
	MW030	MWCS030R2A	1200.00		ug/kg
	MW030	MWCS030R3A	170.00		ug/kg
	MW030	MWCS030S2A	1300.00		ug/kg
	MW031	MWCS031R2A	430.00		ug/kg
	MW031	MWCS031R3A	320.00		ug/kg
	MW031	MWCS031R4A	56.00	J	ug/kg
	MW034	MWCS034R2A	140.00		ug/kg
	MW034	MWCS034R3A	12.00	J	ug/kg
	MW034	MWCS034R4A	8.10	J	ug/kg
	MW035	MWCS035R2A	130.00		ug/kg
	MW035	MWCS035R3A	9.40	J	ug/kg
	MW035	MWCS035R4A	44.00	U	ug/kg
	MW035	MWCS035S4A	7.00	J	ug/kg
	MW037	MWCS037R2A	140.00		ug/kg
	MW037	MWCS037R3A	40.00	U	ug/kg
	MW037	MWCS037R4A	4.00	J	ug/kg
	MW040	MWCS040R2A	180.00		ug/kg
	MW040	MWCS040R3A	14.00	J	ug/kg
	MW040	MWCS040R4A	55.00	U	ug/kg
	MW041	MWCT041R2	370.00		ug/kg
	MW046	MWCT046R2	210.00		ug/kg
	MW050	MWCT050R2	3100.00		ug/kg
	MW053	MWCT053R2	220.00		ug/kg
	TF-22	TF-22B	160.00		ug/kg
	TF-22	TF-22C	2700.00		ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	94.00	U	ug/kg
	B-14	B-14	260.00		ug/kg
	B-15	B-15	140.00		ug/kg
	B-16	B-16	190.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
B-17	B-17	92.00	U	ug/kg
B-18	B-18	160.00		ug/kg
B-19	B-19	390.00		ug/kg
MW001	MWSB001R1	77.00		ug/kg
MW002	MWSB002R1	43.00	J	ug/kg
MW008	MWSB008R1	99.00		ug/kg
MW008	MWSB008S1	97.00		ug/kg
MW008-SP	MWSB008R1 SP	62.00		ug/kg
MW009	MWSB009R1	180.00		ug/kg
MW009-SP	MWSB009R1 SP	220.00		ug/kg
MW012	MWSB012R1	140.00		ug/kg
MW013	MWSB013R1	14.00	J	ug/kg
MW014	MWSB014R1	38.00	J	ug/kg
MW015	MWSB015R1	67.00		ug/kg
MW015	MWSB015S1	47.00		ug/kg
MW03a	MWSB03aR1	320.00		ug/kg
MW03b	MWSB03bR1	150.00		ug/kg
MW04a	MWSB04aR1	35.00	J	ug/kg
MW04b	MWSB04bR1	120.00		ug/kg
MW04b-SP	MWSB04bR1 SP	150.00		ug/kg
MW10a	MWSB10aR1	150.00		ug/kg
MW10b	MWSB10bR1	130.00		ug/kg
MW10c	MWSB10cR1	250.00		ug/kg
MW11a	MWSB11aR1	130.00		ug/kg
MW11a-SP	MWSB11aR1 SP	140.00		ug/kg
MW11b	MWSB11bR1	150.00		ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	290.00		ug/kg
Acenaphthene				
Surface Samples				
A	A	23.00	U	ug/kg
C	C	19.00	U	ug/kg
F	F	21.00	U	ug/kg
HC-2	HC-2	45.00		ug/kg
MW-1(a)	MW-1(a)	20.00	U	ug/kg
MW016	MWSS016R1	53.00		ug/kg
MW017	MWSS017R1	70.00		ug/kg
MW018	MWSS018R1	91.00		ug/kg
MW019	MWSS019R1	53.00		ug/kg
MW020	MWSS020R1	24.00	J	ug/kg
MW021	MWSS021R1	140.00		ug/kg
MW022	MWSS022R1	100.00		ug/kg
MW023	MWSS023R1	41.00		ug/kg
MW024	MWSS024R1	220.00		ug/kg
MW025	MWSS025R1	150.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW026	MWSS026R1	200.00		ug/kg
MW026	MWSS026S1	100.00		ug/kg
MW027	MWSS027R1	200.00		ug/kg
MW028	MWSS028R1	400.00		ug/kg
MW029	MWSS029R1	240.00		ug/kg
MW030	MWSS030R1	240.00		ug/kg
MW031	MWSS031R1	660.00		ug/kg
MW032	MWSS032R1	280.00		ug/kg
MW034	MWSS034R1	300.00		ug/kg
MW035	MWSS035R1	210.00		ug/kg
MW037	MWSS037R1	220.00		ug/kg
MW039	MWST039R1	1200.00		ug/kg
MW040	MWST040R1	85.00		ug/kg
MW040	MWST040S1	180.00		ug/kg
MW042	MWST042R1	150.00		ug/kg
MW043	MWST043R1	120.00		ug/kg
MW044	MWST044R1	330.00		ug/kg
MW045	MWST045R1	77.00		ug/kg
MW047	MWST047R1	210.00		ug/kg
MW048	MWST048R1	1100.00		ug/kg
MW049	MWST049R1	76.00		ug/kg
MW051	MWST051R1	4600.00		ug/kg
MW052	MWST052R1	260.00		ug/kg
MW054	MWST054R1	580.00		ug/kg
MW055	MWSS055R1	320.00		ug/kg
TF-20	TF-20	99.00	U	ug/kg
TF-21	TF-21A	99.00	U	ug/kg
TF-22	TF-22A	190.00		ug/kg
TF-23	TF-23	100.00		ug/kg
Subsurface Samples				
F	F	21.60		ug/kg
HC-2	S-1	1300.00	UD	ug/kg
HC-2	S-2	820.00	UD	ug/kg
HC-2	S-3	91.00	U	ug/kg
MW-1	1	110.00		ug/kg
MW-1	2	130.00		ug/kg
MW024	MWCS024R2A	730.00		ug/kg
MW024	MWCS024R3A	66.00		ug/kg
MW025	MWCS025R2A	150.00		ug/kg
MW025	MWCS025R3A	23.00	U	ug/kg
MW025	MWCS025R4A	15.00	J	ug/kg
MW026	MWCS026R2A	22.00	J	ug/kg
MW026	MWCS026R3A	25.00	U	ug/kg
MW026	MWCS026R4A	25.00	U	ug/kg
MW027	MWCS027R2A	660.00		ug/kg
MW027	MWCS027R3A	1500.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW027	MWCS027R4A	36.00		ug/kg
MW028	MWCS028R2A	35.00	J	ug/kg
MW028	MWCS028R3A	26.00	J	ug/kg
MW028	MWCS028R4A	38.00	U	ug/kg
MW029	MWCS029R2A	24.00	J	ug/kg
MW029	MWCS029R3A	24.00	U	ug/kg
MW029	MWCS029R4A	25.00	U	ug/kg
MW030	MWCS030R2A	7200.00		ug/kg
MW030	MWCS030R3A	280.00		ug/kg
MW030	MWCS030S2A	8700.00		ug/kg
MW031	MWCS031R2A	380.00		ug/kg
MW031	MWCS031R3A	220.00		ug/kg
MW031	MWCS031R4A	63.00		ug/kg
MW034	MWCS034R2A	110.00		ug/kg
MW034	MWCS034R3A	16.00	J	ug/kg
MW034	MWCS034R4A	26.00	U	ug/kg
MW035	MWCS035R2A	80.00		ug/kg
MW035	MWCS035R3A	18.00	J	ug/kg
MW035	MWCS035R4A	26.00	U	ug/kg
MW035	MWCS035S4A	25.00	U	ug/kg
MW037	MWCS037R2A	120.00		ug/kg
MW037	MWCS037R3A	24.00	U	ug/kg
MW037	MWCS037R4A	26.00	U	ug/kg
MW040	MWCS040R2A	170.00		ug/kg
MW040	MWCS040R3A	26.00	J	ug/kg
MW040	MWCS040R4A	32.00	U	ug/kg
MW041	MWCT041R2	340.00		ug/kg
MW046	MWCT046R2	150.00		ug/kg
MW050	MWCT050R2	4000.00		ug/kg
MW053	MWCT053R2	220.00		ug/kg
TF-22	TF-22B	320.00		ug/kg
TF-22	TF-22C	45000.00		ug/kg
Bank Samples				
B-12	B-12	98.00	U	ug/kg
B-13	B-13	94.00	U	ug/kg
B-14	B-14	940.00		ug/kg
B-15	B-15	410.00		ug/kg
B-16	B-16	130.00		ug/kg
B-17	B-17	110.00		ug/kg
B-18	B-18	230.00		ug/kg
B-19	B-19	360.00		ug/kg
MW001	MWSB001R1	120.00		ug/kg
MW002	MWSB002R1	71.00		ug/kg
MW008	MWSB008R1	54.00		ug/kg
MW008	MWSB008S1	58.00		ug/kg
MW008-SP	MWSB008R1 SP	29.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW009	MWSB009R1	140.00		ug/kg
MW009-SP	MWSB009R1 SP	200.00		ug/kg
MW012	MWSB012R1	170.00		ug/kg
MW013	MWSB013R1	26.00		ug/kg
MW014	MWSB014R1	30.00		ug/kg
MW015	MWSB015R1	59.00		ug/kg
MW015	MWSB015S1	69.00		ug/kg
MW03a	MWSB03aR1	670.00		ug/kg
MW03b	MWSB03bR1	170.00		ug/kg
MW04a	MWSB04aR1	33.00		ug/kg
MW04b	MWSB04bR1	58.00		ug/kg
MW04b-SP	MWSB04bR1 SP	28.00		ug/kg
MW10a	MWSB10aR1	320.00		ug/kg
MW10b	MWSB10bR1	290.00		ug/kg
MW10c	MWSB10cR1	250.00		ug/kg
MW11a	MWSB11aR1	88.00		ug/kg
MW11a-SP	MWSB11aR1 SP	120.00		ug/kg
MW11b	MWSB11bR1	150.00		ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	1400.00		ug/kg
Bulk Sediment	DPC-DRET-7298	2.50		ug/L
Bulk Sediment	DPC-DUPLICAT	2.50		ug/L
Bulk Sediment	DPC-METD-7298	5.80		ug/L
Bulk Sediment	DPC-METT-7298	5.60		ug/L
Bulk Sediment	DPC-WATD-7298	1.70	U	ug/L
Bulk Sediment	DPC-WATT-7298	1.70	U	ug/L
Bulk Sediment	TCLT RINSATE 1	1.70	U	ug/L
Bulk Sediment	TCLT-PV 01	3.90		ug/L
Bulk Sediment	TCLT-PV 02.5	5.20		ug/L
Bulk Sediment	TCLT-PV 04	4.60		ug/L
Bulk Sediment	TCLT-PV 06	1.80	G	ug/L
Bulk Sediment	TCLT-PV 07.3	4.00		ug/L
Bulk Sediment	TCLT-PV 09	4.20		ug/L
Bulk Sediment	TCLT-PV 11	4.30		ug/L
Bulk Sediment	TCLT-PV 12.8	5.30		ug/L
Bulk Sediment	TCLT-PV 14.4	5.50		ug/L
Bulk Sediment	TCLT-PV 15.8	5.50		ug/L
Bulk Sediment	TCLT-PV 17.5	5.30		ug/L
Bulk Sediment	TCLT-PV 19	4.30	G	ug/L
Bulk Sediment	TCLT-PV 20.6	4.90		ug/L
Bulk Sediment	TCLT-PV 22.2	4.40		ug/L
Bulk Sediment	TCLT-PV 23.8	4.00		ug/L
Bulk Sediment	TCLT-PV 25.3	4.20		ug/L
Bulk Sediment	TCLT-PV 26.9	4.20		ug/L
Bulk Sediment	TCLT-PV 28.4	4.00		ug/L
Bulk Sediment	TCLT-PV 30	3.80	G	ug/L

	Station	Sample ID	Concentration	Flag	Units
Acenaphthylene					
Surface Samples					
	A	A	23.00	U	ug/kg
	C	C	19.00	U	ug/kg
	F	F	22.00		ug/kg
	HC-2	HC-2	44.00		ug/kg
	MW-1(a)	MW-1(a)	20.00	U	ug/kg
	MW016	MWSS016R1	46.00		ug/kg
	MW017	MWSS017R1	52.00		ug/kg
	MW018	MWSS018R1	60.00		ug/kg
	MW019	MWSS019R1	66.00		ug/kg
	MW020	MWSS020R1	27.00	J	ug/kg
	MW021	MWSS021R1	68.00		ug/kg
	MW022	MWSS022R1	88.00		ug/kg
	MW023	MWSS023R1	36.00		ug/kg
	MW024	MWSS024R1	110.00		ug/kg
	MW025	MWSS025R1	100.00		ug/kg
	MW026	MWSS026R1	210.00		ug/kg
	MW026	MWSS026S1	150.00		ug/kg
	MW027	MWSS027R1	120.00		ug/kg
	MW028	MWSS028R1	130.00		ug/kg
	MW029	MWSS029R1	140.00		ug/kg
	MW030	MWSS030R1	110.00		ug/kg
	MW031	MWSS031R1	200.00		ug/kg
	MW032	MWSS032R1	97.00		ug/kg
	MW034	MWSS034R1	160.00		ug/kg
	MW035	MWSS035R1	140.00		ug/kg
	MW037	MWSS037R1	170.00		ug/kg
	MW039	MWST039R1	240.00		ug/kg
	MW040	MWST040R1	86.00		ug/kg
	MW040	MWST040S1	130.00		ug/kg
	MW042	MWST042R1	89.00		ug/kg
	MW043	MWST043R1	100.00		ug/kg
	MW044	MWST044R1	150.00		ug/kg
	MW045	MWST045R1	63.00		ug/kg
	MW047	MWST047R1	140.00		ug/kg
	MW048	MWST048R1	410.00		ug/kg
	MW049	MWST049R1	60.00		ug/kg
	MW051	MWST051R1	1600.00		ug/kg
	MW052	MWST052R1	240.00		ug/kg
	MW054	MWST054R1	690.00		ug/kg
	MW055	MWSS055R1	210.00		ug/kg
	TF-20	TF-20	99.00	U	ug/kg
	TF-21	TF-21A	120.00		ug/kg
	TF-22	TF-22A	200.00		ug/kg
	TF-23	TF-23	170.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
Subsurface Samples					
	F	F	18.00	U	ug/kg
	HC-2	S-1	4500.00	UD	ug/kg
	HC-2	S-2	2900.00	UD	ug/kg
	HC-2	S-3	320.00	U	ug/kg
	MW-1	1	180.00		ug/kg
	MW-1	2	540.00		ug/kg
	MW024	MWCS024R2A	100.00		ug/kg
	MW024	MWCS024R3A	42.00		ug/kg
	MW025	MWCS025R2A	93.00		ug/kg
	MW025	MWCS025R3A	27.00	U	ug/kg
	MW025	MWCS025R4A	27.00	U	ug/kg
	MW026	MWCS026R2A	28.00	J	ug/kg
	MW026	MWCS026R3A	29.00	U	ug/kg
	MW026	MWCS026R4A	29.00	U	ug/kg
	MW027	MWCS027R2A	150.00		ug/kg
	MW027	MWCS027R3A	96.00		ug/kg
	MW027	MWCS027R4A	30.00	U	ug/kg
	MW028	MWCS028R2A	43.00		ug/kg
	MW028	MWCS028R3A	33.00	J	ug/kg
	MW028	MWCS028R4A	44.00	U	ug/kg
	MW029	MWCS029R2A	28.00	J	ug/kg
	MW029	MWCS029R3A	28.00	U	ug/kg
	MW029	MWCS029R4A	29.00	U	ug/kg
	MW030	MWCS030R2A	680.00		ug/kg
	MW030	MWCS030R3A	24.00	J	ug/kg
	MW030	MWCS030S2A	430.00		ug/kg
	MW031	MWCS031R2A	240.00		ug/kg
	MW031	MWCS031R3A	200.00		ug/kg
	MW031	MWCS031R4A	38.00	J	ug/kg
	MW034	MWCS034R2A	140.00		ug/kg
	MW034	MWCS034R3A	23.00	J	ug/kg
	MW034	MWCS034R4A	30.00	U	ug/kg
	MW035	MWCS035R2A	99.00		ug/kg
	MW035	MWCS035R3A	29.00	U	ug/kg
	MW035	MWCS035R4A	29.00	U	ug/kg
	MW035	MWCS035S4A	29.00	U	ug/kg
	MW037	MWCS037R2A	73.00		ug/kg
	MW037	MWCS037R3A	27.00	U	ug/kg
	MW037	MWCS037R4A	30.00	U	ug/kg
	MW040	MWCS040R2A	140.00		ug/kg
	MW040	MWCS040R3A	34.00	J	ug/kg
	MW040	MWCS040R4A	37.00	U	ug/kg
	MW041	MWCT041R2	210.00		ug/kg
	MW046	MWCT046R2	160.00		ug/kg
	MW050	MWCT050R2	1700.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW053	MWCT053R2	200.00		ug/kg
	TF-22	TF-22B	320.00		ug/kg
	TF-22	TF-22C	6300.00		ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	94.00	U	ug/kg
	B-14	B-14	1100.00		ug/kg
	B-15	B-15	200.00		ug/kg
	B-16	B-16	290.00		ug/kg
	B-17	B-17	100.00		ug/kg
	B-18	B-18	270.00		ug/kg
	B-19	B-19	710.00		ug/kg
	MW001	MWSB001R1	46.00		ug/kg
	MW002	MWSB002R1	36.00		ug/kg
	MW008	MWSB008R1	57.00		ug/kg
	MW008	MWSB008S1	68.00		ug/kg
	MW008-SP	MWSB008R1 SP	32.00		ug/kg
	MW009	MWSB009R1	180.00		ug/kg
	MW009-SP	MWSB009R1 SP	78.00		ug/kg
	MW012	MWSB012R1	82.00		ug/kg
	MW013	MWSB013R1	26.00	J	ug/kg
	MW014	MWSB014R1	41.00		ug/kg
	MW015	MWSB015R1	48.00		ug/kg
	MW015	MWSB015S1	39.00		ug/kg
	MW03a	MWSB03aR1	130.00		ug/kg
	MW03b	MWSB03bR1	91.00		ug/kg
	MW04a	MWSB04aR1	35.00		ug/kg
	MW04b	MWSB04bR1	56.00		ug/kg
	MW04b-SP	MWSB04bR1 SP	28.00	J	ug/kg
	MW10a	MWSB10aR1	64.00		ug/kg
	MW10b	MWSB10bR1	110.00		ug/kg
	MW10c	MWSB10cR1	170.00		ug/kg
	MW11a	MWSB11aR1	76.00		ug/kg
	MW11a-SP	MWSB11aR1 SP	89.00		ug/kg
	MW11b	MWSB11bR1	68.00		ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	150.00		ug/kg
Anthracene					
Surface Samples					
	A	A	70.00		ug/kg
	C	C	19.00	U	ug/kg
	F	F	58.00		ug/kg
	HC-2	HC-2	240.00		ug/kg
	MW-1(a)	MW-1(a)	20.00	U	ug/kg
	MW016	MWSS016R1	140.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW017	MWSS017R1	210.00		ug/kg
MW018	MWSS018R1	230.00		ug/kg
MW019	MWSS019R1	170.00		ug/kg
MW020	MWSS020R1	26.00	J	ug/kg
MW021	MWSS021R1	360.00		ug/kg
MW022	MWSS022R1	210.00		ug/kg
MW023	MWSS023R1	76.00		ug/kg
MW024	MWSS024R1	1000.00		ug/kg
MW025	MWSS025R1	450.00		ug/kg
MW026	MWSS026R1	420.00		ug/kg
MW026	MWSS026S1	310.00		ug/kg
MW027	MWSS027R1	440.00		ug/kg
MW028	MWSS028R1	520.00		ug/kg
MW029	MWSS029R1	470.00		ug/kg
MW030	MWSS030R1	650.00		ug/kg
MW031	MWSS031R1	1000.00		ug/kg
MW032	MWSS032R1	490.00		ug/kg
MW034	MWSS034R1	470.00		ug/kg
MW035	MWSS035R1	490.00		ug/kg
MW037	MWSS037R1	400.00		ug/kg
MW039	MWST039R1	1700.00		ug/kg
MW040	MWST040R1	180.00		ug/kg
MW040	MWST040S1	300.00		ug/kg
MW042	MWST042R1	240.00		ug/kg
MW043	MWST043R1	240.00		ug/kg
MW044	MWST044R1	370.00		ug/kg
MW045	MWST045R1	120.00		ug/kg
MW047	MWST047R1	320.00		ug/kg
MW048	MWST048R1	830.00		ug/kg
MW049	MWST049R1	120.00		ug/kg
MW051	MWST051R1	2600.00		ug/kg
MW052	MWST052R1	530.00		ug/kg
MW054	MWST054R1	1500.00		ug/kg
MW055	MWSS055R1	610.00		ug/kg
TF-20	TF-20	140.00		ug/kg
TF-21	TF-21A	170.00		ug/kg
TF-22	TF-22A	630.00		ug/kg
TF-23	TF-23	250.00		ug/kg
Subsurface Samples				
F	F	46.80		ug/kg
HC-2	S-1	380.00	D	ug/kg
HC-2	S-2	530.00	D	ug/kg
HC-2	S-3	180.00		ug/kg
MW-1	1	390.00		ug/kg
MW-1	2	750.00		ug/kg
MW024	MWCS024R2A	1200.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW024	MWCS024R3A	140.00		ug/kg
	MW025	MWCS025R2A	380.00		ug/kg
	MW025	MWCS025R3A	3.60	J	ug/kg
	MW025	MWCS025R4A	55.00	U	ug/kg
	MW026	MWCS026R2A	27.00	J	ug/kg
	MW026	MWCS026R3A	59.00	U	ug/kg
	MW026	MWCS026R4A	58.00	U	ug/kg
	MW027	MWCS027R2A	700.00		ug/kg
	MW027	MWCS027R3A	2200.00		ug/kg
	MW027	MWCS027R4A	15.00	J	ug/kg
	MW028	MWCS028R2A	98.00		ug/kg
	MW028	MWCS028R3A	14.00	J	ug/kg
	MW028	MWCS028R4A	90.00	U	ug/kg
	MW029	MWCS029R2A	20.00	J	ug/kg
	MW029	MWCS029R3A	57.00	U	ug/kg
	MW029	MWCS029R4A	58.00	U	ug/kg
	MW030	MWCS030R2A	4300.00		ug/kg
	MW030	MWCS030R3A	100.00		ug/kg
	MW030	MWCS030S2A	6000.00		ug/kg
	MW031	MWCS031R2A	3600.00		ug/kg
	MW031	MWCS031R3A	600.00		ug/kg
	MW031	MWCS031R4A	41.00	J	ug/kg
	MW034	MWCS034R2A	270.00		ug/kg
	MW034	MWCS034R3A	6.20	J	ug/kg
	MW034	MWCS034R4A	61.00	U	ug/kg
	MW035	MWCS035R2A	170.00		ug/kg
	MW035	MWCS035R3A	5.10	J	ug/kg
	MW035	MWCS035R4A	60.00	U	ug/kg
	MW035	MWCS035S4A	58.00	U	ug/kg
	MW037	MWCS037R2A	180.00		ug/kg
	MW037	MWCS037R3A	55.00	U	ug/kg
	MW037	MWCS037R4A	61.00	U	ug/kg
	MW040	MWCS040R2A	350.00		ug/kg
	MW040	MWCS040R3A	19.00	J	ug/kg
	MW040	MWCS040R4A	75.00	U	ug/kg
	MW041	MWCT041R2	520.00		ug/kg
	MW046	MWCT046R2	450.00		ug/kg
	MW050	MWCT050R2	6300.00		ug/kg
	MW053	MWCT053R2	440.00		ug/kg
	TF-22	TF-22B	630.00		ug/kg
	TF-22	TF-22C	27000.00		ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	99.00		ug/kg
	B-14	B-14	3700.00		ug/kg
	B-15	B-15	780.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	B-16	B-16	680.00		ug/kg
	B-17	B-17	380.00		ug/kg
	B-18	B-18	470.00		ug/kg
	B-19	B-19	1400.00		ug/kg
	MW001	MWSB001R1	210.00		ug/kg
	MW002	MWSB002R1	110.00		ug/kg
	MW008	MWSB008R1	100.00		ug/kg
	MW008	MWSB008S1	570.00		ug/kg
	MW008-SP	MWSB008R1 SP	39.00	J	ug/kg
	MW009	MWSB009R1	730.00		ug/kg
	MW009-SP	MWSB009R1 SP	420.00		ug/kg
	MW012	MWSB012R1	330.00		ug/kg
	MW013	MWSB013R1	43.00	J	ug/kg
	MW014	MWSB014R1	65.00		ug/kg
	MW015	MWSB015R1	230.00		ug/kg
	MW015	MWSB015S1	160.00		ug/kg
	MW03a	MWSB03aR1	530.00		ug/kg
	MW03b	MWSB03bR1	720.00		ug/kg
	MW04a	MWSB04aR1	42.00	J	ug/kg
	MW04b	MWSB04bR1	130.00		ug/kg
	MW04b-SP	MWSB04bR1 SP	39.00	J	ug/kg
	MW10a	MWSB10aR1	520.00		ug/kg
	MW10b	MWSB10bR1	640.00		ug/kg
	MW10c	MWSB10cR1	730.00		ug/kg
	MW11a	MWSB11aR1	190.00		ug/kg
	MW11a-SP	MWSB11aR1 SP	640.00		ug/kg
	MW11b	MWSB11bR1	430.00		ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	1900.00		ug/kg
Fluorene					
Surface Samples					
	A	A	23.00	U	ug/kg
	C	C	19.00	U	ug/kg
	F	F	21.00	U	ug/kg
	HC-2	HC-2	52.00		ug/kg
	MW-1(a)	MW-1(a)	20.00	U	ug/kg
	MW016	MWSS016R1	63.00		ug/kg
	MW017	MWSS017R1	87.00		ug/kg
	MW018	MWSS018R1	120.00		ug/kg
	MW019	MWSS019R1	71.00		ug/kg
	MW020	MWSS020R1	16.00	J	ug/kg
	MW021	MWSS021R1	190.00		ug/kg
	MW022	MWSS022R1	160.00		ug/kg
	MW023	MWSS023R1	47.00		ug/kg
	MW024	MWSS024R1	340.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW025	MWSS025R1	230.00		ug/kg
MW026	MWSS026R1	310.00		ug/kg
MW026	MWSS026S1	230.00		ug/kg
MW027	MWSS027R1	290.00		ug/kg
MW028	MWSS028R1	550.00		ug/kg
MW029	MWSS029R1	330.00		ug/kg
MW030	MWSS030R1	310.00		ug/kg
MW031	MWSS031R1	710.00		ug/kg
MW032	MWSS032R1	310.00		ug/kg
MW034	MWSS034R1	400.00		ug/kg
MW035	MWSS035R1	270.00		ug/kg
MW037	MWSS037R1	240.00		ug/kg
MW039	MWST039R1	1500.00		ug/kg
MW040	MWST040R1	120.00		ug/kg
MW040	MWST040S1	200.00		ug/kg
MW042	MWST042R1	180.00		ug/kg
MW043	MWST043R1	140.00		ug/kg
MW044	MWST044R1	430.00		ug/kg
MW045	MWST045R1	77.00		ug/kg
MW047	MWST047R1	300.00		ug/kg
MW048	MWST048R1	840.00		ug/kg
MW049	MWST049R1	86.00		ug/kg
MW051	MWST051R1	3800.00		ug/kg
MW052	MWST052R1	360.00		ug/kg
MW054	MWST054R1	1100.00		ug/kg
MW055	MWSS055R1	530.00		ug/kg
TF-20	TF-20	99.00	U	ug/kg
TF-21	TF-21A	99.00	U	ug/kg
TF-22	TF-22A	200.00		ug/kg
TF-23	TF-23	120.00		ug/kg
Subsurface Samples				
F	F	25.20		ug/kg
HC-2	S-1	350.00	D	ug/kg
HC-2	S-2	300.00	D	ug/kg
HC-2	S-3	120.00		ug/kg
MW-1	1	130.00		ug/kg
MW-1	2	280.00		ug/kg
MW024	MWCS024R2A	730.00		ug/kg
MW024	MWCS024R3A	110.00		ug/kg
MW025	MWCS025R2A	220.00		ug/kg
MW025	MWCS025R3A	28.00	U	ug/kg
MW025	MWCS025R4A	28.00	U	ug/kg
MW026	MWCS026R2A	17.00	J	ug/kg
MW026	MWCS026R3A	30.00	U	ug/kg
MW026	MWCS026R4A	30.00	U	ug/kg
MW027	MWCS027R2A	860.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW027	MWCS027R3A	3000.00		ug/kg
	MW027	MWCS027R4A	29.00	J	ug/kg
	MW028	MWCS028R2A	37.00	J	ug/kg
	MW028	MWCS028R3A	14.00	J	ug/kg
	MW028	MWCS028R4A	46.00	U	ug/kg
	MW029	MWCS029R2A	19.00	J	ug/kg
	MW029	MWCS029R3A	29.00	U	ug/kg
	MW029	MWCS029R4A	30.00	U	ug/kg
	MW030	MWCS030R2A	12000.00		ug/kg
	MW030	MWCS030R3A	250.00		ug/kg
	MW030	MWCS030S2A	15000.00		ug/kg
	MW031	MWCS031R2A	900.00		ug/kg
	MW031	MWCS031R3A	400.00		ug/kg
	MW031	MWCS031R4A	37.00	J	ug/kg
	MW034	MWCS034R2A	180.00		ug/kg
	MW034	MWCS034R3A	29.00	U	ug/kg
	MW034	MWCS034R4A	31.00	U	ug/kg
	MW035	MWCS035R2A	120.00		ug/kg
	MW035	MWCS035R3A	31.00	U	ug/kg
	MW035	MWCS035R4A	31.00	U	ug/kg
	MW035	MWCS035S4A	30.00	U	ug/kg
	MW037	MWCS037R2A	130.00		ug/kg
	MW037	MWCS037R3A	28.00	U	ug/kg
	MW037	MWCS037R4A	31.00	U	ug/kg
	MW040	MWCS040R2A	260.00		ug/kg
	MW040	MWCS040R3A	16.00	J	ug/kg
	MW040	MWCS040R4A	39.00	U	ug/kg
	MW041	MWCT041R2	440.00		ug/kg
	MW046	MWCT046R2	330.00		ug/kg
	MW050	MWCT050R2	5800.00		ug/kg
	MW053	MWCT053R2	460.00		ug/kg
	TF-22	TF-22B	350.00		ug/kg
	TF-22	TF-22C	26000.00		ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	94.00	U	ug/kg
	B-14	B-14	1200.00		ug/kg
	B-15	B-15	370.00		ug/kg
	B-16	B-16	320.00		ug/kg
	B-17	B-17	120.00		ug/kg
	B-18	B-18	200.00		ug/kg
	B-19	B-19	590.00		ug/kg
	MW001	MWSB001R1	120.00		ug/kg
	MW002	MWSB002R1	77.00		ug/kg
	MW008	MWSB008R1	58.00		ug/kg
	MW008	MWSB008S1	72.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW008-SP	MWSB008R1 SP	23.00	J	ug/kg
	MW009	MWSB009R1	310.00		ug/kg
	MW009-SP	MWSB009R1 SP	340.00		ug/kg
	MW012	MWSB012R1	240.00		ug/kg
	MW013	MWSB013R1	19.00	J	ug/kg
	MW014	MWSB014R1	38.00		ug/kg
	MW015	MWSB015R1	82.00		ug/kg
	MW015	MWSB015S1	94.00		ug/kg
	MW03a	MWSB03aR1	540.00		ug/kg
	MW03b	MWSB03bR1	240.00		ug/kg
	MW04a	MWSB04aR1	29.00	J	ug/kg
	MW04b	MWSB04bR1	82.00		ug/kg
	MW04b-SP	MWSB04bR1 SP	25.00	J	ug/kg
	MW10a	MWSB10aR1	330.00		ug/kg
	MW10b	MWSB10bR1	330.00		ug/kg
	MW10c	MWSB10cR1	340.00		ug/kg
	MW11a	MWSB11aR1	97.00		ug/kg
	MW11a-SP	MWSB11aR1 SP	160.00		ug/kg
	MW11b	MWSB11bR1	310.00		ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	2500.00		ug/kg
Naphthalene					
Surface Samples					
	A	A	23.00	U	ug/kg
	C	C	19.00	U	ug/kg
	F	F	21.00		ug/kg
	HC-2	HC-2	36.00		ug/kg
	MW-1(a)	MW-1(a)	20.00	U	ug/kg
	MW016	MWSS016R1	160.00		ug/kg
	MW017	MWSS017R1	130.00		ug/kg
	MW018	MWSS018R1	240.00		ug/kg
	MW019	MWSS019R1	190.00		ug/kg
	MW020	MWSS020R1	32.00	J	ug/kg
	MW021	MWSS021R1	280.00		ug/kg
	MW022	MWSS022R1	430.00		ug/kg
	MW023	MWSS023R1	120.00		ug/kg
	MW024	MWSS024R1	410.00		ug/kg
	MW025	MWSS025R1	460.00		ug/kg
	MW026	MWSS026R1	780.00		ug/kg
	MW026	MWSS026S1	380.00		ug/kg
	MW027	MWSS027R1	450.00		ug/kg
	MW028	MWSS028R1	580.00		ug/kg
	MW029	MWSS029R1	470.00		ug/kg
	MW030	MWSS030R1	450.00		ug/kg
	MW031	MWSS031R1	730.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW032	MWSS032R1	350.00		ug/kg
MW034	MWSS034R1	600.00		ug/kg
MW035	MWSS035R1	640.00		ug/kg
MW037	MWSS037R1	680.00		ug/kg
MW039	MWST039R1	1800.00		ug/kg
MW040	MWST040R1	300.00		ug/kg
MW040	MWST040S1	840.00		ug/kg
MW042	MWST042R1	560.00		ug/kg
MW043	MWST043R1	470.00		ug/kg
MW044	MWST044R1	760.00		ug/kg
MW045	MWST045R1	240.00		ug/kg
MW047	MWST047R1	650.00		ug/kg
MW048	MWST048R1	2800.00		ug/kg
MW049	MWST049R1	370.00		ug/kg
MW051	MWST051R1	5300.00		ug/kg
MW052	MWST052R1	1100.00		ug/kg
MW054	MWST054R1	4200.00		ug/kg
MW055	MWSS055R1	640.00		ug/kg
TF-20	TF-20	99.00	U	ug/kg
TF-21	TF-21A	99.00	U	ug/kg
TF-22	TF-22A	170.00		ug/kg
TF-23	TF-23	250.00		ug/kg
Subsurface Samples				
F	F	25.20		ug/kg
HC-2	S-1	930.00	DJ	ug/kg
HC-2	S-2	540.00	DJ	ug/kg
HC-2	S-3	89.00	J	ug/kg
MW-1	1	360.00		ug/kg
MW-1	2	590.00		ug/kg
MW024	MWCS024R2A	510.00		ug/kg
MW024	MWCS024R3A	69.00		ug/kg
MW025	MWCS025R2A	510.00		ug/kg
MW025	MWCS025R3A	5.30	J	ug/kg
MW025	MWCS025R4A	6.00	J	ug/kg
MW026	MWCS026R2A	25.00	J	ug/kg
MW026	MWCS026R3A	3.80	J	ug/kg
MW026	MWCS026R4A	45.00	U	ug/kg
MW027	MWCS027R2A	1100.00		ug/kg
MW027	MWCS027R3A	640.00		ug/kg
MW027	MWCS027R4A	45.00	J	ug/kg
MW028	MWCS028R2A	60.00	J	ug/kg
MW028	MWCS028R3A	14.00	J	ug/kg
MW028	MWCS028R4A	69.00	U	ug/kg
MW029	MWCS029R2A	34.00	J	ug/kg
MW029	MWCS029R3A	43.00	U	ug/kg
MW029	MWCS029R4A	45.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW030	MWCS030R2A	4000.00		ug/kg
	MW030	MWCS030R3A	520.00		ug/kg
	MW030	MWCS030S2A	2600.00		ug/kg
	MW031	MWCS031R2A	860.00		ug/kg
	MW031	MWCS031R3A	600.00		ug/kg
	MW031	MWCS031R4A	280.00		ug/kg
	MW034	MWCS034R2A	450.00		ug/kg
	MW034	MWCS034R3A	43.00	U	ug/kg
	MW034	MWCS034R4A	46.00	U	ug/kg
	MW035	MWCS035R2A	340.00		ug/kg
	MW035	MWCS035R3A	9.70	J	ug/kg
	MW035	MWCS035R4A	46.00	U	ug/kg
	MW035	MWCS035S4A	45.00	U	ug/kg
	MW037	MWCS037R2A	360.00		ug/kg
	MW037	MWCS037R3A	42.00	U	ug/kg
	MW037	MWCS037R4A	46.00	U	ug/kg
	MW040	MWCS040R2A	720.00		ug/kg
	MW040	MWCS040R3A	34.00	J	ug/kg
	MW040	MWCS040R4A	58.00	U	ug/kg
	MW041	MWCT041R2	1100.00		ug/kg
	MW046	MWCT046R2	750.00		ug/kg
	MW050	MWCT050R2	11000.00		ug/kg
	MW053	MWCT053R2	840.00		ug/kg
	TF-22	TF-22B	450.00		ug/kg
	TF-22	TF-22C	8600.00		ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	94.00	U	ug/kg
	B-14	B-14	230.00		ug/kg
	B-15	B-15	130.00		ug/kg
	B-16	B-16	200.00		ug/kg
	B-17	B-17	92.00	U	ug/kg
	B-18	B-18	210.00		ug/kg
	B-19	B-19	690.00		ug/kg
	MW001	MWSB001R1	94.00		ug/kg
	MW002	MWSB002R1	63.00		ug/kg
	MW008	MWSB008R1	210.00		ug/kg
	MW008	MWSB008S1	170.00		ug/kg
	MW008-SP	MWSB008R1 SP	120.00		ug/kg
	MW009	MWSB009R1	230.00		ug/kg
	MW009-SP	MWSB009R1 SP	520.00		ug/kg
	MW012	MWSB012R1	260.00		ug/kg
	MW013	MWSB013R1	34.00	J	ug/kg
	MW014	MWSB014R1	55.00		ug/kg
	MW015	MWSB015R1	92.00		ug/kg
	MW015	MWSB015S1	83.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW03a	MWSB03aR1	850.00		ug/kg
	MW03b	MWSB03bR1	280.00		ug/kg
	MW04a	MWSB04aR1	76.00		ug/kg
	MW04b	MWSB04bR1	180.00		ug/kg
	MW04b-SP	MWSB04bR1 SP	90.00		ug/kg
	MW10a	MWSB10aR1	200.00		ug/kg
	MW10b	MWSB10bR1	240.00		ug/kg
	MW10c	MWSB10cR1	510.00		ug/kg
	MW11a	MWSB11aR1	160.00		ug/kg
	MW11a-SP	MWSB11aR1 SP	200.00		ug/kg
	MW11b	MWSB11bR1	290.00		ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	530.00		ug/kg
	Bulk Sediment	DPC-DRET-7298	2.00	U	ug/L
	Bulk Sediment	DPC-DUPLICAT	2.00	U	ug/L
	Bulk Sediment	DPC-METD-7298	2.00	U	ug/L
	Bulk Sediment	DPC-METT-7298	2.00	U	ug/L
	Bulk Sediment	DPC-WATD-7298	2.00	U	ug/L
	Bulk Sediment	DPC-WATT-7298	2.00	U	ug/L
	Bulk Sediment	TCLT RINSATE 1	2.00	U	ug/L
	Bulk Sediment	TCLT-PV 01	2.00	U	ug/L
	Bulk Sediment	TCLT-PV 02.5	2.00	U	ug/L
	Bulk Sediment	TCLT-PV 04	2.00	U	ug/L
	Bulk Sediment	TCLT-PV 06	2.00	U	ug/L
	Bulk Sediment	TCLT-PV 07.3	2.10	U	ug/L
	Bulk Sediment	TCLT-PV 09	2.40	U	ug/L
	Bulk Sediment	TCLT-PV 11	2.00	U	ug/L
	Bulk Sediment	TCLT-PV 12.8	2.00	U	ug/L
	Bulk Sediment	TCLT-PV 14.4	2.10	U	ug/L
	Bulk Sediment	TCLT-PV 15.8	2.10	U	ug/L
	Bulk Sediment	TCLT-PV 17.5	2.10	U	ug/L
	Bulk Sediment	TCLT-PV 19	2.10	U	ug/L
	Bulk Sediment	TCLT-PV 20.6	2.20	U	ug/L
	Bulk Sediment	TCLT-PV 22.2	2.10	U	ug/L
	Bulk Sediment	TCLT-PV 23.8	2.00	U	ug/L
	Bulk Sediment	TCLT-PV 25.3	2.20	U	ug/L
	Bulk Sediment	TCLT-PV 26.9	2.20	U	ug/L
	Bulk Sediment	TCLT-PV 28.4	2.00	U	ug/L
	Bulk Sediment	TCLT-PV 30	2.00	U	ug/L
Phenanthrene					
Surface Samples					
	A	A	240.00		ug/kg
	C	C	61.00		ug/kg
	F	F	250.00		ug/kg
	HC-2	HC-2	540.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW-1(a)	MW-1(a)	46.00		ug/kg
MW016	MWSS016R1	280.00		ug/kg
MW017	MWSS017R1	470.00		ug/kg
MW018	MWSS018R1	510.00		ug/kg
MW019	MWSS019R1	400.00		ug/kg
MW020	MWSS020R1	81.00		ug/kg
MW021	MWSS021R1	650.00		ug/kg
MW022	MWSS022R1	560.00		ug/kg
MW023	MWSS023R1	210.00		ug/kg
MW024	MWSS024R1	1200.00		ug/kg
MW025	MWSS025R1	750.00		ug/kg
MW026	MWSS026R1	960.00		ug/kg
MW026	MWSS026S1	720.00		ug/kg
MW027	MWSS027R1	1100.00		ug/kg
MW028	MWSS028R1	1100.00		ug/kg
MW029	MWSS029R1	1100.00		ug/kg
MW030	MWSS030R1	1100.00		ug/kg
MW031	MWSS031R1	3700.00		ug/kg
MW032	MWSS032R1	1400.00		ug/kg
MW034	MWSS034R1	1200.00	E	ug/kg
MW035	MWSS035R1	950.00		ug/kg
MW037	MWSS037R1	930.00		ug/kg
MW039	MWST039R1	3200.00		ug/kg
MW040	MWST040R1	490.00		ug/kg
MW040	MWST040S1	720.00		ug/kg
MW042	MWST042R1	710.00		ug/kg
MW043	MWST043R1	680.00		ug/kg
MW044	MWST044R1	960.00		ug/kg
MW045	MWST045R1	430.00		ug/kg
MW047	MWST047R1	970.00		ug/kg
MW048	MWST048R1	2500.00		ug/kg
MW049	MWST049R1	400.00		ug/kg
MW051	MWST051R1	13000.00		ug/kg
MW052	MWST052R1	1300.00		ug/kg
MW054	MWST054R1	4100.00		ug/kg
MW055	MWSS055R1	1400.00		ug/kg
TF-20	TF-20	630.00		ug/kg
TF-21	TF-21A	730.00		ug/kg
TF-22	TF-22A	2200.00		ug/kg
TF-23	TF-23	1000.00		ug/kg
Subsurface Samples				
F	F	241.20		ug/kg
HC-2	S-1	2400.00	D	ug/kg
HC-2	S-2	1700.00	D	ug/kg
HC-2	S-3	480.00	D	ug/kg
MW-1	1	1200.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW-1	2	2000.00		ug/kg
MW024	MWCS024R2A	1000.00		ug/kg
MW024	MWCS024R3A	390.00		ug/kg
MW025	MWCS025R2A	700.00		ug/kg
MW025	MWCS025R3A	14.00	J	ug/kg
MW025	MWCS025R4A	13.00	J	ug/kg
MW026	MWCS026R2A	66.00		ug/kg
MW026	MWCS026R3A	16.00	J	ug/kg
MW026	MWCS026R4A	9.00	J	ug/kg
MW027	MWCS027R2A	1700.00		ug/kg
MW027	MWCS027R3A	6600.00		ug/kg
MW027	MWCS027R4A	120.00		ug/kg
MW028	MWCS028R2A	200.00		ug/kg
MW028	MWCS028R3A	37.00	J	ug/kg
MW028	MWCS028R4A	12.00	J	ug/kg
MW029	MWCS029R2A	67.00		ug/kg
MW029	MWCS029R3A	12.00	J	ug/kg
MW029	MWCS029R4A	10.00	J	ug/kg
MW030	MWCS030R2A	25000.00		ug/kg
MW030	MWCS030R3A	470.00		ug/kg
MW030	MWCS030S2A	26000.00		ug/kg
MW031	MWCS031R2A	2800.00		ug/kg
MW031	MWCS031R3A	1000.00		ug/kg
MW031	MWCS031R4A	86.00		ug/kg
MW034	MWCS034R2A	570.00		ug/kg
MW034	MWCS034R3A	27.00	J	ug/kg
MW034	MWCS034R4A	19.00	J	ug/kg
MW035	MWCS035R2A	420.00		ug/kg
MW035	MWCS035R3A	33.00		ug/kg
MW035	MWCS035R4A	14.00	J	ug/kg
MW035	MWCS035S4A	12.00	J	ug/kg
MW037	MWCS037R2A	510.00		ug/kg
MW037	MWCS037R3A	11.00	J	ug/kg
MW037	MWCS037R4A	9.40	J	ug/kg
MW040	MWCS040R2A	890.00		ug/kg
MW040	MWCS040R3A	66.00		ug/kg
MW040	MWCS040R4A	8.60	J	ug/kg
MW041	MWCT041R2	1300.00		ug/kg
MW046	MWCT046R2	890.00		ug/kg
MW050	MWCT050R2	12000.00		ug/kg
MW053	MWCT053R2	1100.00		ug/kg
TF-22	TF-22B	2700.00		ug/kg
TF-22	TF-22C	130000.00		ug/kg
Bank Samples				
B-12	B-12	350.00		ug/kg
B-13	B-13	450.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
B-14	B-14	20000.00		ug/kg
B-15	B-15	4100.00		ug/kg
B-16	B-16	4400.00		ug/kg
B-17	B-17	1800.00		ug/kg
B-18	B-18	2000.00		ug/kg
B-19	B-19	5000.00		ug/kg
MW001	MWSB001R1	520.00		ug/kg
MW002	MWSB002R1	360.00		ug/kg
MW008	MWSB008R1	430.00		ug/kg
MW008	MWSB008S1	510.00		ug/kg
MW008-SP	MWSB008R1 SP	190.00		ug/kg
MW009	MWSB009R1	2300.00		ug/kg
MW009-SP	MWSB009R1 SP	1700.00		ug/kg
MW012	MWSB012R1	830.00		ug/kg
MW013	MWSB013R1	160.00		ug/kg
MW014	MWSB014R1	320.00		ug/kg
MW015	MWSB015R1	500.00		ug/kg
MW015	MWSB015S1	540.00		ug/kg
MW03a	MWSB03aR1	1200.00		ug/kg
MW03b	MWSB03bR1	670.00		ug/kg
MW04a	MWSB04aR1	170.00		ug/kg
MW04b	MWSB04bR1	440.00		ug/kg
MW04b-SP	MWSB04bR1 SP	200.00		ug/kg
MW10a	MWSB10aR1	2400.00		ug/kg
MW10b	MWSB10bR1	1400.00		ug/kg
MW10c	MWSB10cR1	2400.00		ug/kg
MW11a	MWSB11aR1	840.00		ug/kg
MW11a-SP	MWSB11aR1 SP	1400.00		ug/kg
MW11b	MWSB11bR1	1100.00		ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	6300.00	E	ug/kg
Bulk Sediment	DPC-DRET-7298	3.40		ug/L
Bulk Sediment	DPC-DUPLICAT	3.30		ug/L
Bulk Sediment	DPC-METD-7298	6.20		ug/L
Bulk Sediment	DPC-METT-7298	6.50		ug/L
Bulk Sediment	DPC-WATD-7298	1.40	U	ug/L
Bulk Sediment	DPC-WATT-7298	1.40	U	ug/L
Bulk Sediment	TCLT RINSATE 1	1.40	U	ug/L
Bulk Sediment	TCLT-PV 01	3.00		ug/L
Bulk Sediment	TCLT-PV 02.5	5.00		ug/L
Bulk Sediment	TCLT-PV 04	5.10		ug/L
Bulk Sediment	TCLT-PV 06	4.50		ug/L
Bulk Sediment	TCLT-PV 07.3	4.60		ug/L
Bulk Sediment	TCLT-PV 09	5.60		ug/L
Bulk Sediment	TCLT-PV 11	2.20		ug/L
Bulk Sediment	TCLT-PV 12.8	9.40		ug/L

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	TCLT-PV 14.4	4.80		ug/L
	Bulk Sediment	TCLT-PV 15.8	8.50		ug/L
	Bulk Sediment	TCLT-PV 17.5	8.00		ug/L
	Bulk Sediment	TCLT-PV 19	5.50		ug/L
	Bulk Sediment	TCLT-PV 20.6	7.40		ug/L
	Bulk Sediment	TCLT-PV 22.2	5.70		ug/L
	Bulk Sediment	TCLT-PV 23.8	3.30		ug/L
	Bulk Sediment	TCLT-PV 25.3	5.20		ug/L
	Bulk Sediment	TCLT-PV 26.9	4.40		ug/L
	Bulk Sediment	TCLT-PV 28.4	4.00		ug/L
	Bulk Sediment	TCLT-PV 30	4.00		ug/L
Total LPAH					
Surface Samples					
	A	A	310.00		ug/kg
	C	C	61.00		ug/kg
	F	F	351.00		ug/kg
	HC-2	HC-2	957.00		ug/kg
	MW-1(a)	MW-1(a)	46.00		ug/kg
	MW016	MWSS016R1	803.00		ug/kg
	MW017	MWSS017R1	1083.00		ug/kg
	MW018	MWSS018R1	1350.00		ug/kg
	MW019	MWSS019R1	1034.00		ug/kg
	MW020	MWSS020R1	226.00		ug/kg
	MW021	MWSS021R1	1808.00		ug/kg
	MW022	MWSS022R1	1678.00		ug/kg
	MW023	MWSS023R1	578.00		ug/kg
	MW024	MWSS024R1	3460.00		ug/kg
	MW025	MWSS025R1	2330.00		ug/kg
	MW026	MWSS026R1	3160.00		ug/kg
	MW026	MWSS026S1	2010.00		ug/kg
	MW027	MWSS027R1	2770.00		ug/kg
	MW028	MWSS028R1	3560.00		ug/kg
	MW029	MWSS029R1	2950.00		ug/kg
	MW030	MWSS030R1	3040.00		ug/kg
	MW031	MWSS031R1	7280.00		ug/kg
	MW032	MWSS032R1	3187.00		ug/kg
	MW034	MWSS034R1	3420.00		ug/kg
	MW035	MWSS035R1	2920.00		ug/kg
	MW037	MWSS037R1	2860.00		ug/kg
	MW039	MWST039R1	10220.00		ug/kg
	MW040	MWST040R1	1355.00		ug/kg
	MW040	MWST040S1	2590.00		ug/kg
	MW042	MWST042R1	2119.00		ug/kg
	MW043	MWST043R1	1910.00		ug/kg
	MW044	MWST044R1	3240.00		ug/kg
	MW045	MWST045R1	1117.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW047	MWST047R1	2830.00		ug/kg
MW048	MWST048R1	8970.00		ug/kg
MW049	MWST049R1	1222.00		ug/kg
MW051	MWST051R1	32300.00		ug/kg
MW052	MWST052R1	4150.00		ug/kg
MW054	MWST054R1	13080.00		ug/kg
MW055	MWSS055R1	3920.00		ug/kg
TF-20	TF-20	770.00		ug/kg
TF-21	TF-21A	1020.00		ug/kg
TF-22	TF-22A	3590.00		ug/kg
TF-23	TF-23	1890.00		ug/kg
Subsurface Samples				
F	F	360.00		ug/kg
HC-2	S-1	4060.00		ug/kg
HC-2	S-2	3070.00		ug/kg
HC-2	S-3	869.00		ug/kg
MW-1	1	2370.00		ug/kg
MW-1	2	4290.00		ug/kg
MW024	MWCS024R2A	4480.00		ug/kg
MW024	MWCS024R3A	850.00		ug/kg
MW025	MWCS025R2A	2243.00		ug/kg
MW025	MWCS025R3A	26.50		ug/kg
MW025	MWCS025R4A	39.30		ug/kg
MW026	MWCS026R2A	204.00		ug/kg
MW026	MWCS026R3A	25.50		ug/kg
MW026	MWCS026R4A	13.50		ug/kg
MW027	MWCS027R2A	5580.00		ug/kg
MW027	MWCS027R3A	14356.00		ug/kg
MW027	MWCS027R4A	266.00		ug/kg
MW028	MWCS028R2A	503.00		ug/kg
MW028	MWCS028R3A	146.00		ug/kg
MW028	MWCS028R4A	18.90		ug/kg
MW029	MWCS029R2A	209.00		ug/kg
MW029	MWCS029R3A	19.00		ug/kg
MW029	MWCS029R4A	16.00		ug/kg
MW030	MWCS030R2A	54380.00		ug/kg
MW030	MWCS030R3A	1814.00		ug/kg
MW030	MWCS030S2A	60030.00		ug/kg
MW031	MWCS031R2A	9210.00		ug/kg
MW031	MWCS031R3A	3340.00		ug/kg
MW031	MWCS031R4A	601.00		ug/kg
MW034	MWCS034R2A	1860.00		ug/kg
MW034	MWCS034R3A	84.20		ug/kg
MW034	MWCS034R4A	27.10		ug/kg
MW035	MWCS035R2A	1359.00		ug/kg
MW035	MWCS035R3A	75.20		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW035	MWCS035R4A	14.00		ug/kg
	MW035	MWCS035S4A	19.00		ug/kg
	MW037	MWCS037R2A	1513.00		ug/kg
	MW037	MWCS037R3A	11.00		ug/kg
	MW037	MWCS037R4A	13.40		ug/kg
	MW040	MWCS040R2A	2710.00		ug/kg
	MW040	MWCS040R3A	209.00		ug/kg
	MW040	MWCS040R4A	8.60		ug/kg
	MW041	MWCT041R2	4280.00		ug/kg
	MW046	MWCT046R2	2940.00		ug/kg
	MW050	MWCT050R2	43900.00		ug/kg
	MW053	MWCT053R2	3480.00		ug/kg
	TF-22	TF-22B	4770.00		ug/kg
	TF-22	TF-22C	242900.00		ug/kg
Bank Samples					
	B-12	B-12	350.00		ug/kg
	B-13	B-13	549.00		ug/kg
	B-14	B-14	27170.00		ug/kg
	B-15	B-15	5990.00		ug/kg
	B-16	B-16	6020.00		ug/kg
	B-17	B-17	2510.00		ug/kg
	B-18	B-18	3380.00		ug/kg
	B-19	B-19	8750.00		ug/kg
	MW001	MWSB001R1	1187.00		ug/kg
	MW002	MWSB002R1	760.00		ug/kg
	MW008	MWSB008R1	1008.00		ug/kg
	MW008	MWSB008S1	1545.00		ug/kg
	MW008-SP	MWSB008R1 SP	495.00		ug/kg
	MW009	MWSB009R1	4070.00		ug/kg
	MW009-SP	MWSB009R1 SP	3478.00		ug/kg
	MW012	MWSB012R1	2052.00		ug/kg
	MW013	MWSB013R1	322.00		ug/kg
	MW014	MWSB014R1	587.00		ug/kg
	MW015	MWSB015R1	1078.00		ug/kg
	MW015	MWSB015S1	1032.00		ug/kg
	MW03a	MWSB03aR1	4240.00		ug/kg
	MW03b	MWSB03bR1	2321.00		ug/kg
	MW04a	MWSB04aR1	420.00		ug/kg
	MW04b	MWSB04bR1	1066.00		ug/kg
	MW04b-SP	MWSB04bR1 SP	560.00		ug/kg
	MW10a	MWSB10aR1	3984.00		ug/kg
	MW10b	MWSB10bR1	3140.00		ug/kg
	MW10c	MWSB10cR1	4650.00		ug/kg
	MW11a	MWSB11aR1	1581.00		ug/kg
	MW11a-SP	MWSB11aR1 SP	2749.00		ug/kg
	MW11b	MWSB11bR1	2498.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
High Molecular Weight Polycyclic Hydrocarbons				
Benzo(a)anthracene				
Surface Samples				
A	A	460.00		ug/kg
C	C	67.00		ug/kg
F	F	320.00		ug/kg
HC-2	HC-2	620.00		ug/kg
MW-1(a)	MW-1(a)	51.00		ug/kg
MW016	MWSS016R1	220.00		ug/kg
MW017	MWSS017R1	280.00		ug/kg
MW018	MWSS018R1	340.00		ug/kg
MW019	MWSS019R1	240.00		ug/kg
MW020	MWSS020R1	46.00		ug/kg
MW021	MWSS021R1	520.00		ug/kg
MW022	MWSS022R1	270.00		ug/kg
MW023	MWSS023R1	140.00		ug/kg
MW024	MWSS024R1	1400.00		ug/kg
MW025	MWSS025R1	550.00		ug/kg
MW026	MWSS026R1	520.00		ug/kg
MW026	MWSS026S1	440.00		ug/kg
MW027	MWSS027R1	860.00		ug/kg
MW028	MWSS028R1	580.00		ug/kg
MW029	MWSS029R1	850.00		ug/kg
MW030	MWSS030R1	1100.00		ug/kg
MW031	MWSS031R1	2000.00		ug/kg
MW032	MWSS032R1	1000.00		ug/kg
MW034	MWSS034R1	750.00	E	ug/kg
MW035	MWSS035R1	820.00		ug/kg
MW037	MWSS037R1	740.00		ug/kg
MW039	MWST039R1	1800.00		ug/kg
MW040	MWST040R1	270.00		ug/kg
MW040	MWST040S1	320.00		ug/kg
MW042	MWST042R1	340.00		ug/kg
MW043	MWST043R1	370.00		ug/kg
MW044	MWST044R1	720.00		ug/kg
MW045	MWST045R1	440.00		ug/kg
MW047	MWST047R1	560.00		ug/kg
MW048	MWST048R1	1500.00		ug/kg
MW049	MWST049R1	210.00		ug/kg
MW051	MWST051R1	6300.00		ug/kg
MW052	MWST052R1	740.00		ug/kg
MW054	MWST054R1	1800.00		ug/kg
MW055	MWSS055R1	1000.00		ug/kg
TF-20	TF-20	720.00		ug/kg
TF-21	TF-21A	640.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
TF-22	TF-22A	3100.00		ug/kg
TF-23	TF-23	1200.00		ug/kg
Subsurface Samples				
F	F	248.40		ug/kg
HC-2	S-1	2700.00	D	ug/kg
HC-2	S-2	2400.00	D	ug/kg
HC-2	S-3	600.00	D	ug/kg
MW-1	1	1100.00		ug/kg
MW-1	2	2400.00		ug/kg
MW024	MWCS024R2A	1500.00		ug/kg
MW024	MWCS024R3A	140.00		ug/kg
MW025	MWCS025R2A	330.00		ug/kg
MW025	MWCS025R3A	34.00	U	ug/kg
MW025	MWCS025R4A	34.00	U	ug/kg
MW026	MWCS026R2A	32.00	J	ug/kg
MW026	MWCS026R3A	5.50	J	ug/kg
MW026	MWCS026R4A	36.00	U	ug/kg
MW027	MWCS027R2A	900.00		ug/kg
MW027	MWCS027R3A	790.00		ug/kg
MW027	MWCS027R4A	14.00	J	ug/kg
MW028	MWCS028R2A	81.00		ug/kg
MW028	MWCS028R3A	21.00	J	ug/kg
MW028	MWCS028R4A	55.00	U	ug/kg
MW029	MWCS029R2A	23.00	J	ug/kg
MW029	MWCS029R3A	35.00	U	ug/kg
MW029	MWCS029R4A	36.00	U	ug/kg
MW030	MWCS030R2A	4500.00		ug/kg
MW030	MWCS030R3A	63.00		ug/kg
MW030	MWCS030S2A	3100.00		ug/kg
MW031	MWCS031R2A	3000.00		ug/kg
MW031	MWCS031R3A	560.00		ug/kg
MW031	MWCS031R4A	29.00	J	ug/kg
MW034	MWCS034R2A	330.00		ug/kg
MW034	MWCS034R3A	35.00	U	ug/kg
MW034	MWCS034R4A	37.00	U	ug/kg
MW035	MWCS035R2A	350.00		ug/kg
MW035	MWCS035R3A	37.00	U	ug/kg
MW035	MWCS035R4A	37.00	U	ug/kg
MW035	MWCS035S4A	36.00	U	ug/kg
MW037	MWCS037R2A	230.00		ug/kg
MW037	MWCS037R3A	34.00	U	ug/kg
MW037	MWCS037R4A	37.00	U	ug/kg
MW040	MWCS040R2A	320.00		ug/kg
MW040	MWCS040R3A	19.00	J	ug/kg
MW040	MWCS040R4A	46.00	U	ug/kg
MW041	MWCT041R2	810.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW046	MWCT046R2	540.00		ug/kg
	MW050	MWCT050R2	5300.00		ug/kg
	MW053	MWCT053R2	560.00		ug/kg
	TF-22	TF-22B	1900.00		ug/kg
	TF-22	TF-22C	32000.00		ug/kg
Bank Samples					
	B-12	B-12	700.00		ug/kg
	B-13	B-13	320.00		ug/kg
	B-14	B-14	15000.00		ug/kg
	B-15	B-15	3500.00		ug/kg
	B-16	B-16	2600.00		ug/kg
	B-17	B-17	1200.00		ug/kg
	B-18	B-18	4000.00		ug/kg
	B-19	B-19	4700.00		ug/kg
	MW001	MWSB001R1	330.00		ug/kg
	MW002	MWSB002R1	300.00		ug/kg
	MW008	MWSB008R1	260.00		ug/kg
	MW008	MWSB008S1	400.00		ug/kg
	MW008-SP	MWSB008R1 SP	79.00		ug/kg
	MW009	MWSB009R1	3400.00		ug/kg
	MW009-SP	MWSB009R1 SP	1500.00		ug/kg
	MW012	MWSB012R1	350.00		ug/kg
	MW013	MWSB013R1	120.00		ug/kg
	MW014	MWSB014R1	190.00		ug/kg
	MW015	MWSB015R1	360.00		ug/kg
	MW015	MWSB015S1	240.00		ug/kg
	MW03a	MWSB03aR1	840.00		ug/kg
	MW03b	MWSB03bR1	820.00		ug/kg
	MW04a	MWSB04aR1	100.00		ug/kg
	MW04b	MWSB04bR1	410.00		ug/kg
	MW04b-SP	MWSB04bR1 SP	160.00		ug/kg
	MW10a	MWSB10aR1	1900.00		ug/kg
	MW10b	MWSB10bR1	1800.00		ug/kg
	MW10c	MWSB10cR1	1600.00		ug/kg
	MW11a	MWSB11aR1	500.00		ug/kg
	MW11a-SP	MWSB11aR1 SP	1300.00		ug/kg
	MW11b	MWSB11bR1	640.00		ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	1700.00		ug/kg
Benzo(a)pyrene					
Surface Samples					
	A	A	460.00		ug/kg
	C	C	62.00		ug/kg
	F	F	370.00		ug/kg
	HC-2	HC-2	630.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW-1(a)	MW-1(a)	63.00		ug/kg
MW016	MWSS016R1	220.00		ug/kg
MW017	MWSS017R1	300.00		ug/kg
MW018	MWSS018R1	310.00		ug/kg
MW019	MWSS019R1	250.00		ug/kg
MW020	MWSS020R1	47.00		ug/kg
MW021	MWSS021R1	470.00		ug/kg
MW022	MWSS022R1	380.00		ug/kg
MW023	MWSS023R1	140.00		ug/kg
MW024	MWSS024R1	890.00		ug/kg
MW025	MWSS025R1	530.00		ug/kg
MW026	MWSS026R1	590.00		ug/kg
MW026	MWSS026S1	550.00		ug/kg
MW027	MWSS027R1	800.00		ug/kg
MW028	MWSS028R1	620.00		ug/kg
MW029	MWSS029R1	820.00		ug/kg
MW030	MWSS030R1	750.00		ug/kg
MW031	MWSS031R1	1600.00		ug/kg
MW032	MWSS032R1	800.00		ug/kg
MW034	MWSS034R1	720.00	E	ug/kg
MW035	MWSS035R1	850.00		ug/kg
MW037	MWSS037R1	790.00		ug/kg
MW039	MWST039R1	1200.00	E	ug/kg
MW040	MWST040R1	330.00	UE	ug/kg
MW040	MWST040S1	240.00	UE	ug/kg
MW042	MWST042R1	380.00		ug/kg
MW043	MWST043R1	400.00		ug/kg
MW044	MWST044R1	560.00		ug/kg
MW045	MWST045R1	650.00		ug/kg
MW047	MWST047R1	540.00		ug/kg
MW048	MWST048R1	1700.00	E	ug/kg
MW049	MWST049R1	300.00	UE	ug/kg
MW051	MWST051R1	6400.00		ug/kg
MW052	MWST052R1	820.00		ug/kg
MW054	MWST054R1	1200.00	UE	ug/kg
MW055	MWSS055R1	940.00		ug/kg
TF-20	TF-20	970.00		ug/kg
TF-21	TF-21A	750.00		ug/kg
TF-22	TF-22A	3500.00		ug/kg
TF-23	TF-23	1600.00		ug/kg
Subsurface Samples				
F	F	309.60		ug/kg
HC-2	S-1	1500.00	D	ug/kg
HC-2	S-2	1200.00	D	ug/kg
HC-2	S-3	220.00		ug/kg
MW-1	1	1300.00		ug/kg

Appendix D.1 - Chemical and Physical Data

	Station	Sample ID	Concentration	Flag	Units
	MW-1	2	4100.00		ug/kg
	MW024	MWCS024R2A	640.00		ug/kg
	MW024	MWCS024R3A	140.00		ug/kg
	MW025	MWCS025R2A	350.00		ug/kg
	MW025	MWCS025R3A	4.40	J	ug/kg
	MW025	MWCS025R4A	27.00	U	ug/kg
	MW026	MWCS026R2A	30.00	J	ug/kg
	MW026	MWCS026R3A	29.00	U	ug/kg
	MW026	MWCS026R4A	100.00		ug/kg
	MW027	MWCS027R2A	780.00		ug/kg
	MW027	MWCS027R3A	440.00		ug/kg
	MW027	MWCS027R4A	7.50	J	ug/kg
	MW028	MWCS028R2A	85.00		ug/kg
	MW028	MWCS028R3A	19.00	J	ug/kg
	MW028	MWCS028R4A	120.00		ug/kg
	MW029	MWCS029R2A	25.00	J	ug/kg
	MW029	MWCS029R3A	180.00		ug/kg
	MW029	MWCS029R4A	150.00		ug/kg
	MW030	MWCS030R2A	2400.00		ug/kg
	MW030	MWCS030R3A	34.00		ug/kg
	MW030	MWCS030S2A	1500.00		ug/kg
	MW031	MWCS031R2A	2300.00		ug/kg
	MW031	MWCS031R3A	660.00		ug/kg
	MW031	MWCS031R4A	29.00	J	ug/kg
	MW034	MWCS034R2A	370.00		ug/kg
	MW034	MWCS034R3A	11.00	J	ug/kg
	MW034	MWCS034R4A	30.00	U	ug/kg
	MW035	MWCS035R2A	370.00		ug/kg
	MW035	MWCS035R3A	11.00	J	ug/kg
	MW035	MWCS035R4A	220.00		ug/kg
	MW035	MWCS035S4A	200.00		ug/kg
	MW037	MWCS037R2A	240.00		ug/kg
	MW037	MWCS037R3A	27.00	U	ug/kg
	MW037	MWCS037R4A	26.00	J	ug/kg
	MW040	MWCS040R2A	300.00		ug/kg
	MW040	MWCS040R3A	18.00	J	ug/kg
	MW040	MWCS040R4A	37.00	U	ug/kg
	MW041	MWCT041R2	720.00		ug/kg
	MW046	MWCT046R2	480.00		ug/kg
	MW050	MWCT050R2	5100.00		ug/kg
	MW053	MWCT053R2	580.00		ug/kg
	TF-22	TF-22B	2000.00		ug/kg
	TF-22	TF-22C	35000.00		ug/kg
Bank Samples					
	B-12	B-12	1100.00		ug/kg
	B-13	B-13	370.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
B-14	B-14	16000.00		ug/kg
B-15	B-15	4600.00		ug/kg
B-16	B-16	2900.00		ug/kg
B-17	B-17	1400.00		ug/kg
B-18	B-18	5800.00		ug/kg
B-19	B-19	5000.00		ug/kg
MW001	MWSB001R1	240.00		ug/kg
MW002	MWSB002R1	200.00		ug/kg
MW008	MWSB008R1	370.00		ug/kg
MW008	MWSB008S1	600.00		ug/kg
MW008-SP	MWSB008R1 SP	100.00		ug/kg
MW009	MWSB009R1	2400.00		ug/kg
MW009-SP	MWSB009R1 SP	1600.00		ug/kg
MW012	MWSB012R1	460.00		ug/kg
MW013	MWSB013R1	120.00		ug/kg
MW014	MWSB014R1	200.00		ug/kg
MW015	MWSB015R1	320.00		ug/kg
MW015	MWSB015S1	230.00	E	ug/kg
MW03a	MWSB03aR1	560.00		ug/kg
MW03b	MWSB03bR1	620.00		ug/kg
MW04a	MWSB04aR1	110.00		ug/kg
MW04b	MWSB04bR1	500.00		ug/kg
MW04b-SP	MWSB04bR1 SP	300.00		ug/kg
MW10a	MWSB10aR1	1200.00		ug/kg
MW10b	MWSB10bR1	1600.00		ug/kg
MW10c	MWSB10cR1	1800.00		ug/kg
MW11a	MWSB11aR1	550.00		ug/kg
MW11a-SP	MWSB11aR1 SP	920.00		ug/kg
MW11b	MWSB11bR1	540.00		ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	1200.00		ug/kg
Benzo(b)fluoranthene				
Surface Samples				
A	A	600.00		ug/kg
C	C	54.00		ug/kg
F	F	380.00		ug/kg
HC-2	HC-2	640.00		ug/kg
MW-1(a)	MW-1(a)	66.00		ug/kg
MW016	MWSS016R1	440.00	T	ug/kg
MW017	MWSS017R1	520.00	T	ug/kg
MW018	MWSS018R1	630.00	T	ug/kg
MW019	MWSS019R1	410.00	T	ug/kg
MW020	MWSS020R1	94.00	T	ug/kg
MW021	MWSS021R1	970.00	T	ug/kg
MW022	MWSS022R1	700.00	T	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW023	MWSS023R1	24.00	TJ	ug/kg
	MW025	MWSS025R1	1100.00	T	ug/kg
	MW026	MWSS026R1	890.00	T	ug/kg
	MW026	MWSS026S1	990.00	T	ug/kg
	MW027	MWSS027R1	1600.00	T	ug/kg
	MW028	MWSS028R1	1000.00	T	ug/kg
	MW029	MWSS029R1	1400.00		ug/kg
	MW030	MWSS030R1	1600.00	T	ug/kg
	MW031	MWSS031R1	3900.00	T	ug/kg
	MW032	MWSS032R1	1700.00	T	ug/kg
	MW034	MWSS034R1	1400.00	T	ug/kg
	MW035	MWSS035R1	1500.00		ug/kg
	MW037	MWSS037R1	1100.00	T	ug/kg
	MW039	MWST039R1	2400.00	T	ug/kg
	MW040	MWST040R1	60.00	T	ug/kg
	MW040	MWST040S1	570.00	T	ug/kg
	MW042	MWST042R1	730.00	T	ug/kg
	MW043	MWST043R1	570.00	T	ug/kg
	MW044	MWST044R1	1100.00	T	ug/kg
	MW045	MWST045R1	1200.00	T	ug/kg
	MW047	MWST047R1	1000.00	T	ug/kg
	MW048	MWST048R1	2400.00	T	ug/kg
	MW049	MWST049R1	470.00	T	ug/kg
	MW051	MWST051R1	12000.00	T	ug/kg
	MW052	MWST052R1	1200.00	T	ug/kg
	MW054	MWST054R1	2800.00	T	ug/kg
	MW055	MWSS055R1	1700.00	T	ug/kg
Subsurface Samples					
	F	F	298.80		ug/kg
	MW024	MWCS024R2A	1300.00	T	ug/kg
	MW024	MWCS024R3A	220.00	T	ug/kg
	MW025	MWCS025R2A	580.00		ug/kg
	MW025	MWCS025R3A	7.00	TJ	ug/kg
	MW025	MWCS025R4A	3.60	TJ	ug/kg
	MW026	MWCS026R2A	47.00	TJ	ug/kg
	MW026	MWCS026R3A	6.40	TJ	ug/kg
	MW026	MWCS026R4A	40.00	U	ug/kg
	MW027	MWCS027R2A	1300.00	T	ug/kg
	MW027	MWCS027R3A	730.00	T	ug/kg
	MW027	MWCS027R4A	16.00	TJ	ug/kg
	MW028	MWCS028R2A	52.00	J	ug/kg
	MW028	MWCS028R3A	16.00	J	ug/kg
	MW028	MWCS028R4A	61.00	U	ug/kg
	MW029	MWCS029R2A	41.00	JT	ug/kg
	MW029	MWCS029R3A	39.00	U	ug/kg
	MW029	MWCS029R4A	40.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW030	MWCS030R2A	4100.00	T	ug/kg
MW030	MWCS030R3A	69.00	T	ug/kg
MW030	MWCS030S2A	2400.00	T	ug/kg
MW031	MWCS031R2A	5000.00	T	ug/kg
MW031	MWCS031R3A	620.00		ug/kg
MW031	MWCS031R4A	20.00	J	ug/kg
MW034	MWCS034R2A	520.00	T	ug/kg
MW034	MWCS034R3A	16.00	JT	ug/kg
MW034	MWCS034R4A	41.00	U	ug/kg
MW035	MWCS035R2A	520.00	T	ug/kg
MW035	MWCS035R3A	19.00	JT	ug/kg
MW035	MWCS035R4A	41.00	U	ug/kg
MW035	MWCS035S4A	40.00	U	ug/kg
MW037	MWCS037R2A	370.00	T	ug/kg
MW037	MWCS037R3A	3.70	TJ	ug/kg
MW037	MWCS037R4A	41.00	U	ug/kg
MW040	MWCS040R2A	240.00		ug/kg
MW040	MWCS040R3A	17.00	J	ug/kg
MW040	MWCS040R4A	51.00	U	ug/kg
MW041	MWCT041R2	1000.00	T	ug/kg
MW046	MWCT046R2	740.00	T	ug/kg
MW050	MWCT050R2	6700.00	T	ug/kg
MW053	MWCT053R2	730.00	T	ug/kg
Bank Samples				
MW001	MWSB001R1	630.00	T	ug/kg
MW002	MWSB002R1	570.00	T	ug/kg
MW008	MWSB008R1	670.00	T	ug/kg
MW008	MWSB008S1	1200.00	T	ug/kg
MW008-SP	MWSB008R1 SP	250.00	T	ug/kg
MW009	MWSB009R1	5000.00	T	ug/kg
MW009-SP	MWSB009R1 SP	3000.00	T	ug/kg
MW012	MWSB012R1	870.00	T	ug/kg
MW013	MWSB013R1	130.00		ug/kg
MW014	MWSB014R1	490.00	T	ug/kg
MW015	MWSB015R1	850.00	T	ug/kg
MW015	MWSB015S1	570.00	T	ug/kg
MW03a	MWSB03aR1	1700.00	T	ug/kg
MW03b	MWSB03bR1	1300.00	T	ug/kg
MW04a	MWSB04aR1	270.00	T	ug/kg
MW04b	MWSB04bR1	1100.00	T	ug/kg
MW04b-SP	MWSB04bR1 SP	400.00	T	ug/kg
MW10a	MWSB10aR1	3100.00	T	ug/kg
MW10b	MWSB10bR1	3700.00	T	ug/kg
MW10c	MWSB10cR1	3900.00		ug/kg
MW11a	MWSB11aR1	1100.00	T	ug/kg
MW11a-SP	MWSB11aR1 SP	1900.00	T	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW11b	MWSB11bR1	1100.00	T	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	2100.00	T	ug/kg
Benzo(g,h,i)perylene					
Surface Samples					
	A	A	260.00		ug/kg
	C	C	33.00		ug/kg
	F	F	220.00		ug/kg
	HC-2	HC-2	390.00		ug/kg
	MW-1(a)	MW-1(a)	32.00		ug/kg
	MW016	MWSS016R1	66.00	E	ug/kg
	MW017	MWSS017R1	87.00	E	ug/kg
	MW018	MWSS018R1	150.00		ug/kg
	MW019	MWSS019R1	140.00		ug/kg
	MW020	MWSS020R1	36.00	E	ug/kg
	MW021	MWSS021R1	240.00		ug/kg
	MW022	MWSS022R1	220.00	E	ug/kg
	MW023	MWSS023R1	100.00		ug/kg
	MW024	MWSS024R1	280.00		ug/kg
	MW025	MWSS025R1	220.00		ug/kg
	MW026	MWSS026R1	300.00		ug/kg
	MW026	MWSS026S1	180.00		ug/kg
	MW027	MWSS027R1	380.00	E	ug/kg
	MW028	MWSS028R1	250.00	E	ug/kg
	MW029	MWSS029R1	360.00	E	ug/kg
	MW030	MWSS030R1	290.00	E	ug/kg
	MW031	MWSS031R1	600.00		ug/kg
	MW032	MWSS032R1	460.00	E	ug/kg
	MW034	MWSS034R1	270.00	E	ug/kg
	MW035	MWSS035R1	320.00		ug/kg
	MW037	MWSS037R1	400.00	E	ug/kg
	MW039	MWST039R1	990.00		ug/kg
	MW040	MWST040R1	60.00		ug/kg
	MW040	MWST040S1	150.00		ug/kg
	MW042	MWST042R1	130.00		ug/kg
	MW043	MWST043R1	290.00	E	ug/kg
	MW044	MWST044R1	260.00		ug/kg
	MW045	MWST045R1	240.00	E	ug/kg
	MW047	MWST047R1	240.00		ug/kg
	MW048	MWST048R1	750.00		ug/kg
	MW049	MWST049R1	120.00		ug/kg
	MW051	MWST051R1	3800.00		ug/kg
	MW052	MWST052R1	480.00	E	ug/kg
	MW054	MWST054R1	420.00		ug/kg
	MW055	MWSS055R1	470.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	TF-20	TF-20	690.00		ug/kg
	TF-21	TF-21A	520.00		ug/kg
	TF-22	TF-22A	1900.00		ug/kg
	TF-23	TF-23	750.00		ug/kg
Subsurface Samples					
	F	F	208.80		ug/kg
	HC-2	S-1	820.00	D	ug/kg
	HC-2	S-2	730.00	D	ug/kg
	HC-2	S-3	110.00		ug/kg
	MW-1	1	1100.00		ug/kg
	MW-1	2	3400.00		ug/kg
	MW024	MWCS024R2A	360.00		ug/kg
	MW024	MWCS024R3A	95.00		ug/kg
	MW025	MWCS025R2A	270.00		ug/kg
	MW025	MWCS025R3A	30.00	U	ug/kg
	MW025	MWCS025R4A	30.00	U	ug/kg
	MW026	MWCS026R2A	18.00	J	ug/kg
	MW026	MWCS026R3A	32.00	U	ug/kg
	MW026	MWCS026R4A	32.00	U	ug/kg
	MW027	MWCS027R2A	670.00		ug/kg
	MW027	MWCS027R3A	320.00		ug/kg
	MW027	MWCS027R4A	33.00	U	ug/kg
	MW028	MWCS028R2A	40.00	J	ug/kg
	MW028	MWCS028R3A	7.40	J	ug/kg
	MW028	MWCS028R4A	49.00	U	ug/kg
	MW029	MWCS029R2A	15.00	J	ug/kg
	MW029	MWCS029R3A	31.00	U	ug/kg
	MW029	MWCS029R4A	32.00	U	ug/kg
	MW030	MWCS030R2A	1600.00		ug/kg
	MW030	MWCS030R3A	21.00	J	ug/kg
	MW030	MWCS030S2A	950.00		ug/kg
	MW031	MWCS031R2A	1500.00		ug/kg
	MW031	MWCS031R3A	380.00		ug/kg
	MW031	MWCS031R4A	13.00	J	ug/kg
	MW034	MWCS034R2A	300.00		ug/kg
	MW034	MWCS034R3A	7.20	J	ug/kg
	MW034	MWCS034R4A	33.00	U	ug/kg
	MW035	MWCS035R2A	240.00		ug/kg
	MW035	MWCS035R3A	7.30	J	ug/kg
	MW035	MWCS035R4A	33.00	U	ug/kg
	MW035	MWCS035S4A	32.00	U	ug/kg
	MW037	MWCS037R2A	190.00		ug/kg
	MW037	MWCS037R3A	30.00	U	ug/kg
	MW037	MWCS037R4A	33.00	U	ug/kg
	MW040	MWCS040R2A	180.00		ug/kg
	MW040	MWCS040R3A	8.40	J	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW040	MWCS040R4A	41.00	U	ug/kg
	MW041	MWCT041R2	490.00		ug/kg
	MW046	MWCT046R2	300.00		ug/kg
	MW050	MWCT050R2	1200.00		ug/kg
	MW053	MWCT053R2	350.00		ug/kg
	TF-22	TF-22B	960.00		ug/kg
	TF-22	TF-22C	20000.00		ug/kg
Bank Samples					
	B-12	B-12	980.00		ug/kg
	B-13	B-13	260.00		ug/kg
	B-14	B-14	5000.00		ug/kg
	B-15	B-15	2900.00		ug/kg
	B-16	B-16	1700.00		ug/kg
	B-17	B-17	870.00		ug/kg
	B-18	B-18	4200.00		ug/kg
	B-19	B-19	2800.00		ug/kg
	MW001	MWSB001R1	70.00	E	ug/kg
	MW002	MWSB002R1	64.00	E	ug/kg
	MW008	MWSB008R1	230.00		ug/kg
	MW008	MWSB008S1	300.00		ug/kg
	MW008-SP	MWSB008R1 SP	65.00		ug/kg
	MW009	MWSB009R1	520.00	E	ug/kg
	MW009-SP	MWSB009R1 SP	720.00		ug/kg
	MW012	MWSB012R1	310.00		ug/kg
	MW013	MWSB013R1	12.00	J	ug/kg
	MW014	MWSB014R1	44.00		ug/kg
	MW015	MWSB015R1	95.00		ug/kg
	MW015	MWSB015S1	75.00		ug/kg
	MW03a	MWSB03aR1	250.00	E	ug/kg
	MW03b	MWSB03bR1	290.00		ug/kg
	MW04a	MWSB04aR1	50.00		ug/kg
	MW04b	MWSB04bR1	220.00	E	ug/kg
	MW04b-SP	MWSB04bR1 SP	330.00		ug/kg
	MW10a	MWSB10aR1	730.00		ug/kg
	MW10b	MWSB10bR1	400.00	E	ug/kg
	MW10c	MWSB10cR1	1300.00		ug/kg
	MW11a	MWSB11aR1	370.00		ug/kg
	MW11a-SP	MWSB11aR1 SP	560.00		ug/kg
	MW11b	MWSB11bR1	150.00		ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	680.00		ug/kg
Benzo(k)fluoranthene					
Surface Samples					
	A	A	470.00		ug/kg
	C	C	49.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	F	F	240.00		ug/kg
	HC-2	HC-2	450.00		ug/kg
	MW-1(a)	MW-1(a)	47.00		ug/kg
	MW016	MWSS016R1	440.00	T	ug/kg
	MW017	MWSS017R1	520.00	T	ug/kg
	MW018	MWSS018R1	630.00	T	ug/kg
	MW019	MWSS019R1	410.00	T	ug/kg
	MW020	MWSS020R1	94.00	T	ug/kg
	MW021	MWSS021R1	970.00	T	ug/kg
	MW022	MWSS022R1	700.00	T	ug/kg
	MW023	MWSS023R1	24.00	TJ	ug/kg
	MW025	MWSS025R1	1100.00	T	ug/kg
	MW026	MWSS026R1	890.00	T	ug/kg
	MW026	MWSS026S1	990.00	T	ug/kg
	MW027	MWSS027R1	1600.00	T	ug/kg
	MW028	MWSS028R1	1000.00	T	ug/kg
	MW029	MWSS029R1	1400.00		ug/kg
	MW030	MWSS030R1	1600.00	TE	ug/kg
	MW031	MWSS031R1	3900.00	T	ug/kg
	MW032	MWSS032R1	1700.00	T	ug/kg
	MW034	MWSS034R1	1400.00	T	ug/kg
	MW035	MWSS035R1	1500.00		ug/kg
	MW037	MWSS037R1	1100.00	T	ug/kg
	MW039	MWST039R1	2400.00	T	ug/kg
	MW040	MWST040R1	60.00	T	ug/kg
	MW040	MWST040S1	570.00	T	ug/kg
	MW042	MWST042R1	730.00	T	ug/kg
	MW043	MWST043R1	570.00	T	ug/kg
	MW044	MWST044R1	1100.00	T	ug/kg
	MW045	MWST045R1	1200.00	T	ug/kg
	MW047	MWST047R1	1000.00	T	ug/kg
	MW048	MWST048R1	2400.00	T	ug/kg
	MW049	MWST049R1	470.00	T	ug/kg
	MW051	MWST051R1	12000.00	T	ug/kg
	MW052	MWST052R1	1200.00	T	ug/kg
	MW054	MWST054R1	2800.00	T	ug/kg
	MW055	MWSS055R1	1700.00	T	ug/kg
Subsurface Samples					
	F	F	248.40		ug/kg
	MW024	MWCS024R2A	1300.00	T	ug/kg
	MW024	MWCS024R3A	220.00	T	ug/kg
	MW025	MWCS025R2A	580.00		ug/kg
	MW025	MWCS025R3A	7.00	TJ	ug/kg
	MW025	MWCS025R4A	3.60	TJ	ug/kg
	MW026	MWCS026R2A	47.00	TJ	ug/kg
	MW026	MWCS026R3A	6.40	TJ	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW026	MWCS026R4A	27.00	U	ug/kg
	MW027	MWCS027R2A	1300.00	T	ug/kg
	MW027	MWCS027R3A	730.00	T	ug/kg
	MW027	MWCS027R4A	16.00	TJ	ug/kg
	MW028	MWCS028R2A	65.00		ug/kg
	MW028	MWCS028R3A	14.00	J	ug/kg
	MW028	MWCS028R4A	41.00	U	ug/kg
	MW029	MWCS029R2A	41.00	JT	ug/kg
	MW029	MWCS029R3A	26.00	U	ug/kg
	MW029	MWCS029R4A	27.00	U	ug/kg
	MW030	MWCS030R2A	4100.00	T	ug/kg
	MW030	MWCS030R3A	69.00	T	ug/kg
	MW030	MWCS030S2A	2400.00	T	ug/kg
	MW031	MWCS031R2A	5000.00	T	ug/kg
	MW031	MWCS031R3A	360.00		ug/kg
	MW031	MWCS031R4A	26.00	J	ug/kg
	MW034	MWCS034R2A	520.00	T	ug/kg
	MW034	MWCS034R3A	16.00	JT	ug/kg
	MW034	MWCS034R4A	28.00	U	ug/kg
	MW035	MWCS035R2A	520.00	T	ug/kg
	MW035	MWCS035R3A	19.00	JT	ug/kg
	MW035	MWCS035R4A	27.00	U	ug/kg
	MW035	MWCS035S4A	27.00	U	ug/kg
	MW037	MWCS037R2A	370.00	T	ug/kg
	MW037	MWCS037R3A	3.70	TJ	ug/kg
	MW037	MWCS037R4A	28.00	U	ug/kg
	MW040	MWCS040R2A	240.00		ug/kg
	MW040	MWCS040R3A	15.00	J	ug/kg
	MW040	MWCS040R4A	34.00	U	ug/kg
	MW041	MWCT041R2	1000.00	T	ug/kg
	MW046	MWCT046R2	740.00	T	ug/kg
	MW050	MWCT050R2	6700.00	T	ug/kg
	MW053	MWCT053R2	730.00	T	ug/kg
Bank Samples					
	MW001	MWSB001R1	630.00	T	ug/kg
	MW002	MWSB002R1	570.00	T	ug/kg
	MW008	MWSB008R1	670.00	T	ug/kg
	MW008	MWSB008S1	1200.00	T	ug/kg
	MW008-SP	MWSB008R1 SP	250.00	T	ug/kg
	MW009	MWSB009R1	5000.00	T	ug/kg
	MW009-SP	MWSB009R1 SP	3000.00	T	ug/kg
	MW012	MWSB012R1	870.00	T	ug/kg
	MW013	MWSB013R1	130.00		ug/kg
	MW014	MWSB014R1	490.00	T	ug/kg
	MW015	MWSB015R1	850.00	T	ug/kg
	MW015	MWSB015S1	570.00	T	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW03a	MWSB03aR1	1700.00	T	ug/kg
MW03b	MWSB03bR1	1300.00	T	ug/kg
MW04a	MWSB04aR1	270.00	T	ug/kg
MW04b	MWSB04bR1	1100.00	T	ug/kg
MW04b-SP	MWSB04bR1 SP	400.00	T	ug/kg
MW10a	MWSB10aR1	3100.00	T	ug/kg
MW10b	MWSB10bR1	3700.00	T	ug/kg
MW10c	MWSB10cR1	3900.00		ug/kg
MW11a	MWSB11aR1	1100.00	T	ug/kg
MW11a-SP	MWSB11aR1 SP	1900.00	T	ug/kg
MW11b	MWSB11bR1	1100.00	T	ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	2100.00	T	ug/kg
Benzofluoranthenes				
Surface Samples				
MW016	MWSS016R1	880.00		ug/kg
MW017	MWSS017R1	1040.00		ug/kg
MW018	MWSS018R1	1260.00		ug/kg
MW019	MWSS019R1	820.00		ug/kg
MW020	MWSS020R1	188.00		ug/kg
MW021	MWSS021R1	1940.00		ug/kg
MW022	MWSS022R1	1400.00		ug/kg
MW023	MWSS023R1	48.00		ug/kg
MW025	MWSS025R1	2200.00		ug/kg
MW026	MWSS026R1	1780.00		ug/kg
MW026	MWSS026S1	1980.00		ug/kg
MW027	MWSS027R1	3200.00		ug/kg
MW028	MWSS028R1	2000.00		ug/kg
MW029	MWSS029R1	2800.00		ug/kg
MW030	MWSS030R1	3200.00		ug/kg
MW031	MWSS031R1	7800.00		ug/kg
MW032	MWSS032R1	3400.00		ug/kg
MW034	MWSS034R1	2800.00		ug/kg
MW035	MWSS035R1	3000.00		ug/kg
MW037	MWSS037R1	2200.00		ug/kg
MW039	MWST039R1	4800.00		ug/kg
MW040	MWST040R1	120.00		ug/kg
MW040	MWST040S1	1140.00		ug/kg
MW042	MWST042R1	1460.00		ug/kg
MW043	MWST043R1	1140.00		ug/kg
MW044	MWST044R1	2200.00		ug/kg
MW045	MWST045R1	2400.00		ug/kg
MW047	MWST047R1	2000.00		ug/kg
MW048	MWST048R1	4800.00		ug/kg
MW049	MWST049R1	940.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW051	MWST051R1	24000.00		ug/kg
MW052	MWST052R1	2400.00		ug/kg
MW054	MWST054R1	5600.00		ug/kg
MW055	MWSS055R1	3400.00		ug/kg
TF-20	TF-20	1700.00		ug/kg
TF-21	TF-21A	1300.00		ug/kg
TF-22	TF-22A	7100.00		ug/kg
TF-23	TF-23	2400.00		ug/kg
Subsurface Samples				
F	F	550.80		ug/kg
HC-2	S-1	2810.00	D	ug/kg
HC-2	S-2	2120.00	D	ug/kg
HC-2	S-3	1101.00	D	ug/kg
MW-1	1	1700.00		ug/kg
MW-1	2	4700.00		ug/kg
MW024	MWCS024R2A	2600.00		ug/kg
MW024	MWCS024R3A	440.00		ug/kg
MW025	MWCS025R2A	1160.00		ug/kg
MW025	MWCS025R3A	14.00		ug/kg
MW025	MWCS025R4A	7.20		ug/kg
MW026	MWCS026R2A	94.00		ug/kg
MW026	MWCS026R3A	12.80		ug/kg
MW026	MWCS026R4A	40.00	U	ug/kg
MW027	MWCS027R2A	2600.00		ug/kg
MW027	MWCS027R3A	1460.00		ug/kg
MW027	MWCS027R4A	32.00		ug/kg
MW028	MWCS028R2A	117.00		ug/kg
MW028	MWCS028R3A	30.00		ug/kg
MW028	MWCS028R4A	61.00	U	ug/kg
MW029	MWCS029R2A	82.00		ug/kg
MW029	MWCS029R3A	39.00	U	ug/kg
MW029	MWCS029R4A	40.00	U	ug/kg
MW030	MWCS030R2A	8200.00		ug/kg
MW030	MWCS030R3A	138.00		ug/kg
MW030	MWCS030S2A	4800.00		ug/kg
MW031	MWCS031R2A	10000.00		ug/kg
MW031	MWCS031R3A	980.00		ug/kg
MW031	MWCS031R4A	46.00		ug/kg
MW034	MWCS034R2A	1040.00		ug/kg
MW034	MWCS034R3A	32.00		ug/kg
MW034	MWCS034R4A	41.00	U	ug/kg
MW035	MWCS035R2A	1040.00		ug/kg
MW035	MWCS035R3A	38.00		ug/kg
MW035	MWCS035R4A	41.00	U	ug/kg
MW035	MWCS035S4A	40.00	U	ug/kg
MW037	MWCS037R2A	740.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW037	MWCS037R3A	7.40		ug/kg
	MW037	MWCS037R4A	41.00	U	ug/kg
	MW040	MWCS040R2A	480.00		ug/kg
	MW040	MWCS040R3A	32.00		ug/kg
	MW040	MWCS040R4A	51.00	U	ug/kg
	MW041	MWCT041R2	2000.00		ug/kg
	MW046	MWCT046R2	1480.00		ug/kg
	MW050	MWCT050R2	13400.00		ug/kg
	MW053	MWCT053R2	1460.00		ug/kg
	TF-22	TF-22B	2900.00		ug/kg
	TF-22	TF-22C	38000.00		ug/kg
Bank Samples					
	B-12	B-12	1800.00		ug/kg
	B-13	B-13	640.00		ug/kg
	B-14	B-14	19000.00		ug/kg
	B-15	B-15	7000.00		ug/kg
	B-16	B-16	4400.00		ug/kg
	B-17	B-17	2000.00		ug/kg
	B-18	B-18	8200.00		ug/kg
	B-19	B-19	6800.00		ug/kg
	MW001	MWSB001R1	1260.00		ug/kg
	MW002	MWSB002R1	1140.00		ug/kg
	MW008	MWSB008R1	1340.00		ug/kg
	MW008	MWSB008S1	2400.00		ug/kg
	MW008-SP	MWSB008R1 SP	500.00		ug/kg
	MW009	MWSB009R1	10000.00		ug/kg
	MW009-SP	MWSB009R1 SP	6000.00		ug/kg
	MW012	MWSB012R1	1740.00		ug/kg
	MW013	MWSB013R1	260.00		ug/kg
	MW014	MWSB014R1	980.00		ug/kg
	MW015	MWSB015R1	1700.00		ug/kg
	MW015	MWSB015S1	1140.00		ug/kg
	MW03a	MWSB03aR1	3400.00		ug/kg
	MW03b	MWSB03bR1	2600.00		ug/kg
	MW04a	MWSB04aR1	540.00		ug/kg
	MW04b	MWSB04bR1	2200.00		ug/kg
	MW04b-SP	MWSB04bR1 SP	800.00		ug/kg
	MW10a	MWSB10aR1	6200.00		ug/kg
	MW10b	MWSB10bR1	7400.00		ug/kg
	MW10c	MWSB10cR1	7800.00		ug/kg
	MW11a	MWSB11aR1	2200.00		ug/kg
	MW11a-SP	MWSB11aR1 SP	3800.00		ug/kg
	MW11b	MWSB11bR1	2200.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
Chrysene					
Surface Samples					
	A	A	730.00		ug/kg
	C	C	87.00		ug/kg
	F	F	430.00		ug/kg
	HC-2	HC-2	960.00		ug/kg
	MW-1(a)	MW-1(a)	73.00		ug/kg
	MW016	MWSS016R1	320.00		ug/kg
	MW017	MWSS017R1	330.00		ug/kg
	MW018	MWSS018R1	490.00		ug/kg
	MW019	MWSS019R1	280.00		ug/kg
	MW020	MWSS020R1	61.00		ug/kg
	MW021	MWSS021R1	780.00		ug/kg
	MW022	MWSS022R1	360.00		ug/kg
	MW023	MWSS023R1	190.00		ug/kg
	MW024	MWSS024R1	1600.00		ug/kg
	MW025	MWSS025R1	700.00		ug/kg
	MW026	MWSS026R1	590.00		ug/kg
	MW026	MWSS026S1	520.00		ug/kg
	MW027	MWSS027R1	1000.00		ug/kg
	MW028	MWSS028R1	620.00		ug/kg
	MW029	MWSS029R1	950.00		ug/kg
	MW030	MWSS030R1	1100.00		ug/kg
	MW031	MWSS031R1	2900.00		ug/kg
	MW032	MWSS032R1	1300.00		ug/kg
	MW034	MWSS034R1	800.00	E	ug/kg
	MW035	MWSS035R1	1000.00		ug/kg
	MW037	MWSS037R1	780.00		ug/kg
	MW039	MWST039R1	2100.00		ug/kg
	MW040	MWST040R1	340.00		ug/kg
	MW040	MWST040S1	400.00		ug/kg
	MW042	MWST042R1	450.00		ug/kg
	MW043	MWST043R1	410.00		ug/kg
	MW044	MWST044R1	850.00		ug/kg
	MW045	MWST045R1	580.00		ug/kg
	MW047	MWST047R1	670.00		ug/kg
	MW048	MWST048R1	1700.00		ug/kg
	MW049	MWST049R1	300.00		ug/kg
	MW051	MWST051R1	6400.00		ug/kg
	MW052	MWST052R1	850.00		ug/kg
	MW054	MWST054R1	2200.00		ug/kg
	MW055	MWSS055R1	1200.00		ug/kg
	TF-20	TF-20	1000.00		ug/kg
	TF-21	TF-21A	870.00		ug/kg
	TF-22	TF-22A	4700.00		ug/kg
	TF-23	TF-23	1200.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
Subsurface Samples					
	F	F	338.40		ug/kg
	HC-2	S-1	2200.00	D	ug/kg
	HC-2	S-2	1700.00	D	ug/kg
	HC-2	S-3	140.00		ug/kg
	MW-1	1	1400.00		ug/kg
	MW-1	2	2600.00		ug/kg
	MW024	MWCS024R2A	1100.00		ug/kg
	MW024	MWCS024R3A	170.00		ug/kg
	MW025	MWCS025R2A	380.00		ug/kg
	MW025	MWCS025R3A	5.10	J	ug/kg
	MW025	MWCS025R4A	3.40	J	ug/kg
	MW026	MWCS026R2A	32.00	J	ug/kg
	MW026	MWCS026R3A	40.00	U	ug/kg
	MW026	MWCS026R4A	39.00	U	ug/kg
	MW027	MWCS027R2A	890.00		ug/kg
	MW027	MWCS027R3A	790.00		ug/kg
	MW027	MWCS027R4A	14.00	J	ug/kg
	MW028	MWCS028R2A	90.00		ug/kg
	MW028	MWCS028R3A	23.00	J	ug/kg
	MW028	MWCS028R4A	61.00	U	ug/kg
	MW029	MWCS029R2A	26.00	J	ug/kg
	MW029	MWCS029R3A	38.00	U	ug/kg
	MW029	MWCS029R4A	39.00	U	ug/kg
	MW030	MWCS030R2A	4900.00		ug/kg
	MW030	MWCS030R3A	77.00		ug/kg
	MW030	MWCS030S2A	2700.00		ug/kg
	MW031	MWCS031R2A	3300.00		ug/kg
	MW031	MWCS031R3A	690.00		ug/kg
	MW031	MWCS031R4A	32.00	J	ug/kg
	MW034	MWCS034R2A	410.00		ug/kg
	MW034	MWCS034R3A	12.00	J	ug/kg
	MW034	MWCS034R4A	41.00	U	ug/kg
	MW035	MWCS035R2A	400.00		ug/kg
	MW035	MWCS035R3A	16.00	J	ug/kg
	MW035	MWCS035R4A	40.00	U	ug/kg
	MW035	MWCS035S4A	39.00	U	ug/kg
	MW037	MWCS037R2A	280.00		ug/kg
	MW037	MWCS037R3A	3.80	U	ug/kg
	MW037	MWCS037R4A	41.00	U	ug/kg
	MW040	MWCS040R2A	390.00		ug/kg
	MW040	MWCS040R3A	23.00	J	ug/kg
	MW040	MWCS040R4A	51.00	U	ug/kg
	MW041	MWCT041R2	920.00		ug/kg
	MW046	MWCT046R2	600.00		ug/kg
	MW050	MWCT050R2	5500.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW053	MWCT053R2	620.00		ug/kg
TF-22	TF-22B	1800.00		ug/kg
TF-22	TF-22C	31000.00		ug/kg
Bank Samples				
B-12	B-12	840.00		ug/kg
B-13	B-13	410.00		ug/kg
B-14	B-14	16000.00		ug/kg
B-15	B-15	3700.00		ug/kg
B-16	B-16	3100.00		ug/kg
B-17	B-17	1400.00		ug/kg
B-18	B-18	4500.00		ug/kg
B-19	B-19	5400.00		ug/kg
MW001	MWSB001R1	410.00		ug/kg
MW002	MWSB002R1	350.00		ug/kg
MW008	MWSB008R1	340.00		ug/kg
MW008	MWSB008S1	800.00		ug/kg
MW008-SP	MWSB008R1 SP	130.00		ug/kg
MW009	MWSB009R1	3200.00		ug/kg
MW009-SP	MWSB009R1 SP	1500.00		ug/kg
MW012	MWSB012R1	770.00		ug/kg
MW013	MWSB013R1	180.00		ug/kg
MW014	MWSB014R1	230.00		ug/kg
MW015	MWSB015R1	570.00		ug/kg
MW015	MWSB015S1	380.00		ug/kg
MW03a	MWSB03aR1	1200.00		ug/kg
MW03b	MWSB03bR1	1000.00		ug/kg
MW04a	MWSB04aR1	170.00		ug/kg
MW04b	MWSB04bR1	640.00		ug/kg
MW04b-SP	MWSB04bR1 SP	220.00		ug/kg
MW10a	MWSB10aR1	2200.00		ug/kg
MW10b	MWSB10bR1	2300.00		ug/kg
MW10c	MWSB10cR1	2100.00		ug/kg
MW11a	MWSB11aR1	710.00		ug/kg
MW11a-SP	MWSB11aR1 SP	1600.00		ug/kg
MW11b	MWSB11bR1	720.00		ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	2000.00		ug/kg
Dibenzo(a,h)anthracene				
Surface Samples				
A	A	75.00		ug/kg
C	C	19.00	U	ug/kg
F	F	77.00		ug/kg
HC-2	HC-2	130.00		ug/kg
MW-1(a)	MW-1(a)	20.00	U	ug/kg
MW016	MWSS016R1	14.00	J	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW017	MWSS017R1	22.00	J	ug/kg
MW018	MWSS018R1	40.00	U	ug/kg
MW019	MWSS019R1	45.00	U	ug/kg
MW020	MWSS020R1	31.00	UE	ug/kg
MW021	MWSS021R1	44.00	U	ug/kg
MW022	MWSS022R1	36.00	U	ug/kg
MW023	MWSS023R1	32.00	U	ug/kg
MW024	MWSS024R1	38.00	U	ug/kg
MW025	MWSS025R1	43.00	U	ug/kg
MW026	MWSS026R1	34.00	U	ug/kg
MW026	MWSS026S1	33.00	U	ug/kg
MW027	MWSS027R1	160.00	E	ug/kg
MW028	MWSS028R1	64.00	E	ug/kg
MW029	MWSS029R1	33.00	E	ug/kg
MW030	MWSS030R1	35.00	E	ug/kg
MW031	MWSS031R1	120.00	J	ug/kg
MW032	MWSS032R1	210.00	E	ug/kg
MW034	MWSS034R1	61.00	E	ug/kg
MW035	MWSS035R1	63.00	J	ug/kg
MW037	MWSS037R1	44.00	U	ug/kg
MW039	MWST039R1	140.00	J	ug/kg
MW040	MWST040R1	33.00	U	ug/kg
MW040	MWST040S1	38.00	U	ug/kg
MW042	MWST042R1	24.00	J	ug/kg
MW043	MWST043R1	34.00	U	ug/kg
MW044	MWST044R1	39.00	U	ug/kg
MW045	MWST045R1	42.00	U	ug/kg
MW047	MWST047R1	42.00	U	ug/kg
MW048	MWST048R1	230.00		ug/kg
MW049	MWST049R1	34.00	U	ug/kg
MW051	MWST051R1	210.00	U	ug/kg
MW052	MWST052R1	39.00	U	ug/kg
MW054	MWST054R1	200.00	U	ug/kg
MW055	MWSS055R1	33.00	J	ug/kg
TF-20	TF-20	170.00		ug/kg
TF-21	TF-21A	140.00		ug/kg
TF-22	TF-22A	650.00		ug/kg
TF-23	TF-23	210.00		ug/kg
Subsurface Samples				
F	F	18.00	U	ug/kg
HC-2	S-1	580.00	D	ug/kg
HC-2	S-2	360.00	D	ug/kg
HC-2	S-3	6.10	U	ug/kg
MW-1	1	370.00		ug/kg
MW-1	2	780.00		ug/kg
MW024	MWCS024R2A	160.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW024	MWCS024R3A	19.00	J	ug/kg
MW025	MWCS025R2A	49.00		ug/kg
MW025	MWCS025R3A	27.00	U	ug/kg
MW025	MWCS025R4A	27.00	U	ug/kg
MW026	MWCS026R2A	6.40	J	ug/kg
MW026	MWCS026R3A	29.00	U	ug/kg
MW026	MWCS026R4A	28.00	U	ug/kg
MW027	MWCS027R2A	39.00	U	ug/kg
MW027	MWCS027R3A	30.00	U	ug/kg
MW027	MWCS027R4A	30.00	U	ug/kg
MW028	MWCS028R2A	18.00	J	ug/kg
MW028	MWCS028R3A	41.00	U	ug/kg
MW028	MWCS028R4A	44.00	U	ug/kg
MW029	MWCS029R2A	29.00	U	ug/kg
MW029	MWCS029R3A	28.00	U	ug/kg
MW029	MWCS029R4A	28.00	U	ug/kg
MW030	MWCS030R2A	590.00		ug/kg
MW030	MWCS030R3A	9.20	J	ug/kg
MW030	MWCS030S2A	68.00	U	ug/kg
MW031	MWCS031R2A	690.00		ug/kg
MW031	MWCS031R3A	140.00		ug/kg
MW031	MWCS031R4A	39.00	U	ug/kg
MW034	MWCS034R2A	51.00		ug/kg
MW034	MWCS034R3A	28.00	U	ug/kg
MW034	MWCS034R4A	30.00	U	ug/kg
MW035	MWCS035R2A	100.00		ug/kg
MW035	MWCS035R3A	29.00	U	ug/kg
MW035	MWCS035R4A	29.00	U	ug/kg
MW035	MWCS035S4A	28.00	U	ug/kg
MW037	MWCS037R2A	37.00		ug/kg
MW037	MWCS037R3A	27.00	U	ug/kg
MW037	MWCS037R4A	30.00	U	ug/kg
MW040	MWCS040R2A	58.00		ug/kg
MW040	MWCS040R3A	40.00	U	ug/kg
MW040	MWCS040R4A	37.00	U	ug/kg
MW041	MWCT041R2	36.00	J	ug/kg
MW046	MWCT046R2	41.00	U	ug/kg
MW050	MWCT050R2	610.00		ug/kg
MW053	MWCT053R2	37.00	U	ug/kg
TF-22	TF-22B	96.00	U	ug/kg
TF-22	TF-22C	4500.00		ug/kg
Bank Samples				
B-12	B-12	280.00		ug/kg
B-13	B-13	94.00	U	ug/kg
B-14	B-14	1800.00		ug/kg
B-15	B-15	830.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
B-16	B-16	470.00		ug/kg
B-17	B-17	280.00		ug/kg
B-18	B-18	1300.00		ug/kg
B-19	B-19	890.00		ug/kg
MW001	MWSB001R1	18.00	J	ug/kg
MW002	MWSB002R1	34.00	U	ug/kg
MW008	MWSB008R1	43.00	J	ug/kg
MW008	MWSB008S1	18.00	J	ug/kg
MW008-SP	MWSB008R1 SP	59.00	U	ug/kg
MW009	MWSB009R1	130.00		ug/kg
MW009-SP	MWSB009R1 SP	19.00	J	ug/kg
MW012	MWSB012R1	23.00	J	ug/kg
MW013	MWSB013R1	32.00		ug/kg
MW014	MWSB014R1	30.00	U	ug/kg
MW015	MWSB015R1	41.00	U	ug/kg
MW015	MWSB015S1	15.00	J	ug/kg
MW03a	MWSB03aR1	41.00	J	ug/kg
MW03b	MWSB03bR1	140.00		ug/kg
MW04a	MWSB04aR1	23.00	J	ug/kg
MW04b	MWSB04bR1	45.00		ug/kg
MW04b-SP	MWSB04bR1 SP	22.00	J	ug/kg
MW10a	MWSB10aR1	360.00		ug/kg
MW10b	MWSB10bR1	14.00	E	ug/kg
MW10c	MWSB10cR1	93.00	J	ug/kg
MW11a	MWSB11aR1	28.00	J	ug/kg
MW11a-SP	MWSB11aR1 SP	44.00	J	ug/kg
MW11b	MWSB11bR1	5.30	J	ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	210.00		ug/kg
Fluoranthene				
Surface Samples				
A	A	650.00		ug/kg
C	C	110.00		ug/kg
F	F	480.00		ug/kg
HC-2	HC-2	1000.00		ug/kg
MW-1(a)	MW-1(a)	100.00		ug/kg
MW016	MWSS016R1	440.00		ug/kg
MW017	MWSS017R1	560.00		ug/kg
MW018	MWSS018R1	840.00		ug/kg
MW019	MWSS019R1	530.00		ug/kg
MW020	MWSS020R1	120.00		ug/kg
MW021	MWSS021R1	1200.00		ug/kg
MW022	MWSS022R1	640.00		ug/kg
MW023	MWSS023R1	350.00		ug/kg
MW024	MWSS024R1	4300.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW025	MWSS025R1	1200.00		ug/kg
MW026	MWSS026R1	1100.00		ug/kg
MW026	MWSS026S1	860.00		ug/kg
MW027	MWSS027R1	1600.00		ug/kg
MW028	MWSS028R1	980.00		ug/kg
MW029	MWSS029R1	1100.00		ug/kg
MW030	MWSS030R1	2300.00		ug/kg
MW031	MWSS031R1	6900.00		ug/kg
MW032	MWSS032R1	2500.00		ug/kg
MW034	MWSS034R1	1500.00	E	ug/kg
MW035	MWSS035R1	1100.00		ug/kg
MW037	MWSS037R1	1300.00		ug/kg
MW039	MWST039R1	7800.00		ug/kg
MW040	MWST040R1	620.00		ug/kg
MW040	MWST040S1	920.00		ug/kg
MW042	MWST042R1	960.00		ug/kg
MW043	MWST043R1	830.00		ug/kg
MW044	MWST044R1	2000.00		ug/kg
MW045	MWST045R1	740.00		ug/kg
MW047	MWST047R1	1400.00		ug/kg
MW048	MWST048R1	3200.00		ug/kg
MW049	MWST049R1	680.00		ug/kg
MW051	MWST051R1	13000.00		ug/kg
MW052	MWST052R1	1500.00		ug/kg
MW054	MWST054R1	4400.00		ug/kg
MW055	MWSS055R1	1800.00		ug/kg
TF-20	TF-20	1500.00		ug/kg
TF-21	TF-21A	1500.00		ug/kg
TF-22	TF-22A	4100.00		ug/kg
TF-23	TF-23	2200.00		ug/kg
Subsurface Samples				
F	F	388.80		ug/kg
HC-2	S-1	2800.00	D	ug/kg
HC-2	S-2	2300.00	D	ug/kg
HC-2	S-3	590.00		ug/kg
MW-1	1	2200.00		ug/kg
MW-1	2	3800.00		ug/kg
MW024	MWCS024R2A	6600.00		ug/kg
MW024	MWCS024R3A	450.00		ug/kg
MW025	MWCS025R2A	730.00		ug/kg
MW025	MWCS025R3A	13.00	J	ug/kg
MW025	MWCS025R4A	7.80	J	ug/kg
MW026	MWCS026R2A	66.00		ug/kg
MW026	MWCS026R3A	9.50	J	ug/kg
MW026	MWCS026R4A	48.00	U	ug/kg
MW027	MWCS027R2A	3200.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW027	MWCS027R3A	4300.00		ug/kg
	MW027	MWCS027R4A	69.00		ug/kg
	MW028	MWCS028R2A	190.00		ug/kg
	MW028	MWCS028R3A	43.00	J	ug/kg
	MW028	MWCS028R4A	74.00	U	ug/kg
	MW029	MWCS029R2A	59.00		ug/kg
	MW029	MWCS029R3A	3.90	J	ug/kg
	MW029	MWCS029R4A	48.00	U	ug/kg
	MW030	MWCS030R2A	18000.00		ug/kg
	MW030	MWCS030R3A	310.00		ug/kg
	MW030	MWCS030S2A	17000.00		ug/kg
	MW031	MWCS031R2A	3200.00		ug/kg
	MW031	MWCS031R3A	1200.00		ug/kg
	MW031	MWCS031R4A	110.00		ug/kg
	MW034	MWCS034R2A	600.00		ug/kg
	MW034	MWCS034R3A	46.00	U	ug/kg
	MW034	MWCS034R4A	4.20	J	ug/kg
	MW035	MWCS035R2A	500.00		ug/kg
	MW035	MWCS035R3A	26.00	J	ug/kg
	MW035	MWCS035R4A	49.00	U	ug/kg
	MW035	MWCS035S4A	48.00	U	ug/kg
	MW037	MWCS037R2A	580.00		ug/kg
	MW037	MWCS037R3A	6.70	J	ug/kg
	MW037	MWCS037R4A	50.00	U	ug/kg
	MW040	MWCS040R2A	980.00		ug/kg
	MW040	MWCS040R3A	74.00		ug/kg
	MW040	MWCS040R4A	4.90	J	ug/kg
	MW041	MWCT041R2	2000.00		ug/kg
	MW046	MWCT046R2	1100.00		ug/kg
	MW050	MWCT050R2	12000.00		ug/kg
	MW053	MWCT053R2	1200.00		ug/kg
	TF-22	TF-22B	3900.00		ug/kg
	TF-22	TF-22C	71000.00		ug/kg
Bank Samples					
	B-12	B-12	720.00		ug/kg
	B-13	B-13	490.00		ug/kg
	B-14	B-14	22000.00		ug/kg
	B-15	B-15	4300.00		ug/kg
	B-16	B-16	3600.00		ug/kg
	B-17	B-17	1800.00		ug/kg
	B-18	B-18	3600.00		ug/kg
	B-19	B-19	6400.00		ug/kg
	MW001	MWSB001R1	960.00		ug/kg
	MW002	MWSB002R1	960.00		ug/kg
	MW008	MWSB008R1	510.00		ug/kg
	MW008	MWSB008S1	580.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW008-SP	MWSB008R1 SP	290.00		ug/kg
MW009	MWSB009R1	7800.00		ug/kg
MW009-SP	MWSB009R1 SP	2900.00		ug/kg
MW012	MWSB012R1	980.00		ug/kg
MW013	MWSB013R1	320.00		ug/kg
MW014	MWSB014R1	420.00		ug/kg
MW015	MWSB015R1	1000.00		ug/kg
MW015	MWSB015S1	800.00		ug/kg
MW03a	MWSB03aR1	2300.00		ug/kg
MW03b	MWSB03bR1	1300.00		ug/kg
MW04a	MWSB04aR1	320.00		ug/kg
MW04b	MWSB04bR1	1200.00		ug/kg
MW04b-SP	MWSB04bR1 SP	44.00	J	ug/kg
MW10a	MWSB10aR1	4300.00		ug/kg
MW10b	MWSB10bR1	2500.00		ug/kg
MW10c	MWSB10cR1	2900.00		ug/kg
MW11a	MWSB11aR1	1300.00		ug/kg
MW11a-SP	MWSB11aR1 SP	2800.00		ug/kg
MW11b	MWSB11bR1	1200.00		ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	5600.00		ug/kg
Bulk Sediment	DPC-DRET-7298	1.60	U	ug/L
Bulk Sediment	DPC-DUPLICAT	1.60	U	ug/L
Bulk Sediment	DPC-METD-7298	1.60	U	ug/L
Bulk Sediment	DPC-METT-7298	1.10	J	ug/L
Bulk Sediment	DPC-WATD-7298	1.60	U	ug/L
Bulk Sediment	DPC-WATT-7298	1.60	U	ug/L
Bulk Sediment	TCLT RINSATE 1	1.60	U	ug/L
Bulk Sediment	TCLT-PV 01	1.60	U	ug/L
Bulk Sediment	TCLT-PV 02.5	1.60	U	ug/L
Bulk Sediment	TCLT-PV 04	1.20	J	ug/L
Bulk Sediment	TCLT-PV 06	1.70		ug/L
Bulk Sediment	TCLT-PV 07.3	2.10		ug/L
Bulk Sediment	TCLT-PV 09	2.20		ug/L
Bulk Sediment	TCLT-PV 11	2.30		ug/L
Bulk Sediment	TCLT-PV 12.8	3.50		ug/L
Bulk Sediment	TCLT-PV 14.4	3.70		ug/L
Bulk Sediment	TCLT-PV 15.8	3.70		ug/L
Bulk Sediment	TCLT-PV 17.5	3.10		ug/L
Bulk Sediment	TCLT-PV 19	2.10		ug/L
Bulk Sediment	TCLT-PV 20.6	2.70		ug/L
Bulk Sediment	TCLT-PV 22.2	2.00		ug/L
Bulk Sediment	TCLT-PV 23.8	2.00		ug/L
Bulk Sediment	TCLT-PV 25.3	2.00		ug/L
Bulk Sediment	TCLT-PV 26.9	2.00		ug/L
Bulk Sediment	TCLT-PV 28.4	1.70		ug/L

Station	Sample ID	Concentration	Flag	Units
Bulk Sediment	TCLT-PV 30	1.60	J	ug/L
Indeno(1,2,3-cd)pyrene				
Surface Samples				
A	A	340.00		ug/kg
C	C	41.00		ug/kg
F	F	280.00		ug/kg
HC-2	HC-2	440.00		ug/kg
MW-1(a)	MW-1(a)	49.00		ug/kg
MW016	MWSS016R1	72.00		ug/kg
MW017	MWSS017R1	87.00		ug/kg
MW018	MWSS018R1	140.00		ug/kg
MW019	MWSS019R1	120.00		ug/kg
MW020	MWSS020R1	30.00	E	ug/kg
MW021	MWSS021R1	230.00		ug/kg
MW022	MWSS022R1	210.00		ug/kg
MW023	MWSS023R1	95.00		ug/kg
MW024	MWSS024R1	300.00		ug/kg
MW025	MWSS025R1	220.00		ug/kg
MW026	MWSS026R1	260.00		ug/kg
MW026	MWSS026S1	170.00		ug/kg
MW027	MWSS027R1	370.00	E	ug/kg
MW028	MWSS028R1	240.00	E	ug/kg
MW029	MWSS029R1	350.00	E	ug/kg
MW030	MWSS030R1	300.00	E	ug/kg
MW031	MWSS031R1	610.00		ug/kg
MW032	MWSS032R1	460.00	E	ug/kg
MW034	MWSS034R1	270.00	E	ug/kg
MW035	MWSS035R1	320.00		ug/kg
MW037	MWSS037R1	360.00		ug/kg
MW039	MWST039R1	740.00		ug/kg
MW040	MWST040R1	14.00	J	ug/kg
MW040	MWST040S1	130.00		ug/kg
MW042	MWST042R1	130.00		ug/kg
MW043	MWST043R1	230.00		ug/kg
MW044	MWST044R1	250.00		ug/kg
MW045	MWST045R1	230.00		ug/kg
MW047	MWST047R1	230.00		ug/kg
MW048	MWST048R1	640.00		ug/kg
MW049	MWST049R1	100.00		ug/kg
MW051	MWST051R1	3400.00		ug/kg
MW052	MWST052R1	420.00		ug/kg
MW054	MWST054R1	1200.00		ug/kg
MW055	MWSS055R1	460.00		ug/kg
TF-20	TF-20	560.00		ug/kg
TF-21	TF-21A	410.00		ug/kg
TF-22	TF-22A	1600.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	TF-23	TF-23	610.00		ug/kg
Subsurface Samples					
	F	F	208.80		ug/kg
	HC-2	S-1	970.00	D	ug/kg
	HC-2	S-2	740.00	D	ug/kg
	HC-2	S-3	94.00		ug/kg
	MW-1	1	1100.00		ug/kg
	MW-1	2	2900.00		ug/kg
	MW024	MWCS024R2A	340.00		ug/kg
	MW024	MWCS024R3A	83.00		ug/kg
	MW025	MWCS025R2A	220.00		ug/kg
	MW025	MWCS025R3A	27.00	U	ug/kg
	MW025	MWCS025R4A	27.00	U	ug/kg
	MW026	MWCS026R2A	15.00	J	ug/kg
	MW026	MWCS026R3A	29.00	U	ug/kg
	MW026	MWCS026R4A	29.00	U	ug/kg
	MW027	MWCS027R2A	590.00		ug/kg
	MW027	MWCS027R3A	270.00		ug/kg
	MW027	MWCS027R4A	30.00	U	ug/kg
	MW028	MWCS028R2A	38.00	J	ug/kg
	MW028	MWCS028R3A	7.00	J	ug/kg
	MW028	MWCS028R4A	44.00	U	ug/kg
	MW029	MWCS029R2A	12.00	J	ug/kg
	MW029	MWCS029R3A	28.00	U	ug/kg
	MW029	MWCS029R4A	29.00	U	ug/kg
	MW030	MWCS030R2A	1300.00		ug/kg
	MW030	MWCS030R3A	18.00	J	ug/kg
	MW030	MWCS030S2A	800.00	J	ug/kg
	MW031	MWCS031R2A	1400.00		ug/kg
	MW031	MWCS031R3A	340.00		ug/kg
	MW031	MWCS031R4A	12.00	J	ug/kg
	MW034	MWCS034R2A	230.00		ug/kg
	MW034	MWCS034R3A	5.30	J	ug/kg
	MW034	MWCS034R4A	30.00	U	ug/kg
	MW035	MWCS035R2A	210.00		ug/kg
	MW035	MWCS035R3A	5.80	J	ug/kg
	MW035	MWCS035R4A	30.00	U	ug/kg
	MW035	MWCS035S4A	29.00	U	ug/kg
	MW037	MWCS037R2A	160.00		ug/kg
	MW037	MWCS037R3A	27.00	U	ug/kg
	MW037	MWCS037R4A	30.00	U	ug/kg
	MW040	MWCS040R2A	140.00		ug/kg
	MW040	MWCS040R3A	6.60	J	ug/kg
	MW040	MWCS040R4A	37.00	U	ug/kg
	MW041	MWCT041R2	430.00		ug/kg
	MW046	MWCT046R2	260.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW050	MWCT050R2	1300.00		ug/kg
	MW053	MWCT053R2	290.00		ug/kg
	TF-22	TF-22B	730.00		ug/kg
	TF-22	TF-22C	15000.00		ug/kg
Bank Samples					
	B-12	B-12	870.00		ug/kg
	B-13	B-13	210.00		ug/kg
	B-14	B-14	4400.00		ug/kg
	B-15	B-15	2500.00		ug/kg
	B-16	B-16	1400.00		ug/kg
	B-17	B-17	710.00		ug/kg
	B-18	B-18	3800.00		ug/kg
	B-19	B-19	2200.00		ug/kg
	MW001	MWSB001R1	76.00		ug/kg
	MW002	MWSB002R1	68.00		ug/kg
	MW008	MWSB008R1	190.00		ug/kg
	MW008	MWSB008S1	290.00		ug/kg
	MW008-SP	MWSB008R1 SP	54.00	U	ug/kg
	MW009	MWSB009R1	610.00		ug/kg
	MW009-SP	MWSB009R1 SP	740.00		ug/kg
	MW012	MWSB012R1	280.00		ug/kg
	MW013	MWSB013R1	28.00	U	ug/kg
	MW014	MWSB014R1	55.00		ug/kg
	MW015	MWSB015R1	100.00		ug/kg
	MW015	MWSB015S1	16.00	J	ug/kg
	MW03a	MWSB03aR1	250.00		ug/kg
	MW03b	MWSB03bR1	290.00		ug/kg
	MW04a	MWSB04aR1	47.00		ug/kg
	MW04b	MWSB04bR1	210.00		ug/kg
	MW04b-SP	MWSB04bR1 SP	250.00		ug/kg
	MW10a	MWSB10aR1	780.00		ug/kg
	MW10b	MWSB10bR1	470.00	E	ug/kg
	MW10c	MWSB10cR1	1200.00		ug/kg
	MW11a	MWSB11aR1	350.00		ug/kg
	MW11a-SP	MWSB11aR1 SP	550.00		ug/kg
	MW11b	MWSB11bR1	170.00		ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	610.00		ug/kg
Pyrene					
Surface Samples					
	A	A	670.00		ug/kg
	C	C	120.00		ug/kg
	F	F	540.00		ug/kg
	HC-2	HC-2	1000.00		ug/kg
	MW-1(a)	MW-1(a)	100.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW016	MWSS016R1	480.00		ug/kg
MW017	MWSS017R1	570.00		ug/kg
MW018	MWSS018R1	780.00		ug/kg
MW019	MWSS019R1	610.00		ug/kg
MW020	MWSS020R1	130.00		ug/kg
MW021	MWSS021R1	1200.00		ug/kg
MW022	MWSS022R1	960.00		ug/kg
MW023	MWSS023R1	360.00		ug/kg
MW024	MWSS024R1	3500.00		ug/kg
MW025	MWSS025R1	1200.00		ug/kg
MW026	MWSS026R1	1600.00	E	ug/kg
MW026	MWSS026S1	1200.00		ug/kg
MW027	MWSS027R1	1800.00		ug/kg
MW028	MWSS028R1	1200.00		ug/kg
MW029	MWSS029R1	1700.00	E	ug/kg
MW030	MWSS030R1	2300.00		ug/kg
MW031	MWSS031R1	5900.00		ug/kg
MW032	MWSS032R1	2100.00		ug/kg
MW034	MWSS034R1	1700.00	E	ug/kg
MW035	MWSS035R1	2100.00		ug/kg
MW037	MWSS037R1	1400.00		ug/kg
MW039	MWST039R1	4900.00		ug/kg
MW040	MWST040R1	730.00		ug/kg
MW040	MWST040S1	980.00		ug/kg
MW042	MWST042R1	870.00	E	ug/kg
MW043	MWST043R1	990.00		ug/kg
MW044	MWST044R1	1500.00	E	ug/kg
MW045	MWST045R1	740.00		ug/kg
MW047	MWST047R1	1200.00	E	ug/kg
MW048	MWST048R1	3600.00		ug/kg
MW049	MWST049R1	580.00		ug/kg
MW051	MWST051R1	15000.00	E	ug/kg
MW052	MWST052R1	1600.00		ug/kg
MW054	MWST054R1	5000.00		ug/kg
MW055	MWSS055R1	2200.00	E	ug/kg
TF-20	TF-20	1400.00		ug/kg
TF-21	TF-21A	1500.00		ug/kg
TF-22	TF-22A	3400.00		ug/kg
TF-23	TF-23	1900.00		ug/kg
Subsurface Samples				
F	F	360.00		ug/kg
HC-2	S-1	8300.00	D	ug/kg
HC-2	S-2	7800.00	D	ug/kg
HC-2	S-3	1800.00	D	ug/kg
MW-1	1	2300.00		ug/kg
MW-1	2	6000.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW024	MWCS024R2A	4400.00		ug/kg
	MW024	MWCS024R3A	570.00		ug/kg
	MW025	MWCS025R2A	1000.00		ug/kg
	MW025	MWCS025R3A	14.00	J	ug/kg
	MW025	MWCS025R4A	8.20	J	ug/kg
	MW026	MWCS026R2A	100.00		ug/kg
	MW026	MWCS026R3A	11.00	J	ug/kg
	MW026	MWCS026R4A	71.00	U	ug/kg
	MW027	MWCS027R2A	3200.00		ug/kg
	MW027	MWCS027R3A	3000.00		ug/kg
	MW027	MWCS027R4A	38.00	J	ug/kg
	MW028	MWCS028R2A	250.00	E	ug/kg
	MW028	MWCS028R3A	73.00	E	ug/kg
	MW028	MWCS028R4A	110.00	UE	ug/kg
	MW029	MWCS029R2A	87.00		ug/kg
	MW029	MWCS029R3A	5.30	J	ug/kg
	MW029	MWCS029R4A	71.00	U	ug/kg
	MW030	MWCS030R2A	12000.00		ug/kg
	MW030	MWCS030R3A	190.00		ug/kg
	MW030	MWCS030S2A	12000.00		ug/kg
	MW031	MWCS031R2A	4900.00	E	ug/kg
	MW031	MWCS031R3A	1500.00	E	ug/kg
	MW031	MWCS031R4A	100.00	E	ug/kg
	MW034	MWCS034R2A	1100.00		ug/kg
	MW034	MWCS034R3A	57.00	J	ug/kg
	MW034	MWCS034R4A	6.10	J	ug/kg
	MW035	MWCS035R2A	930.00		ug/kg
	MW035	MWCS035R3A	32.00	J	ug/kg
	MW035	MWCS035R4A	73.00	U	ug/kg
	MW035	MWCS035S4A	71.00	U	ug/kg
	MW037	MWCS037R2A	410.00		ug/kg
	MW037	MWCS037R3A	5.70	J	ug/kg
	MW037	MWCS037R4A	74.00	U	ug/kg
	MW040	MWCS040R2A	910.00	E	ug/kg
	MW040	MWCS040R3A	73.00	E	ug/kg
	MW040	MWCS040R4A	4.60	E	ug/kg
	MW041	MWCT041R2	2000.00	E	ug/kg
	MW046	MWCT046R2	1400.00	E	ug/kg
	MW050	MWCT050R2	10000.00	E	ug/kg
	MW053	MWCT053R2	1400.00	E	ug/kg
	TF-22	TF-22B	3900.00		ug/kg
	TF-22	TF-22C	82000.00		ug/kg
Bank Samples					
	B-12	B-12	870.00	J	ug/kg
	B-13	B-13	640.00	J	ug/kg
	B-14	B-14	270000.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
B-15	B-15	6100.00	J	ug/kg
B-16	B-16	5200.00	J	ug/kg
B-17	B-17	2700.00	J	ug/kg
B-18	B-18	5000.00	J	ug/kg
B-19	B-19	8500.00		ug/kg
MW001	MWSB001R1	880.00		ug/kg
MW002	MWSB002R1	710.00		ug/kg
MW008	MWSB008R1	740.00		ug/kg
MW008	MWSB008S1	650.00		ug/kg
MW008-SP	MWSB008R1 SP	270.00		ug/kg
MW009	MWSB009R1	5500.00		ug/kg
MW009-SP	MWSB009R1 SP	2800.00		ug/kg
MW012	MWSB012R1	1300.00		ug/kg
MW013	MWSB013R1	250.00		ug/kg
MW014	MWSB014R1	400.00		ug/kg
MW015	MWSB015R1	930.00		ug/kg
MW015	MWSB015S1	710.00		ug/kg
MW03a	MWSB03aR1	3000.00		ug/kg
MW03b	MWSB03bR1	1400.00		ug/kg
MW04a	MWSB04aR1	260.00		ug/kg
MW04b	MWSB04bR1	1200.00		ug/kg
MW04b-SP	MWSB04bR1 SP	240.00		ug/kg
MW10a	MWSB10aR1	3100.00		ug/kg
MW10b	MWSB10bR1	2600.00		ug/kg
MW10c	MWSB10cR1	2900.00		ug/kg
MW11a	MWSB11aR1	1000.00		ug/kg
MW11a-SP	MWSB11aR1 SP	2000.00		ug/kg
MW11b	MWSB11bR1	1000.00		ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	3900.00		ug/kg
Total HPAH				
Surface Samples				
A	A	4715.00		ug/kg
C	C	623.00		ug/kg
F	F	3337.00		ug/kg
HC-2	HC-2	6260.00		ug/kg
MW-1(a)	MW-1(a)	581.00		ug/kg
MW016	MWSS016R1	2712.00		ug/kg
MW017	MWSS017R1	3276.00		ug/kg
MW018	MWSS018R1	4310.00		ug/kg
MW019	MWSS019R1	2990.00		ug/kg
MW020	MWSS020R1	658.00		ug/kg
MW021	MWSS021R1	6580.00		ug/kg
MW022	MWSS022R1	4440.00		ug/kg
MW023	MWSS023R1	1423.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW024	MWSS024R1	12270.00		ug/kg
	MW025	MWSS025R1	6820.00		ug/kg
	MW026	MWSS026R1	6740.00		ug/kg
	MW026	MWSS026S1	5900.00		ug/kg
	MW027	MWSS027R1	10170.00		ug/kg
	MW028	MWSS028R1	6554.00		ug/kg
	MW029	MWSS029R1	8963.00		ug/kg
	MW030	MWSS030R1	11375.00		ug/kg
	MW031	MWSS031R1	28430.00		ug/kg
	MW032	MWSS032R1	12230.00		ug/kg
	MW034	MWSS034R1	8871.00		ug/kg
	MW035	MWSS035R1	9573.00		ug/kg
	MW037	MWSS037R1	7970.00		ug/kg
	MW039	MWST039R1	24470.00		ug/kg
	MW040	MWST040R1	2154.00		ug/kg
	MW040	MWST040S1	4040.00		ug/kg
	MW042	MWST042R1	4744.00		ug/kg
	MW043	MWST043R1	4660.00		ug/kg
	MW044	MWST044R1	8340.00		ug/kg
	MW045	MWST045R1	6020.00		ug/kg
	MW047	MWST047R1	6840.00		ug/kg
	MW048	MWST048R1	18120.00		ug/kg
	MW049	MWST049R1	2930.00		ug/kg
	MW051	MWST051R1	78300.00		ug/kg
	MW052	MWST052R1	8810.00		ug/kg
	MW054	MWST054R1	20620.00		ug/kg
	MW055	MWSS055R1	11503.00		ug/kg
	TF-20	TF-20	8710.00		ug/kg
	TF-21	TF-21A	7630.00		ug/kg
	TF-22	TF-22A	30050.00		ug/kg
	TF-23	TF-23	12070.00		ug/kg
Subsurface Samples					
	F	F	2613.60		ug/kg
	HC-2	S-1	22680.00		ug/kg
	HC-2	S-2	19350.00		ug/kg
	HC-2	S-3	4655.00		ug/kg
	MW-1	1	12570.00		ug/kg
	MW-1	2	30680.00		ug/kg
	MW024	MWCS024R2A	17700.00		ug/kg
	MW024	MWCS024R3A	2107.00		ug/kg
	MW025	MWCS025R2A	4489.00		ug/kg
	MW025	MWCS025R3A	50.50		ug/kg
	MW025	MWCS025R4A	26.60		ug/kg
	MW026	MWCS026R2A	393.40		ug/kg
	MW026	MWCS026R3A	38.80		ug/kg
	MW026	MWCS026R4A	100.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW027	MWCS027R2A	12830.00		ug/kg
	MW027	MWCS027R3A	11370.00		ug/kg
	MW027	MWCS027R4A	174.50		ug/kg
	MW028	MWCS028R2A	909.00		ug/kg
	MW028	MWCS028R3A	223.40		ug/kg
	MW028	MWCS028R4A	120.00		ug/kg
	MW029	MWCS029R2A	329.00		ug/kg
	MW029	MWCS029R3A	189.20		ug/kg
	MW029	MWCS029R4A	150.00		ug/kg
	MW030	MWCS030R2A	53490.00		ug/kg
	MW030	MWCS030R3A	860.20		ug/kg
	MW030	MWCS030S2A	42850.00		ug/kg
	MW031	MWCS031R2A	30290.00		ug/kg
	MW031	MWCS031R3A	6450.00		ug/kg
	MW031	MWCS031R4A	371.00		ug/kg
	MW034	MWCS034R2A	4431.00		ug/kg
	MW034	MWCS034R3A	124.50		ug/kg
	MW034	MWCS034R4A	10.30		ug/kg
	MW035	MWCS035R2A	4140.00		ug/kg
	MW035	MWCS035R3A	136.10		ug/kg
	MW035	MWCS035R4A	220.00		ug/kg
	MW035	MWCS035S4A	200.00		ug/kg
	MW037	MWCS037R2A	2867.00		ug/kg
	MW037	MWCS037R3A	19.80		ug/kg
	MW037	MWCS037R4A	26.00		ug/kg
	MW040	MWCS040R2A	3758.00		ug/kg
	MW040	MWCS040R3A	253.99		ug/kg
	MW040	MWCS040R4A	9.50		ug/kg
	MW041	MWCT041R2	9406.00		ug/kg
	MW046	MWCT046R2	6160.00		ug/kg
	MW050	MWCT050R2	54410.00		ug/kg
	MW053	MWCT053R2	6460.00		ug/kg
	TF-22	TF-22B	18090.00		ug/kg
	TF-22	TF-22C	328500.00		ug/kg
Bank Samples					
	B-12	B-12	8160.00		ug/kg
	B-13	B-13	3340.00		ug/kg
	B-14	B-14	369200.00		ug/kg
	B-15	B-15	35430.00		ug/kg
	B-16	B-16	25370.00		ug/kg
	B-17	B-17	12360.00		ug/kg
	B-18	B-18	40400.00		ug/kg
	B-19	B-19	42690.00		ug/kg
	MW001	MWSB001R1	4244.00		ug/kg
	MW002	MWSB002R1	3792.00		ug/kg
	MW008	MWSB008R1	4023.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW008	MWSB008S1	6038.00		ug/kg
MW008-SP	MWSB008R1 SP	1434.00		ug/kg
MW009	MWSB009R1	33560.00		ug/kg
MW009-SP	MWSB009R1 SP	17779.00		ug/kg
MW012	MWSB012R1	6213.00		ug/kg
MW013	MWSB013R1	1294.00		ug/kg
MW014	MWSB014R1	2519.00		ug/kg
MW015	MWSB015R1	5075.00		ug/kg
MW015	MWSB015S1	3606.00		ug/kg
MW03a	MWSB03aR1	11841.00		ug/kg
MW03b	MWSB03bR1	8460.00		ug/kg
MW04a	MWSB04aR1	1620.00		ug/kg
MW04b	MWSB04bR1	6625.00		ug/kg
MW04b-SP	MWSB04bR1 SP	2366.00		ug/kg
MW10a	MWSB10aR1	20770.00		ug/kg
MW10b	MWSB10bR1	19084.00		ug/kg
MW10c	MWSB10cR1	21693.00		ug/kg
MW11a	MWSB11aR1	7008.00		ug/kg
MW11a-SP	MWSB11aR1 SP	13574.00		ug/kg
MW11b	MWSB11bR1	6625.30		ug/kg
Chlorinated Aromatic Compounds				
1,2,4-Trichlorobenzene				
Surface Samples				
MW016	MWSS016R1	9.10	U	ug/kg
MW017	MWSS017R1	12.00	U	ug/kg
MW018	MWSS018R1	9.40	U	ug/kg
MW019	MWSS019R1	11.00	U	ug/kg
MW020	MWSS020R1	7.20	U	ug/kg
MW021	MWSS021R1	10.00	UE	ug/kg
MW022	MWSS022R1	8.30	UE	ug/kg
MW023	MWSS023R1	7.60	U	ug/kg
MW024	MWSS024R1	24.00	U	ug/kg
MW025	MWSS025R1	10.00	U	ug/kg
MW026	MWSS026R1	20.00	U	ug/kg
MW026	MWSS026S1	20.00	U	ug/kg
MW027	MWSS027R1	10.00	U	ug/kg
MW028	MWSS028R1	7.10	U	ug/kg
MW029	MWSS029R1	21.00	U	ug/kg
MW030	MWSS030R1	22.00	U	ug/kg
MW031	MWSS031R1	25.00	U	ug/kg
MW032	MWSS032R1	20.00	U	ug/kg
MW034	MWSS034R1	9.10	UE	ug/kg
MW035	MWSS035R1	9.20	U	ug/kg
MW037	MWSS037R1	10.00	UE	ug/kg
MW039	MWST039R1	19.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW040	MWST040R1	7.70	U	ug/kg
	MW040	MWST040S1	8.90	U	ug/kg
	MW042	MWST042R1	23.00	U	ug/kg
	MW043	MWST043R1	20.00	U	ug/kg
	MW044	MWST044R1	12.00	UE	ug/kg
	MW045	MWST045R1	9.80	UE	ug/kg
	MW047	MWST047R1	13.00	UE	ug/kg
	MW048	MWST048R1	23.00	U	ug/kg
	MW049	MWST049R1	7.90	UE	ug/kg
	MW051	MWST051R1	10.00	U	ug/kg
	MW052	MWST052R1	23.00	U	ug/kg
	MW054	MWST054R1	12.00	UE	ug/kg
	MW055	MWSS055R1	21.00	U	ug/kg
	TF-20	TF-20	20.00	U	ug/kg
	TF-21	TF-21A	20.00	U	ug/kg
	TF-22	TF-22A	20.00	U	ug/kg
	TF-23	TF-23	20.00	U	ug/kg
Subsurface Samples					
	MW-1	1	97.00	U	ug/kg
	MW-1	2	100.00	U	ug/kg
	MW024	MWCS024R2A	7.40	U	ug/kg
	MW024	MWCS024R3A	6.80	U	ug/kg
	MW025	MWCS025R2A	7.90	U	ug/kg
	MW025	MWCS025R3A	6.20	U	ug/kg
	MW025	MWCS025R4A	6.20	U	ug/kg
	MW026	MWCS026R2A	7.50	U	ug/kg
	MW026	MWCS026R3A	6.80	U	ug/kg
	MW026	MWCS026R4A	6.70	U	ug/kg
	MW027	MWCS027R2A	23.00	U	ug/kg
	MW027	MWCS027R3A	7.10	U	ug/kg
	MW027	MWCS027R4A	6.90	U	ug/kg
	MW028	MWCS028R2A	6.60	U	ug/kg
	MW028	MWCS028R3A	6.40	U	ug/kg
	MW028	MWCS028R4A	6.80	U	ug/kg
	MW029	MWCS029R2A	6.80	U	ug/kg
	MW029	MWCS029R3A	6.50	U	ug/kg
	MW029	MWCS029R4A	6.70	U	ug/kg
	MW030	MWCS030R2A	8.80	U	ug/kg
	MW030	MWCS030R3A	6.20	U	ug/kg
	MW030	MWCS030S2A	20.00	U	ug/kg
	MW031	MWCS031R2A	7.80	UE	ug/kg
	MW031	MWCS031R3A	7.60	U	ug/kg
	MW031	MWCS031R4A	6.10	U	ug/kg
	MW034	MWCS034R2A	6.80	U	ug/kg
	MW034	MWCS034R3A	6.50	U	ug/kg
	MW034	MWCS034R4A	6.90	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW035	MWCS035R2A	6.60	U	ug/kg
	MW035	MWCS035R3A	6.80	U	ug/kg
	MW035	MWCS035R4A	6.80	U	ug/kg
	MW035	MWCS035S4A	6.70	U	ug/kg
	MW037	MWCS037R2A	6.50	U	ug/kg
	MW037	MWCS037R3A	6.30	U	ug/kg
	MW037	MWCS037R4A	6.90	U	ug/kg
	MW040	MWCS040R2A	6.70	U	ug/kg
	MW040	MWCS040R3A	6.30	U	ug/kg
	MW040	MWCS040R4A	5.70	U	ug/kg
	MW041	MWCT041R2	23.00	U	ug/kg
	MW046	MWCT046R2	9.60	UE	ug/kg
	MW050	MWCT050R2	20.00	U	ug/kg
	MW053	MWCT053R2	22.00	U	ug/kg
	TF-22	TF-22B	20.00	U	ug/kg
	TF-22	TF-22C	20.00	U	ug/kg
Bank Samples					
	B-12	B-12	20.00	U	ug/kg
	B-13	B-13	20.00	U	ug/kg
	B-14	B-14	20.00	U	ug/kg
	B-15	B-15	20.00	U	ug/kg
	B-16	B-16	20.00	U	ug/kg
	B-17	B-17	20.00	U	ug/kg
	B-18	B-18	20.00	U	ug/kg
	B-19	B-19	20.00	U	ug/kg
	MW001	MWSB001R1	8.30	U	ug/kg
	MW002	MWSB002R1	7.90	U	ug/kg
	MW008	MWSB008R1	20.00	U	ug/kg
	MW008	MWSB008S1	25.00	U	ug/kg
	MW008-SP	MWSB008R1 SP	6.90	U	ug/kg
	MW009	MWSB009R1	11.00	UE	ug/kg
	MW009-SP	MWSB009R1 SP	11.00	UE	ug/kg
	MW012	MWSB012R1	8.10	U	ug/kg
	MW013	MWSB013R1	6.60	U	ug/kg
	MW014	MWSB014R1	7.00	U	ug/kg
	MW015	MWSB015R1	9.60	U	ug/kg
	MW03a	MWSB03aR1	9.80	U	ug/kg
	MW03b	MWSB03bR1	8.80	U	ug/kg
	MW04a	MWSB04aR1	20.00	UE	ug/kg
	MW04b	MWSB04bR1	7.80	U	ug/kg
	MW10a	MWSB10aR1	6.80	U	ug/kg
	MW10b	MWSB10bR1	7.40	U	ug/kg
	MW10c	MWSB10cR1	10.00	U	ug/kg
	MW11a	MWSB11aR1	9.80	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	8.80	U	ug/kg
	MW11b	MWSB11bR1	7.10	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	7.50	U	ug/kg
1,2-Dichlorobenzene				
Surface Samples				
MW016	MWSS016R1	3.60	U	ug/kg
MW017	MWSS017R1	4.80	U	ug/kg
MW018	MWSS018R1	3.80	U	ug/kg
MW019	MWSS019R1	4.20	U	ug/kg
MW020	MWSS020R1	2.90	U	ug/kg
MW021	MWSS021R1	4.20	UE	ug/kg
MW022	MWSS022R1	3.30	UE	ug/kg
MW023	MWSS023R1	3.00	U	ug/kg
MW024	MWSS024R1	9.50	U	ug/kg
MW025	MWSS025R1	4.00	U	ug/kg
MW026	MWSS026R1	8.10	U	ug/kg
MW026	MWSS026S1	7.80	U	ug/kg
MW027	MWSS027R1	4.20	U	ug/kg
MW028	MWSS028R1	2.80	U	ug/kg
MW029	MWSS029R1	8.30	U	ug/kg
MW030	MWSS030R1	8.70	U	ug/kg
MW031	MWSS031R1	10.00	U	ug/kg
MW032	MWSS032R1	7.80	U	ug/kg
MW034	MWSS034R1	3.60	UE	ug/kg
MW035	MWSS035R1	3.70	U	ug/kg
MW037	MWSS037R1	4.10	UE	ug/kg
MW039	MWST039R1	7.60	U	ug/kg
MW040	MWST040R1	3.10	U	ug/kg
MW040	MWST040S1	3.60	U	ug/kg
MW042	MWST042R1	9.10	U	ug/kg
MW043	MWST043R1	8.10	U	ug/kg
MW044	MWST044R1	4.90	UE	ug/kg
MW045	MWST045R1	3.90	UE	ug/kg
MW047	MWST047R1	5.30	UE	ug/kg
MW048	MWST048R1	9.10	U	ug/kg
MW049	MWST049R1	3.20	UE	ug/kg
MW051	MWST051R1	4.00	U	ug/kg
MW052	MWST052R1	9.10	U	ug/kg
MW054	MWST054R1	5.00	UE	ug/kg
MW055	MWSS055R1	8.50	U	ug/kg
TF-20	TF-20	99.00	U	ug/kg
TF-21	TF-21A	20.00	U	ug/kg
TF-22	TF-22A	20.00	U	ug/kg
TF-23	TF-23	20.00	U	ug/kg
Subsurface Samples				
MW-1	1	97.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW-1	2	100.00	U	ug/kg
	MW024	MWCS024R2A	2.90	U	ug/kg
	MW024	MWCS024R3A	2.70	U	ug/kg
	MW025	MWCS025R2A	3.20	U	ug/kg
	MW025	MWCS025R3A	2.50	U	ug/kg
	MW025	MWCS025R4A	2.50	U	ug/kg
	MW026	MWCS026R2A	3.00	U	ug/kg
	MW026	MWCS026R3A	2.70	U	ug/kg
	MW026	MWCS026R4A	2.70	U	ug/kg
	MW027	MWCS027R2A	9.10	U	ug/kg
	MW027	MWCS027R3A	2.80	U	ug/kg
	MW027	MWCS027R4A	2.80	U	ug/kg
	MW028	MWCS028R2A	2.60	U	ug/kg
	MW028	MWCS028R3A	2.60	U	ug/kg
	MW028	MWCS028R4A	2.70	U	ug/kg
	MW029	MWCS029R2A	2.70	U	ug/kg
	MW029	MWCS029R3A	2.60	U	ug/kg
	MW029	MWCS029R4A	2.70	U	ug/kg
	MW030	MWCS030R2A	3.50	U	ug/kg
	MW030	MWCS030R3A	2.50	U	ug/kg
	MW030	MWCS030S2A	7.90	U	ug/kg
	MW031	MWCS031R2A	3.10	UE	ug/kg
	MW031	MWCS031R3A	3.00	U	ug/kg
	MW031	MWCS031R4A	2.40	U	ug/kg
	MW034	MWCS034R2A	2.70	U	ug/kg
	MW034	MWCS034R3A	2.60	U	ug/kg
	MW034	MWCS034R4A	2.80	U	ug/kg
	MW035	MWCS035R2A	2.60	U	ug/kg
	MW035	MWCS035R3A	2.70	U	ug/kg
	MW035	MWCS035R4A	2.70	U	ug/kg
	MW035	MWCS035S4A	2.70	U	ug/kg
	MW037	MWCS037R2A	2.60	U	ug/kg
	MW037	MWCS037R3A	2.50	U	ug/kg
	MW037	MWCS037R4A	2.80	U	ug/kg
	MW040	MWCS040R2A	2.70	U	ug/kg
	MW040	MWCS040R3A	2.50	U	ug/kg
	MW040	MWCS040R4A	2.30	U	ug/kg
	MW041	MWCT041R2	9.10	U	ug/kg
	MW046	MWCT046R2	3.80	UE	ug/kg
	MW050	MWCT050R2	8.20	U	ug/kg
	MW053	MWCT053R2	8.60	U	ug/kg
	TF-22	TF-22B	20.00	U	ug/kg
	TF-22	TF-22C	20.00	U	ug/kg
Bank Samples					
	B-12	B-12	20.00	U	ug/kg
	B-13	B-13	20.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
B-14	B-14	20.00	U	ug/kg
B-15	B-15	20.00	U	ug/kg
B-16	B-16	20.00	U	ug/kg
B-17	B-17	20.00	U	ug/kg
B-18	B-18	20.00	U	ug/kg
B-19	B-19	20.00	U	ug/kg
MW001	MWSB001R1	3.30	U	ug/kg
MW002	MWSB002R1	3.20	U	ug/kg
MW008	MWSB008R1	7.90	U	ug/kg
MW008	MWSB008S1	10.00	U	ug/kg
MW008-SP	MWSB008R1 SP	2.80	U	ug/kg
MW009	MWSB009R1	4.20	UE	ug/kg
MW009-SP	MWSB009R1 SP	4.50	UE	ug/kg
MW012	MWSB012R1	3.20	U	ug/kg
MW013	MWSB013R1	2.60	U	ug/kg
MW014	MWSB014R1	2.80	U	ug/kg
MW015	MWSB015R1	3.80	U	ug/kg
MW03a	MWSB03aR1	3.90	U	ug/kg
MW03b	MWSB03bR1	3.50	U	ug/kg
MW04a	MWSB04aR1	8.20	UE	ug/kg
MW04b	MWSB04bR1	3.10	U	ug/kg
MW10a	MWSB10aR1	2.70	U	ug/kg
MW10b	MWSB10bR1	2.90	U	ug/kg
MW10c	MWSB10cR1	4.10	U	ug/kg
MW11a	MWSB11aR1	3.90	U	ug/kg
MW11a-SP	MWSB11aR1 SP	3.50	U	ug/kg
MW11b	MWSB11bR1	2.80	U	ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	3.00	U	ug/kg
1,3-Dichlorobenzene				
Surface Samples				
MW016	MWSS016R1	3.60	U	ug/kg
MW017	MWSS017R1	4.80	U	ug/kg
MW018	MWSS018R1	3.80	U	ug/kg
MW019	MWSS019R1	4.20	U	ug/kg
MW020	MWSS020R1	2.90	U	ug/kg
MW021	MWSS021R1	4.20	UE	ug/kg
MW022	MWSS022R1	3.30	UE	ug/kg
MW023	MWSS023R1	3.00	U	ug/kg
MW024	MWSS024R1	9.50	U	ug/kg
MW025	MWSS025R1	4.00	U	ug/kg
MW026	MWSS026R1	8.10	U	ug/kg
MW026	MWSS026S1	7.80	U	ug/kg
MW027	MWSS027R1	4.20	U	ug/kg
MW028	MWSS028R1	2.80	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW029	MWSS029R1	8.30	U	ug/kg
	MW030	MWSS030R1	8.70	U	ug/kg
	MW031	MWSS031R1	10.00	U	ug/kg
	MW032	MWSS032R1	7.80	U	ug/kg
	MW034	MWSS034R1	3.60	UE	ug/kg
	MW035	MWSS035R1	3.70	U	ug/kg
	MW037	MWSS037R1	4.10	UE	ug/kg
	MW039	MWST039R1	7.60	U	ug/kg
	MW040	MWST040R1	3.10	U	ug/kg
	MW040	MWST040S1	3.60	U	ug/kg
	MW042	MWST042R1	9.10	U	ug/kg
	MW043	MWST043R1	8.10	U	ug/kg
	MW044	MWST044R1	4.90	UE	ug/kg
	MW045	MWST045R1	3.90	UE	ug/kg
	MW047	MWST047R1	5.30	UE	ug/kg
	MW048	MWST048R1	9.10	U	ug/kg
	MW049	MWST049R1	3.20	UE	ug/kg
	MW051	MWST051R1	4.00	U	ug/kg
	MW052	MWST052R1	9.10	U	ug/kg
	MW054	MWST054R1	5.00	UE	ug/kg
	MW055	MWSS055R1	8.50	U	ug/kg
	TF-20	TF-20	99.00	U	ug/kg
	TF-21	TF-21A	99.00	U	ug/kg
	TF-22	TF-22A	95.00	U	ug/kg
	TF-23	TF-23	99.00	U	ug/kg
Subsurface Samples					
	MW-1	1	97.00	U	ug/kg
	MW-1	2	100.00	U	ug/kg
	MW024	MWCS024R2A	2.90	U	ug/kg
	MW024	MWCS024R3A	2.70	U	ug/kg
	MW025	MWCS025R2A	3.20	U	ug/kg
	MW025	MWCS025R3A	2.50	U	ug/kg
	MW025	MWCS025R4A	2.50	U	ug/kg
	MW026	MWCS026R2A	3.00	U	ug/kg
	MW026	MWCS026R3A	2.70	U	ug/kg
	MW026	MWCS026R4A	2.70	U	ug/kg
	MW027	MWCS027R2A	9.10	U	ug/kg
	MW027	MWCS027R3A	2.80	U	ug/kg
	MW027	MWCS027R4A	2.80	U	ug/kg
	MW028	MWCS028R2A	2.60	U	ug/kg
	MW028	MWCS028R3A	2.60	U	ug/kg
	MW028	MWCS028R4A	2.70	U	ug/kg
	MW029	MWCS029R2A	2.70	U	ug/kg
	MW029	MWCS029R3A	2.60	U	ug/kg
	MW029	MWCS029R4A	2.70	U	ug/kg
	MW030	MWCS030R2A	3.50	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW030	MWCS030R3A	2.50	U	ug/kg
	MW030	MWCS030S2A	7.90	U	ug/kg
	MW031	MWCS031R2A	3.10	UE	ug/kg
	MW031	MWCS031R3A	3.00	U	ug/kg
	MW031	MWCS031R4A	2.40	U	ug/kg
	MW034	MWCS034R2A	2.70	U	ug/kg
	MW034	MWCS034R3A	2.60	U	ug/kg
	MW034	MWCS034R4A	2.80	U	ug/kg
	MW035	MWCS035R2A	2.60	U	ug/kg
	MW035	MWCS035R3A	2.70	U	ug/kg
	MW035	MWCS035R4A	2.70	U	ug/kg
	MW035	MWCS035S4A	2.70	U	ug/kg
	MW037	MWCS037R2A	2.60	U	ug/kg
	MW037	MWCS037R3A	2.50	U	ug/kg
	MW037	MWCS037R4A	2.80	U	ug/kg
	MW040	MWCS040R2A	2.70	U	ug/kg
	MW040	MWCS040R3A	2.50	U	ug/kg
	MW040	MWCS040R4A	2.30	U	ug/kg
	MW041	MWCT041R2	9.10	U	ug/kg
	MW046	MWCT046R2	3.80	UE	ug/kg
	MW050	MWCT050R2	8.20	U	ug/kg
	MW053	MWCT053R2	8.60	U	ug/kg
	TF-22	TF-22B	96.00	U	ug/kg
	TF-22	TF-22C	98.00	U	ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	94.00	U	ug/kg
	B-14	B-14	92.00	U	ug/kg
	B-15	B-15	88.00	U	ug/kg
	B-16	B-16	93.00	U	ug/kg
	B-17	B-17	92.00	U	ug/kg
	B-18	B-18	78.00	U	ug/kg
	B-19	B-19	89.00	U	ug/kg
	MW001	MWSB001R1	3.30	U	ug/kg
	MW002	MWSB002R1	3.20	U	ug/kg
	MW008	MWSB008R1	7.90	U	ug/kg
	MW008	MWSB008S1	10.00	U	ug/kg
	MW008-SP	MWSB008R1 SP	2.80	U	ug/kg
	MW009	MWSB009R1	4.20	UE	ug/kg
	MW009-SP	MWSB009R1 SP	4.50	UE	ug/kg
	MW012	MWSB012R1	3.20	U	ug/kg
	MW013	MWSB013R1	2.60	U	ug/kg
	MW014	MWSB014R1	2.80	U	ug/kg
	MW015	MWSB015R1	3.80	U	ug/kg
	MW03a	MWSB03aR1	3.90	U	ug/kg
	MW03b	MWSB03bR1	3.50	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW04a	MWSB04aR1	8.20	UE	ug/kg
MW04b	MWSB04bR1	3.10	U	ug/kg
MW10a	MWSB10aR1	2.70	U	ug/kg
MW10b	MWSB10bR1	2.90	U	ug/kg
MW10c	MWSB10cR1	4.10	U	ug/kg
MW11a	MWSB11aR1	3.90	U	ug/kg
MW11a-SP	MWSB11aR1 SP	3.50	U	ug/kg
MW11b	MWSB11bR1	2.80	U	ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	3.00	U	ug/kg
1,4-Dichlorobenzene				
Surface Samples				
MW016	MWSS016R1	3.60	U	ug/kg
MW017	MWSS017R1	4.80	U	ug/kg
MW018	MWSS018R1	3.80	U	ug/kg
MW019	MWSS019R1	4.20	U	ug/kg
MW020	MWSS020R1	2.90	U	ug/kg
MW021	MWSS021R1	4.20	UE	ug/kg
MW022	MWSS022R1	3.30	UE	ug/kg
MW023	MWSS023R1	3.00	U	ug/kg
MW024	MWSS024R1	9.50	U	ug/kg
MW025	MWSS025R1	4.00	U	ug/kg
MW026	MWSS026R1	8.10	U	ug/kg
MW026	MWSS026S1	7.80	U	ug/kg
MW027	MWSS027R1	4.20	U	ug/kg
MW028	MWSS028R1	2.80	U	ug/kg
MW029	MWSS029R1	8.30	U	ug/kg
MW030	MWSS030R1	8.70	U	ug/kg
MW031	MWSS031R1	10.00	U	ug/kg
MW032	MWSS032R1	7.80	U	ug/kg
MW034	MWSS034R1	3.60	UE	ug/kg
MW035	MWSS035R1	3.70	U	ug/kg
MW037	MWSS037R1	4.10	UE	ug/kg
MW039	MWST039R1	7.60	U	ug/kg
MW040	MWST040R1	3.10	U	ug/kg
MW040	MWST040S1	3.60	U	ug/kg
MW042	MWST042R1	9.10	U	ug/kg
MW043	MWST043R1	8.10	U	ug/kg
MW044	MWST044R1	4.90	UE	ug/kg
MW045	MWST045R1	3.90	UE	ug/kg
MW047	MWST047R1	5.30	UE	ug/kg
MW048	MWST048R1	9.10	U	ug/kg
MW049	MWST049R1	3.20	UE	ug/kg
MW051	MWST051R1	4.00	U	ug/kg
MW052	MWST052R1	9.10	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW054	MWST054R1	5.00	UE	ug/kg
	MW055	MWSS055R1	8.50	U	ug/kg
	TF-20	TF-20	99.00	U	ug/kg
	TF-21	TF-21A	99.00	U	ug/kg
	TF-22	TF-22A	95.00	U	ug/kg
	TF-23	TF-23	99.00	U	ug/kg
Subsurface Samples					
	MW-1	1	97.00	U	ug/kg
	MW-1	2	100.00	U	ug/kg
	MW024	MWCS024R2A	2.90	U	ug/kg
	MW024	MWCS024R3A	2.70	U	ug/kg
	MW025	MWCS025R2A	3.20	U	ug/kg
	MW025	MWCS025R3A	2.50	U	ug/kg
	MW025	MWCS025R4A	2.50	U	ug/kg
	MW026	MWCS026R2A	3.00	U	ug/kg
	MW026	MWCS026R3A	2.70	U	ug/kg
	MW026	MWCS026R4A	2.70	U	ug/kg
	MW027	MWCS027R2A	9.10	U	ug/kg
	MW027	MWCS027R3A	2.80	U	ug/kg
	MW027	MWCS027R4A	2.80	U	ug/kg
	MW028	MWCS028R2A	2.60	U	ug/kg
	MW028	MWCS028R3A	2.60	U	ug/kg
	MW028	MWCS028R4A	2.70	U	ug/kg
	MW029	MWCS029R2A	2.70	U	ug/kg
	MW029	MWCS029R3A	2.60	U	ug/kg
	MW029	MWCS029R4A	2.70	U	ug/kg
	MW030	MWCS030R2A	3.50	U	ug/kg
	MW030	MWCS030R3A	2.50	U	ug/kg
	MW030	MWCS030S2A	7.90	U	ug/kg
	MW031	MWCS031R2A	3.10	UE	ug/kg
	MW031	MWCS031R3A	3.00	U	ug/kg
	MW031	MWCS031R4A	2.40	U	ug/kg
	MW034	MWCS034R2A	2.70	U	ug/kg
	MW034	MWCS034R3A	2.60	U	ug/kg
	MW034	MWCS034R4A	2.80	U	ug/kg
	MW035	MWCS035R2A	2.60	U	ug/kg
	MW035	MWCS035R3A	2.70	U	ug/kg
	MW035	MWCS035R4A	2.70	U	ug/kg
	MW035	MWCS035S4A	2.70	U	ug/kg
	MW037	MWCS037R2A	2.60	U	ug/kg
	MW037	MWCS037R3A	2.50	U	ug/kg
	MW037	MWCS037R4A	2.80	U	ug/kg
	MW040	MWCS040R2A	2.70	U	ug/kg
	MW040	MWCS040R3A	2.50	U	ug/kg
	MW040	MWCS040R4A	2.30	U	ug/kg
	MW041	MWCT041R2	9.10	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW046	MWCT046R2	3.80	UE	ug/kg
	MW050	MWCT050R2	8.20	U	ug/kg
	MW053	MWCT053R2	8.60	U	ug/kg
	TF-22	TF-22B	96.00	U	ug/kg
	TF-22	TF-22C	98.00	U	ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	94.00	U	ug/kg
	B-14	B-14	92.00	U	ug/kg
	B-15	B-15	88.00	U	ug/kg
	B-16	B-16	93.00	U	ug/kg
	B-17	B-17	92.00	U	ug/kg
	B-18	B-18	78.00	U	ug/kg
	B-19	B-19	89.00	U	ug/kg
	MW001	MWSB001R1	3.30	U	ug/kg
	MW002	MWSB002R1	3.20	U	ug/kg
	MW008	MWSB008R1	7.90	U	ug/kg
	MW008	MWSB008S1	10.00	U	ug/kg
	MW008-SP	MWSB008R1 SP	2.80	U	ug/kg
	MW009	MWSB009R1	4.20	UE	ug/kg
	MW009-SP	MWSB009R1 SP	4.50	UE	ug/kg
	MW012	MWSB012R1	3.20	U	ug/kg
	MW013	MWSB013R1	2.60	U	ug/kg
	MW014	MWSB014R1	2.80	U	ug/kg
	MW015	MWSB015R1	3.80	U	ug/kg
	MW03a	MWSB03aR1	3.90	U	ug/kg
	MW03b	MWSB03bR1	3.50	U	ug/kg
	MW04a	MWSB04aR1	8.20	UE	ug/kg
	MW04b	MWSB04bR1	3.10	U	ug/kg
	MW10a	MWSB10aR1	2.70	U	ug/kg
	MW10b	MWSB10bR1	2.90	U	ug/kg
	MW10c	MWSB10cR1	4.10	U	ug/kg
	MW11a	MWSB11aR1	3.90	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	3.50	U	ug/kg
	MW11b	MWSB11bR1	2.80	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	3.00	U	ug/kg
Hexachlorobenzene					
Surface Samples					
	MW016	MWSS016R1	3.00	U	ug/kg
	MW017	MWSS017R1	4.00	U	ug/kg
	MW018	MWSS018R1	3.10	U	ug/kg
	MW019	MWSS019R1	3.50	U	ug/kg
	MW020	MWSS020R1	2.40	U	ug/kg
	MW021	MWSS021R1	3.50	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW022	MWSS022R1	2.80	U	ug/kg
MW023	MWSS023R1	2.50	U	ug/kg
MW024	MWSS024R1	4.00	U	ug/kg
MW025	MWSS025R1	3.30	U	ug/kg
MW026	MWSS026R1	2.70	U	ug/kg
MW026	MWSS026S1	2.60	U	ug/kg
MW027	MWSS027R1	3.50	U	ug/kg
MW028	MWSS028R1	2.40	U	ug/kg
MW029	MWSS029R1	3.50	U	ug/kg
MW030	MWSS030R1	3.60	U	ug/kg
MW031	MWSS031R1	4.20	U	ug/kg
MW032	MWSS032R1	2.60	U	ug/kg
MW034	MWSS034R1	3.00	U	ug/kg
MW035	MWSS035R1	3.10	U	ug/kg
MW037	MWSS037R1	3.40	U	ug/kg
MW039	MWST039R1	2.50	U	ug/kg
MW040	MWST040R1	2.60	U	ug/kg
MW040	MWST040S1	3.00	U	ug/kg
MW042	MWST042R1	3.00	U	ug/kg
MW043	MWST043R1	2.70	U	ug/kg
MW044	MWST044R1	4.10	U	ug/kg
MW045	MWST045R1	3.30	U	ug/kg
MW047	MWST047R1	4.40	U	ug/kg
MW048	MWST048R1	3.00	U	ug/kg
MW049	MWST049R1	2.60	U	ug/kg
MW051	MWST051R1	3.30	U	ug/kg
MW052	MWST052R1	3.00	U	ug/kg
MW054	MWST054R1	4.20	U	ug/kg
MW055	MWSS055R1	3.50	U	ug/kg
TF-20	TF-20	8.00	U	ug/kg
TF-21	TF-21A	8.00	U	ug/kg
TF-22	TF-22A	8.00	U	ug/kg
TF-23	TF-23	8.00	U	ug/kg
Subsurface Samples				
MW-1	1	97.00	U	ug/kg
MW-1	2	100.00	U	ug/kg
MW024	MWCS024R2A	2.40	U	ug/kg
MW024	MWCS024R3A	2.20	U	ug/kg
MW025	MWCS025R2A	2.60	U	ug/kg
MW025	MWCS025R3A	2.10	U	ug/kg
MW025	MWCS025R4A	2.10	U	ug/kg
MW026	MWCS026R2A	2.50	U	ug/kg
MW026	MWCS026R3A	2.20	U	ug/kg
MW026	MWCS026R4A	2.20	U	ug/kg
MW027	MWCS027R2A	3.00	U	ug/kg
MW027	MWCS027R3A	2.40	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW027	MWCS027R4A	2.30	U	ug/kg
	MW028	MWCS028R2A	2.20	U	ug/kg
	MW028	MWCS028R3A	2.10	U	ug/kg
	MW028	MWCS028R4A	2.30	U	ug/kg
	MW029	MWCS029R2A	2.20	U	ug/kg
	MW029	MWCS029R3A	2.20	U	ug/kg
	MW029	MWCS029R4A	2.20	U	ug/kg
	MW030	MWCS030R2A	2.90	U	ug/kg
	MW030	MWCS030R3A	2.00	U	ug/kg
	MW030	MWCS030S2A	2.60	U	ug/kg
	MW031	MWCS031R2A	2.60	U	ug/kg
	MW031	MWCS031R3A	2.50	U	ug/kg
	MW031	MWCS031R4A	2.00	U	ug/kg
	MW034	MWCS034R2A	2.30	U	ug/kg
	MW034	MWCS034R3A	2.20	U	ug/kg
	MW034	MWCS034R4A	2.30	U	ug/kg
	MW035	MWCS035R2A	2.20	U	ug/kg
	MW035	MWCS035R3A	2.30	U	ug/kg
	MW035	MWCS035R4A	2.30	U	ug/kg
	MW035	MWCS035S4A	2.20	U	ug/kg
	MW037	MWCS037R2A	2.20	U	ug/kg
	MW037	MWCS037R3A	2.10	U	ug/kg
	MW037	MWCS037R4A	2.30	U	ug/kg
	MW040	MWCS040R2A	2.20	U	ug/kg
	MW040	MWCS040R3A	2.10	U	ug/kg
	MW040	MWCS040R4A	1.90	U	ug/kg
	MW041	MWCT041R2	3.00	U	ug/kg
	MW046	MWCT046R2	3.20	U	ug/kg
	MW050	MWCT050R2	2.70	U	ug/kg
	MW053	MWCT053R2	2.90	U	ug/kg
	TF-22	TF-22B	8.00	U	ug/kg
	TF-22	TF-22C	8.00	U	ug/kg
Bank Samples					
	B-12	B-12	8.00	U	ug/kg
	B-13	B-13	8.00	U	ug/kg
	B-14	B-14	8.00	U	ug/kg
	B-15	B-15	8.00	U	ug/kg
	B-16	B-16	8.00	U	ug/kg
	B-17	B-17	8.00	U	ug/kg
	B-18	B-18	8.00	U	ug/kg
	B-19	B-19	8.00	U	ug/kg
	MW001	MWSB001R1	2.80	U	ug/kg
	MW002	MWSB002R1	2.60	U	ug/kg
	MW008	MWSB008R1	2.60	U	ug/kg
	MW008	MWSB008S1	3.30	U	ug/kg
	MW008-SP	MWSB008R1 SP	2.30	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW009	MWSB009R1	3.50	U	ug/kg
MW009-SP	MWSB009R1 SP	3.80	U	ug/kg
MW012	MWSB012R1	2.70	U	ug/kg
MW013	MWSB013R1	2.20	U	ug/kg
MW014	MWSB014R1	2.30	U	ug/kg
MW015	MWSB015R1	3.20	U	ug/kg
MW015	MWSB015S1	2.40	U	ug/kg
MW03a	MWSB03aR1	3.30	U	ug/kg
MW03b	MWSB03bR1	2.90	U	ug/kg
MW04a	MWSB04aR1	2.70	U	ug/kg
MW04b	MWSB04bR1	2.60	U	ug/kg
MW04b-SP	MWSB04bR1 SP	2.20	U	ug/kg
MW10a	MWSB10aR1	2.30	U	ug/kg
MW10b	MWSB10bR1	2.40	U	ug/kg
MW10c	MWSB10cR1	3.40	U	ug/kg
MW11a	MWSB11aR1	3.30	U	ug/kg
MW11a-SP	MWSB11aR1 SP	2.90	U	ug/kg
MW11b	MWSB11bR1	2.40	U	ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	2.50	U	ug/kg
Volatile Organic Compounds				
Ethylbenzene				
Surface Samples				
MW016	MWSS016R1	3.60	U	ug/kg
MW017	MWSS017R1	4.80	U	ug/kg
MW018	MWSS018R1	3.80	U	ug/kg
MW019	MWSS019R1	4.20	U	ug/kg
MW020	MWSS020R1	2.90	U	ug/kg
MW021	MWSS021R1	4.20	U	ug/kg
MW022	MWSS022R1	3.30	U	ug/kg
MW023	MWSS023R1	3.00	U	ug/kg
MW024	MWSS024R1	9.50	U	ug/kg
MW025	MWSS025R1	4.00	U	ug/kg
MW026	MWSS026R1	8.10	U	ug/kg
MW026	MWSS026S1	7.80	U	ug/kg
MW027	MWSS027R1	4.20	U	ug/kg
MW028	MWSS028R1	2.80	U	ug/kg
MW029	MWSS029R1	8.30	U	ug/kg
MW030	MWSS030R1	8.70	U	ug/kg
MW031	MWSS031R1	10.00	U	ug/kg
MW032	MWSS032R1	7.80	U	ug/kg
MW034	MWSS034R1	3.60	UE	ug/kg
MW035	MWSS035R1	3.70	U	ug/kg
MW037	MWSS037R1	4.10	U	ug/kg
MW039	MWST039R1	7.60	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW040	MWST040R1	3.10	U	ug/kg
	MW040	MWST040S1	3.60	U	ug/kg
	MW042	MWST042R1	9.10	U	ug/kg
	MW043	MWST043R1	8.10	U	ug/kg
	MW044	MWST044R1	4.90	U	ug/kg
	MW045	MWST045R1	3.90	U	ug/kg
	MW047	MWST047R1	5.30	U	ug/kg
	MW048	MWST048R1	9.10	U	ug/kg
	MW049	MWST049R1	3.20	U	ug/kg
	MW051	MWST051R1	4.00	U	ug/kg
	MW052	MWST052R1	9.10	U	ug/kg
	MW054	MWST054R1	5.00	U	ug/kg
	MW055	MWSS055R1	8.50	U	ug/kg
	TF-20	TF-20	10.00	U	ug/kg
	TF-21	TF-21A	10.00	U	ug/kg
	TF-22	TF-22A	10.00	U	ug/kg
	TF-23	TF-23	10.00	U	ug/kg
Subsurface Samples					
	MW024	MWCS024R2A	2.90	U	ug/kg
	MW024	MWCS024R3A	2.70	U	ug/kg
	MW025	MWCS025R2A	3.20	U	ug/kg
	MW025	MWCS025R3A	2.50	U	ug/kg
	MW025	MWCS025R4A	2.50	U	ug/kg
	MW026	MWCS026R2A	3.00	U	ug/kg
	MW026	MWCS026R3A	2.70	U	ug/kg
	MW026	MWCS026R4A	2.70	U	ug/kg
	MW027	MWCS027R2A	9.10	U	ug/kg
	MW027	MWCS027R3A	2.80	U	ug/kg
	MW027	MWCS027R4A	2.80	U	ug/kg
	MW028	MWCS028R2A	2.60	U	ug/kg
	MW028	MWCS028R3A	2.60	U	ug/kg
	MW028	MWCS028R4A	2.70	U	ug/kg
	MW029	MWCS029R2A	2.70	U	ug/kg
	MW029	MWCS029R3A	2.60	U	ug/kg
	MW029	MWCS029R4A	2.70	U	ug/kg
	MW030	MWCS030R2A	3.50	U	ug/kg
	MW030	MWCS030R3A	2.50	U	ug/kg
	MW030	MWCS030S2A	7.90	U	ug/kg
	MW031	MWCS031R2A	3.10	U	ug/kg
	MW031	MWCS031R3A	3.00	U	ug/kg
	MW031	MWCS031R4A	2.40	U	ug/kg
	MW034	MWCS034R2A	2.70	U	ug/kg
	MW034	MWCS034R3A	2.60	U	ug/kg
	MW034	MWCS034R4A	2.80	U	ug/kg
	MW035	MWCS035R2A	2.60	U	ug/kg
	MW035	MWCS035R3A	2.70	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW035	MWCS035R4A	2.70	U	ug/kg
	MW035	MWCS035S4A	2.70	U	ug/kg
	MW037	MWCS037R2A	2.60	U	ug/kg
	MW037	MWCS037R3A	2.50	U	ug/kg
	MW037	MWCS037R4A	2.80	U	ug/kg
	MW040	MWCS040R2A	2.70	U	ug/kg
	MW040	MWCS040R3A	2.50	U	ug/kg
	MW040	MWCS040R4A	2.30	U	ug/kg
	MW041	MWCT041R2	9.10	U	ug/kg
	MW046	MWCT046R2	3.80	U	ug/kg
	MW050	MWCT050R2	8.20	U	ug/kg
	MW053	MWCT053R2	8.60	U	ug/kg
	TF-22	TF-22B	10.00	U	ug/kg
	TF-22	TF-22C	10.00	U	ug/kg
Bank Samples					
	B-12	B-12	10.00	U	ug/kg
	B-13	B-13	10.00	U	ug/kg
	B-14	B-14	10.00	U	ug/kg
	B-15	B-15	10.00	U	ug/kg
	B-16	B-16	10.00	U	ug/kg
	B-17	B-17	10.00	U	ug/kg
	B-18	B-18	10.00	U	ug/kg
	B-19	B-19	10.00	U	ug/kg
	MW001	MWSB001R1	3.30	U	ug/kg
	MW002	MWSB002R1	3.20	U	ug/kg
	MW008	MWSB008R1	7.90	U	ug/kg
	MW008	MWSB008S1	10.00	U	ug/kg
	MW008-SP	MWSB008R1 SP	2.80	UE	ug/kg
	MW009	MWSB009R1	4.20	U	ug/kg
	MW009-SP	MWSB009R1 SP	4.50	U	ug/kg
	MW012	MWSB012R1	3.20	U	ug/kg
	MW013	MWSB013R1	2.60	U	ug/kg
	MW014	MWSB014R1	2.80	U	ug/kg
	MW015	MWSB015R1	3.80	U	ug/kg
	MW03a	MWSB03aR1	3.90	U	ug/kg
	MW03b	MWSB03bR1	3.50	U	ug/kg
	MW04a	MWSB04aR1	8.20	U	ug/kg
	MW04b	MWSB04bR1	3.10	U	ug/kg
	MW10a	MWSB10aR1	2.70	U	ug/kg
	MW10b	MWSB10bR1	2.90	U	ug/kg
	MW10c	MWSB10cR1	4.10	U	ug/kg
	MW11a	MWSB11aR1	3.90	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	3.50	U	ug/kg
	MW11b	MWSB11bR1	2.80	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	3.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
m,p-Xylene				
Surface Samples				
MW016	MWSS016R1	3.60	U	ug/kg
MW017	MWSS017R1	4.80	U	ug/kg
MW018	MWSS018R1	3.80	U	ug/kg
MW019	MWSS019R1	4.20	U	ug/kg
MW020	MWSS020R1	2.90	U	ug/kg
MW021	MWSS021R1	4.20	U	ug/kg
MW022	MWSS022R1	3.30	U	ug/kg
MW023	MWSS023R1	3.00	U	ug/kg
MW024	MWSS024R1	9.50	U	ug/kg
MW025	MWSS025R1	4.00	U	ug/kg
MW026	MWSS026R1	8.10	U	ug/kg
MW026	MWSS026S1	7.80	U	ug/kg
MW027	MWSS027R1	4.20	U	ug/kg
MW028	MWSS028R1	2.80	U	ug/kg
MW029	MWSS029R1	8.30	U	ug/kg
MW030	MWSS030R1	8.70	U	ug/kg
MW031	MWSS031R1	10.00	U	ug/kg
MW032	MWSS032R1	7.80	U	ug/kg
MW034	MWSS034R1	3.60	UE	ug/kg
MW035	MWSS035R1	3.70	U	ug/kg
MW037	MWSS037R1	4.10	U	ug/kg
MW039	MWST039R1	7.60	U	ug/kg
MW040	MWST040R1	3.10	U	ug/kg
MW040	MWST040S1	3.60	U	ug/kg
MW042	MWST042R1	9.10	U	ug/kg
MW043	MWST043R1	8.10	U	ug/kg
MW044	MWST044R1	4.90	U	ug/kg
MW045	MWST045R1	3.90	U	ug/kg
MW047	MWST047R1	5.30	U	ug/kg
MW048	MWST048R1	9.10	U	ug/kg
MW049	MWST049R1	3.20	U	ug/kg
MW051	MWST051R1	4.00	U	ug/kg
MW052	MWST052R1	9.10	U	ug/kg
MW054	MWST054R1	5.00	U	ug/kg
MW055	MWSS055R1	8.50	U	ug/kg
Subsurface Samples				
MW024	MWCS024R2A	2.90	U	ug/kg
MW024	MWCS024R3A	2.70	U	ug/kg
MW025	MWCS025R2A	3.20	U	ug/kg
MW025	MWCS025R3A	2.50	U	ug/kg
MW025	MWCS025R4A	2.50	U	ug/kg
MW026	MWCS026R2A	3.00	U	ug/kg
MW026	MWCS026R3A	2.70	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW026	MWCS026R4A	2.70	U	ug/kg
	MW027	MWCS027R2A	9.10	U	ug/kg
	MW027	MWCS027R3A	2.80	U	ug/kg
	MW027	MWCS027R4A	2.80	U	ug/kg
	MW028	MWCS028R2A	2.60	U	ug/kg
	MW028	MWCS028R3A	2.60	U	ug/kg
	MW028	MWCS028R4A	2.70	U	ug/kg
	MW029	MWCS029R2A	2.70	U	ug/kg
	MW029	MWCS029R3A	2.60	U	ug/kg
	MW029	MWCS029R4A	2.70	U	ug/kg
	MW030	MWCS030R2A	3.50	U	ug/kg
	MW030	MWCS030R3A	2.50	U	ug/kg
	MW030	MWCS030S2A	7.90	U	ug/kg
	MW031	MWCS031R2A	3.10	U	ug/kg
	MW031	MWCS031R3A	3.00	U	ug/kg
	MW031	MWCS031R4A	2.40	U	ug/kg
	MW034	MWCS034R2A	2.70	U	ug/kg
	MW034	MWCS034R3A	2.60	U	ug/kg
	MW034	MWCS034R4A	2.80	U	ug/kg
	MW035	MWCS035R2A	2.60	U	ug/kg
	MW035	MWCS035R3A	2.70	U	ug/kg
	MW035	MWCS035R4A	2.70	U	ug/kg
	MW035	MWCS035S4A	2.70	U	ug/kg
	MW037	MWCS037R2A	2.60	U	ug/kg
	MW037	MWCS037R3A	2.50	U	ug/kg
	MW037	MWCS037R4A	2.80	U	ug/kg
	MW040	MWCS040R2A	2.70	U	ug/kg
	MW040	MWCS040R3A	2.50	U	ug/kg
	MW040	MWCS040R4A	2.30	U	ug/kg
	MW041	MWCT041R2	9.10	U	ug/kg
	MW046	MWCT046R2	3.80	U	ug/kg
	MW050	MWCT050R2	8.20	U	ug/kg
	MW053	MWCT053R2	8.60	U	ug/kg
Bank Samples					
	MW001	MWSB001R1	3.30	U	ug/kg
	MW002	MWSB002R1	3.20	U	ug/kg
	MW008	MWSB008R1	7.90	U	ug/kg
	MW008	MWSB008S1	10.00	U	ug/kg
	MW008-SP	MWSB008R1 SP	2.80	UE	ug/kg
	MW009	MWSB009R1	4.20	U	ug/kg
	MW009-SP	MWSB009R1 SP	4.50	U	ug/kg
	MW012	MWSB012R1	3.20	U	ug/kg
	MW013	MWSB013R1	2.60	U	ug/kg
	MW014	MWSB014R1	2.80	U	ug/kg
	MW015	MWSB015R1	3.80	U	ug/kg
	MW03a	MWSB03aR1	3.90	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW03b	MWSB03bR1	3.50	U	ug/kg
	MW04a	MWSB04aR1	8.20	U	ug/kg
	MW04b	MWSB04bR1	3.10	U	ug/kg
	MW10a	MWSB10aR1	3.10		ug/kg
	MW10b	MWSB10bR1	2.90	U	ug/kg
	MW10c	MWSB10cR1	4.10	U	ug/kg
	MW11a	MWSB11aR1	3.90	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	3.50	U	ug/kg
	MW11b	MWSB11bR1	2.80	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	3.00	U	ug/kg
o-Xylene					
Surface Samples					
	MW016	MWSS016R1	3.60	U	ug/kg
	MW017	MWSS017R1	4.80	U	ug/kg
	MW018	MWSS018R1	3.80	U	ug/kg
	MW019	MWSS019R1	4.20	U	ug/kg
	MW020	MWSS020R1	2.90	U	ug/kg
	MW021	MWSS021R1	4.20	U	ug/kg
	MW022	MWSS022R1	3.30	U	ug/kg
	MW023	MWSS023R1	3.00	U	ug/kg
	MW024	MWSS024R1	9.50	U	ug/kg
	MW025	MWSS025R1	4.00	U	ug/kg
	MW026	MWSS026R1	8.10	U	ug/kg
	MW026	MWSS026S1	7.80	U	ug/kg
	MW027	MWSS027R1	4.20	U	ug/kg
	MW028	MWSS028R1	2.80	U	ug/kg
	MW029	MWSS029R1	8.30	U	ug/kg
	MW030	MWSS030R1	8.70	U	ug/kg
	MW031	MWSS031R1	10.00	U	ug/kg
	MW032	MWSS032R1	7.80	U	ug/kg
	MW034	MWSS034R1	3.60	UE	ug/kg
	MW035	MWSS035R1	3.70	U	ug/kg
	MW037	MWSS037R1	4.10	U	ug/kg
	MW039	MWST039R1	7.60	U	ug/kg
	MW040	MWST040R1	3.10	U	ug/kg
	MW040	MWST040S1	3.60	U	ug/kg
	MW042	MWST042R1	9.10	U	ug/kg
	MW043	MWST043R1	8.10	U	ug/kg
	MW044	MWST044R1	4.90	U	ug/kg
	MW045	MWST045R1	3.90	U	ug/kg
	MW047	MWST047R1	5.30	U	ug/kg
	MW048	MWST048R1	9.10	U	ug/kg
	MW049	MWST049R1	3.20	U	ug/kg
	MW051	MWST051R1	4.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW052	MWST052R1	9.10	U	ug/kg
MW054	MWST054R1	5.00	U	ug/kg
MW055	MWSS055R1	8.50	U	ug/kg
Subsurface Samples				
MW024	MWCS024R2A	2.90	U	ug/kg
MW024	MWCS024R3A	2.70	U	ug/kg
MW025	MWCS025R2A	3.20	U	ug/kg
MW025	MWCS025R3A	2.50	U	ug/kg
MW025	MWCS025R4A	2.50	U	ug/kg
MW026	MWCS026R2A	3.00	U	ug/kg
MW026	MWCS026R3A	2.70	U	ug/kg
MW026	MWCS026R4A	2.70	U	ug/kg
MW027	MWCS027R2A	9.10	U	ug/kg
MW027	MWCS027R3A	2.80	U	ug/kg
MW027	MWCS027R4A	2.80	U	ug/kg
MW028	MWCS028R2A	2.60	U	ug/kg
MW028	MWCS028R3A	2.60	U	ug/kg
MW028	MWCS028R4A	2.70	U	ug/kg
MW029	MWCS029R2A	2.70	U	ug/kg
MW029	MWCS029R3A	2.60	U	ug/kg
MW029	MWCS029R4A	2.70	U	ug/kg
MW030	MWCS030R2A	3.50	U	ug/kg
MW030	MWCS030R3A	2.50	U	ug/kg
MW030	MWCS030S2A	7.90	U	ug/kg
MW031	MWCS031R2A	3.10	U	ug/kg
MW031	MWCS031R3A	3.00	U	ug/kg
MW031	MWCS031R4A	2.40	U	ug/kg
MW034	MWCS034R2A	2.70	U	ug/kg
MW034	MWCS034R3A	2.60	U	ug/kg
MW034	MWCS034R4A	2.80	U	ug/kg
MW035	MWCS035R2A	2.60	U	ug/kg
MW035	MWCS035R3A	2.70	U	ug/kg
MW035	MWCS035R4A	2.70	U	ug/kg
MW035	MWCS035S4A	2.70	U	ug/kg
MW037	MWCS037R2A	2.60	U	ug/kg
MW037	MWCS037R3A	2.50	U	ug/kg
MW037	MWCS037R4A	2.80	U	ug/kg
MW040	MWCS040R2A	2.70	U	ug/kg
MW040	MWCS040R3A	2.50	U	ug/kg
MW040	MWCS040R4A	2.30	U	ug/kg
MW041	MWCT041R2	9.10	U	ug/kg
MW046	MWCT046R2	3.80	U	ug/kg
MW050	MWCT050R2	8.20	U	ug/kg
MW053	MWCT053R2	8.60	U	ug/kg
Bank Samples				
MW001	MWSB001R1	3.30	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW002	MWSB002R1	3.20	U	ug/kg
MW008	MWSB008R1	7.90	U	ug/kg
MW008	MWSB008S1	10.00	U	ug/kg
MW008-SP	MWSB008R1 SP	2.80	UE	ug/kg
MW009	MWSB009R1	4.20	U	ug/kg
MW009-SP	MWSB009R1 SP	4.50	U	ug/kg
MW012	MWSB012R1	3.20	U	ug/kg
MW013	MWSB013R1	2.60	U	ug/kg
MW014	MWSB014R1	2.80	U	ug/kg
MW015	MWSB015R1	3.80	U	ug/kg
MW03a	MWSB03aR1	3.90	U	ug/kg
MW03b	MWSB03bR1	3.50	U	ug/kg
MW04a	MWSB04aR1	8.20	U	ug/kg
MW04b	MWSB04bR1	3.10	U	ug/kg
MW10a	MWSB10aR1	2.70	U	ug/kg
MW10b	MWSB10bR1	2.90	U	ug/kg
MW10c	MWSB10cR1	4.10	U	ug/kg
MW11a	MWSB11aR1	3.90	U	ug/kg
MW11a-SP	MWSB11aR1 SP	3.50	U	ug/kg
MW11b	MWSB11bR1	2.80	U	ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	3.00	U	ug/kg
Tetrachloroethene				
Surface Samples				
MW016	MWSS016R1	3.60	U	ug/kg
MW017	MWSS017R1	4.80	U	ug/kg
MW018	MWSS018R1	3.80	U	ug/kg
MW019	MWSS019R1	4.20	U	ug/kg
MW020	MWSS020R1	2.90	U	ug/kg
MW021	MWSS021R1	4.20	U	ug/kg
MW022	MWSS022R1	3.30	U	ug/kg
MW023	MWSS023R1	3.00	U	ug/kg
MW024	MWSS024R1	9.50	U	ug/kg
MW025	MWSS025R1	4.00	U	ug/kg
MW026	MWSS026R1	8.10	U	ug/kg
MW026	MWSS026S1	7.80	U	ug/kg
MW027	MWSS027R1	4.20	U	ug/kg
MW028	MWSS028R1	2.80	U	ug/kg
MW029	MWSS029R1	8.30	U	ug/kg
MW030	MWSS030R1	8.70	U	ug/kg
MW031	MWSS031R1	10.00	U	ug/kg
MW032	MWSS032R1	7.80	U	ug/kg
MW034	MWSS034R1	3.60	UE	ug/kg
MW035	MWSS035R1	3.70	U	ug/kg
MW037	MWSS037R1	4.10	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW039	MWST039R1	7.60	U	ug/kg
	MW040	MWST040R1	3.10	U	ug/kg
	MW040	MWST040S1	3.60	U	ug/kg
	MW042	MWST042R1	9.10	U	ug/kg
	MW043	MWST043R1	8.10	U	ug/kg
	MW044	MWST044R1	4.90	U	ug/kg
	MW045	MWST045R1	3.90	U	ug/kg
	MW047	MWST047R1	5.30	U	ug/kg
	MW048	MWST048R1	9.10	U	ug/kg
	MW049	MWST049R1	3.20	U	ug/kg
	MW051	MWST051R1	4.00	U	ug/kg
	MW052	MWST052R1	9.10	U	ug/kg
	MW054	MWST054R1	5.00	U	ug/kg
	MW055	MWSS055R1	8.50	U	ug/kg
	TF-20	TF-20	10.00	U	ug/kg
	TF-21	TF-21A	10.00	U	ug/kg
	TF-22	TF-22A	10.00	U	ug/kg
	TF-23	TF-23	10.00	U	ug/kg
Subsurface Samples					
	MW024	MWCS024R2A	2.90	U	ug/kg
	MW024	MWCS024R3A	2.70	U	ug/kg
	MW025	MWCS025R2A	3.20	U	ug/kg
	MW025	MWCS025R3A	2.50	U	ug/kg
	MW025	MWCS025R4A	2.50	U	ug/kg
	MW026	MWCS026R2A	3.00	U	ug/kg
	MW026	MWCS026R3A	2.70	U	ug/kg
	MW026	MWCS026R4A	2.70	U	ug/kg
	MW027	MWCS027R2A	9.10	U	ug/kg
	MW027	MWCS027R3A	2.80	U	ug/kg
	MW027	MWCS027R4A	2.80	U	ug/kg
	MW028	MWCS028R2A	2.60	U	ug/kg
	MW028	MWCS028R3A	2.60	U	ug/kg
	MW028	MWCS028R4A	2.70	U	ug/kg
	MW029	MWCS029R2A	2.70	U	ug/kg
	MW029	MWCS029R3A	2.60	U	ug/kg
	MW029	MWCS029R4A	2.70	U	ug/kg
	MW030	MWCS030R2A	3.50	U	ug/kg
	MW030	MWCS030R3A	2.50	U	ug/kg
	MW030	MWCS030S2A	7.90	U	ug/kg
	MW031	MWCS031R2A	3.10	U	ug/kg
	MW031	MWCS031R3A	3.00	U	ug/kg
	MW031	MWCS031R4A	2.40	U	ug/kg
	MW034	MWCS034R2A	2.70	U	ug/kg
	MW034	MWCS034R3A	2.60	U	ug/kg
	MW034	MWCS034R4A	2.80	U	ug/kg
	MW035	MWCS035R2A	2.60	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW035	MWCS035R3A	2.70	U	ug/kg
	MW035	MWCS035R4A	2.70	U	ug/kg
	MW035	MWCS035S4A	2.70	U	ug/kg
	MW037	MWCS037R2A	2.60	U	ug/kg
	MW037	MWCS037R3A	2.50	U	ug/kg
	MW037	MWCS037R4A	2.80	U	ug/kg
	MW040	MWCS040R2A	2.70	U	ug/kg
	MW040	MWCS040R3A	2.50	U	ug/kg
	MW040	MWCS040R4A	2.30	U	ug/kg
	MW041	MWCT041R2	9.10	U	ug/kg
	MW046	MWCT046R2	3.80	U	ug/kg
	MW050	MWCT050R2	8.20	U	ug/kg
	MW053	MWCT053R2	8.60	U	ug/kg
	TF-22	TF-22B	10.00	U	ug/kg
	TF-22	TF-22C	10.00	U	ug/kg
Bank Samples					
	B-12	B-12	10.00	U	ug/kg
	B-13	B-13	10.00	U	ug/kg
	B-14	B-14	10.00	U	ug/kg
	B-15	B-15	10.00	U	ug/kg
	B-16	B-16	10.00	U	ug/kg
	B-17	B-17	10.00	U	ug/kg
	B-18	B-18	10.00	U	ug/kg
	B-19	B-19	10.00	U	ug/kg
	MW001	MWSB001R1	3.30	U	ug/kg
	MW002	MWSB002R1	3.20	U	ug/kg
	MW008	MWSB008R1	7.90	U	ug/kg
	MW008	MWSB008S1	10.00	U	ug/kg
	MW008-SP	MWSB008R1 SP	2.80	UE	ug/kg
	MW009	MWSB009R1	4.20	U	ug/kg
	MW009-SP	MWSB009R1 SP	4.50	U	ug/kg
	MW012	MWSB012R1	3.20	U	ug/kg
	MW013	MWSB013R1	2.60	U	ug/kg
	MW014	MWSB014R1	2.80	U	ug/kg
	MW015	MWSB015R1	3.80	U	ug/kg
	MW03a	MWSB03aR1	3.90	U	ug/kg
	MW03b	MWSB03bR1	3.50	U	ug/kg
	MW04a	MWSB04aR1	8.20	U	ug/kg
	MW04b	MWSB04bR1	3.10	U	ug/kg
	MW10a	MWSB10aR1	2.70	U	ug/kg
	MW10b	MWSB10bR1	2.90	U	ug/kg
	MW10c	MWSB10cR1	4.10	U	ug/kg
	MW11a	MWSB11aR1	3.90	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	3.50	U	ug/kg
	MW11b	MWSB11bR1	2.80	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	3.00	U	ug/kg
Trichloroethene					
Surface Samples					
	MW021	MWSS021R1	4.20	U	ug/kg
	MW054	MWST054R1	5.00	U	ug/kg
	TF-20	TF-20	10.00	U	ug/kg
	TF-21	TF-21A	10.00	U	ug/kg
	TF-22	TF-22A	10.00	U	ug/kg
	TF-23	TF-23	10.00	U	ug/kg
Subsurface Samples					
	MW053	MWCT053R2	8.60	U	ug/kg
	TF-22	TF-22B	10.00	U	ug/kg
	TF-22	TF-22C	25.00		ug/kg
Bank Samples					
	B-12	B-12	10.00	U	ug/kg
	B-13	B-13	10.00	U	ug/kg
	B-14	B-14	10.00	U	ug/kg
	B-15	B-15	10.00	U	ug/kg
	B-16	B-16	10.00	U	ug/kg
	B-17	B-17	10.00	U	ug/kg
	B-18	B-18	10.00	U	ug/kg
	B-19	B-19	10.00	U	ug/kg
Xylenes (Total)					
Surface Samples					
	TF-20	TF-20	10.00	U	ug/kg
	TF-21	TF-21A	10.00	U	ug/kg
	TF-22	TF-22A	10.00	U	ug/kg
	TF-23	TF-23	10.00	U	ug/kg
Subsurface Samples					
	TF-22	TF-22B	10.00	U	ug/kg
	TF-22	TF-22C	10.00	U	ug/kg
Bank Samples					
	B-12	B-12	10.00	U	ug/kg
	B-13	B-13	10.00	U	ug/kg
	B-14	B-14	10.00	U	ug/kg
	B-15	B-15	10.00	U	ug/kg
	B-16	B-16	10.00	U	ug/kg
	B-17	B-17	10.00	U	ug/kg
	B-18	B-18	10.00	U	ug/kg
	B-19	B-19	10.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
Chlorinated Aliphatic Compound				
Hexachlorobutadiene				
Surface Samples				
MW016	MWSS016R1	3.00	U	ug/kg
MW017	MWSS017R1	4.00	U	ug/kg
MW018	MWSS018R1	3.10	U	ug/kg
MW019	MWSS019R1	3.50	U	ug/kg
MW020	MWSS020R1	2.40	U	ug/kg
MW021	MWSS021R1	3.50	U	ug/kg
MW022	MWSS022R1	2.80	U	ug/kg
MW023	MWSS023R1	2.50	U	ug/kg
MW024	MWSS024R1	4.00	U	ug/kg
MW025	MWSS025R1	3.30	U	ug/kg
MW026	MWSS026R1	2.70	U	ug/kg
MW026	MWSS026S1	2.60	U	ug/kg
MW027	MWSS027R1	3.50	U	ug/kg
MW028	MWSS028R1	2.40	U	ug/kg
MW029	MWSS029R1	3.50	U	ug/kg
MW030	MWSS030R1	3.60	U	ug/kg
MW031	MWSS031R1	4.20	U	ug/kg
MW032	MWSS032R1	2.60	U	ug/kg
MW034	MWSS034R1	3.00	U	ug/kg
MW035	MWSS035R1	3.10	U	ug/kg
MW037	MWSS037R1	3.40	U	ug/kg
MW039	MWST039R1	2.50	U	ug/kg
MW040	MWST040R1	2.60	U	ug/kg
MW040	MWST040S1	3.00		ug/kg
MW042	MWST042R1	3.00	U	ug/kg
MW043	MWST043R1	2.70	U	ug/kg
MW044	MWST044R1	4.10	U	ug/kg
MW045	MWST045R1	3.30	U	ug/kg
MW047	MWST047R1	4.40	U	ug/kg
MW048	MWST048R1	3.00	U	ug/kg
MW049	MWST049R1	2.60	UE	ug/kg
MW051	MWST051R1	3.30	U	ug/kg
MW052	MWST052R1	3.00	U	ug/kg
MW054	MWST054R1	4.20	U	ug/kg
MW055	MWSS055R1	3.50	U	ug/kg
TF-20	TF-20	8.00	U	ug/kg
TF-21	TF-21A	8.00	U	ug/kg
TF-22	TF-22A	8.00	U	ug/kg
TF-23	TF-23	8.00	U	ug/kg
Subsurface Samples				
MW-1	1	190.00	U	ug/kg
MW-1	2	200.00	U	ug/kg

Appendix D.1 - Chemical and Physical Data

	Station	Sample ID	Concentration	Flag	Units
	MW024	MWCS024R2A	2.40	U	ug/kg
	MW024	MWCS024R3A	2.20	U	ug/kg
	MW025	MWCS025R2A	2.60	U	ug/kg
	MW025	MWCS025R3A	2.10	U	ug/kg
	MW025	MWCS025R4A	2.10	U	ug/kg
	MW026	MWCS026R2A	2.50	U	ug/kg
	MW026	MWCS026R3A	2.20	U	ug/kg
	MW026	MWCS026R4A	2.20	U	ug/kg
	MW027	MWCS027R2A	3.00	U	ug/kg
	MW027	MWCS027R3A	2.40	U	ug/kg
	MW027	MWCS027R4A	2.30	U	ug/kg
	MW028	MWCS028R2A	2.20	U	ug/kg
	MW028	MWCS028R3A	2.10	U	ug/kg
	MW028	MWCS028R4A	2.30	U	ug/kg
	MW029	MWCS029R2A	2.20	U	ug/kg
	MW029	MWCS029R3A	2.20	U	ug/kg
	MW029	MWCS029R4A	2.20	U	ug/kg
	MW030	MWCS030R2A	2.90	U	ug/kg
	MW030	MWCS030R3A	2.00	U	ug/kg
	MW030	MWCS030S2A	2.60	U	ug/kg
	MW031	MWCS031R2A	2.60	U	ug/kg
	MW031	MWCS031R3A	2.50	U	ug/kg
	MW031	MWCS031R4A	2.00	U	ug/kg
	MW034	MWCS034R2A	2.30	U	ug/kg
	MW034	MWCS034R3A	2.20	U	ug/kg
	MW034	MWCS034R4A	2.30	U	ug/kg
	MW035	MWCS035R2A	2.20	U	ug/kg
	MW035	MWCS035R3A	2.30	U	ug/kg
	MW035	MWCS035R4A	2.30	U	ug/kg
	MW035	MWCS035S4A	2.20	U	ug/kg
	MW037	MWCS037R2A	2.20	U	ug/kg
	MW037	MWCS037R3A	2.10	U	ug/kg
	MW037	MWCS037R4A	2.30	U	ug/kg
	MW040	MWCS040R2A	2.20	U	ug/kg
	MW040	MWCS040R3A	2.10	U	ug/kg
	MW040	MWCS040R4A	1.90	U	ug/kg
	MW041	MWCT041R2	3.00	U	ug/kg
	MW046	MWCT046R2	3.20	U	ug/kg
	MW050	MWCT050R2	2.70	U	ug/kg
	MW053	MWCT053R2	2.90	U	ug/kg
	TF-22	TF-22B	8.00	U	ug/kg
	TF-22	TF-22C	8.00	U	ug/kg
Bank Samples					
	B-12	B-12	8.00	U	ug/kg
	B-13	B-13	8.00	U	ug/kg
	B-14	B-14	8.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
B-15	B-15	8.00	U	ug/kg
B-16	B-16	8.00	U	ug/kg
B-17	B-17	8.00	U	ug/kg
B-18	B-18	8.00	U	ug/kg
B-19	B-19	8.00	U	ug/kg
MW001	MWSB001R1	2.80	U	ug/kg
MW002	MWSB002R1	2.60	U	ug/kg
MW008	MWSB008R1	2.60	U	ug/kg
MW008	MWSB008S1	3.30	U	ug/kg
MW008-SP	MWSB008R1 SP	2.30	U	ug/kg
MW009	MWSB009R1	3.50	U	ug/kg
MW009-SP	MWSB009R1 SP	3.80	U	ug/kg
MW012	MWSB012R1	2.70	U	ug/kg
MW013	MWSB013R1	2.20	U	ug/kg
MW014	MWSB014R1	2.30	U	ug/kg
MW015	MWSB015R1	3.20	U	ug/kg
MW015	MWSB015S1	2.40	U	ug/kg
MW03a	MWSB03aR1	3.30	U	ug/kg
MW03b	MWSB03bR1	2.90	U	ug/kg
MW04a	MWSB04aR1	2.70	U	ug/kg
MW04b	MWSB04bR1	2.60	U	ug/kg
MW04b-SP	MWSB04bR1 SP	2.20	U	ug/kg
MW10a	MWSB10aR1	2.30	U	ug/kg
MW10b	MWSB10bR1	2.40	U	ug/kg
MW10c	MWSB10cR1	3.40	U	ug/kg
MW11a	MWSB11aR1	3.30	U	ug/kg
MW11a-SP	MWSB11aR1 SP	2.90	U	ug/kg
MW11b	MWSB11bR1	2.40	U	ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	2.50	U	ug/kg
Bulk Sediment	DPC-DRET-7298	0.05	UE	ug/L
Bulk Sediment	DPC-DUPLICAT	0.05	UE	ug/L
Bulk Sediment	DPC-METD-7298	0.05	UE	ug/L
Bulk Sediment	DPC-METT-7298	0.05	UE	ug/L
Bulk Sediment	DPC-WATD-7298	0.05	UE	ug/L
Bulk Sediment	DPC-WATT-7298	0.05	UE	ug/L
Bulk Sediment	TCLT RINSATE 1	0.04	U	ug/L
Bulk Sediment	TCLT-PV 01	0.05	U	ug/L
Bulk Sediment	TCLT-PV 02.5	0.05	UE	ug/L
Bulk Sediment	TCLT-PV 04	0.06	U	ug/L
Bulk Sediment	TCLT-PV 06	0.05	U	ug/L
Bulk Sediment	TCLT-PV 07.3	0.05	U	ug/L
Bulk Sediment	TCLT-PV 09	0.05	U	ug/L
Bulk Sediment	TCLT-PV 11	0.05	U	ug/L
Bulk Sediment	TCLT-PV 12.8	0.06	UE	ug/L
Bulk Sediment	TCLT-PV 14.4	0.06	U	ug/L

Station	Sample ID	Concentration	Flag	Units
Bulk Sediment	TCLT-PV 15.8	0.05	UE	ug/L
Bulk Sediment	TCLT-PV 17.5	0.05	U	ug/L
Bulk Sediment	TCLT-PV 19	0.05	U	ug/L
Bulk Sediment	TCLT-PV 20.6	0.05	UE	ug/L
Bulk Sediment	TCLT-PV 22.2	0.05	UE	ug/L
Bulk Sediment	TCLT-PV 23.8	0.11	U	ug/L
Bulk Sediment	TCLT-PV 25.3	0.11	UE	ug/L
Bulk Sediment	TCLT-PV 26.9	0.10	UE	ug/L
Bulk Sediment	TCLT-PV 28.4	0.10	U	ug/L
Bulk Sediment	TCLT-PV 28.4	0.10	U	ug/L
Bulk Sediment	TCLT-PV 30	0.10	UE	ug/L

Phthalates

bis(2-Ethylhexyl)phthalate

Surface Samples

MW016	MWSS016R1	130.00	B	ug/kg
MW017	MWSS017R1	170.00	B	ug/kg
MW018	MWSS018R1	300.00	B	ug/kg
MW019	MWSS019R1	140.00	B	ug/kg
MW020	MWSS020R1	69.00	BJ	ug/kg
MW021	MWSS021R1	240.00	B	ug/kg
MW022	MWSS022R1	95.00	BJ	ug/kg
MW023	MWSS023R1	280.00	B	ug/kg
MW024	MWSS024R1	370.00	B	ug/kg
MW025	MWSS025R1	530.00	B	ug/kg
MW026	MWSS026R1	130.00	B	ug/kg
MW026	MWSS026S1	43.00	BJ	ug/kg
MW027	MWSS027R1	320.00	B	ug/kg
MW028	MWSS028R1	61.00	JB	ug/kg
MW029	MWSS029R1	710.00	B	ug/kg
MW030	MWSS030R1	100.00	U	ug/kg
MW031	MWSS031R1	860.00	J	ug/kg
MW032	MWSS032R1	610.00	B	ug/kg
MW034	MWSS034R1	500.00	E	ug/kg
MW035	MWSS035R1	710.00		ug/kg
MW037	MWSS037R1	370.00	B	ug/kg
MW039	MWST039R1	120.00	B	ug/kg
MW040	MWST040R1	160.00	B	ug/kg
MW040	MWST040S1	150.00	B	ug/kg
MW042	MWST042R1	320.00	B	ug/kg
MW043	MWST043R1	280.00	B	ug/kg
MW044	MWST044R1	400.00	B	ug/kg
MW045	MWST045R1	440.00	B	ug/kg
MW047	MWST047R1	560.00	B	ug/kg
MW048	MWST048R1	520.00	B	ug/kg
MW049	MWST049R1	210.00	B	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW051	MWST051R1	690.00	B	ug/kg
MW052	MWST052R1	330.00	B	ug/kg
MW054	MWST054R1	140.00	B	ug/kg
MW055	MWSS055R1	700.00	B	ug/kg
TF-20	TF-20	1300.00		ug/kg
TF-21	TF-21A	1600.00		ug/kg
TF-22	TF-22A	3500.00		ug/kg
TF-23	TF-23	100.00		ug/kg
Subsurface Samples				
MW-1	1	320.00		ug/kg
MW-1	2	100.00	U	ug/kg
MW024	MWCS024R2A	100.00	B	ug/kg
MW024	MWCS024R3A	24.00	BJ	ug/kg
MW025	MWCS025R2A	110.00	B	ug/kg
MW025	MWCS025R3A	52.00	BJ	ug/kg
MW025	MWCS025R4A	39.00	BJ	ug/kg
MW026	MWCS026R2A	36.00	BJ	ug/kg
MW026	MWCS026R3A	18.00	BJ	ug/kg
MW026	MWCS026R4A	22.00	BJ	ug/kg
MW027	MWCS027R2A	140.00	B	ug/kg
MW027	MWCS027R3A	39.00	BJ	ug/kg
MW027	MWCS027R4A	19.00	BJ	ug/kg
MW028	MWCS028R2A	38.00	BJ	ug/kg
MW028	MWCS028R3A	31.00	BJ	ug/kg
MW028	MWCS028R4A	30.00	BJ	ug/kg
MW029	MWCS029R2A	33.00	BJ	ug/kg
MW029	MWCS029R3A	42.00	BJ	ug/kg
MW029	MWCS029R4A	22.00	BJ	ug/kg
MW030	MWCS030R2A	46.00	BJ	ug/kg
MW030	MWCS030R3A	18.00	BJ	ug/kg
MW030	MWCS030S2A	87.00	BJ	ug/kg
MW031	MWCS031R2A	60.00	BJ	ug/kg
MW031	MWCS031R3A	20.00	BJ	ug/kg
MW031	MWCS031R4A	22.00	BJ	ug/kg
MW034	MWCS034R2A	120.00	B	ug/kg
MW034	MWCS034R3A	41.00	BJ	ug/kg
MW034	MWCS034R4A	22.00	BJ	ug/kg
MW035	MWCS035R2A	240.00	B	ug/kg
MW035	MWCS035R3A	33.00	BJ	ug/kg
MW035	MWCS035R4A	40.00	BJ	ug/kg
MW035	MWCS035S4A	20.00	BJ	ug/kg
MW037	MWCS037R2A	100.00	B	ug/kg
MW037	MWCS037R3A	50.00	BJ	ug/kg
MW037	MWCS037R4A	29.00	BJ	ug/kg
MW040	MWCS040R2A	16.00	BJ	ug/kg
MW040	MWCS040R3A	18.00	BJ	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW040	MWCS040R4A	19.00	BJ	ug/kg
	MW041	MWCT041R2	550.00	B	ug/kg
	MW046	MWCT046R2	460.00	B	ug/kg
	MW050	MWCT050R2	170.00		ug/kg
	MW053	MWCT053R2	150.00	B	ug/kg
	TF-22	TF-22B	520.00		ug/kg
	TF-22	TF-22C	98.00	U	ug/kg
Bank Samples					
	B-12	B-12	280.00		ug/kg
	B-13	B-13	94.00	U	ug/kg
	B-14	B-14	500.00		ug/kg
	B-15	B-15	870.00		ug/kg
	B-16	B-16	220.00		ug/kg
	B-17	B-17	630.00		ug/kg
	B-18	B-18	290.00		ug/kg
	B-19	B-19	1400.00		ug/kg
	MW001	MWSB001R1	230.00	B	ug/kg
	MW002	MWSB002R1	320.00	B	ug/kg
	MW008	MWSB008R1	440.00	B	ug/kg
	MW008	MWSB008S1	450.00		ug/kg
	MW008-SP	MWSB008R1 SP	390.00	B	ug/kg
	MW009	MWSB009R1	280.00	B	ug/kg
	MW009-SP	MWSB009R1 SP	680.00	B	ug/kg
	MW012	MWSB012R1	260.00	B	ug/kg
	MW013	MWSB013R1	92.00	B	ug/kg
	MW014	MWSB014R1	72.00	BJ	ug/kg
	MW015	MWSB015R1	79.00	JB	ug/kg
	MW015	MWSB015S1	110.00		ug/kg
	MW03a	MWSB03aR1	250.00	B	ug/kg
	MW03b	MWSB03bR1	220.00	B	ug/kg
	MW04a	MWSB04aR1	140.00	B	ug/kg
	MW04b	MWSB04bR1	280.00	B	ug/kg
	MW04b-SP	MWSB04bR1 SP	97.00	E	ug/kg
	MW10a	MWSB10aR1	810.00	B	ug/kg
	MW10b	MWSB10bR1	720.00		ug/kg
	MW10c	MWSB10cR1	660.00		ug/kg
	MW11a	MWSB11aR1	330.00	B	ug/kg
	MW11a-SP	MWSB11aR1 SP	520.00	B	ug/kg
	MW11b	MWSB11bR1	140.00	B	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	130.00	B	ug/kg
Butylbenzylphthalate					
Surface Samples					
	MW016	MWSS016R1	10.00	J	ug/kg
	MW017	MWSS017R1	13.00	J	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW018	MWSS018R1	100.00	U	ug/kg
	MW019	MWSS019R1	18.00	J	ug/kg
	MW020	MWSS020R1	77.00	U	ug/kg
	MW021	MWSS021R1	35.00	J	ug/kg
	MW022	MWSS022R1	89.00	U	ug/kg
	MW023	MWSS023R1	5.50	J	ug/kg
	MW024	MWSS024R1	41.00	J	ug/kg
	MW025	MWSS025R1	110.00	U	ug/kg
	MW026	MWSS026R1	86.00	U	ug/kg
	MW026	MWSS026S1	83.00	U	ug/kg
	MW027	MWSS027R1	110.00	U	ug/kg
	MW028	MWSS028R1	76.00	U	ug/kg
	MW029	MWSS029R1	29.00	J	ug/kg
	MW030	MWSS030R1	32.00	J	ug/kg
	MW031	MWSS031R1	1000.00	U	ug/kg
	MW032	MWSS032R1	200.00		ug/kg
	MW034	MWSS034R1	43.00	J	ug/kg
	MW035	MWSS035R1	55.00	J	ug/kg
	MW037	MWSS037R1	23.00	J	ug/kg
	MW039	MWST039R1	81.00	U	ug/kg
	MW040	MWST040R1	82.00	U	ug/kg
	MW040	MWST040S1	95.00	U	ug/kg
	MW042	MWST042R1	97.00	U	ug/kg
	MW043	MWST043R1	9.40	J	ug/kg
	MW044	MWST044R1	98.00	U	ug/kg
	MW045	MWST045R1	28.00	J	ug/kg
	MW047	MWST047R1	100.00	U	ug/kg
	MW048	MWST048R1	24.00	J	ug/kg
	MW049	MWST049R1	85.00	U	ug/kg
	MW051	MWST051R1	530.00	U	ug/kg
	MW052	MWST052R1	10.00	J	ug/kg
	MW054	MWST054R1	100.00	U	ug/kg
	MW055	MWSS055R1	55.00	J	ug/kg
	TF-20	TF-20	99.00	U	ug/kg
	TF-21	TF-21A	390.00		ug/kg
	TF-22	TF-22A	95.00	U	ug/kg
	TF-23	TF-23	99.00	U	ug/kg
Subsurface Samples					
	MW-1	1	97.00	U	ug/kg
	MW-1	2	100.00	U	ug/kg
	MW024	MWCS024R2A	78.00	U	ug/kg
	MW024	MWCS024R3A	72.00	U	ug/kg
	MW025	MWCS025R2A	85.00	U	ug/kg
	MW025	MWCS025R3A	67.00	U	ug/kg
	MW025	MWCS025R4A	67.00	U	ug/kg
	MW026	MWCS026R2A	80.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW026	MWCS026R3A	72.00	U	ug/kg
	MW026	MWCS026R4A	71.00	U	ug/kg
	MW027	MWCS027R2A	97.00	U	ug/kg
	MW027	MWCS027R3A	76.00	U	ug/kg
	MW027	MWCS027R4A	74.00	U	ug/kg
	MW028	MWCS028R2A	100.00	UE	ug/kg
	MW028	MWCS028R3A	100.00	UE	ug/kg
	MW028	MWCS028R4A	110.00	UE	ug/kg
	MW029	MWCS029R2A	72.00	U	ug/kg
	MW029	MWCS029R3A	69.00	U	ug/kg
	MW029	MWCS029R4A	71.00	U	ug/kg
	MW030	MWCS030R2A	370.00	U	ug/kg
	MW030	MWCS030R3A	3.40	J	ug/kg
	MW030	MWCS030S2A	170.00	U	ug/kg
	MW031	MWCS031R2A	120.00	UE	ug/kg
	MW031	MWCS031R3A	120.00	UE	ug/kg
	MW031	MWCS031R4A	98.00	UE	ug/kg
	MW034	MWCS034R2A	73.00	U	ug/kg
	MW034	MWCS034R3A	69.00	U	ug/kg
	MW034	MWCS034R4A	74.00	U	ug/kg
	MW035	MWCS035R2A	70.00	U	ug/kg
	MW035	MWCS035R3A	73.00	U	ug/kg
	MW035	MWCS035R4A	73.00	U	ug/kg
	MW035	MWCS035S4A	71.00	U	ug/kg
	MW037	MWCS037R2A	69.00	U	ug/kg
	MW037	MWCS037R3A	3.50	J	ug/kg
	MW037	MWCS037R4A	74.00	U	ug/kg
	MW040	MWCS040R2A	110.00	UE	ug/kg
	MW040	MWCS040R3A	100.00	UE	ug/kg
	MW040	MWCS040R4A	92.00	UE	ug/kg
	MW041	MWCT041R2	46.00	J	ug/kg
	MW046	MWCT046R2	28.00	J	ug/kg
	MW050	MWCT050R2	87.00	U	ug/kg
	MW053	MWCT053R2	92.00	U	ug/kg
	TF-22	TF-22B	96.00	U	ug/kg
	TF-22	TF-22C	98.00	U	ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	94.00	U	ug/kg
	B-14	B-14	120.00		ug/kg
	B-15	B-15	88.00	U	ug/kg
	B-16	B-16	93.00	U	ug/kg
	B-17	B-17	92.00	U	ug/kg
	B-18	B-18	78.00	U	ug/kg
	B-19	B-19	89.00	U	ug/kg
	MW001	MWSB001R1	13.00	J	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW002	MWSB002R1	18.00	J	ug/kg
MW008	MWSB008R1	45.00	J	ug/kg
MW008	MWSB008S1	41.00	J	ug/kg
MW008-SP	MWSB008R1 SP	39.00	J	ug/kg
MW009	MWSB009R1	35.00	J	ug/kg
MW009-SP	MWSB009R1 SP	31.00	J	ug/kg
MW012	MWSB012R1	86.00	U	ug/kg
MW013	MWSB013R1	70.00	U	ug/kg
MW014	MWSB014R1	75.00	U	ug/kg
MW015	MWSB015R1	100.00	U	ug/kg
MW015	MWSB015S1	12.00	J	ug/kg
MW03a	MWSB03aR1	420.00	U	ug/kg
MW03b	MWSB03bR1	24.00	J	ug/kg
MW04a	MWSB04aR1	12.00	J	ug/kg
MW04b	MWSB04bR1	53.00	J	ug/kg
MW04b-SP	MWSB04bR1 SP	30.00	E	ug/kg
MW10a	MWSB10aR1	73.00	U	ug/kg
MW10b	MWSB10bR1	160.00	U	ug/kg
MW10c	MWSB10cR1	71.00	J	ug/kg
MW11a	MWSB11aR1	42.00	J	ug/kg
MW11a-SP	MWSB11aR1 SP	60.00	J	ug/kg
MW11b	MWSB11bR1	17.00	J	ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	60.00	U	ug/kg
Di-n-butylphthalate				
Surface Samples				
MW016	MWSS016R1	66.00	U	ug/kg
MW017	MWSS017R1	65.00	U	ug/kg
MW018	MWSS018R1	69.00	U	ug/kg
MW019	MWSS019R1	18.00	J	ug/kg
MW020	MWSS020R1	53.00	U	ug/kg
MW021	MWSS021R1	76.00	U	ug/kg
MW022	MWSS022R1	140.00		ug/kg
MW023	MWSS023R1	27.00	J	ug/kg
MW024	MWSS024R1	65.00	U	ug/kg
MW025	MWSS025R1	73.00	U	ug/kg
MW026	MWSS026R1	59.00	U	ug/kg
MW026	MWSS026S1	57.00	U	ug/kg
MW027	MWSS027R1	76.00	U	ug/kg
MW028	MWSS028R1	52.00	U	ug/kg
MW029	MWSS029R1	57.00	U	ug/kg
MW030	MWSS030R1	59.00	U	ug/kg
MW031	MWSS031R1	68.00	U	ug/kg
MW032	MWSS032R1	42.00	J	ug/kg
MW034	MWSS034R1	66.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW035	MWSS035R1	50.00	U	ug/kg
	MW037	MWSS037R1	74.00	U	ug/kg
	MW039	MWST039R1	55.00	U	ug/kg
	MW040	MWST040R1	12.00	J	ug/kg
	MW040	MWST040S1	65.00	U	ug/kg
	MW042	MWST042R1	66.00	U	ug/kg
	MW043	MWST043R1	59.00	U	ug/kg
	MW044	MWST044R1	66.00	U	ug/kg
	MW045	MWST045R1	28.00	JB	ug/kg
	MW047	MWST047R1	72.00	U	ug/kg
	MW048	MWST048R1	66.00	U	ug/kg
	MW049	MWST049R1	58.00	U	ug/kg
	MW051	MWST051R1	33.00	J	ug/kg
	MW052	MWST052R1	66.00	U	ug/kg
	MW054	MWST054R1	68.00	U	ug/kg
	MW055	MWSS055R1	77.00	U	ug/kg
	TF-20	TF-20	99.00	U	ug/kg
	TF-21	TF-21A	99.00	U	ug/kg
	TF-22	TF-22A	95.00	U	ug/kg
	TF-23	TF-23	99.00	U	ug/kg
Subsurface Samples					
	MW-1	1	97.00	U	ug/kg
	MW-1	2	100.00	U	ug/kg
	MW024	MWCS024R2A	54.00	U	ug/kg
	MW024	MWCS024R3A	49.00	U	ug/kg
	MW025	MWCS025R2A	58.00	U	ug/kg
	MW025	MWCS025R3A	46.00	U	ug/kg
	MW025	MWCS025R4A	46.00	U	ug/kg
	MW026	MWCS026R2A	54.00	U	ug/kg
	MW026	MWCS026R3A	49.00	U	ug/kg
	MW026	MWCS026R4A	48.00	U	ug/kg
	MW027	MWCS027R2A	66.00	U	ug/kg
	MW027	MWCS027R3A	52.00	U	ug/kg
	MW027	MWCS027R4A	50.00	U	ug/kg
	MW028	MWCS028R2A	6.70	J	ug/kg
	MW028	MWCS028R3A	5.50	J	ug/kg
	MW028	MWCS028R4A	75.00	U	ug/kg
	MW029	MWCS029R2A	49.00	U	ug/kg
	MW029	MWCS029R3A	47.00	U	ug/kg
	MW029	MWCS029R4A	48.00	U	ug/kg
	MW030	MWCS030R2A	260.00	U	ug/kg
	MW030	MWCS030R3A	45.00	U	ug/kg
	MW030	MWCS030S2A	120.00	U	ug/kg
	MW031	MWCS031R2A	85.00	U	ug/kg
	MW031	MWCS031R3A	83.00	U	ug/kg
	MW031	MWCS031R4A	66.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW034	MWCS034R2A	50.00	U	ug/kg
	MW034	MWCS034R3A	47.00	U	ug/kg
	MW034	MWCS034R4A	50.00	U	ug/kg
	MW035	MWCS035R2A	48.00	U	ug/kg
	MW035	MWCS035R3A	50.00	U	ug/kg
	MW035	MWCS035R4A	50.00	U	ug/kg
	MW035	MWCS035S4A	48.00	U	ug/kg
	MW037	MWCS037R2A	47.00	U	ug/kg
	MW037	MWCS037R3A	46.00	U	ug/kg
	MW037	MWCS037R4A	6.70	J	ug/kg
	MW040	MWCS040R2A	7.70	J	ug/kg
	MW040	MWCS040R3A	6.80	J	ug/kg
	MW040	MWCS040R4A	63.00	U	ug/kg
	MW041	MWCT041R2	66.00	U	ug/kg
	MW046	MWCT046R2	21.00	J	ug/kg
	MW050	MWCT050R2	59.00	U	ug/kg
	MW053	MWCT053R2	63.00	U	ug/kg
	TF-22	TF-22B	96.00	U	ug/kg
	TF-22	TF-22C	98.00	U	ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	94.00	U	ug/kg
	B-14	B-14	92.00	U	ug/kg
	B-15	B-15	88.00	U	ug/kg
	B-16	B-16	93.00	U	ug/kg
	B-17	B-17	92.00	U	ug/kg
	B-18	B-18	78.00	U	ug/kg
	B-19	B-19	89.00	U	ug/kg
	MW001	MWSB001R1	13.00	JB	ug/kg
	MW002	MWSB002R1	58.00	U	ug/kg
	MW008	MWSB008R1	14.00	J	ug/kg
	MW008	MWSB008S1	16.00	J	ug/kg
	MW008-SP	MWSB008R1 SP	36.00	JB	ug/kg
	MW009	MWSB009R1	18.00	JB	ug/kg
	MW009-SP	MWSB009R1 SP	23.00	JB	ug/kg
	MW012	MWSB012R1	79.00		ug/kg
	MW013	MWSB013R1	33.00	J	ug/kg
	MW014	MWSB014R1	260.00		ug/kg
	MW015	MWSB015R1	16.00	JB	ug/kg
	MW015	MWSB015S1	10.00	J	ug/kg
	MW03a	MWSB03aR1	71.00	U	ug/kg
	MW03b	MWSB03bR1	64.00	U	ug/kg
	MW04a	MWSB04aR1	60.00	U	ug/kg
	MW04b	MWSB04bR1	57.00	U	ug/kg
	MW04b-SP	MWSB04bR1 SP	48.00	U	ug/kg
	MW10a	MWSB10aR1	50.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW10b	MWSB10bR1	110.00		ug/kg
MW10c	MWSB10cR1	27.00	J	ug/kg
MW11a	MWSB11aR1	20.00	J	ug/kg
MW11a-SP	MWSB11aR1 SP	17.00	J	ug/kg
MW11b	MWSB11bR1	13.00	J	ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	40.00	U	ug/kg
Di-n-octylphthalate				
Surface Samples				
MW016	MWSS016R1	95.00	U	ug/kg
MW017	MWSS017R1	93.00	U	ug/kg
MW018	MWSS018R1	98.00	U	ug/kg
MW019	MWSS019R1	110.00	U	ug/kg
MW020	MWSS020R1	76.00	U	ug/kg
MW021	MWSS021R1	110.00	U	ug/kg
MW022	MWSS022R1	87.00	U	ug/kg
MW023	MWSS023R1	79.00	U	ug/kg
MW024	MWSS024R1	93.00	U	ug/kg
MW025	MWSS025R1	100.00	U	ug/kg
MW026	MWSS026R1	84.00	U	ug/kg
MW026	MWSS026S1	81.00	U	ug/kg
MW027	MWSS027R1	110.00	U	ug/kg
MW028	MWSS028R1	74.00	U	ug/kg
MW029	MWSS029R1	81.00	U	ug/kg
MW030	MWSS030R1	85.00	U	ug/kg
MW031	MWSS031R1	980.00	U	ug/kg
MW032	MWSS032R1	81.00	U	ug/kg
MW034	MWSS034R1	95.00	U	ug/kg
MW035	MWSS035R1	360.00	U	ug/kg
MW037	MWSS037R1	110.00	U	ug/kg
MW039	MWST039R1	79.00	U	ug/kg
MW040	MWST040R1	80.00	U	ug/kg
MW040	MWST040S1	93.00	U	ug/kg
MW042	MWST042R1	95.00	U	ug/kg
MW043	MWST043R1	84.00	U	ug/kg
MW044	MWST044R1	95.00	U	ug/kg
MW045	MWST045R1	100.00	UE	ug/kg
MW047	MWST047R1	100.00	U	ug/kg
MW048	MWST048R1	95.00	U	ug/kg
MW049	MWST049R1	83.00	U	ug/kg
MW051	MWST051R1	520.00	U	ug/kg
MW052	MWST052R1	95.00	U	ug/kg
MW054	MWST054R1	490.00	U	ug/kg
MW055	MWSS055R1	110.00	U	ug/kg
TF-20	TF-20	99.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	TF-21	TF-21A	99.00	U	ug/kg
	TF-22	TF-22A	95.00	U	ug/kg
	TF-23	TF-23	99.00	U	ug/kg
Subsurface Samples					
	MW-1	1	97.00	U	ug/kg
	MW-1	2	100.00	U	ug/kg
	MW024	MWCS024R2A	77.00	U	ug/kg
	MW024	MWCS024R3A	70.00	U	ug/kg
	MW025	MWCS025R2A	83.00	U	ug/kg
	MW025	MWCS025R3A	65.00	U	ug/kg
	MW025	MWCS025R4A	65.00	U	ug/kg
	MW026	MWCS026R2A	78.00	U	ug/kg
	MW026	MWCS026R3A	70.00	U	ug/kg
	MW026	MWCS026R4A	70.00	U	ug/kg
	MW027	MWCS027R2A	95.00	U	ug/kg
	MW027	MWCS027R3A	74.00	U	ug/kg
	MW027	MWCS027R4A	72.00	U	ug/kg
	MW028	MWCS028R2A	100.00	U	ug/kg
	MW028	MWCS028R3A	100.00	U	ug/kg
	MW028	MWCS028R4A	110.00	U	ug/kg
	MW029	MWCS029R2A	70.00	U	ug/kg
	MW029	MWCS029R3A	68.00	U	ug/kg
	MW029	MWCS029R4A	70.00	U	ug/kg
	MW030	MWCS030R2A	360.00	U	ug/kg
	MW030	MWCS030R3A	65.00	U	ug/kg
	MW030	MWCS030S2A	170.00	U	ug/kg
	MW031	MWCS031R2A	120.00	U	ug/kg
	MW031	MWCS031R3A	120.00	U	ug/kg
	MW031	MWCS031R4A	95.00	U	ug/kg
	MW034	MWCS034R2A	71.00	U	ug/kg
	MW034	MWCS034R3A	68.00	U	ug/kg
	MW034	MWCS034R4A	72.00	U	ug/kg
	MW035	MWCS035R2A	68.00	U	ug/kg
	MW035	MWCS035R3A	71.00	U	ug/kg
	MW035	MWCS035R4A	71.00	U	ug/kg
	MW035	MWCS035S4A	70.00	U	ug/kg
	MW037	MWCS037R2A	68.00	U	ug/kg
	MW037	MWCS037R3A	66.00	U	ug/kg
	MW037	MWCS037R4A	72.00	U	ug/kg
	MW040	MWCS040R2A	100.00	U	ug/kg
	MW040	MWCS040R3A	99.00	U	ug/kg
	MW040	MWCS040R4A	90.00	U	ug/kg
	MW041	MWCT041R2	95.00	U	ug/kg
	MW046	MWCT046R2	100.00	U	ug/kg
	MW050	MWCT050R2	85.00	U	ug/kg
	MW053	MWCT053R2	90.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	TF-22	TF-22B	96.00	U	ug/kg
	TF-22	TF-22C	98.00	U	ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	94.00	U	ug/kg
	B-14	B-14	92.00	U	ug/kg
	B-15	B-15	88.00	U	ug/kg
	B-16	B-16	93.00	U	ug/kg
	B-17	B-17	92.00	U	ug/kg
	B-18	B-18	78.00	U	ug/kg
	B-19	B-19	89.00	U	ug/kg
	MW001	MWSB001R1	87.00	UE	ug/kg
	MW002	MWSB002R1	83.00	UE	ug/kg
	MW008	MWSB008R1	330.00	U	ug/kg
	MW008	MWSB008S1	420.00	U	ug/kg
	MW008-SP	MWSB008R1 SP	140.00	U	ug/kg
	MW009	MWSB009R1	83.00	UE	ug/kg
	MW009-SP	MWSB009R1 SP	120.00	U	ug/kg
	MW012	MWSB012R1	84.00	U	ug/kg
	MW013	MWSB013R1	68.00	U	ug/kg
	MW014	MWSB014R1	73.00	U	ug/kg
	MW015	MWSB015R1	100.00	U	ug/kg
	MW015	MWSB015S1	74.00	U	ug/kg
	MW03a	MWSB03aR1	100.00	UE	ug/kg
	MW03b	MWSB03bR1	91.00	U	ug/kg
	MW04a	MWSB04aR1	85.00	U	ug/kg
	MW04b	MWSB04bR1	81.00	UE	ug/kg
	MW04b-SP	MWSB04bR1 SP	68.00	U	ug/kg
	MW10a	MWSB10aR1	71.00	U	ug/kg
	MW10b	MWSB10bR1	77.00	U	ug/kg
	MW10c	MWSB10cR1	430.00	U	ug/kg
	MW11a	MWSB11aR1	100.00	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	180.00	U	ug/kg
	MW11b	MWSB11bR1	74.00	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	290.00	U	ug/kg
Diethylphthalate					
Surface Samples					
	MW016	MWSS016R1	69.00	U	ug/kg
	MW017	MWSS017R1	68.00	U	ug/kg
	MW018	MWSS018R1	72.00	U	ug/kg
	MW019	MWSS019R1	81.00	U	ug/kg
	MW020	MWSS020R1	55.00	U	ug/kg
	MW021	MWSS021R1	79.00	U	ug/kg
	MW022	MWSS022R1	63.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW023	MWSS023R1	30.00	J	ug/kg
MW024	MWSS024R1	68.00	U	ug/kg
MW025	MWSS025R1	76.00	U	ug/kg
MW026	MWSS026R1	61.00	U	ug/kg
MW026	MWSS026S1	59.00	U	ug/kg
MW027	MWSS027R1	79.00	U	ug/kg
MW028	MWSS028R1	54.00	U	ug/kg
MW029	MWSS029R1	59.00	U	ug/kg
MW030	MWSS030R1	62.00	U	ug/kg
MW031	MWSS031R1	71.00	U	ug/kg
MW032	MWSS032R1	59.00	U	ug/kg
MW034	MWSS034R1	38.00	J	ug/kg
MW035	MWSS035R1	53.00	U	ug/kg
MW037	MWSS037R1	78.00	U	ug/kg
MW039	MWST039R1	34.00	J	ug/kg
MW040	MWST040R1	32.00	JB	ug/kg
MW040	MWST040S1	68.00	U	ug/kg
MW042	MWST042R1	69.00	U	ug/kg
MW043	MWST043R1	61.00	U	ug/kg
MW044	MWST044R1	70.00	U	ug/kg
MW045	MWST045R1	40.00	J	ug/kg
MW047	MWST047R1	75.00	U	ug/kg
MW048	MWST048R1	87.00		ug/kg
MW049	MWST049R1	60.00	U	ug/kg
MW051	MWST051R1	45.00	J	ug/kg
MW052	MWST052R1	69.00	U	ug/kg
MW054	MWST054R1	71.00	U	ug/kg
MW055	MWSS055R1	81.00	U	ug/kg
TF-20	TF-20	99.00	U	ug/kg
TF-21	TF-21A	99.00	U	ug/kg
TF-22	TF-22A	95.00	U	ug/kg
TF-23	TF-23	99.00	U	ug/kg
Subsurface Samples				
MW-1	1	97.00	U	ug/kg
MW-1	2	100.00	U	ug/kg
MW024	MWCS024R2A	56.00	U	ug/kg
MW024	MWCS024R3A	51.00	U	ug/kg
MW025	MWCS025R2A	60.00	U	ug/kg
MW025	MWCS025R3A	48.00	U	ug/kg
MW025	MWCS025R4A	48.00	U	ug/kg
MW026	MWCS026R2A	57.00	U	ug/kg
MW026	MWCS026R3A	51.00	U	ug/kg
MW026	MWCS026R4A	51.00	U	ug/kg
MW027	MWCS027R2A	69.00	U	ug/kg
MW027	MWCS027R3A	54.00	U	ug/kg
MW027	MWCS027R4A	53.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW028	MWCS028R2A	39.00	UE	ug/kg
	MW028	MWCS028R3A	73.00	U	ug/kg
	MW028	MWCS028R4A	78.00	U	ug/kg
	MW029	MWCS029R2A	51.00	U	ug/kg
	MW029	MWCS029R3A	49.00	U	ug/kg
	MW029	MWCS029R4A	51.00	U	ug/kg
	MW030	MWCS030R2A	67.00	U	ug/kg
	MW030	MWCS030R3A	47.00	U	ug/kg
	MW030	MWCS030S2A	120.00	U	ug/kg
	MW031	MWCS031R2A	89.00	U	ug/kg
	MW031	MWCS031R3A	86.00	U	ug/kg
	MW031	MWCS031R4A	70.00	U	ug/kg
	MW034	MWCS034R2A	52.00	U	ug/kg
	MW034	MWCS034R3A	49.00	U	ug/kg
	MW034	MWCS034R4A	27.00	J	ug/kg
	MW035	MWCS035R2A	50.00	U	ug/kg
	MW035	MWCS035R3A	1100.00		ug/kg
	MW035	MWCS035R4A	52.00	U	ug/kg
	MW035	MWCS035S4A	51.00	U	ug/kg
	MW037	MWCS037R2A	49.00	U	ug/kg
	MW037	MWCS037R3A	25.00	J	ug/kg
	MW037	MWCS037R4A	53.00	U	ug/kg
	MW040	MWCS040R2A	76.00	U	ug/kg
	MW040	MWCS040R3A	72.00	U	ug/kg
	MW040	MWCS040R4A	66.00	U	ug/kg
	MW041	MWCT041R2	69.00	U	ug/kg
	MW046	MWCT046R2	73.00	U	ug/kg
	MW050	MWCT050R2	63.00	U	ug/kg
	MW053	MWCT053R2	66.00	U	ug/kg
	TF-22	TF-22B	96.00	U	ug/kg
	TF-22	TF-22C	98.00	U	ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	94.00	U	ug/kg
	B-14	B-14	92.00	U	ug/kg
	B-15	B-15	88.00	U	ug/kg
	B-16	B-16	93.00	U	ug/kg
	B-17	B-17	92.00	U	ug/kg
	B-18	B-18	78.00	U	ug/kg
	B-19	B-19	89.00	U	ug/kg
	MW001	MWSB001R1	33.00	J	ug/kg
	MW002	MWSB002R1	32.00	J	ug/kg
	MW008	MWSB008R1	34.00	J	ug/kg
	MW008	MWSB008S1	42.00	J	ug/kg
	MW008-SP	MWSB008R1 SP	28.00	J	ug/kg
	MW009	MWSB009R1	61.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW009-SP	MWSB009R1 SP	87.00	U	ug/kg
	MW012	MWSB012R1	32.00	J	ug/kg
	MW013	MWSB013R1	27.00	J	ug/kg
	MW014	MWSB014R1	54.00	U	ug/kg
	MW015	MWSB015R1	39.00	J	ug/kg
	MW015	MWSB015S1	30.00	J	ug/kg
	MW03a	MWSB03aR1	41.00	J	ug/kg
	MW03b	MWSB03bR1	67.00	U	ug/kg
	MW04a	MWSB04aR1	33.00	J	ug/kg
	MW04b	MWSB04bR1	59.00	U	ug/kg
	MW04b-SP	MWSB04bR1 SP	29.00	E	ug/kg
	MW10a	MWSB10aR1	52.00	U	ug/kg
	MW10b	MWSB10bR1	30.00	J	ug/kg
	MW10c	MWSB10cR1	42.00	J	ug/kg
	MW11a	MWSB11aR1	75.00	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	37.00	J	ug/kg
	MW11b	MWSB11bR1	29.00	J	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	43.00	U	ug/kg
Dimethylphthalate					
Surface Samples					
	MW016	MWSS016R1	62.00	U	ug/kg
	MW017	MWSS017R1	61.00	U	ug/kg
	MW018	MWSS018R1	64.00	U	ug/kg
	MW019	MWSS019R1	73.00	U	ug/kg
	MW020	MWSS020R1	49.00	U	ug/kg
	MW021	MWSS021R1	71.00	U	ug/kg
	MW022	MWSS022R1	57.00	U	ug/kg
	MW023	MWSS023R1	52.00	U	ug/kg
	MW024	MWSS024R1	7.20	J	ug/kg
	MW025	MWSS025R1	13.00	J	ug/kg
	MW026	MWSS026R1	55.00	U	ug/kg
	MW026	MWSS026S1	53.00	U	ug/kg
	MW027	MWSS027R1	71.00	U	ug/kg
	MW028	MWSS028R1	49.00	U	ug/kg
	MW029	MWSS029R1	8.70	J	ug/kg
	MW030	MWSS030R1	7.40	J	ug/kg
	MW031	MWSS031R1	64.00	U	ug/kg
	MW032	MWSS032R1	53.00	U	ug/kg
	MW034	MWSS034R1	62.00	U	ug/kg
	MW035	MWSS035R1	47.00	U	ug/kg
	MW037	MWSS037R1	70.00	U	ug/kg
	MW039	MWST039R1	52.00	U	ug/kg
	MW040	MWST040R1	52.00	U	ug/kg
	MW040	MWST040S1	61.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW042	MWST042R1	62.00	U	ug/kg
MW043	MWST043R1	55.00	U	ug/kg
MW044	MWST044R1	62.00	U	ug/kg
MW045	MWST045R1	24.00	J	ug/kg
MW047	MWST047R1	67.00	U	ug/kg
MW048	MWST048R1	62.00	U	ug/kg
MW049	MWST049R1	54.00	U	ug/kg
MW051	MWST051R1	68.00	U	ug/kg
MW052	MWST052R1	62.00	U	ug/kg
MW054	MWST054R1	64.00	U	ug/kg
MW055	MWSS055R1	23.00	J	ug/kg
TF-20	TF-20	99.00	U	ug/kg
TF-21	TF-21A	99.00	U	ug/kg
TF-22	TF-22A	95.00	U	ug/kg
TF-23	TF-23	99.00	U	ug/kg
Subsurface Samples				
MW-1	1	97.00	U	ug/kg
MW-1	2	100.00	U	ug/kg
MW024	MWCS024R2A	50.00	U	ug/kg
MW024	MWCS024R3A	46.00	U	ug/kg
MW025	MWCS025R2A	54.00	U	ug/kg
MW025	MWCS025R3A	43.00	U	ug/kg
MW025	MWCS025R4A	43.00	U	ug/kg
MW026	MWCS026R2A	51.00	U	ug/kg
MW026	MWCS026R3A	46.00	U	ug/kg
MW026	MWCS026R4A	46.00	U	ug/kg
MW027	MWCS027R2A	62.00	U	ug/kg
MW027	MWCS027R3A	49.00	U	ug/kg
MW027	MWCS027R4A	47.00	U	ug/kg
MW028	MWCS028R2A	67.00	U	ug/kg
MW028	MWCS028R3A	66.00	U	ug/kg
MW028	MWCS028R4A	70.00	U	ug/kg
MW029	MWCS029R2A	46.00	U	ug/kg
MW029	MWCS029R3A	44.00	U	ug/kg
MW029	MWCS029R4A	46.00	U	ug/kg
MW030	MWCS030R2A	60.00	U	ug/kg
MW030	MWCS030R3A	42.00	U	ug/kg
MW030	MWCS030S2A	110.00	U	ug/kg
MW031	MWCS031R2A	80.00	U	ug/kg
MW031	MWCS031R3A	78.00	U	ug/kg
MW031	MWCS031R4A	62.00	U	ug/kg
MW034	MWCS034R2A	47.00	U	ug/kg
MW034	MWCS034R3A	44.00	U	ug/kg
MW034	MWCS034R4A	47.00	U	ug/kg
MW035	MWCS035R2A	45.00	U	ug/kg
MW035	MWCS035R3A	47.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW035	MWCS035R4A	47.00	U	ug/kg
	MW035	MWCS035S4A	46.00	U	ug/kg
	MW037	MWCS037R2A	44.00	U	ug/kg
	MW037	MWCS037R3A	43.00	U	ug/kg
	MW037	MWCS037R4A	47.00	U	ug/kg
	MW040	MWCS040R2A	68.00	U	ug/kg
	MW040	MWCS040R3A	65.00	U	ug/kg
	MW040	MWCS040R4A	59.00	U	ug/kg
	MW041	MWCT041R2	62.00	U	ug/kg
	MW046	MWCT046R2	47.00	J	ug/kg
	MW050	MWCT050R2	56.00	U	ug/kg
	MW053	MWCT053R2	59.00	U	ug/kg
	TF-22	TF-22B	96.00	U	ug/kg
	TF-22	TF-22C	98.00	U	ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	94.00	U	ug/kg
	B-14	B-14	92.00	U	ug/kg
	B-15	B-15	320.00		ug/kg
	B-16	B-16	93.00	U	ug/kg
	B-17	B-17	92.00	U	ug/kg
	B-18	B-18	78.00	U	ug/kg
	B-19	B-19	89.00	U	ug/kg
	MW001	MWSB001R1	57.00	U	ug/kg
	MW002	MWSB002R1	54.00	U	ug/kg
	MW008	MWSB008R1	54.00	U	ug/kg
	MW008	MWSB008S1	68.00	U	ug/kg
	MW008-SP	MWSB008R1 SP	47.00	U	ug/kg
	MW009	MWSB009R1	54.00	U	ug/kg
	MW009-SP	MWSB009R1 SP	78.00	U	ug/kg
	MW012	MWSB012R1	10.00	J	ug/kg
	MW013	MWSB013R1	45.00	U	ug/kg
	MW014	MWSB014R1	48.00	U	ug/kg
	MW015	MWSB015R1	66.00	U	ug/kg
	MW015	MWSB015S1	49.00	U	ug/kg
	MW03a	MWSB03aR1	67.00	U	ug/kg
	MW03b	MWSB03bR1	60.00	U	ug/kg
	MW04a	MWSB04aR1	56.00	U	ug/kg
	MW04b	MWSB04bR1	35.00	J	ug/kg
	MW04b-SP	MWSB04bR1 SP	45.00	UE	ug/kg
	MW10a	MWSB10aR1	47.00	U	ug/kg
	MW10b	MWSB10bR1	50.00	U	ug/kg
	MW10c	MWSB10cR1	16.00	J	ug/kg
	MW11a	MWSB11aR1	67.00	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	60.00	U	ug/kg
	MW11b	MWSB11bR1	49.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	38.00	U	ug/kg
Miscellaneous Extractable Compounds				
Benzoic acid				
Surface Samples				
MW016	MWSS016R1	46.00	J	ug/kg
MW017	MWSS017R1	78.00	J	ug/kg
MW018	MWSS018R1	110.00	JB	ug/kg
MW019	MWSS019R1	100.00	JB	ug/kg
MW020	MWSS020R1	43.00	JB	ug/kg
MW021	MWSS021R1	140.00	J	ug/kg
MW022	MWSS022R1	70.00	J	ug/kg
MW023	MWSS023R1	36.00	J	ug/kg
MW024	MWSS024R1	210.00	JB	ug/kg
MW025	MWSS025R1	150.00	JB	ug/kg
MW026	MWSS026R1	70.00	J	ug/kg
MW026	MWSS026S1	56.00	J	ug/kg
MW027	MWSS027R1	93.00	J	ug/kg
MW028	MWSS028R1	100.00	JB	ug/kg
MW029	MWSS029R1	120.00	JB	ug/kg
MW030	MWSS030R1	120.00	JB	ug/kg
MW031	MWSS031R1	330.00	JB	ug/kg
MW032	MWSS032R1	1300.00	J	ug/kg
MW034	MWSS034R1	200.00	JB	ug/kg
MW035	MWSS035R1	140.00	JB	ug/kg
MW037	MWSS037R1	140.00	J	ug/kg
MW039	MWST039R1	50.00	JB	ug/kg
MW040	MWST040R1	66.00	JB	ug/kg
MW040	MWST040S1	58.00	J	ug/kg
MW042	MWST042R1	170.00	J	ug/kg
MW043	MWST043R1	80.00	J	ug/kg
MW044	MWST044R1	130.00	J	ug/kg
MW045	MWST045R1	140.00	JB	ug/kg
MW047	MWST047R1	230.00	J	ug/kg
MW048	MWST048R1	88.00	JB	ug/kg
MW049	MWST049R1	81.00	J	ug/kg
MW051	MWST051R1	290.00	J	ug/kg
MW052	MWST052R1	140.00	J	ug/kg
MW054	MWST054R1	140.00	J	ug/kg
MW055	MWSS055R1	200.00	J	ug/kg
TF-20	TF-20	500.00	U	ug/kg
TF-21	TF-21A	500.00	U	ug/kg
TF-22	TF-22A	480.00	U	ug/kg
TF-23	TF-23	500.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
Subsurface Samples					
	MW-1	1	970.00	U	ug/kg
	MW-1	2	1000.00	U	ug/kg
	MW024	MWCS024R2A	66.00	JB	ug/kg
	MW024	MWCS024R3A	23.00	JB	ug/kg
	MW025	MWCS025R2A	30.00	JB	ug/kg
	MW025	MWCS025R3A	6.80	JB	ug/kg
	MW025	MWCS025R4A	12.00	JB	ug/kg
	MW026	MWCS026R2A	24.00	JB	ug/kg
	MW026	MWCS026R3A	34.00	JB	ug/kg
	MW026	MWCS026R4A	16.00	JB	ug/kg
	MW027	MWCS027R2A	540.00	U	ug/kg
	MW027	MWCS027R3A	22.00	JB	ug/kg
	MW027	MWCS027R4A	20.00	JB	ug/kg
	MW028	MWCS028R2A	33.00	BJ	ug/kg
	MW028	MWCS028R3A	38.00	JB	ug/kg
	MW028	MWCS028R4A	35.00	BJ	ug/kg
	MW029	MWCS029R2A	23.00	JB	ug/kg
	MW029	MWCS029R3A	25.00	BJ	ug/kg
	MW029	MWCS029R4A	23.00	JB	ug/kg
	MW030	MWCS030R2A	520.00	U	ug/kg
	MW030	MWCS030R3A	360.00	U	ug/kg
	MW030	MWCS030S2A	470.00	U	ug/kg
	MW031	MWCS031R2A	320.00	JB	ug/kg
	MW031	MWCS031R3A	200.00	JB	ug/kg
	MW031	MWCS031R4A	20.00	JB	ug/kg
	MW034	MWCS034R2A	41.00	JB	ug/kg
	MW034	MWCS034R3A	19.00	JB	ug/kg
	MW034	MWCS034R4A	20.00	JB	ug/kg
	MW035	MWCS035R2A	56.00	JB	ug/kg
	MW035	MWCS035R3A	21.00	JB	ug/kg
	MW035	MWCS035R4A	22.00	JB	ug/kg
	MW035	MWCS035S4A	23.00	JB	ug/kg
	MW037	MWCS037R2A	45.00	JB	ug/kg
	MW037	MWCS037R3A	32.00	JB	ug/kg
	MW037	MWCS037R4A	16.00	JB	ug/kg
	MW040	MWCS040R2A	270.00	JB	ug/kg
	MW040	MWCS040R3A	30.00	JB	ug/kg
	MW040	MWCS040R4A	16.00	BJ	ug/kg
	MW041	MWCT041R2	150.00	J	ug/kg
	MW046	MWCT046R2	160.00	J	ug/kg
	MW050	MWCT050R2	480.00	U	ug/kg
	MW053	MWCT053R2	100.00	J	ug/kg
	TF-22	TF-22B	480.00	U	ug/kg
	TF-22	TF-22C	490.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
Bank Samples					
	B-12	B-12	490.00	U	ug/kg
	B-13	B-13	470.00	UJ	ug/kg
	B-14	B-14	460.00	U	ug/kg
	B-15	B-15	440.00	U	ug/kg
	B-16	B-16	460.00	U	ug/kg
	B-17	B-17	460.00	U	ug/kg
	B-18	B-18	390.00	U	ug/kg
	B-19	B-19	440.00	U	ug/kg
	MW001	MWSB001R1	62.00	JB	ug/kg
	MW002	MWSB002R1	55.00	JB	ug/kg
	MW008	MWSB008R1	300.00	JB	ug/kg
	MW008	MWSB008S1	120.00	JB	ug/kg
	MW008-SP	MWSB008R1 SP	110.00	JB	ug/kg
	MW009	MWSB009R1	92.00	JB	ug/kg
	MW009-SP	MWSB009R1 SP	150.00	JB	ug/kg
	MW012	MWSB012R1	97.00	JB	ug/kg
	MW013	MWSB013R1	19.00	JB	ug/kg
	MW014	MWSB014R1	19.00	JB	ug/kg
	MW015	MWSB015R1	35.00	JB	ug/kg
	MW015	MWSB015S1	38.00	BJ	ug/kg
	MW03a	MWSB03aR1	580.00	U	ug/kg
	MW03b	MWSB03bR1	80.00	JB	ug/kg
	MW04a	MWSB04aR1	48.00	JB	ug/kg
	MW04b	MWSB04bR1	160.00	JB	ug/kg
	MW04b-SP	MWSB04bR1 SP	990.00	E	ug/kg
	MW10a	MWSB10aR1	730.00	B	ug/kg
	MW10b	MWSB10bR1	640.00	B	ug/kg
	MW10c	MWSB10cR1	240.00	JB	ug/kg
	MW11a	MWSB11aR1	240.00	JB	ug/kg
	MW11a-SP	MWSB11aR1 SP	170.00	JB	ug/kg
	MW11b	MWSB11bR1	100.00	JB	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	55.00	JB	ug/kg
Benzyl alcohol					
Surface Samples					
	MW016	MWSS016R1	1.80	E	ug/kg
	MW017	MWSS017R1	5.00	E	ug/kg
	MW018	MWSS018R1	4.30	E	ug/kg
	MW019	MWSS019R1	7.10	E	ug/kg
	MW020	MWSS020R1	1.80	E	ug/kg
	MW021	MWSS021R1	5.90	E	ug/kg
	MW022	MWSS022R1	1.80	E	ug/kg
	MW023	MWSS023R1	1.10	E	ug/kg
	MW024	MWSS024R1	30.00	J	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW025	MWSS025R1	5.20	J	ug/kg
MW026	MWSS026R1	2.50	E	ug/kg
MW026	MWSS026S1	2.20	J	ug/kg
MW027	MWSS027R1	3.30	E	ug/kg
MW028	MWSS028R1	2.00	E	ug/kg
MW029	MWSS029R1	7.90	E	ug/kg
MW030	MWSS030R1	7.50	E	ug/kg
MW031	MWSS031R1	3.80	E	ug/kg
MW032	MWSS032R1	3.60	E	ug/kg
MW034	MWSS034R1	8.40	E	ug/kg
MW035	MWSS035R1	4.30	E	ug/kg
MW037	MWSS037R1	9.80	UE	ug/kg
MW039	MWST039R1	2.70	E	ug/kg
MW040	MWST040R1	1.30	UE	ug/kg
MW040	MWST040S1	1.70	UE	ug/kg
MW042	MWST042R1	6.00	E	ug/kg
MW043	MWST043R1	3.10	E	ug/kg
MW044	MWST044R1	5.20	E	ug/kg
MW045	MWST045R1	5.00	E	ug/kg
MW047	MWST047R1	9.70	E	ug/kg
MW048	MWST048R1	3.80	E	ug/kg
MW049	MWST049R1	3.20	UE	ug/kg
MW051	MWST051R1	9.00	E	ug/kg
MW052	MWST052R1	3.20	E	ug/kg
MW054	MWST054R1	6.00	UE	ug/kg
MW055	MWSS055R1	6.90	E	ug/kg
TF-20	TF-20	20.00	U	ug/kg
TF-21	TF-21A	20.00	U	ug/kg
TF-22	TF-22A	20.00	U	ug/kg
TF-23	TF-23	20.00	U	ug/kg
Subsurface Samples				
MW-1	1	480.00	U	ug/kg
MW-1	2	510.00	U	ug/kg
MW024	MWCS024R2A	19.00	U	ug/kg
MW024	MWCS024R3A	18.00	U	ug/kg
MW025	MWCS025R2A	4.00	E	ug/kg
MW025	MWCS025R3A	16.00	E	ug/kg
MW025	MWCS025R4A	16.00	E	ug/kg
MW026	MWCS026R2A	20.00	E	ug/kg
MW026	MWCS026R3A	18.00	U	ug/kg
MW026	MWCS026R4A	18.00	E	ug/kg
MW027	MWCS027R2A	24.00	E	ug/kg
MW027	MWCS027R3A	19.00	E	ug/kg
MW027	MWCS027R4A	18.00	E	ug/kg
MW028	MWCS028R2A	26.00	U	ug/kg
MW028	MWCS028R3A	25.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW028	MWCS028R4A	27.00	U	ug/kg
	MW029	MWCS029R2A	18.00	E	ug/kg
	MW029	MWCS029R3A	0.91	J	ug/kg
	MW029	MWCS029R4A	18.00	U	ug/kg
	MW030	MWCS030R2A	2.90	E	ug/kg
	MW030	MWCS030R3A	1.60	E	ug/kg
	MW030	MWCS030S2A	2.70	E	ug/kg
	MW031	MWCS031R2A	3.60	J	ug/kg
	MW031	MWCS031R3A	5.00	J	ug/kg
	MW031	MWCS031R4A	24.00	U	ug/kg
	MW034	MWCS034R2A	1.30	J	ug/kg
	MW034	MWCS034R3A	1.20	J	ug/kg
	MW034	MWCS034R4A	18.00	U	ug/kg
	MW035	MWCS035R2A	1.80	E	ug/kg
	MW035	MWCS035R3A	18.00	U	ug/kg
	MW035	MWCS035R4A	18.00	E	ug/kg
	MW035	MWCS035S4A	18.00	U	ug/kg
	MW037	MWCS037R2A	17.00	U	ug/kg
	MW037	MWCS037R3A	17.00	U	ug/kg
	MW037	MWCS037R4A	18.00	U	ug/kg
	MW040	MWCS040R2A	26.00	U	ug/kg
	MW040	MWCS040R3A	1.50	J	ug/kg
	MW040	MWCS040R4A	23.00	U	ug/kg
	MW041	MWCT041R2	5.60	E	ug/kg
	MW046	MWCT046R2	6.20	E	ug/kg
	MW050	MWCT050R2	3.20	E	ug/kg
	MW053	MWCT053R2	3.20	E	ug/kg
	TF-22	TF-22B	20.00	U	ug/kg
	TF-22	TF-22C	20.00	U	ug/kg
Bank Samples					
	B-12	B-12	20.00	U	ug/kg
	B-13	B-13	20.00	UJ	ug/kg
	B-14	B-14	20.00	U	ug/kg
	B-15	B-15	20.00	U	ug/kg
	B-16	B-16	20.00	U	ug/kg
	B-17	B-17	20.00	U	ug/kg
	B-18	B-18	20.00	U	ug/kg
	B-19	B-19	20.00	U	ug/kg
	MW001	MWSB001R1	3.30	E	ug/kg
	MW002	MWSB002R1	2.30	E	ug/kg
	MW008	MWSB008R1	99.00	E	ug/kg
	MW008	MWSB008S1	6.80	E	ug/kg
	MW008-SP	MWSB008R1 SP	3.60	E	ug/kg
	MW009	MWSB009R1	6.60	E	ug/kg
	MW009-SP	MWSB009R1 SP	5.70	E	ug/kg
	MW012	MWSB012R1	2.20	E	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW013	MWSB013R1	17.00	E	ug/kg
	MW014	MWSB014R1	2.00	E	ug/kg
	MW015	MWSB015R1	50.00	UE	ug/kg
	MW015	MWSB015S1	19.00	UE	ug/kg
	MW03a	MWSB03aR1	3.80	E	ug/kg
	MW03b	MWSB03bR1	2.20	E	ug/kg
	MW04a	MWSB04aR1	2.30	E	ug/kg
	MW04b	MWSB04bR1	7.30	E	ug/kg
	MW04b-SP	MWSB04bR1 SP	85.00	E	ug/kg
	MW10a	MWSB10aR1	14.00	E	ug/kg
	MW10b	MWSB10bR1	38.00	E	ug/kg
	MW10c	MWSB10cR1	4.90	E	ug/kg
	MW11a	MWSB11aR1	4.70	E	ug/kg
	MW11a-SP	MWSB11aR1 SP	3.90	E	ug/kg
	MW11b	MWSB11bR1	9.40	E	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	2.10	G	ug/kg
Dibenzofuran					
Surface Samples					
	MW016	MWSS016R1	61.00		ug/kg
	MW017	MWSS017R1	59.00		ug/kg
	MW018	MWSS018R1	100.00		ug/kg
	MW019	MWSS019R1	53.00		ug/kg
	MW020	MWSS020R1	14.00	J	ug/kg
	MW021	MWSS021R1	170.00		ug/kg
	MW022	MWSS022R1	140.00		ug/kg
	MW023	MWSS023R1	43.00		ug/kg
	MW024	MWSS024R1	250.00		ug/kg
	MW025	MWSS025R1	180.00		ug/kg
	MW026	MWSS026R1	220.00		ug/kg
	MW026	MWSS026S1	160.00		ug/kg
	MW027	MWSS027R1	210.00		ug/kg
	MW028	MWSS028R1	380.00		ug/kg
	MW029	MWSS029R1	230.00		ug/kg
	MW030	MWSS030R1	240.00		ug/kg
	MW031	MWSS031R1	460.00		ug/kg
	MW032	MWSS032R1	250.00		ug/kg
	MW034	MWSS034R1	270.00		ug/kg
	MW035	MWSS035R1	180.00		ug/kg
	MW037	MWSS037R1	150.00		ug/kg
	MW039	MWST039R1	1200.00		ug/kg
	MW040	MWST040R1	96.00		ug/kg
	MW040	MWST040S1	160.00		ug/kg
	MW042	MWST042R1	170.00		ug/kg
	MW043	MWST043R1	110.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
MW044	MWST044R1	310.00		ug/kg
MW045	MWST045R1	76.00		ug/kg
MW047	MWST047R1	230.00		ug/kg
MW048	MWST048R1	490.00		ug/kg
MW049	MWST049R1	92.00		ug/kg
MW051	MWST051R1	2900.00		ug/kg
MW052	MWST052R1	210.00		ug/kg
MW054	MWST054R1	580.00		ug/kg
MW055	MWSS055R1	350.00		ug/kg
TF-20	TF-20	99.00	U	ug/kg
TF-21	TF-21A	99.00	U	ug/kg
TF-22	TF-22A	100.00		ug/kg
TF-23	TF-23	99.00	U	ug/kg
Subsurface Samples				
MW-1	1	61.00	J	ug/kg
MW-1	2	110.00		ug/kg
MW024	MWCS024R2A	490.00		ug/kg
MW024	MWCS024R3A	63.00		ug/kg
MW025	MWCS025R2A	160.00		ug/kg
MW025	MWCS025R3A	27.00	U	ug/kg
MW025	MWCS025R4A	27.00	U	ug/kg
MW026	MWCS026R2A	14.00	J	ug/kg
MW026	MWCS026R3A	29.00	U	ug/kg
MW026	MWCS026R4A	29.00	U	ug/kg
MW027	MWCS027R2A	480.00		ug/kg
MW027	MWCS027R3A	1000.00		ug/kg
MW027	MWCS027R4A	24.00	J	ug/kg
MW028	MWCS028R2A	29.00	J	ug/kg
MW028	MWCS028R3A	8.60	J	ug/kg
MW028	MWCS028R4A	45.00	U	ug/kg
MW029	MWCS029R2A	19.00	J	ug/kg
MW029	MWCS029R3A	28.00	U	ug/kg
MW029	MWCS029R4A	29.00	U	ug/kg
MW030	MWCS030R2A	4800.00		ug/kg
MW030	MWCS030R3A	210.00		ug/kg
MW030	MWCS030S2A	3400.00		ug/kg
MW031	MWCS031R2A	400.00		ug/kg
MW031	MWCS031R3A	280.00		ug/kg
MW031	MWCS031R4A	32.00	J	ug/kg
MW034	MWCS034R2A	110.00		ug/kg
MW034	MWCS034R3A	4.70	J	ug/kg
MW034	MWCS034R4A	30.00	U	ug/kg
MW035	MWCS035R2A	88.00		ug/kg
MW035	MWCS035R3A	5.50	J	ug/kg
MW035	MWCS035R4A	30.00	U	ug/kg
MW035	MWCS035S4A	29.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW037	MWCS037R2A	85.00		ug/kg
	MW037	MWCS037R3A	28.00	U	ug/kg
	MW037	MWCS037R4A	30.00	U	ug/kg
	MW040	MWCS040R2A	180.00		ug/kg
	MW040	MWCS040R3A	12.00	J	ug/kg
	MW040	MWCS040R4A	37.00	U	ug/kg
	MW041	MWCT041R2	290.00		ug/kg
	MW046	MWCT046R2	200.00		ug/kg
	MW050	MWCT050R2	2200.00		ug/kg
	MW053	MWCT053R2	240.00		ug/kg
	TF-22	TF-22B	140.00		ug/kg
	TF-22	TF-22C	4600.00		ug/kg
Bank Samples					
	B-12	B-12	98.00	U	ug/kg
	B-13	B-13	94.00	U	ug/kg
	B-14	B-14	230.00		ug/kg
	B-15	B-15	88.00	U	ug/kg
	B-16	B-16	97.00		ug/kg
	B-17	B-17	92.00	U	ug/kg
	B-18	B-18	78.00	U	ug/kg
	B-19	B-19	150.00		ug/kg
	MW001	MWSB001R1	100.00		ug/kg
	MW002	MWSB002R1	60.00		ug/kg
	MW008	MWSB008R1	64.00		ug/kg
	MW008	MWSB008S1	65.00		ug/kg
	MW008-SP	MWSB008R1 SP	37.00		ug/kg
	MW009	MWSB009R1	180.00		ug/kg
	MW009-SP	MWSB009R1 SP	220.00		ug/kg
	MW012	MWSB012R1	170.00		ug/kg
	MW013	MWSB013R1	15.00	J	ug/kg
	MW014	MWSB014R1	28.00	J	ug/kg
	MW015	MWSB015R1	67.00		ug/kg
	MW015	MWSB015S1	80.00		ug/kg
	MW03a	MWSB03aR1	450.00		ug/kg
	MW03b	MWSB03bR1	200.00		ug/kg
	MW04a	MWSB04aR1	34.00	J	ug/kg
	MW04b	MWSB04bR1	85.00		ug/kg
	MW04b-SP	MWSB04bR1 SP	45.00		ug/kg
	MW10a	MWSB10aR1	220.00		ug/kg
	MW10b	MWSB10bR1	220.00		ug/kg
	MW10c	MWSB10cR1	300.00		ug/kg
	MW11a	MWSB11aR1	98.00		ug/kg
	MW11a-SP	MWSB11aR1 SP	140.00		ug/kg
	MW11b	MWSB11bR1	190.00		ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	780.00		ug/kg

Station	Sample ID	Concentration	Flag	Units
Hexachloroethane				
Surface Samples				
MW021	MWSS021R1	84.00	U	ug/kg
MW054	MWST054R1	76.00	U	ug/kg
Subsurface Samples				
MW053	MWCT053R2	70.00	U	ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-DRET-7298	3.10	U	ug/L
Bulk Sediment	DPC-DUPLICAT	3.10	U	ug/L
Bulk Sediment	DPC-METD-7298	3.10	U	ug/L
Bulk Sediment	DPC-METT-7298	3.10	U	ug/L
Bulk Sediment	DPC-WATD-7298	3.10	U	ug/L
Bulk Sediment	DPC-WATT-7298	3.10	U	ug/L
Bulk Sediment	TCLT RINSATE 1	3.10	U	ug/L
Bulk Sediment	TCLT-PV 01	3.10	U	ug/L
Bulk Sediment	TCLT-PV 02.5	3.10	U	ug/L
Bulk Sediment	TCLT-PV 04	3.10	U	ug/L
Bulk Sediment	TCLT-PV 06	3.10	U	ug/L
Bulk Sediment	TCLT-PV 07.3	3.40	U	ug/L
Bulk Sediment	TCLT-PV 09	3.80	U	ug/L
Bulk Sediment	TCLT-PV 11	3.10	U	ug/L
Bulk Sediment	TCLT-PV 12.8	3.10	U	ug/L
Bulk Sediment	TCLT-PV 14.4	3.30	U	ug/L
Bulk Sediment	TCLT-PV 15.8	3.40	U	ug/L
Bulk Sediment	TCLT-PV 17.5	3.30	U	ug/L
Bulk Sediment	TCLT-PV 19	3.30	U	ug/L
Bulk Sediment	TCLT-PV 20.6	3.40	U	ug/L
Bulk Sediment	TCLT-PV 22.2	3.40	U	ug/L
Bulk Sediment	TCLT-PV 23.8	3.20	U	ug/L
Bulk Sediment	TCLT-PV 25.3	3.50	U	ug/L
Bulk Sediment	TCLT-PV 26.9	3.40	U	ug/L
Bulk Sediment	TCLT-PV 28.4	3.10	U	ug/L
Bulk Sediment	TCLT-PV 30	3.20	U	ug/L
N-Nitrosodiphenylamine				
Surface Samples				
MW016	MWSS016R1	21.00	U	ug/kg
MW017	MWSS017R1	21.00	U	ug/kg
MW018	MWSS018R1	29.00		ug/kg
MW019	MWSS019R1	25.00	U	ug/kg
MW020	MWSS020R1	17.00	U	ug/kg
MW021	MWSS021R1	24.00	U	ug/kg
MW022	MWSS022R1	46.00		ug/kg
MW023	MWSS023R1	17.00	U	ug/kg
MW024	MWSS024R1	21.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW025	MWSS025R1	23.00	U	ug/kg
	MW026	MWSS026R1	19.00	U	ug/kg
	MW026	MWSS026S1	18.00	U	ug/kg
	MW027	MWSS027R1	24.00	U	ug/kg
	MW028	MWSS028R1	16.00	U	ug/kg
	MW029	MWSS029R1	18.00	U	ug/kg
	MW030	MWSS030R1	19.00	U	ug/kg
	MW031	MWSS031R1	43.00	U	ug/kg
	MW032	MWSS032R1	18.00	U	ug/kg
	MW034	MWSS034R1	21.00	U	ug/kg
	MW035	MWSS035R1	32.00	U	ug/kg
	MW037	MWSS037R1	66.00		ug/kg
	MW039	MWST039R1	17.00	U	ug/kg
	MW040	MWST040R1	18.00	U	ug/kg
	MW040	MWST040S1	21.00	U	ug/kg
	MW042	MWST042R1	21.00	U	ug/kg
	MW043	MWST043R1	19.00	U	ug/kg
	MW044	MWST044R1	21.00	U	ug/kg
	MW045	MWST045R1	23.00	U	ug/kg
	MW047	MWST047R1	23.00	U	ug/kg
	MW048	MWST048R1	21.00	U	ug/kg
	MW049	MWST049R1	18.00	U	ug/kg
	MW051	MWST051R1	190.00	J	ug/kg
	MW052	MWST052R1	83.00		ug/kg
	MW054	MWST054R1	22.00	U	ug/kg
	MW055	MWSS055R1	25.00	U	ug/kg
	TF-20	TF-20	20.00	U	ug/kg
	TF-21	TF-21A	20.00	U	ug/kg
	TF-22	TF-22A	20.00	U	ug/kg
	TF-23	TF-23	20.00	U	ug/kg
Subsurface Samples					
	MW-1	1	97.00	U	ug/kg
	MW-1	2	100.00	U	ug/kg
	MW024	MWCS024R2A	34.00	U	ug/kg
	MW024	MWCS024R3A	16.00		ug/kg
	MW025	MWCS025R2A	18.00	U	ug/kg
	MW025	MWCS025R3A	14.00	UX	ug/kg
	MW025	MWCS025R4A	14.00	U	ug/kg
	MW026	MWCS026R2A	4.40	J	ug/kg
	MW026	MWCS026R3A	16.00	U	ug/kg
	MW026	MWCS026R4A	15.00	U	ug/kg
	MW027	MWCS027R2A	21.00	U	ug/kg
	MW027	MWCS027R3A	33.00	U	ug/kg
	MW027	MWCS027R4A	16.00	U	ug/kg
	MW028	MWCS028R2A	8.70	J	ug/kg
	MW028	MWCS028R3A	22.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW028	MWCS028R4A	24.00	U	ug/kg
	MW029	MWCS029R2A	16.00	U	ug/kg
	MW029	MWCS029R3A	15.00	U	ug/kg
	MW029	MWCS029R4A	15.00	U	ug/kg
	MW030	MWCS030R2A	160.00	U	ug/kg
	MW030	MWCS030R3A	14.00	U	ug/kg
	MW030	MWCS030S2A	73.00	U	ug/kg
	MW031	MWCS031R2A	54.00	U	ug/kg
	MW031	MWCS031R3A	26.00	U	ug/kg
	MW031	MWCS031R4A	21.00	U	ug/kg
	MW034	MWCS034R2A	16.00	U	ug/kg
	MW034	MWCS034R3A	15.00	U	ug/kg
	MW034	MWCS034R4A	16.00	U	ug/kg
	MW035	MWCS035R2A	15.00	U	ug/kg
	MW035	MWCS035R3A	16.00	U	ug/kg
	MW035	MWCS035R4A	16.00	U	ug/kg
	MW035	MWCS035S4A	15.00	U	ug/kg
	MW037	MWCS037R2A	15.00	U	ug/kg
	MW037	MWCS037R3A	15.00	U	ug/kg
	MW037	MWCS037R4A	16.00	U	ug/kg
	MW040	MWCS040R2A	23.00	U	ug/kg
	MW040	MWCS040R3A	4.30	J	ug/kg
	MW040	MWCS040R4A	20.00	U	ug/kg
	MW041	MWCT041R2	60.00		ug/kg
	MW046	MWCT046R2	22.00	U	ug/kg
	MW050	MWCT050R2	38.00	U	ug/kg
	MW053	MWCT053R2	20.00	U	ug/kg
	TF-22	TF-22B	20.00	U	ug/kg
	TF-22	TF-22C	20.00	U	ug/kg
Bank Samples					
	B-12	B-12	20.00	U	ug/kg
	B-13	B-13	20.00	U	ug/kg
	B-14	B-14	20.00	U	ug/kg
	B-15	B-15	20.00	U	ug/kg
	B-16	B-16	20.00	U	ug/kg
	B-17	B-17	20.00	U	ug/kg
	B-18	B-18	20.00	U	ug/kg
	B-19	B-19	20.00	U	ug/kg
	MW001	MWSB001R1	19.00	U	ug/kg
	MW002	MWSB002R1	18.00	U	ug/kg
	MW008	MWSB008R1	18.00	U	ug/kg
	MW008	MWSB008S1	23.00	U	ug/kg
	MW008-SP	MWSB008R1 SP	14.00	J	ug/kg
	MW009	MWSB009R1	18.00	U	ug/kg
	MW009-SP	MWSB009R1 SP	26.00	U	ug/kg
	MW012	MWSB012R1	19.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW013	MWSB013R1	15.00	U	ug/kg
	MW014	MWSB014R1	16.00	U	ug/kg
	MW015	MWSB015R1	22.00	U	ug/kg
	MW015	MWSB015S1	16.00	U	ug/kg
	MW03a	MWSB03aR1	23.00	U	ug/kg
	MW03b	MWSB03bR1	20.00	U	ug/kg
	MW04a	MWSB04aR1	19.00	U	ug/kg
	MW04b	MWSB04bR1	17.00	J	ug/kg
	MW04b-SP	MWSB04bR1 SP	15.00	UE	ug/kg
	MW10a	MWSB10aR1	16.00	U	ug/kg
	MW10b	MWSB10bR1	17.00	U	ug/kg
	MW10c	MWSB10cR1	24.00	U	ug/kg
	MW11a	MWSB11aR1	35.00	J	ug/kg
	MW11a-SP	MWSB11aR1 SP	61.00	J	ug/kg
	MW11b	MWSB11bR1	16.00	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	26.00	U	ug/kg
Pesticides					
4,4-DDD					
Surface Samples					
	MW016	MWSS016R1	6.10	U	ug/kg
	MW017	MWSS017R1	7.90	U	ug/kg
	MW018	MWSS018R1	6.30	U	ug/kg
	MW019	MWSS019R1	7.10	U	ug/kg
	MW020	MWSS020R1	4.80	U	ug/kg
	MW021	MWSS021R1	6.90	U	ug/kg
	MW022	MWSS022R1	10.00	P	ug/kg
	MW023	MWSS023R1	5.00	U	ug/kg
	MW024	MWSS024R1	7.90	U	ug/kg
	MW025	MWSS025R1	6.70	U	ug/kg
	MW026	MWSS026R1	5.40	U	ug/kg
	MW026	MWSS026S1	5.20	U	ug/kg
	MW027	MWSS027R1	6.90	U	ug/kg
	MW028	MWSS028R1	4.80	U	ug/kg
	MW029	MWSS029R1	13.00		ug/kg
	MW030	MWSS030R1	7.20	U	ug/kg
	MW031	MWSS031R1	8.30	U	ug/kg
	MW032	MWSS032R1	5.20	U	ug/kg
	MW034	MWSS034R1	6.10	U	ug/kg
	MW035	MWSS035R1	6.20	U	ug/kg
	MW037	MWSS037R1	6.80	U	ug/kg
	MW039	MWST039R1	5.00	U	ug/kg
	MW040	MWST040R1	5.10	U	ug/kg
	MW040	MWST040S1	6.00	U	ug/kg
	MW042	MWST042R1	6.10	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW043	MWST043R1	5.40	U	ug/kg
	MW044	MWST044R1	8.10	U	ug/kg
	MW045	MWST045R1	6.50	U	ug/kg
	MW047	MWST047R1	8.80	U	ug/kg
	MW048	MWST048R1	6.10	U	ug/kg
	MW049	MWST049R1	5.30	U	ug/kg
	MW051	MWST051R1	6.70	U	ug/kg
	MW052	MWST052R1	6.10	U	ug/kg
	MW054	MWST054R1	8.30	U	ug/kg
	MW055	MWSS055R1	7.10	U	ug/kg
	TF-20	TF-20	8.00	U	ug/kg
	TF-21	TF-21A	8.00	U	ug/kg
	TF-22	TF-22A	8.00	U	ug/kg
	TF-23	TF-23	8.00	U	ug/kg
Subsurface Samples					
	MW024	MWCS024R2A	4.90	U	ug/kg
	MW024	MWCS024R3A	4.50	U	ug/kg
	MW025	MWCS025R2A	5.30	U	ug/kg
	MW025	MWCS025R3A	4.20	U	ug/kg
	MW025	MWCS025R4A	4.20	U	ug/kg
	MW026	MWCS026R2A	5.00	U	ug/kg
	MW026	MWCS026R3A	4.50	U	ug/kg
	MW026	MWCS026R4A	4.40	U	ug/kg
	MW027	MWCS027R2A	18.00	P	ug/kg
	MW027	MWCS027R3A	4.80	U	ug/kg
	MW027	MWCS027R4A	4.60	U	ug/kg
	MW028	MWCS028R2A	4.40	U	ug/kg
	MW028	MWCS028R3A	4.30	U	ug/kg
	MW028	MWCS028R4A	4.60	U	ug/kg
	MW029	MWCS029R2A	4.50	U	ug/kg
	MW029	MWCS029R3A	4.30	U	ug/kg
	MW029	MWCS029R4A	4.40	U	ug/kg
	MW030	MWCS030R2A	5.80	U	ug/kg
	MW030	MWCS030R3A	4.10	U	ug/kg
	MW030	MWCS030S2A	5.30	U	ug/kg
	MW031	MWCS031R2A	36.00	P	ug/kg
	MW031	MWCS031R3A	5.00	U	ug/kg
	MW031	MWCS031R4A	4.10	U	ug/kg
	MW034	MWCS034R2A	4.60	U	ug/kg
	MW034	MWCS034R3A	4.30	U	ug/kg
	MW034	MWCS034R4A	4.60	U	ug/kg
	MW035	MWCS035R2A	4.40	U	ug/kg
	MW035	MWCS035R3A	4.60	U	ug/kg
	MW035	MWCS035R4A	4.60	U	ug/kg
	MW035	MWCS035S4A	4.40	U	ug/kg
	MW037	MWCS037R2A	4.30	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW037	MWCS037R3A	4.20	U	ug/kg
	MW037	MWCS037R4A	4.60	U	ug/kg
	MW040	MWCS040R2A	4.40	U	ug/kg
	MW040	MWCS040R3A	4.20	U	ug/kg
	MW040	MWCS040R4A	3.80	U	ug/kg
	MW041	MWCT041R2	6.10	U	ug/kg
	MW046	MWCT046R2	6.40	U	ug/kg
	MW050	MWCT050R2	5.50	U	ug/kg
	MW053	MWCT053R2	5.70	U	ug/kg
	TF-22	TF-22B	8.00	U	ug/kg
	TF-22	TF-22C	8.00	U	ug/kg
Bank Samples					
	B-12	B-12	8.00	U	ug/kg
	B-13	B-13	8.00	U	ug/kg
	B-14	B-14	8.00	U	ug/kg
	B-15	B-15	8.00	U	ug/kg
	B-16	B-16	8.00	U	ug/kg
	B-17	B-17	8.00	U	ug/kg
	B-18	B-18	8.00	U	ug/kg
	B-19	B-19	8.00	U	ug/kg
	MW001	MWSB001R1	5.60	U	ug/kg
	MW002	MWSB002R1	5.30	U	ug/kg
	MW008	MWSB008R1	5.30	U	ug/kg
	MW008	MWSB008S1	6.70	U	ug/kg
	MW008-SP	MWSB008R1 SP	4.60	U	ug/kg
	MW009	MWSB009R1	7.10	U	ug/kg
	MW009-SP	MWSB009R1 SP	7.60	U	ug/kg
	MW012	MWSB012R1	5.40	U	ug/kg
	MW013	MWSB013R1	4.40	U	ug/kg
	MW014	MWSB014R1	4.70	U	ug/kg
	MW015	MWSB015R1	6.40	U	ug/kg
	MW015	MWSB015S1	4.80	U	ug/kg
	MW03a	MWSB03aR1	23.00	P	ug/kg
	MW03b	MWSB03bR1	16.00	P	ug/kg
	MW04a	MWSB04aR1	5.50	U	ug/kg
	MW04b	MWSB04bR1	5.20	U	ug/kg
	MW04b-SP	MWSB04bR1 SP	4.40	U	ug/kg
	MW10a	MWSB10aR1	4.60	U	ug/kg
	MW10b	MWSB10bR1	4.90	U	ug/kg
	MW10c	MWSB10cR1	13.00	U	ug/kg
	MW11a	MWSB11aR1	6.50	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	5.80	U	ug/kg
	MW11b	MWSB11bR1	4.80	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	5.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
4,4-DDE					
Surface Samples					
	MW016	MWSS016R1	6.10	U	ug/kg
	MW017	MWSS017R1	7.90	U	ug/kg
	MW018	MWSS018R1	6.30	U	ug/kg
	MW019	MWSS019R1	7.10	U	ug/kg
	MW020	MWSS020R1	4.80	U	ug/kg
	MW021	MWSS021R1	6.90	U	ug/kg
	MW022	MWSS022R1	5.60	U	ug/kg
	MW023	MWSS023R1	5.00	U	ug/kg
	MW024	MWSS024R1	7.90	U	ug/kg
	MW025	MWSS025R1	6.70	U	ug/kg
	MW026	MWSS026R1	5.40	U	ug/kg
	MW026	MWSS026S1	5.20	U	ug/kg
	MW027	MWSS027R1	6.90	U	ug/kg
	MW028	MWSS028R1	4.80	U	ug/kg
	MW029	MWSS029R1	6.90	U	ug/kg
	MW030	MWSS030R1	7.20	U	ug/kg
	MW031	MWSS031R1	93.00		ug/kg
	MW032	MWSS032R1	5.20	U	ug/kg
	MW034	MWSS034R1	6.10	U	ug/kg
	MW035	MWSS035R1	6.20	U	ug/kg
	MW037	MWSS037R1	6.80	U	ug/kg
	MW039	MWST039R1	5.00	U	ug/kg
	MW040	MWST040R1	5.10	U	ug/kg
	MW040	MWST040S1	6.00	U	ug/kg
	MW042	MWST042R1	6.10	U	ug/kg
	MW043	MWST043R1	5.40	U	ug/kg
	MW044	MWST044R1	8.10	U	ug/kg
	MW045	MWST045R1	6.50	U	ug/kg
	MW047	MWST047R1	8.80	U	ug/kg
	MW048	MWST048R1	6.10	U	ug/kg
	MW049	MWST049R1	5.30	U	ug/kg
	MW051	MWST051R1	6.70	U	ug/kg
	MW052	MWST052R1	6.10	U	ug/kg
	MW054	MWST054R1	8.30	U	ug/kg
	MW055	MWSS055R1	7.10	U	ug/kg
	TF-20	TF-20	8.00	U	ug/kg
	TF-21	TF-21A	8.00	U	ug/kg
	TF-22	TF-22A	8.00	U	ug/kg
	TF-23	TF-23	8.00	U	ug/kg
Subsurface Samples					
	MW024	MWCS024R2A	11.00	E	ug/kg
	MW024	MWCS024R3A	4.50	U	ug/kg
	MW025	MWCS025R2A	5.30	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW025	MWCS025R3A	4.20	U	ug/kg
	MW025	MWCS025R4A	4.20	U	ug/kg
	MW026	MWCS026R2A	5.00	U	ug/kg
	MW026	MWCS026R3A	4.50	U	ug/kg
	MW026	MWCS026R4A	4.40	U	ug/kg
	MW027	MWCS027R2A	9.80	P	ug/kg
	MW027	MWCS027R3A	4.80	U	ug/kg
	MW027	MWCS027R4A	4.60	U	ug/kg
	MW028	MWCS028R2A	4.40	U	ug/kg
	MW028	MWCS028R3A	4.30	U	ug/kg
	MW028	MWCS028R4A	4.60	U	ug/kg
	MW029	MWCS029R2A	4.50	U	ug/kg
	MW029	MWCS029R3A	4.30	U	ug/kg
	MW029	MWCS029R4A	4.40	U	ug/kg
	MW030	MWCS030R2A	8.20	P	ug/kg
	MW030	MWCS030R3A	4.10	U	ug/kg
	MW030	MWCS030S2A	9.60	P	ug/kg
	MW031	MWCS031R2A	5.20	U	ug/kg
	MW031	MWCS031R3A	5.00	U	ug/kg
	MW031	MWCS031R4A	4.10	U	ug/kg
	MW034	MWCS034R2A	4.60	U	ug/kg
	MW034	MWCS034R3A	4.30	U	ug/kg
	MW034	MWCS034R4A	4.60	U	ug/kg
	MW035	MWCS035R2A	4.40	U	ug/kg
	MW035	MWCS035R3A	4.60	U	ug/kg
	MW035	MWCS035R4A	4.60	U	ug/kg
	MW035	MWCS035S4A	4.40	U	ug/kg
	MW037	MWCS037R2A	4.30	U	ug/kg
	MW037	MWCS037R3A	4.20	U	ug/kg
	MW037	MWCS037R4A	4.60	U	ug/kg
	MW040	MWCS040R2A	4.40	U	ug/kg
	MW040	MWCS040R3A	4.20	U	ug/kg
	MW040	MWCS040R4A	3.80	U	ug/kg
	MW041	MWCT041R2	6.10	U	ug/kg
	MW046	MWCT046R2	6.40	U	ug/kg
	MW050	MWCT050R2	5.50	U	ug/kg
	MW053	MWCT053R2	5.70	U	ug/kg
	TF-22	TF-22B	8.00	U	ug/kg
	TF-22	TF-22C	8.00	U	ug/kg
Bank Samples					
	B-12	B-12	8.00	U	ug/kg
	B-13	B-13	8.00	U	ug/kg
	B-14	B-14	8.00	U	ug/kg
	B-15	B-15	8.00	U	ug/kg
	B-16	B-16	8.00	U	ug/kg
	B-17	B-17	8.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	B-18	B-18	8.00	U	ug/kg
	B-19	B-19	8.00	U	ug/kg
	MW001	MWSB001R1	5.60	U	ug/kg
	MW002	MWSB002R1	5.30	U	ug/kg
	MW008	MWSB008R1	5.30	U	ug/kg
	MW008	MWSB008S1	6.70	U	ug/kg
	MW008-SP	MWSB008R1 SP	22.00	P	ug/kg
	MW009	MWSB009R1	7.10	U	ug/kg
	MW009-SP	MWSB009R1 SP	7.60	U	ug/kg
	MW012	MWSB012R1	5.40	U	ug/kg
	MW013	MWSB013R1	4.40	U	ug/kg
	MW014	MWSB014R1	4.70	U	ug/kg
	MW015	MWSB015R1	6.40	U	ug/kg
	MW015	MWSB015S1	4.80	U	ug/kg
	MW03a	MWSB03aR1	6.50	U	ug/kg
	MW03b	MWSB03bR1	5.80	U	ug/kg
	MW04a	MWSB04aR1	5.50	U	ug/kg
	MW04b	MWSB04bR1	5.20	U	ug/kg
	MW04b-SP	MWSB04bR1 SP	4.40	U	ug/kg
	MW10a	MWSB10aR1	4.60	U	ug/kg
	MW10b	MWSB10bR1	7.70	U	ug/kg
	MW10c	MWSB10cR1	10.00	U	ug/kg
	MW11a	MWSB11aR1	6.50	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	5.80	U	ug/kg
	MW11b	MWSB11bR1	4.80	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	5.00	U	ug/kg
4,4-DDT					
Surface Samples					
	MW016	MWSS016R1	6.10	U	ug/kg
	MW017	MWSS017R1	7.90	U	ug/kg
	MW018	MWSS018R1	6.30	U	ug/kg
	MW019	MWSS019R1	7.10	U	ug/kg
	MW020	MWSS020R1	4.80	U	ug/kg
	MW021	MWSS021R1	6.90	U	ug/kg
	MW022	MWSS022R1	5.60	U	ug/kg
	MW023	MWSS023R1	5.00	U	ug/kg
	MW024	MWSS024R1	7.90	U	ug/kg
	MW025	MWSS025R1	6.70	U	ug/kg
	MW026	MWSS026R1	5.40	U	ug/kg
	MW026	MWSS026S1	5.20	U	ug/kg
	MW027	MWSS027R1	6.90	U	ug/kg
	MW028	MWSS028R1	4.80	U	ug/kg
	MW029	MWSS029R1	30.00		ug/kg
	MW030	MWSS030R1	7.20	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW031	MWSS031R1	8.30	U	ug/kg
MW032	MWSS032R1	5.20	U	ug/kg
MW034	MWSS034R1	6.10	U	ug/kg
MW035	MWSS035R1	6.20	U	ug/kg
MW037	MWSS037R1	6.80	U	ug/kg
MW039	MWST039R1	5.00	U	ug/kg
MW040	MWST040R1	5.10	U	ug/kg
MW040	MWST040S1	6.00	U	ug/kg
MW042	MWST042R1	6.10	U	ug/kg
MW043	MWST043R1	5.40	U	ug/kg
MW044	MWST044R1	8.10	U	ug/kg
MW045	MWST045R1	6.50	U	ug/kg
MW047	MWST047R1	8.80	U	ug/kg
MW048	MWST048R1	6.10	U	ug/kg
MW049	MWST049R1	5.30	U	ug/kg
MW051	MWST051R1	6.70	U	ug/kg
MW052	MWST052R1	6.10	U	ug/kg
MW054	MWST054R1	8.30	U	ug/kg
MW055	MWSS055R1	11.40		ug/kg
TF-20	TF-20	8.00	U	ug/kg
TF-21	TF-21A	8.00	U	ug/kg
TF-22	TF-22A	8.00	U	ug/kg
TF-23	TF-23	40.00	U	ug/kg
Subsurface Samples				
MW024	MWCS024R2A	4.90	U	ug/kg
MW024	MWCS024R3A	4.50	U	ug/kg
MW025	MWCS025R2A	5.30	U	ug/kg
MW025	MWCS025R3A	4.20	U	ug/kg
MW025	MWCS025R4A	4.20	U	ug/kg
MW026	MWCS026R2A	5.00	U	ug/kg
MW026	MWCS026R3A	4.50	U	ug/kg
MW026	MWCS026R4A	4.40	U	ug/kg
MW027	MWCS027R2A	6.10	U	ug/kg
MW027	MWCS027R3A	4.80	U	ug/kg
MW027	MWCS027R4A	4.60	U	ug/kg
MW028	MWCS028R2A	4.40	U	ug/kg
MW028	MWCS028R3A	4.30	U	ug/kg
MW028	MWCS028R4A	4.60	U	ug/kg
MW029	MWCS029R2A	4.50	U	ug/kg
MW029	MWCS029R3A	4.30	U	ug/kg
MW029	MWCS029R4A	4.40	U	ug/kg
MW030	MWCS030R2A	5.80	U	ug/kg
MW030	MWCS030R3A	4.10	U	ug/kg
MW030	MWCS030S2A	5.30	U	ug/kg
MW031	MWCS031R2A	71.00	E	ug/kg
MW031	MWCS031R3A	5.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW031	MWCS031R4A	4.10	U	ug/kg
	MW034	MWCS034R2A	4.60	U	ug/kg
	MW034	MWCS034R3A	4.30	U	ug/kg
	MW034	MWCS034R4A	4.60	U	ug/kg
	MW035	MWCS035R2A	4.40	U	ug/kg
	MW035	MWCS035R3A	4.60	U	ug/kg
	MW035	MWCS035R4A	4.60	U	ug/kg
	MW035	MWCS035S4A	4.40	U	ug/kg
	MW037	MWCS037R2A	4.30	U	ug/kg
	MW037	MWCS037R3A	4.20	U	ug/kg
	MW037	MWCS037R4A	4.60	U	ug/kg
	MW040	MWCS040R2A	4.40	U	ug/kg
	MW040	MWCS040R3A	4.20	U	ug/kg
	MW040	MWCS040R4A	3.80	U	ug/kg
	MW041	MWCT041R2	6.10	U	ug/kg
	MW046	MWCT046R2	6.40	U	ug/kg
	MW050	MWCT050R2	5.50	U	ug/kg
	MW053	MWCT053R2	5.70	U	ug/kg
	TF-22	TF-22B	8.00	U	ug/kg
	TF-22	TF-22C	40.00	U	ug/kg
Bank Samples					
	B-12	B-12	8.00	U	ug/kg
	B-13	B-13	8.00	U	ug/kg
	B-14	B-14	8.00	U	ug/kg
	B-15	B-15	8.00	U	ug/kg
	B-16	B-16	8.00	U	ug/kg
	B-17	B-17	8.00	U	ug/kg
	B-18	B-18	8.00	U	ug/kg
	B-19	B-19	8.00	U	ug/kg
	MW001	MWSB001R1	5.60	U	ug/kg
	MW002	MWSB002R1	5.30	U	ug/kg
	MW008	MWSB008R1	5.30	U	ug/kg
	MW008	MWSB008S1	6.70	U	ug/kg
	MW008-SP	MWSB008R1 SP	38.00	P	ug/kg
	MW009	MWSB009R1	19.00		ug/kg
	MW009-SP	MWSB009R1 SP	7.60	U	ug/kg
	MW012	MWSB012R1	6.80	U	ug/kg
	MW013	MWSB013R1	4.40	U	ug/kg
	MW014	MWSB014R1	4.70	U	ug/kg
	MW015	MWSB015R1	6.40	U	ug/kg
	MW015	MWSB015S1	4.80	U	ug/kg
	MW03a	MWSB03aR1	6.50	U	ug/kg
	MW03b	MWSB03bR1	10.00	P	ug/kg
	MW04a	MWSB04aR1	5.50	U	ug/kg
	MW04b	MWSB04bR1	5.20	U	ug/kg
	MW04b-SP	MWSB04bR1 SP	4.40	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW10a	MWSB10aR1	4.60	U	ug/kg
	MW10b	MWSB10bR1	15.00	U	ug/kg
	MW10c	MWSB10cR1	33.00	U	ug/kg
	MW11a	MWSB11aR1	6.50	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	8.40	U	ug/kg
	MW11b	MWSB11bR1	4.80	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	5.00	U	ug/kg
Aldrin					
Surface Samples					
	MW021	MWSS021R1	3.50	U	ug/kg
	MW054	MWST054R1	4.20	U	ug/kg
	TF-20	TF-20	8.00	U	ug/kg
	TF-21	TF-21A	8.00	U	ug/kg
	TF-22	TF-22A	8.00	U	ug/kg
	TF-23	TF-23	8.00	U	ug/kg
Subsurface Samples					
	MW053	MWCT053R2	2.90	U	ug/kg
	TF-22	TF-22B	8.00	U	ug/kg
	TF-22	TF-22C	8.00	U	ug/kg
Bank Samples					
	B-12	B-12	8.00	U	ug/kg
	B-13	B-13	8.00	U	ug/kg
	B-14	B-14	8.00	U	ug/kg
	B-15	B-15	8.00	U	ug/kg
	B-16	B-16	8.00	U	ug/kg
	B-17	B-17	8.00	U	ug/kg
	B-18	B-18	8.00	U	ug/kg
	B-19	B-19	8.00	U	ug/kg
alpha-Chlordane					
Surface Samples					
	MW021	MWSS021R1	3.50	U	ug/kg
	MW054	MWST054R1	4.20	U	ug/kg
Subsurface Samples					
	MW053	MWCT053R2	2.90	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-DRET-7298	0.05	UE	ug/L
	Bulk Sediment	DPC-DUPLICAT	0.05	UE	ug/L
	Bulk Sediment	DPC-METD-7298	0.05	UE	ug/L
	Bulk Sediment	DPC-METT-7298	0.05	UE	ug/L
	Bulk Sediment	DPC-WATD-7298	0.05	UE	ug/L
	Bulk Sediment	DPC-WATT-7298	0.05	UE	ug/L

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	TCLT RINSATE 1	0.04	U	ug/L
	Bulk Sediment	TCLT-PV 01	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 02.5	0.05	UE	ug/L
	Bulk Sediment	TCLT-PV 04	0.06	U	ug/L
	Bulk Sediment	TCLT-PV 06	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 07.3	0.05		ug/L
	Bulk Sediment	TCLT-PV 09	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 11	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 12.8	0.06	UE	ug/L
	Bulk Sediment	TCLT-PV 14.4	0.06	U	ug/L
	Bulk Sediment	TCLT-PV 15.8	0.05	UE	ug/L
	Bulk Sediment	TCLT-PV 17.5	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 19	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 20.6	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 22.2	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 23.8	0.11	U	ug/L
	Bulk Sediment	TCLT-PV 25.3	0.11	UE	ug/L
	Bulk Sediment	TCLT-PV 26.9	0.10	UE	ug/L
	Bulk Sediment	TCLT-PV 28.4	0.10	U	ug/L
	Bulk Sediment	TCLT-PV 30	0.10	U	ug/L
Dieldrin					
Surface Samples					
	MW021	MWSS021R1	6.90	U	ug/kg
	MW054	MWST054R1	8.30	U	ug/kg
	TF-20	TF-20	8.00	U	ug/kg
	TF-21	TF-21A	8.00	U	ug/kg
	TF-22	TF-22A	8.00	U	ug/kg
	TF-23	TF-23	8.00	U	ug/kg
Subsurface Samples					
	MW053	MWCT053R2	5.70	U	ug/kg
	TF-22	TF-22B	8.00	U	ug/kg
	TF-22	TF-22C	8.00	U	ug/kg
Bank Samples					
	B-12	B-12	8.00	U	ug/kg
	B-13	B-13	8.00	U	ug/kg
	B-14	B-14	8.00	U	ug/kg
	B-15	B-15	8.00	U	ug/kg
	B-16	B-16	8.00	U	ug/kg
	B-17	B-17	8.00	U	ug/kg
	B-18	B-18	8.00	U	ug/kg
	B-19	B-19	8.00	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-DRET-7298	0.10	UE	ug/L
	Bulk Sediment	DPC-DUPLICAT	0.10	UE	ug/L

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	DPC-METD-7298	0.10	UE	ug/L
	Bulk Sediment	DPC-METT-7298	0.10	UE	ug/L
	Bulk Sediment	DPC-WATD-7298	0.10	UE	ug/L
	Bulk Sediment	DPC-WATT-7298	0.10	UE	ug/L
	Bulk Sediment	TCLT RINSATE 1	0.08	U	ug/L
	Bulk Sediment	TCLT-PV 01	0.09	U	ug/L
	Bulk Sediment	TCLT-PV 02.5	0.11	UE	ug/L
	Bulk Sediment	TCLT-PV 04	0.12	U	ug/L
	Bulk Sediment	TCLT-PV 06	0.10	U	ug/L
	Bulk Sediment	TCLT-PV 07.3	0.10	U	ug/L
	Bulk Sediment	TCLT-PV 09	0.10	U	ug/L
	Bulk Sediment	TCLT-PV 11	0.11	U	ug/L
	Bulk Sediment	TCLT-PV 12.8	0.11	UE	ug/L
	Bulk Sediment	TCLT-PV 14.4	0.11	U	ug/L
	Bulk Sediment	TCLT-PV 15.8	0.11	UE	ug/L
	Bulk Sediment	TCLT-PV 17.5	0.10	U	ug/L
	Bulk Sediment	TCLT-PV 19	0.10	U	ug/L
	Bulk Sediment	TCLT-PV 20.6	0.10	U	ug/L
	Bulk Sediment	TCLT-PV 22.2	0.11	U	ug/L
	Bulk Sediment	TCLT-PV 23.8	0.22	U	ug/L
	Bulk Sediment	TCLT-PV 25.3	0.23	UE	ug/L
	Bulk Sediment	TCLT-PV 26.9	0.10	UE	ug/L
	Bulk Sediment	TCLT-PV 28.4	0.20	U	ug/L
	Bulk Sediment	TCLT-PV 30	0.20	U	ug/L
gamma-BHC (Lindane)					
Surface Samples					
	MW021	MWSS021R1	3.50	U	ug/kg
	MW054	MWST054R1	4.20	U	ug/kg
	TF-20	TF-20	8.00	U	ug/kg
	TF-21	TF-21A	8.00	U	ug/kg
	TF-22	TF-22A	8.00	U	ug/kg
	TF-23	TF-23	8.00	U	ug/kg
Subsurface Samples					
	MW053	MWCT053R2	2.90	U	ug/kg
	TF-22	TF-22B	8.00	U	ug/kg
	TF-22	TF-22C	8.00	U	ug/kg
Bank Samples					
	B-12	B-12	8.00	U	ug/kg
	B-13	B-13	8.00	U	ug/kg
	B-14	B-14	8.00	U	ug/kg
	B-15	B-15	8.00	U	ug/kg
	B-16	B-16	8.00	U	ug/kg
	B-17	B-17	8.00	U	ug/kg
	B-18	B-18	8.00	U	ug/kg
	B-19	B-19	8.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
gamma-Chlordane				
Surface Samples				
TF-20	TF-20	8.00	U	ug/kg
TF-21	TF-21A	8.00	U	ug/kg
TF-22	TF-22A	8.00	U	ug/kg
TF-23	TF-23	8.00	U	ug/kg
Subsurface Samples				
TF-22	TF-22B	8.00	U	ug/kg
TF-22	TF-22C	8.00	U	ug/kg
Bank Samples				
B-12	B-12	8.00	U	ug/kg
B-13	B-13	8.00	U	ug/kg
B-14	B-14	8.00	U	ug/kg
B-15	B-15	8.00	U	ug/kg
B-16	B-16	8.00	U	ug/kg
B-17	B-17	8.00	U	ug/kg
B-18	B-18	8.00	U	ug/kg
B-19	B-19	8.00	U	ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-DRET-7298	0.05	UE	ug/L
Bulk Sediment	DPC-DUPLICAT	0.05	UE	ug/L
Bulk Sediment	DPC-METD-7298	0.05	UE	ug/L
Bulk Sediment	DPC-METT-7298	0.05	UE	ug/L
Bulk Sediment	DPC-WATD-7298	0.05	UE	ug/L
Bulk Sediment	DPC-WATT-7298	0.05	UE	ug/L
Bulk Sediment	TCLT RINSATE 1	0.04	U	ug/L
Bulk Sediment	TCLT-PV 01	0.05	U	ug/L
Bulk Sediment	TCLT-PV 02.5	0.05	UE	ug/L
Bulk Sediment	TCLT-PV 04	0.06	U	ug/L
Bulk Sediment	TCLT-PV 06	0.05	U	ug/L
Bulk Sediment	TCLT-PV 07.3	0.05	U	ug/L
Bulk Sediment	TCLT-PV 09	0.05	U	ug/L
Bulk Sediment	TCLT-PV 11	0.05	U	ug/L
Bulk Sediment	TCLT-PV 12.8	0.06	UE	ug/L
Bulk Sediment	TCLT-PV 14.4	0.06	U	ug/L
Bulk Sediment	TCLT-PV 15.8	0.05	UE	ug/L
Bulk Sediment	TCLT-PV 17.5	0.05	U	ug/L
Bulk Sediment	TCLT-PV 19	0.05	U	ug/L
Bulk Sediment	TCLT-PV 20.6	0.05	U	ug/L
Bulk Sediment	TCLT-PV 22.2	0.05	U	ug/L
Bulk Sediment	TCLT-PV 23.8	0.11	U	ug/L
Bulk Sediment	TCLT-PV 25.3	0.11	UE	ug/L
Bulk Sediment	TCLT-PV 26.9	0.10	UE	ug/L
Bulk Sediment	TCLT-PV 28.4	0.10	U	ug/L

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	TCLT-PV 30	0.10	U	ug/L
Heptachlor					
Surface Samples					
	MW021	MWSS021R1	3.50	U	ug/kg
	MW054	MWST054R1	4.20	U	ug/kg
	TF-20	TF-20	8.00	U	ug/kg
	TF-21	TF-21A	8.00	U	ug/kg
	TF-22	TF-22A	8.00	U	ug/kg
	TF-23	TF-23	8.00	U	ug/kg
Subsurface Samples					
	MW053	MWCT053R2	2.90	U	ug/kg
	TF-22	TF-22B	8.00	U	ug/kg
	TF-22	TF-22C	8.00	U	ug/kg
Bank Samples					
	B-12	B-12	8.00	U	ug/kg
	B-13	B-13	8.00	U	ug/kg
	B-14	B-14	8.00	U	ug/kg
	B-15	B-15	8.00	U	ug/kg
	B-16	B-16	8.00	U	ug/kg
	B-17	B-17	8.00	U	ug/kg
	B-18	B-18	8.00	U	ug/kg
	B-19	B-19	8.00	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-DRET-7298	0.05	UE	ug/L
	Bulk Sediment	DPC-DUPLICAT	0.05	UE	ug/L
	Bulk Sediment	DPC-METD-7298	0.05	UE	ug/L
	Bulk Sediment	DPC-METT-7298	0.05	UE	ug/L
	Bulk Sediment	DPC-WATD-7298	0.05	UE	ug/L
	Bulk Sediment	DPC-WATT-7298	0.05	UE	ug/L
	Bulk Sediment	TCLT RINSATE 1	0.04	U	ug/L
	Bulk Sediment	TCLT-PV 01	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 02.5	0.05	UE	ug/L
	Bulk Sediment	TCLT-PV 04	0.06	U	ug/L
	Bulk Sediment	TCLT-PV 06	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 07.3	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 09	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 11	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 12.8	0.06	UE	ug/L
	Bulk Sediment	TCLT-PV 14.4	0.06	U	ug/L
	Bulk Sediment	TCLT-PV 15.8	0.05	UE	ug/L
	Bulk Sediment	TCLT-PV 17.5	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 19	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 20.6	0.05	U	ug/L
	Bulk Sediment	TCLT-PV 22.2	0.05	U	ug/L

	Station	Sample ID	Concentration	Flag	Units
	Bulk Sediment	TCLT-PV 23.8	0.11	U	ug/L
	Bulk Sediment	TCLT-PV 25.3	0.11	UE	ug/L
	Bulk Sediment	TCLT-PV 26.9	0.10	UE	ug/L
	Bulk Sediment	TCLT-PV 28.4	0.10	U	ug/L
	Bulk Sediment	TCLT-PV 30	0.10	U	ug/L
Total DDT					
Surface Samples					
	TF-20	TF-20	8.00	U	ug/kg
	TF-21	TF-21A	8.00	U	ug/kg
	TF-22	TF-22A	8.00	U	ug/kg
	TF-23	TF-23	40.00	U	ug/kg
Subsurface Samples					
	TF-22	TF-22B	8.00	U	ug/kg
	TF-22	TF-22C	40.00	U	ug/kg
Bank Samples					
	B-12	B-12	8.00	U	ug/kg
	B-13	B-13	8.00	U	ug/kg
	B-14	B-14	8.00	U	ug/kg
	B-15	B-15	8.00	U	ug/kg
	B-16	B-16	8.00	U	ug/kg
	B-17	B-17	8.00	U	ug/kg
	B-18	B-18	8.00	U	ug/kg
	B-19	B-19	8.00	U	ug/kg
Polychlorinated Biphenyls (PCBs)					
Aroclor 1016					
Surface Samples					
	MW016	MWSS016R1	60.00	U	ug/kg
	MW017	MWSS017R1	78.00	U	ug/kg
	MW018	MWSS018R1	62.00	U	ug/kg
	MW019	MWSS019R1	71.00	U	ug/kg
	MW020	MWSS020R1	48.00	U	ug/kg
	MW021	MWSS021R1	69.00	U	ug/kg
	MW022	MWSS022R1	55.00	U	ug/kg
	MW023	MWSS023R1	50.00	U	ug/kg
	MW024	MWSS024R1	78.00	U	ug/kg
	MW025	MWSS025R1	66.00	U	ug/kg
	MW026	MWSS026R1	53.00	U	ug/kg
	MW026	MWSS026S1	52.00	U	ug/kg
	MW027	MWSS027R1	69.00	U	ug/kg
	MW028	MWSS028R1	48.00	U	ug/kg
	MW029	MWSS029R1	69.00	U	ug/kg
	MW030	MWSS030R1	72.00	U	ug/kg
	MW031	MWSS031R1	83.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW032	MWSS032R1	52.00	U	ug/kg
	MW034	MWSS034R1	60.00	U	ug/kg
	MW035	MWSS035R1	62.00	U	ug/kg
	MW037	MWSS037R1	67.00	U	ug/kg
	MW039	MWST039R1	50.00	U	ug/kg
	MW040	MWST040R1	51.00	U	ug/kg
	MW040	MWST040S1	59.00	U	ug/kg
	MW042	MWST042R1	60.00	U	ug/kg
	MW043	MWST043R1	53.00	J	ug/kg
	MW044	MWST044R1	80.00	U	ug/kg
	MW045	MWST045R1	65.00	U	ug/kg
	MW047	MWST047R1	87.00	U	ug/kg
	MW048	MWST048R1	60.00	U	ug/kg
	MW049	MWST049R1	52.00	U	ug/kg
	MW051	MWST051R1	66.00	U	ug/kg
	MW052	MWST052R1	60.00	U	ug/kg
	MW054	MWST054R1	82.00	U	ug/kg
	MW055	MWSS055R1	70.00	U	ug/kg
	TF-20	TF-20	80.00	U	ug/kg
	TF-21	TF-21A	80.00	U	ug/kg
	TF-22	TF-22A	80.00	U	ug/kg
	TF-23	TF-23	80.00	U	ug/kg
Subsurface Samples					
	MW024	MWCS024R2A	49.00	U	ug/kg
	MW024	MWCS024R3A	45.00	U	ug/kg
	MW025	MWCS025R3A	42.00	U	ug/kg
	MW025	MWCS025R4A	42.00	U	ug/kg
	MW026	MWCS026R2A	50.00	U	ug/kg
	MW026	MWCS026R3A	45.00	U	ug/kg
	MW026	MWCS026R4A	44.00	U	ug/kg
	MW027	MWCS027R2A	60.00	U	ug/kg
	MW027	MWCS027R3A	48.00	U	ug/kg
	MW027	MWCS027R4A	46.00	U	ug/kg
	MW028	MWCS028R2A	44.00	U	mg/kg
	MW028	MWCS028R3A	42.00	U	mg/kg
	MW028	MWCS028R4A	46.00	U	mg/kg
	MW029	MWCS029R2A	45.00	U	ug/kg
	MW029	MWCS029R3A	43.00	U	ug/kg
	MW029	MWCS029R4A	44.00	U	ug/kg
	MW030	MWCS030R2A	58.00	U	ug/kg
	MW030	MWCS030R3A	41.00	U	ug/kg
	MW030	MWCS030S2A	53.00	U	ug/kg
	MW031	MWCS031R2A	52.00	U	mg/kg
	MW031	MWCS031R3A	50.00	U	mg/kg
	MW031	MWCS031R4A	41.00	U	mg/kg
	MW034	MWCS034R2A	46.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW034	MWCS034R3A	43.00	U	ug/kg
	MW034	MWCS034R4A	46.00	U	ug/kg
	MW035	MWCS035R2A	44.00	U	ug/kg
	MW035	MWCS035R3A	46.00	U	ug/kg
	MW035	MWCS035R4A	46.00	U	ug/kg
	MW035	MWCS035S4A	44.00	U	ug/kg
	MW037	MWCS037R2A	43.00	U	ug/kg
	MW037	MWCS037R3A	42.00	U	ug/kg
	MW037	MWCS037R4A	46.00	U	ug/kg
	MW040	MWCS040R2A	44.00	U	mg/kg
	MW040	MWCS040R3A	42.00	U	mg/kg
	MW040	MWCS040R4A	38.00	U	mg/kg
	MW041	MWCT041R2	60.00	U	ug/kg
	MW046	MWCT046R2	63.00	U	ug/kg
	MW050	MWCT050R2	54.00	U	ug/kg
	MW053	MWCT053R2	57.00	U	ug/kg
	TF-22	TF-22B	80.00	U	ug/kg
	TF-22	TF-22C	80.00	U	ug/kg
Bank Samples					
	B-12	B-12	80.00	U	ug/kg
	B-13	B-13	80.00	U	ug/kg
	B-14	B-14	80.00	U	ug/kg
	B-15	B-15	80.00	U	ug/kg
	B-16	B-16	80.00	U	ug/kg
	B-17	B-17	80.00	U	ug/kg
	B-18	B-18	80.00	U	ug/kg
	B-19	B-19	80.00	U	ug/kg
	MW001	MWSB001R1	55.00	U	ug/kg
	MW002	MWSB002R1	52.00	U	ug/kg
	MW008	MWSB008R1	52.00	U	ug/kg
	MW008	MWSB008S1	66.00	U	ug/kg
	MW008-SP	MWSB008R1 SP	46.00	U	ug/kg
	MW009	MWSB009R1	70.00	U	ug/kg
	MW009-SP	MWSB009R1 SP	75.00	U	ug/kg
	MW012	MWSB012R1	53.00	U	ug/kg
	MW013	MWSB013R1	43.00	U	ug/kg
	MW014	MWSB014R1	46.00	U	ug/kg
	MW015	MWSB015R1	63.00	U	ug/kg
	MW015	MWSB015S1	47.00	U	ug/kg
	MW03a	MWSB03aR1	65.00	U	ug/kg
	MW03b	MWSB03bR1	58.00	U	ug/kg
	MW04a	MWSB04aR1	54.00	U	ug/kg
	MW04b	MWSB04bR1	52.00	U	ug/kg
	MW04b-SP	MWSB04bR1 SP	43.00	U	ug/kg
	MW10a	MWSB10aR1	45.00	U	ug/kg
	MW10b	MWSB10bR1	48.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW10c	MWSB10cR1	67.00	U	ug/kg
	MW11a	MWSB11aR1	65.00	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	58.00	U	ug/kg
	MW11b	MWSB11bR1	47.00	J	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	49.00	U	ug/kg
Aroclor 1016/1242					
Subsurface Samples					
	MW025	MWCS025R2A	76.00	C	ug/kg
Aroclor 1221					
Surface Samples					
	MW016	MWSS016R1	60.00	U	ug/kg
	MW017	MWSS017R1	78.00	U	ug/kg
	MW018	MWSS018R1	62.00	U	ug/kg
	MW019	MWSS019R1	71.00	U	ug/kg
	MW020	MWSS020R1	48.00	U	ug/kg
	MW021	MWSS021R1	69.00	U	ug/kg
	MW022	MWSS022R1	55.00	U	ug/kg
	MW023	MWSS023R1	50.00	U	ug/kg
	MW024	MWSS024R1	78.00	U	ug/kg
	MW025	MWSS025R1	66.00	U	ug/kg
	MW026	MWSS026R1	53.00	U	ug/kg
	MW026	MWSS026S1	52.00	U	ug/kg
	MW027	MWSS027R1	69.00	U	ug/kg
	MW028	MWSS028R1	48.00	U	ug/kg
	MW029	MWSS029R1	69.00	U	ug/kg
	MW030	MWSS030R1	72.00	U	ug/kg
	MW031	MWSS031R1	83.00	U	ug/kg
	MW032	MWSS032R1	52.00	U	ug/kg
	MW034	MWSS034R1	60.00	U	ug/kg
	MW035	MWSS035R1	62.00	U	ug/kg
	MW037	MWSS037R1	67.00	U	ug/kg
	MW039	MWST039R1	50.00	U	ug/kg
	MW040	MWST040R1	51.00	U	ug/kg
	MW040	MWST040S1	59.00	U	ug/kg
	MW042	MWST042R1	60.00	U	ug/kg
	MW043	MWST043R1	53.00	U	ug/kg
	MW044	MWST044R1	80.00	U	ug/kg
	MW045	MWST045R1	65.00	U	ug/kg
	MW047	MWST047R1	87.00	U	ug/kg
	MW048	MWST048R1	60.00	U	ug/kg
	MW049	MWST049R1	52.00	U	ug/kg
	MW051	MWST051R1	66.00	U	ug/kg
	MW052	MWST052R1	60.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW054	MWST054R1	82.00	U	ug/kg
	MW055	MWSS055R1	70.00	U	ug/kg
	TF-20	TF-20	80.00	U	ug/kg
	TF-21	TF-21A	80.00	U	ug/kg
	TF-22	TF-22A	80.00	U	ug/kg
	TF-23	TF-23	80.00	U	ug/kg
Subsurface Samples					
	MW024	MWCS024R2A	49.00	U	ug/kg
	MW024	MWCS024R3A	45.00	U	ug/kg
	MW025	MWCS025R2A	53.00	U	ug/kg
	MW025	MWCS025R3A	42.00	U	ug/kg
	MW025	MWCS025R4A	42.00	U	ug/kg
	MW026	MWCS026R2A	50.00	U	ug/kg
	MW026	MWCS026R3A	45.00	U	ug/kg
	MW026	MWCS026R4A	44.00	U	ug/kg
	MW027	MWCS027R2A	60.00	U	ug/kg
	MW027	MWCS027R3A	48.00	U	ug/kg
	MW027	MWCS027R4A	46.00	U	ug/kg
	MW028	MWCS028R2A	44.00	U	mg/kg
	MW028	MWCS028R3A	42.00	U	mg/kg
	MW028	MWCS028R4A	46.00	U	mg/kg
	MW029	MWCS029R2A	45.00	U	ug/kg
	MW029	MWCS029R3A	43.00	U	ug/kg
	MW029	MWCS029R4A	44.00	U	ug/kg
	MW030	MWCS030R2A	58.00	U	ug/kg
	MW030	MWCS030R3A	41.00	U	ug/kg
	MW030	MWCS030S2A	53.00	U	ug/kg
	MW031	MWCS031R2A	52.00	U	mg/kg
	MW031	MWCS031R3A	50.00	U	mg/kg
	MW031	MWCS031R4A	41.00	U	mg/kg
	MW034	MWCS034R2A	46.00	U	ug/kg
	MW034	MWCS034R3A	43.00	U	ug/kg
	MW034	MWCS034R4A	46.00	U	ug/kg
	MW035	MWCS035R2A	44.00	U	ug/kg
	MW035	MWCS035R3A	46.00	U	ug/kg
	MW035	MWCS035R4A	46.00	U	ug/kg
	MW035	MWCS035S4A	44.00	U	ug/kg
	MW037	MWCS037R2A	43.00	U	ug/kg
	MW037	MWCS037R3A	42.00	U	ug/kg
	MW037	MWCS037R4A	46.00	U	ug/kg
	MW040	MWCS040R2A	44.00	U	mg/kg
	MW040	MWCS040R3A	42.00	U	mg/kg
	MW040	MWCS040R4A	38.00	U	mg/kg
	MW041	MWCT041R2	60.00	U	ug/kg
	MW046	MWCT046R2	63.00	U	ug/kg
	MW050	MWCT050R2	54.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW053	MWCT053R2	57.00	U	ug/kg
	TF-22	TF-22B	80.00	U	ug/kg
	TF-22	TF-22C	80.00	U	ug/kg
Bank Samples					
	B-12	B-12	80.00	U	ug/kg
	B-13	B-13	80.00	U	ug/kg
	B-14	B-14	80.00	U	ug/kg
	B-15	B-15	80.00	U	ug/kg
	B-16	B-16	80.00	U	ug/kg
	B-17	B-17	80.00	U	ug/kg
	B-18	B-18	80.00	U	ug/kg
	B-19	B-19	80.00	U	ug/kg
	MW001	MWSB001R1	55.00	U	ug/kg
	MW002	MWSB002R1	52.00	U	ug/kg
	MW008	MWSB008R1	52.00	U	ug/kg
	MW008	MWSB008S1	66.00	U	ug/kg
	MW008-SP	MWSB008R1 SP	46.00	U	ug/kg
	MW009	MWSB009R1	70.00	U	ug/kg
	MW009-SP	MWSB009R1 SP	75.00	U	ug/kg
	MW012	MWSB012R1	53.00	U	ug/kg
	MW013	MWSB013R1	43.00	U	ug/kg
	MW014	MWSB014R1	46.00	U	ug/kg
	MW015	MWSB015R1	63.00	U	ug/kg
	MW015	MWSB015S1	47.00	U	ug/kg
	MW03a	MWSB03aR1	65.00	U	ug/kg
	MW03b	MWSB03bR1	58.00	U	ug/kg
	MW04a	MWSB04aR1	54.00	U	ug/kg
	MW04b	MWSB04bR1	52.00	U	ug/kg
	MW04b-SP	MWSB04bR1 SP	43.00	U	ug/kg
	MW10a	MWSB10aR1	45.00	U	ug/kg
	MW10b	MWSB10bR1	48.00	U	ug/kg
	MW10c	MWSB10cR1	67.00	U	ug/kg
	MW11a	MWSB11aR1	65.00	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	58.00	U	ug/kg
	MW11b	MWSB11bR1	47.00	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	49.00	U	ug/kg
Aroclor 1232					
Surface Samples					
	MW016	MWSS016R1	60.00	U	ug/kg
	MW017	MWSS017R1	78.00	U	ug/kg
	MW018	MWSS018R1	62.00	U	ug/kg
	MW019	MWSS019R1	71.00	U	ug/kg
	MW020	MWSS020R1	48.00	U	ug/kg
	MW021	MWSS021R1	69.00	U	ug/kg

Appendix D.1 - Chemical and Physical Data

Station	Sample ID	Concentration	Flag	Units
MW022	MWSS022R1	55.00	U	ug/kg
MW023	MWSS023R1	50.00	U	ug/kg
MW024	MWSS024R1	78.00	U	ug/kg
MW025	MWSS025R1	66.00	U	ug/kg
MW026	MWSS026R1	53.00	U	ug/kg
MW026	MWSS026S1	52.00	U	ug/kg
MW027	MWSS027R1	69.00	U	ug/kg
MW028	MWSS028R1	48.00	U	ug/kg
MW029	MWSS029R1	69.00	U	ug/kg
MW030	MWSS030R1	72.00	U	ug/kg
MW031	MWSS031R1	83.00	U	ug/kg
MW032	MWSS032R1	52.00	U	ug/kg
MW034	MWSS034R1	60.00	U	ug/kg
MW035	MWSS035R1	62.00	U	ug/kg
MW037	MWSS037R1	67.00	U	ug/kg
MW039	MWST039R1	50.00	U	ug/kg
MW040	MWST040R1	51.00	U	ug/kg
MW040	MWST040S1	59.00	U	ug/kg
MW042	MWST042R1	60.00	U	ug/kg
MW043	MWST043R1	53.00	U	ug/kg
MW044	MWST044R1	80.00	U	ug/kg
MW045	MWST045R1	65.00	U	ug/kg
MW047	MWST047R1	87.00	U	ug/kg
MW048	MWST048R1	60.00	U	ug/kg
MW049	MWST049R1	52.00	U	ug/kg
MW051	MWST051R1	66.00	U	ug/kg
MW052	MWST052R1	60.00	U	ug/kg
MW054	MWST054R1	82.00	U	ug/kg
MW055	MWSS055R1	70.00	U	ug/kg
TF-20	TF-20	80.00	U	ug/kg
TF-21	TF-21A	80.00	U	ug/kg
TF-22	TF-22A	80.00	U	ug/kg
TF-23	TF-23	80.00	U	ug/kg
Subsurface Samples				
MW024	MWCS024R2A	49.00	U	ug/kg
MW024	MWCS024R3A	45.00	U	ug/kg
MW025	MWCS025R2A	53.00	U	ug/kg
MW025	MWCS025R3A	42.00	U	ug/kg
MW025	MWCS025R4A	42.00	U	ug/kg
MW026	MWCS026R2A	50.00	U	ug/kg
MW026	MWCS026R3A	45.00	U	ug/kg
MW026	MWCS026R4A	44.00	U	ug/kg
MW027	MWCS027R2A	60.00	U	ug/kg
MW027	MWCS027R3A	48.00	U	ug/kg
MW027	MWCS027R4A	46.00	U	ug/kg
MW028	MWCS028R2A	44.00	U	mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW028	MWCS028R3A	42.00	U	mg/kg
	MW028	MWCS028R4A	46.00	U	mg/kg
	MW029	MWCS029R2A	45.00	U	ug/kg
	MW029	MWCS029R3A	43.00	U	ug/kg
	MW029	MWCS029R4A	44.00	U	ug/kg
	MW030	MWCS030R2A	58.00	U	ug/kg
	MW030	MWCS030R3A	41.00	U	ug/kg
	MW030	MWCS030S2A	53.00	U	ug/kg
	MW031	MWCS031R2A	52.00	U	mg/kg
	MW031	MWCS031R3A	50.00	U	mg/kg
	MW031	MWCS031R4A	41.00	U	mg/kg
	MW034	MWCS034R2A	46.00	U	ug/kg
	MW034	MWCS034R3A	43.00	U	ug/kg
	MW034	MWCS034R4A	46.00	U	ug/kg
	MW035	MWCS035R2A	44.00	U	ug/kg
	MW035	MWCS035R3A	46.00	U	ug/kg
	MW035	MWCS035R4A	46.00	U	ug/kg
	MW035	MWCS035S4A	44.00	U	ug/kg
	MW037	MWCS037R2A	43.00	U	ug/kg
	MW037	MWCS037R3A	42.00	U	ug/kg
	MW037	MWCS037R4A	46.00	U	ug/kg
	MW040	MWCS040R2A	44.00	U	mg/kg
	MW040	MWCS040R3A	42.00	U	mg/kg
	MW040	MWCS040R4A	38.00	U	mg/kg
	MW041	MWCT041R2	60.00	U	ug/kg
	MW046	MWCT046R2	63.00	U	ug/kg
	MW050	MWCT050R2	54.00	U	ug/kg
	MW053	MWCT053R2	57.00	U	ug/kg
	TF-22	TF-22B	80.00	U	ug/kg
	TF-22	TF-22C	80.00	U	ug/kg
Bank Samples					
	B-12	B-12	80.00	U	ug/kg
	B-13	B-13	80.00	U	ug/kg
	B-14	B-14	80.00	U	ug/kg
	B-15	B-15	80.00	U	ug/kg
	B-16	B-16	80.00	U	ug/kg
	B-17	B-17	80.00	U	ug/kg
	B-18	B-18	80.00	U	ug/kg
	B-19	B-19	80.00	U	ug/kg
	MW001	MWSB001R1	55.00	U	ug/kg
	MW002	MWSB002R1	52.00	U	ug/kg
	MW008	MWSB008R1	52.00	U	ug/kg
	MW008	MWSB008S1	66.00	U	ug/kg
	MW008-SP	MWSB008R1 SP	46.00	U	ug/kg
	MW009	MWSB009R1	70.00	U	ug/kg
	MW009-SP	MWSB009R1 SP	75.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW012	MWSB012R1	53.00	U	ug/kg
	MW013	MWSB013R1	43.00	U	ug/kg
	MW014	MWSB014R1	46.00	U	ug/kg
	MW015	MWSB015R1	63.00	U	ug/kg
	MW015	MWSB015S1	47.00	U	ug/kg
	MW03a	MWSB03aR1	65.00	U	ug/kg
	MW03b	MWSB03bR1	58.00	U	ug/kg
	MW04a	MWSB04aR1	54.00	U	ug/kg
	MW04b	MWSB04bR1	52.00	U	ug/kg
	MW04b-SP	MWSB04bR1 SP	43.00	U	ug/kg
	MW10a	MWSB10aR1	45.00	U	ug/kg
	MW10b	MWSB10bR1	48.00	U	ug/kg
	MW10c	MWSB10cR1	67.00	U	ug/kg
	MW11a	MWSB11aR1	65.00	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	58.00	U	ug/kg
	MW11b	MWSB11bR1	47.00	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	49.00	U	ug/kg
Aroclor 1242					
Surface Samples					
	MW016	MWSS016R1	60.00	U	ug/kg
	MW017	MWSS017R1	78.00	U	ug/kg
	MW018	MWSS018R1	62.00	U	ug/kg
	MW019	MWSS019R1	71.00	U	ug/kg
	MW020	MWSS020R1	48.00	U	ug/kg
	MW021	MWSS021R1	69.00	U	ug/kg
	MW022	MWSS022R1	55.00	U	ug/kg
	MW023	MWSS023R1	50.00	U	ug/kg
	MW024	MWSS024R1	78.00	U	ug/kg
	MW025	MWSS025R1	66.00	U	ug/kg
	MW026	MWSS026R1	53.00	U	ug/kg
	MW026	MWSS026S1	52.00	U	ug/kg
	MW027	MWSS027R1	69.00	U	ug/kg
	MW028	MWSS028R1	48.00	U	ug/kg
	MW029	MWSS029R1	69.00	U	ug/kg
	MW030	MWSS030R1	72.00	U	ug/kg
	MW031	MWSS031R1	83.00	U	ug/kg
	MW032	MWSS032R1	52.00	U	ug/kg
	MW034	MWSS034R1	60.00	U	ug/kg
	MW035	MWSS035R1	62.00	U	ug/kg
	MW037	MWSS037R1	67.00	U	ug/kg
	MW039	MWST039R1	50.00	U	ug/kg
	MW040	MWST040R1	51.00	U	ug/kg
	MW040	MWST040S1	59.00	U	ug/kg
	MW042	MWST042R1	60.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW043	MWST043R1	53.00	U	ug/kg
	MW044	MWST044R1	80.00	U	ug/kg
	MW045	MWST045R1	65.00	U	ug/kg
	MW047	MWST047R1	87.00	U	ug/kg
	MW048	MWST048R1	60.00	U	ug/kg
	MW049	MWST049R1	52.00	U	ug/kg
	MW051	MWST051R1	66.00	U	ug/kg
	MW052	MWST052R1	60.00	U	ug/kg
	MW054	MWST054R1	82.00	U	ug/kg
	MW055	MWSS055R1	70.00	U	ug/kg
	TF-20	TF-20	80.00	U	ug/kg
	TF-21	TF-21A	80.00	U	ug/kg
	TF-22	TF-22A	80.00	U	ug/kg
	TF-23	TF-23	80.00	U	ug/kg
Subsurface Samples					
	MW024	MWCS024R2A	49.00	U	ug/kg
	MW024	MWCS024R3A	45.00	U	ug/kg
	MW025	MWCS025R3A	42.00	U	ug/kg
	MW025	MWCS025R4A	42.00	U	ug/kg
	MW026	MWCS026R2A	50.00	U	ug/kg
	MW026	MWCS026R3A	45.00	U	ug/kg
	MW026	MWCS026R4A	44.00	U	ug/kg
	MW027	MWCS027R2A	60.00	U	ug/kg
	MW027	MWCS027R3A	48.00	U	ug/kg
	MW027	MWCS027R4A	46.00	U	ug/kg
	MW028	MWCS028R2A	44.00	U	mg/kg
	MW028	MWCS028R3A	42.00	U	mg/kg
	MW028	MWCS028R4A	46.00	U	mg/kg
	MW029	MWCS029R2A	45.00	U	ug/kg
	MW029	MWCS029R3A	43.00	U	ug/kg
	MW029	MWCS029R4A	44.00	U	ug/kg
	MW030	MWCS030R2A	58.00	U	ug/kg
	MW030	MWCS030R3A	41.00	U	ug/kg
	MW030	MWCS030S2A	53.00	U	ug/kg
	MW031	MWCS031R2A	52.00	U	mg/kg
	MW031	MWCS031R3A	50.00	U	mg/kg
	MW031	MWCS031R4A	41.00	U	mg/kg
	MW034	MWCS034R2A	46.00	U	ug/kg
	MW034	MWCS034R3A	43.00	U	ug/kg
	MW034	MWCS034R4A	46.00	U	ug/kg
	MW035	MWCS035R2A	44.00	U	ug/kg
	MW035	MWCS035R3A	46.00	U	ug/kg
	MW035	MWCS035R4A	46.00	U	ug/kg
	MW035	MWCS035S4A	44.00	U	ug/kg
	MW037	MWCS037R2A	43.00	U	ug/kg
	MW037	MWCS037R3A	42.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW037	MWCS037R4A	46.00	U	ug/kg
	MW040	MWCS040R2A	44.00	U	mg/kg
	MW040	MWCS040R3A	42.00	U	mg/kg
	MW040	MWCS040R4A	38.00	U	mg/kg
	MW041	MWCT041R2	60.00	U	ug/kg
	MW046	MWCT046R2	63.00	U	ug/kg
	MW050	MWCT050R2	54.00	U	ug/kg
	MW053	MWCT053R2	57.00	U	ug/kg
	TF-22	TF-22B	80.00	U	ug/kg
	TF-22	TF-22C	80.00	U	ug/kg
Bank Samples					
	B-12	B-12	80.00	U	ug/kg
	B-13	B-13	80.00	U	ug/kg
	B-14	B-14	80.00	U	ug/kg
	B-15	B-15	80.00	U	ug/kg
	B-16	B-16	80.00	U	ug/kg
	B-17	B-17	80.00	U	ug/kg
	B-18	B-18	80.00	U	ug/kg
	B-19	B-19	80.00	U	ug/kg
	MW001	MWSB001R1	55.00	U	ug/kg
	MW002	MWSB002R1	52.00	U	ug/kg
	MW008	MWSB008R1	52.00	U	ug/kg
	MW008	MWSB008S1	66.00	U	ug/kg
	MW008-SP	MWSB008R1 SP	46.00	U	ug/kg
	MW009	MWSB009R1	70.00	U	ug/kg
	MW009-SP	MWSB009R1 SP	75.00	U	ug/kg
	MW012	MWSB012R1	53.00	U	ug/kg
	MW013	MWSB013R1	43.00	U	ug/kg
	MW014	MWSB014R1	46.00	U	ug/kg
	MW015	MWSB015R1	63.00	U	ug/kg
	MW015	MWSB015S1	47.00	U	ug/kg
	MW03a	MWSB03aR1	65.00	U	ug/kg
	MW03b	MWSB03bR1	58.00	U	ug/kg
	MW04a	MWSB04aR1	54.00	U	ug/kg
	MW04b	MWSB04bR1	52.00	U	ug/kg
	MW04b-SP	MWSB04bR1 SP	43.00	U	ug/kg
	MW10a	MWSB10aR1	45.00	U	ug/kg
	MW10b	MWSB10bR1	48.00	U	ug/kg
	MW10c	MWSB10cR1	67.00	U	ug/kg
	MW11a	MWSB11aR1	65.00	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	58.00	U	ug/kg
	MW11b	MWSB11bR1	47.00	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	49.00	U	ug/kg

Station	Sample ID	Concentration	Flag	Units
Aroclor 1248				
Surface Samples				
MW016	MWSS016R1	60.00	U	ug/kg
MW017	MWSS017R1	78.00	U	ug/kg
MW018	MWSS018R1	62.00	U	ug/kg
MW019	MWSS019R1	71.00	U	ug/kg
MW020	MWSS020R1	48.00	U	ug/kg
MW021	MWSS021R1	69.00	U	ug/kg
MW022	MWSS022R1	55.00	U	ug/kg
MW023	MWSS023R1	50.00	U	ug/kg
MW024	MWSS024R1	78.00	U	ug/kg
MW025	MWSS025R1	66.00	U	ug/kg
MW026	MWSS026R1	53.00	U	ug/kg
MW026	MWSS026S1	52.00	U	ug/kg
MW027	MWSS027R1	69.00	U	ug/kg
MW028	MWSS028R1	48.00	U	ug/kg
MW029	MWSS029R1	69.00	U	ug/kg
MW030	MWSS030R1	72.00	U	ug/kg
MW031	MWSS031R1	83.00	U	ug/kg
MW032	MWSS032R1	52.00	U	ug/kg
MW034	MWSS034R1	60.00	U	ug/kg
MW035	MWSS035R1	62.00	U	ug/kg
MW037	MWSS037R1	67.00	U	ug/kg
MW039	MWST039R1	50.00	U	ug/kg
MW040	MWST040R1	51.00	U	ug/kg
MW040	MWST040S1	59.00	U	ug/kg
MW042	MWST042R1	60.00	U	ug/kg
MW043	MWST043R1	53.00	U	ug/kg
MW044	MWST044R1	80.00	U	ug/kg
MW045	MWST045R1	65.00	U	ug/kg
MW047	MWST047R1	87.00	U	ug/kg
MW048	MWST048R1	60.00	U	ug/kg
MW049	MWST049R1	52.00	U	ug/kg
MW051	MWST051R1	66.00	U	ug/kg
MW052	MWST052R1	60.00	U	ug/kg
MW054	MWST054R1	82.00	U	ug/kg
MW055	MWSS055R1	70.00	U	ug/kg
TF-20	TF-20	80.00	U	ug/kg
TF-21	TF-21A	80.00	U	ug/kg
TF-22	TF-22A	80.00	U	ug/kg
TF-23	TF-23	80.00	U	ug/kg
Subsurface Samples				
MW024	MWCS024R2A	49.00	U	ug/kg
MW024	MWCS024R3A	45.00	U	ug/kg
MW025	MWCS025R2A	53.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW025	MWCS025R3A	42.00	U	ug/kg
	MW025	MWCS025R4A	42.00	U	ug/kg
	MW026	MWCS026R2A	50.00	U	ug/kg
	MW026	MWCS026R3A	45.00	U	ug/kg
	MW026	MWCS026R4A	44.00	U	ug/kg
	MW027	MWCS027R2A	60.00	U	ug/kg
	MW027	MWCS027R3A	48.00	U	ug/kg
	MW027	MWCS027R4A	46.00	U	ug/kg
	MW028	MWCS028R2A	44.00	U	mg/kg
	MW028	MWCS028R3A	42.00	U	mg/kg
	MW028	MWCS028R4A	46.00	U	mg/kg
	MW029	MWCS029R2A	45.00	U	ug/kg
	MW029	MWCS029R3A	43.00	U	ug/kg
	MW029	MWCS029R4A	44.00	U	ug/kg
	MW030	MWCS030R2A	58.00	U	ug/kg
	MW030	MWCS030R3A	41.00	U	ug/kg
	MW030	MWCS030S2A	53.00	U	ug/kg
	MW031	MWCS031R2A	52.00	U	mg/kg
	MW031	MWCS031R3A	50.00	U	mg/kg
	MW031	MWCS031R4A	41.00	U	mg/kg
	MW034	MWCS034R2A	46.00	U	ug/kg
	MW034	MWCS034R3A	43.00	U	ug/kg
	MW034	MWCS034R4A	46.00	U	ug/kg
	MW035	MWCS035R2A	44.00	U	ug/kg
	MW035	MWCS035R3A	46.00	U	ug/kg
	MW035	MWCS035R4A	46.00	U	ug/kg
	MW035	MWCS035S4A	44.00	U	ug/kg
	MW037	MWCS037R2A	43.00	U	ug/kg
	MW037	MWCS037R3A	42.00	U	ug/kg
	MW037	MWCS037R4A	46.00	U	ug/kg
	MW040	MWCS040R2A	44.00	U	mg/kg
	MW040	MWCS040R3A	42.00	U	mg/kg
	MW040	MWCS040R4A	38.00	U	mg/kg
	MW041	MWCT041R2	60.00	U	ug/kg
	MW046	MWCT046R2	63.00	U	ug/kg
	MW050	MWCT050R2	54.00	U	ug/kg
	MW053	MWCT053R2	57.00	U	ug/kg
	TF-22	TF-22B	80.00	U	ug/kg
	TF-22	TF-22C	80.00	U	ug/kg
Bank Samples					
	B-12	B-12	80.00	U	ug/kg
	B-13	B-13	80.00	U	ug/kg
	B-14	B-14	80.00	U	ug/kg
	B-15	B-15	80.00	U	ug/kg
	B-16	B-16	80.00	U	ug/kg
	B-17	B-17	80.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	B-18	B-18	80.00	U	ug/kg
	B-19	B-19	80.00	U	ug/kg
	MW001	MWSB001R1	55.00	U	ug/kg
	MW002	MWSB002R1	52.00	U	ug/kg
	MW008	MWSB008R1	52.00	U	ug/kg
	MW008	MWSB008S1	66.00	U	ug/kg
	MW008-SP	MWSB008R1 SP	46.00	U	ug/kg
	MW009	MWSB009R1	70.00	U	ug/kg
	MW009-SP	MWSB009R1 SP	75.00	U	ug/kg
	MW012	MWSB012R1	53.00	U	ug/kg
	MW013	MWSB013R1	43.00	U	ug/kg
	MW014	MWSB014R1	46.00	U	ug/kg
	MW015	MWSB015R1	63.00	U	ug/kg
	MW015	MWSB015S1	47.00	U	ug/kg
	MW03a	MWSB03aR1	65.00	U	ug/kg
	MW03b	MWSB03bR1	58.00	U	ug/kg
	MW04a	MWSB04aR1	54.00	U	ug/kg
	MW04b	MWSB04bR1	52.00	U	ug/kg
	MW04b-SP	MWSB04bR1 SP	43.00	U	ug/kg
	MW10a	MWSB10aR1	45.00	U	ug/kg
	MW10b	MWSB10bR1	48.00	U	ug/kg
	MW10c	MWSB10cR1	67.00	U	ug/kg
	MW11a	MWSB11aR1	65.00	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	58.00	U	ug/kg
	MW11b	MWSB11bR1	47.00	U	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	49.00	U	ug/kg
Aroclor 1254					
Surface Samples					
	MW016	MWSS016R1	60.00	U	ug/kg
	MW017	MWSS017R1	78.00	U	ug/kg
	MW018	MWSS018R1	83.00		ug/kg
	MW019	MWSS019R1	57.00	J	ug/kg
	MW020	MWSS020R1	48.00	U	ug/kg
	MW021	MWSS021R1	69.00	U	ug/kg
	MW022	MWSS022R1	41.00	J	ug/kg
	MW023	MWSS023R1	50.00	U	ug/kg
	MW024	MWSS024R1	78.00	U	ug/kg
	MW025	MWSS025R1	45.00	J	ug/kg
	MW026	MWSS026R1	53.00	U	ug/kg
	MW026	MWSS026S1	52.00	U	ug/kg
	MW027	MWSS027R1	59.00	J	ug/kg
	MW028	MWSS028R1	48.00	U	ug/kg
	MW029	MWSS029R1	164.00		ug/kg
	MW030	MWSS030R1	58.00	J	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW031	MWSS031R1	1300.00		ug/kg
MW032	MWSS032R1	88.00		ug/kg
MW034	MWSS034R1	52.00	J	ug/kg
MW035	MWSS035R1	53.00	J	ug/kg
MW037	MWSS037R1	54.00	J	ug/kg
MW039	MWST039R1	34.00	J	ug/kg
MW040	MWST040R1	51.00	U	ug/kg
MW040	MWST040S1	59.00	U	ug/kg
MW042	MWST042R1	63.00		ug/kg
MW043	MWST043R1	34.00	J	ug/kg
MW044	MWST044R1	73.00	J	ug/kg
MW045	MWST045R1	38.00	J	ug/kg
MW047	MWST047R1	82.00	J	ug/kg
MW048	MWST048R1	43.00	J	ug/kg
MW049	MWST049R1	125.00		ug/kg
MW051	MWST051R1	92.00		ug/kg
MW052	MWST052R1	32.00	J	ug/kg
MW054	MWST054R1	82.00	U	ug/kg
MW055	MWSS055R1	140.00		ug/kg
TF-20	TF-20	80.00	U	ug/kg
TF-21	TF-21A	80.00	U	ug/kg
TF-22	TF-22A	120.00		ug/kg
TF-23	TF-23	250.00		ug/kg
Subsurface Samples				
MW024	MWCS024R2A	49.00	U	ug/kg
MW024	MWCS024R3A	45.00	U	ug/kg
MW025	MWCS025R2A	64.00		ug/kg
MW025	MWCS025R3A	42.00	U	ug/kg
MW025	MWCS025R4A	42.00	U	ug/kg
MW026	MWCS026R2A	27.00	J	ug/kg
MW026	MWCS026R3A	45.00	U	ug/kg
MW026	MWCS026R4A	44.00	U	ug/kg
MW027	MWCS027R2A	150.00		ug/kg
MW027	MWCS027R3A	48.00	U	ug/kg
MW027	MWCS027R4A	46.00	U	ug/kg
MW028	MWCS028R2A	44.00	U	mg/kg
MW028	MWCS028R3A	42.00	U	mg/kg
MW028	MWCS028R4A	46.00	U	mg/kg
MW029	MWCS029R2A	45.00	U	ug/kg
MW029	MWCS029R3A	43.00	U	ug/kg
MW029	MWCS029R4A	44.00	U	ug/kg
MW030	MWCS030R2A	58.00	U	ug/kg
MW030	MWCS030R3A	41.00	U	ug/kg
MW030	MWCS030S2A	53.00	U	ug/kg
MW031	MWCS031R2A	230.00		mg/kg
MW031	MWCS031R3A	50.00	U	mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW031	MWCS031R4A	41.00	U	mg/kg
	MW034	MWCS034R2A	33.00	J	ug/kg
	MW034	MWCS034R3A	43.00	U	ug/kg
	MW034	MWCS034R4A	46.00	U	ug/kg
	MW035	MWCS035R2A	24.00	J	ug/kg
	MW035	MWCS035R3A	46.00	U	ug/kg
	MW035	MWCS035R4A	46.00	U	ug/kg
	MW035	MWCS035S4A	44.00	U	ug/kg
	MW037	MWCS037R2A	39.00	J	ug/kg
	MW037	MWCS037R3A	42.00	U	ug/kg
	MW037	MWCS037R4A	46.00	U	ug/kg
	MW040	MWCS040R2A	44.00	U	mg/kg
	MW040	MWCS040R3A	42.00	U	mg/kg
	MW040	MWCS040R4A	38.00	U	mg/kg
	MW041	MWCT041R2	88.00		ug/kg
	MW046	MWCT046R2	50.00	J	ug/kg
	MW050	MWCT050R2	54.00	U	ug/kg
	MW053	MWCT053R2	57.00	U	ug/kg
	TF-22	TF-22B	80.00	U	ug/kg
	TF-22	TF-22C	80.00	U	ug/kg
Bank Samples					
	B-12	B-12	81.00		ug/kg
	B-13	B-13	80.00	U	ug/kg
	B-14	B-14	170.00		ug/kg
	B-15	B-15	2800.00		ug/kg
	B-16	B-16	40.00	J	ug/kg
	B-17	B-17	31.00	J	ug/kg
	B-18	B-18	80.00	U	ug/kg
	B-19	B-19	80.00	U	ug/kg
	MW001	MWSB001R1	76.00		ug/kg
	MW002	MWSB002R1	81.00		ug/kg
	MW008	MWSB008R1	59.00		ug/kg
	MW008	MWSB008S1	85.00		ug/kg
	MW008-SP	MWSB008R1 SP	510.00		ug/kg
	MW009	MWSB009R1	140.00		ug/kg
	MW009-SP	MWSB009R1 SP	88.00		ug/kg
	MW012	MWSB012R1	67.00		ug/kg
	MW013	MWSB013R1	30.00	J	ug/kg
	MW014	MWSB014R1	62.00		ug/kg
	MW015	MWSB015R1	63.00	U	ug/kg
	MW015	MWSB015S1	47.00	U	ug/kg
	MW03a	MWSB03aR1	190.00		ug/kg
	MW03b	MWSB03bR1	80.00		ug/kg
	MW04a	MWSB04aR1	54.00	U	ug/kg
	MW04b	MWSB04bR1	29.00	J	ug/kg
	MW04b-SP	MWSB04bR1 SP	43.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW10a	MWSB10aR1	110.00		ug/kg
	MW10b	MWSB10bR1	150.00		ug/kg
	MW10c	MWSB10cR1	250.00		ug/kg
	MW11a	MWSB11aR1	65.00	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	32.00	J	ug/kg
	MW11b	MWSB11bR1	53.00		ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	34.00	J	ug/kg
Aroclor 1260					
Surface Samples					
	MW016	MWSS016R1	60.00	U	ug/kg
	MW017	MWSS017R1	78.00	U	ug/kg
	MW018	MWSS018R1	62.00	U	ug/kg
	MW019	MWSS019R1	71.00	U	ug/kg
	MW020	MWSS020R1	48.00	U	ug/kg
	MW021	MWSS021R1	69.00	U	ug/kg
	MW022	MWSS022R1	55.00	U	ug/kg
	MW023	MWSS023R1	50.00	U	ug/kg
	MW024	MWSS024R1	78.00	U	ug/kg
	MW025	MWSS025R1	66.00	U	ug/kg
	MW026	MWSS026R1	53.00	U	ug/kg
	MW026	MWSS026S1	52.00	U	ug/kg
	MW027	MWSS027R1	69.00	U	ug/kg
	MW028	MWSS028R1	48.00	U	ug/kg
	MW029	MWSS029R1	69.00	U	ug/kg
	MW030	MWSS030R1	72.00	U	ug/kg
	MW031	MWSS031R1	83.00	U	ug/kg
	MW032	MWSS032R1	52.00	U	ug/kg
	MW034	MWSS034R1	39.00	J	ug/kg
	MW035	MWSS035R1	62.00	U	ug/kg
	MW037	MWSS037R1	67.00	U	ug/kg
	MW039	MWST039R1	50.00	U	ug/kg
	MW040	MWST040R1	51.00	U	ug/kg
	MW040	MWST040S1	59.00	U	ug/kg
	MW042	MWST042R1	60.00	U	ug/kg
	MW043	MWST043R1	53.00	U	ug/kg
	MW044	MWST044R1	80.00	U	ug/kg
	MW045	MWST045R1	40.00	J	ug/kg
	MW047	MWST047R1	87.00	U	ug/kg
	MW048	MWST048R1	60.00	U	ug/kg
	MW049	MWST049R1	52.00	U	ug/kg
	MW051	MWST051R1	76.00		ug/kg
	MW052	MWST052R1	60.00	U	ug/kg
	MW054	MWST054R1	82.00	U	ug/kg
	MW055	MWSS055R1	89.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	TF-20	TF-20	80.00	U	ug/kg
	TF-21	TF-21A	80.00	U	ug/kg
	TF-22	TF-22A	80.00		ug/kg
	TF-23	TF-23	230.00		ug/kg
Subsurface Samples					
	MW024	MWCS024R2A	49.00	U	ug/kg
	MW024	MWCS024R3A	45.00	U	ug/kg
	MW025	MWCS025R2A	53.00	U	ug/kg
	MW025	MWCS025R3A	42.00	U	ug/kg
	MW025	MWCS025R4A	42.00	U	ug/kg
	MW026	MWCS026R2A	50.00	U	ug/kg
	MW026	MWCS026R3A	45.00	U	ug/kg
	MW026	MWCS026R4A	44.00	U	ug/kg
	MW027	MWCS027R2A	76.00		ug/kg
	MW027	MWCS027R3A	48.00	U	ug/kg
	MW027	MWCS027R4A	46.00	U	ug/kg
	MW028	MWCS028R2A	44.00	U	mg/kg
	MW028	MWCS028R3A	42.00	U	mg/kg
	MW028	MWCS028R4A	46.00	U	mg/kg
	MW029	MWCS029R2A	45.00	U	ug/kg
	MW029	MWCS029R3A	43.00	U	ug/kg
	MW029	MWCS029R4A	44.00	U	ug/kg
	MW030	MWCS030R2A	58.00	U	ug/kg
	MW030	MWCS030R3A	41.00	U	ug/kg
	MW030	MWCS030S2A	67.00		ug/kg
	MW031	MWCS031R2A	73.00		mg/kg
	MW031	MWCS031R3A	50.00	U	mg/kg
	MW031	MWCS031R4A	41.00	U	mg/kg
	MW034	MWCS034R2A	46.00	U	ug/kg
	MW034	MWCS034R3A	43.00	U	ug/kg
	MW034	MWCS034R4A	46.00	U	ug/kg
	MW035	MWCS035R2A	44.00	U	ug/kg
	MW035	MWCS035R3A	46.00	U	ug/kg
	MW035	MWCS035R4A	46.00	U	ug/kg
	MW035	MWCS035S4A	44.00	U	ug/kg
	MW037	MWCS037R2A	43.00	U	ug/kg
	MW037	MWCS037R3A	42.00	U	ug/kg
	MW037	MWCS037R4A	46.00	U	ug/kg
	MW040	MWCS040R2A	44.00	U	mg/kg
	MW040	MWCS040R3A	42.00	U	mg/kg
	MW040	MWCS040R4A	38.00	U	mg/kg
	MW041	MWCT041R2	51.00	J	ug/kg
	MW046	MWCT046R2	36.00	J	ug/kg
	MW050	MWCT050R2	31.00	J	ug/kg
	MW053	MWCT053R2	57.00	U	ug/kg
	TF-22	TF-22B	110.00		ug/kg

	Station	Sample ID	Concentration	Flag	Units
	TF-22	TF-22C	80.00	U	ug/kg
Bank Samples					
	B-12	B-12	43.00	J	ug/kg
	B-13	B-13	80.00	U	ug/kg
	B-14	B-14	520.00		ug/kg
	B-15	B-15	80.00	U	ug/kg
	B-16	B-16	74.00	J	ug/kg
	B-17	B-17	80.00	U	ug/kg
	B-18	B-18	80.00	U	ug/kg
	B-19	B-19	80.00	U	ug/kg
	MW001	MWSB001R1	55.00	U	ug/kg
	MW002	MWSB002R1	52.00	U	ug/kg
	MW008	MWSB008R1	64.00		ug/kg
	MW008	MWSB008S1	76.00		ug/kg
	MW008-SP	MWSB008R1 SP	240.00		ug/kg
	MW009	MWSB009R1	120.00		ug/kg
	MW009-SP	MWSB009R1 SP	68.00	J	ug/kg
	MW012	MWSB012R1	43.00	J	ug/kg
	MW013	MWSB013R1	43.00	U	ug/kg
	MW014	MWSB014R1	100.00		ug/kg
	MW015	MWSB015R1	63.00	U	ug/kg
	MW015	MWSB015S1	47.00	U	ug/kg
	MW03a	MWSB03aR1	500.00		ug/kg
	MW03b	MWSB03bR1	44.00	J	ug/kg
	MW04a	MWSB04aR1	54.00	U	ug/kg
	MW04b	MWSB04bR1	52.00	U	ug/kg
	MW04b-SP	MWSB04bR1 SP	43.00	U	ug/kg
	MW10a	MWSB10aR1	63.00		ug/kg
	MW10b	MWSB10bR1	70.00		ug/kg
	MW10c	MWSB10cR1	160.00		ug/kg
	MW11a	MWSB11aR1	65.00	U	ug/kg
	MW11a-SP	MWSB11aR1 SP	58.00	U	ug/kg
	MW11b	MWSB11bR1	43.00	J	ug/kg
Contaminant Mobility Samples					
	Bulk Sediment	DPC-BKS1-7198	49.00	U	ug/kg
PCB (total)					
Surface Samples					
	MW016	MWSS016R1	60.00	U	ug/kg
	MW017	MWSS017R1	78.00	U	ug/kg
	MW018	MWSS018R1	83.00		ug/kg
	MW019	MWSS019R1	57.00	J	ug/kg
	MW020	MWSS020R1	48.00	U	ug/kg
	MW021	MWSS021R1	69.00	U	ug/kg
	MW022	MWSS022R1	41.00	J	ug/kg
	MW023	MWSS023R1	50.00	U	ug/kg

	Station	Sample ID	Concentration	Flag	Units
	MW024	MWSS024R1	78.00	U	ug/kg
	MW025	MWSS025R1	45.00	J	ug/kg
	MW026	MWSS026R1	53.00	U	ug/kg
	MW026	MWSS026S1	52.00	U	ug/kg
	MW027	MWSS027R1	59.00	J	ug/kg
	MW028	MWSS028R1	48.00	U	ug/kg
	MW029	MWSS029R1	164.00		ug/kg
	MW030	MWSS030R1	58.00	J	ug/kg
	MW031	MWSS031R1	1300.00		ug/kg
	MW032	MWSS032R1	88.00		ug/kg
	MW034	MWSS034R1	91.00	J	ug/kg
	MW035	MWSS035R1	53.00	J	ug/kg
	MW037	MWSS037R1	54.00	J	ug/kg
	MW039	MWST039R1	34.00	J	ug/kg
	MW040	MWST040R1	51.00	U	ug/kg
	MW040	MWST040S1	59.00	U	ug/kg
	MW042	MWST042R1	63.00		ug/kg
	MW043	MWST043R1	34.00	J	ug/kg
	MW044	MWST044R1	73.00	J	ug/kg
	MW045	MWST045R1	78.00	J	ug/kg
	MW047	MWST047R1	82.00	J	ug/kg
	MW048	MWST048R1	43.00	J	ug/kg
	MW049	MWST049R1	125.00		ug/kg
	MW051	MWST051R1	168.00		ug/kg
	MW052	MWST052R1	32.00	J	ug/kg
	MW054	MWST054R1	82.00	U	ug/kg
	MW055	MWSS055R1	230.00		ug/kg
	TF-20	TF-20	80.00	U	ug/kg
	TF-21	TF-21A	80.00	U	ug/kg
	TF-22	TF-22A	200.00		ug/kg
	TF-23	TF-23	480.00		ug/kg
Subsurface Samples					
	MW-1	1		U	ug/kg
	MW-1	2		U	ug/kg
	MW024	MWCS024R2A	49.00	U	ug/kg
	MW024	MWCS024R3A	45.00	U	ug/kg
	MW025	MWCS025R2A	140.00		ug/kg
	MW025	MWCS025R3A	42.00	U	ug/kg
	MW025	MWCS025R4A	42.00	U	ug/kg
	MW026	MWCS026R2A	27.00	J	ug/kg
	MW026	MWCS026R3A	45.00	U	ug/kg
	MW026	MWCS026R4A	44.00	U	ug/kg
	MW027	MWCS027R2A	230.00		ug/kg
	MW027	MWCS027R3A	48.00	U	ug/kg
	MW027	MWCS027R4A	46.00	U	ug/kg
	MW028	MWCS028R2A	44.00	U	mg/kg

	Station	Sample ID	Concentration	Flag	Units
	MW028	MWCS028R3A	42.00	U	mg/kg
	MW028	MWCS028R4A	46.00	U	mg/kg
	MW029	MWCS029R2A	45.00	U	ug/kg
	MW029	MWCS029R3A	43.00	U	ug/kg
	MW029	MWCS029R4A	44.00	U	ug/kg
	MW030	MWCS030R2A	58.00	U	ug/kg
	MW030	MWCS030R3A	41.00	U	ug/kg
	MW030	MWCS030S2A	67.00		ug/kg
	MW031	MWCS031R2A	300.00		mg/kg
	MW031	MWCS031R3A	50.00	U	mg/kg
	MW031	MWCS031R4A	41.00	U	mg/kg
	MW034	MWCS034R2A	33.00	J	ug/kg
	MW034	MWCS034R3A	43.00	U	ug/kg
	MW034	MWCS034R4A	46.00	U	ug/kg
	MW035	MWCS035R2A	24.00	J	ug/kg
	MW035	MWCS035R3A	46.00	U	ug/kg
	MW035	MWCS035R4A	46.00	U	ug/kg
	MW035	MWCS035S4A	44.00	U	ug/kg
	MW037	MWCS037R2A	39.00	J	ug/kg
	MW037	MWCS037R3A	42.00	U	ug/kg
	MW037	MWCS037R4A	46.00	U	ug/kg
	MW040	MWCS040R2A	44.00	U	mg/kg
	MW040	MWCS040R3A	42.00	U	mg/kg
	MW040	MWCS040R4A	38.00	U	mg/kg
	MW041	MWCT041R2	140.00	J	ug/kg
	MW046	MWCT046R2	86.00	J	ug/kg
	MW050	MWCT050R2	31.00	J	ug/kg
	MW053	MWCT053R2	57.00	U	ug/kg
	TF-22	TF-22B	110.00		ug/kg
	TF-22	TF-22C	80.00	U	ug/kg
Bank Samples					
	B-12	B-12	124.00		ug/kg
	B-13	B-13	80.00	U	ug/kg
	B-14	B-14	690.00		ug/kg
	B-15	B-15	2800.00		ug/kg
	B-16	B-16	114.00	J	ug/kg
	B-17	B-17	31.00	J	ug/kg
	B-18	B-18	80.00	U	ug/kg
	B-19	B-19	80.00	U	ug/kg
	MW001	MWSB001R1	76.00		ug/kg
	MW002	MWSB002R1	81.00		ug/kg
	MW008	MWSB008R1	120.00		ug/kg
	MW008	MWSB008S1	160.00		ug/kg
	MW008-SP	MWSB008R1 SP	750.00		ug/kg
	MW009	MWSB009R1	260.00		ug/kg
	MW009-SP	MWSB009R1 SP	160.00	J	ug/kg

Station	Sample ID	Concentration	Flag	Units
MW012	MWSB012R1	110.00	J	ug/kg
MW013	MWSB013R1	30.00	J	ug/kg
MW014	MWSB014R1	160.00		ug/kg
MW015	MWSB015R1	63.00	U	ug/kg
MW015	MWSB015S1	47.00	U	ug/kg
MW03a	MWSB03aR1	690.00		ug/kg
MW03b	MWSB03bR1	120.00	J	ug/kg
MW04a	MWSB04aR1	54.00	U	ug/kg
MW04b	MWSB04bR1	29.00	J	ug/kg
MW04b-SP	MWSB04bR1 SP	43.00	U	ug/kg
MW10a	MWSB10aR1	170.00		ug/kg
MW10b	MWSB10bR1	220.00		ug/kg
MW10c	MWSB10cR1	410.00		ug/kg
MW11a	MWSB11aR1	65.00	U	ug/kg
MW11a-SP	MWSB11aR1 SP	32.00	J	ug/kg
MW11b	MWSB11bR1	96.00	J	ug/kg
Contaminant Mobility Samples				
Bulk Sediment	DPC-BKS1-7198	34.00	J	ug/kg
TBT				
Dibutyltin				
Surface Samples				
MW022	MWSS022R1	0.05	U	ug/L
MW024	MWSS024R1	0.05	U	ug/L
MW024	MWSS024R1S	0.05	U	ug/L
MW025	MWSS025R1	0.05	U	ug/L
MW025	MWSS025R1S	0.05	U	ug/L
MW028	MWSS028R1	0.05		ug/L
MW030	MWSS030R1	0.03	U	ug/L
MW031	MWSS031R1	0.03		ug/L
MW032	MWSS032R1	0.06		ug/L
MW034	MWSS034R1	0.03	U	ug/L
MW035	MWSS035R1	0.05		ug/L
MW039	MWST039R1	0.05	U	ug/L
MW040	MWST040R1	0.05	U	ug/L
MW040	MWST040R1S	0.05	U	ug/L
MW043	MWST043R1	0.05	U	ug/L
MW043	MWST043R1S	0.05	U	ug/L
MW047	MWST047R1	0.05	U	ug/L
MW047	MWST047R1S	0.05	U	ug/L
MW048	MWST048R1	0.05	U	ug/L
MW048	MWST048R1S	0.05	U	ug/L
MW051	MWST051R1	0.05	U	ug/L
MW051	MWST051R1S	0.05	U	ug/L
MW054	MWST054R1	0.05	U	ug/L
MW054	MWST054R1S	0.05	U	ug/L

	Station	Sample ID	Concentration	Flag	Units
	TF-20	TF-20	30.00	U	ug/kg
	TF-21	TF-21A	30.00	U	ug/kg
	TF-22	TF-22A	30.00	U	ug/kg
	TF-23	TF-23	30.00	U	ug/kg
Subsurface Samples					
	TF-22	TF-22B	30.00	U	ug/kg
	TF-22	TF-22C	30.00	U	ug/kg
Monobutyltin					
Surface Samples					
	MW022	MWSS022R1	0.05	U	ug/L
	MW024	MWSS024R1	0.05	UE	ug/L
	MW024	MWSS024R1S	0.05	U	ug/L
	MW025	MWSS025R1	0.05	U	ug/L
	MW025	MWSS025R1S	0.05	U	ug/L
	MW028	MWSS028R1	0.05		ug/L
	MW030	MWSS030R1	0.03	U	ug/L
	MW031	MWSS031R1	0.03	U	ug/L
	MW032	MWSS032R1	0.03	U	ug/L
	MW034	MWSS034R1	0.03	U	ug/L
	MW035	MWSS035R1	0.05		ug/L
	MW039	MWST039R1	0.05	U	ug/L
	MW040	MWST040R1	0.05	U	ug/L
	MW040	MWST040R1S	0.05	U	ug/L
	MW043	MWST043R1	0.05	U	ug/L
	MW043	MWST043R1S	0.05	U	ug/L
	MW047	MWST047R1	0.05	U	ug/L
	MW047	MWST047R1S	0.05	U	ug/L
	MW048	MWST048R1	0.05	U	ug/L
	MW048	MWST048R1S	0.05	U	ug/L
	MW051	MWST051R1	0.05	U	ug/L
	MW051	MWST051R1S	0.05	U	ug/L
	MW054	MWST054R1	0.05	U	ug/L
	MW054	MWST054R1S	0.05	U	ug/L
	TF-20	TF-20	30.00	U	ug/kg
	TF-21	TF-21A	30.00	U	ug/kg
	TF-22	TF-22A	81.00		ug/kg
	TF-23	TF-23	30.00	U	ug/kg
Subsurface Samples					
	TF-22	TF-22B	30.00	U	ug/kg
	TF-22	TF-22C	30.00	U	ug/kg
Tetrabutyltin					
Surface Samples					
	MW022	MWSS022R1	0.05	U	ug/L
	MW024	MWSS024R1	0.05	U	ug/L

	Station	Sample ID	Concentration	Flag	Units
	MW024	MWSS024R1S	0.05	U	ug/L
	MW025	MWSS025R1	0.05	U	ug/L
	MW025	MWSS025R1S	0.05	U	ug/L
	MW028	MWSS028R1	0.05		ug/L
	MW030	MWSS030R1	0.03	U	ug/L
	MW031	MWSS031R1	0.03	U	ug/L
	MW032	MWSS032R1	0.03	U	ug/L
	MW034	MWSS034R1	0.03	U	ug/L
	MW035	MWSS035R1	0.05		ug/L
	MW039	MWST039R1	0.05	U	ug/L
	MW040	MWST040R1	0.05	U	ug/L
	MW040	MWST040R1S	0.05	U	ug/L
	MW043	MWST043R1	0.05	U	ug/L
	MW043	MWST043R1S	0.05	U	ug/L
	MW047	MWST047R1	0.05	U	ug/L
	MW047	MWST047R1S	0.05	U	ug/L
	MW048	MWST048R1	0.05	U	ug/L
	MW048	MWST048R1S	0.05	U	ug/L
	MW051	MWST051R1	0.05	U	ug/L
	MW051	MWST051R1S	0.05	U	ug/L
	MW054	MWST054R1	0.05	U	ug/L
	MW054	MWST054R1S	0.05	U	ug/L
Tributyltin					
Surface Samples					
	MW022	MWSS022R1	0.10		ug/L
	MW024	MWSS024R1	0.05	U	ug/L
	MW024	MWSS024R1S	0.05	U	ug/L
	MW025	MWSS025R1	0.05	U	ug/L
	MW025	MWSS025R1S	0.05	U	ug/L
	MW028	MWSS028R1	0.05		ug/L
	MW030	MWSS030R1	0.09		ug/L
	MW031	MWSS031R1	0.09		ug/L
	MW032	MWSS032R1	0.40		ug/L
	MW034	MWSS034R1	0.04		ug/L
	MW035	MWSS035R1	0.23		ug/L
	MW039	MWST039R1	0.05	U	ug/L
	MW040	MWST040R1	0.06		ug/L
	MW040	MWST040R1S	0.05	U	ug/L
	MW043	MWST043R1	0.05	U	ug/L
	MW043	MWST043R1S	0.05	U	ug/L
	MW047	MWST047R1	0.05	U	ug/L
	MW047	MWST047R1S	0.05	U	ug/L
	MW048	MWST048R1	0.05	U	ug/L
	MW048	MWST048R1S	0.05	U	ug/L
	MW051	MWST051R1	0.05	U	ug/L
	MW051	MWST051R1S	0.05	U	ug/L

	Station	Sample ID	Concentration	Flag	Units
	MW054	MWST054R1	0.05	U	ug/L
	MW054	MWST054R1S	0.05	U	ug/L
	TF-20	TF-20	70.00		ug/kg
	TF-21	TF-21A	80.00		ug/kg
	TF-22	TF-22A	147.00		ug/kg
	TF-23	TF-23	31.00		ug/kg
Subsurface Samples					
	TF-22	TF-22B	30.00	U	ug/kg
	TF-22	TF-22C	30.00	U	ug/kg
Total Volatile Solids					
Total Volatile Solids					
Surface Samples					
	TF-20	TF-20	8.00		%
	TF-21	TF-21A	9.00		%
	TF-22	TF-22A	10.00		%
	TF-23	TF-23	15.00		%
Subsurface Samples					
	F	F	3.60		%
	TF-22	TF-22B	14.00		%
	TF-22	TF-22C	17.00		%
Bank Samples					
	B-12	B-12	6.00		%
	B-13	B-13	3.61		%
	B-14	B-14	10.00		%
	B-15	B-15	7.00		%
	B-16	B-16	6.00		%
	B-17	B-17	5.00		%
	B-18	B-18	4.00		%
	B-19	B-19	5.00		%
Tentatively Identified Compounds					
1,2,4-Trithiolane					
Surface Samples					
	MW021	MWSS021R1	1500.00	NJ	ug/kg
2-Cyclohexen-1-one, 3,5,5-Tri					
Surface Samples					
	MW054	MWST054R1	620.00	NJ	ug/kg
Subsurface Samples					
	MW053	MWCT053R2	5000.00	NJ	ug/kg

Station	Sample ID	Concentration	Flag	Units
Bicyclo[3.1.0]HEXAN-3-ONE,4-me				
Surface Samples				
MW021	MWSS021R1	91.70	NJ	ug/kg
Lenthionine				
Surface Samples				
MW021	MWSS021R1	8000.00	NJ	ug/kg
Methane, Thiobis				
Surface Samples				
MW021	MWSS021R1	458.00	NJ	ug/kg
MW021	MWSS021R1	350.00	NJ	ug/kg
MW054	MWST054R1	60.00	NJ	ug/kg
MW054	MWST054R1	30.00	NJ	ug/kg
Unknown Hydrocarbon				
Surface Samples				
MW021	MWSS021R1	54.20	J	ug/kg
MW021	MWSS021R1	29.20	J	ug/kg
MW021	MWSS021R1	50.00	J	ug/kg
Unknown Hydrocarbon (8270)				
Surface Samples				
MW021	MWSS021R1	1100.00	NJ	ug/kg
MW021	MWSS021R1	1900.00	NJ	ug/kg
MW054	MWST054R1	730.00	J	ug/kg
MW054	MWST054R1	680.00	NJ	ug/kg
MW054	MWST054R1	3800.00	J	ug/kg
MW054	MWST054R1	2200.00	J	ug/kg
Subsurface Samples				
MW053	MWCT053R2	8700.00	J	ug/kg
MW053	MWCT053R2	3900.00	J	ug/kg
MW053	MWCT053R2	3900.00	J	ug/kg
MW053	MWCT053R2	3900.00	J	ug/kg
Unknown Hydrocarbon (VOC)				
Subsurface Samples				
MW053	MWCT053R2	30.20	J	ug/kg
MW053	MWCT053R2	86.20	J	ug/kg
MW053	MWCT053R2	90.50	J	ug/kg
MW053	MWCT053R2	47.40	J	ug/kg
MW053	MWCT053R2	69.00	J	ug/kg

Station	Sample ID	Concentration	Flag	Units
Unknown Polynuclear Aromatic				
Surface Samples				
MW021	MWSS021R1	3600.00	NJ	ug/kg
Unknown VOC				
Surface Samples				
MW054	MWST054R1	35.00	J	ug/kg
MW054	MWST054R1	45.00	J	ug/kg
MW054	MWST054R1	30.00	J	ug/kg

SQO - Sediment Quality Objective

EF - Exceednace Factor = Concentration divided by SQO

* - Duplicate analysis not within control limits

B - Analyte detected in samples and in method blank

C - Combined with unresolved substances

D - Value was from an anlysis at a secondary dilution factor

E - Estimated

G - Value greater than minimum shown

J - Estimated Value

N - Spiked sample recovery not within control limits

P - The percent difference in sample concentration between the two GC columns is > 25%

T - Detected below the quantification limit shown

Appendix D.2 - Benthic Data

Sample Name	NODC	Rep A	Rep B	Rep C	Rep D	Rep E
		MWBT039				
Crustacea						
Harpacticoida sp. Indet.	6119000000	4		1		5
Leucon subnasica	6154040115	1	1			5
Cumella vulgaris	6154080102		2			3
Limnora lignorum	6161050101				1	
Corophiidae sp. Indet.	6169150000	4	3	2		2
Monocorophium insidiosum	6169150211	5		5	3	11
Grandidierella japonica	6169150902					6
Miscellaneous						
Oligochaeta sp. Indet.	5004	58	23	32	17	29
Nemertinea sp. Indet.	4300000000					1
Mollusca						
Macoma sp. Juv.	5515310100	3	1	2		
Macoma nasuta	5515310114	1		1		
Macoma inquinata	5515310115		1			
Macoma balthica	5515310116	1		2	5	1
Cryptomya californica	5517010101			1		
Polychaeta						
Glycera nana					1	
Eteone sp. Indet.	5001130200	6	12	4		7
Nereis virens	5001240302	1				
Glycinde polygnatha	5001280105	1				
Spionidae sp. Juv.	5001430000					1
Polydora sp. Juv.	5001430400				1	
Polydora cornuta	5001430411	1	1			
Boccardia proboscidea	5001430803		1		7	
Pygospio elegans	5001431302	9	5	20	6	6
Pseudopolydora kempi	5001431501	5	8	2	6	3
Cirratulidae sp. Indet.	5001500000	1	1	3		3
Tharyx parvus	5001500303		2		1	
Capitella capitata 'hyperspeci	5001600101	43	43	26	45	32
Mediomastus sp. Indet.	5001600400					1
Aberinicola sp. Indet.	5001620100	1	1	1		2
Manyunkia aestuarina	5001701502	20	55	49	24	20

Appendix D.2 - Benthic Data

Sample Name	NODC	Rep A	Rep B	Rep C	Rep D	Rep E
			MWBT043			
Crustacea						
Harpacticoida sp. Indet.	6119000000	2	2	8		
Leucon subnasica	6154040115	12	22	18	12	18
Cumella vulgaris	6154080102	1	3	2	2	1
Corophiidae sp. Indet.	6169150000	1	3	8	5	3
Monocorophium sp. Juv.	6169150200		1		2	3
Monocorophium insidiosum	6169150211	15	21	19	24	27
Grandidierella japonica	6169150902	7	15	8	13	6
Upogebiidae sp. Indet.	6183170000			1		
Miscellaneous						
Oligochaeta sp. Indet.	5004	43	56	54	44	56
Nemertinea sp. Indet.	4300000000		1			
Mollusca						
Macoma sp. Indet.	5515310100			1		
Macoma nasuta	5515310114	4	1		1	1
Macoma inquinata	5515310115				1	
Macoma balthica	5515310116	1	5	4	1	
Polychaeta						
Eteone sp. Indet.	5001130200	10	5	5	3	
Phyllodoce sp. Indet.	5001131400	1				
Glycera americana	5001270104	2	2		2	4
Glycinde polygnatha	5001280105		1		2	
Polydora cornuta	5001430411			1		
Prionospio lighti	5001430521		2			
Spiophanes berkeleyorum	5001431004		1			1
Pygospio elegans	5001431302	8	16	21	2	25
Pseudopolydora kempi	5001431501	6	9	13	11	13
Cirratulidae sp. Indet.	5001500000	4	4	4	8	
Tharyx parvus	5001500303	3	2	1	10	1
Capitella capitata 'hyperspeci	5001600101	21	39	53	25	34
Mediomastus sp. Indet.	5001600400	2	4	2	4	4
Aberinicola sp. Indet.	5001620100		1	1	1	1
Manyunkia aestuarina	5001701502		4	11		3

Appendix D.2 - Benthic Data

Sample Name	NODC	Rep A	Rep B	Rep C	Rep D	Rep E
			MWBT048			
Crustacea						
Harpacticoida sp. Indet.	6119000000	3	4		1	2
Cirripedia sp. Indet.	6130000000	1				1
Leucon subnasica	6154040115	4	76	46	65	55
Cumella vulgaris	6154080102		26	1	7	7
Corophiidae sp. Indet.	6169150000	4	5	1	4	3
Monocorophium sp. Juv.	6169150200		4	1	1	
Monocorophium insidiosum	6169150211	15	2	6	6	9
Grandidierella japonica	6169150902	8	14	12	15	3
Miscellaneous						
Oligochaeta sp. Indet.	5004	31	343	144	140	109
Phoronida sp. Indet.	7700000000	1				
Holothuroidea sp. Juv.	8170000000					2
Mollusca						
Mytilus sp. Juv.	5507010100					1
Rochefortia tumida	5515100102					1
Macoma sp. Juv.	5515310100		2			1
Macoma nasuta	5515310114	2	4	3	4	6
Macoma inquinata	5515310115			1		
Macoma balthica	5515310116	1	1	1	1	
Cryptomya californica	5517010101				1	
Polychaeta						
Eteone sp. Indet.	5001130200	4	12	8	6	3
Glycera americana	5001270104	1				2
Glycinde polygnatha	5001280105			1	1	2
Spionidae sp. Juv.	5001430000			1		
Polydora sp. Juv.	5001430400				1	
Polydora cornuta	5001430411	2	2	1		
Pygospio elegans	5001431302	14	17	9	11	17
Pseudopolydora kempi	5001431501	8	21	18	22	19
Cirratulidae sp. Indet.	5001500000	2	4		3	4
Tharyx parvus	5001500303				1	1
Capitella capitata 'hyperspeci	5001600101	62	68	17	47	22
Mediomastus sp. Indet.	5001600400		1	1	1	1
Aberinicola sp. Indet.	5001620100		6	5	2	4
Manyunkia aestuarina	5001701502	20	8		12	6

Sample Name	NODC	Rep A	Rep B	Rep C	Rep D	Rep E
		MWBT049				
Crustacea						
Zeuzo normani		6	4	1	8	9
Harpacticoida sp. Indet.	6119000000	1	1	1	1	1
Cirripedia sp. Indet.	6130000000			1		2
Leucon subnasica	6154040115	6	1	19	30	10
Cumella vulgaris	6154080102	1	1	3	3	1
Ampithoe lacertosa	6169040118		1		2	
Corophiidae sp. Indet.	6169150000	3	4	3	3	9
Monocorophium sp. Juv.	6169150200			4	3	6
Monocorophium insidiosum	6169150211	31	13	15	12	22
Grandidierella japonica	6169150902	1		5	2	
Hemigrapsus oregonensis	6189070102	1				
Miscellaneous						
Oligochaeta sp. Indet.	5004	92	47	32	69	61
Anthozoa sp. Indet.	3740000000				1	
Nemertinea sp. Indet.	4300000000	1		2	1	2
Holothuroidea sp. Juv.	8170000000	4	1		3	6
Mollusca						
Macoma nasuta	5515310114				1	
Macoma balthica	5515310116		2	2	1	
Polychaeta						
Glycera nana			7			
Eteone sp. Indet.	5001130200	9	10	4	4	13
Nereis virens	5001240302					1
Glycera americana	5001270104				1	
Glycinde polygnatha	5001280105	1				
Dipolydora socialis	5001430402			1		
Polydora cornuta	5001430411	3	1	3	5	5
Pygospio elegans	5001431302	11	19	11	19	20
Pseudopolydora kempi	5001431501	6	11	3	1	6
Cirratulidae sp. Indet.	5001500000		2	1		1
Capitella capitata 'hyperspeci	5001600101	38	9	36	36	35
Heteromastus filobranchus	5001600203					1
Notomastus tenuis	5001600302			1	1	
Aberinicola sp. Indet.	5001620100	12	7	6	5	7
Manyunkia aestuarina	5001701502	75	10	23	75	65

Sample Name	NODC	Rep A	Rep B	Rep C	Rep D	Rep E
		MWBT052				
Crustacea						
Zeuzo normani				6	1	
Harpacticoida sp. Indet.	6119000000	1	1	10	4	15
Leucon subnasica	6154040115	10	6	9	3	13
Cumella vulgaris	6154080102	6	1	8	1	12
Corophiidae sp. Indet.	6169150000	2	3	4	3	12
Monocorophium sp. Juv.	6169150200	2		8		7
Monocorophium insidiosum	6169150211	9	4	15	5	21
Grandidierella japonica	6169150902	4		7		3
Crangon sp. Indet.	6179220100				1	
Miscellaneous						
Oligochaeta sp. Indet.	5004	81	31	99	43	62
Anthozoa sp. Indet.	3740000000				1	
Nemertinea sp. Indet.	4300000000				1	
Phoronida sp. Indet.	7700000000		1			
Holothuroidea sp. Juv.	8170000000		1	2		
Mollusca						
Bivalvia sp. Juv.	5500000000			1		
Macoma sp. Juv.	5515310100					1
Macoma nasuta	5515310114	3	4	2	4	3
Macoma balthica	5515310116	1	2			
Polychaeta						
Glycera nana		1			1	
Eteone sp. Indet.	5001130200	9	3	10	5	16
Nereis vexillosa	5001240405			1		
Glycera americana	5001270104		1	1		
Glycinde polygnatha	5001280105			2		3
Polydora cornuta	5001430411				1	1
Pygospio elegans	5001431302	5		1	2	4
Pseudopolydora kempi	5001431501	9	4	5	13	6
Cirratulidae sp. Indet.	5001500000	1		2		1
Tharyx parvus	5001500303		1			
Capitella capitata 'hyperspeci	5001600101	56	60	141	171	174
Notomastus tenuis	5001600302	2				1
Mediomastus sp. Indet.	5001600400				1	1
Aberinicola sp. Indet.	5001620100	1		2	10	4
Manyunkia aestuarina	5001701502	31	17	105	38	79

Sample Name	NODC	Rep A	Rep B	Rep C	Rep D	Rep E
		MWBT054				
Crustacea						
Eogammarus confervicolus		2	6	1	8	11
Zeuzo normani		78	44	74	32	37
Harpacticoida sp. Indet.	6119000000	13	5	6	15	2
Leucon subnasica	6154040115	29	30	24	23	27
Cumella vulgaris	6154080102	1	1			2
Corophiidae sp. Indet.	6169150000	24	26	48	58	76
Monocorophium sp. Juv.	6169150200	16	28	23	20	31
Monocorophium insidiosum	6169150211	73	89	101	113	109
Grandidierella japonica	6169150902	3	19	18	10	18
Miscellaneous						
Oligochaeta sp. Indet.	5004	37	13	37	25	75
Holothuroidea sp. Juv.	8170000000	1				
Mollusca						
Mytilus sp. Juv.	5507010100	1				
Macoma inquinata	5515310115	1				
Macoma balthica	5515310116			1	1	
Polychaeta						
Eteone sp. Indet.	5001130200	14	13	14	13	9
Nereis virens	5001240302	1				
Glycinde polygnatha	5001280105					1
Polydora cornuta	5001430411			1		
Pygospio elegans	5001431302	14	5	11	20	16
Cirratulidae sp. Indet.	5001500000	2				
Capitellidae sp. Indet.	5001600000	1				
Capitella capitata 'hyperspeci	5001600101	37	17	38	21	26
Mediomastus sp. Indet.	5001600400					1
Aberinicola sp. Indet.	5001620100	1		1		1
Manyunkia aestuarina	5001701502	165	63	111	120	35

Appendix D.2 - Benthic Data

Sample Name	NODC	Rep A	Rep B	Rep C	Rep D	Rep E
		MWRH205R1				
Crustacea						
Eogammarus confervicolus		1	1	6		
Zeuzo normani		123	132	76	58	101
Harpacticoida sp. Indet.	6119000000	54	19	24	8	42
Leucon subnasica	6154040115		2		4	3
Cumella vulgaris	6154080102	5	3	2	1	3
Ampithoe lacertosa	6169040118	4	4	6	8	4
Corophiidae sp. Indet.	6169150000	49	73	53	17	87
Monocorophium sp. Juv.	6169150200	171	118	55	45	54
Monocorophium insidiosum	6169150211	85	91	76	66	85
Grandidierella japonica	6169150902	19	9	8	1	4
Hemigrapsus oregonensis	6189070102				1	
Miscellaneous						
Chironomidae sp. Indet.		1				
Oligochaeta sp. Indet.	5004	663	783	683	279	636
Nemertinea sp. Indet.	4300000000		1			1
Phoronida sp. Indet.	7700000000					1
Holothuroidea sp. Juv.	8170000000	12	10	7	7	11
Mollusca						
Mytilus sp. Juv.	5507010100			2		1
Macoma sp. Indet.	5515310100		1			
Macoma sp. Juv.	5515310100	1		1		
Macoma nasuta	5515310114		2	2		
Macoma balthica	5515310116			2	2	1
Polychaeta						
Eumida longicornuta			1			
Glycera nana			1			
Eteone sp. Indet.	5001130200	6	7	3	6	10
Syllis sp. Indet.	5001230300	1				
Nereis virens	5001240302				1	
Platynereis bicanaliculata	5001240501			1		
Glycera americana	5001270104				2	
Glycinde polygnatha	5001280105		2	1		1
Lumbrineris sp. Indet.	5001310100	1	1			
Spio filicornis	5001430701		1	1		
Pygospio elegans	5001431302	9	6	3	4	19
Pseudopolydora kempi	5001431501	1	2	2	2	1
Streblospio benedicti	5001431801	8	14	10	9	8
Cirratulidae sp. Indet.	5001500000		5	5	3	3
Tharyx parvus	5001500303					2
Capitella capitata 'hyperspeci	5001600101	120	86	117	30	52

Appendix D.2 - Benthic Data

Sample Name	NODC	Rep A	Rep B	Rep C	Rep D	Rep E
Notomastus tenuis	5001600302			1		
Aberinicola sp. Indet.	5001620100		2	1		2
Manyunkia aestuarina	5001701502	136	172	100	65	94

Sample Name	NODC	Rep A	Rep B	Rep C	Rep D	Rep E
			MWRH206R1			
Crustacea						
Eogammarus confervicolus					1	4
Zeuzo normani					1	1
Harpacticoida sp. Indet.	6119000000		1		1	1
Leucon subnasica	6154040115	18	7	5	26	29
Cumella vulgaris	6154080102	3	2			1
Corophiidae sp. Indet.	6169150000	2	3	1	9	11
Monocorophium sp. Juv.	6169150200	5	12	2	6	15
Monocorophium insidiosum	6169150211	13	22	21	27	5
Grandidierella japonica	6169150902				1	2
Miscellaneous						
Oligochaeta sp. Indet.	5004	113	201	145	106	163
Holothuroidea sp. Juv.	8170000000	4		1	5	2
Mollusca						
Macoma sp. Juv.	5515310100		1			
Macoma nasuta	5515310114	5	5	4	5	3
Macoma inquinata	5515310115		1		1	
Polychaeta						
Eumida longicornuta						1
Eteone sp. Indet.	5001130200	2	2		5	
Podarkeopsis glabrus	5001211903				1	
Glycera sp. Juv.	5001270100				1	
Glycera americana	5001270104	1		2	1	1
Glycinde polygnatha	5001280105	1		2		
Leitoscoloplos sp. Juv.	5001401600				1	
Polydora sp. Juv.	5001430400		1	1		1
Dipolydora caulleryi	5001430404		1	1		
Polydora cornuta	5001430411				1	
Prionospio lighti	5001430521			2		
Pygospio elegans	5001431302	3	7	2	1	3
Pseudopolydora kempi	5001431501	1	4	3	4	2
Streblospio benedicti	5001431801	17	33	42	24	38
Cirratulidae sp. Indet.	5001500000	1	8	3	4	1
Tharyx parvus	5001500303			1		
Capitella capitata 'hyperspeci	5001600101	32	49	46	43	53
Mediomastus sp. Indet.	5001600400	1			2	1
Aberinicola sp. Indet.	5001620100	10	8	6	5	3
Manyunkia aestuarina	5001701502	18	17	13	3	6

Sample Name	NODC	Rep A	Rep B	Rep C	Rep D	Rep E
		MWRH207R1				
Crustacea						
Eogammarus confervicolus		4	3	8	6	10
Zeuzo normani		1	4	1		
Harpacticoida sp. Indet.	6119000000			2	2	
Leucon subnasica	6154040115	11	33	31	55	28
Cumella vulgaris	6154080102	2			2	
Ampithoe lacertosa	6169040118				1	2
Corophiidae sp. Indet.	6169150000	19	32	22	21	13
Monocorophium sp. Juv.	6169150200	25	33	8	20	13
Monocorophium insidiosum	6169150211	55	74	52	89	96
Grandidierella japonica	6169150902					8
Miscellaneous						
Oligochaeta sp. Indet.	5004	162	168	113	683	247
Nemertinea sp. Indet.	4300000000		1			1
Holothuroidea sp. Juv.	8170000000	11	32	3	9	12
Mollusca						
Mytilus sp. Juv.	5507010100					1
Macoma nasuta	5515310114			2	3	1
Macoma balthica	5515310116	1	4			1
Polychaeta						
Eteone sp. Indet.	5001130200		4	1	5	2
Glycera americana	5001270104		1			
Polydora sp. Juv.	5001430400	2	2		7	
Polydora cornuta	5001430411	2	2	5	1	
Pygospio elegans	5001431302	14	29	20	37	27
Pseudopolydora kempi	5001431501	6	5	3	11	7
Streblospio benedicti	5001431801	14	16	10	37	29
Cirratulidae sp. Indet.	5001500000	7	7	10	3	11
Tharyx parvus	5001500303	1		1	6	3
Capitella capitata 'hyperspeci	5001600101	56	43	73	123	51
Notomastus tenuis	5001600302	2				
Mediomastus sp. Indet.	5001600400					1
Aberinicola sp. Indet.	5001620100	11	12	10	8	18
Manyunkia aestuarina	5001701502	50	51	47	117	47

Appendix D.3 Amphipod Bioassay Data

Sample Name	Rep	Analysis Start Date	Number Tested	Number Survivors	Number Died	Number Reburied	Number Not Reburied	Total Effective Mortality	Percent Survival	Percent Mortality	Percent Reburied	Percent Not Reburied	Percent Total Effective Mortality
control	1	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
control	2	5/29/98	20	20	0	20	0	0	100.0	0.0	100.0	0.0	0.0
control	3	5/29/98	20	20	0	20	0	0	100.0	0.0	100.0	0.0	0.0
control	4	5/29/98	20	20	0	20	0	0	100.0	0.0	100.0	0.0	0.0
control	5	5/29/98	20	20	0	20	0	0	100.0	0.0	100.0	0.0	0.0
MWAS022R1	1	5/29/98	20	19	5	18	1	2	95.0	5.0	94.7	5.3	10.0
MWAS022R1	2	5/29/98	20	17	15	17	0	3	85.0	15.0	100.0	0.0	15.0
MWAS022R1	3	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWAS022R1	4	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWAS022R1	5	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWAS024R1	1	5/29/98	20	18	10	18	0	2	90.0	10.0	100.0	0.0	10.0
MWAS024R1	2	5/29/98	20	18	10	18	0	2	90.0	10.0	100.0	0.0	10.0
MWAS024R1	3	5/29/98	20	16	20	14	2	6	80.0	20.0	87.5	12.5	30.0
MWAS024R1	4	5/29/98	20	14	30	14	0	6	70.0	30.0	100.0	0.0	30.0
MWAS024R1	5	5/29/98	20	16	20	16	0	4	80.0	20.0	100.0	0.0	20.0
MWAS025R1	1	5/29/98	20	16	20	16	0	4	80.0	20.0	100.0	0.0	20.0
MWAS025R1	2	5/29/98	20	20	0	20	0	0	100.0	0.0	100.0	0.0	0.0
MWAS025R1	3	5/29/98	20	17	15	17	0	3	85.0	15.0	100.0	0.0	15.0
MWAS025R1	4	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWAS025R1	5	5/29/98	20	17	15	17	0	3	85.0	15.0	100.0	0.0	15.0

Appendix D.3 Amphipod Bioassay Data (Continued)

Sample Name	Rep	Analysis Start Date	Number Tested	Number Survivors	Number Died	Number Reburied	Number Not Reburied	Total Effective Mortality	Percent Survival	Percent Mortality	Percent Reburied	Percent Not Reburied	Percent Total Effective Mortality
MWAT039R1	1	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWAT039R1	2	5/29/98	20	18	10	17	1	3	90.0	10.0	94.4	5.6	15.0
MWAT039R1	3	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWAT039R1	4	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWAT039R1	5	5/29/98	20	19	5	18	1	2	95.0	5.0	94.7	5.3	10.0
MWAT040R1	1	5/29/98	20	18	10	18	0	2	90.0	10.0	100.0	0.0	10.0
MWAT040R1	2	5/29/98	20	19	5	18	1	2	95.0	5.0	94.7	5.3	10.0
MWAT040R1	3	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWAT040R1	4	5/29/98	20	20	0	20	0	0	100.0	0.0	100.0	0.0	0.0
MWAT040R1	5	5/29/98	20	20	0	19	1	1	100.0	0.0	95.0	5.0	5.0
MWAT043R1	1	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWAT043R1	2	5/29/98	20	18	10	18	0	2	90.0	10.0	100.0	0.0	10.0
MWAT043R1	3	5/29/98	20	20	0	20	0	0	100.0	0.0	100.0	0.0	0.0
MWAT043R1	4	5/29/98	20	18	10	18	0	2	90.0	10.0	100.0	0.0	10.0
MWAT043R1	5	5/29/98	20	20	0	20	0	0	100.0	0.0	100.0	0.0	0.0
MWAT048R1	1	5/29/98	20	16	20	16	0	4	80.0	20.0	100.0	0.0	20.0
MWAT048R1	2	5/29/98	20	20	0	19	1	1	100.0	0.0	95.0	5.0	5.0
MWAT048R1	3	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWAT048R1	4	5/29/98	20	16	20	15	1	5	80.0	20.0	93.8	6.3	25.0
MWAT048R1	5	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0

Appendix D.3 Amphipod Bioassay Data (Continued)

Sample Name	Rep	Analysis Start Date	Number Tested	Number Survivors	Number Died	Number Reburied	Number Not Reburied	Total Effective Mortality	Percent Survival	Percent Mortality	Percent Reburied	Percent Not Reburied	Percent Total Effective Mortality
MWAT049R1	1	5/29/98	20	20	0	20	0	0	100.0	0.0	100.0	0.0	0.0
MWAT049R1	2	5/29/98	20	18	10	17	1	3	90.0	10.0	94.4	5.6	15.0
MWAT049R1	3	5/29/98	20	20	0	20	0	0	100.0	0.0	100.0	0.0	0.0
MWAT049R1	4	5/29/98	20	20	0	20	0	0	100.0	0.0	100.0	0.0	0.0
MWAT049R1	5	5/29/98	20	18	10	18	0	2	90.0	10.0	100.0	0.0	10.0
MWAT052R1	1	5/29/98	20	18	10	18	0	2	90.0	10.0	100.0	0.0	10.0
MWAT052R1	2	5/29/98	20	20	0	19	1	1	100.0	0.0	95.0	5.0	5.0
MWAT052R1	3	5/29/98	20	17	15	17	0	3	85.0	15.0	100.0	0.0	15.0
MWAT052R1	4	5/29/98	20	19	5	18	1	2	95.0	5.0	94.7	5.3	10.0
MWAT052R1	5	5/29/98	20	20	0	18	2	2	100.0	0.0	90.0	10.0	10.0
MWAT054R1	1	5/29/98	20	18	10	17	1	3	90.0	10.0	94.4	5.6	15.0
MWAT054R1	2	5/29/98	20	17	15	17	0	3	85.0	15.0	100.0	0.0	15.0
MWAT054R1	3	5/29/98	20	19	5	18	1	2	95.0	5.0	94.7	5.3	10.0
MWAT054R1	4	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWAT054R1	5	5/29/98	20	18	10	18	0	2	90.0	10.0	100.0	0.0	10.0
MWRC208R1	1	5/29/98	20	18	10	18	0	2	90.0	10.0	100.0	0.0	10.0
MWRC208R1	2	5/29/98	20	19	5	18	1	2	95.0	5.0	94.7	5.3	10.0
MWRC208R1	3	5/29/98	20	20	0	19	1	1	100.0	0.0	95.0	5.0	5.0
MWRC208R1	4	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWRC208R1	5	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0

Appendix D.3 Amphipod Bioassay Data (Continued)

Sample Name	Rep	Analysis Start Date	Number Tested	Number Survivors	Number Died	Number Reburied	Number Not Reburied	Total Effective Mortality	Percent Survival	Percent Mortality	Percent Reburied	Percent Not Reburied	Percent Total Effective Mortality
MWRC209R1	1	5/29/98	20	20	0	20	0	0	100.0	0.0	100.0	0.0	0.0
MWRC209R1	2	5/29/98	20	20	0	20	0	0	100.0	0.0	100.0	0.0	0.0
MWRC209R1	3	5/29/98	20	20	0	19	1	1	100.0	0.0	95.0	5.0	5.0
MWRC209R1	4	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWRC209R1	5	5/29/98	20	18	10	18	0	2	90.0	10.0	100.0	0.0	10.0
MWRC210R1	1	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWRC210R1	2	5/29/98	20	18	10	18	0	2	90.0	10.0	100.0	0.0	10.0
MWRC210R1	3	5/29/98	20	20	0	19	1	1	100.0	0.0	95.0	5.0	5.0
MWRC210R1	4	5/29/98	20	19	5	19	0	1	95.0	5.0	100.0	0.0	5.0
MWRC210R1	5	5/29/98	20	18	10	18	0	2	90.0	10.0	100.0	0.0	10.0
RefTox-0.1	1	5/29/98	10	4					40.0				
RefTox-0.1	2	5/29/98	10	5					50.0				
RefTox-0.3	1	5/29/98	10	3					30.0				
RefTox-0.3	2	5/29/98	10	3					33.0				
RefTox-1	1	5/29/98	10	0					0.0				
RefTox-1	2	5/29/98	10	0					0.0				
RefTox-10	1	5/29/98	10	0					0.0				
RefTox-10	2	5/29/98	10	0					0.0				
RefTox-3	1	5/29/98	10	0					0.0				
RefTox-3	2	5/29/98	10	0					0.0				

Appendix D.3 Amphipod Bioassay Data (Continued)

Sample Name	Rep	Analysis Start Date	Number Tested	Number Survivors	Number Died	Number Reburied	Number Not Reburied	Total Effective Mortality	Percent Survival	Percent Mortality	Percent Reburied	Percent Not Reburied	Percent Total Effective Mortality
RefTox-Control	1	5/29/98	10	8					80.0				
RefTox-Control	2	5/29/98	10	8					80.0				

"RefTox-" samples refer to Reference Toxicity and the reference toxicant concentration is included in the sample name in mg/L

Appendix D.4 Bivalve larval Bioassay Data

Sample Name	Rep	Analysis Start Date	Number Tested	Number Normal	Number Abnormal	Total Number Normal Plus Abnormal	Percent Mortality	Percent Normal	Percent Abnormal	Percent Combined Mortality and Abnormality
MWAS022R1	1	6/4/98	322	260	29	289	10.2		10.0	19.2
MWAS022R1	2	6/4/98	322	209	13	222	31.0		5.9	35.1
MWAS022R1	3	6/4/98	322	174	7	181	43.8		3.9	45.9
MWAS022R1	4	6/4/98	322	214	14	228	29.1		6.1	33.5
MWAS022R1	5	6/4/98	322	211	11	222	31.0		5.0	34.4
MWAS024R1	1	6/4/98	322	232	4	236	26.7		1.7	27.9
MWAS024R1	2	6/4/98	322	261	10	271	15.8		3.7	18.9
MWAS024R1	3	6/4/98	322	280	17	297	7.7		5.7	13.0
MWAS024R1	4	6/4/98	322	255	12	267	17.0		4.5	20.8
MWAS024R1	5	6/4/98	322	230	10	240	25.4		4.2	28.5
MWAS025R1	1	6/4/98	322	223	8	231	28.2		3.5	30.7
MWAS025R1	2	6/4/98	322	218	3	221	31.3		1.4	32.3
MWAS025R1	3	6/4/98	322	255	13	268	16.7		4.9	20.8
MWAS025R1	4	6/4/98	322	208	3	211	34.4		1.4	35.4
MWAS025R1	5	6/4/98	322	263	5	268	16.7		1.9	18.3
MWAT039R1	1	6/4/98	322	250	10	260	19.2		3.8	22.3
MWAT039R1	2	6/4/98	322	256	16	272	15.5		5.9	20.4
MWAT039R1	3	6/4/98	322	249	8	257	20.1		3.1	22.6
MWAT039R1	4	6/4/98	322	260	7	267	17.0		2.6	19.2
MWAT039R1	5	6/4/98	322	219	15	234	27.3		6.4	31.9

Appendix D.4 Bivalve larval Bioassay Data (Continued)

Sample Name	Rep	Analysis Start Date	Number Tested	Number Normal	Number Abnormal	Total Number Normal Plus Abnormal	Percent Mortality	Percent Normal	Percent Abnormal	Percent Combined Mortality and Abnormality
MWAT040R1	1	6/4/98	322	202	8	210	34.7		3.8	37.2
MWAT040R1	2	6/4/98	322	231	16	247	23.2		6.5	28.2
MWAT040R1	3	6/4/98	322	251	13	264	18.0		4.9	22.0
MWAT040R1	4	6/4/98	322	245	17	262	18.6		6.5	23.9
MWAT040R1	5	6/4/98	322	255	12	267	17.0		4.5	20.8
MWAT043R1	1	6/4/98	322	263	4	267	17.0		1.5	18.3
MWAT043R1	2	6/4/98	322	249	16	265	17.7		6.0	22.6
MWAT043R1	3	6/4/98	322	258	21	279	13.3		7.5	19.8
MWAT043R1	4	6/4/98	322	236	13	249	22.6		5.2	26.7
MWAT043R1	5	6/4/98	322	240	14	254	21.1		5.5	25.4
MWAT048R1	1	6/4/98	322	197	9	206	36.0		4.4	38.8
MWAT048R1	2	6/4/98	322	246	14	260	19.2		5.4	23.6
MWAT048R1	3	6/4/98	322	225	19	244	24.2		7.8	30.1
MWAT048R1	4	6/4/98	322	225	9	234	27.3		3.8	30.1
MWAT048R1	5	6/4/98	322	241	22	263	18.3		8.4	25.1
MWAT049R1	1	6/4/98	322	255	9	264	18.0		3.4	20.8
MWAT049R1	2	6/4/98	322	271	16	287	10.8		5.6	15.8
MWAT049R1	3	6/4/98	322	227	16	243	24.5		6.6	29.5
MWAT049R1	4	6/4/98	322	242	15	257	20.1		5.8	24.8
MWAT049R1	5	6/4/98	322	257	4	261	18.9		1.5	20.1

Appendix D.4 Bivalve larval Bioassay Data (Continued)

Sample Name	Rep	Analysis Start Date	Number Tested	Number Normal	Number Abnormal	Total Number Normal Plus Abnormal	Percent Mortality	Percent Normal	Percent Abnormal	Percent Combined Mortality and Abnormality
MWAT052R1	1	6/4/98	322	224	10	234	27.3		4.3	30.4
MWAT052R1	2	6/4/98	322	264	12	276	14.2		4.3	18.0
MWAT052R1	3	6/4/98	322	213	15	228	29.1		6.6	33.8
MWAT052R1	4	6/4/98	322	195	3	198	38.5		1.5	39.4
MWAT052R1	5	6/4/98	322	246	7	253	21.4		2.8	23.6
MWAT054R1	1	6/4/98	322	199	17	216	32.9		7.9	38.2
MWAT054R1	2	6/4/98	322	245	25	270	16.1		9.3	23.9
MWAT054R1	3	6/4/98	322	222	12	234	27.3		5.1	31.0
MWAT054R1	4	6/4/98	322	191	23	214	33.5		10.7	40.6
MWAT054R1	5	6/4/98	322	236	7	243	24.5		2.9	26.7
MWRC208R1	1	6/4/98	322	253	14	267	17.0		5.2	21.4
MWRC208R1	2	6/4/98	322	242	7	249	22.6		2.8	24.8
MWRC208R1	3	6/4/98	322	248	18	266	17.3		6.8	22.9
MWRC208R1	4	6/4/98	322	244	11	255	20.8		4.3	24.2
MWRC208R1	5	6/4/98	322	242	11	253	21.4		4.3	24.8
MWRC209R1	1	6/4/98	322	256	13	269	16.4		4.8	20.4
MWRC209R1	2	6/4/98	322	251	20	271	15.8		7.4	22.0
MWRC209R1	3	6/4/98	322	234	11	245	23.9		4.5	27.3
MWRC209R1	4	6/4/98	322	224	13	237	26.4		5.5	30.4
MWRC209R1	5	6/4/98	322	251	18	269	16.4		6.7	22.0

Appendix D.4 Bivalve larval Bioassay Data (Continued)

Sample Name	Rep	Analysis Start Date	Number Tested	Number Normal	Number Abnormal	Total Number Normal Plus Abnormal	Percent Mortality	Percent Normal	Percent Abnormal	Percent Combined Mortality and Abnormality
MWRC210R1	1	6/4/98	322	207	5	212	34.1		2.4	35.7
MWRC210R1	2	6/4/98	322	255	20	275	14.5		7.3	20.8
MWRC210R1	3	6/4/98	322	219	12	231	28.2		5.2	31.9
MWRC210R1	4	6/4/98	322	241	12	253	21.4		4.7	25.1
MWRC210R1	5	6/4/98	322	244	15	259	19.5		5.8	24.2
RefTox-1	1	6/4/98	308					72.0		
RefTox-1	2	6/4/98	308					85.7		
RefTox-1	3	6/4/98	308					80.0		
RefTox-1	4	6/4/98	308					87.7		
RefTox-16	1	6/4/98	308					1.6		
RefTox-16	2	6/4/98	308					0.3		
RefTox-16	3	6/4/98	308					1.3		
RefTox-16	4	6/4/98	308					1.0		
RefTox-2	1	6/4/98	308					73.7		
RefTox-2	2	6/4/98	308					87.0		
RefTox-2	3	6/4/98	308					84.7		
RefTox-2	4	6/4/98	308					82.5		
RefTox-32	1	6/4/98	308					0.0		
RefTox-32	2	6/4/98	308					0.0		
RefTox-32	3	6/4/98	308					0.0		

Appendix D.4 Bivalve larval Bioassay Data (Continued)

Sample Name	Rep	Analysis Start Date	Number Tested	Number Normal	Number Abnormal	Total Number Normal Plus Abnormal	Percent Mortality	Percent Normal	Percent Abnormal	Percent Combined Mortality and Abnormality
RefTox-32	4	6/4/98	308					0.0		
RefTox-4	1	6/4/98	308					83.1		
RefTox-4	2	6/4/98	308					77.3		
RefTox-4	3	6/4/98	308					84.7		
RefTox-4	4	6/4/98	308					77.6		
RefTox-64	1	6/4/98	308					0.0		
RefTox-64	2	6/4/98	308					0.0		
RefTox-64	3	6/4/98	308					0.0		
RefTox-64	4	6/4/98	308					0.0		
RefTox-8	1	6/4/98	308					76.3		
RefTox-8	2	6/4/98	308					81.5		
RefTox-8	3	6/4/98	308					89.6		
RefTox-8	4	6/4/98	308					77.0		
RefTox-Control	1	6/4/98	308					83.1		
RefTox-Control	2	6/4/98	308					88.3		
RefTox-Control	3	6/4/98	308					84.7		
RefTox-Control	4	6/4/98	308					78.9		
swcontrol	1	6/4/98	322	251	21	272	15.5		7.7	22.0
swcontrol	2	6/4/98	322	272	16	288	10.5		5.6	15.5
swcontrol	3	6/4/98	322	295	30	325	-1.0		9.2	8.3

Appendix D.4 Bivalve larval Bioassay Data (Continued)

Sample Name	Rep	Analysis Start Date	Number Tested	Number Normal	Number Abnormal	Total Number Normal Plus Abnormal	Percent Mortality	Percent Normal	Percent Abnormal	Percent Combined Mortality and Abnormality
swcontrol	4	6/4/98	322	268	15	283	12.1		5.3	16.7
swcontrol	5	6/4/98	322	242	17	259	19.5		6.6	24.8

"RefTox-" samples refer to Reference Toxicity and the reference toxicant concentration is included in the sample name in ug/L)

Appendix D.5 Juvenile Polychaete Bioassay Data

Sample Name	Rep	Analysis Start Date	Number Tested	Number Suvivors	Number Died	Total Biomass (mg)	Individual Biomass (mg)	Individual Growth (mg/day)	Percent Survival	Percent Mortality
control	1	7/3/98	5	5	0	60.8	12.2	0.60	100.0	0.0
control	2	7/3/98	5	4	1	71.2	17.8	0.88	80.0	20.0
control	3	7/3/98	5	5	0	74.0	14.8	0.73	100.0	0.0
control	4	7/3/98	5	4	1	40.7	10.2	0.50	80.0	20.0
control	5	7/3/98	5	5	0	71.9	14.4	0.71	100.0	0.0
MWAS022R1	1	7/3/98	5	2	3	31.0	15.5	0.77	40.0	60.0
MWAS022R1	2	7/3/98	5	5	0	56.8	11.4	0.56	100.0	0.0
MWAS022R1	3	7/3/98	5	5	0	66.3	13.3	0.65	100.0	0.0
MWAS022R1	4	7/3/98	5	5	0	48.2	9.6	0.47	100.0	0.0
MWAS022R1	5	7/3/98	5	4	1	52.6	13.2	0.65	80.0	20.0
MWAS024R1	1	7/3/98	5	4	1	50.0	12.5	0.62	80.0	20.0
MWAS024R1	2	7/3/98	5	5	0	39.6	7.9	0.39	100.0	0.0
MWAS024R1	3	7/3/98	5	5	0	36.2	7.2	0.35	100.0	0.0
MWAS024R1	4	7/3/98	5	5	0	49.6	9.9	0.49	100.0	0.0
MWAS024R1	5	7/3/98	5	5	0	50.2	10.0	0.49	100.0	0.0
MWAS025R1	1	7/3/98	5	5	0	43.1	8.6	0.42	100.0	0.0
MWAS025R1	2	7/3/98	5	5	0	31.6	6.3	0.31	100.0	0.0
MWAS025R1	3	7/3/98	5	5	0	29.3	5.9	0.28	100.0	0.0
MWAS025R1	4	7/3/98	5	5	0	34.6	6.9	0.34	100.0	0.0
MWAS025R1	5	7/3/98	5	5	0	24.3	4.9	0.23	100.0	0.0

Appendix D.5 Juvenile Polychaete Bioassay Data (Continued)

Sample Name	Rep	Analysis Start Date	Number Tested	Number Suvivors	Number Died	Total Biomass (mg)	Individual Biomass (mg)	Individual Growth (mg/day)	Percent Survival	Percent Mortality
MWAT040R1	1	7/3/98	5	5	0	41.5	8.3	0.41	100.0	0.0
MWAT040R1	2	7/3/98	5	5	0	43.7	8.7	0.43	100.0	0.0
MWAT040R1	3	7/3/98	5	5	0	38.3	7.7	0.37	100.0	0.0
MWAT040R1	4	7/3/98	5	5	0	47.8	9.6	0.47	100.0	0.0
MWAT040R1	5	7/3/98	5	5	0	45.8	9.2	0.45	100.0	0.0
MWRC208R1	1	7/3/98	5	5	0	68.8	13.8	0.68	100.0	0.0
MWRC208R1	2	7/3/98	5	5	0	46.0	9.2	0.45	100.0	0.0
MWRC208R1	3	7/3/98	5	5	0	46.8	9.4	0.46	100.0	0.0
MWRC208R1	4	7/3/98	5	5	0	54.5	10.9	0.54	100.0	0.0
MWRC208R1	5	7/3/98	5	5	0	69.0	13.8	0.68	100.0	0.0
MWRC209R1	1	7/3/98	5	5	0	38.6	7.7	0.38	100.0	0.0
MWRC209R1	2	7/3/98	5	5	0	50.4	10.1	0.50	100.0	0.0
MWRC209R1	3	7/3/98	5	5	0	32.0	6.4	0.31	100.0	0.0
MWRC209R1	4	7/3/98	5	4	1	32.7	8.2	0.40	80.0	20.0
MWRC209R1	5	7/3/98	5	5	0	61.2	12.2	0.60	100.0	0.0
RefTox-1.56	1	7/3/98	10	10					100.0	
RefTox-1.56	2	7/3/98	10	10					100.0	
RefTox-12.5	1	7/3/98	10	0					0.0	
RefTox-12.5	2	7/3/98	10	0					0.0	
RefTox-25	1	7/3/98	10	0					0.0	

Appendix D.5 Juvenile Polychaete Bioassay Data (Continued)

Sample Name	Rep	Analysis Start Date	Number Tested	Number Suvivors	Number Died	Total Biomass (mg)	Individual Biomass (mg)	Individual Growth (mg/day)	Percent Survival	Percent Mortality
RefTox-25	2	7/3/98	10	0					0.0	
RefTox-3.13	1	7/3/98	10	10					100.0	
RefTox-3.13	2	7/3/98	10	10					100.0	
RefTox-6.25	1	7/3/98	10	7					78.8	
RefTox-6.25	2	7/3/98	10	8					80.0	
RefTox-Control	1	7/3/98	10	10					100.0	
RefTox-Control	2	7/3/98	10	10					100.0	

"RefTox-" samples refer to Reference Toxicity and the reference toxicant concentration is included in the sample name in mg/L